

Digital Super Hybrid System

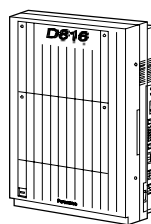
Panasonic

INSTALLATION MANUAL

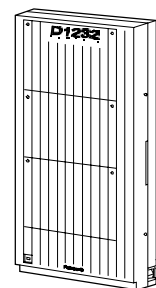
Please read this manual before connecting the
Digital Super Hybrid System.

MODEL

KX-TD816AL / KX-TD1232AL



KX-TD816AL



KX-TD1232AL

Thank you for purchasing the Panasonic Model
KX-TD816AL/KX-TD1232AL, Digital Super Hybrid System.

System Components

	Model No.	Description
Service Unit	KX-TD816AL	Digital Super Hybrid System (Main Unit)
	KX-TD1232AL	Digital Super Hybrid System (Main Unit), including the KX-TD196 (Remote Card)
Telephone	KX-T7220AL	Digital Proprietary Telephone
	KX-T7230AL	Digital Proprietary Telephone with Display
	KX-T7235AL	Digital Proprietary Telephone with Large Display
	KX-T7250AL	Digital Proprietary Telephone
Optional Equipment	KX-T7240AL	Digital DSS Console
	KX-TD160* ¹	Doorphone Card
	KX-TD170AL	8-Station Line Unit
	KX-TD180AL	4-CO Line Unit
	KX-TD180DAL* ³	4-CO Line Unit
	KX-TD181AL* ²	8-CO Line Card
	KX-TD181DAL* ^{2/3}	8-CO Line Card
	KX-TD185AL	4-DID Line Unit
	KX-TD192* ²	System Inter Connection Card (two cards with Connection Cable)
	KX-TD280AL	2-ISDN S0 Line Unit
	KX-TD281AL* ²	4-ISDN S0 Line Card
KX-T30865	Doorphone	
KX-A216* ¹	Backup Battery and Adaptor Card	
KX-A46	Battery Adaptor	

System Components Table

Note The models marked *¹ can be installed only in KX-TD816.
The models marked *² can be installed only in KX-TD1232.
The models marked *³ supports the Pay Tone service of your Central Office.
In this Installation Manual, the suffix "AL" of each model number is omitted.
The Digital Super Hybrid System is abbreviated as "DSHS."
The Digital Proprietary Telephone is abbreviated as "DPT."
A Single Line Telephone is abbreviated as "SLT."

Important Information

This equipment should be used on PSTN lines requiring 2-wire Loop calling unguarded clearing with Loop Disconnect or DTMF address signaling.

The equipment must be connected to direct extension lines and a payphone should not be connected as an extension.

Operation in Power Failure

In the event of a power failure, single line telephones (SLTs) will be directly connected to specific CO lines as follows:

KX-TD816 : CO 1 is connected to the extension jack 1

CO 2 is connected to the extension jack 2

CO 5 is connected to Power Failure Transfer jack

KX-TD1232 : three SLTs can be connected to CO 1, CO 2 and CO 9 which are connected to Power Failure Transfer jacks

- Set the Dialing Mode (Tone or Pulse) of your telephone, according to the CO line.
- 114 and 000 can be dialed on the apparatus for the purpose of making outgoing calls to the emergency (114) and (000) service.

Satisfactory performance can not be guaranteed for every allowed combination of host and subsidiary apparatus.

114 and 000 can be dialed on the apparatus after accessing the CO line for the purpose of making outgoing calls to the emergency (114) and (000) service.

During dialing, this apparatus may tinkle the bells of other telephones using the same line. This is not a fault and we advise you not to call Fault Repair Service.

‘Prevention of access by user. This apparatus is intended to be accessible only to authorized personnel. This apparatus must be installed in a locked room or similar environment, such that user access is prevented. Failure to prevent such user access will invalidate any approval given to this apparatus.’

Caution:

Do not push the PAUSE button more than twice following the initial access digit (or digits). Failure to comply with this requirement may result in unsatisfactory operation.

Note:

No External TRC Terminal is provided due to an Internal Link between PE and TRC.

CAUTION

Danger of explosion if battery is incorrectly replaced.

**Replace only with the same or equivalent type recommended by the manufacturer.
Dispose of used batteries according to the manufacturer's instructions.**

Attention

- The apparatus is designed to be installed and operated under controlled conditions of ambient temperature and a relative humidity not greater than 60%.
- Avoid installing the apparatus in damp or humid environments, such as bathrooms or swimming pools.
- The apparatus shall not be exposed to dripping or splashing.
- Keep the unit away from heating appliances and electrical noise generating devices such as fluorescent lamps, motors and televisions. These noise sources can interfere with the performance of the Digital Super Hybrid System.
- This unit should be kept free of dust, moisture, high temperature (more than 40°C / 104°F) and vibration, and should not be exposed to direct sunlight.
- Never attempt to insert wires, pins, etc. into the vents or other holes of this unit.
- If there is any trouble, disconnect the unit from the telephone line. Plug the telephone directly into the telephone line. If the telephone operates properly, do not reconnect the unit to the line until the trouble has been repaired. If the telephone does not operate properly, chances are that the trouble is in the telephone system, and not in the unit.
- Do not use benzine, thinner, or the like, or any abrasive powder to clean the cabinet. Wipe it with a soft cloth.

WARNING

THIS UNIT MAY ONLY BE INSTALLED AND SERVED BY QUALIFIED SERVICE PERSONNEL.

WHEN A FAILURE OCCURS WHICH RESULTS IN THE INTERNAL PARTS BECOMING ACCESSIBLE, DISCONNECT THE POWER SUPPLY CORD IMMEDIATELY AND RETURN THIS UNIT TO YOUR DEALER.

DISCONNECT THE TELECOM CONNECTION BEFORE DISCONNECTING THE POWER CONNECTION PRIOR TO RELOCATING THE EQUIPMENT, AND RECONNECT THE POWER FIRST.

THIS UNIT IS EQUIPPED WITH AN EARTHING CONTACT PLUG. FOR SAFETY REASONS THIS PLUG MUST ONLY BE CONNECTED TO AN EARTHING CONTACT SOCKET WHICH HAS BEEN INSTALLED ACCORDING TO REGULATIONS.

THE POWER SOCKET WALL OUTLET SHOULD BE LOCATED NEAR THIS EQUIPMENT AND BE EASILY ACCESSIBLE.

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

Attention

The serial number of this product may be found on the label affixed to the bottom of the unit. You should note the serial number of this unit in the space provided and retain this book as a permanent record of your purchase to aid in identification in the event of theft.

MODEL NO.: _____

SERIAL NO.: _____

For your future reference

DATE OF PURCHASE _____

NAME OF DEALER _____

DEALER'S ADDRESS _____

Introduction

This Installation Manual provides technical information for the Panasonic Digital Super Hybrid System, KX-TD816/KX-TD1232. It is designed to serve as an overall technical reference for the system and includes a description of the system, its hardware and software, features and services and environmental requirements.

This manual contains the following sections:

Section 1, System Outline.

Provides general information on the system including system capacity and specifications.

Section 2, Installation.

Contains the basic system installation and wiring instructions, as well as how to install the optional cards and units.

Section 3, Features.

Describes all the basic, optional and programmable features in alphabetical order. It also provides information about the programming required, conditions, connection references, related features and operation for every feature.

Section 4, System Programming.

Provides step-by-step programming instructions for a proprietary telephone.

Section 5, List.

Lists tone/ring tone and default values of system programming.

Section 6, Troubleshooting.

Provides information for system and telephone troubleshooting.

NOTE

The following documents may be used in conjunction with this manual:

- User Manual for KX-TD816/KX-TD1232 System, DIGITAL Proprietary Telephones, DSS Console and Single Line Telephones.
- Programming Table
The programming table is designed to be used as a hard copy reference to the user-programmed data.

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Section 1

System Outline

This section provides general information on the system, including system capacity and specifications.

1.1 System Highlights

System Capacity	Basic System	Module Expansion	System Connection
KX-TD816			
CO line (ISDN S0 line)	4	8 (2)	—
Extension	8	16	—
KX-TD1232			
CO line (ISDN S0 line)	0	12 (6)	24 (12)
Extension	16	32	64

Module Expansion

Expansion modules are used to increase the system capacity. CO line modules and extension modules can be added to the basic system to add CO lines and extensions.

EXtra Device Port (XDP)

Each extension jack in the system supports the connection of a digital proprietary telephone and a single line device. The devices have different extension numbers and are treated as two completely different extensions.

Paralleled Telephone Connection

Every jack in the system also supports the parallel connection of a digital proprietary telephone and a single line device. They share the same extension number and are considered by the system to be one extension.

Super Hybrid System

This system supports the connection of digital proprietary telephones, DSS Console and single line devices such as single line telephones, facsimiles, and data terminals.

System Connection*

With the addition of optional System Inter Connection Card, two Digital Super Hybrid Systems can be connected together to expand the system capacity. The two systems function as one, however, some functions such as paging and music on hold are duplicated.

Digital Proprietary Telephones (DPT)

The system supports four different models of digital proprietary telephones which cover the range from a monitor set to a large display handsfree version.

1.1 System Highlights

Programming System

The system can be programmed from a digital proprietary telephone or from a personal computer.

Voice Mail Integration

The system supports Voice Processing Systems with in-band DTMF signaling.

Automatic Route Selection (ARS)

Automatically selects the pre-programmed least expensive route for outgoing toll calls.

Trunk (CO Line) Answer From Any Station (TAFAS)

Ringing occurs over the external paging system; call can be answered from any station.

Remote Station Lock Control

Allows an operator to lock an extension so that outgoing calls cannot be made.

Charge Fee Reference

Allows the user to see charges and print out the charges.

Budget Management

Limits the telephone usage to a pre-assigned amount.

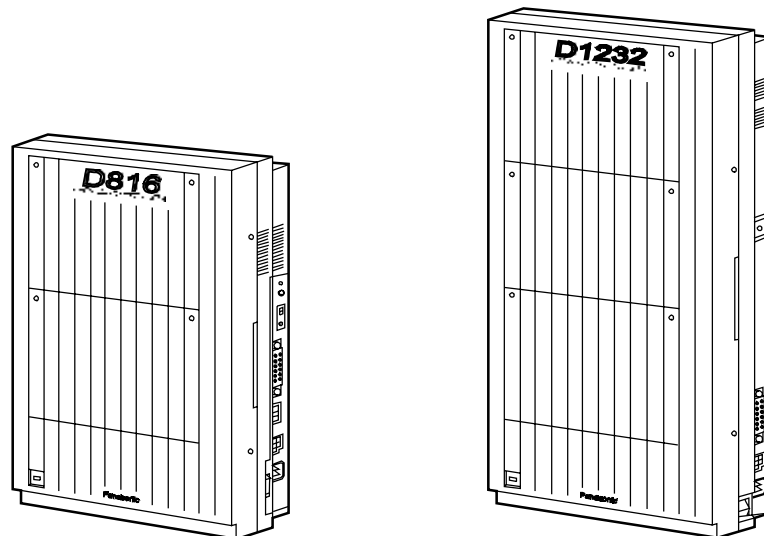
Hotel Application

Allows to handle the front and operator service such as check-in / check-out and wake-up call setting.

1.2 Basic System Construction

The KX-TD816 Digital Super Hybrid System has a basic capacity of 4 CO lines and 8 extensions, and KX-TD1232 has 16 extensions. It is capable of supporting Panasonic digital proprietary telephones, DSS Consoles and single line devices such as single line telephones, facsimiles.

To expand its capabilities the system can be equipped with optional components or customer-supplied peripherals such as external speakers and external music sources (e.g., radios).



1.3 Digital Proprietary Telephones

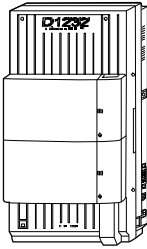
The following Panasonic digital proprietary telephones are available with this system.

Proprietary Telephone	Description
KX-T7220	Speakerphone, 24 CO
KX-T7230	Display, speakerphone, 24 CO
KX-T7235	Large display, speakerphone, 12 CO
KX-T7250	Monitor, 6 CO

Note CO: CO line access button

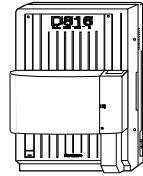
1.4 Options

8-Station Line Unit (KX-TD170)



8 or 16 extensions can be added.

Each unit adds eight extensions. One expansion unit for KX-TD816, and up to two expansion units for KX-TD1232 can be installed per system.



8 extensions can be added.

4-CO Line Unit (KX-TD180/KX-TD180D) / 4-DID Line Unit (KX-TD185) / 2-ISDN S0 Line Unit (KX-TD280)

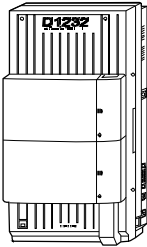
One of the following units can be installed per system.

KX-TD180 : Adds four CO lines.

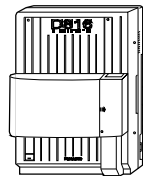
KX-TD180D: Adds four CO lines which support the Pay Tone service of your Central Office.

KX-TD185 : Adds four DID lines.

KX-TD280 : Adds two ISDN S0 lines.



4 CO lines / 4 DID lines /
2 ISDN S0 lines can be added.



4 CO lines / 4 DID lines /
2 ISDN S0 lines can be added.

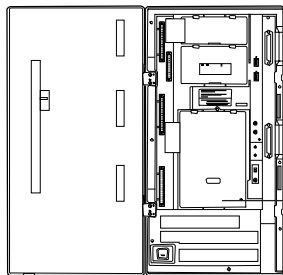
8-CO Line Card (KX-TD181/KX-TD181D)* / 4-ISDN S0 Line Card (KX-TD281)*

One of the following cards can be installed for KX-TD1232.

KX-TD181 : Adds eight CO lines.

KX-TD180D: Adds four CO lines which support the Pay Tone service of your Central Office.

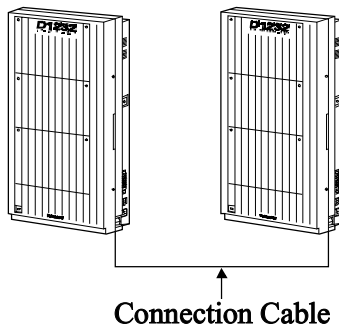
KX-TD281 : Adds four ISDN S0 lines.



8 CO lines / 4 ISDN S0 lines can be added.

1.4 Options

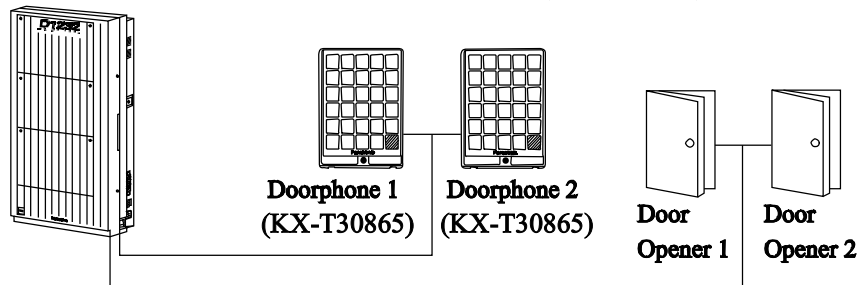
System Inter Connection Card (KX-TD192)*¹



Permits two Digital Super Hybrid Systems to be connected together — to double system capacity.

Doorphone Card (KX-TD160)

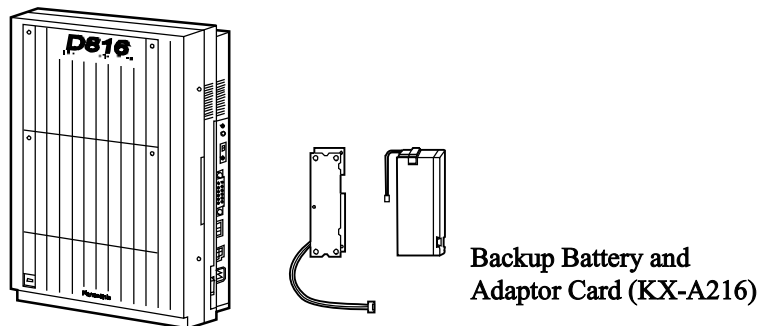
This card supports two doorphones and two door openers. The doorphone is an option (KX-T30865).



Note The KX-TD1232 is illustrated as a main unit.

Backup Battery and Adaptor Card (KX-A216)*²

Operate all the features as a backup power supply in the event of a power failure.



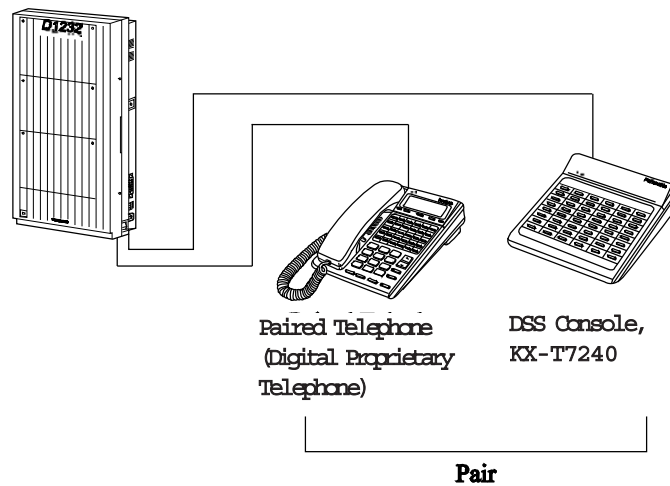
*¹: Available for KX-TD1232 only.

*²: Available for KX-TD816 only.

1.4 Options

DSS Console (KX-T7240)

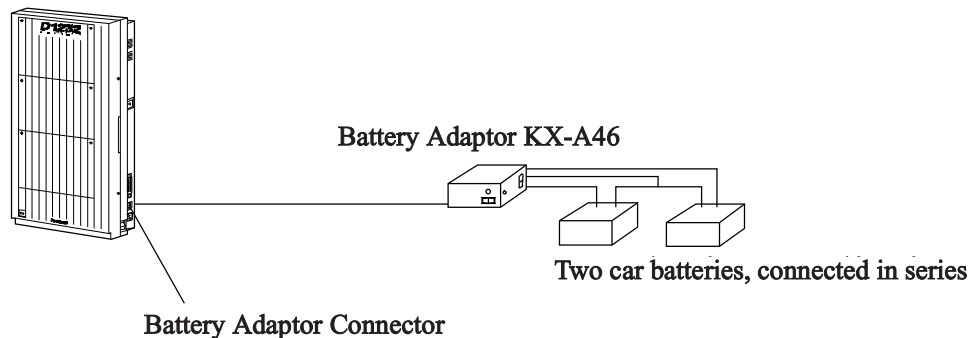
Permits easy and quick access to stations and features. The Busy Lamp Field shows the idle or busy state of each station. DSS Console is designed for use with a digital proprietary telephone. The system supports up to four DSS Consoles per system.



Note The KX-TD1232 is illustrated as a main unit.

Battery Adaptor (KX-A46)

Supports the connection of two car batteries (12 VDC -2) for power backup in case of a power failure.



Note The KX-TD1232 is illustrated as a main unit.

1.5 Specifications

1.5.1 General Description

System Capacity	KX-TD816	
	CO lines (ISDN S0 lines)	8 max. (2 max.)
	Extensions	16 max. (32 max. with XDP)
	KX-TD1232	
	CO lines (ISDN S0 lines)	12 max. (6 max.)
	Extensions	32 max. (64 max. with XDP)
Control Method	Stored Program CPU: 16 bits CPU	
Switching	Non Blocking PCM Time Sharing Switch	
Power Supplies	Primary	240 VAC, 50 Hz
	Secondary	Station Supply Volt: 30V Circuit Volt: $\pm 5V, \pm 15V$
	Power Failure	<ul style="list-style-type: none">• Memory back-up duration: seven years by factory-provided lithium battery• 3 CO lines max. automatically assigned to SLTs (Power Failure Transfer)• System operation for several hours by recommended batteries (consisting of two 12 VDC car batteries)
Dialing	Outward	Dial Pulse (DP) 10 pps, 20 pps Tone (DTMF) Dialing
	Internal	Dial Pulse (DP) 10 pps, 20 pps Tone (DTMF) Dialing
	Mode Conversion	DP-DTMF, DTMF-DP
Connector	KX-TD816	
	CO lines	Modular jack
	Extensions	Modular jack
	KX-TD1232	
	CO lines	4-pin connector
	Extensions	Amphenol connector
Paging Output	Pin Jack (RCA JACK)	
External Music Input	Two-conductors Jack (MINIJACK 3.5 mm diameter)	

1.5 Specifications

Extension Connection Cable

Single line telephones	1 pair wire (A, B)
KX-T7220, KX-T7230, KX-T7235, KX-T7250	2 pair wire (L, H): A and B are not necessary or 2 pair wire (A, B, L, H)
KX-T7240	2 pair wire (L, H): A and B are not necessary

SMDR (Station Message Detail Recording)

Interface	EIA (RS-232C)
Output Equipment	Printer
Detail Recording	Date, Time, Extension Number, CO Line Number, Dialed Number, Call Duration, Account Code

1.5.2 Characteristics

Station Loop Limit	KX-T7220 / KX-T7230 / KX-T7235 / KX-T7250.....40 ohms
	Single Line Telephone600 ohms including set
	Doorphone.....20 ohms

Minimum Leakage Resistance 15 000 ohms

Maximum Number of Station Instruments per Line

1 for KX-T7220, KX-T7230, KX-T7235,
KX-T7250 or single line telephone
2 by Parallel or eXtra Device Port Connection of a
proprietary telephone and a single line telephone

Ring Voltage 70 Vrms at 25 Hz depending on the Ringing Load

Primary Power 240 VAC, 50 Hz

Central Office Loop Limit 1 600 ohms max.

Environmental Requirements 0 – 40 °C / 32 – 104 °F, 10 – 90%

1.5.3 System Capacity

1.5.3 System Capacity

Lines, Cards, Units, Station Equipment

Item	KX-TD816 Max. Quantity	KX-TD1232 Max. Quantity	
		Single System	System Connection
System Inter Connection Card	—	—	2
Service Unit	1	1	2
8-CO Line Card or 4-ISDN S0 Line Card	—	1	2
4-CO Line Unit, 4-DID Line Unit or 2-ISDN S0 Line Unit	1	1	2
CO Line	8	12	24
ISDN S0 Line	2	6	12
8-Station Line Unit	1	2	4
Extension Jack	16	32	64
Station Terminal (including DSS Consoles)	32	64	128
{DSS Console}	{4}	{4}	{8}
Remote Card	—	1	2
Doorphone	2	2	4
Door Opener	2	2	4
External Pager	1	2	4
External Music Source	1	2	4

1.5.3 System Capacity

System Data

Item	Max. Quantity	
Operator	2	
System Speed Dialing	500	
One-Touch Dialing	24	per station (proprietary telephone)
Station Speed Dialing	10	per station
Call Park	10	
Absent Message	9	
CO Line Group	8	
Toll Restriction Level	8	
Extension Group	16	
Class of Service	8	
Message Waiting	128	

Section 2

Installation

This section contains the basic system installation and wiring instructions, as well as how to install the optional cards and units.

2.1 Before Installation

Please read the following notes concerning installation and connection before installing the system.

Safety Installation Instructions

When installing telephone wiring, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

1. Never install telephone wiring during a lightning storm.
2. Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
3. Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
4. Use caution when installing or modifying telephone lines.

Installation Precautions

This set is exclusively made for wall mounting only. Avoid installing in the following places. (Doing so may result in malfunction, noise, or discoloration.)

1. In direct sunlight and hot, cold, or humid places. (Temperature range: 0°C – 40°C / 32°F – 104°F)
2. Sulfuric gases produced in areas where there are thermal springs, etc. may damage the equipment or contacts.
3. Places in which shocks or vibrations are frequent or strong.
4. Dusty places, or places where water or oil may come into contact with the unit.
5. Near high-frequency generating devices such as sewing machines or electric welders.
6. On or near computers, telexes, or other office equipment, as well as microwave ovens or air conditioners. (It is preferable not to install in the same room with the above equipment.)
7. Install at least 1.8 m from radios and televisions. (both the main unit and proprietary telephones)
8. Do not obstruct area around the main unit (for reasons of maintenance and inspection — be especially careful to allow space for cooling above and at the sides of the main unit).

Wiring Precautions

Make sure to keep the following instructions when wiring.

1. Do not wire the telephone cable in parallel with an AC power source, computer, telex, etc. If the cables are run near those wires, shield the cables with metal tubing or use shielded cables and ground the shields.
2. If cables are run on the floor, use protectors or the like to protect

2.1 Before Installation

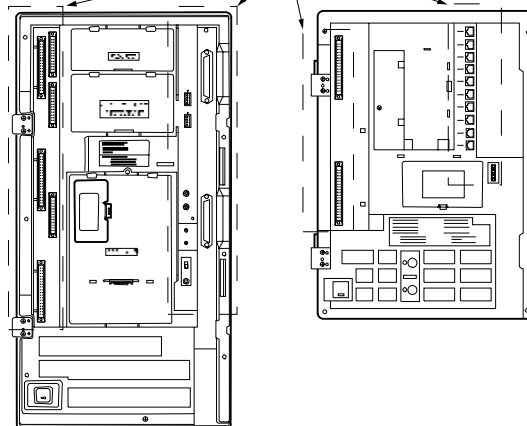
the wires where they may be stepped on. Avoid wiring under carpets.

3. Avoid using the same power supply outlet for computers, telexes, and other office equipment. Otherwise, the system operation may be interrupted by the induction noise from such equipment.
4. Please use one pair telephone wire for extension connection of (telephone) equipment such as single line telephones, data terminals, answering machines, computers, voice processing systems, etc., except proprietary telephones (KX-T7220, KX-T7230, KX-T7235, KX-T7250 etc.).
5. The Power Switch of the system must be off during wiring. After all the wirings are completed, turn the Power Switch on.
6. Mis-wiring may cause the system to operate improperly. Refer to Section 6.1.1 "Installation" and Section 6.1.2 "Connection."
7. If an extension does not operate properly, disconnect the telephone from the extension line and then connect again, or turn off the Power Switch of the system and then on again.
8. The system is equipped with a 3-wire grounding type plug. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the purpose of the grounding-type plug.
9. Use twisted pair cable for CO line connection.
10. CO lines should be installed with lightning protectors. For details, refer to Section 2.4.3 "Lightning Protector Installation."

Warning:

Static sensitive devices are used. To protect printed circuit boards from static electricity, do not touch connectors indicated to the right. To discharge body static, touch ground or wear a grounding strap.

Warning : Static sensitive connectors



2.2 Installation of the Main Unit

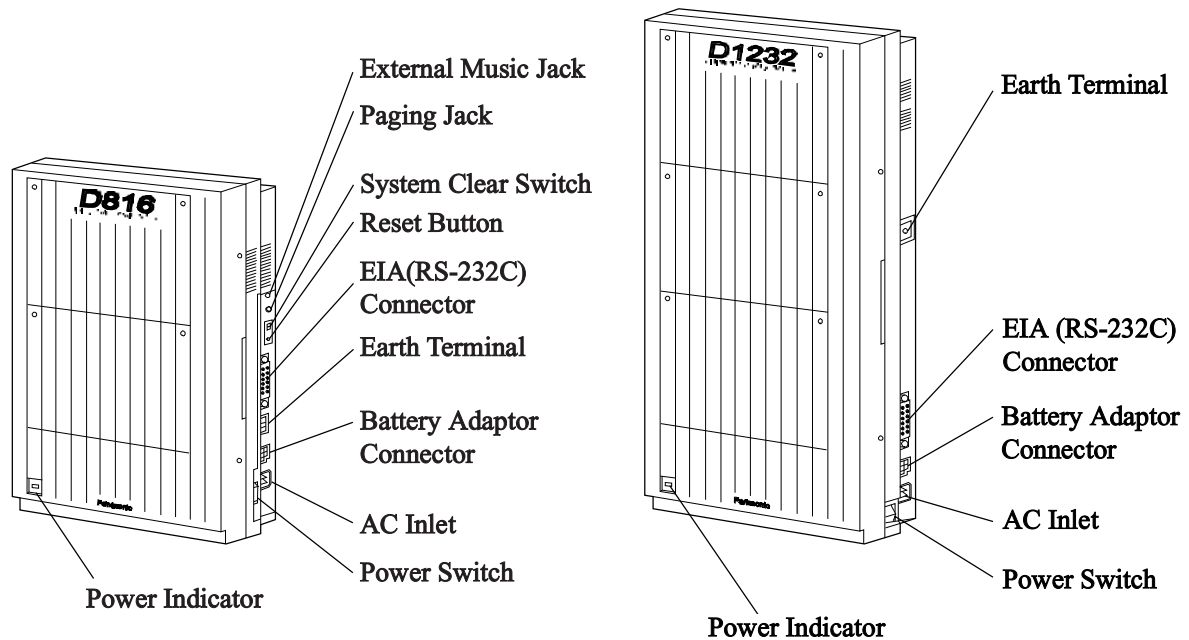
2.2.1 Unpacking

When you unpack the main unit, the following components should be included:

	KX-TD816	KX-TD1232
Main Unit	one	one
AC Cord	one	one
Templet	one	one
Screw	three	four
Anchor Plug	three	four
Pager Connector	—	two
Music Source Connector	—	two
Expansion line cord holder	one	one
4-pin plugs for doorphone or door opener connection	two	two

2.2.2 Name and Location

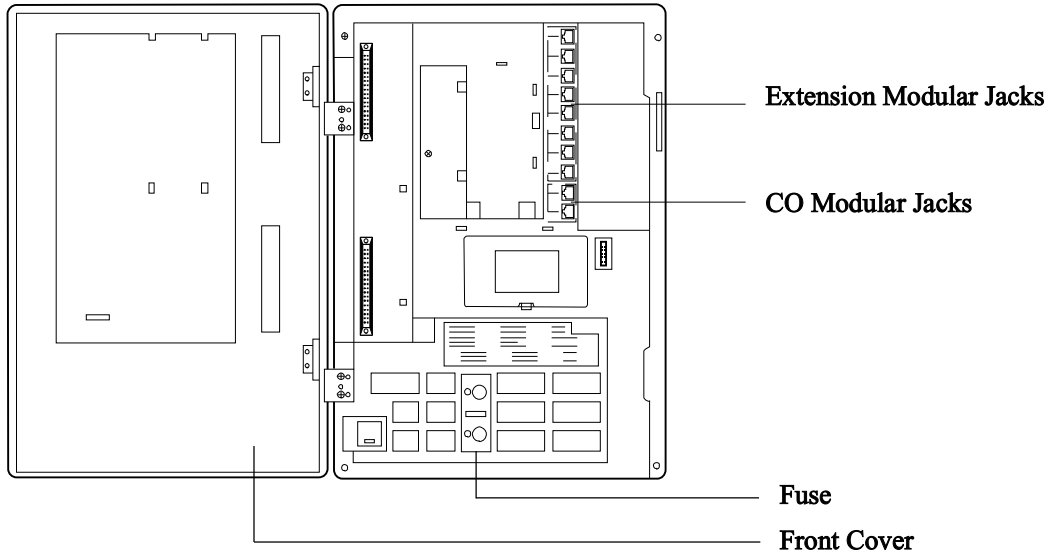
Overview of the Main Unit



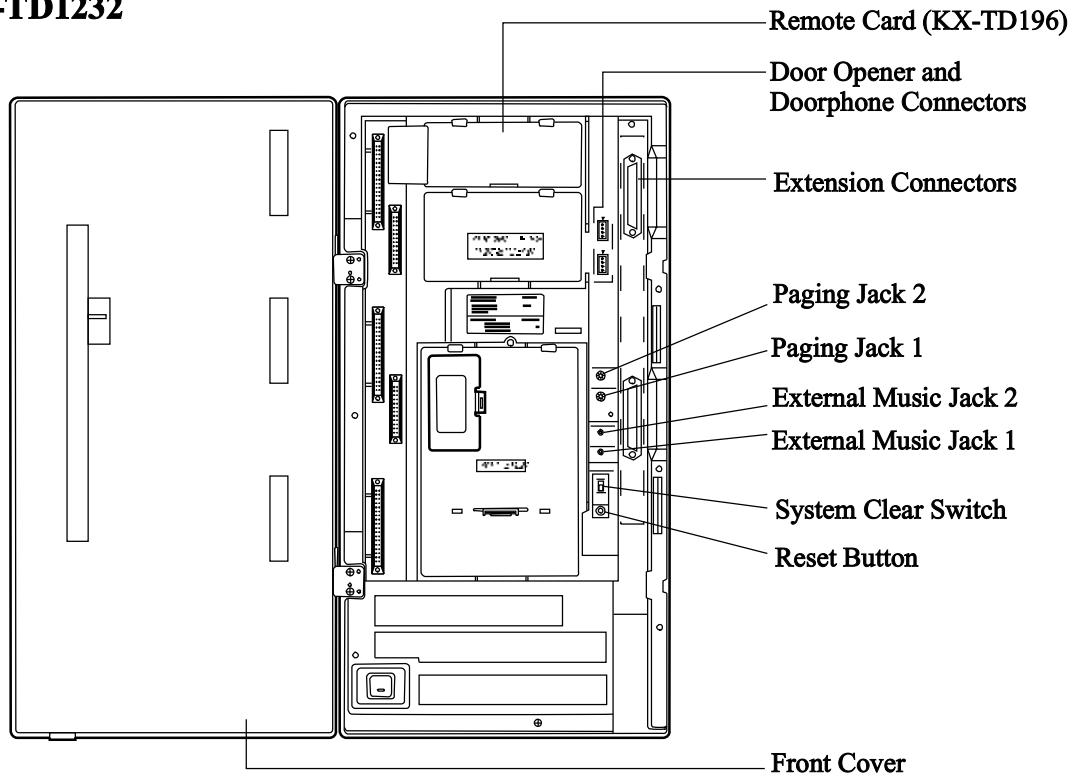
2.2 Installation of the Main Unit

Inside View of the Main Unit

KX-TD816



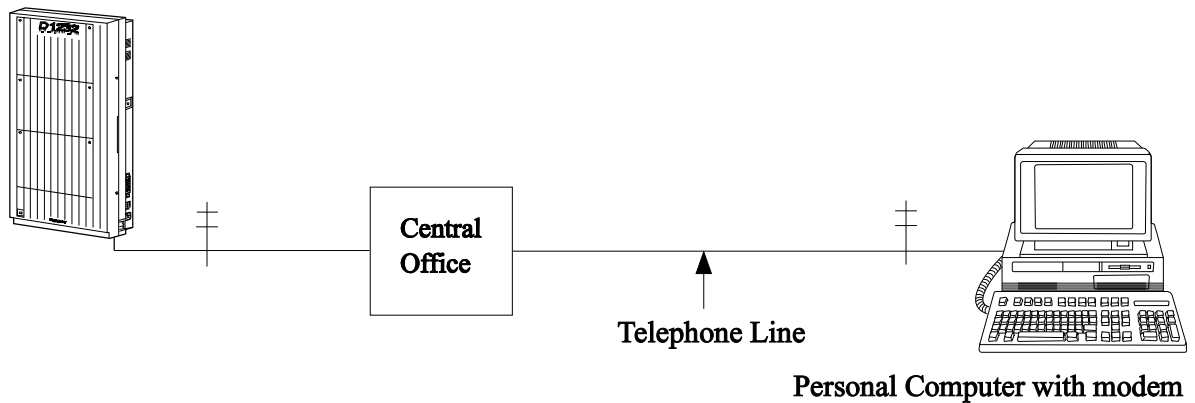
KX-TD1232



2.2 Installation of the Main Unit

2.2.3 About the Remote Card (KX-TD196)*

The Remote Card is already installed in KX-TD1232. It allows programming and maintenance of the system from a remote location.



Programming References

Section 4, System Programming,
[107] System Password
[813] Floating Number Assignment
[814] Modem Standard

Feature References

Section 3, Features,
System Programming and Diagnosis with Personal Computer

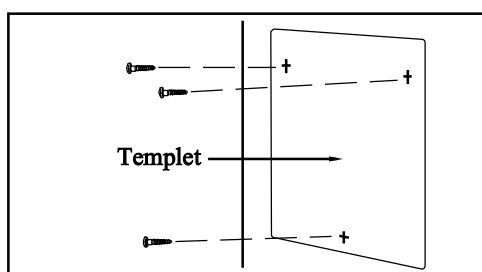
2.2.4 Wall Mounting

This set is exclusively made for wall mounting only. The wall where the main unit is to be mounted must be able to support the weight of the main unit. If screws other than the ones supplied are used, use the same-sized diameter screws as the enclosed ones.

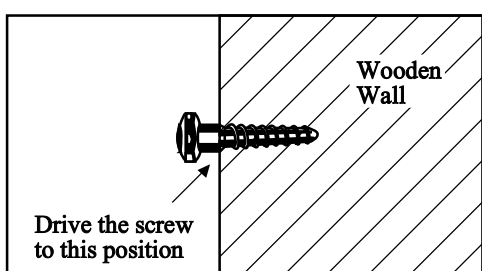
KX-TD816

Mounting on Wooden Wall

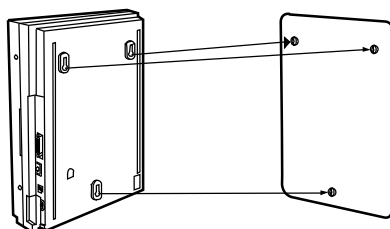
1. Place the templet (included) on the wall to mark the three screw positions.



2. Install the three screws (included) into the wall.

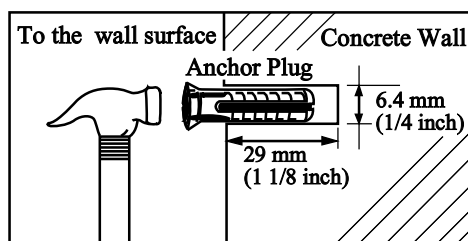


3. Hook the main unit on the screw heads.

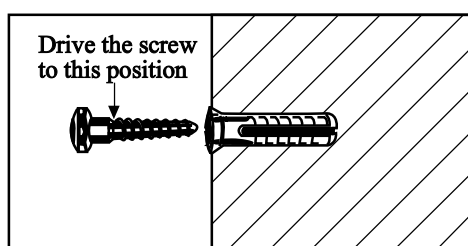


Mounting on Concrete or Mortar Wall

1. Place the templet (included) on the wall to mark the three screw positions.
2. Drill three holes and drive the anchor plugs (included) with a hammer, flush to the wall.



3. Install the three screws (included) into the anchor plugs.



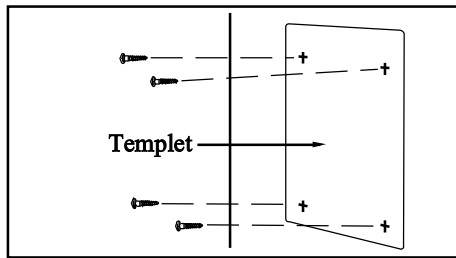
4. Hook the main unit on the screw heads.

2.2.4 Wall Mounting

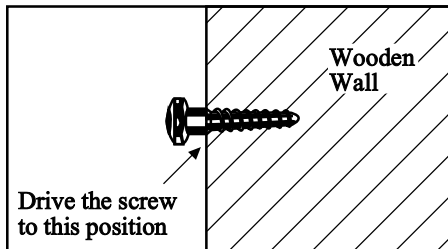
KX-TD1232

Mounting on Wooden Wall

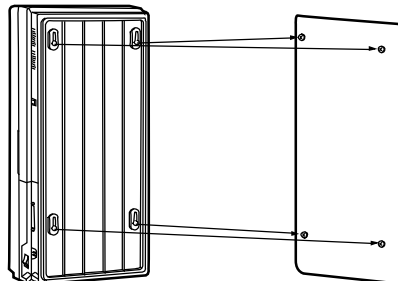
1. Place the templet (included) on the wall to mark the four screw positions.



2. Install the four screws (included) into the wall.

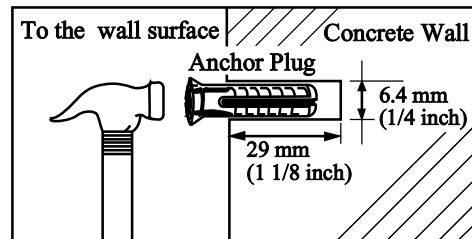


3. Hook the main unit on the screw heads.

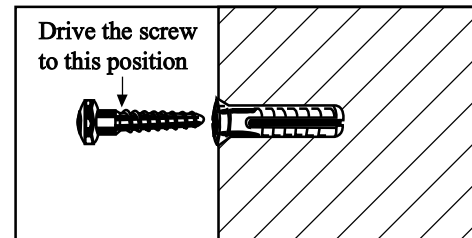


Mounting on Concrete or Mortar Wall

1. Place the templet (included) on the wall to mark the four screw positions.
2. Drill four holes and drive the anchor plugs (included) with a hammer, flush to the wall.



3. Install the four screws (included) into the anchor plugs.



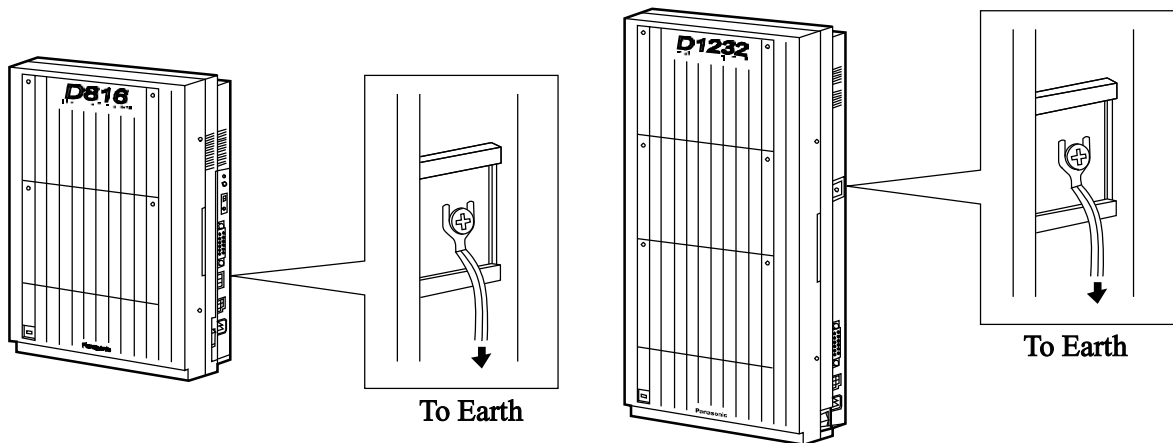
4. Hook the main unit on the screw heads.

2.2 Installation of the Main Unit

2.2.5 Frame Earth Connection

IMPORTANT!!!

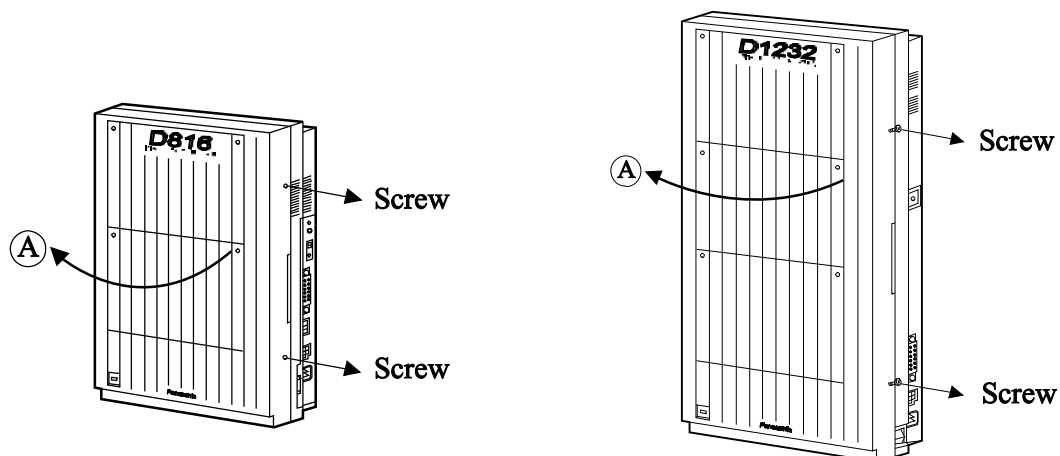
You must connect the frame of the main unit to Earth.



2.2.6 Opening Front Cover

Two screws are attached to the front cover by springs so that they will not be lost. To open the front cover of the main unit:

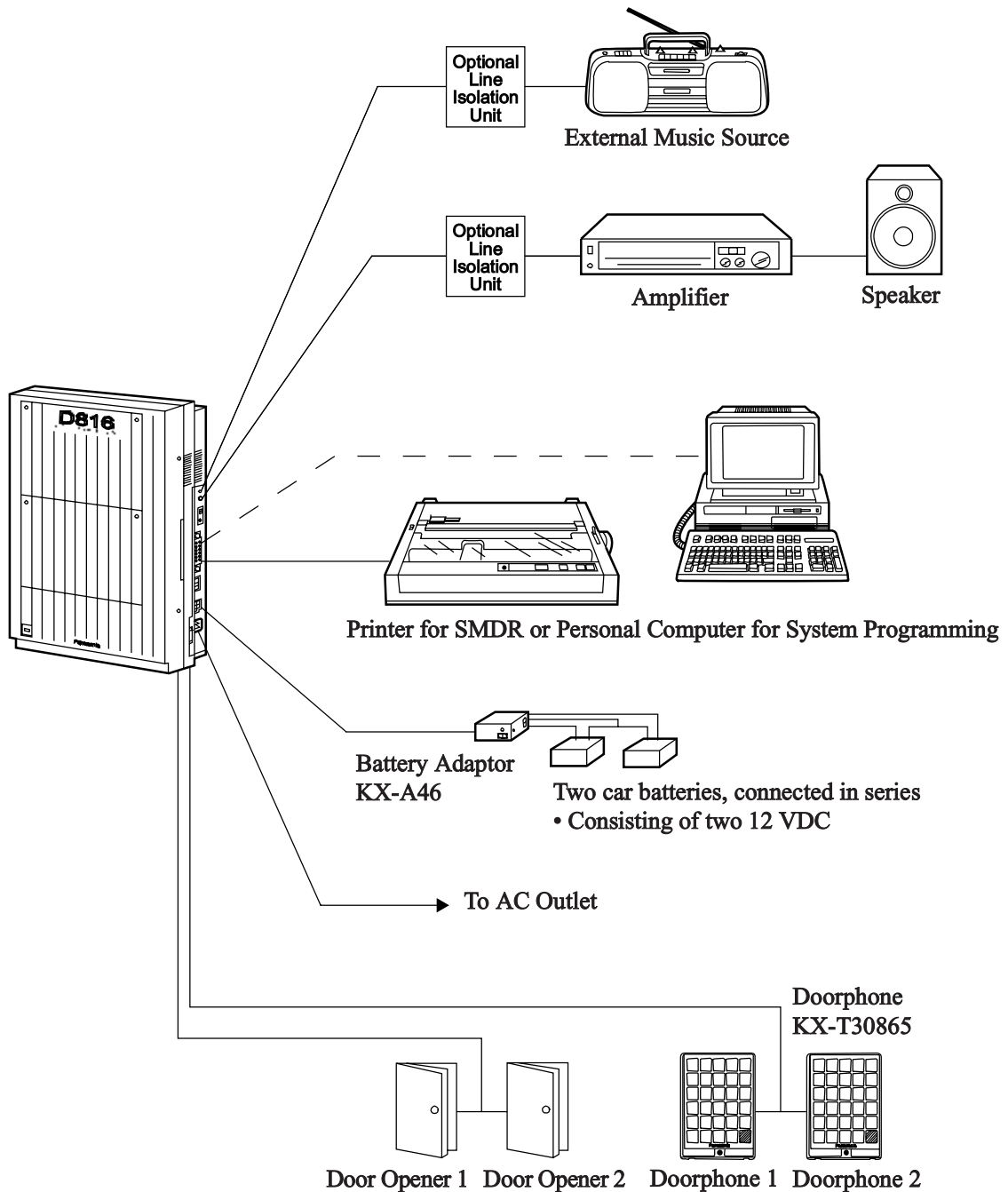
1. Loosen the two screws on the right side of the main unit.
2. Open the front cover in the direction of Arrow (A).



2.3 Connection

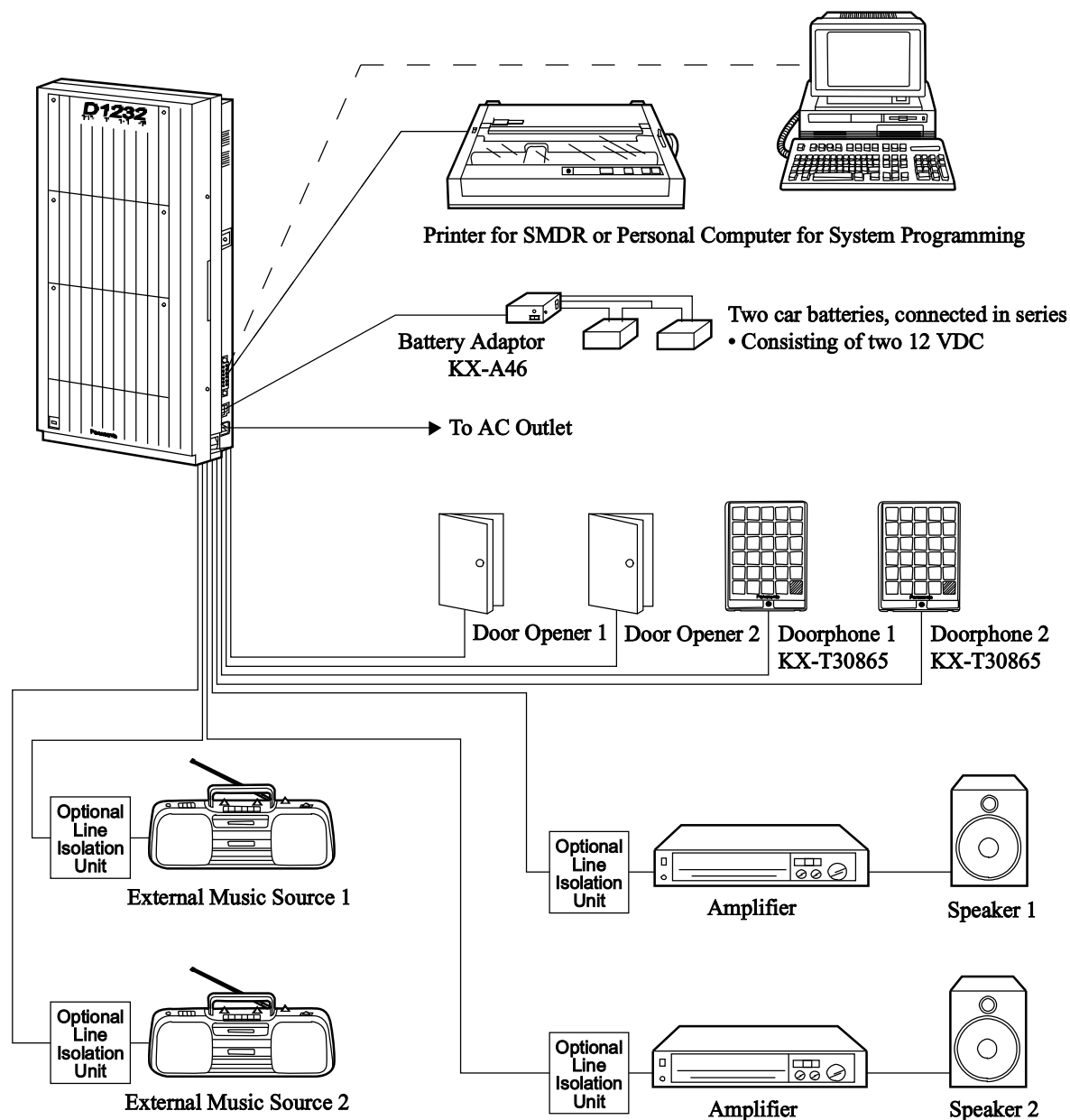
2.3.1 System Connection Diagram

KX-TD816



2.3.1 System Connection Diagram

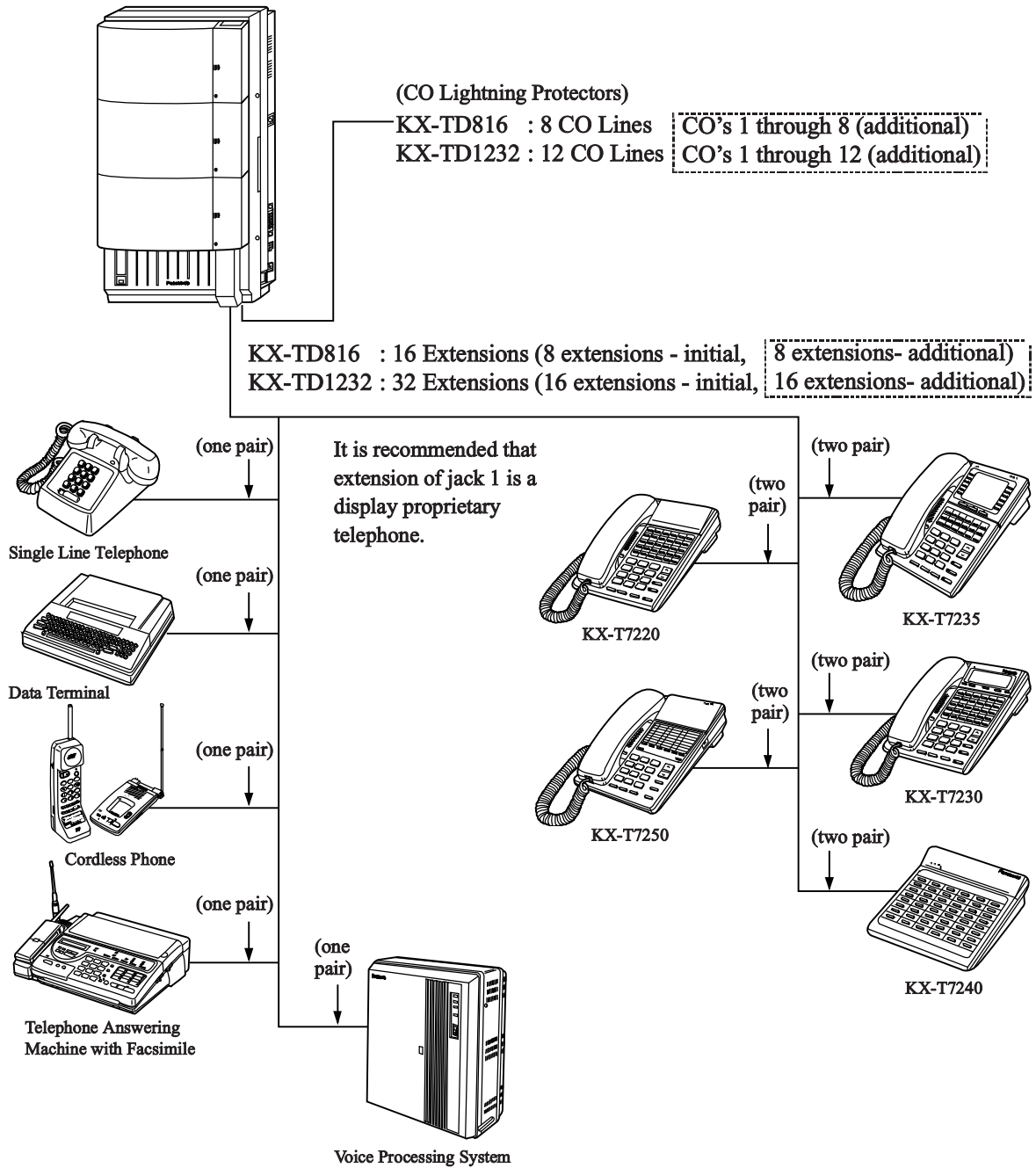
KX-TD1232



Note It is an Austel requirement that an optional Line Isolation Unit, obtainable from your installer, be fitted between the External Music Jack and the External Music Source and between the Paging Jack and the Paging Equipment.

2.3.1 System Connection Diagram

KX-TD816 / KX-TD1232



Notes

- : needs optional cards or adaptor.
- Parallel telephone connections are possible.
- The KX-TD1232 is illustrated as a main unit.

2.3.2 CO Line Connection (KX-TD816: CO1 through CO4)

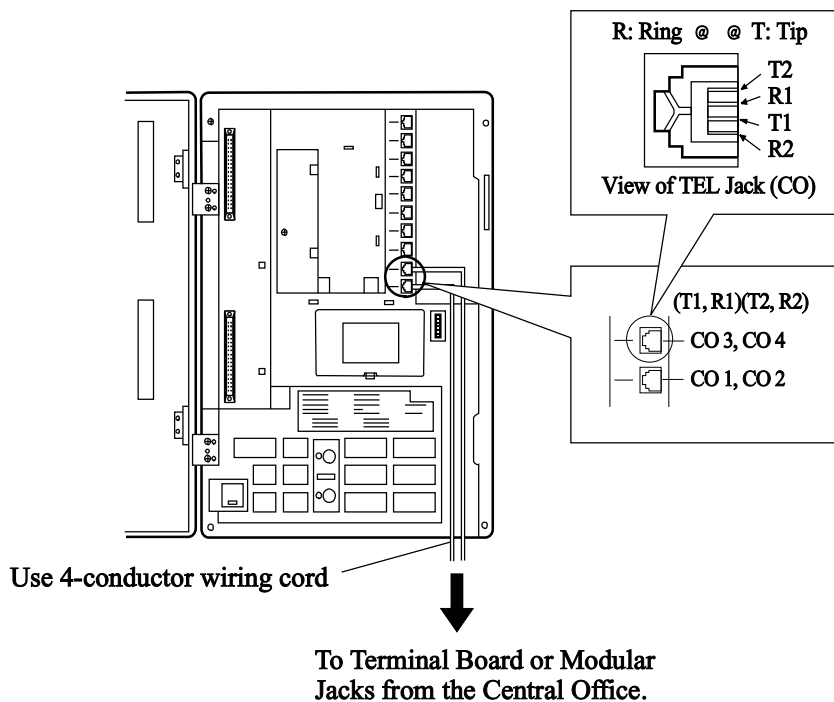
Wire Specifications

Use twisted pair cable for installation. The wire specifications for extensions are as follows:

Wire	Solid wire
Diameter of conductor	ø0.4 – ø0.65 mm (22, 24, 26AWG)
Diameter including coating	ø0.66 – ø1.05 mm

Connection

Insert the modular plugs of the telephone line cords (4-conductor wiring) into the modular jacks on the system.



Notes

- Mis-connection may cause the system to operate improperly. See Section 6.1.1 “Installation” and 6.1.2 “Connection” before connection.
- Optional card or unit is required to connect CO lines to KX-TD1232. See Section 2.4 “Optional Cards and Units Installation.”

2.3.3 Extension Connection

for Digital Proprietary Telephones, Single Line Telephones and DSS Console
(KX-TD816: Jack 1 through Jack 8, KX-TD1232: Jack 1 through Jack 16)

1. Extension Connection for KX-TD816

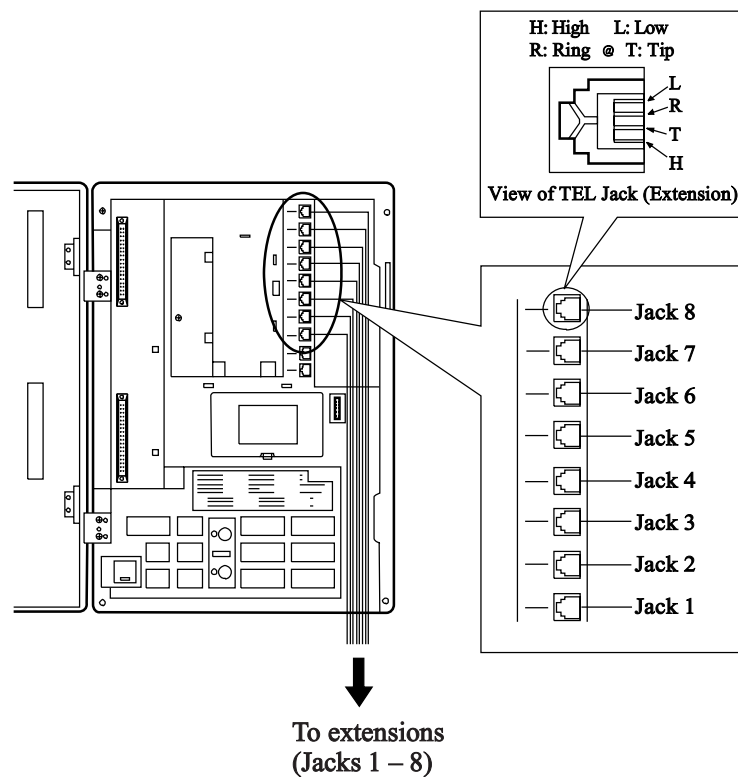
Wire Specifications

In making an extension line connection, use twisted pair cable for installation. The wire specifications for extensions are as follows:

Wire	Solid wire
Diameter of conductor	ø 0.4 – ø 0.65 mm
Diameter including coating	ø 0.66 – ø 1.05 mm

Connection

Insert the modular plugs of the telephone line cords (4-conductor wiring) into the modular jacks on the system. Mis-connection may cause the system to operate improperly. See Section 6.1.1 “Installation” and 6.1.2 “Connection” before connection.



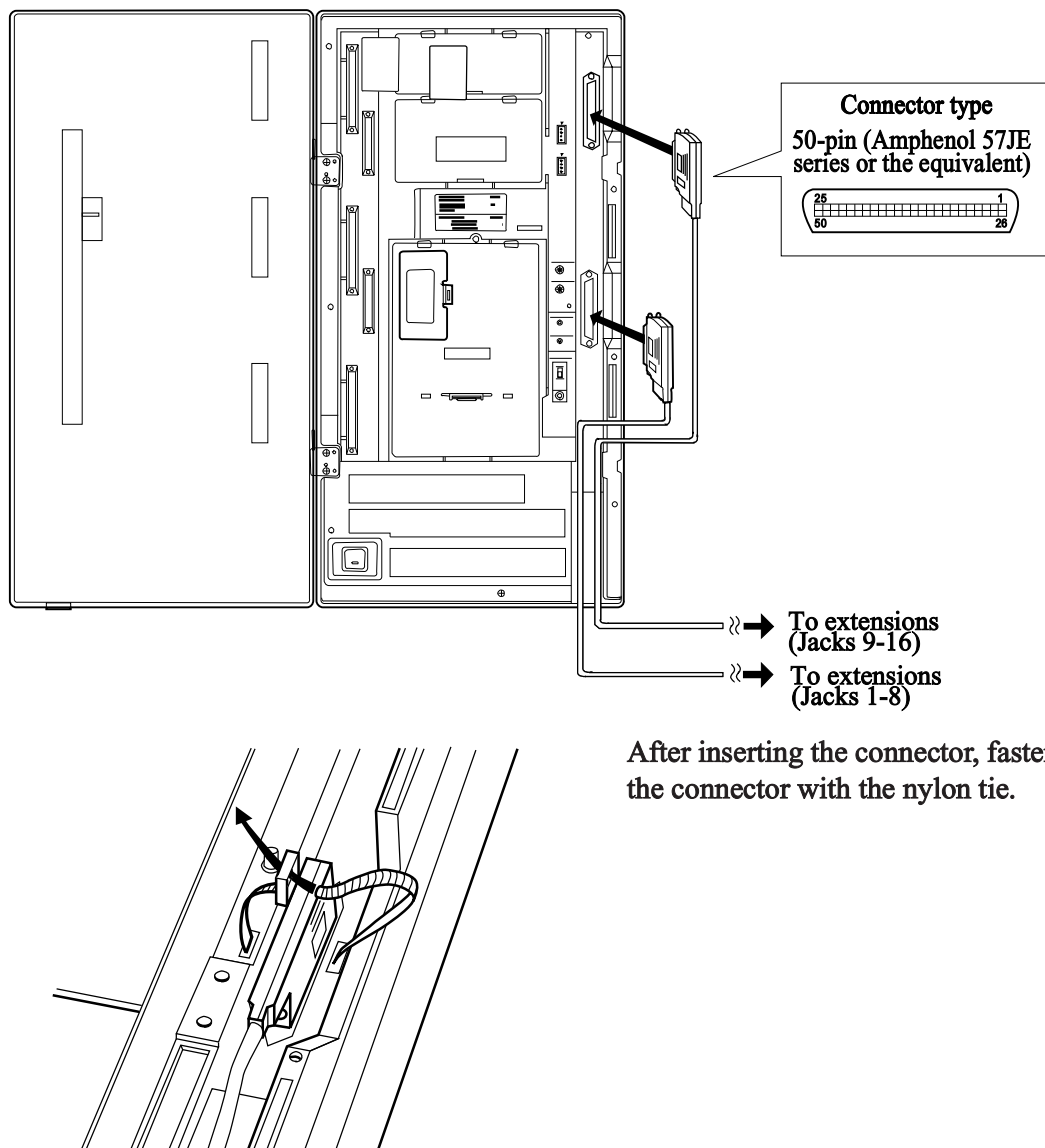
2.3.3 Extension Connection

for Digital Proprietary Telephones, Single Line Telephones and DSS Console
(KX-TD816: Jack 1 through Jack 8, KX-TD1232: Jack 1 through Jack 16)

2. Extension Connection for KX-TD1232

Connection

Insert the connectors to the system as shown. For Cable Pin Numbers to Be Connected, see page 2-16. Mis-connection may cause the system to operate improperly. See Section 6.1.1 “Installation” and 6.1.2 “Connection” before connection.



2.3.3 Extension Connection

for Digital Proprietary Telephones, Single Line Telephones and DSS Console
(KX-TD816: Jack 1 through Jack 8, KX-TD1232: Jack 1 through Jack 16)

Cable Pin Numbers to Be Connected

CONN. PIN	EXTN. 1-8		EXTN. 9-16		8EXTN†		8EXTN†	
26 1	Jack No.1	T	Jack No.9	T	Jack No.17	T	Jack No.25	T
27 2		R		R		R		R
28 3		D1		D1		D1		D1
		D2		D2		D2		D2
		P1		P1		P1		P1
		P2		P2		P2		P2
29 4	Jack No.2	T	Jack No.10	T	Jack No.18	T	Jack No.26	T
30 5		R		R		R		R
31 6		D1		D1		D1		D1
		D2		D2		D2		D2
		P1		P1		P1		P1
		P2		P2		P2		P2
32 7	Jack No.3	T	Jack No.11	T	Jack No.19	T	Jack No.27	T
33 8		R		R		R		R
34 9		D1		D1		D1		D1
		D2		D2		D2		D2
		P1		P1		P1		P1
		P2		P2		P2		P2
35 10	Jack No.4	T	Jack No.12	T	Jack No.20	T	Jack No.28	T
36 11		R		R		R		R
37 12		D1		D1		D1		D1
		D2		D2		D2		D2
		P1		P1		P1		P1
		P2		P2		P2		P2
38 13	Jack No.5	T	Jack No.13	T	Jack No.21	T	Jack No.29	T
39 14		R		R		R		R
40 15		D1		D1		D1		D1
		D2		D2		D2		D2
		P1		P1		P1		P1
		P2		P2		P2		P2
41 16	Jack No.6	T	Jack No.14	T	Jack No.22	T	Jack No.30	T
42 17		R		R		R		R
43 18		D1		D1		D1		D1
		D2		D2		D2		D2
		P1		P1		P1		P1
		P2		P2		P2		P2
44 19	Jack No.7	T	Jack No.15	T	Jack No.23	T	Jack No.31	T
45 20		R		R		R		R
46 21		D1		D1		D1		D1
		D2		D2		D2		D2
		P1		P1		P1		P1
		P2		P2		P2		P2
47 22	Jack No.8	T	Jack No.16	T	Jack No.24	T	Jack No.32	T
48 23		R		R		R		R
49 24		D1		D1		D1		D1
		D2		D2		D2		D2
		P1		P1		P1		P1
		P2		P2		P2		P2
50 25								

2.3.3 Extension Connection

for Digital Proprietary Telephones, Single Line Telephones and DSS Console
(KX-TD816: Jack 1 through Jack 8, KX-TD1232: Jack 1 through Jack 16)

- Notes** † “8EXTN” in the table indicates an extension expansion area for KX-TD1232. There are three expansion areas on the main unit of KX-TD1232. Up to two 8-Station Line Units and a 4-CO Line Unit can be installed to any area. It is required to designate which is 8-Station Line Unit 1 and which is 2 by system programming.
- If a telephone or answering machine with an A-A1 relay is connected to the main unit, set the A-A1 relay switch of the telephone or answering machine to OFF position.

Digital Proprietary Telephone Connection

With the KX-T7220, KX-T7230, KX-T7235, and KX-T7250 model digital proprietary telephones, 4-conductor wiring is required for each extension. Connect pins “L” and “H” only. (“A” and “B” are only needed for Paralleled Telephone or XDP operation.)

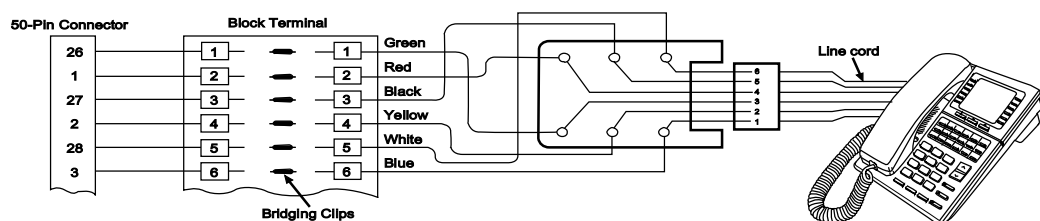
Single Line Telephone Connection

With the single line telephones, 2-conductor wiring is required for each extension. Connect pins “A” and “B”.

DSS Console Connection

A maximum of four DSS Consoles, model KX-T7240, can be installed per system. The DSS Console must be connected in parallel with any proprietary telephone. System Programming is required to designate paired jack numbers of DSS Consoles and proprietary telephones. With the KX-T7240 model DSS Console, 4-conductor wiring is required for each extension. Connect pins “L” and “H” only. (“A” and “B” are not necessary.)

Station Wiring (3-pair twisted cabling) :



2.3.3 Extension Connection

for Digital Proprietary Telephones, Single Line Telephones and DSS Console
(KX-TD816: Jack 1 through Jack 8, KX-TD1232: Jack 1 through Jack 16)

Programming References

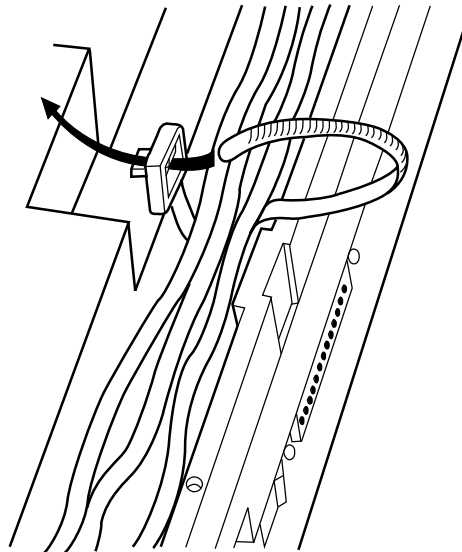
Section 4, System Programming,
[007] DSS Console Port and Paired Telephone Assignment
[109] Expansion Card / Unit Type

Feature References

Section 3, Features,
DSS Console (KX-T7240)
Module Expansion

Note

After completing all the required inside cabling, including CO lines, extensions, external pagers and external music sources, fasten the cables with the nylon tie (included) as shown.

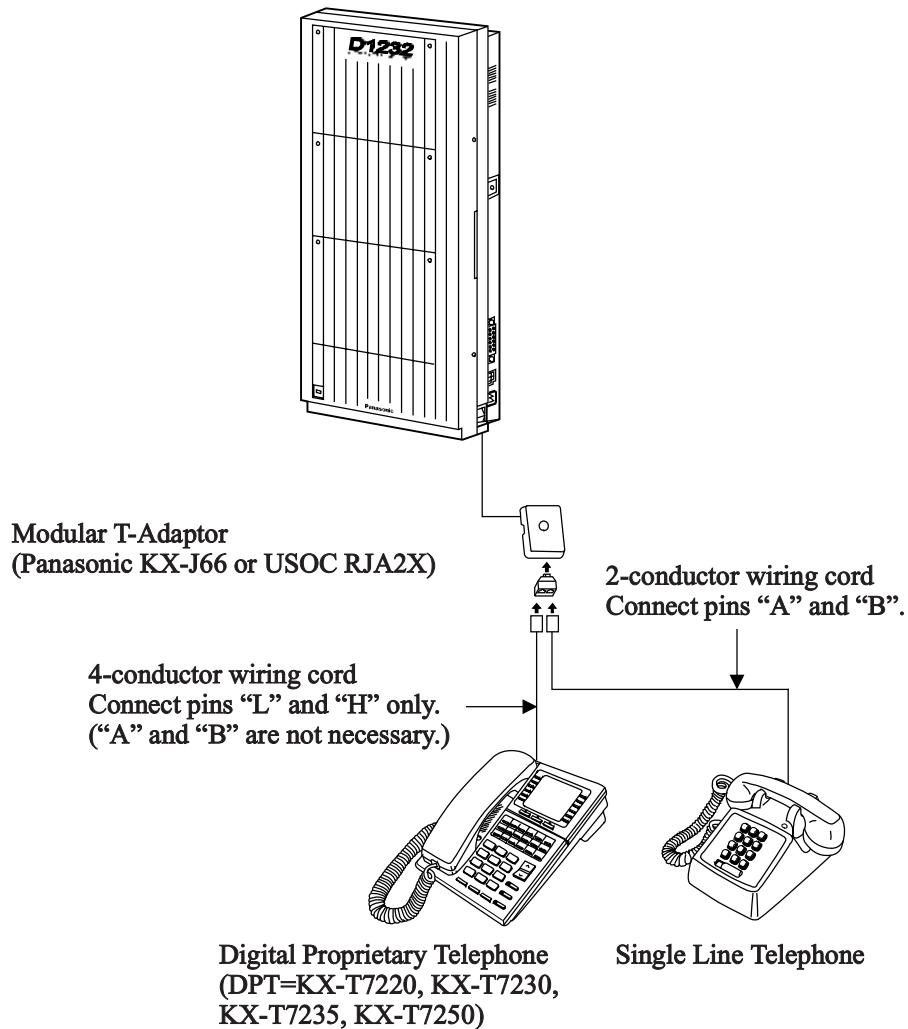


2.3.4 Paralleled Telephone Connection

for a Digital Proprietary Telephone and a Single Line Telephone

Any single line telephone can be connected in parallel with a digital proprietary telephone as follows:

Method 1: Using a Modular T-Adaptor

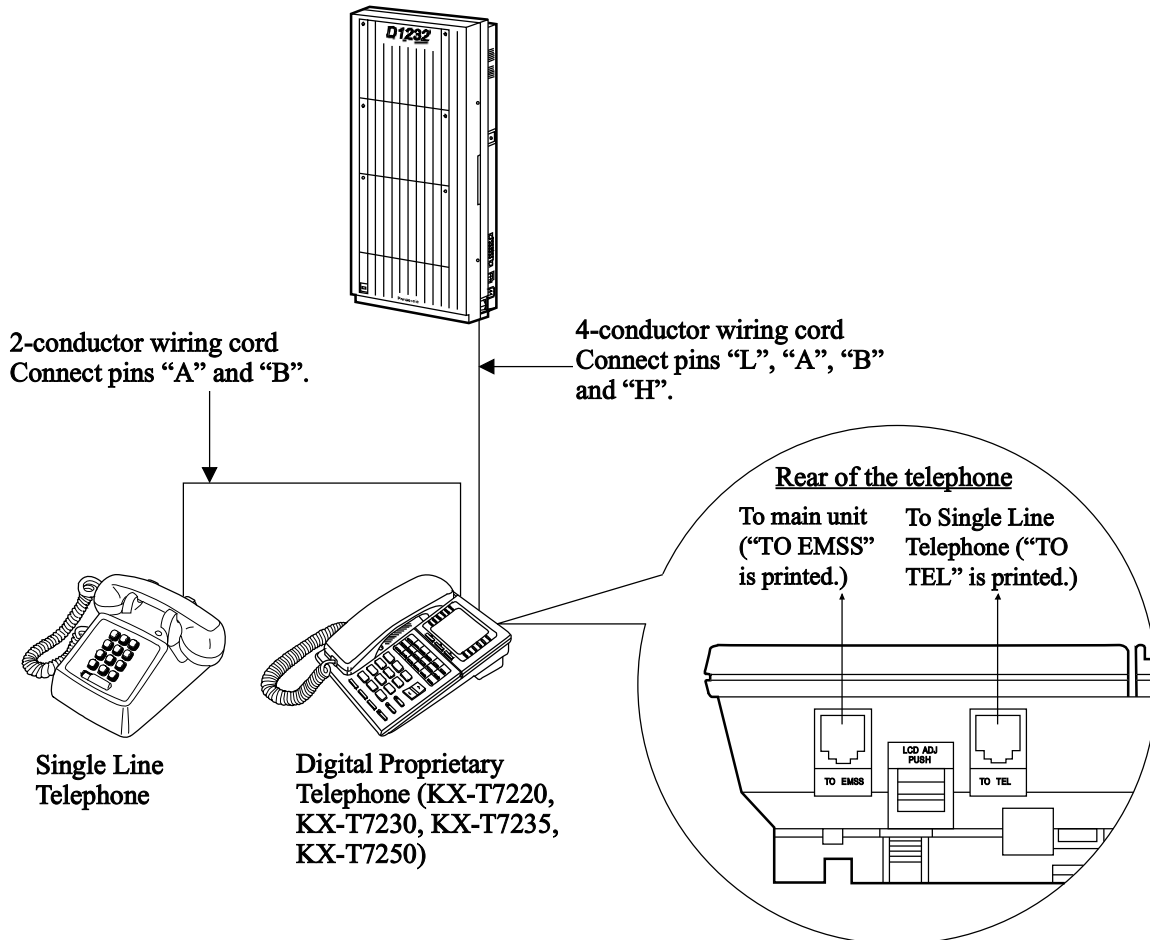


Note The KX-TD1232 is illustrated as a main unit.

2.3.4 Paralleled Telephone Connection

for a Digital Proprietary Telephone and a Single Line Telephone

Method 2: Using a "TO TEL" Jack



- Notes**
- Not only a single line telephone but a single line device such as an answering machine, a facsimile or a modem (personal computer) etc. can be connected in parallel with a digital proprietary telephone.
 - The KX-TD1232 is illustrated as a main unit.

Feature References

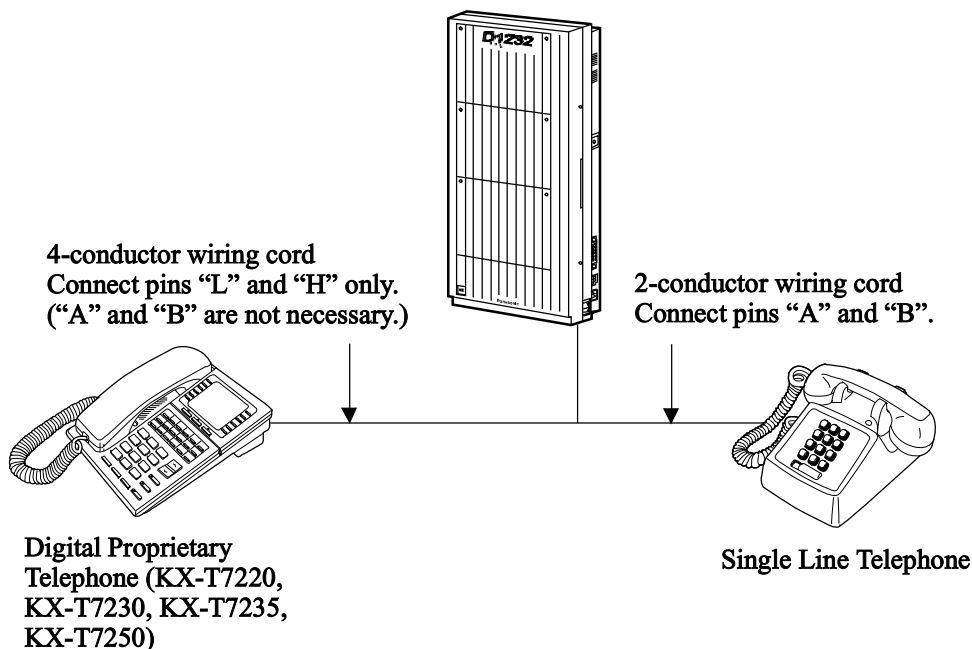
Section 3, Features,
Paralleled Telephone

2.3.5 EXtra Device Port (XDP) Connection

for a Digital Proprietary Telephone and a Single Line Telephone

With the eXtra Device Port (XDP) connection, a digital proprietary telephone (KX-T7220, KX-T7230, KX-T7235, or KX-T7250) and a single line telephone can be connected to the same extension jack and have different extension numbers. System programming is required.

A single line telephone and a digital proprietary telephone are connected to the main unit by 2-conductor and 4-conductor wiring cords.



Note The KX-TD1232 is illustrated as a main unit.

Programming References

Section 4, System Programming,
[600] EXtra Device Port

Feature References

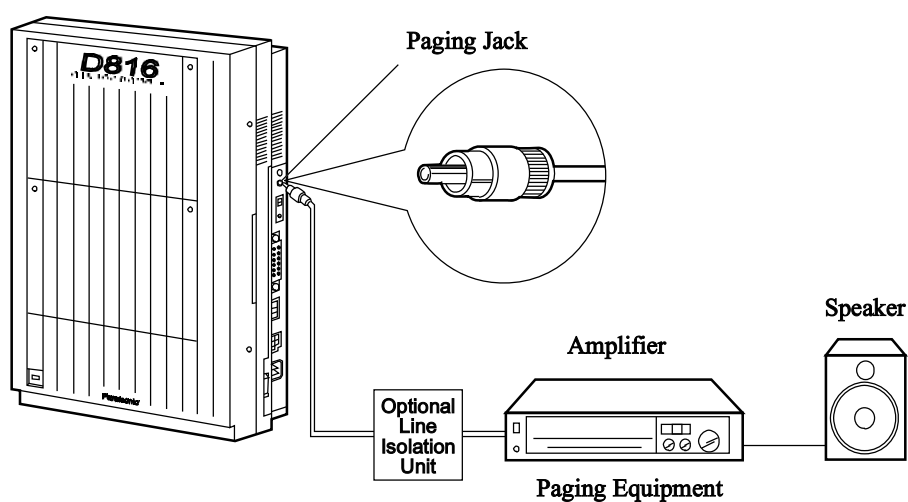
Section 3, Features,
EXtra Device Port (XDP)

2.3.6 External Pager Connection

KX-TD816

One external pager (user-supplied) can be connected to KX-TD816 as illustrated below. Use an RCA connector and shielded cable. To adjust the sound level of the pagers, use the volume control on the amplifiers.

- Output impedance: 600 Ω

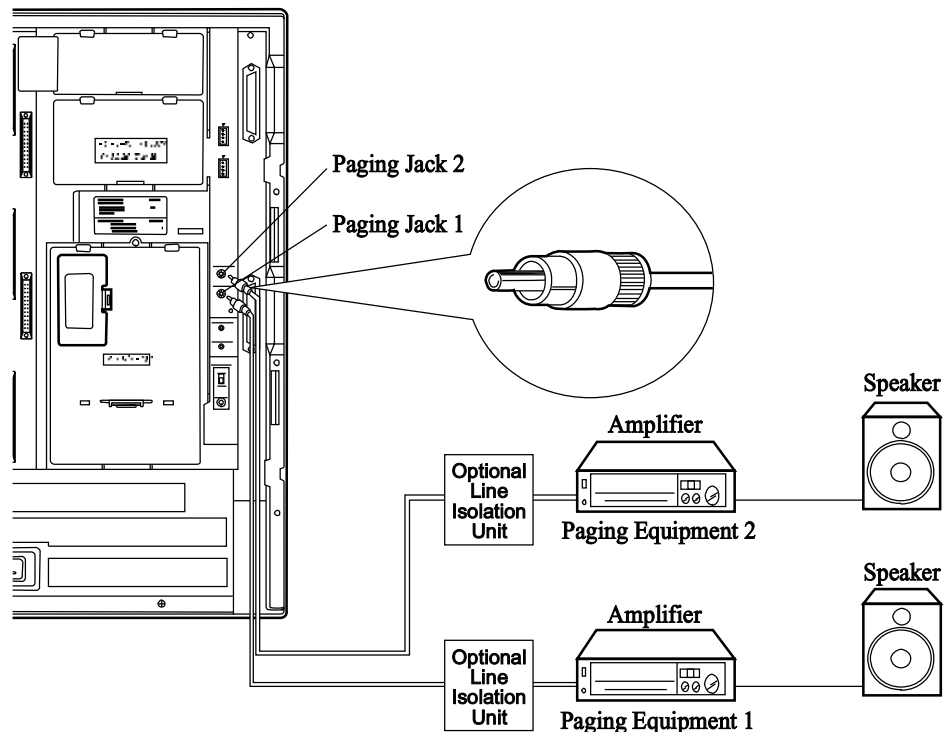


2.3.6 External Pager Connection

KX-TD1232

Up to two external pagers (user-supplied) can be connected to KX-TD1232 per system as illustrated below. You can program the external pager that will send background music and determine whether both pagers will generate a confirmation tone. Use an RCA connector and shielded cable. To adjust the sound level of the pagers, use the volume control on the amplifiers.

- Output impedance: 600 Ω



Note It is an Austel requirement that an optional Line Isolation Unit, obtainable from your installer, be fitted between the Paging jack and the Paging equipment.

Programming References

Section 4, System Programming,
[804] External Pager BGM
[805] External Pager Confirmation Tone

Feature References

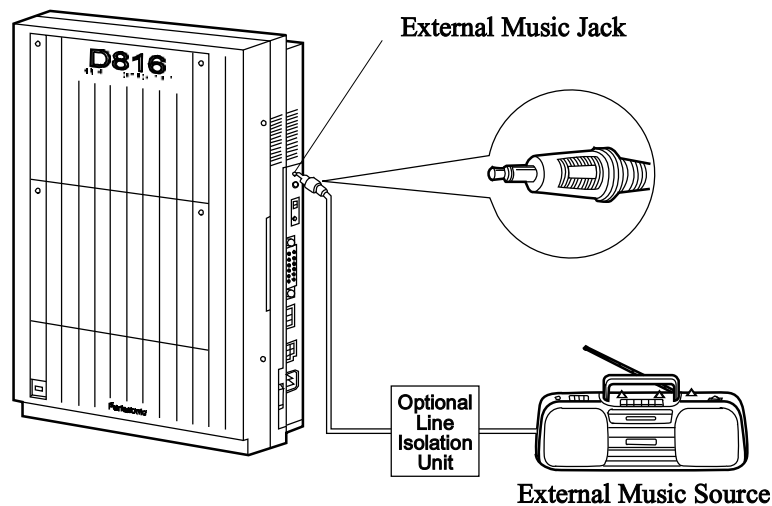
Section 3, Features,
Background Music (BGM) – External Paging – External
Paging – All
Trunk (CO Line) Answer From Any Station (TAFAS)

2.3.7 External Music Source Connection

KX-TD816

One music source such as a radio (user-supplied) can be connected to KX-TD816 as illustrated below. Use a two-conductor plug (3.5 mm in diameter). Insert the plug to the earphone / headphone jack on the external music source.

- Input impedance: 8 k Ω

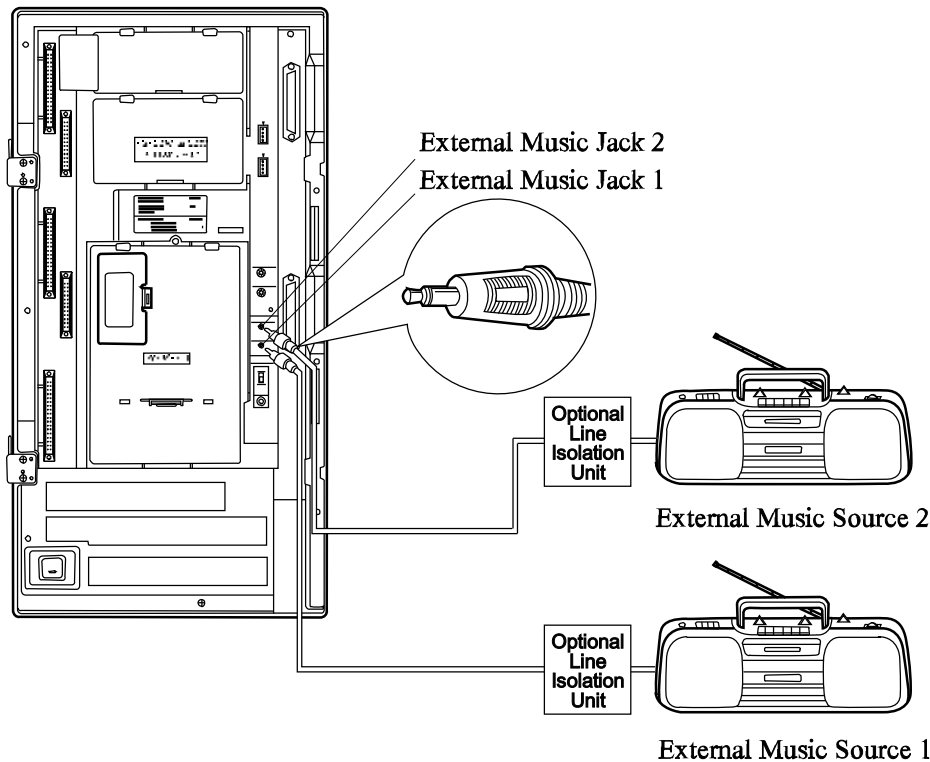


2.3.7 External Music Source Connection

KX-TD1232

Up to two music sources such as a radio (user-supplied) can be connected to KX-TD1232 per system as illustrated below. Use a two-conductor plug (3.5 mm in diameter). Insert the plug to the earphone / headphone jack on the external music source.

- Input impedance: 8 k Ω



- Notes**
- System Programming of music sources used for Music on Hold and Background Music is required.
 - To adjust the sound level of the Music on Hold, use the volume control on the external music source.
 - It is an Austel requirement that an optional Line Isolation Unit, obtainable from your installer, be fitted between the External Music Jack and the external Music Source.

Programming References

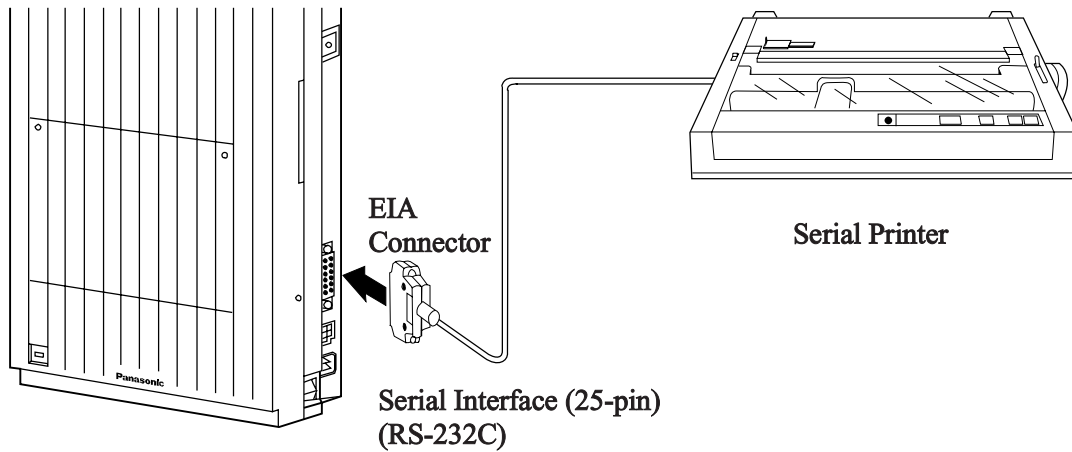
Section 4, System Programming,
[803] Music Source Use
[990] System Additional Information, Field (20)

Feature References

Section 3, Features,
Background Music (BGM) Background Music (BGM) – External
Music on Hold

2.3.8 Printer Connection

A user-supplied printer can be connected to the EIA (RS-232C) connector (25-pin) on the main unit. The printer is used to print out SMDR call records and system programming data. Connect the EIA (RS-232C) printer connector to the EIA connector. Cables must be shielded; the maximum length is 2 m.



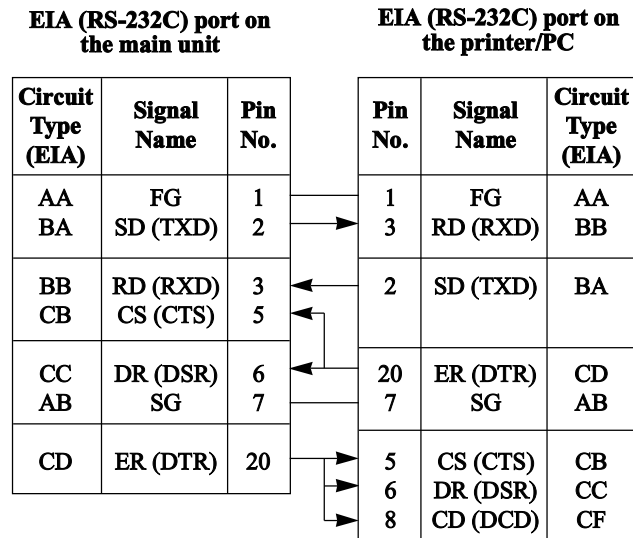
Note The KX-TD1232 is illustrated as a main unit.

The pin configuration of EIA (RS-232C) connector is as follows:

Pin No.	Signal Name		Circuit Type	
			EIA	CCITT
1	FG	Frame Ground	AA	101
2	SD (TXD)	Transmitted Data	BA	103
3	RD (RXD)	Received Data	BB	104
4	RS (RTS)	Request To Send	CA	105
5	CS (CTS)	Clear To Send	CB	106
6	DR (DSR)	Data Set Ready	CC	107
7	SG	Signal Ground	AB	102
8	CD (DCD)	Data Carrier Detect	CF	109
20	ER (DTR)	Data Terminal Ready	CD	108.2

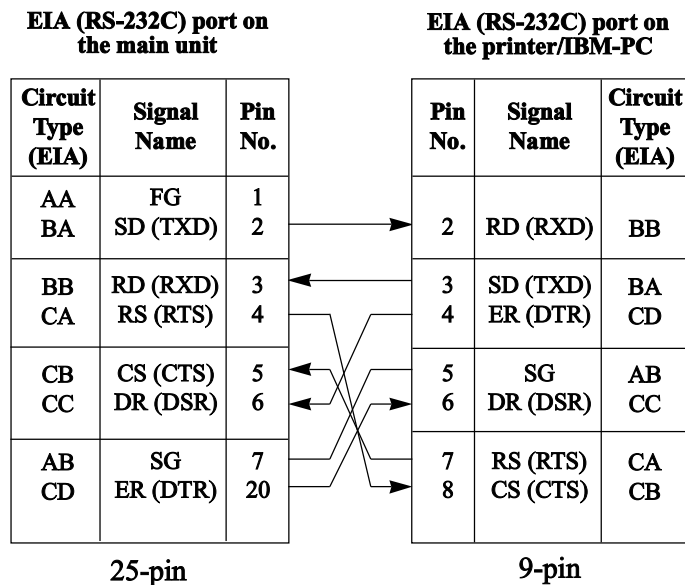
2.3.8 Printer Connection

Printer / Personal Computer (25-pin) Connection Chart



Printer / IBM Personal Computer (9-pin) Connection Chart

If you connect an IBM-PC or printer with 9-pin EIA (RS-232C) connector to your system, see the chart below.



Note Please read your printer manual and connect the first EIA pin (FG) of this unit to the printer cable.

2.3.8 Printer Connection

EIA (RS-232C) Signals

Frame Ground: FG

Connects to the unit frame and the earth ground conductor of the AC power cord.

Transmitted Data: SD (TXD)(output)

Conveys signals from the unit to the printer. A "Mark" condition is held unless data or break signals are being transmitted.

Received Data: RD (RXD)(input)

Conveys signals from the printer.

Request to Send: RS (RTS).....(output)

This lead is held 'ON' whenever CR (DSR) is 'ON'.

Clear To Send: CS (CTS).....(input)

An 'ON' condition of the CS (CTS) circuit indicates that the printer is ready to receive data from the unit. The unit does not attempt to transfer data or receive data when the CS (CTS) circuit is 'OFF'.

Data Set Ready: CR (DSR).....(input)

An 'ON' condition of the CR (DSR) circuit indicates that the printer is ready. An 'ON' condition does not indicate that communication has been established with the printer.

Signal Ground: SG

Connects to the DC ground of the unit for all interface signals.

Data Terminal Ready: ER (DTR)(output)

This signal line is turned on by the unit to indicate that it is online. The 'ON' condition does not indicate that communication has been established with the printer. The signal line is switched 'OFF' when the unit is offline.

Data Carrier Detect: CD (DCD)(input)

The ON condition is an indication to data terminal (DTE) that the carrier signal is being received.

Programming References

Section 4, System Programming,

[800] SMDR Incoming / Outgoing Call Log Printout

[801] SMDR Format

[802] System Data Printout

[806]-[807] EIA (RS-232C) Parameters – Port 1 / Port 2

Feature References

Section 3, Features,

Station Message Detail Recording (SMDR)

System Programming and Diagnosis with Personal Computer

2.4 Optional Cards and Units Installation

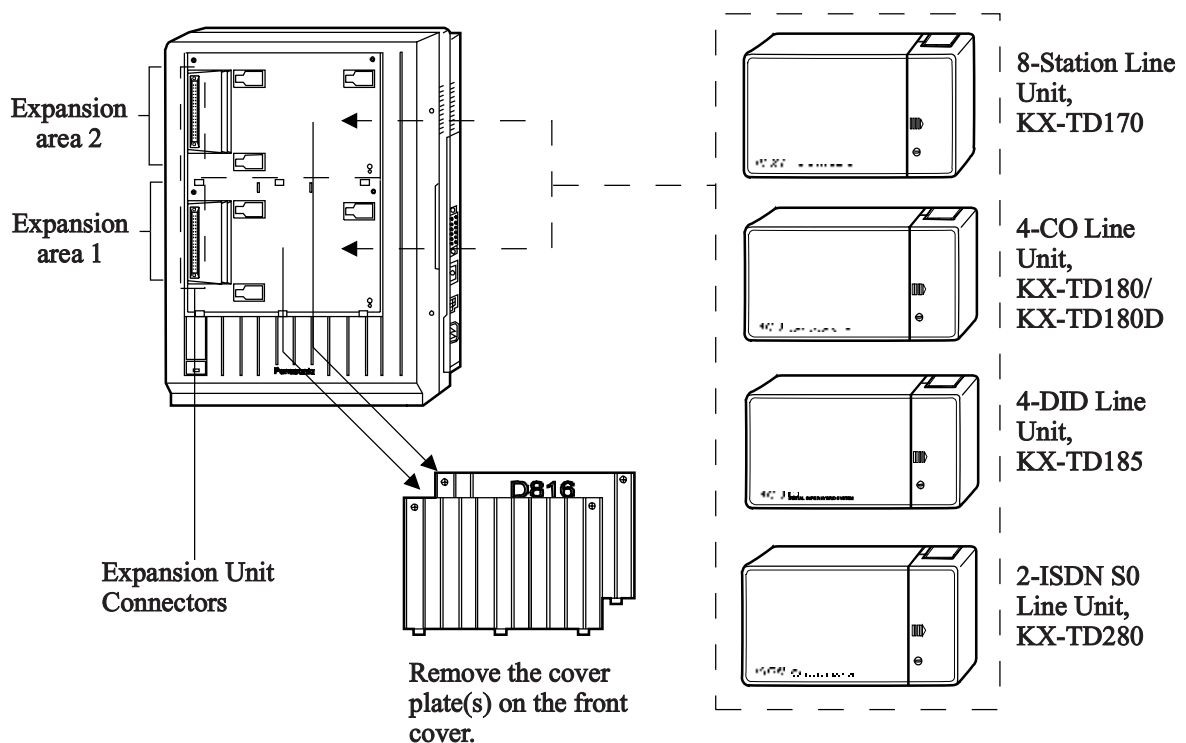
2.4.1 Location of Optional Cards and Units

Precaution The location of the optional cards and units is shown below. To protect the printed circuit boards (P-boards) from static electricity, do not touch parts on the P-boards in the main unit and on the optional cards and units.

Expansion Units

KX-TD816

One 8-Station Line Unit (KX-TD170) and / or one of 4-CO Line Unit (KX-TD180/KX-TD180D), 4-DID Line Unit (KX-TD185) or 2-ISDN S0 Line Unit (KX-TD280) can be installed to any of the two expansion areas.

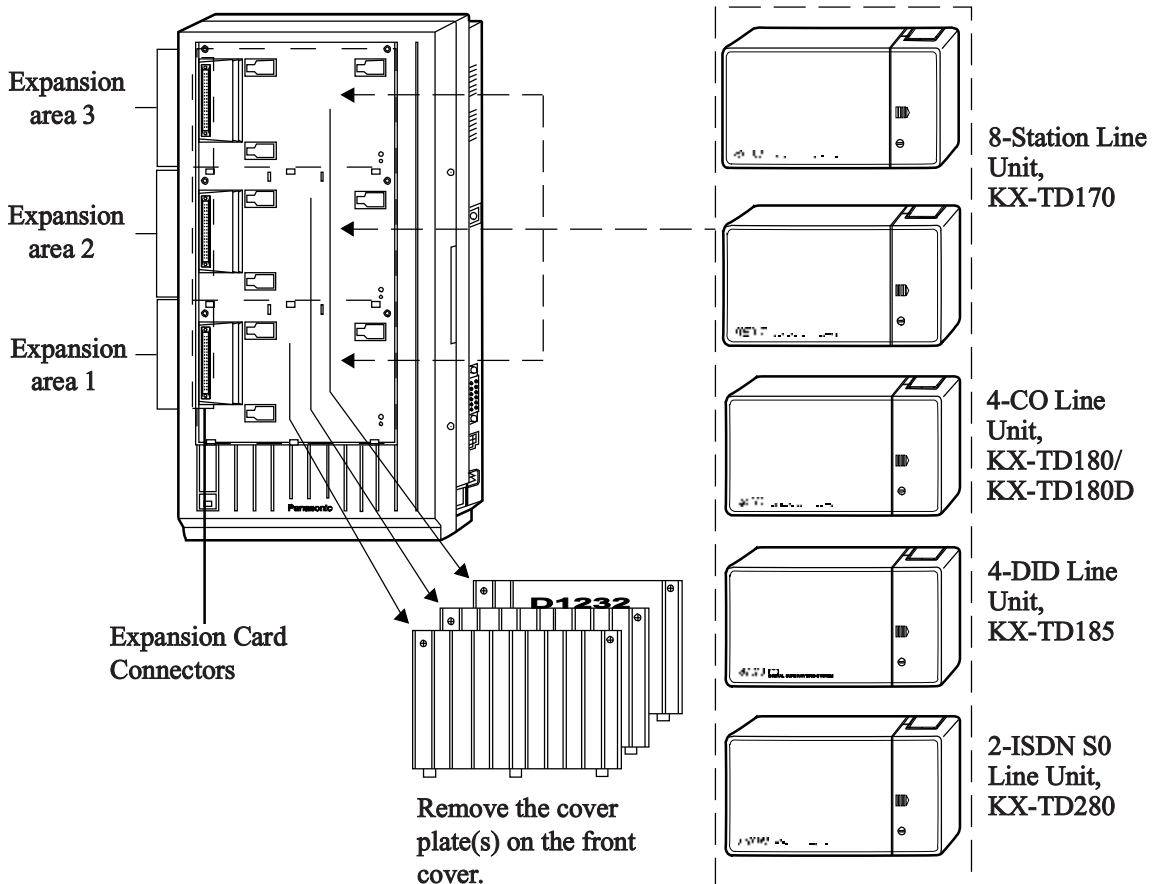


Note System Programming is required for expansion unit location. Refer to Section 4.3 [109] "Expansion Card / Unit Type."
Default : Area 1 = 4-CO Line Unit,
Area 2 = 8-Station Line Unit.

2.4.1 Location of Optional Cards and Units

KX-TD1232

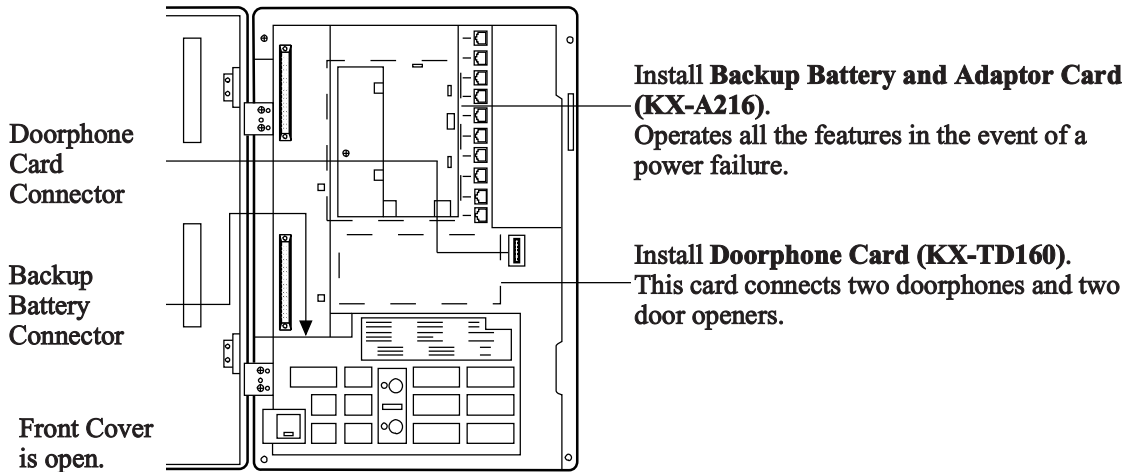
A maximum of two 8-Station Line Units (KX-TD170) and / or one of 4-CO Line Unit (KX-TD180/KX-TD180D), 4-DID Line Unit (KX-TD185) or 2-ISDN S0 Line Unit (KX-TD280) can be installed to any of the three expansion areas.



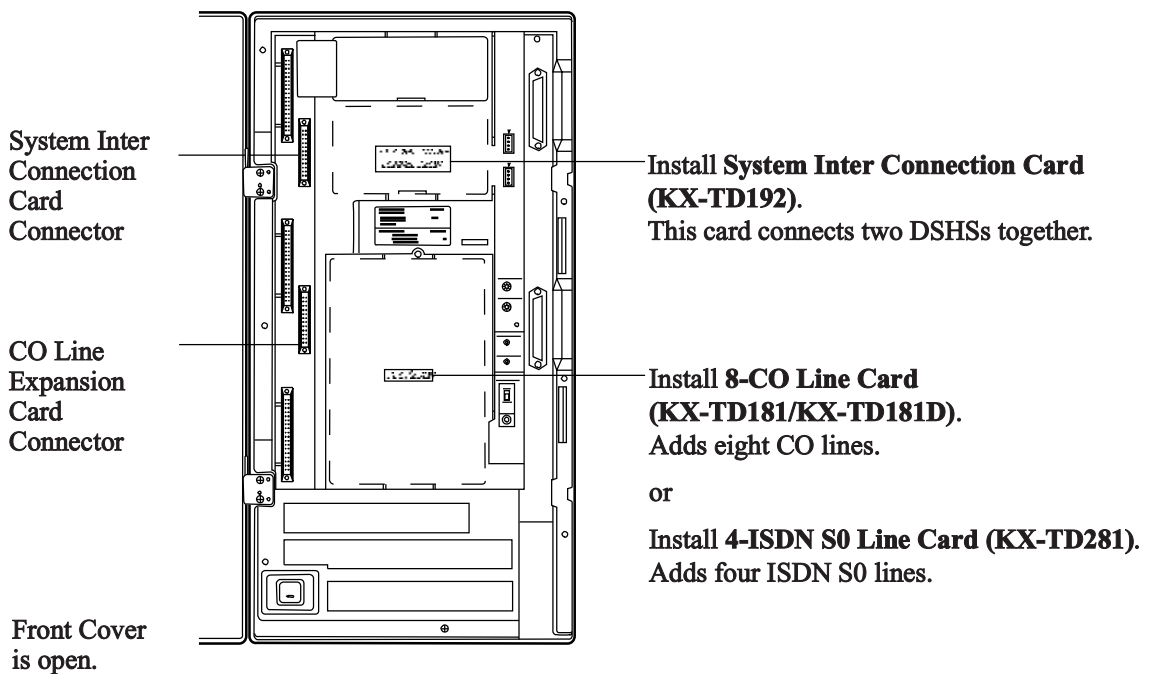
Note System Programming is required for expansion unit location. Refer to Section 4.3 [109] "Expansion Card / Unit Type."
Default : Area 1 = 4-CO Line Unit,
Area 2, 3 = 8-Station Line Unit.

2.4.1 Location of Optional Cards and Units

Backup Battery and Adaptor Card / Doorphone Card for KX-TD816



System Inter Connection Card / 8-CO Line Card / 4-ISDN S0 Line Card for KX-TD1232



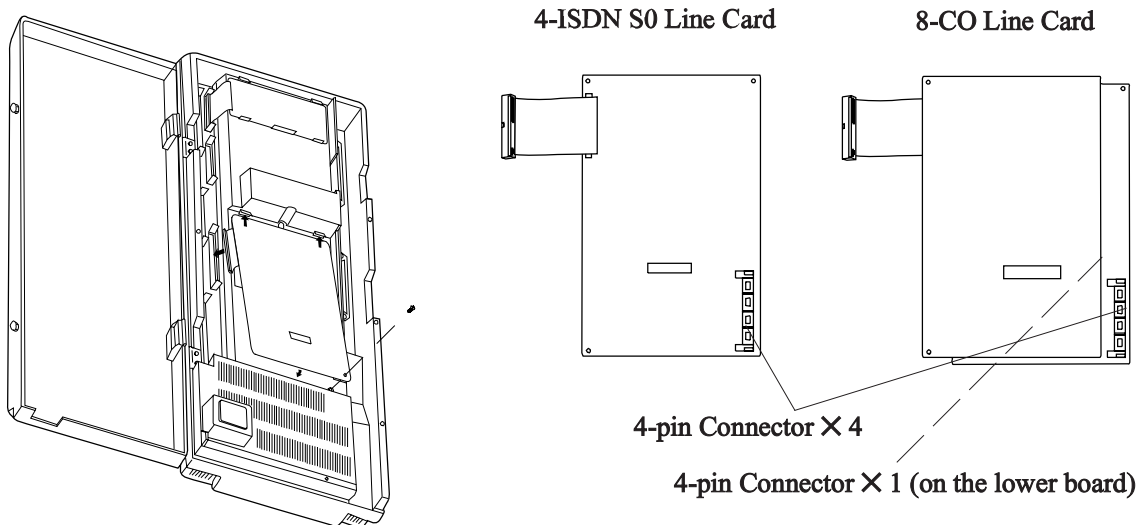
2.4.2 CO Line Connection (KX-TD1232: CO1 through CO8)

Card Installation

To connect CO 1 through CO 8 to KX-TD1232, install the optional 8-CO Line Card (KX-TD181/KX-TD181D).

To connect four ISDN S0 lines to KX-TD1232, install the optional 4-ISDN S0 Line Card (KX-TD281).

1. Insert the upper end of the 8-CO Line Card or 4-ISDN S0 Line Card into the two hooks on the main unit.
2. Press the two corners at the lower end of the Card.
3. Fix the card with an accessory screw at the lower-right corner.
4. Connect the cord to the connector.



Wire Specifications

In making a CO line connection, use twisted pair cable for installation. The wire specifications for CO lines are as follows:

Wire	Solid wire
Diameter of conductor	ø 0.4 – ø 0.65 mm
Diameter including coating	ø 0.66 – ø 1.05 mm

- Note**
- In case of starting the system for the first time or System Data Clear, the application for location will adapt the practical installation instead of system default setting.
 - System Programming is required for location identification. Refer to Section 4, [109] “Expansion Card / Unit Type.”
Default: 8-CO Line Card

2.4.2 CO Line Connection (KX-TD1232: CO1 through CO8)

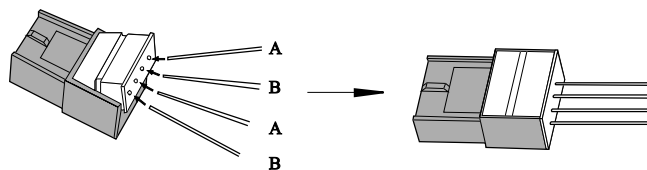
8-CO Line Connection with KX-TD181/KX-TD181D

Use 4-pin plugs (included) to connect CO lines. There are four plugs to connect eight CO lines. A single plug is able to connect two CO lines. Mis-connection may cause the system to operate improperly. See Section 6.1.2 “Connection” before connection.

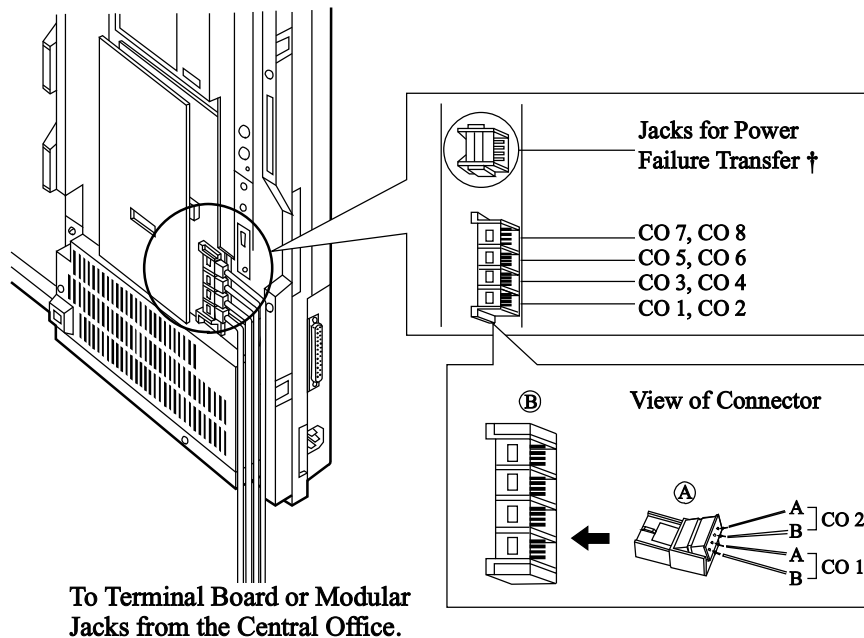
1. Insert required telephone wires into the holes in a plug.
Fix the transparent part into the black part.

Note: Do not strip the wires. Insert the wires all the way into the plug.

4-pin plug



2. Insert the plug (A) into a CO jack (B) on the card.



† For details, refer to Section 2.5 “Power Failure Transfer Connection.”

2.4.2 CO Line Connection (KX-TD1232: CO1 through CO8)

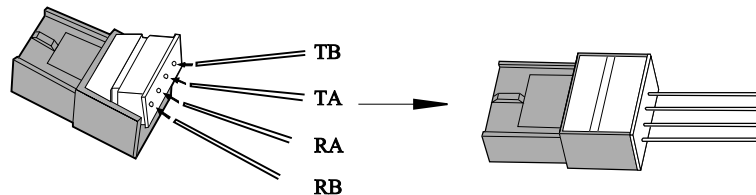
4-ISDN S0 Line Connection with KX-TD281

Use 4-pin plugs (included) to connect ISDN S0 lines. There are four plugs to connect four ISDN S0 lines. A single plug is able to connect one ISDN S0 line. Mis-connection may cause the system to operate improperly. See Section 6.1.2 "Connection" before connection.

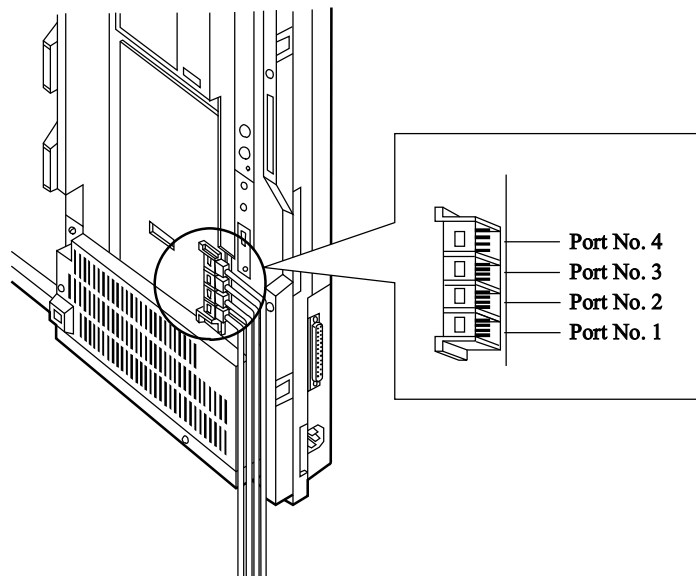
1. Insert required telephone wires into the holes in a plug.
Fix the transparent part into the black part.

Note: Do not strip the wires. Insert the wires all the way into the plug.

4-pin plug



2. Insert the plug into an ISDN port on the card.



To Terminal Board or Modular
Jacks from the Central Office.

2.4.3 Lightning Protector Installation

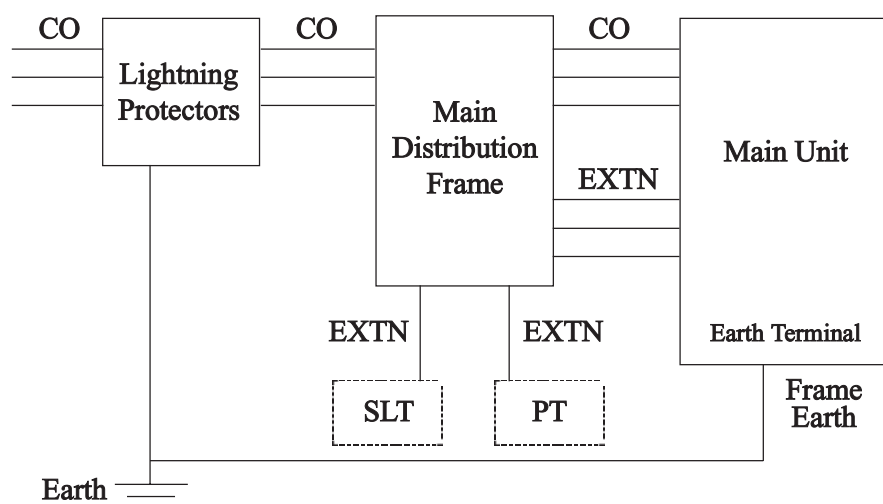
A lightning protector is a device to be installed on a CO line to prevent a dangerous surge from entering the building and damaging equipment.

A dangerous surge can occur if a telephone line comes in contact with a power line. Troubles due to lightning surges have been showing a steady increase with the development of electronic equipment.

In many countries, there are regulations requiring the installation of a lightning protector. A lightning strike to a telephone cable which is 10 m above ground can be as high as 200,000 volts.

This system should be installed with lightning protectors. In addition, connection to earth ground is very important for the protection of the system.

Installation Diagram

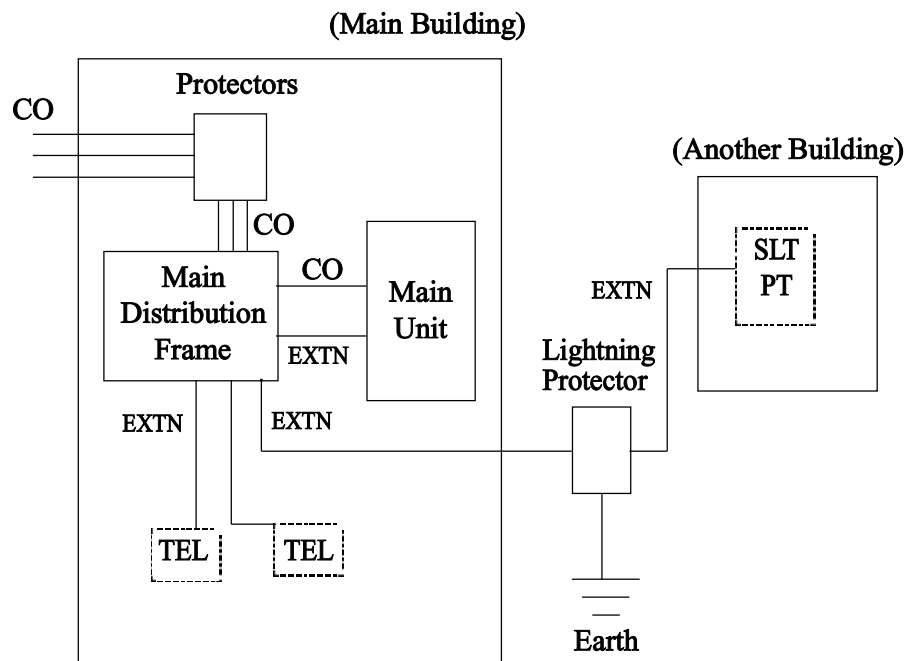


2.4.3 Lightning Protector Installation

Outside Installation Diagram

If you install an extension outside of the main building, the following precautions are recommended:

- (1) Install the extension wire underground.
- (2) Use a conduit to protect the wire.

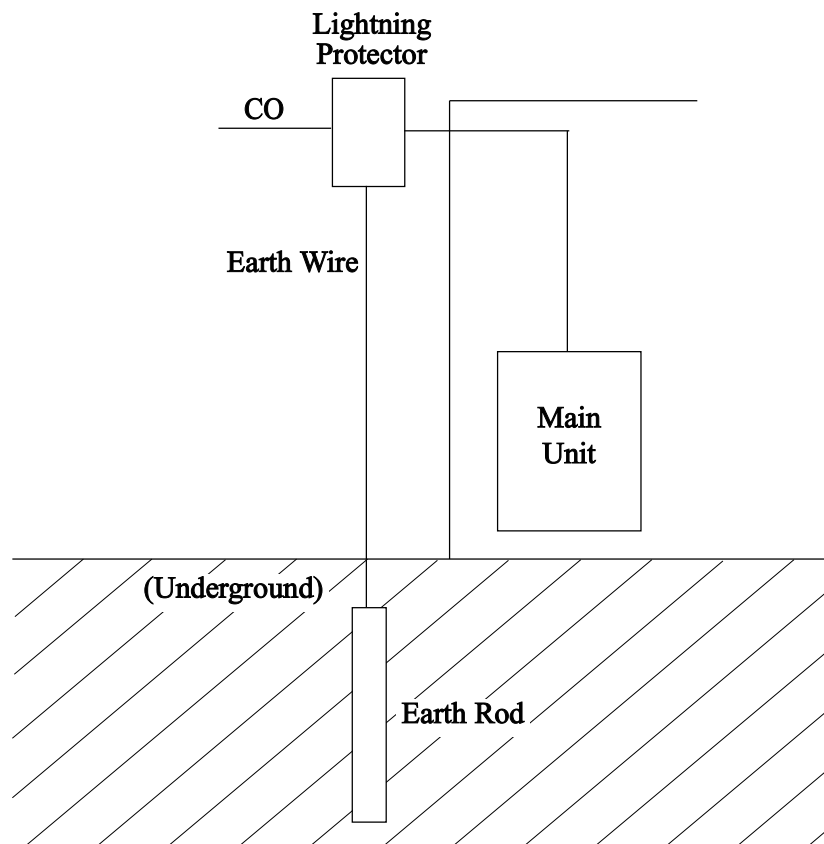


Note The lightning protector for an extension is different from that for CO.

2.4.3 Lightning Protector Installation

Earth Rod Installation Diagram

The length of earth rod and the required depth depend on the composition of the soil. Consider the following recommendations:



- 1) Installation location of the earth rod.....Near the protector
- 2) Check obstructions.....None
- 3) Composition of the earth rodMetal
- 4) Depth of the earth rodMore than 50 cm
- 5) Size of the earth wireThickness is more than 1.6 mm

2.4 Optional Cards and Units Installation

2.4.4 8-Station Line Unit Connection

To add eight extensions (KX-TD816: jacks 9 through 16, KX-TD1232: jacks 17 through 24), use the optional 8-Station Line Unit (KX-TD170).

To add 16 extensions for KX-TD1232 (jacks 17 through 32), use two KX-TD170s.

This unit can be installed in any of the expansion areas provided on the front of the main unit.

For the unit installation, see Section 2.4.8 “Installing Expansion Unit (KX-TD170/KX-TD180(D)/KX-TD185/KX-TD280).”

2.4.5 4-CO Line Unit Connection

To add four CO lines (KX-TD816: CO 5 through CO 8, KX-TD1232: CO 9 through CO 12), use the optional 4-CO Line Unit (KX-TD180/KX-TD180D). This unit can be installed in any of the expansion areas provided on the front of the main unit.

For the unit installation, see Section 2.4.8 “Installing Expansion Unit (KX-TD170/KX-TD180(D)/KX-TD185/KX-TD280).”

2.4.6 4-DID Line Unit Connection

To add four DID lines (KX-TD816: CO 5 through CO 8, KX-TD1232: CO 9 through CO 12), use the optional 4-DID Line Unit (KX-TD185). This unit can be installed in any of the expansion areas provided on the front of the main unit.

For the unit installation, see Section 2.4.8 “Installing Expansion Unit (KX-TD170/KX-TD180(D)/KX-TD185/KX-TD280).”

2.4.7 2-ISDN S0 Line Unit Connection

To add two ISDN S0 lines (KX-TD816: ISDN 1 and ISDN 2, KX-TD1232: ISDN 5 and ISDN 6), use the optional 2-ISDN S0 Line Unit (KX-TD280). This unit can be installed in any of the expansion areas provided on the front of the main unit.

For the unit installation, see Section 2.4.8 “Installing Expansion Unit (KX-TD170/KX-TD180(D)/KX-TD185/KX-TD280).”

2.4.8 Installing Expansion Unit (KX-TD170 / KX-TD180(D) / KX-TD185 / KX-TD280)

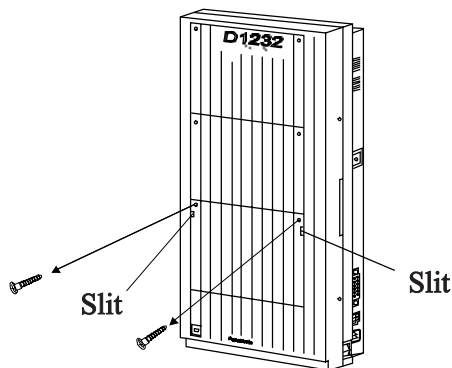
The following procedures can be used to install either 8-Station Line Unit (KX-TD170), 4-CO Line Unit (KX-TD180/KX-TD180D), 4-DID Line Unit (KX-TD185) or 2-ISDN S0 Line Unit (KX-TD280). System programming is required for unit location identification.

Default KX-TD816: bottom = 4-CO Line Unit,
top = 8-Station Line Unit

KX-TD1232: bottom = 4-CO Line Unit,
middle and top = 8-Station Line Unit

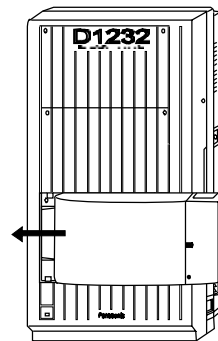
Note The KX-TD1232 is illustrated as a main unit.

1. Loosen the two the screws on the cover plate. Insert fingers into the slits to remove the cover plate.

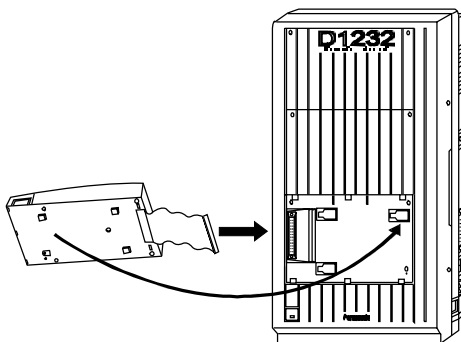


Note Any of the cover plates can be removed, as needed.

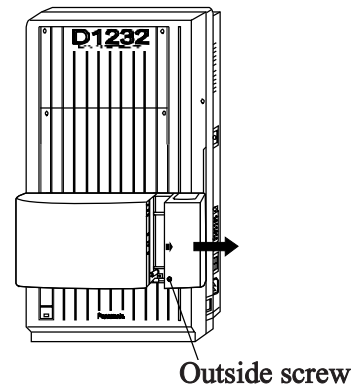
3. Hook the cabinet to the main unit and slide the cabinet to the left until it is fixed.



2. Connect the cabinet cord to the connector in the main unit firmly.

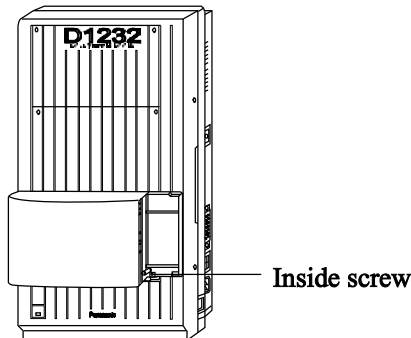


4. Loosen the outside screw and slide the cover to the right.



2.4.8 Installing Expansion Unit (KX-TD170 / KX-TD180(D) / KX-TD185 / KX-TD280)

5. Secure the inside screw (include) to fix the cabinet to the main unit.



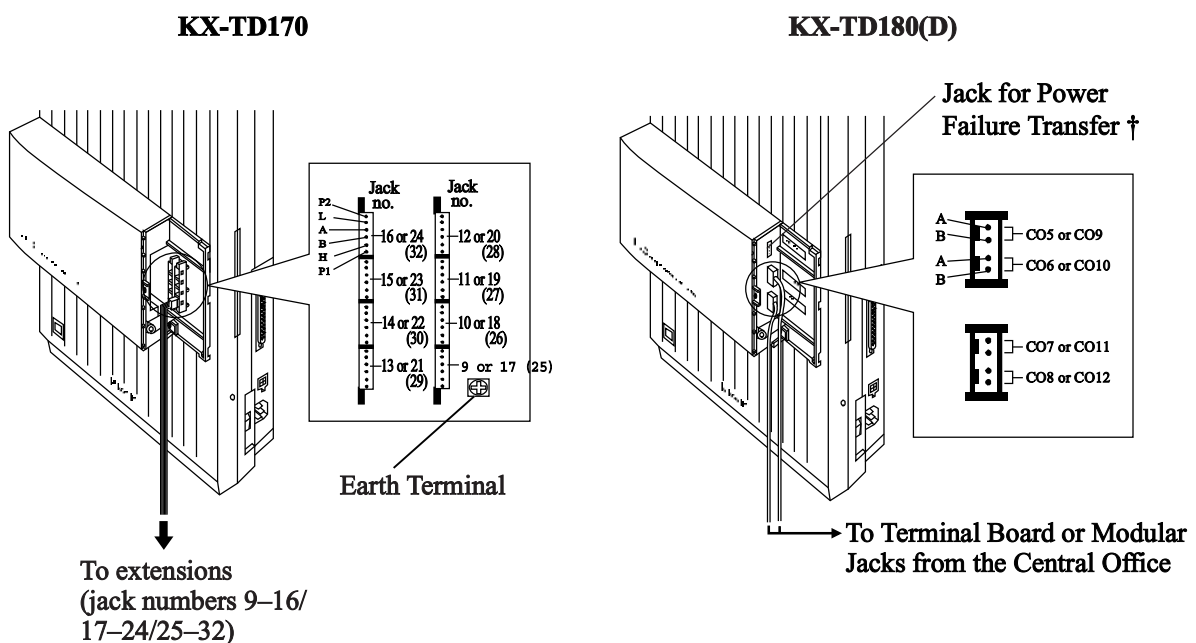
Note Be sure to fix the inside screw to the main unit, or the unit may not work properly.

6. Prepare the required plugs. Two 4-pin plugs are included in KX-TD180(D) or KX-TD280 to connect four CO lines. Eight 6-pin plugs are included in KX-TD170 to connect eight extensions.

- To prepare a 4-pin plug for KX-TD180(D), perform step 1 on page 2-32.
- To prepare a 4-pin plug for KX-TD280, perform step 1 on page 2-33.
- To prepare a 6-pin plug for KX-TD170, perform step 1 on page 2-15.

7. Insert the plug into a jack on the unit.

Connect an earth wire to the earth terminal on the extension expansion unit.

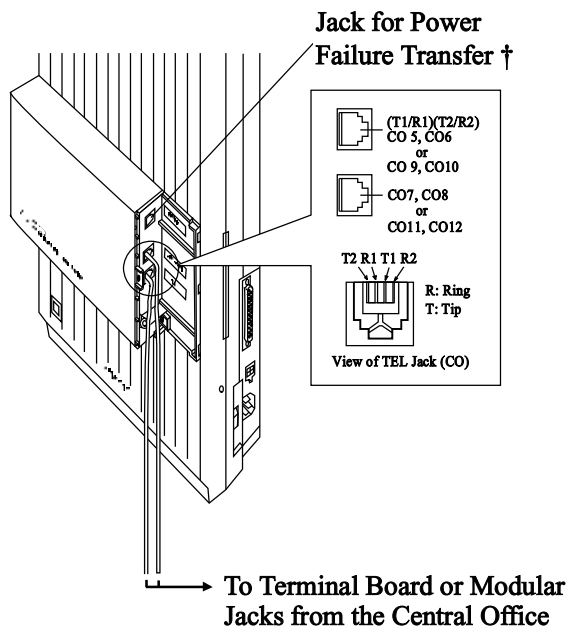


† For details, refer to Section 2.5 “Power Failure Transfer Connection.”

2.4.8 Installing Expansion Unit (KX-TD170 / KX-TD180(D) / KX-TD185 / KX-TD280)

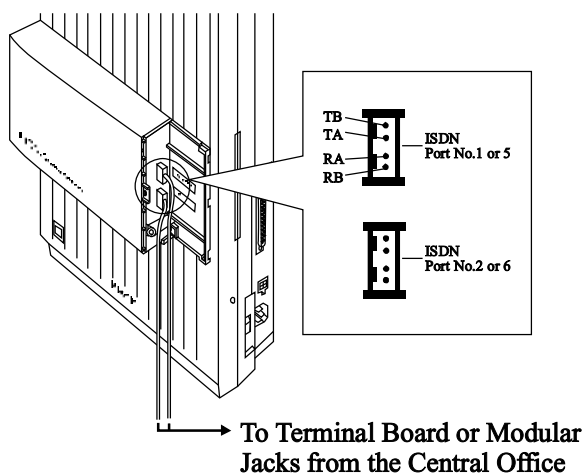
7. (Continued)

KX-TD185



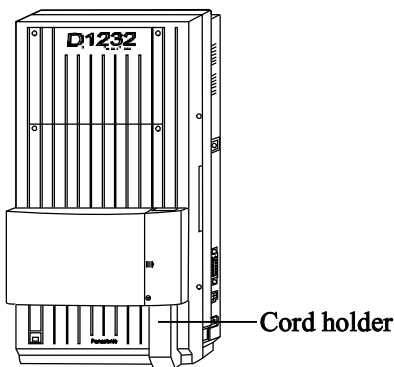
† For details, refer to Section 2.5 “Power Failure Transfer Connection.”

KX-TD280

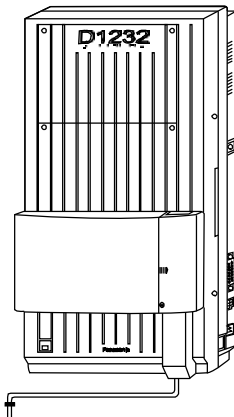


2.4.8 Installing Expansion Unit (KX-TD170 / KX-TD180(D) / KX-TD185 / KX-TD280)

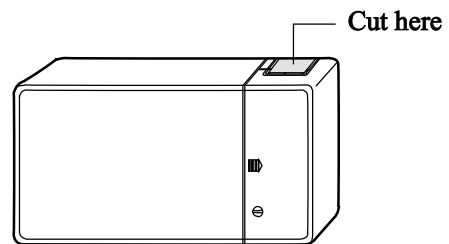
8. Tie all of the cords into a bundle. If other cords are exposed in the upper cabinets, tie them also.
9. Close the cabinet cover and secure the outside screw.
10. Cover the cords with the cord holder (included).



11. Fix the cords to the wall as shown so that the front cover can be opened.



- Notes**
- If two or three expansion units are installed, cut the cabinet covers on the lower cabinets to allow the cords from the upper cabinet to go down through the cabinet covers. To protect the cords, smooth the cut edges.



Programming References

Section 4, System Programming,
[109] Expansion Card / Unit Type

Feature References

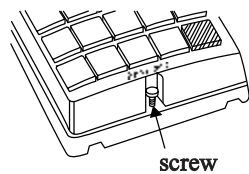
Section 3, Features,
Module Expansion

2.4.9 Doorphone and Door Opener Connection

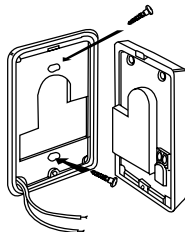
A maximum of two doorphones (KX-T30865) and two door openers (user-supplied) is permitted. A Doorphone Card (KX-TD160) is required for KX-TD816.

Installing the Doorphone



1. Loosen the screw to separate the doorphone into two halves.



2. Install the base cover to the wall with two screws.

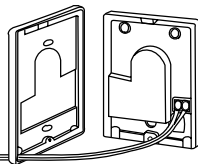


Note Two kinds of screws are included. Please choose an appropriate one depending on your wall type:

-  — Type 1: When the doorphone plate has been fixed to the wall.
-  — Type 2: When you wish to install the doorphone directly to the wall.

3. Connect the wires from the terminal box to the screws located in the front cover.

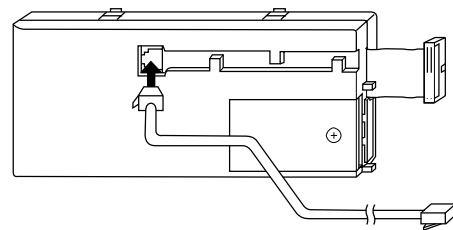
To the terminal box (See the following page.) ←



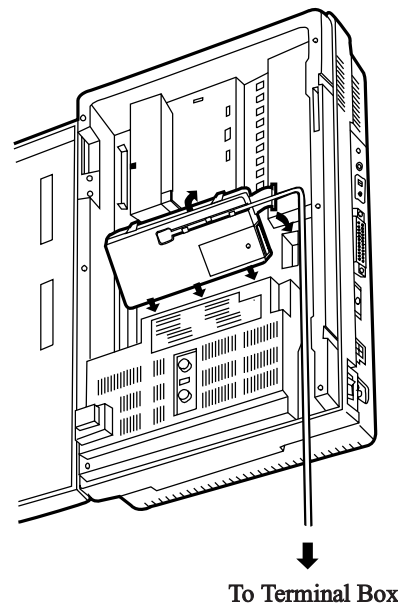
4. Secure both halves together and re-install the screw.

Doorphone Card Installation

1. Connect a 4-conductor modular connector to the Doorphone Card Cabinet, and pass the cord through the groove on the cabinet.



2. Attach the Doorphone Card Cabinet to the main unit and press it down.
3. Connect the cord to the Doorphone Card Connector.

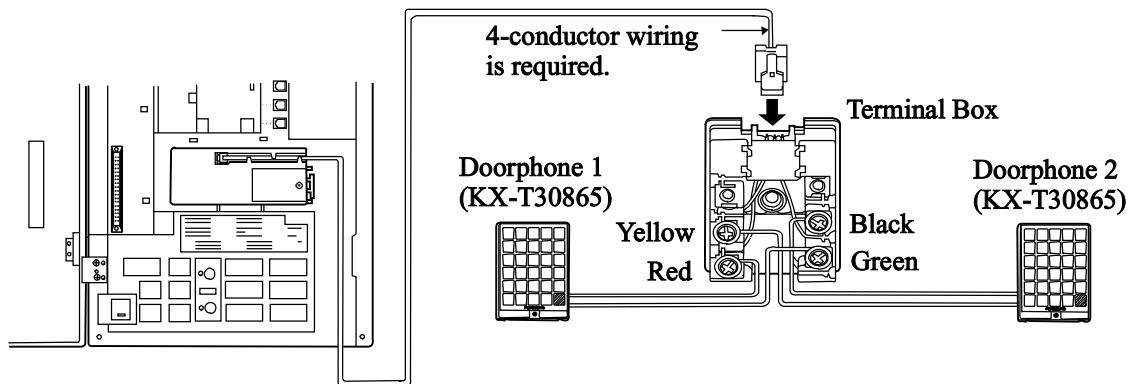


2.4.9 Doorphone and Door Opener Connection

2. Connection for KX-TD816

Wiring of the Doorphone

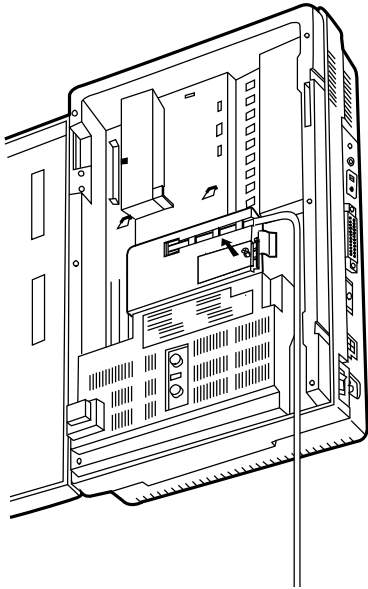
1. Connect the Doorphone Card to the terminal box using a 4-conductor modular connector.
2. Connect the wires of doorphone 1 to the red and green screws of the terminal box.
3. Connect the wires of doorphone 2 to the yellow and black screws of the terminal box.



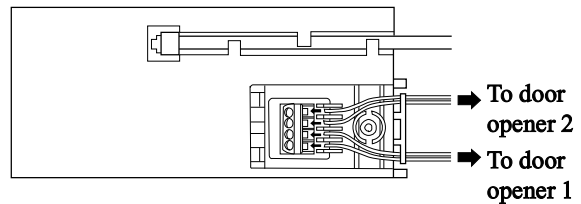
2.4.9 Doorphone and Door Opener Connection

Connecting Door Openers

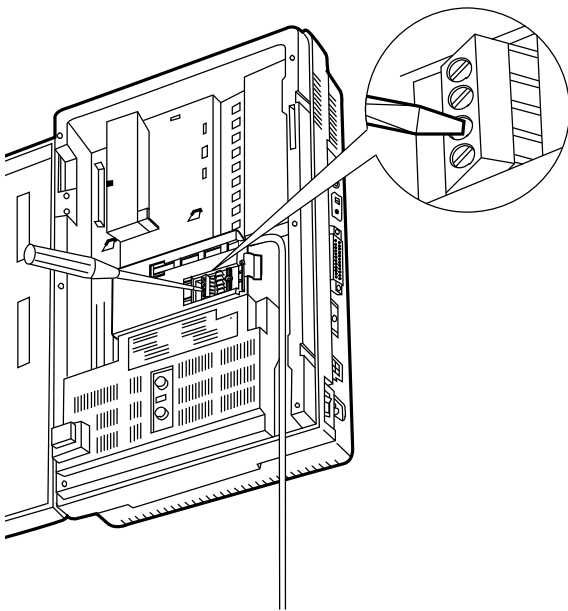
1. Loosen the screw to remove the cover.



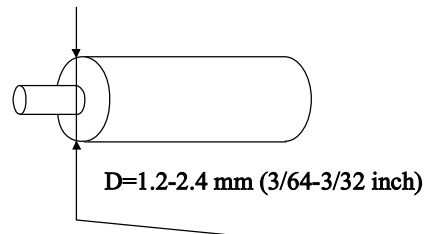
3. Insert the wires coming from the door openers into holes and tighten the screws.



2. Loosen the screws.



- Notes**
- For wiring, it is recommended to use UL 1015, AWG 22 twisted wire or the equivalent.
 - The wire should be between 1.2 and 2.4 mm (3/64 and 3/32 inch) in diameter including the coating.



- Set the door opener paired with the doorphone.

2.4.9 Doorphone and Door Opener Connection

2. Connection for KX-TD1232

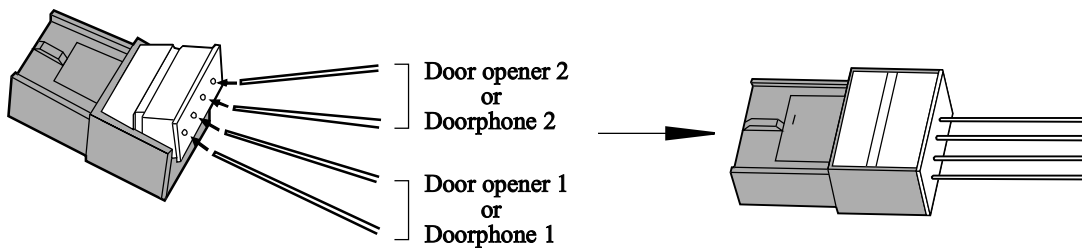
Use 4-pin plugs (included) to connect doorphone or door opener. A plug is able to connect up to two doorphones or door openers. 4-conductor wiring is required.

1. Insert required wires into the holes in a plug.

Fix the transparent part into the black part.

Note: Do not strip the wires. Insert the wires all the way into the plug.

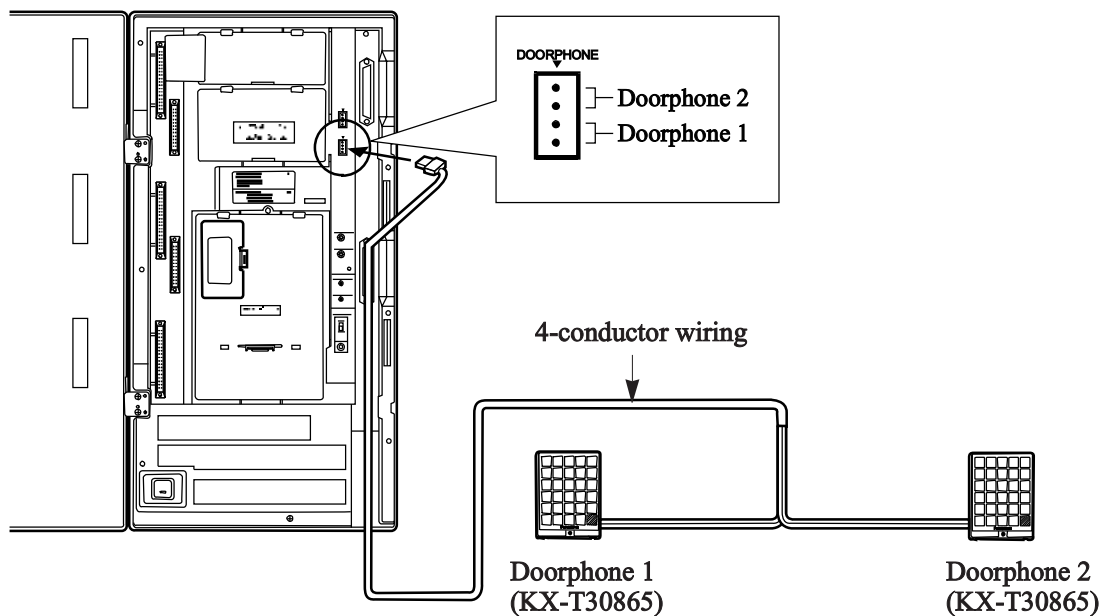
4-pin plug



2. Insert the plug into the connector in the main unit.

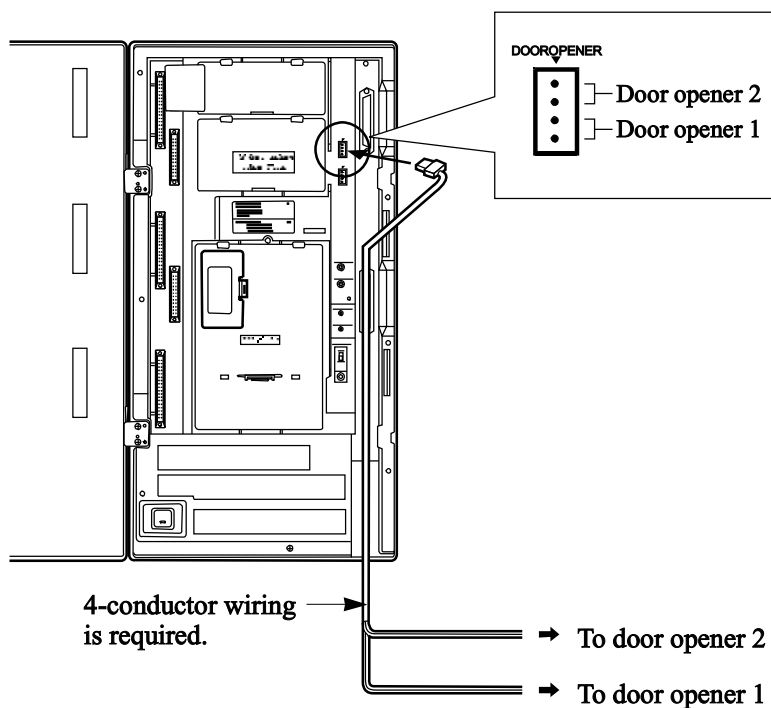
3. Connect the wires to the doorphone (1 or/and 2) or door opener (1 or/and 2).

■ Doorphone

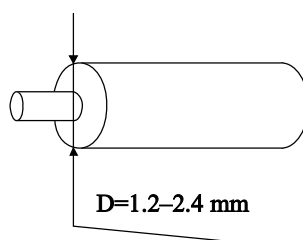


2.4.9 Doorphone and Door Opener Connection

■ Door Opener



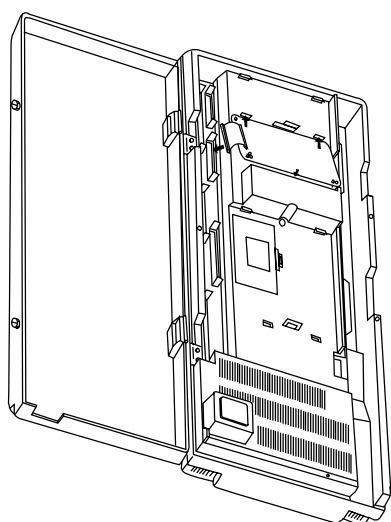
- Notes**
- For wiring, it is recommended to use UL 1015 twisted wire or the equivalent.
 - The wire should be between 1.2 and 2.4 mm in diameter including the coating.



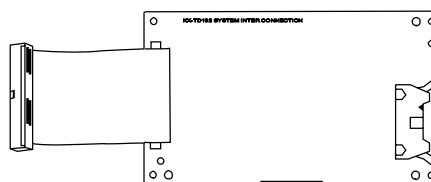
- Pair the door opener with the doorphone.

2.4.10 System Connection*

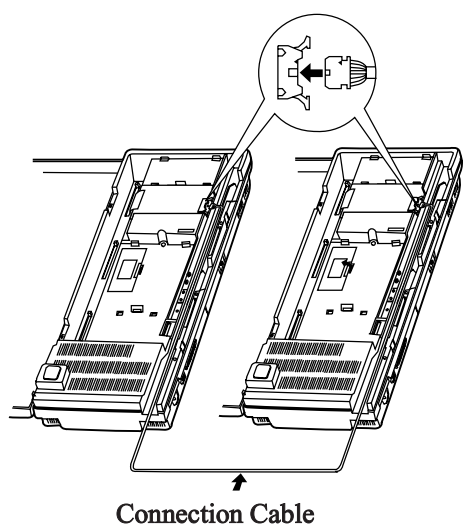
To connect two main units, use the optional System Inter Connection Cards (two) and the Connection Cable (included in the cards).



1. Insert the upper end of the System Inter Connection Card into the two hooks on the main unit of the Master System.
2. Press the two corners at the lower end of the System Inter Connection Card.
3. Connect the cord to the System Inter Connection Card connector.



System Inter Connection Card

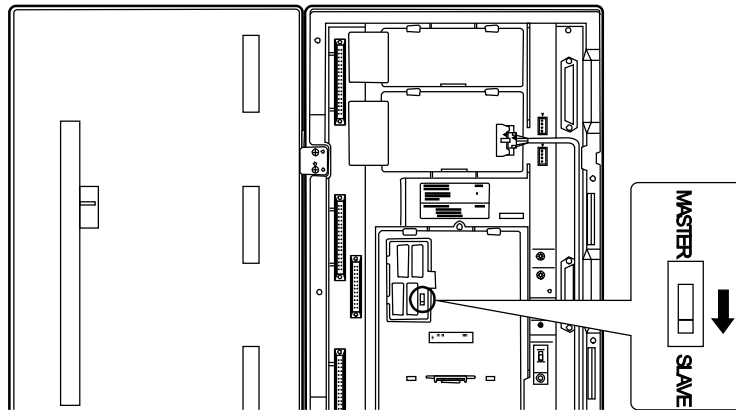


4. Open the latch on the card.
5. Repeat steps 1 through 4 for the Slave System, using the other card.
6. Insert one connection cable end to the Master System and insert the other end into the Slave System.
7. Close the latches on both systems.

*: Available for KX-TD1232 only.

2.4.10 System Connection*

8. Open the ROM Cover in the Slave System and set the Master/Slave switch on the CPU card to “Slave.”



9. Turn the power on.

- Notes**
- System Connection is completed about one minute later after the power is turned on.
 - To turn the power on for the first time, refer to Section 2.6 “Starting the System for the First Time.”

*: Available for KX-TD1232 c

Programming References

Section 4, System Programming,
[115] Adjust Time

Feature References

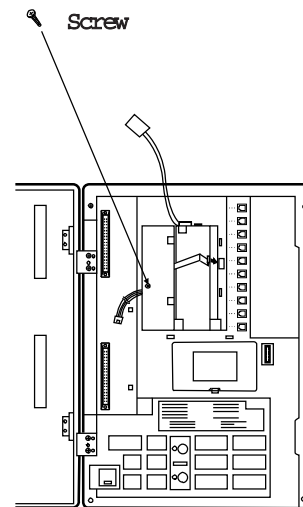
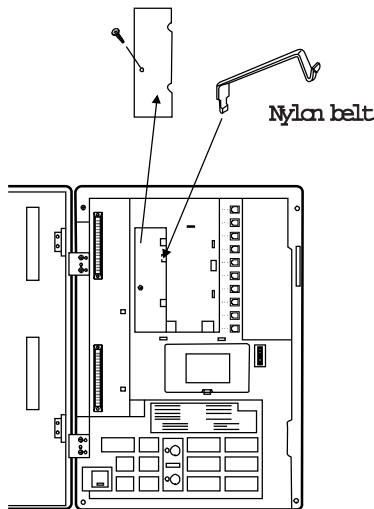
Section 3, Features,
System Connection

2.4.11 Backup Battery and Adaptor Card Connection*

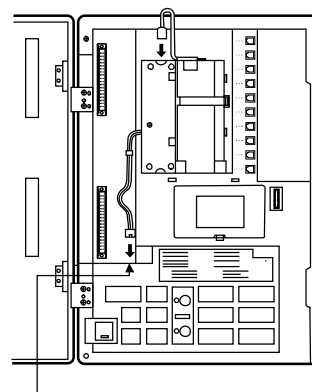
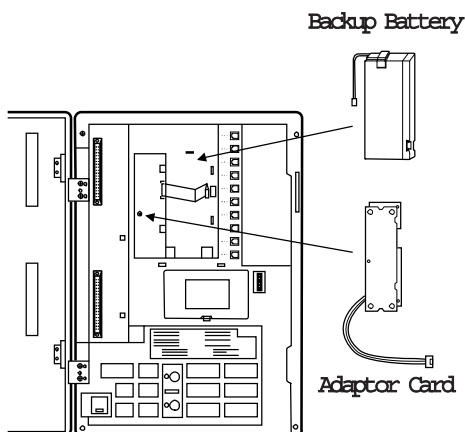
The optional Backup Battery and Adaptor Card (KX-A216) are available for KX-TD816. It is a backup power supply to operate all the features in the event of a power failure. In case of power failure, the battery automatically maintains the power to the main unit instantly for about 10 minutes. The battery charges automatically by itself when it is discharged.

You can choose KX-A216 or KX-A46 for a backup power supply. For connection of KX-A46, see the next page.

1. Loosen the screw of the adaptor card cover and remove the adaptor card cover from the main unit. Then attach the nylon belt.
3. Fasten the nylon belt to fix the battery. Fix the adaptor card by a screw (included).



2. Insert the battery and adaptor card into the frame.
4. Connect the cord of battery to the adaptor card. Remove the backup battery connector cover on the main unit. Then connect the cord of the adaptor card to the backup battery connector.



Note Make sure of the polarities of the battery.

Backup Battery Connector

*: Available for KX-TD1232 only.

Installation

2-51

2.4.12 Battery Adaptor Connection

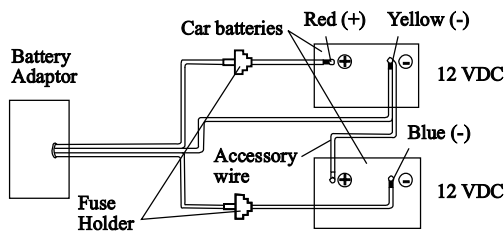
User-supplied car batteries can be used as a backup power supply in the event of a power failure. In case of power failure, the batteries automatically maintain the power to the main unit instantly. The optional Battery Adaptor, model KX-A46, is required.

The Battery Adaptor should not be exposed to direct sunlight. Keep the adaptor and car batteries away from heating appliances and fire. Place car batteries in airy place.

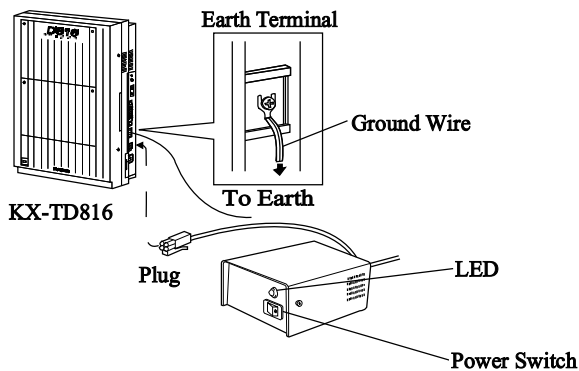
Connection

When connecting the battery adaptor, keep the following in mind.

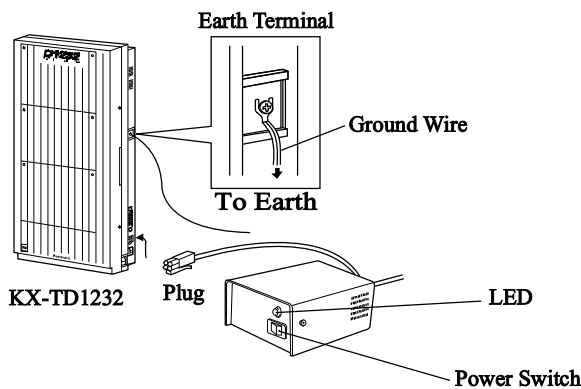
- Make sure of the polarities of batteries and wires.
- Make sure do not short the batteries and wires.
- To connect the two batteries, use accessory wire.



1. Assemble the cords and two car batteries (12VDC each) as shown.



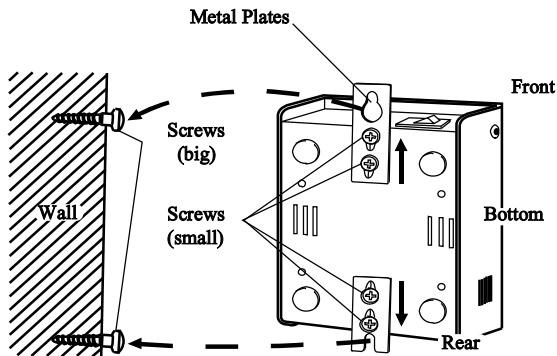
2. Insert the plug of the battery adaptor into the battery adaptor connector on the main unit. Connect the earth wire to the earth terminal on the main unit.



3. Turn on the power switch of the battery adaptor.

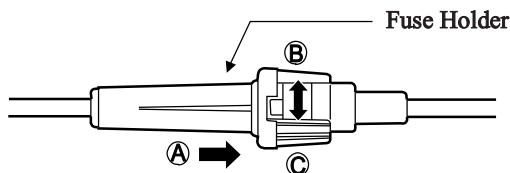
2.4.12 Battery Adaptor Connection

Wall Mounting



1. Drive the accessory four small screws on the bottom of the unit.
2. Place the metal plates so that the screw heads insert into the slots as shown.
3. Slide the metal plates in the directions of the arrows, and drive the screws.
4. Place the templet on the wall to mark two screw positions, and install the big screws into the wall.
5. Hook the battery adaptor on the screw heads.

- Notes**
- If the Power LED does not go on, check the main unit, battery adaptor, batteries and wiring connection.
 - After connection of the battery adaptor, keep the power switch on unless when the main unit is turned off. (Batteries will discharge.)
 - To charge the discharged batteries, use a proper charging unit.
 - Power Fuse: (8A, 32V) -2
- If the Power LED light goes off during a power failure, the power fuse may have been blown. To change the fuse:



1. Turn the power switch off.
2. Turn the fuse holder in the direction of Arrow (B) while pushing it in the direction of Arrow (A).
3. Change the fuse.
4. Turn the fuse holder in the direction of Arrow (C) while pushing it in the direction of Arrow (A).
5. Turn the power switch on.

- **Back-up Duration:** depends on the amp-hour of the batteries used.
e.g. When using two 12 VDC batteries 20 amp-hour, maintenance-free, car batteries, the power is maintained for about three hours.

2.5 Power Failure Transfer Connection

Power Failure Transfer connects a specific single line telephone to selected CO line in the event of system power failure.

Single line telephones connected to specific extension jacks or Power Failure Transfer jacks are connected directly to CO lines, as follows:

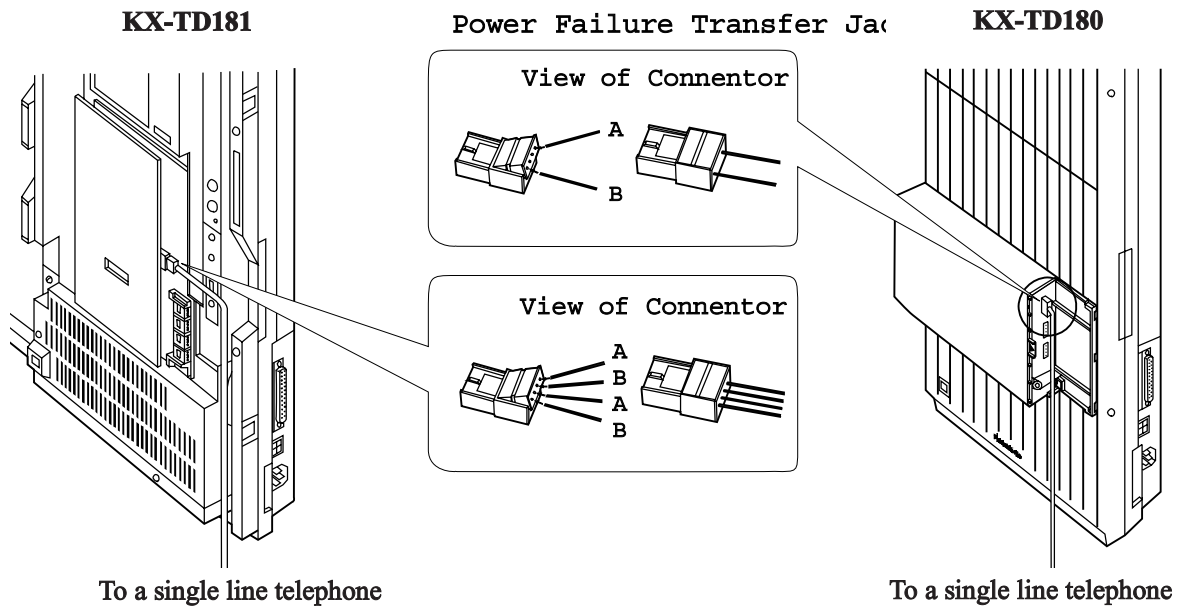
KX-TD816

CO 1 – Extension jack 1
CO 2 – Extension jack 2
CO 5 – Power Failure Transfer jack

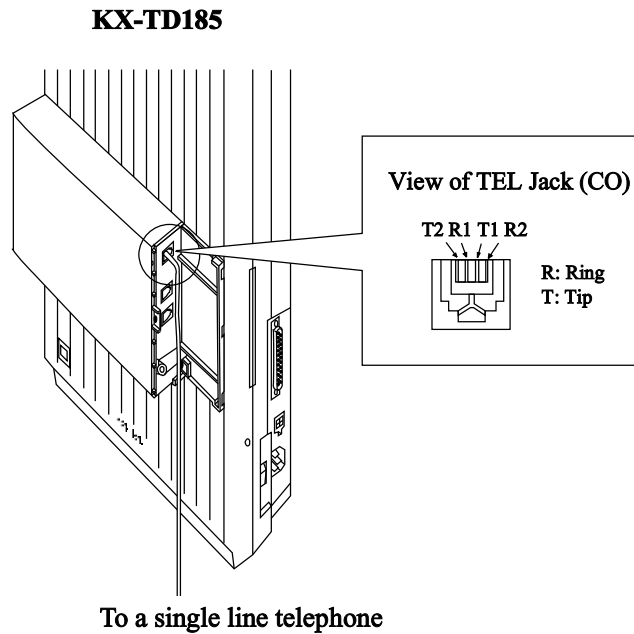
KX-TD1232

CO 1, CO 2, CO 9 – Power Failure Transfer jacks of Master System
CO 13, CO 14, CO 21 – Power Failure Transfer jacks of Slave System

The Power Failure Transfer jack is on the 8-CO Line Card, 4-CO Line Unit and the 4-DID Line Unit.



2.5 Power Failure Transfer Connection



- Notes**
- In the event of a power failure, system memory is protected by the factory-provided lithium battery. There is no memory loss except for the saved values of the Camp-on, Saved Number Redial, Last Number Redial, Call Park and Message Waiting features.
 - The system automatically changes the current connection when the power supply stops.
 - If DC power is available from backup batteries in the event of an AC power failure, the system does not change the current connection.

Programming References

None

Feature References

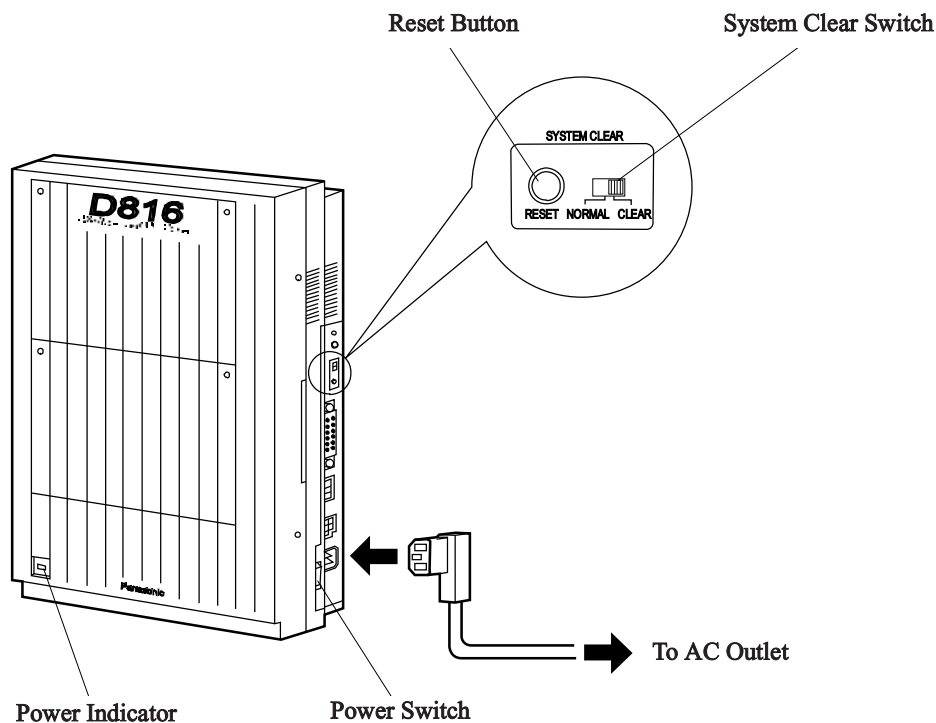
Section 3, Features,
Power Failure Transfer

2.6 Starting the System for the First Time

1. Set the power switch to “OFF”.
2. Set the system clear switch to “CLEAR”.
3. Plug the AC power cord into the system and an AC outlet.
4. Turn the power switch on.
5. Press the Reset button with a pointed tool.
(The power indicator will flash.)
6. Slide the system clear switch to “NORMAL” while the power indicator is flashing (approximately within 10 seconds).

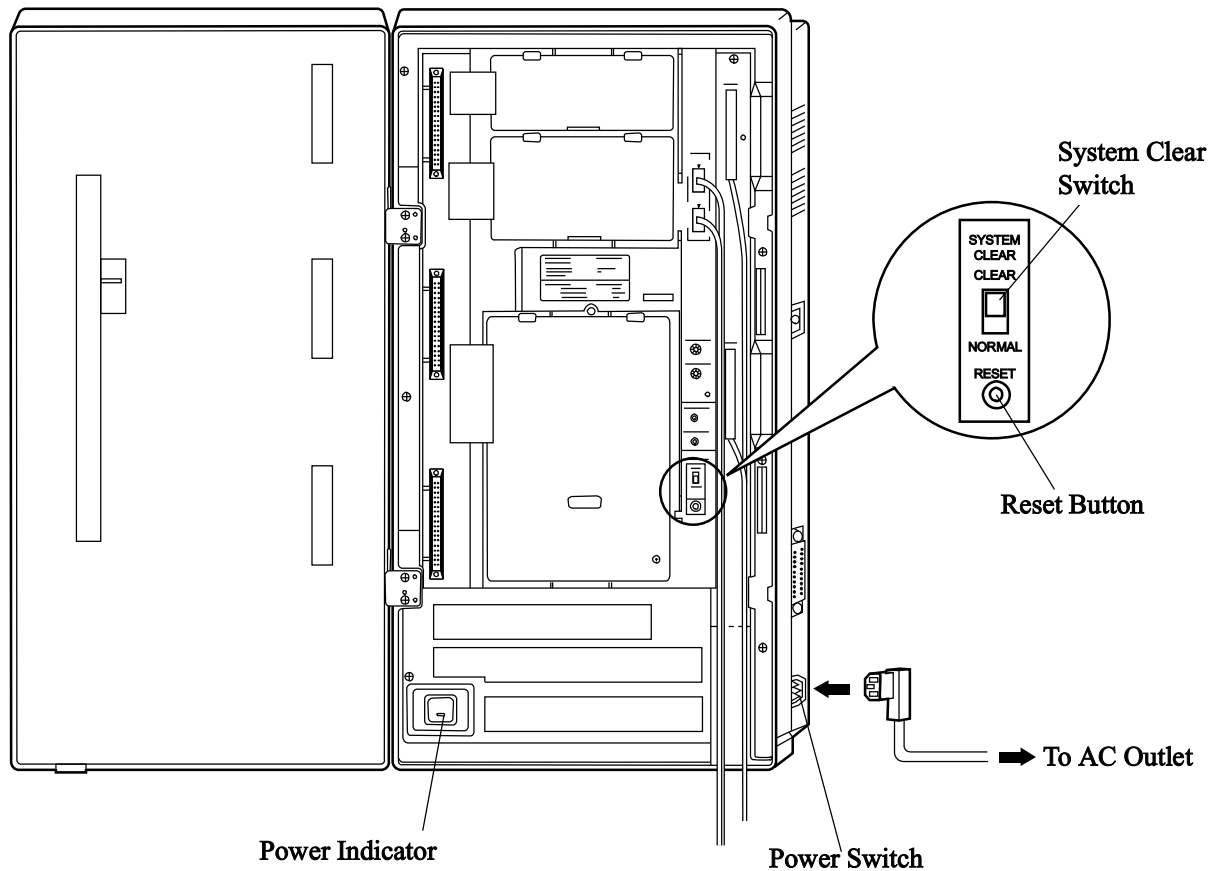
The system will be initialized with default values. The system will also check the CO lines, extensions, and optional cards and units.

KX-TD816



2.6 Starting the System for the First Time

KX-TD1232



Notice After pressing the Reset button, slide the system clear switch to “NORMAL” at step 6 while the power indicator is flashing (approximately within 10 seconds). Otherwise, the system does not start up with the default values.

2.7 System Restart

If after checking the system features you determine that the system is not operating properly, restart the system.

Keep in mind that the following features are cleared when you restart the system:

- Camp-on
- Call Park

The following features are cancelled when you restart the system:

- Calls on Hold
- Calls on Exclusive Hold
- Calls in progress

1. Make sure that the system clear switch is set to “NORMAL.”
2. Press the Reset button with a pointed tool.

Notice If the system clear switch is set to “CLEAR,” do not slide the system clear switch to “NORMAL” within 20 seconds of pressing the Reset button. If you do, the system programming data is reset to the default values. (Refer to Section 2.8 “System Data Clear.”) Wait over 30 seconds after pressing the Reset button and then slide the system clear switch to “NORMAL.”

If the system still does not operate properly, please see Section 6.1.4 “Using Reset Button.”

2.8 System Data Clear

After storing or changing the system programming data, you can clear the programming data stored in the system. The system will restart with the default settings.

1. Slide the system clear switch to “CLEAR.”
2. Press the Reset button with a pointed tool.
3. Return the system clear switch to “NORMAL” while the power indicator is flashing (approximately within 10 seconds).

Notice After pressing the Reset button, return the system clear switch to “NORMAL” at step 3 while the power indicator is flashing (approximately within 10 seconds). Otherwise, the system is not cleared.

Section 3

Features

This section describes every basic, optional, and programmable features in alphabetical order. It also provides information about the conditions, connection references, programming required, related features, and operation for every feature.

Absent Message Capability

Description

Once set this option provides a message, on the display of the calling extension, to show the reason for the called extension's absence. Nine messages can be programmed as desired which are available for every extension user. There are six pre-programmed default messages. Setting or cancelling a message can be done by individual extension users but only callers with a display telephone can receive the message.

Conditions

- Six default messages, which are changeable, are shown below. The “%” means a parameter to be entered when assigning a message at individual extension.
 - (1) Will Return Soon
 - (2) Gone Home
 - (3) At Ext %%% (extension number)
 - (4) Back at %% : %% (hour : minute)
 - (5) Out Until %% / %% (month / day)
 - (6) In a Meeting
- An extension user can select only one message at a time. The selected message is displayed every time the user goes off-hook.

Programming References

Section 4, System Programming,
 [008] Absent Messages
 [100] Flexible Numbering, Absent message set / cancel

Feature References

None

Operation References

—User Manual

DPT Features, SLT Features;
 Absent Message Capability

Account Code Entry

Description

An Account Code is used to identify incoming and outgoing outside calls for accounting and billing purposes. The account code is appended to the Station Message Detail Recording (SMDR) call record. For incoming outside calls, account codes are optional. For outgoing outside calls, there are three modes available to enter an account code: Verified-All Calls mode; Verified Toll Restriction Override mode; and Option mode. One mode is selected for each extension on a Class of Service basis. In Verified-All Calls mode, the user must always enter a pre-assigned account code when making any of the following calls

unless it has previously been stored in memory:

- Call Forwarding – to CO Line
- Last Number Redial
- Line Access
- One-Touch Dialing
- Pickup Dialing
- Saved Number Redial
- Station Speed Dialing
- System Speed Dialing

In Verified-Toll Restriction Override mode, the user can enter a pre-assigned account code only when the user needs to override toll restriction.

In Option mode, the user can enter any account code if needed.

Conditions

- An account code can be stored into Memory Dialing (System / Station Speed Dialing; One-Touch Dialing; Pickup Dialing; Call Forwarding – to CO Line).
- The Account button may be used in place of the feature number. A flexible button on the proprietary telephone set can be programmed as the Account button.
- Account code entry after CPC detection must be done within 15 seconds. Otherwise, SMDR call record is activated and entry becomes impossible afterwards.
- If disconnection signal is selected in program [990], field (3) and Recall function is enabled in field (15), the Verified-All Calls extension is allowed to make an outside call using the same line with Recall function.
- If an account code is appended to a call, specified display telephone users can see the charge for the call (Charge Fee Reference).
- In any mode, emergency dial numbers stored in program [311] Emergency Dial Set can be dialed out without an account code entry.

Programming References

Section 4, System Programming,
[005] Flexible CO Button Assignment
[100] Flexible Numbering, Account code entry
[508] Account Code Entry Mode
[990] System Additional Information, Fields (3), (15)
Station ProgrammingUser Manual,
Charge Fee Reference
Flexible Button Assignment – Account Button

Feature References

Section 3, Features,
Charge Fee Reference
Toll Restriction Override by Account Code Entry

3 Features



Feature References Section 3, Features,
CO Line Connection Assignment

Operation References DPT Features,
—User Manual Answering, Direct CO Line

Automatic Callback Busy (Camp-On)

Description Allows the caller to be informed when the called party has completed the current call.
Automatic Callback – Extension
If the caller answers the callback ringing, the called extension automatically starts ringing again.
Automatic Callback – CO Line
If the caller answers the callback ringing, the line is automatically selected to allow the user to make an outside call.

Conditions • Off-hook prior to the start of callback ringing cancels this function. If the callback ringing is not answered in four rings (within 10 seconds) the callback is cancelled.
• More than one extension user can set this function to one extension or CO line at the same time.

Programming References
No programming required.

Feature References None

Operation References DPT Features, SLT Features;
—User Manual Automatic Callback Busy (Camp-On)

Automatic Route Selection (ARS)

Description

Automatic Route Selection (ARS) is a system programmable feature that automatically selects the least expensive route available at the time an outgoing outside call is made. Previous programming eliminates the necessity for the user to dial the access code of the least expensive carrier. All the user has to do is to dial the feature number for ARS, and the number. The appropriate CO line group is selected and an appropriate access code is added before the number is outpulsed.

Conditions

- Toll Restriction check is done before ARS is applied.
- ARS works according to the selected dialing plan. Thus, if the user-dialed number is not found in the dialing plan (Leading Digit Tables), the dialed number is sent out with Local Access (Automatic line access) Code.
- ARS is not applied to a call made by specifying a CO line group. In other words, it is possible to make an outside call by assigning a CO line group directly (ARS Override).
- This feature also applies to Call Forwarding – to CO Line.

Programming References

Section 4, System Programming,

[100] Flexible Numbering, Automatic line access / ARS

[312] ARS Mode

[313] ARS Time

[314]–[321] ARS Leading Digit Entry for Plans 1 through 8

[322]–[329] ARS Routing Plans 1 through 8

[330] ARS Modify Removed Digit

[331] ARS Modify Added Number

Programming Example

The following is an example to show how to program ARS so that the user can call the XYZ Company via the least expensive line.

Step 1. Program ARS to work when the feature number for ARS is dialed by the user. Use the program [312] ARS Mode to enable it.

Step 2. Store the telephone number of an outside party that will use the ARS feature. For example, if the XYZ Company's telephone number is "1-234-567-8910" (not including the line access code), store the leading seven digits of the number "1234567." To store the numbers, use one of the programs [314] through [321] ARS Leading Digit Entry for Plans 1 through 8 (Leading Digit Tables 1 through 8). Here it is supposed that we have selected Leading Digit Table 1 to store the number. Remember that Table number "1" matches Route Plan Table 1.

Example: Program Address [314] Leading Digit Table 1

Location	Entry
01	1234567
02	
.	
.	
.	
50	

Table 1

Step 3. Check all carriers available to call the stored telephone number and their CO line groups. Suppose there are three carriers available to call the XYZ Company and each carrier's line is assigned to a CO line group as follows:

Carrier E — CO Line Group 1

Carrier F — CO Line Group 2

Carrier G — CO Line Group 3

Then check the fee charged by each carrier:

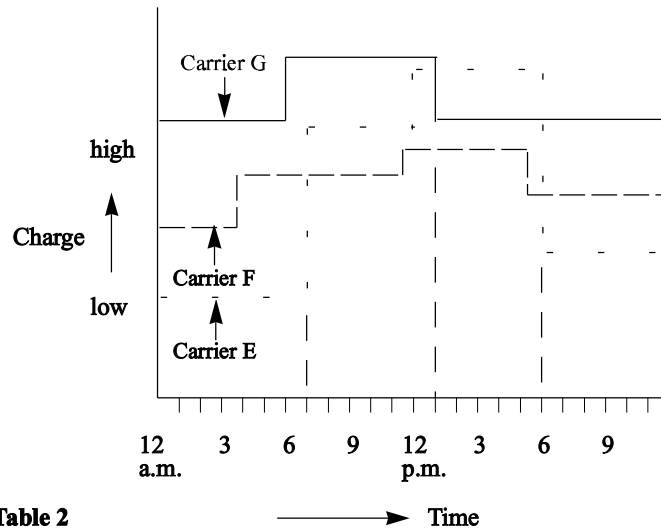


Table 2

As shown in Table 2, the least costly route varies with the time of day. To select the least expensive line at a certain time, split the day into three zones as follows:

- (1) 7:00 a.m. - 1:00 p.m.
- (2) 1:00 p.m. - 6:00 p.m.
- (3) 6:00 p.m. - 7:00 a.m.

To program the time zones above, use the program [313] "ARS Time." Four time zones (Time-A, Time-B, Time-C, Time-D) are provided here.

Example: Program Address [313] ARS Time Table

Time Zones	Entry
Time-A	7:00 a.m.
Time-B	1:00 p.m.
Time-C	6:00 p.m.
Time-D	Disable

← Enter the starting time of each zone. If a zone is not necessary, select "Disable."

Table 3

Enter the starting hour for each zone.

Step 4. Determine the priority of the CO line groups in each time zone. The table below shows the carrier and CO line groups selected for each priority and time zone:

3 Features



	Time –A (7:00-13:00)	Time –B (13:00-18:00)	Time –C (18:00-7:00)
Least Costly Carrier / CO Line Group (Priority 1)	Carrier F/Group 2	Carrier F/Group 2	Carrier E/Group 1
Next Less Costly Carrier / CO Line Group (Priority 2)	Carrier E/Group 1	Carrier G/Group 3	Carrier F/Group 2
Most Costly Carrier / CO Line Group (Priority 3)	Carrier G/Group 3	Carrier E/Group 1	Carrier G/Group 3

Table 4

To have the system use the priorities shown above, use one of the programs [322] through [329] “ARS Routing Plans 1 through 8” (Route Plan Tables 1 through 8).

As we have already selected Leading Digit Table 1, select Route Plan Table 1. Enter the CO line group numbers in priority order. If the specified CO line group requires digit modification, designate a digit modification table number from 1 through 8.

This table is required to have the system automatically add a specific carrier access code to the user-dialed number.

Example: Program [322] Route Plan Table 1

	Time –A COG Modify	Time –B COG Modify	Time –C COG Modify	Time –D COG Modify
Priority 1	2 2	2 2	1 1	
Priority 2	1 1	3 3	2 2	
Priority 3	3 3	1 1	3 3	

Table 5

COG: CO Line Group
Modify: Modification Table Number

Step 5. Make up the Digit Modification Table. Carriers E, F and G match CO line groups and Modification Tables as follows and have the following Access Code:

Carrier	COG	Mod. Table	Access Code
E	1	1	1-0-333
F	2	2	1-0-555
G	3	3	1-0-666

Table 6

According to Table 6, enter the Access Codes in the respective Modification Tables using the programs [330] “ARS Modify Removed Digit” and [331] “ARS Modify Added Number” as follows:

Example: Program [330] Digit Modification Tables

Modification Table 1		Modification Table 2		Modification Table 3	
Remove	0	Remove	0	Remove	0
Add	10333	Add	10555	Add	10666

← Enter the number of the digits to be deleted.

← Enter the digits to be added.

Eventually, if Modification Table 1 is applied, the user-dialed number “9-1-234-567-8910” is modified to “9-10333-1-234-567-8910” to access the least expensive Carrier E.

Similarly, if Modification Table 2 is applied, it is modified to “9-10555-1-234-567-8910” to access Carrier F.

Enter the “Removed Digit” program when it is necessary to delete some leading digits from the user-dialed number. For example, if the user manually dials a Carrier Access Code but the carrier is not the least expensive, modification is required. For example, to delete “10333” from the beginning of the user-dialed number and to add “10555,” enter “5” in “Removed Digit” program. Enter “10555” in “Added Number” program. When “9-10333-1-234-567-8910” is dialed,

9-10333-1-234-567-8910



Five digits are deleted and “10555” is added here.
 “10555-1-234-567-8910” is sent to the CO line.

Feature References

Section 3, Features,
 Line Access, Automatic

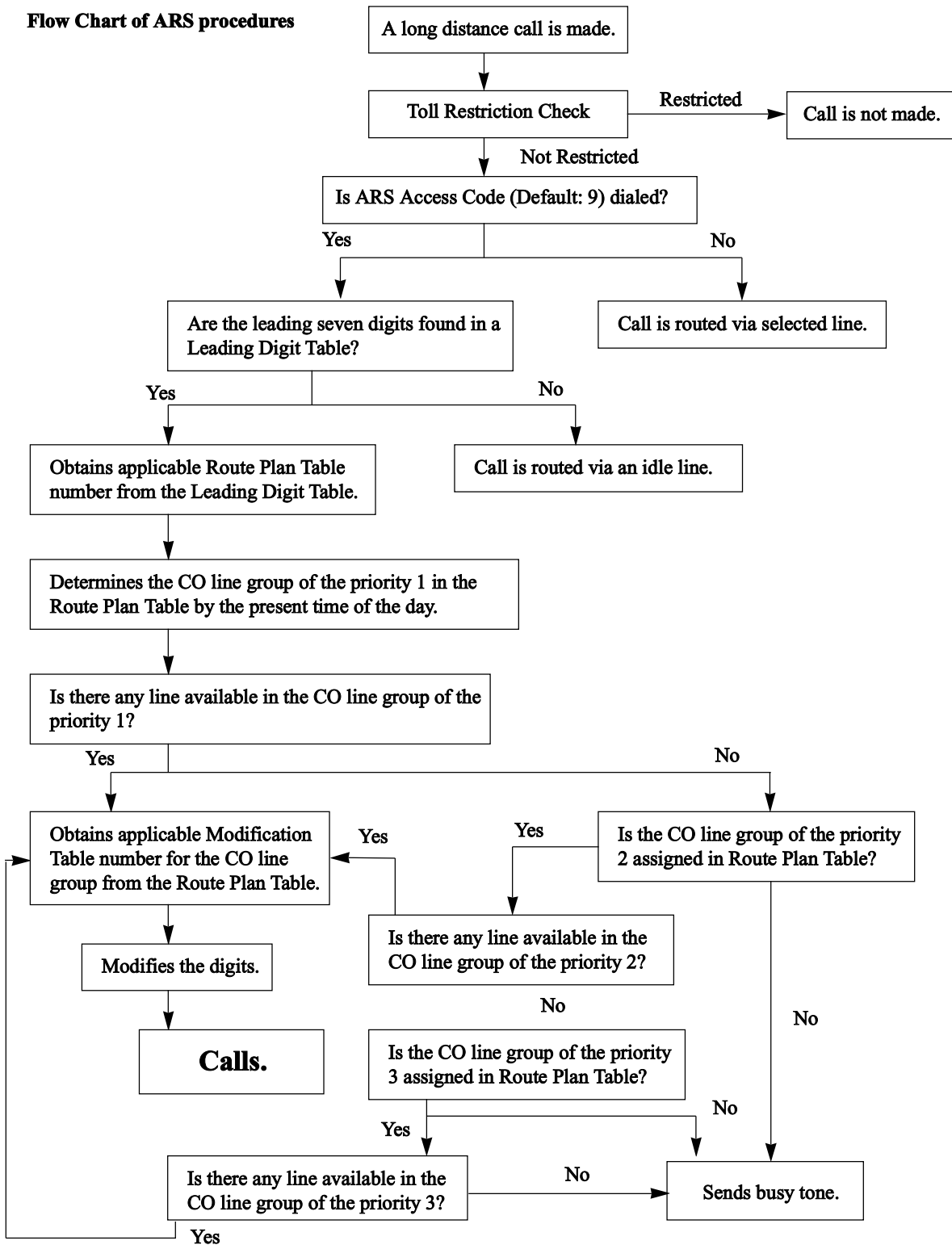
Operation References —User Manual

DPT Features, SLT Features;
 Outward Dialing – Line Access, Automatic

3 Features



Flow Chart of ARS procedures



Automatic Station Release

Description After going off-hook, if an extension user fails to dial any digits within a specified time period, the user will be disconnected from the line after reorder tone is sent. To get a line again, the user must go back on-hook and then off-hook.

Conditions This function works in the following cases:
When making a call
(1)The first digit has not been dialed within 10 seconds.
(2)After a digit is dialed, the next one is not dialed within five seconds (Intercom call only).

Programming References No programming required.

Feature References None

Operation References Not applicable.

Background Music (BGM)

Description Allows the proprietary telephone user to listen to background music from the monitor speaker on the telephone.

Conditions

- It may be required to select a music source used for BGM by system programming. One external music source can be connected to KX-TD816, and up to two sources can be connected to KX-TD1232 per system.
- For Music Source 1, it is possible to select the internal or external music source by system programming.
- The music is interrupted while off-hooked.

Connection References
Section 2, Installation,
2.3.7 External Music Source Connection

Programming References
Section 4, System Programming,
[803] Music Source Use
[990] System Additional Information, Field (20)

Feature References **Section 3, Features,**
Music on Hold

3 Features

B

Operation References DPT Features,
—User Manual Background Music (BGM)

Background Music (BGM) – External

Description Background music (BGM) can be broadcasted in your office through external pagers. The BGM can be turned on and off by the operator only.

- Conditions**
- It is required to connect an external pager. The pager is a user-supplied item. One pager and one external music source can be installed in KX-TD816, and up to two pagers and up to two external music sources can be installed in KX-TD1232 per system.
 - For Music Source 1, it is possible to select the internal or external music source by system programming.
 - Each pager can be programmed to send BGM or not.
 - Priority of access to external pager is: (1)TAFAS; (2)Paging; (3)BGM. Higher priorities will override BGM.

Connection References

Section 2, Installation,
2.3.6 External Pager Connection
2.3.7 External Music Source Connection

Programming References

Section 4, System Programming,
[100] Flexible Numbering, Background music – external on / off
[803] Music Source Use
[804] External Pager BGM
[990] System Additional Information, Field (20)

Feature References Section 3, Features,
Background Music (BGM)

Operation References Operator Service Features
—User Manual Background Music (BGM) — External

Budget Management

Description Limits the telephone usage to a pre-assigned amount. For example, the limit may be the amount deposit during a hotel at check-in. If the pre-assigned limit is reached, the extension user cannot make further calls until he/she receives authorization from the operator.

Conditions None

Programming References

Section 4, System Programming,
[010] Budget Management

Feature References Section 3, Features,
HOTEL APPLICATION

Operation References Not applicable.

Busy Lamp Field

Description The LED (Light Emitting Diode) indicators of the DSS (Direct Station Selection) buttons, each of which corresponds to a selected extension, tell whether the corresponding extensions are idle or busy.

Conditions

- This function is available for DSS buttons on DSS Consoles and for flexible CO buttons assigned as DSS buttons on digital proprietary telephones (DPT).
- A DSS button indicator lights red if the corresponding extension is busy.

Programming References

Section 4, System Programming,
[005] Flexible CO Button Assignment
Station ProgrammingUser Manual,
Flexible Button Assignment – Direct Station Selection (DSS) Button

Feature References Section 3, Features,
Button, Direct Station Selection (DSS) DSS Console (KX-T7240)

Operation References Not applicable.

Busy Station Signaling (BSS)

Description When attempting to call a busy extension, Busy Station Signaling allows you to signal the user on the phone to answer your call. The called extension user hears a Call Waiting tone and is able to answer the call.

Operation References **Basic Operation,**
—User Manual **Making Calls**
 DSS Console Features,
 Location of Controls

Button, Flexible

Description

The use of Flexible Buttons is determined by either system or station programming. The following three types of Flexible Buttons are provided on digital proprietary telephones (DPT) and DSS Console:

- Flexible CO buttons (provided on DPT only)
- Flexible DSS buttons (provided on DSS Console only)
- Programmable Feature (PF) buttons

The table below shows all of the features which can be assigned to Flexible Buttons.

Button Features to be assigned	CO (DPT)	DSS (DSS)	PF (DSS)
Single-CO	✓		
Group-CO	✓		
Loop-CO	✓		
Direct Station Selection (DSS)	✓	✓	
Message Waiting	✓	✓	
Account Code Entry	✓	✓	✓
Conference	✓	✓	✓
FWD/DND	✓	✓	✓
One-Touch Dialing	✓	✓	✓
Saved Number Redial	✓	✓	✓
Voice Mail Transfer	✓	✓	✓

In the table, “✓” indicates that the feature can be assigned to the button.

Conditions

- A CO line can only appear on one Single-CO button of any given telephone. A station can only appear on one DSS button of any given telephone or DSS Console.
- It is possible to have multiple appearances of the same Group-CO or Loop-CO buttons on the same telephone. Incoming and outgoing calls on the line are shown on the button in the following priority.
Single-CO > Group-CO > Loop-CO

3 Features

B

Programming References

Section 4, System Programming,
[005] Flexible CO Button Assignment
Station ProgrammingUser Manual,
Flexible Button Assignment

Feature References

Section 3, Features,
Buttons on Digital Proprietary DSS Console (KX-T7240)
Telephones

Operation References Not applicable.

Button, Group-CO (G-CO)

Description

To support efficient utilization of CO lines, a group of CO lines (CO line group) can be assigned to a CO button. The function is referred to as Group-CO (G-CO). The G-CO button works in conjunction with the DIL 1:N feature. Any incoming call from any CO line in the CO line group arrives at the G-CO button. To make an outside call, the user can access an idle CO line in the group by simply pressing the dedicated G-CO button.

Conditions

- No G-CO button is originally provided on a DPT. It is programmable on a CO button by either system or station programming.
- It is needed to program the extension for receiving and / or originating calls on CO lines.
- It is possible to assign the same CO line group to more than one G-CO buttons on the same DPT.
- It is possible to assign the same line to an S-CO button and to a G-CO button.
- Immediate, delayed, no ringing or no incoming call (disable) can be selected on an extension-CO line group basis.
- The DPT user can choose a desired ringer frequency for each G-CO button by system or station programming.

Programming References

Section 4, System Programming,
[005] Flexible CO Button Assignment
[400] CO Line Connection Assignment
[401] CO Line Group Assignment
[603]–[604] DIL 1:N Extension and Delayed Ringing — Day / Night
[605]–[606] Outgoing Permitted CO Line Assignment — Day / Night
Station ProgrammingUser Manual,
Flexible Button Assignment – Group-CO (G-CO) Button
Ringing Tone Selection for CO Buttons

Feature References

Section 3, Features,	
Answering, Direct CO	Line Access, Direct
CO Line Group	Ringling, Delayed
LED Indication, CO Line	Ringling Tone Selection for CO
Line Access, CO Line Group	Buttons

Operation References —User Manual

DPT Features,
 Answering, Direct CO Line
 Outward Dialing – Line Access, CO Line Group

Button, Loop-CO (L-CO)

Description

All CO lines can be assigned to a flexible CO button on a digital proprietary telephone (DPT). The assigned button serves as a Loop-CO (L-CO) button. An incoming call on any CO line arrives at the L-CO, unless there are S-CO or G-CO buttons associated with the line or unless the button is already in use. To make an outside call, the DPT user can simply press the dedicated L-CO button.

Conditions

- No L-CO button is originally provided on a DPT. A flexible CO button can be assigned as an L-CO button in either system or station programming.
- It is possible to assign more than one L-CO button on a DPT.
- Pressing the L-CO button provides the same operation as dialing the automatic line access code. This results in Automatic Line Access or Automatic Route Selection (ARS), if programmed.
- Immediate, delayed, no ringing or no incoming call (disable) can be selected on an extension–CO line group basis.
- The DPT user can choose a desired ringer frequency for each L-CO button by system or station programming.

Programming References

Section 4, System Programming,
 [005] Flexible CO Button Assignment
 [400] CO Line Connection Assignment
 [603]–[604] DIL 1:N Extension and Delayed Ringing — Day / Night
 [605]–[606] Outgoing Permitted CO Line Assignment — Day / Night
Station Programming.....User Manual,
 Flexible Button Assignment – Loop-CO (L-CO) Button
 Ringling Tone Selection for CO Buttons

Feature References

Section 3, Features,	
Answering, Direct CO Line	Line Access, Direct
LED Indication, CO Line	Ringling, Delayed

3 Features

B

	Line Access, Automatic	Ringling Tone Selection for CO Buttons
Operation References —User Manual	DPT Features, Outward Dialing – Line Access, Automatic	

Button, Single-CO (S-CO)

Description A Single-CO (S-CO) button is a CO line access button. This allows the digital proprietary telephone user to access a specific line by pressing an S-CO button. An incoming call can be directed to an S-CO button.

- Conditions**
- The default setting for CO buttons is changeable. (Flexible CO Button)
 - An S-CO button provides CO line status.
 - It is possible to assign one CO line to both an S-CO and a G-CO button.
 - If Automatic Route Selection (ARS) is set, it is overridden by an outgoing call made by pressing the S-CO button.
 - Incoming calls appear on the digital proprietary telephone, when an extension is assigned as the incoming call destination and an S-CO, G-CO and/or L-CO button is assigned.
 - Immediate, delayed, no ringing or no incoming call (disable) can be selected on an extension-CO line group basis.
 - The DPT user can choose a desired ringing tone type for the S-CO button by system or station programming.

Programming References

Section 4, System Programming,
 [005] Flexible CO Button Assignment
 [400] CO Line Connection Assignment
 [603]–[604] DIL 1:N Extension and Delayed Ringing — Day / Night
 [605]–[606] Outgoing Permitted CO Line Assignment — Day / Night
Station ProgrammingUser Manual,
 Flexible Button Assignment – Single-CO (S-CO) Button
 Ringling Tone Selection for CO Buttons

Feature References	Section 3, Features, Answering, Direct CO Line LED Indication, CO Line Line Access, Direct	Line Access, Individual Ringling, Delayed Ringling Tone Selection for CO Buttons
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Operation References —User Manual	Basic Operation, Making Calls DPT Features, Outward Dialing – Line Access, Individual
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Buttons on Digital Proprietary Telephones

Description

Digital proprietary telephones are provided with the feature / line access buttons listed below:

Digital Proprietary Telephones KX-T:

Buttons	7220	7230	7235	7250
AUTO ANSWER / MUTE †	✓	✓	✓	
AUTO DIAL / STORE †	✓	✓	✓	✓ !
CO † *	✓ (24)	✓ (24)	✓ (12)	✓ (6)
CONF †	✓	✓	✓	
Function			✓(10)	
FWD / DND †	✓	✓	✓	
HOLD	✓	✓	✓	✓
INTERCOM †	✓	✓	✓	✓
MESSAGE †	✓	✓	✓	
MONITOR				✓
PAUSE		✓	✓	
PROGRAM	✓	✓	✓	✓
RECALL	✓	✓	✓	✓
REDIAL	✓	✓	✓	✓
SHIFT †		✓	✓	
Soft		✓(3)	✓(3)	
SP-PHONE †	✓	✓	✓	
TRANSFER	✓	✓	✓	✓
VOLUME	✓	✓	✓	✓

- ✓ : The button is provided on the designated telephones.
- † : The button is provided with an LED (Light Emitting Diode).
- * : The buttons which can be changed to function as a feature button are called flexible buttons.
- ! : The button is provided without an LED.
- (x) : Shows the number of buttons only if multiple buttons are provided.

The functions of the listed buttons are described below:

AUTO ANSWER / MUTE: This dual function button is used for extension auto-answer and microphone mute during a conversation.

AUTO DIAL / STORE: Used for System Speed Dialing and storing program changes.

CO (Central Office line): Can be re-assigned to a different CO or to various feature buttons.

CONF (Conference): Used to establish a three-party conference.

Function: Used to perform the displayed function / operation.

- FWD / DND (Call Forwarding / Do Not Disturb):** Used to program Call Forwarding, set Do Not Disturb.
- HOLD:** Used to place a call on hold.
- INTERCOM:** Used to make or receive intercom calls.
- MESSAGE:** Used to send a message or display current message.
- MONITOR:** Used for handsfree operation.
- PAUSE:** Inserts a pause in a speed dial number.
- PROGRAM:** Used to enter / exit programming mode.
- RECALL:** Allows you to disconnect the current call and originate another call without hanging up (Recall). Sends a Register Recall signal to the Central Office or a host PBX to access their features (External Feature Access).
- REDIAL:** Used for Last Number or Automatic Redial.
- SAVE:** Used to store a dialed telephone number for Saved Number Redial.
- SHIFT:** Used to access the second level of Soft button function.
- Soft:** Pressing a Soft button performs the function / operation appearing on the bottom line of the display.
- SP-PHONE (Speakerphone):** Used for handsfree operation. Pressing the button causes the telephone to switch between handset and handsfree operation.
- TRANSFER:** Transfers a call to another extension or external destination.
- VOLUME:** Used to adjust the ringer, speaker, handset and headset volume and the display contrast.

Conditions

- Certain buttons are equipped with light indicators (LED's) to show line or feature status.
- CO buttons can be classified according to the following three types: Single-CO (S-CO) button / Group-CO (G-CO) button / Loop-CO (L-CO) button

Programming References

Section 4, System Programming,
[005] Flexible CO Button Assignment
Station ProgrammingUser Manual,
Flexible Button Assignment

Feature References

None

Operation References —User Manual

Refer to respective operating instructions.

CALL FORWARDING FEATURES – SUMMARY

Description	<p>Call forwarding features enable you to have your calls forwarded to a specified destination. You may specify the circumstances under which your calls are forwarded. The following Call Forwarding features are available:</p> <ul style="list-style-type: none"> Call Forwarding – All Calls Call Forwarding – Busy Call Forwarding – Busy / No Answer Call Forwarding – Follow Me Call Forwarding – No Answer Call Forwarding – to CO Line
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Call Forwarding – All Calls

Description	This feature is used when you want all your calls to be automatically re-directed to another extension.
Conditions	<ul style="list-style-type: none"> • Types of calls which are forwarded by this feature are: <ul style="list-style-type: none"> Outside calls – DIL 1:1; Intercept Routing Intercom calls – Extension; Transfer • There can only be one stage of Call Forwarding, if a call is forwarded to an extension which is also in Call Forwarding. In this case, Station Hunting can be activated for the forwarded call. • Although calls are forwarded, Message Waiting is not. The MESSAGE button indicator is lit on the originally called extension. • If an extension in Call Forwarding is also in a Hunt group, a call directed to the extension is forwarded. Station Hunting still applies for calls directed to other extensions in the Hunt group. • Setting this function cancels other Call Forwarding or Do Not Disturb functions, if any. • A Floating Station cannot be programmed as the forwarded destination.

Programming References

Section 4, System Programming,
[005] Flexible CO Button Assignment
[100] Flexible Numbering, Call forwarding / Do not disturb set / cancel
Station ProgrammingUser Manual,
Flexible Button Assignment – FWD/DND Button

Feature References	None
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3 Features

C

Operation References DPT Features, SLT Features;
—User Manual Call Forwarding — All Calls

Call Forwarding – Busy

Description A call directed to your extension is forwarded to another extension if your telephone is busy.

- Conditions**
- Types of calls which are forwarded by this feature are:
Outside calls – DIL 1:1; Intercept Routing
Intercom calls – Extension; Transfer
 - There can only be one stage of Call Forwarding, if a call is forwarded to a station which is also in Call Forwarding. In this case, Station Hunting is activated for the forwarded call.
 - Although calls are forwarded, Message Waiting is not. The MESSAGE button indicator is lit on the originally called extension.
 - If an extension in Call Forwarding is also in a Hunt group, a call directed to the extension is forwarded. Station Hunting still applies for calls directed to other extensions in the Hunt group.
 - Setting this function cancels other Call Forwarding or Do Not Disturb functions, if any.
 - A Floating Station cannot be programmed as the forwarded destination.

Programming References

Section 4, System Programming,
[005] Flexible Button Assignment
[100] Flexible Numbering, Call forwarding / Do not disturb set / cancel
Station ProgrammingUser Manual,
Flexible Button Assignment – FWD/DND Button

Feature References None

Operation References DPT Features, SLT Features;
—User Manual Call Forwarding — Busy

3 Features



- Conditions**
- Same as the conditions of Call Forwarding – All Calls.
 - It is programmable to enable or disable this feature on Class of Service basis.

Programming References
Section 4, System Programming,
[005] Flexible CO Button Assignment
[100] Flexible Numbering, Call forwarding / do not disturb set / cancel
[991] COS Additional Information, Field (2)
Station Programming.....User Manual,
Flexible Button Assignment – FWD / DND Button

Feature References Section 3, Features,
Call Forwarding – All Calls

Operation References DPT Features, SLT Features;
—User Manual Call Forwarding — Follow Me

Call Forwarding – No Answer

Description Calls to your extension are forwarded to another extension if you do not answer the call in a pre-determined time.

- Conditions**
- Types of calls which are forwarded by this function are:
 - Outside calls – DIL 1:1; Intercept Routing
 - Intercom calls – Extension; Transfer
 - This function operates if an incoming call is not answered in a specific period of time. Therefore, this function also applies if your extension is busy and cannot answer the incoming call within the time.
 - There can only be one stage of Call Forwarding if a call is forwarded to a station which is also in Call Forwarding. In this case, Station Hunting is activated for the forwarded call.
 - Although calls are forwarded, Message Waiting is not. The MESSAGE button indicator is lit on the originally called extension.
 - If an extension in Call Forwarding is also in a Hunt group, a call directed to the extension is forwarded. Station Hunting still applies for calls directed to other extensions in the Hunt group.
 - Setting this function cancels other Call Forwarding or Do Not Disturb functions, if any.
 - A Floating Station cannot be programmed as the forwarded destination.
 - No Answer timer is activated in the following cases:
 - Busy Station Signaling (BSS)
 - While the caller hears dial tone

Programming References

Section 4, System Programming,
[005] Flexible CO Button Assignment
[100] Flexible Numbering, Call forwarding / do not disturb set / cancel
[202] Call Forwarding – No Answer Time
Station Programming.....User Manual,
Flexible Button Assignment – FWD/DND Button

Feature References None

Operation References **DPT Features, SLT Features;**
—User Manual Call Forwarding — No Answer

Call Forwarding – to CO Line

Description Calls directed to your extension will be sent to an external destination. The outside telephone number must be pre-programmed.

- Conditions**
- Types of calls which are forwarded by this function are:
 - Outside calls – DIL 1:1; DID; DDI
 - Intercom calls – Extension; Transfer
 - The forwarding extension’s Toll Restriction, Automatic Route Selection and Account Code Entry requirements still apply.
 - Although calls are forwarded, Message Waiting is not. The MESSAGE button indicator is lit on the originally called extension.
 - If an extension in Call Forwarding is also in a Hunt group a call directed to the extension is forwarded. Station Hunting still applies for calls directed to other extensions in the Hunt group.
 - Setting this function cancels other Call Forwarding or Do Not Disturb functions, if any.
 - Class of Service programming determines the extensions that are able to perform the function.
 - If an extension is limited by the program [502] “Extension-to-CO Line Call Duration Limit” according to its Class of Service, the extension is unable to forward an outside call to a CO line.
 - If a call between an extension and an outside party is established by this feature, the duration of the call period can be restricted depending on the setting of a system timer.

Programming References

Section 4, System Programming,
[005] Flexible CO Button Assignment
[100] Flexible Numbering, Call forwarding / do not disturb set / cancel

3 Features



[205] Extension-to-CO Line Call Duration Time
[502] Extension-to-CO Line Call Duration Limit
[504] Call Forwarding to CO Line
Station Programming.....User Manual,
Flexible Button Assignment – FWD/DND Button

Feature References **Section 3, Features,**
 Limited Call Duration

Operation References **DPT Features, SLT Features;**
—User Manual Call Forwarding — to CO Line

Call Hold – CO Line

Description Allows the extension user to put an outside call on hold. The held call can be retrieved from the user who held it or from any other extension.

- Conditions**
- With a single line telephone, the user can hold only one call whether it is an extension or outside call.
 - Music is sent to the party on hold, if available (Music on Hold).
 - If a call on hold is not retrieved in a specific period of time, Hold Recall results.
 - If an outside party is placed on hold and not retrieved in 30 minutes, it is automatically disconnected.

Programming References
 Section 4, System Programming,
 [100] Flexible Numbering, Call hold
 [200] Hold Recall Time

Feature References **Section 3, Features,**
 Hold Recall Music on Hold

Operation References **DPT Features, SLT Features;**
—User Manual Call Hold

3 Features

C

Feature References	Section 3, Features, Hold Recall	Music on Hold
Operation References —User Manual	DPT Features, Call Hold, Exclusive	

Call Hold, Exclusive – Intercom

Description Allows the proprietary telephone user to prevent any other extension users from retrieving a held intercom call. Only the user who held it can retrieve the call.

- Conditions**
- Only one intercom call can be placed on Call Hold or Exclusive Call Hold at a time.
 - If a call on hold is not retrieved in a specific period of time, Hold Recall results. After Hold Recall results, the held call can be retrieved from any other extension.
 - Music is sent to the party on hold, if available (Music on Hold).

Programming References
Section 4, System Programming,
[200] Hold Recall Time

Feature References	Section 3, Features, Hold Recall	Music on Hold
Operation References —User Manual	DPT Features, Call Hold, Exclusive	

Call Hold Retrieve – CO Line

Description Allows the extension user to retrieve a specified outside call that has been placed on hold by another extension.

Conditions Confirmation tone is sent to the user when the hold is retrieved by the feature number. Eliminating the tone is programmable.

Programming References
Section 4, System Programming,
[100] Flexible Numbering, Call hold retrieve – CO line
[990] System Additional Information, Field (16)

Feature References **Section 3, Features,**
Call Hold – CO Line

Operation References **DPT Features, SLT Features;**
—User Manual Call Hold Retrieve

Call Hold Retrieve – Intercom

Description Allows the extension user to retrieve a call that has been placed on hold by another extension.

Conditions Confirmation tone is sent to the user when the hold is retrieved by the feature number. Eliminating the tone is programmable.

Programming References
Section 4, System Programming,
[100] Flexible Numbering, Call hold retrieve – intercom
[990] System Additional Information, Field (16)

Feature References **Section 3, Features,**
Call Hold – Intercom

Operation References **DPT Features, SLT Features;**
—User Manual Call Hold Retrieve

Calling Line Identification Restriction (CLIR)

Description Allows the extension user to restrict the presentation of the calling party's number to the called party when making a call. This is one of the ISDN services.

Conditions If the presentation is enabled, the called party can check the calling party's number before the called party is answered it (Calling Line Identification Presentation, CLIP).

Programming References
Section 4, System Programming,
[416] ISDN Line Number Assignment
[417] ISDN Outgoing CLIR Service Assignment

Feature References None

Operation References Not applicable.

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C

Call Park

Description Allows the extension user to place a held call into a system parking area. This releases the user from the parked call to perform other operations. The parked call can be retrieved from any other extension user.

- Conditions**
- The system contains 10 parking areas, each of which has its own call park number. Up to 10 calls can be parked at the same time in the system. Under the System Connection*, all users may access the same call parking area. The number of holding slots remains at 10.
 - If a parked call is not retrieved in a specific period of time, Transfer Recall starts.
 - If a parked call is not retrieved in 30 minutes, it is automatically disconnected.
 - Confirmation tone is sent to the user when the parked call is retrieved. Eliminating the tone is programmable.

Programming References

Section 4, System Programming,
[100] Flexible Numbering, Call park / call park retrieve
[201] Transfer Recall Time
[990] System Additional Information, Field (16)

Feature References None

Operation References DPT Features, SLT Features;
—User Manual Call Park

Calling Party Control (CPC) Signal Detection

Description The Calling Party Control (CPC) Signal is an on-hook indication (disconnect signal) sent from the CO line when the telephone is hung up at the other end. To support efficient utilization of CO lines, the system monitors their state and when CPC Signal is detected from a line, the system disconnects the line and informs the extension with reorder tone.

- Conditions**
- CPC Signal Detection is enabled or disabled on incoming and outgoing outside calls by system programming.
 - Generally CPC Signal Detection works on incoming outside calls, and does not work on outgoing outside calls (except once they are placed on Call Hold, Exclusive Call Hold or Consultation Hold). In this case, if

the extension user remains off-hook after the completion of an outgoing outside call, the system does not release all the switches used to establish the connection, and a CO line connected will continue to be seized. To prevent this, it is administrable to make CPC Signal Detection work on outgoing outside calls. (Note: Some Central Offices may send CPC-like signals during the dialing sequence and an attempt to make a call may be terminated. If your CO does not send such signals, it is recommended to make CPC Signal Detection work on outgoing outside calls.)

- CPC Signal Detection is effective only with the 4-DID Line Unit (KX-TD185) (KX-TD816: CO05 through CO08, KX-TD1232: CO09 through CO12 or CO21 through CO24). In this case, “D (4DID)” must be selected in program [109] “Expansion Card / Unit Type.”
- If your Central Office does not send CPC-like signals, it is also effective to limit the dialed numbers during a call by the program [991] “COS Additional Information” on a Class of Service basis to prevent unauthorized calls.
- If CPC Signal is detected during a Conference call, the line is disconnected and the remaining two parties maintain the call.

Programming References

Section 4, System Programming,
 [405] CPC Signal Detection Incoming Set
 [415] CPC Signal Detection Outgoing Set
 [991] COS Additional Information, Field (1)

Feature References None

Operation References Not applicable.

Call Pickup, CO Line

Description Allows any extension user to answer an incoming outside call that is ringing at another’s telephone.

Conditions

- Call Pickup starts with the lowest CO number.
- Confirmation tone is sent to the user when the call is picked up. Eliminating the tone is programmable.

Programming References

Section 4, System Programming,
 [100] Flexible Numbering, Call pickup, CO line
 [990] System Additional Information, Field (16)

3 Features

C

Feature References None

Operation References DPT Features, SLT Features;
—User Manual Call Pickup, CO Line

Call Pickup, Directed

Description Allows any extension user to answer a call ringing at any other extension.

Conditions

- Doorphone calls can be picked up from extensions that are not programmed to answer doorphone calls.
- Confirmation tone is sent to the user when the call is picked up. Eliminating the tone is programmable.

Programming References

Section 4, System Programming,
[100] Flexible Numbering, Call pickup, directed
[990] System Additional Information, Field (16)

Feature References None

Operation References DPT Features, SLT Features;
—User Manual Call Pickup, Directed

Call Pickup, Group

Description Allows the extension user to answer a call that is ringing at another telephone, if the call is ringing within the user's extension group.

Conditions

- The user can pick up an incoming outside, intercom, or doorphone call.
- The priority of Group Call Pickup is as follows:
Outside call > Transferred call > Extension call > Doorphone call
- Group Call Pickup starts with the lowest jack number.
- Confirmation tone is sent to the user when the call is picked up. Eliminating the tone is programmable.

Programming References

Section 4, System Programming,
[100] Flexible Numbering, Call pickup, group
[990] System Additional Information, Field (16)

Feature References None

Operation References **DPT Features, SLT Features;**
—User Manual Call Pickup, Group

Call Pickup Deny

Description Allows the user to prohibit other extensions from picking up calls ringing at his / her extension by using the call pickup features.

Conditions Distinctive dial tone is sent to the user on the extension with this feature when the user goes off-hook.

Programming References

Section 4, System Programming,
[100] Flexible Numbering, Call pickup deny set / cancel

Feature References **Section 3, Features,**
Call Pickup, CO Line Call Pickup, Group
Call Pickup, Directed

Operation References **DPT Features, SLT Features;**
—User Manual Call Pickup Deny

Call Splitting

Description Allows the extension user to alternate between two other parties. Placing the current call on hold allows the user to have a conversation with the other party.

Conditions Call Splitting is impossible during Doorphone Call or Paging.

Programming References

No programming required.

Feature References None

Operation References **DPT Features, SLT Features;**
—User Manual Call Splitting

CALL TRANSFER FEATURES – SUMMARY

Description Call Transfer features allow the user to transfer a call to another party. This operation can be screened or unscreened. Screened call transfer is used when you want to announce the call to the other party before completing the transfer. Unscreened call transfer immediately releases the caller to the called party. An intercom or an outside call can be transferred to an extension or to an outside party by:

- Call Transfer, Screened – to CO Line**
- Call Transfer, Screened – to Extension**
- Call Transfer, Unscreened – to Extension**

Call Transfer, Screened – to CO Line

Description Allows the proprietary telephone user to voice-announce to the external party and transfer the call.

Conditions

- Class of Service programming determines the extensions that are able to perform it.
- Transferring a call to an external party cannot be performed from a single line telephone.

Programming References

Section 4, System Programming,
[205] Extension-to-CO Line Call Duration Time
[206] CO-to-CO Call Duration Time
[502] Extension-to-CO Line Call Duration Limit
[503] Call Transfer to CO Line
[990] System Additional Information, Field (1)

Feature References **Section 3, Features,**
Hold Recall

Operation Reference **DPT Features,**
—User Manual Call Transfer — to CO Line

Call Transfer, Screened – to Extension

Description	Allows the extension user to voice-announce to the extension and transfer the call.
Conditions	None
Programming References	Section 4, System Programming, [990] System Additional Information, Field (1)
Feature References	None
Operation Reference —User Manual	DPT Features, SLT Features; Call Transfer — to Extension

Call Transfer, Unscreened – to Extension

Description	Allows the user to transfer an intercom or outside call to directly transfer to an extension party. After dialing the destination extension, the user replaces the handset while hearing ringback tone.
Conditions	<ul style="list-style-type: none">• If the destination party does not answer within the transfer recall time, the call will return to the user or Operator 1. You can select the desired one by system programming.• This function is possible when the destination is sending ringback or busy tone. If the destination is busy, Camp-On Transfer occurs.• The ringing signal pattern follows the regular ringing pattern depending on the party being transferred: outside or intercom call ringing.• It is possible for any extension user to transfer a call to the floating modem.*• If music on hold is enabled, music is sent to the caller while being transferred. It is system-programmable whether to send ringback tone or music on hold to the caller by program [990], Field (1).
Programming References	Section 4, System Programming, [201] Transfer Recall Time [990] System Additional Information, Fields (1), (11)
Feature References	None

3 Features

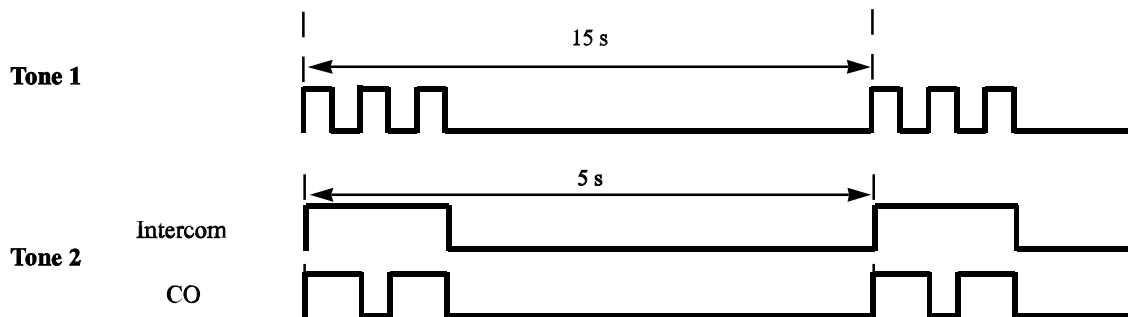
C

Operation References DPT Features, SLT Features;
—User Manual Call Transfer — to Extension

Call Waiting

Description While in conversation, a call waiting tone informs the user of another incoming call that is waiting. He or she can answer the second call by disconnecting or placing the current call on hold. Call waiting tone can be enabled or disabled by dialing the appropriate feature number.

- Conditions**
- The call waiting tone is generated when an outside call or a doorphone call comes in or when an extension caller executes Busy Station Signaling.
 - Setting Data Line Security temporarily cancels Call Waiting which has been turned on by an extension user.
 - For proprietary telephone users, two types of call waiting tone are provided to prevent them from missing the tone as shown below: A digital proprietary telephone user can select the desired type by station programming.



Programming References Section 4, System Programming,
[100] Flexible Numbering, Call waiting set / cancel
Station ProgrammingUser Manual,
Call Waiting Tone Type Assignment

Feature References Section 3, Features,
Busy Station Signaling (BSS)

Operation References DPT Features, SLT Features;
—User Manual Call Waiting

Charge Fee Reference

Description

Allows pre-assigned display telephone users to see charges and print out the charges. Charges are displayed per extension, CO line, Account Code, or the total of each can be referred to. There are two display formats – Pulse or AS \$.

Conditions

- System programming determines the extensions that can see charges.
- An identification code (ID code), set by system programming, is required to see charges.
- The first display format – Pulse or AS \$ – is selected by system programming. This can be switched manually at each extension.
- Exchange rate between pulse counter and AS \$ is changeable by station programming.

Programming References

Section 4, System Programming,
[117] Charge Display Selection
[118] Charge Verification Assignment
[119] Charge Verification ID Code Set
Station ProgrammingUser Manual,
Charge Fee Reference

Feature References

None

Operation References

—User Manual

Station Programming,
Charge Fee Reference

3 Features



Class of Service (COS)

Description COS is used to define the features which are allowed for a group of extensions. For Check-In / Check-Out feature, primary and secondary COS numbers can be assigned per extension. Eight Classes of Service are available.

- Conditions**
- A list of the programmable items is given below:
 - (1) The ability to forward a call to an outside party – enable / disable
 - (2) The ability to transfer a call to an outside party – enable / disable
 - (3) The ability to override Do Not Disturb of the called station – enable / disable
 - (4) Account Code Entry operation – verified - all calls / verified - toll restriction override / option
 - (5) Outgoing call restriction level (Day mode / Night mode) – 1 through 8
 - (6) Restriction of outside call duration – enable / disable
 - (7) The number of permitted dialing digits during an outside call
 - (8) The ability to set Call Forwarding – Follow Me – enable / disable

Programming References

Section 4, System Programming,
[500]–[501] Toll Restriction Level — Day / Night
[502] Extension-to-CO Line Call Duration Limit
[503] Call Transfer to CO Line
[504] Call Forwarding to CO Line
[507] Do Not Disturb Override
[508] Account Code Entry Mode
[601] Class of Service
[991] COS Additional Information

Feature References **Section 3, Features,**
HOTEL APPLICATION – Check-In / Check-Out

Operation References Not applicable.

CO Incoming Call Information Display

Description	Provides the display proprietary telephone user with the preset CO line name if an incoming outside call arrives at the telephone. If the CO name is not assigned and the CO line is an ISDN S0 line provided with CLIP (Calling Line Identification Presentation) feature, shows the caller's telephone number and name on the display.
Conditions	<ul style="list-style-type: none">• It is required to give names to CO lines by system programming.• With the CLIP feature, the ISDN S0 line informs the system of the caller's telephone number only. To display the name, the system compares the informed number with the System Speed Dialing Numbers stored in program [001] and if a match is found, decides the caller's name by using the System Speed Dialling Names stored in program [002].• The display of CO line name has the precedence on the operator's telephone.• The display DPT (KX-T7230 or KX-T7235) user can record the information of the call received by CLIP feature (CO Incoming Call Information Log feature).
Connection References	Section 2, Installation, 2.4.2 CO Line Connection (KX-TD1232 : CO 1 through CO 8) 2.4.7 2-ISDN S0 Line Unit Connection
Programming References	Section 4, System Programming, [001] System Speed Dialing Number Set [002] System Speed Dialing Name Set [416] ISDN Line Number Assignment [417] ISDN Outgoing CLIR Service Assignment [419] CO Line Name Assignment
Feature References	Section 3, Features, Calling Line Identification Restriction (CLIR) CO Incoming Call Information Log
Operation Reference —User Manual	DPT Features, CO Incoming Call Information Display

CO Incoming Call Information Log

Description

If the display digital proprietary telephone (KX-T7230 or KX-T7235) user cannot answer a call, the telephone automatically records the caller's telephone number, name and the time. The user can call back the caller by checking the call log. This is available if such a telephone receives incoming outside calls from the ISDN S0 line provided with the CLIP (Calling Line Identification Presentation) feature. A maximum of 15 calls are recorded per telephone.

Conditions

- The call log is registered at the time the DPT finishes ringing. If a call is directed to multiple DPTs, the call log is registered at the DPT that has the smallest jack number of the ringing DPTs.
- Transferred call information is also recorded.
- If the DPT is in Call Forwarding – No Answer or IRNA is activated, the call log is registered at the original DPT but not at the destination DPT unless the destination party answers the call and record it manually.
- The telephone user can control the CO Incoming Call Information Log Mode on the unit when the information area is full. If the user sets this mode, new CO incoming call information is retained but old data is discarded. If the user cancels this mode, new CO incoming call information is not memorized on the unit. To set or cancel the mode, a corresponding feature number is used.
- The telephone user can lock the display of the unit so that CO incoming call information is not shown on the display, if the user does not want others to see the information. A lock code is required to set or cancel this feature. Operator can cancel the lock in case the user forgets the lock code.

Connection References

Section 2, Installation,

2.4.2 CO Line Connection (KX-TD1232 : CO 1 through CO 8)

2.4.7 2-ISDN S0 Line Unit Connection

Programming References

Section 4, System Programming,

[001] System Speed Dialing Number Set

[002] System Speed Dialing Name Set

[100] Flexible Numbering, CO incoming call information log mode/CO incoming call information log lock

[416] ISDN Line Number Assignment

[417] ISDN Outgoing CLIR Service Assignment

[419] CO Line Name Assignment

Feature References **Section 3, Features,**
Calling Line Identification Restriction (CLIR)
CO Incoming Call Information Display

Operation Reference **DPT Features,**
—User Manual CO Incoming Call Information Log Lock
CO Incoming Call Information Log Mode
Operator Service Features,
CO Incoming Call Information Log Lock Clear

CO Line Connection Assignment

Description This allows you to specify the CO lines connected to your system to prevent an extension user from originating an outside call by selecting a line which is not connected. An idle line is selected from the connected ones when an extension user makes an Automatic Line Access.

Conditions If the user tries to make a call with a disconnected line, reorder tone sounds to indicate that the line is out of use.

Programming References
Section 4, System Programming,
[400] CO Line Connection Assignment

Feature References None

Operation References Not applicable.

CO Line Connection Assignment – Outgoing

Description Allows you to assign the CO line an extension user can use for outgoing calls. This feature is useful to prevent unauthorized toll calls.

Conditions • When an extension user tries to make an outside call on a disallowed CO line, reorder tone is sent to indicate that the user cannot use the CO line.
• Day and Night Service are individually programmed. (Night Service)

3 Features

C

Programming References

Section 4, System Programming,
[605]–[606] Outgoing Permitted CO Line Assignment — Day / Night

Feature References None

Operation References Not applicable.

CO Line Group

Description

CO lines can be grouped into up to eight CO line groups. This allows extensions to call outside parties without designating a specific CO line, since a CO line is automatically selected from the designated CO line group. All CO lines belonging to a CO line group follow the assignment determined for that CO line group. A list of assignments for each CO line group is shown below:

- The destination of Intercept Routing
- Disconnect Time
- Register Recall Signal Time
- Host PBX Access Code
- Pause Time (used in Speed Dialing and Recall)

Conditions

- Each CO line can only belong to one CO line group.
- CO lines in a CO line group are selected uniformly if all lines belong to the same system.
- If System Connection* is employed, a CO line group can include CO lines in both systems. In this case, a CO line is first selected from the user's system. If all lines in the user's system are in use, a line in the other system is selected.

Programming References

Section 4, System Programming,
[401] CO Line Group Assignment
[409]–[410] Intercept Extension — Day / Night
[411] Host PBX Access Codes
[412] Pause Time
[413] Register Recall Signal Time
[414] Disconnect Time

Feature References None

Operation References Not applicable.

*: Available for KX-TD1232 only.

Conference

Description The system supports three-party conference calls, including outside or inside parties. During a two-party conversation, the extension user can add a third party to their conversation, thereby establishing a conference.

- Conditions**
- Possible conference combinations are: 1-inside and 2-outside; 2-inside and 1-outside; and 3-inside.
 - Up to six conference calls are allowed simultaneously.
 - When a two-party call is changed to a three-party call and vice versa, a confirmation tone is sent to all three parties. Eliminating the tone is programmable.
 - The third party must have a CO button which is common to the CO line in use by the original parties.

Programming References

Section 4, System Programming,
[005] Flexible CO Button Assignment
[990] System Additional Information, Field (13)
Station Programming.....User Manual,
Flexible Button Assignment – Conference (CONF) Button

Feature References **Section 3, Features,**
Conference, Unattended

Operation References **DPT Features, SLT Features;**
—User Manual **Conference**

Conference, Unattended

Description When a proprietary telephone user is in a conference with two outside parties, the user can leave the conference to allow the other two parties to continue conversation. This is called an Unattended Conference. The user may return to the conference, if desired.

- Conditions**
- An Unattended Conference can be established when the extension is allowed to transfer a call to a CO line.
 - The duration of an unattended conference is restricted by a system timer. Hold Recall results to the extension user who left the conference 50 seconds before the time-out. Alarm tone is generated to both outside parties 15 seconds before the time-out. The call is disconnected at the time-out unless the extension returns to the call.

3 Features

C

Programming References

Section 4, System Programming,
[206] CO-to-CO Call Duration Time
[502] Extension-to-CO Line Call Duration Limit
[503] Call Transfer to CO Line

Feature References

Section 3, Features,
Conference Limited Call Duration
Hold Recall

Operation References

—User Manual

DPT Features,
Conference, Unattended

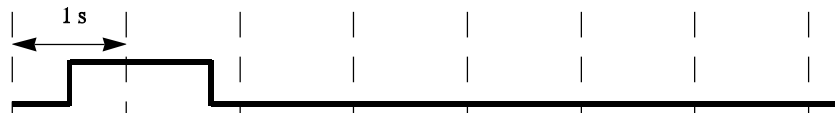
Confirmation Tone

Description

At the end of many different functions the system confirms the success of the operation by sending a confirmation tone to the extension user through the speaker of the telephone.

Confirmation tone 1:

- (a) Indicates that the new setting differs from the previous setting.
- (b) Set or cancel the Electronic Station Lockout.



Confirmation tone 2:

- (a) Indicates that the new setting is identical to the previous setting.
- (b) In addition, sent when various features are successfully performed or accessed. (e.g. Call Hold; Automatic Callback Busy)
- (c) Sent when accessing external paging equipment. (e.g. Paging – All; Paging – External) Confirmation tone from external pagers can be enabled or disabled.



Confirmation tone 3:

Sent when a conversation is established just after dialing.
For example, when accessing the following features by the feature numbers:

- Call Park Retrieve
- Call Pickup
- Hold Retrieve

- Paging / Paging Answer
- TAFAS Answer

This tone can be eliminated by system programming so that the user can start talking instantly.



Confirmation tone 4:

Sent when moving from a two-party call to a three-party call, and vice versa. (These are caused by Conference.) It is possible to eliminate this tone by system programming.



Conditions

Confirmation Tone 1 and 2 are provided to reconfirm the assigned feature.

Programming References

Section 4, System Programming,
 [805] External Pager Confirmation Tone
 [990] System Additional Information, Fields (13), (16)

Feature References

None

Operation References

Not applicable.

Consultation Hold

Description

Allows the extension user to place a call on hold temporarily to transfer it or make a Conference call or make Call Splitting. The held call can be retrieved from other extensions.

Conditions

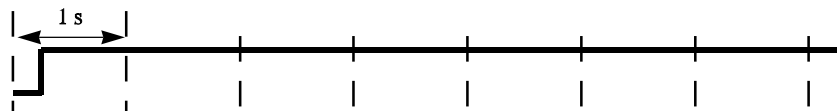
- With a digital proprietary telephone, Consultation Hold is established by pressing TRANSFER or CONF button. With a single line telephone, it is established by pressing the Register Recall button.
- With a single line telephone, the user can hold a call only to transfer it.
- Doorphone calls and paging calls cannot be placed on Consultation Hold.

Dial Tone, Distinctive

Description

Four types of dial tone patterns are available to give some information about features enabled on the telephone set.

Dial tone 1: Normal dial tone. None of the features listed below are enabled.



Dial tone 2: Sounds when any one of the features below are set.

Absent Message Capability

Background Music (BGM) (for digital proprietary telephones only)

Call Forwarding

Call Pickup Deny

Call Waiting

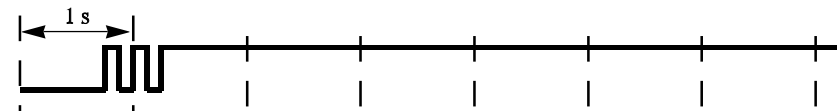
Data Line Security

Do Not Disturb (DND)

Electronic Station Lockout

Pickup Dialing

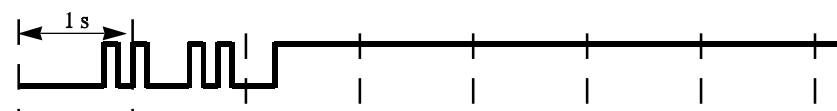
Timed Reminder



Dial tone 3: Sounds when performing Account Code Entry. Also sounds when answering Timed Reminder call.



Dial tone 4: Sounds when messages are waiting for the extension.



Conditions

None

Programming References

No programming required.

3 Features

D

Feature References None

Operation References Not applicable.

Dial Type Selection

Description

Allows you to select the desired dialing mode for each CO line regardless of the type of extension originating the call (pulse or tone).

There are three dialing modes available:

DTMF (Dual Tone Multi-Frequency) Mode

The dialing signal from an extension, either in tone or pulse, is converted to tone dialing. DTMF signals are transmitted to the CO line.

Pulse Dial (Rotary) Mode

The dialing signal from an extension, either in tone or pulse, is converted to pulse dialing. Pulse signals are transmitted to the CO line.

Call Blocking Mode

Set this mode on CO lines that can receive both tone and pulse, but under contract with the Central Office for pulse dialing only. When dialing to the line using an MF4 telephone, only pulse signals are sent to the Central Office.

Conditions

- It is possible for the extension user to temporarily convert the pre-assigned pulse dialing mode to DTMF mode (Pulse to Tone Conversion). DTMF mode cannot be changed to pulse.
- In case a CO line can receive both DTMF and pulse signals and is contracted for DTMF with a Central Office, DTMF mode should be selected for the line. If it is contracted for pulse dialing mode, Call Blocking mode should be selected for the line.
- If a line is assigned Pulse Dial mode, select an appropriate pulse speed, pulse break ratio, and inter-digit pause for the line, if needed. If a line is assigned DTMF, select an appropriate DTMF duration for the line, if needed.
- After a held call is retrieved, the dial mode goes back to the one originally programmed on the CO line.

Programming References

Section 4, System Programming,

[402] Dial Mode Selection

[403] Pulse Speed Selection

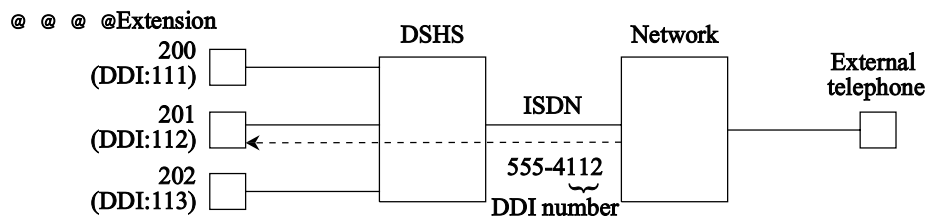
[404] DTMF Time
[990] System Additional Information, Fields (17), (21)

Feature References **Section 3, Features,**
End-to-End DTMF Signaling Pulse to Tone Conversion
(Tone Through)

Operation References Not applicable.

Direct Dialing In (DDI)

Description Provides an automatic direction of an incoming ISDN S0 line call to a specific extension. This requires a DDI number informed from the ISDN network. The DDI number is converted to a specific extension number by using a pre-programmed conversion table.



Explanation

1. An incoming call from the ISDN network reaches your DSHS (Digital Super Hybrid System).
The ISDN network informs DSHS of the DDI number.
2. DSHS converts the DDI number to an extension number and directs the call to the extension.

Conditions

- The DDI service can be enabled or disabled on a CO line basis.
- After the extension number is determined, the system operates the call in the same way as the DIL 1:1 operation.
- If a DDI number cannot be converted to an extension number, the call is put to IRNA destination.

Connection References

Section 2, Installation,
2.4.2 CO Line Connection (KX-TD1232 : CO 1 through CO 8)
2.4.7 2-ISDN S0 Line Unit Connection

3 Features

D

Programming References

Section 4, System Programming,
[418] ISDN DDI Service Assignment
[610] ISDN DDI Number/Extension Number Transformation

Feature References None

Operation References Not applicable.

Direct In Lines (DIL)

Description

Enables an incoming outside call to go directly to one or more answering points.

DIL 1:1 puts an incoming outside call to a single destination. Assignable destinations are: (1) extension; (2) modem*; (3) external pager. This CO line can be used by multiple extension users to make calls but can be used by only one extension to receive calls.

DIL 1:N puts an incoming outside call to multiple destinations. Assignable destinations are extensions only. This CO line can be used by multiple extension users to make and receive calls. Both DIL 1:1 and 1:N can have different destinations for day and night modes (Night Service).

Conditions

- If a CO line is programmed for both DIL 1:1 and DIL 1:N, it is regarded as a DIL 1:1 line.
- DIL 1:1 to the modem* allows the caller to perform remote administration. DIL 1:1 to an external pager sounds the pager when receiving incoming calls (TAFAS feature).

Programming References

Section 4, System Programming,
[407]–[408] DIL 1:1 Extension — Day / Night
[603]–[604] DIL 1:N Extension and Delayed Ringing — Day / Night

Feature References None

Operation References Not applicable.

*: Available for KX-TD1232 only.

Direct Inward Dialing (DID)

Description

Incoming calls can be put through directly to destinations in accordance with the subscriber numbers sent from the Central Office. You can also make outside calls through this feature. Assignable destinations are: (1) extension; (2) external pager (for TAFAS); (3) modem* (for remote system administration).

Conditions

- Exactly how a subscriber number received from the exchange is converted into an extension number programmed in [433] “DID Subscriber Number Removed Digit and Received Digit” and [434] “DID Added Number” is explained below using an example.
<Example>
DID Table settings Received Digit: 4
 Deleted Digit: 2
 Added Dial No.: 2
Subscriber number received from the exchange: 43112

Processing
<1> “2” in 43112 is ignored since there are four received digits. This leaves 4311.
<2> “43” is deleted since there are two deleted digits. This leaves 11.
<3> Added Dial No. “2” makes the final number 211 which serves as the extension number. Note that digits are inserted at the beginning of the number.
- An optional 4-DID Line Unit (KX-TD185) must be installed for this feature.
- If the destination is in Do Not Disturb mode:
 - 1) if IRNA is employed — the call is sent to the IRNA destination.
 - 2) if IRNA is not employed — the system sends the busy tone.

Connection References

Section 2, Installation,
2.4.8 Installing Expansion Unit (KX-TD170 / KX-TD180 / KX-TD185 / KX-TD280)

Programming References

Section 4, System Programming,
[109] Expansion Card / Unit Type
[401] CO Line Group Assignment
[430] DID Table Number Assignment
[431] DID Incoming Assignment
[432] DID Outgoing Assignment
[433] DID Subscriber Number Removed Digit and Received Digit
[434] DID Added Number
[435] DID Wink Time Out Assignment

3 Features

D

Feature References None

Operation References Not applicable.

Display, Call Information

Description The display proprietary telephone shows the user the following call information:

Extension number and name

These are shown when calling or when called by an extension user and during an established intercom call.

A display example: 123 : Smith

Dialed telephone number

This is shown when dialing the telephone number.

A display example: 91234567890

Number or name of the caller

These are shown when receiving an incoming outside call on ISDN network.

A display example: 0712225555

JOHN WHITE

CO line number and name

This is shown when receiving an outside call.

A display example: CO03 :AB COMPANY

Charge Meter

This is shown during an established call.

A display example: 201 :00005

Charge Fee

This is shown during an established call.

A display example: CO01 :\$00001.15

Call duration

This is shown during an established outside call. The display remains for five seconds after the call is finished.

A display example: CO 02 0 :02'28

Conditions

- Extension numbers and names, and CO line names are programmable. If no name is stored, only the number is displayed.
- The display shows no intercom call duration.
- The outgoing outside call duration starts when the programmable timer expires.

- It is programmable to select the first display, meter or charge by System Programming. To alternate the display, press the CO button.

Programming References

Section 4, System Programming,

- [003] Extension Number Set
- [004] Extension Name Set
- [117] Charge Display Selection
- [212] Call Duration Count Start Time
- [419] CO Line Name Assignment

Feature References

Section 3, Features,

CO Incoming Call Information Display

Operation References Not applicable.

Display, Extension Programmed Data

Description

Allows the display proprietary telephone user to confirm the features assigned on the buttons on the telephone. When it is on-hook (that is, when the handset is on the cradle and the SP-PHONE button is off), pressing a button displays the use of the button or the information assigned to the button for five seconds.

Conditions

- Display examples
 - (1) If REDIAL; SAVE; or One-Touch Dialing button is pressed, the stored number is displayed: 950-1001PP12345&
 - (2) If the DSS or MESSAGE button is pressed, the extension number and the name (if assigned) stored under the DSS button or the source of the Message Waiting is displayed: 223 : Tony
 - (3) If Account button is pressed, the display shows: Account
 - (4) If FWD/DND button is pressed, the selected feature assigned on the button is shown as follows:
 - (a) If the Do Not Disturb feature is assigned: Do Not Disturb
 - (b) If Call Forwarding- All Calls to extension 223 is assigned: FWD (All) Ext223
 - (c) If Call Forwarding – Busy to extension 234 is assigned: FWD (BSY) Ext234
 - (d) If Call Forwarding – No Answer to extension 345 is assigned: FWD (NA) Ext345
 - (e) If Call Forwarding – Busy / No Answer to extension 200 is assigned: FWD (B/NA) Ext200

(f) If Call Forwarding – to CO Line number 91201431 is assigned: FWD (CO) 91201431

- If the display characters exceed 16 digits, the mark “&” is shown at the right-hand edge.
- This is used to display the data programmed for each PF (Programmable Feature), DSS, SAVE, or REDIAL button. If Full One-Touch Dialing is enabled on the telephone Full One-Touch Dialing will be active instead.

Programming References

No programming required.

Feature References None

Operation References Not applicable.

Display, Self-Extension Number

Description Allows the display proprietary telephone user to display their own jack number and extension number in station programming mode.

Conditions Display example
If the jack number is 02 and the extension number is 202:
Jack02<=>EXT202

Programming References

Station Programming.....User Manual,
Self-Extension Number Confirmation

Feature References None

Operation References Not applicable.

Display, Time and Date

Description Offers the display proprietary telephone user a display of either the present time and the date or the date and the day of the week. It is displayed while on-hook.

Conditions

- There are two types of display:
Display example 1: Month, Day, Time: 1 Jan 12:00AM
Display example 2: Month, Day, Year, Day of the Week:
1 Jan 1994 SAT
- The present date and time are set by system programming.

Programming References
Section 4, System Programming,
[000] Date and Time Set

Feature References None

Operation References Appendix
—User Manual Display Examples

Display Contrast Adjustment

Description Allows the display proprietary telephone user to adjust the display contrast.

Conditions Soft buttons and Volume button are used to sharpen the contrast to one of three levels.

Programming References
Configuration.....User Manual,
Display Contrast Adjustment (KX-T7230 and KX-T7235 only)

Feature References None

Operation References Not applicable.

Do Not Disturb (DND)

Description Allows an extension user to appear busy to incoming CO or extension calls. This can be set or cancelled by the extension user.

3 Features

D

Conditions

- If your digital proprietary telephone (DPT) is not supplied with the FWD/DND button, it can be assigned on a flexible button.
- DND does not work for the following calls: doorphone calls; recalls for hold / Timed Reminder alarm or calls directed by Intercept Routing.
- Setting DND cancels any Call Forwarding feature currently set.
- A DPT user in DND mode can answer a call by pressing the button showing the arrival of the call.
- An extension in DND mode can be called by other extension users who are allowed to override DND in their Class of Service (Do Not Disturb Override).

Programming References

Section 4, System Programming,
[005] Flexible CO Button Assignment
[100] Flexible Numbering, Call forwarding / do not disturb set / cancel
Station ProgrammingUser Manual,
Flexible Button Assignment – FWD/DND Button

Feature References

Section 3, Features,
Do Not Disturb (DND) Override

Operation References —User Manual

DPT Features, SLT Features;
Do Not Disturb (DND)

Do Not Disturb (DND) Override

Description

Permits the pre-assigned extension user to call another user who sets the Do Not Disturb feature. Dialing “2” enables the caller to override the DND programmed on the called extension’s telephone and causes the telephone to ring.

Conditions

Class of Service (COS) programming determines the extension users who can perform DND Override.

Programming References

Section 4, System Programming,
[507] Do Not Disturb Override

Feature References

Section 3, Features,
Do Not Disturb (DND)

Operation References —User Manual

DPT Features, SLT Features;
Do Not Disturb (DND) Override

Door Opener

Description

Allows the extension users to unlock the door for a visitor from their telephones. The door can be unlocked by extension users who have been programmed to receive doorphone calls. However, while engaged on a doorphone call, any extension user can open the door from the telephone to let the visitor in.

Conditions

It is needed to install a user-supplied door opener on each door to be opened. Two door openers can be installed on each system. System Connection* provides for four door openers.

Connection References

Section 2, Installation,
2.4.9 Doorphone and Door Opener Connection

Programming References

Section 4, System Programming,
[100] Flexible Numbering, Door opener
[607]–[608] Doorphone Ringing Assignment — Day / Night

Feature References

Section 3, Features,
Doorphone Call

Operation References

—User Manual

DPT Features, SLT Features;
Doorphone Call

Doorphone Call

Description

Your system supports two doorphones. If a visitor presses the doorphone button, pre-assigned extensions are rung. The extension who answers the call can talk to the visitor. It is possible for any extension user to originate a call to a doorphone.

Conditions

- It is needed to install an optional Doorphone.
- Two doorphones can be installed on each system. System Connection* provides for four doorphones.
- It is necessary to program the extensions that can receive calls from each doorphone during day and night mode.
- If no extension user answers an incoming doorphone call within 30 seconds, the call stops ringing and is cancelled.
- While engaged on a doorphone call, any extension user can open the door from the telephone to let the visitor in (Door Opener). This requires a user-supplied door opener.

3 Features

D

Connection References

Section 2, Installation
2.4.9 Doorphone and Door Opener Connection

Programming References

Section 4, System Programming,
[100] Flexible Numbering, Doorphone call
[607]–[608] Doorphone Ringing Assignment — Day / Night

Feature References

Section 3, Features,
Door Opener

Operation References —User Manual

DPT Features, SLT Features;
Doorphone Call

DSS Console (KX-T7240)

Description

The Direct Station Selection (DSS) Console provides direct access to stations and busy lamp display as well as providing 16 PF (Programmable Feature) buttons.

The DSS Console must be programmed to work with a digital proprietary telephone (DPT). System programming assigns the jack numbers of the DSS Console and its associated DPT.

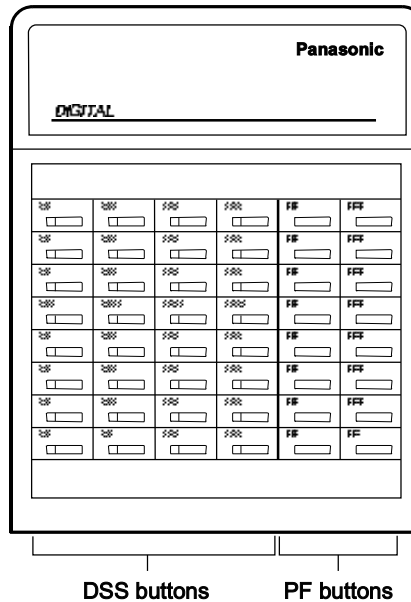
Up to four consoles can be installed per system. A DPT can be paired with up to four DSS Consoles. The paired telephone user can carry out the following operations using the DSS Console:

- Direct access to an extension (Direct Station Selection)
- Quick access to an outside party (One-Touch Dialing)
- Easy transfer of an outside call to an extension (The programmable One-Touch Transfer feature provides simplified operation.)
- Quick access to a system feature

The above functions are enabled simply by pressing buttons on the console which were pre-programmed as function buttons.

A DSS Console has two types of buttons.

DSS Console KX-T7240



DSS (Direct Station Selection) buttons: Used to access extensions. Every button is programmed to correspond to an extension. Pressing a button allows the user to call the corresponding extension. Every button is provided with an indicator (Busy Lamp Field), which shows the current state of the corresponding extension as shown in the Table below:

Light	State of extension
Off	Idle
On	Busy

Busy Lamp Field Table

To meet the user's various needs, DSS buttons can be changed to the other function buttons.

PF (Programmable Feature) buttons printed as F1 through F16: These buttons are provided with no default setting. The paired telephone user can program the buttons for the other function buttons.

3 Features



Conditions

- Programming the DSS and PF buttons can be done only from the paired telephone using station programming or programming with a personal computer. System programming with Proprietary Telephone is not available.
- If the extension number assigned to a DSS button is changed to another number, the DSS button automatically follows the new number. (Re-programming is not necessary.)
- During System Connection*, DSS Consoles must be paired with telephones in the same system.

Connection References

Section 2, Installation,
2.3.3 Extension Connection

Programming References

Section 4, System Programming,
[007] DSS Console Port and Paired Telephone Assignment
Station ProgrammingUser Manual,
Flexible Button Assignment

Feature References

Section 3, Features,,
Button, Flexible
One-Touch Transfer by DSS
Button

Operation References

—User Manual

DSS Console Features

Electronic Station Lockout

Description

Allows the extension users to lock their stations so that other users cannot make outgoing outside calls. Any 3-digit numeric code can be used to lock the station. The same code is used to unlock it.

Conditions

- Making intercom calls and receiving intercom or outside calls are permitted on the locked station.
- Remote Station Lock Control overrides Electronic Station Lockout. If the operator sets Remote Station Lock on a station that has already been locked by the station user, the user cannot unlock it.
- It is programmable to admit the press of the Register Recall button during an outside call on the locked station.
- Emergency dial numbers programmed in [311] “Emergency Dial Set” can be dialed on a locked station.

*: Available for KX-TD1232 only.

EXtra Device Port (XDP)

Description EXtra Device Port (XDP) expands the number of telephones available in the system by allowing an extension jack to contain two telephones. A digital proprietary telephone (DPT) and a single line telephone (SLT) can be connected to the same jack but have different extension numbers so that they can act as completely different extensions.

- Conditions**
- XDP requires previous programming of the individual jack. Enable XDP mode for the desired jack by system programming. Immediately after changing the assignment, changed setting may not work for a maximum of eight seconds.
 - If an SLT is connected to an XDP-enabled jack, neither telephones work.
 - If XDP is disabled for the jack, DPT and SLT may be used as Paralleled Telephones.

Connection References

Section 2, Installation,
2.3.5 EXtra Device Port (XDP) Connection

Programming References

Section 4, System Programming,
[600] EXtra Device Port

Feature References

Section 3, Features,
Paralleled Telephone

Operation References Not applicable.

Flexible Numbering

Description The numbers used for the access codes of system features and the number used for extension numbers are not fixed. They can be set as required provided there are not any conflicts. Feature numbers can be from one to three digits, utilizing numbers “0 through 9” as well as “*” and “#.” Extension numbers can be two to four digits in length. Any number can be set as the leading first or second digit. If one digit is assigned as the leading digit, some extensions have 2-digit numbers and some have 3-digit numbers. If two digits are assigned as the leading digits, some have 3-digit numbers and some have 4-digit numbers.

3 Features

F

Flexible Feature Numbers

Number	Feature	Default
01	1st hundred extension block	2
02	2nd hundred extension block	3
03 - 16	3rd through 16th hundred extension block	None
17	Operator call	0
18	Automatic line access / ARS	9
19	CO line group line access	8
20	System speed dialing	*
21	Station speed dialing	6*
22	Station speed dialing programming	60
23	Doorphone call	61
24	Paging – external	62
25	Paging – external answer / TAFAS answer	42
26	Paging – group	63
27	Paging – group answer	43
28	Call pickup, CO line	4*
29	Call pickup, group	40
30	Call pickup, directed	41
31	Call hold	50
32	Call hold retrieve – intercom	51
33	Call hold retrieve – CO line	53
34	Last number redial	#
35	Call park / call park retrieve	52
36	Account code entry	49
37	Door opener	55
38	External feature access	64
39	Station feature clear	790
40	Message waiting set / cancel / callback	70
42	Call forwarding / do not disturb set / cancel	710
43	Call pickup deny set / cancel	720
44	Data line security set / cancel	730
45	Call waiting set / cancel	731
47	Pickup dialing program set / cancel	74
48	Absent message set / cancel	750
49	Timed reminder set / cancel / confirm	76
50	Electronic station lockout set / cancel	77
51	Night service mode set / cancel	78
52	Parallel telephone mode set / cancel	69
53	Background music – external on / off	65
54	CO incoming call information log mode	56
55	CO incoming call information log lock	57
56	Timed reminder, remote	7*

Default feature numbers are shown above.

In addition to the flexible feature numbers above, fixed feature numbers are provided.

Fixed Feature Numbers

Feature	Default
While busy tone is heard	
Busy Station Signaling (BSS)	2
Off-Hook Call Announcement (OHCA)	2
Automatic Callback Busy	6
While Do Not Disturb tone is heard	
Do Not Disturb Override	2
While calling or talking	
Conference	3
Door Open	5
Alternate Calling – Ring / Voice	*
Pulse to Tone Conversion	* #
Account Code Delimiter	# / 99
When the set is on-hook	
Background music on / off	1
Time display / date display switching	*
Day / night mode display	#

Conditions

- Flexible feature numbers can only be dialed during dial tone.
- The following are examples of feature number conflicts:
Examples: 1 and 11, 0 and 00, 2 and 21, 10 and 101, 32 and 321, etc.
- Some flexible feature numbers require additional digits to make the feature active. For example, to set Call Waiting, the feature number for “Call Waiting” must be followed by “1” and to cancel it, the same feature number should be followed by “0.”

Programming References

Section 4, System Programming,
[003] Extension Number Set
[100] Flexible Numbering

Feature References None

Operation References Not applicable.

Floating Station

- Description** You can assign virtual extension numbers for resources to make them appear to be extensions. These numbers are defined as floating numbers (FN). The following resources can have floating numbers:
- (1) External paging instruments: used for TAFAS feature. For KX-TD816, one FN is available. For KX-TD1232, four FNs are available. These FNs can be assigned as:
 - a) DIL 1:1 destination
 - b) Intercept Routing destination
 - * (2) Modem: used for system administration. One FN is available. This can be assigned as:
 - a) DIL 1:1 destination
 - b) An extension number to call the modem.
 - (3) Digital Test Access: used for testing. One DTA is available. The FN can be used as an extension.

Conditions Floating numbers cannot be used for setting a feature such as Call Forwarding, etc.

Programming References

Section 4, System Programming,
[100] Flexible Numbering, 1st through 16th hundred extension blocks
[813] Floating Number Assignment

Feature References None

Operation References Not applicable.

Full One-Touch Dialing

Description Allows the digital proprietary telephone user to make a call or have access to a system service with one button. There is no need to turn the SP-PHONE / MONITOR button on before pressing the button, which is required for One-Touch Dialing. Handsfree operation is automatically provided by pressing the One-Touch Dialing, DSS, REDIAL, or SAVE button.

*: Available for KX-TD1232 only.

Conditions

- It is necessary to program automatic handsfree dial mode.
- This feature is also available with DSS buttons on a DSS Console.
- This feature is also available with the large display operation of KX-T7235 (Special Display Features for KX-T7235).

Programming References

Station ProgrammingUser Manual,
Full One-Touch Dialing Assignment

Feature References

Section 3, Features,
Button, Direct Station
Selection (DSS)
One-Touch Dialing
Redial, Last Number

Redial, Saved Number
Special Display Features for
KX-T7235

Operation References
—User Manual

DPT Features,
Full One-Touch Dialing

Handset / Headset Selection

Description

The system supports the use of headsets on proprietary telephones.

Conditions

- The headset is an user supplied item.
- To set headset mode on a digital proprietary telephone (DPT), use station programming. To set headset mode on an analog PT, use the handset / headset selector provided on the set and / or on the headset.

Programming References

Station ProgrammingUser Manual,
Handset/Headset Selection

Feature References

None

Operation References

None

3 Features

H

Handsfree Answerback

Description Allows the speakerphone telephone user to talk to a caller without lifting the handset, if the user has set handsfree answerback mode. If the user receives an intercom call in the mode, handsfree conversation is established immediately after the user hears beep tone and the caller hears confirmation tone.

Conditions

- Handsfree answerback mode is set or cancelled by pressing the AUTO ANSWER button.
- This feature does not work for calls from outside parties or doorphone calls.
- Handsfree Answerback set on a telephone overrides the Ring / Voice Intercom Alerting mode preset on the telephone; Handsfree conversation mode is established as soon as confirmation tone is sent.

Programming Reference

No programming required.

Feature References

Section 3, Features,
Alternate Calling – Ring / Voice

Operation References

—User Manual

DPT Features,
Handsfree Answerback

Handsfree Operation

Description Allows the digital proprietary telephone user to dial and to talk to the other party without lifting the handset. Pressing an appropriate button provides handsfree mode.

Conditions

- This function can be utilized by pressing a button listed below when the SP-PHONE / MONITOR button indicator is off:
SP-PHONE button; MONITOR button; INTERCOM button; CO button
- The KX-T7250 can be used for handsfree dialing operations, etc., but cannot be used for handsfree conversation.
- A single press of a One-Touch Button, DSS button, REDIAL button or a SAVE button also provides handsfree mode if Full One-Touch Dialing is enabled.

Programming References

No programming required.

Feature References Section 3, Features,
Full One-Touch Dialing

Operation References DPT Features,
—User Manual Handsfree Operation

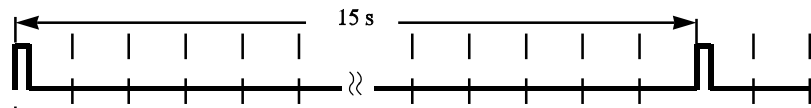
Hold Recall

Description

Prevents a call on hold from being kept waiting longer than a pre-determined time. If the timer expires, ringing or an alarm tone is generated as a reminder to the user who held the call. If the user is on-hook and its speaker-phone is off, the phone is rung. If the user is off-hook or in speakerphone mode when the timer expires an alarm tone is sent from the built-in speaker of a digital proprietary telephone (DPT) or from the handset receiver of a single line telephone at 15-second intervals.

Conditions

- Hold Recall can be disabled by programming.
- The display PT flashes the indication of the held party for five seconds at 15-second intervals synchronized with the tone.
- Alarm tone is sent as follows:



Programming References

Section 4, System Programming,
[200] Hold Recall Time

Feature References Section 3, Features,
Call Hold – CO Line Call Hold, Exclusive – CO Line
Call Hold – Intercom Call Hold, Exclusive – Intercom

Operation References Not applicable.

Host PBX Access

Description

The system may be installed behind an existing host PBX. This is performed by connecting a line from the host to a CO line in the Digital Super Hybrid System.

3 Features

H

Conditions

- To enable Host PBX Access, put the host PBX line in a CO line group. The user accesses the host PBX by selecting that CO line.
- A Host PBX Access Code is required to access CO lines of the host PBX.
- A pause, if programmed, can be inserted between the user-dialled Host PBX Access Code and the following digits (Automatic Pause Insertion). Program the pause time required by the Host PBX for that CO line group.
- Access to the host PBX during a conversation is also possible (External Feature Access).

Programming References

Section 4, System Programming,
[411] Host PBX Access Codes
[412] Pause Time

Feature References

Section 3, Features,
External Feature Access Pause Insertion, Automatic

Operation References Not applicable.

HOTEL APPLICATION

Description

Allows the operator to handle the front/operator services such as check-in / check-out, timed reminder (wake-up call). This operation is applicable to only the operator extension with a KX-T7235.

Check-In / Check-Out

Description

Allows the operator to operate the check-in / check-out service. This feature can control the usage of an outside call by switching the Class of Service between primary and secondary, and count and print out the telephone charge and the other charges (such as mini-bar charges).

Conditions

- Hotel application must be enabled by System Programming.
- When the check-in is assigned, the Class of Service is set to the primary one and the charge counter will be cleared. When the check-out is assigned, the Class of Service is set to secondary one and the total telephone charge and the other charge will be displayed and printed out.
- The telephone charge can be added to the surcharge according to the pre-assigned margin rate.

- If the operator uses the paired DSS console, the operator can refer to the check-in status on the DSS console.
- It is possible to give a header to the printed bill such as the hotel's name or greeting or to assign the starting location of output data with a personal computer.
- A new page is started for each print-out.
- It is possible to limit telephone usage to a pre-assigned amount by System Programming.
- The KX-TD1232 with the KX-TD180D or KX-TD181D supports the Pay Tone service of the Central Office.
- Your Central Office sends the pay tone or the ISDN S0 line sends pay message so that the counting for fee starts for the call.

Programming References

Section 4, System Programming,
[009] Budget Management
[010] Charge Margin Rate
[121] Hotel Application
[436] Pay Tone Assignment
[601] Class of Service

Feature References

Section 4, Features,
Budget Management Charge Fee Reference

Operation References —User Manual

Operator Service Features,
Hotel Application

Timed Reminder, Remote (Wake-Up Call)

Description

Allows the operator to set, cancel and confirm the wake-up call remotely for an extension.

Conditions

When either an operator or the extension sets a new time, the pre-set time is cleared.

Programming References

Section 4, System Programming,
[100] Flexible Numbering, Timed reminder, remote

Feature References

Section 3, Features,
Timed Reminder

Operation References —User Manual

Operator Service Features,
Hotel Application

3 Features

I

Intercept Routing

Description Provides automatic redirection of incoming outside calls. There are two types of Intercept Routing. In the first case a call cannot be placed on the called party. This is called Rerouting. In the second case the call is not answered within a programmed time period. This is called Intercept Routing – No Answer (IRNA).

- Conditions**
- Intercept Routing applies to DIL 1:1, DIL 1:N, TAFAS, Call Forwarding, and Station Hunting.
 - The final destination of intercepted calls must be programmed for day and for night modes. There are three possible destinations:
 - 1) an extension
 - 2) an external pager
 - If the destination is in Do Not Disturb, Do Not Disturb does not function and the call is placed there.

Programming References

Section 4, System Programming,
[203] Intercept Time
[409]–[410] Intercept Extension — Day / Night

Feature References None

Operation References Not applicable.

Intercom Calling

Description Allows the extension user to call another extension user within the system.

- Conditions**
- Extension numbers are assigned to all extensions by system programming. An extension number is programmed to be two, three, or four digits.
 - Names can be given to extension numbers by system programming. An extension number and a name, if programmed, is shown on the display DPT during an intercom call.
 - DSS buttons permit one-touch access to an extension and provide Busy Lamp Field.
 - KX-T7235 user can make an extension call with an extension dialing directory on the display.

- After dialing an extension number, the user will hear one of the following:
 - Ringback tone: indicates that the other extension is being called.
 - Confirmation tone: indicates that the user can perform Voice Calling.
 - Busy tone: indicates that the other extension is busy.
 - Do Not Disturb tone: indicates that the other extension has DND assigned.

Programming References

- Section 4, System Programming,**
 - [003] Extension Number Set
 - [004] Extension Name Set
 - [005] Flexible CO Button Assignment
 - [100] Flexible Numbering, 1st through 16th hundred extension blocks

Station ProgrammingUser Manual,
Flexible Button Assignment – DSS Button

Feature References

Section 3, Features,
Busy Lamp Field Button, Direct Station Selection (DSS)

Operation References —User Manual

DPT Features, SLT Features;
Intercom Calling

LED Indication, CO Line

Description

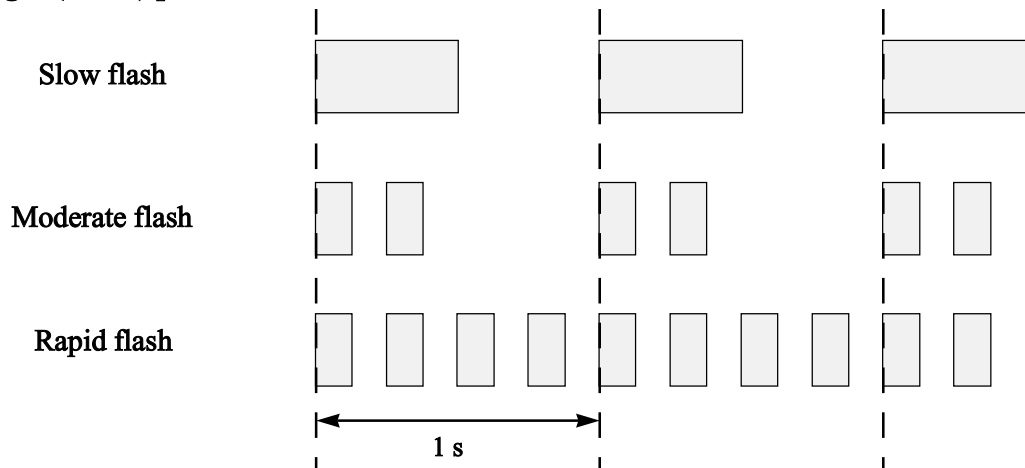
The LED (Light Emitting Diode) indicators of the buttons associated with CO lines tell the line conditions with a variety of lighting patterns. This allows the user to determine which lines are idle and which lines are in use. The table below shows the lighting patterns and line conditions according to the CO button type.

LED Indicator	CO Line Status
Off	Idle
Green On	I-use
Green slow flash	I-hold
Green moderate flash	I-Exclusive Hold / CO-to-CO call / Unattended Conference
Green rapid flash	Hold Recall / Incoming call
Red On	Other-use
Red slow flash	Other-hold

3 Features

L

Flashing light (winks) patterns



Conditions

Red slow flash indication appears on the S-CO button only.

Programming References

Section 4, System Programming,
 [005] Flexible CO Button Assignment
 Station ProgrammingUser Manual,
 Flexible Button Assignment – Group-CO (G-CO) Button, Loop-CO (L-
 CO) Button, Single-CO (S-CO) Button

Feature References

Section 3, Features,
 Button, Group-CO (G-CO) Button, Single-CO (S-CO)
 Button, Loop-CO (L-CO)

Operation References

Not applicable.

LED Indication, Intercom

Description

The LED (Light Emitting Diode) indicator of the INTERCOM button indicates the line condition with a variety of lighting patterns. This allows the user to see the current state of the intercom line. The table on the next page shows the lighting patterns and the intercom line conditions.

INTERCOM Button	Intercom Status
Off	Idle
Green on	Intercom call / Conference established
Green slow flash	Intercom call hold
Green moderate flash	Intercom call exclusive hold / Consultation hold
Green rapid flash	Incoming intercom / doorphone call

Conditions None

Programming References
No programming required.

Feature References Section 3, Features,
Busy Lamp Field

Operation References Not applicable.

Limited Call Duration

Description Limited Call Duration is a system programmable feature that disconnects an outside call when a specified timer expires. A warning tone is sent to the extension user 15 seconds, 10 seconds, and 5 seconds before the time-limit. Limiting the call duration can be enabled or disabled by Class of Service (COS) for each extension.

Conditions

- Any outside call except CO-to-CO call is limited by this feature. For CO-to-CO calls, CO-to-CO Call Duration is activated.
- It is programmable to select the limited call, either incoming and outgoing call or outgoing call only.

Programming References
Section 4, System Programming,
[205] Extension-to-CO Line Call Duration Time
[502] Extension-to-CO Line Call Duration Limit
[990] System Additional Information, Field (12)

Feature References Section 3, Features,
Call Forwarding – to CO Line Conference, Unattended
Call Transfer, Screened – to
CO Line

3 Features

L

Operation References Not applicable.

Line Access, Automatic

Description

Allows the extension user to dial the automatic line access number and access an idle line from the CO line groups assigned for the extension. The digital proprietary telephone user can use the Loop-CO button in place of the access number.

Conditions

- This feature functions with Automatic Route Selection (ARS), if ARS is enabled. If so, the least expensive route is automatically selected.
- Each extension is subject to system programming items for CO lines available to access.
- An idle CO line is selected from the CO line groups assigned to the station. If one CO line group is available, an idle line is selected from that group. If multiple CO line groups are available, the CO line group hunting sequence is determined by system programming.
- This feature requires a CO button (G-CO, L-CO or S-CO) assignment on a digital proprietary telephone (DPT). Dialing the line access code selects a CO button on a DPT according to the priority:
S-CO > G-CO > L-CO on a hunted CO line group
- If Idle Line Preference – Outgoing is set on the telephone, the user can access an idle line only by going off-hook.
- The system waits for a programmed time before dialing after a CO line is seized.

Programming References

Section 4, System Programming,
[100] Flexible Numbering, Automatic line access / ARS
[103] Automatic Access CO Line Group Assignment
[211] Dial Start Time
[400] CO Line Connection Assignment
[605]–[606] Outgoing Permitted CO Line Assignment — Day / Night

Feature References

Section 3, Features,
CO Line Connection Assignment – Outgoing

Operation References —User Manual

DPT Features, SLT Features;
Outward Dialing – Line Access, Automatic

Line Access, CO Line Group

Description

Allows the extension user to dial access a CO line group. An idle line is selected from the CO line group. To specify a CO line group, dial the feature number (the default setting is “8”) and a desired CO line group number (1 through 8). A digital proprietary telephone user can also specify a CO line group by pressing a Group-CO button.

Conditions

- Each extension is subject to system programming items for CO lines available to access.
- An idle line is selected in sequence from the lines in the specified CO line group.
- Group-CO buttons must be programmed prior to use.
- If Idle Line Preference – Outgoing is set on the telephone, the user can access an idle line only by going off-hook.

Programming References

Section 4, System Programming,
[005] Flexible CO Button Assignment
[100] Flexible Numbering, CO line group line access
[211] Dial Start Time
[400] CO Line Connection Assignment
[401] CO Line Group Assignment
[605]–[606] Outgoing Permitted CO Line Assignment — Day / Night
Station ProgrammingUser Manual,
Flexible Button Assignment – Group-CO (G-CO) Button

Feature References

Section 3, Features,
Button, Group-CO (G-CO) CO Line Group
CO Line Connection
Assignment – Outgoing

Operation References —User Manual

DPT Features, SLT Features;
Outward Dialing – Line Access, CO Line Group

3 Features

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Line Access, Direct

Description Allows the digital proprietary telephone user to select a CO line by pressing an idle CO button, which automatically establishes handsfree operation mode and allows the user to perform On-Hook Dialing. The user need not press the SP-PHONE button, MONITOR button nor lift the handset.

- Conditions**
- There are three types of CO buttons which can be programmed on an extension: Single-CO button, Group-CO button, and Loop-CO button.
 - Each extension is subject to system programming items for CO lines available to access.

Programming References

Section 4, System Programming,
[005] Flexible CO Button Assignment
[211] Dial Start Tim
[400] CO Line Connection Assignment
[605]–[606] Outgoing Permitted CO Line Assignment — Day / Night
Station ProgrammingUser Manual,
Flexible Button Assignment – Group-CO (G-CO) Button, Loop-CO (L-CO) Button, Single-CO (S-CO) Button

Feature References **Section 3, Features,**
Button, Group-CO (G-CO) CO Line Connection Assignment
Button, Loop-CO (L-CO) – Outgoing
Button, Single-CO (S-CO)

Operation References **DPT Features,**
—User Manual Outward Dialing – Line Access, Automatic, Line Access, CO Line Group, Line Access, Individual

Line Access, Individual

Description Allows the digital proprietary telephone user one-button access to a CO line without having to dial a line access code.

- Conditions**
- Each extension is subject to system programming items for CO lines available to access.
 - This feature requires a Single-CO (S-CO) button assignment on a proprietary telephone.
 - The system waits for a programmed time before dialing after a CO line is seized.

3 Features

L

Programming References

Station ProgrammingUser Manual,
Preferred Line Assignment – Incoming

Feature References None

Operation References **Basic Operation,**
—User Manual Receiving Calls

Line Preference – Outgoing (Idle Line / No Line / Prime Line)

Description

A digital proprietary telephone user can select a desired outgoing line preference to originate calls from the following three line preferences:

- (1) **Idle Line Preference:**
When you go off-hook, you are connected to an idle line. An idle line is automatically selected from the pre-assigned lines.
- (2) **No Line Preference:**
No line is selected when you go off-hook. You must select a line to make a call.
- (3) **Prime Line Preference:**
When you go off-hook, you are connected to the pre-assigned line. Assign a line as your prime line beforehand.

Conditions

- Setting a new line preference feature cancels the previous setting.
- To set Prime Line Preference, one prime line is selected from intercom or CO lines.
- The CO lines used by users must be connected by programming.
- To select Idle Line Preference, CO lines available for the user should be programmed. Also CO lines available for Automatic Line Access should be assigned.
- The user can override the Idle / Prime Line Preference temporarily to select a specific line. To select it, press the desired line access button (INTERCOM or CO button) before going off-hook or pressing the SP-PHONE / MONITOR button; or if Full One-Touch Dialing is enabled, press One-Touch Dialing, DSS, REDIAL, or SAVE button.

Programming References

Section 4, System Programming,
[005] Flexible CO Button Assignment
[103] Automatic Access CO Line Group Assignment
[400] CO Line Connection Assignment
[605]–[606] Outgoing Permitted CO Line Assignment — Day / Night

Station ProgrammingUser Manual
Flexible Button Assignment – Group-CO (G-CO) Button, Loop-CO (L-CO) Button, Single-CO (S-CO) Button
Preferred Line Assignment – Outgoing

Feature References **Section 3, Features,**
CO Line Connection Assignment – Outgoing

Operation References **Basic Operation,**
—User Manual Making Calls

Lockout

Description If one party in a conversation goes on-hook, they are both disconnected from the speech path automatically. This feature applies to extension and outside calls. Reorder tone is sent to the off-hook party before it is disconnected.

Conditions In the case of a single line telephone (SLT), if nothing is dialed within a certain period of time after the other party goes on-hook, reorder tone is sent to the SLT and then it is disconnected from the speech path.

Programming References
No programming required.

Feature References None

Operation References **DPT Features, SLT Features;**
—User Manual Lockout

Manager Extension

Description One extension in the system can be assigned as the system manager. This extension can perform system programming.

Conditions • Besides the manager extension, the extension that is connected to the jack 1 is able to perform system programming.
• If eXtra Device Port mode is enabled at the manager extension, the digital proprietary telephone user is regarded as the manager.

Programming References
Section 4, System Programming,
[006] Operator / Manager Extension Assignment

3 Features



Feature References None

Operation References Not applicable.

Message Waiting

Description The system supports the ability to inform the called party of a message waiting. The user, with a MESSAGE button, knows there is a message if the LED of the MESSAGE button is lit red. If the button is not provided nor assigned, the called party hears special dial tone, when he / she goes off-hook. Pressing the lit MESSAGE button also means to call back the called party or listen to the messages which are stored in the mailbox of the Voice Processing System.

- Conditions**
- For the digital proprietary telephone which is provided with no MESSAGE button, a flexible CO button can be assigned as the MESSAGE button either by system or station programming.
 - Cancelling the message can be performed from the extension setting it or from the extension receiving it.
 - The system supports a maximum of 128 simultaneous messages.
 - Messages are always left on the original extension. It is not sent to a Call Forwarding or Station Hunting destination.
 - A single line telephone user will hear the ring tone as a notification, if he / she receives a message. It is programmable to set the interval of a ring tone by system programming.

Programming References

Section 4, System Programming,
[005] Flexible CO Button Assignment
[100] Flexible Numbering, Message waiting set / cancel / callback
[213] Message Waiting Ring Interval Time
[990] System Additional Information, Field (9)
Station ProgrammingUser Manual,
Flexible Button Assignment – Message Waiting (MESSAGE) Button

Feature References **Section 3, Features,**
Dial Tone, Distinctive Voice Mail Integration

Operation References **DPT Features, SLT Features;**
—User Manual Message Waiting Voice Mail Integration

Microphone Mute

Description	Allows the digital proprietary telephone user to turn off the microphone, for privacy reasons.
Conditions	<ul style="list-style-type: none">• This is effective for the microphone only; your voice will only be muted during a handsfree conversation.• The user can hear the other party's voice during Microphone Mute.
Programming References	No programming required.
Feature References	None
Operation References	DPT Features, —User Manual Microphone Mute

Mixed Station Capacities

Description	This system supports a wide range of telephone sets, not only Digital Proprietary Telephones (DPT) in the Digital Super Hybrid System, but also single line LD telephones (10 pps / 20 pps, employing dial pulse signals) and single line MF4 telephones. The super hybrid method used in this system allows any telephone to be connected to an extension jack without an adaptor.
Conditions	If a telephone is replaced by another one, the stored data (such as feature button storage) is held for the new one.
Connection References	Section 2, Installation, 2.3.3 Extension Connection 2.4.4 8-Station Line Unit Connection
Programming References	No programming required.
Feature References	None
Operation References	Not applicable.

Module Expansion

Description

The KX-TD816 starts with 4 CO line and 8 extension jacks. The KX-TD1232 starts with 16 extension jacks. They can be expanded by installing expansion cards and units.

- A 8-Station Line Unit adds 8 extension jacks.
- A 8-CO Line Card adds 8 CO line jacks.
- A 4-CO Line Unit adds 4 CO line jacks.
- A 4-DID Line Unit adds 4 DID line jacks.
- A 4-ISDN S0 Line Card adds 4 ISDN S0 lines.
- A 2-ISDN S0 Line Unit adds 2 ISDN S0 lines.

The KX-TD816 can have one 8-Station Line Unit and one of 4-CO Line Unit, 4-DID Line Unit or 2-ISDN S0 Line Unit. The KX-TD1232 can have one of 8-CO Line Card or 4-ISDN S0 Line Card, a maximum of two 8-Station Line Units and one of 4-CO Line Unit, 4-DID Line Unit or 2-ISDN S0 Line Unit.

Conditions

- The number of extension jacks may be different from the number of telephones if the Paralleled Telephone or the eXtra Device Port feature is enabled. These features allow one extension jack to have two telephones.
- When an expansion unit is installed, the unit identification is set by system programming.

Connection References

- Section 2, Installation,
 - 2.4.2 CO Line Connection (KX-TD1232 : CO 1 through CO 8)
 - 2.4.4 8-Station Line Unit Connection
 - 2.4.5 4-CO Line Unit Connection
 - 2.4.6 4-DID Line Unit Connection
 - 2.4.7 2-ISDN S0 Line Unit Connection

Programming References

- Section 4, System Programming,
 - [109] Expansion Card / Unit Type

Feature References

- Section 3, Features,
 - EXtra Device Port (XDP) Paralleled Telephone

Operation References

Not applicable.

Music on Hold

Description

While a party is on hold, music is automatically sent.

Conditions

- Operations such as Call Hold, Exclusive Call Hold, Consultation Hold, or Call Transfer generates Music on Hold.
- The system has an internal music source. However it may be necessary to connect a user-supplied external music source such as a radio to the system. Up to two music sources for KX-TD1232, and one external music source for KX-TD816 can be connected per system.
- The music source is used for Music on Hold and / or BGM. In the case of KX-TD1232, elect a music source for each usage.

Connection References

Section 2, Installation,
2.3.7 External Music Source Connection

Programming References

Section 4, System Programming,
[803] Music Source Use
[990] System Additional Information, Fields (1), (20)

Feature References

Section 3, Features,
Background Music (BGM)

Operation References

Not applicable.

Night Service

Description

This supports both Night and Day modes of operation. The system operation for originating and receiving calls can be different for day and night modes. The system operation for restricting toll calls can be arranged separately to prevent unauthorized toll calls at night.

Switching of the Day / Night Mode

Day / Night mode can be switched either automatically at a pre-assigned time or manually by the operator at any time desired.

Automatic Night Service: If you select automatic switching mode, your system will switch the Day / Night mode at the programmed time each day. The starting time of the Day / Night mode can be set for each day.

Manual Night Service: If you select manual switching mode, the operator can switch the Day / Night mode by dialing the feature number.

3 Features



Conditions

The following programming items may be assigned in a different way between day mode and night mode:

- [407]–[408] DIL 1:1 Extension — Day / Night
- [409]–[410] Intercept Extension — Day / Night
- [500]–[501] Toll Restriction Level — Day / Night
- [603]–[604] DIL 1:N Extension and Delayed Ringing — Day / Night
- [605]–[606] Outgoing Permitted CO Line Assignment — Day / Night
- [607]–[608] Doorphone Ringing Assignment — Day / Night

Programming References

Section 4, System Programming,
[100] Flexible Numbering, Night service mode set / cancel
[101] Day / Night Service Switching Mode
[102] Day / Night Service Starting Time

Feature References

None

Operation References —User Manual

DPT Features, SLT Features;
Night Service
Operator Service Features,
Night Service On / Off

Off-Hook Call Announcement (OHCA)

Description

OHCA allows you to inform a busy extension that another call is waiting by talking through the built-in speaker of the called party's proprietary telephone. If the existing call is using the handset, the second conversation is made with the speakerphone so that the called party can talk to two parties independently. OHCA is performed the same way as Busy Station Signaling (BSS). It depends on the telephone type used by the called party whether BSS or OHCA is activated by the operation. If the called telephone is one of the following, OHCA becomes active: KX-T7235.

Conditions

This feature is only effective if the called extension has set the Call Waiting. If this is not set, the caller will hear reorder tone.

Programming References

Section 4, System Programming,
[100] Flexible Numbering, Call waiting set / cancel

One-Touch Transfer by DSS Button

Description This feature, if programmed, allows the DSS Console and the digital proprietary telephone user to hold an outside call and quickly transfer it to an extension. While talking to an outside party, pressing a DSS button on the console or the proprietary telephone provides automatic hold and transfer. There is no need to press the TRANSFER button. The extension starts ringing immediately.

Conditions

- One-Touch Transfer cannot be performed when there is another call on Consultation Hold.
- If One-Touch Transfer mode is disabled, the user transfers an outside call by pressing the TRANSFER button followed by the DSS button.

Programming References

Section 4, System Programming,
[108] One-Touch Transfer by DSS Button

Feature References

Section 3, Features,
Button, Direct Station Selection (DSS)

Operation References —User Manual

DPT Features,
Call Transfer — to Extension
DSS Console Features,
Call Transfer

Operator

Description The system supports up to two operators. Any extension can be appointed as an operator. The extension assigned as an operator has the ability to perform the following operations:

- Switching Day / Night mode manually
- Setting / clearing station lockout remotely
- Turning Background Music – External on and off
- Controlling CO Incoming Call Information Log Lock mode
- Handling Hotel Application

Conditions

- If eXtra Device Port mode is enabled at the operator's extension, the proprietary telephone user is regarded as the operator.
- The operator can be assigned as a destination of the Transfer Recall by system programming.

Programming References

Section 4, System Programming,
[006] Operator / Manager Extension Assignment
[100] Flexible Numbering, Operator call
[121] Hotel Application
[990] System Additional Information, Field (11)

Feature References None

Operation References **Operator Service Features**
—User Manual

Operator Call

Description Allows the extension user to call an extension operator by dialing the feature number, if at least one operator is assigned. There can be one or two extensions assigned as Operator 1 and 2.

Conditions None

Programming References

Section 4, System Programming,
[006] Operator / Manager Extension Assignment
[100] Flexible Numbering, Operator call

Feature References None

Operation References **DPT Features, SLT Features;**
—User Manual Operator Call

PAGING FEATURES – SUMMARY

Description Paging allows you to make a voice announcement to multiple persons at the same time. Your message is announced over the built-in speakers of digital proprietary telephones and / or external speakers (external pagers). The paged person can answer your page from a nearby telephone. Making and answering a page is possible from either a proprietary or single line telephone. You can do paging with a call on hold in order to transfer the call (Paging and Transfer).
Paging features are classified as follows:
 Paging – All
 Paging – External
 Paging – Group

Paging – All

Description Allows you to make a voice announcement from the speakers of the digital proprietary telephones and from the external paging devices (external pagers). If one of the paged persons answers your paging, you can talk to the person through the connected line.

- Conditions**
- If System Connection* is established, paging is performed to all digital proprietary telephones and all external paging devices in both systems.
 - The confirmation tone is sent to extensions, when the paging is made or answered. Eliminating the tone is programmable.
 - The confirmation tone is sent from external pagers, before the voice announcement. Eliminating the tone is programmable.
 - The ringing or busy extension cannot receive a page.

Connection References

Section 2, Installation,
2.3.6 External Pager Connection

Programming References

Section 4, System Programming,
[100] Flexible Numbering, Paging – external, Paging – external answer / TAFAS answer, Paging – group, Paging – group answer
[805] External Pager Confirmation Tone
[990] System Additional Information, Field (16)

Feature References None

*: Available for KX-TD1232 only.

Operation References —User Manual
DPT Features, SLT Features;
Paging — All
Paging — ANSWER
Paging and Transfer

Paging – External

Description Allows you to make a voice announcement using external paging devices (external pagers). One pager for KX-TD816, and up to two pagers for KX-TD1232 can be contained. For KX-TD1232, it is possible to select one or two pagers to perform your paging. Any telephone user can answer your Paging – External.

Conditions

- Previous connection of an external pager is required.
- External pagers can be used for TAFAS, Paging – External , or Background Music (BGM) – External in this order. For example, if Paging – External is overridden by TAFAS, reorder tone is returned to the performer of the Paging – External. If BGM is overridden by another higher priority, it is interrupted and starts again when the higher priority is finished.
- If System Connection* is established, up to four pagers are available.
- The confirmation tone is sent to the extensions and external pager, when the paging is made or answered. Eliminating the tone is programmable.
- The confirmation tone is sent from external pagers before the voice announcement. Eliminating the tone is programmable.

Connection References

Section 2, Installation,
2.3.6 External Pager Connection

Programming References

Section 4, System Programming,
[100] Flexible Numbering, Paging – external, Paging – external answer / TAFAS answer
[805] External Pager Confirmation Tone
[990] System Additional Information, Field (16)

Feature References None

Operation References —User Manual
DPT Features, SLT Features;
Paging — External
Paging — ANSWER
Paging and Transfer

3 Features

P

Paging – Group

Description Allows you to select an extension group and make a voice announcement. All the digital proprietary telephones in the group will receive the page. If a member of the paged group answers your paging, you can talk to the person through the connected line.

- Conditions**
- To select all groups pages all extensions.
 - Confirmation tone is sent when the page is made or answered. Eliminating the tone is programmable.

Programming References

Section 4, System Programming,
[100] Flexible Numbering, Paging – group, Paging – group answer
[990] System Additional Information, Field (16)

Feature References **Section 3, Features,**
Extension Group

Operation References **DPT Features, SLT Features;**
—User Manual
Paging — Group
Paging — ANSWER
Paging and Transfer

Paralleled Telephone

Description Any digital proprietary telephone can be connected in parallel with a single line telephone. The following combination of telephones is available: DPT + SLT (a digital proprietary telephone and a single line telephone/device).
When a parallel connection is made, an extension user can make and answer a call using either telephone.

- Conditions**
- The digital proprietary telephone (DPT) can be used to perform normal operations whether or not the SLT is enabled.
 - In the SLT + DPT combination, if one telephone goes off-hook while the other telephone is on a call, the call is switched to the former.
 - When receiving a call;
The SLT is enabled; Both the DPT and the SLT ring except when the DPT is in Handsfree Answerback mode or Voice Alerting mode.
The SLT is disabled; DPT rings but the SLT does not ring. However the SLT can answer the phone.

Pickup Dialing

Description Allows an extension user to make an outgoing call by going off-hook, if the user has previously stored the telephone number. This feature is also known as Hot Line.

- Conditions**
- A LD telephone without the “#” button cannot program this feature. For programming the phone number, replace the LD telephone to the telephone with the “#” button temporarily.
 - The user uses a feature number to enable or disable pickup dialing.
 - If the feature is enabled and the user goes off-hook, dial tone is generated for the waiting time and then dialing starts. During the waiting time the user can dial another party, overriding the Pickup Dialing function.
 - If the user answers an incoming call or retrieves a call on hold, the Pickup Dialing feature does not work.

Programming References

Section 4, System Programming,
[100] Flexible Numbering, Pickup dialing program set / cancel
[204] Pickup Dial Waiting Time

Feature References None

Operation References DPT Features, SLT Features;
—User Manual Pickup Dialing (Hot Line)

Power Failure Restart

Description Returning on electricity, the system restarts the stored data automatically. Before restarting, the system records the error logs if necessary.

- Conditions**
- If System Connection* is established, the Slave system makes a copy of the restored data of the Master system.
 - In the event of a power failure, system memory is protected by the factory-provided lithium battery. There is no memory loss except the memories of Camp-On and Call Park.

Programming References

No programming required.

Feature References None

*: Available for KX-TD1232 only.

Operation References Not applicable.

Power Failure Transfer

Description

If a power failure should happen, or during a system-off-line state, single line telephone (SLT) which is connected the Power Failure jack should be connected straight to specific CO lines.

Connections between the CO lines and the SLTs are as follows:

KX-TD816 : CO 1 is connected to extension jack 1

CO 2 is connected to extension jack 2

CO 5 is connected to the power failure transfer jack

KX-TD1232 : CO 1, 2 and 9 are connected to the power failure transfer jacks of Master System

CO 13, 14 and 21 are connected to the power failure transfer jacks of Slave System

Conditions

- Only SLT is available during a power failure.

Connection References

Section 2, Installation,

2.3.2 CO Line Connection (KX-TD816 : CO 1 through CO 4)

2.4.2 CO Line Connection (KX-TD1232 : CO 1 through CO 8)

2.4.5 4-CO Line Unit Connection

2.4.6 4-DID Line Unit Connection

2.5 Power Failure Transfer Connection

Programming References

No programming required.

Feature References

Section 3, Features,
Power Failure Restart

Operation References Not applicable.

Pulse to Tone Conversion

Description

This feature allows the extension user to change from pulse dial to tone (DTMF) dial so that the user can access special services such as computer-accessed long distance service.

3 Features

R

- Conditions**
- This feature works only on CO lines set to Pulse Dialing mode or Call Blocking mode.
 - Dial Type Selection provides selection of a dial mode for each CO line.
 - Changing tone to pulse is not possible.

Programming References

Section 4, System Programming,
[402] Dial Mode Selection

Feature References

Section 3, Features,
Dial Type Selection

Operation References —User Manual

DPT Features, SLT Features;
Pulse to Tone Conversion

Recall

Description

The RECALL button is used to allow a digital proprietary telephone user to disconnect from the current call and originate another call without hanging up first.

Conditions

- By default setting, pressing RECALL button with a digital proprietary telephone works as External Feature Access. By changing the programmed data, it works as Recall (disconnection).
- Pressing the RECALL button re-starts the conversation duration, outputs an SMDR record, inserts the automatic pause, and checks toll restriction level again.
- It is required to enable this function at the locked extension and toll-restricted extension by system programming.

Programming References

Section 4, System Programming,
[414] Disconnect Time
[990] System Additional Information, Fields (3), (15)

Feature References

Section 3, Features,
External Feature Access

Operation References —User Manual

DPT Features,
Recall

Remote Station Lock Control

Description The operator is given the privilege of controlling Electronic Station Lockout on any station.

Conditions Remote Station Lock Control is superior to Electronic Station Lockout. If Station Lockout has already been set by the extension user and Remote Station Lock is set by the operator, cancelling the lock is only possible by the operator.

Programming References No programming required.

Feature References Section 3, Features,
Electronic Station Lockout

Operation References Operator Service Features,
—User Manual Remote Station Lock Control

Reverse Circuit

Description This feature can be used to detect a reversal of CO line polarity from Central Office, when trying to make an outside call. This is useful for determining the start and completion of CO line calls.

Conditions This feature needs system programmings for each CO line.

Programming References Section 4, System Programming,
[420] Reverse Circuit Assignment

Feature References None

Operation References Not applicable.

Ringling, Delayed

Description If Direct In Lines (DIL) 1:N is established, a telephone set is originally set to ring instantly. This setting can be changed to delayed ringing, no ringing or no incoming call (disable) on a CO line number basis.

3 Features

R

- Conditions**
- This feature does not apply to DIL 1:1 calls.
 - If delayed, no ringing or no incoming call (disable) is assigned to an extension, the extension can answer an incoming call during no ring or the delay time by pressing the flashing button.

Programming References

Section 4, System Programming,
[603]–[604] DIL 1:N Extension and Delayed Ringing — Day / Night

Feature References

Section 3, Features,
Direct In Lines (DIL)

Operation References Not applicable.

Ringling, Discriminating

Description

Allows the extension user to identify the incoming call by the ringing pattern. (See Section 5.1 “Tone / Ring Tone.”)

Conditions

- When there are multiple incoming calls and the extension goes from off-hook to on-hook, the calls are rung according to the following priority:
 - <1> Consultation Hold Recall
 - <2> An incoming call from a line in which the Prime Line Preference – Incoming function has been set (with a proprietary telephone only)
 - <3> Call Waiting
 - <4> Incoming calls; Hold Recall; Transfer Recall; Unattended Conference Recall
- If multiple incoming calls arrive at an on-hook extension simultaneously, priority as to which calls should be rung is generally on a “first-come first-served” basis. In the case of digital proprietary telephones (DPT), however, when the Prime Line Preference – Incoming function has been set, this line takes precedence.
- Incoming TAFAS calls can be identified by ringing signals sent out from external pagers. The ringing pattern is the same as the outside calls.
- The DPT user can select a desired tone frequency for each CO button.

Programming References

No programming required.

Feature References

Section 3, Features,
Ringing Tone Selection for CO Buttons

Operation References Not applicable.

3 Features



Operation References DPT Features,
—User Manual Secret Dialing

Special Display Features for KX-T7235

The KX-T7235 is provided with a large display that allows the user to originate calls or to access system facilities with ease. The display prompts the user with information related to the desired feature. Examples of this special function are shown below:

- CO Outgoing Call Log**
- Extension Dialing**
- Station Speed Dialing**
- System Feature Access Menu**
- System Speed Dialing**

CO Outgoing Call Log _ _ _ _ _

Description Provides a display of the last dialed telephone numbers and allows the user to perform redialing the number by pressing the associated button.

Conditions The oldest telephone number will be eliminated when over the limited numbers are dialed out.

Programming References
No programming required.

Feature References None

Operation References Special Display Features (— for KX-T7235),
—User Manual CO Outgoing Call Log

Extension Dialing _ _ _ _ _

Description Provides a display of extension names and numbers. The user can call an extension by pressing the associated function button.

Conditions System programming of extension numbers and names is required.

Programming References

Section 4, System Programming,
[003] Extension Number Set
[004] Extension Name Set
[100] Flexible Numbering, 1st through 16th hundred extension blocks

Feature References None

Operation References **Special Display Features (— for KX-T7235),**
—User Manual Extension Dialing

Station Speed Dialing _ _ _ _ _

Description A list of the names and telephone numbers stored for One-Touch Dialing is displayed allowing the user to make a one-touch call by name without having to know the number.

Conditions • It is necessary to program One-Touch Dialing Numbers and Names into the 10 function buttons F1 through F10.
• It is programmable to select the first display, number or name.

Programming References

Section 4, System Programming,
[990] System Additional Information, Field (19)
Station ProgrammingUser Manual,
Station Speed Dialing Number / Name Assignment (KX-T7235 only)

Feature References **Section 3, Features,**
One-Touch Dialing

Operation References **Special Display Features (— for KX-T7235),**
—User Manual Station Speed Dialing

System Feature Access Menu _ _

Description This feature provides a display of the system features available at any time and allows the user to have access to the desired features.

Conditions • The features available to access are:
 Absent Message Capability
 Call Pickup, Group
 Call Forwarding (set / cancel)
 Do Not Disturb (set / cancel)

3 Features



- Message Waiting
- Paging (access / answer)
- Paralleled Telephone

- In addition to the features above, the operator can have the display of the following features:
 - Background Music (BGM) – External
 - Call Park
 - Night Service

Programming References

No programming required.

Feature References

None

Operation References

—User Manual

Special Display Features (— for KX-T7235),
System Feature Access Menu

System Speed Dialing

Description

A list of the names stored for System Speed Dialing is displayed. This allows the user to dial by name without having to know the telephone number. All the user needs to do is pressing the button associated with the desired name.

Conditions

- The numbers and names for System Speed Dialing must be programmed.
- If a name is not stored for a number, it is not displayed and cannot be called with this feature.

Programming References

Section 4, System Programming,
[001] System Speed Dialing Number Set
[002] System Speed Dialing Name Set

Feature References

Section 3, Features,
System Speed Dialing

Operation References

—User Manual

Special Display Features (— for KX-T7235),
System Speed Dialing

Station Feature Clear

Description

Allows the extension user to cancel the functions set on the user's own telephone. The following functions will be cancelled by this feature:

- Absent Message Capability – The message set on the telephone
- Background Music that has been turned on
- Call Forwarding
- Call Pickup Deny
- Call Waiting enabled
- Data Line Security
- Do Not Disturb (DND)
- Message Waiting – All the messages that have been left by other extension users
- Paralleled Telephone enabled
- Pickup Dialing
- Timed Reminder

Conditions

None

Programming References

Section 4, System Programming,
[100] Flexible Numbering, Station feature clear

Feature References

None

Operation References

—User Manual

DPT Features, SLT Features;
Station Feature Clear

Station Hunting

Description

If a called extension is busy, Station Hunting redirects the incoming call to an idle member of the extension group. Idle extensions are automatically hunted according to the programmed type. There are four hunting types available – Circular, Termination, Voice Mail (VM), and Automated Attendant (AA).

Circular hunting: The extensions are hunted until an idle one is found, regardless of jack number.

Termination hunting: The extensions are hunted until reaching the extension which has the highest jack number in the group.

Example of SMDR printout format:

Explanation

- (1) Date: shows the date of the call as Day / Month / Year.
- (2) Time: shows the end time of a call as Hours:Minutes / AM or PM.
- (3) Ext: shows the extension number, floating number, etc. that engaged in a call.
- (4) CO: shows the CO line number used for the call.
- (5) Dial Number
 - Outgoing call:** shows the other party's telephone number (maximum 20 digits). Valid digits are 0 through 9, *, #, P (if PAUSE button is pressed), or the mark "=" (if a host PBX access code is entered).
 - Received call:** Shows <I> that indicates 'Incoming'.
- (6) ANS: shows the time between the start of ringing and answer.
- (7) Duration: shows the duration of the call as Hours: Minutes:Seconds.
- (8) Cost: shows the cost of the call.
- (9) Acc (Account Code): shows the account code appended to the call.
- (10) CD (Condition Code): shows call handling type with the following codes:
 - TR:** Transfer
 - FW:** Call Forwarding to CO Line
 - RM:** Remote access to a modemTo print out the record of system programming items that have been assigned, use the program [802] "System Data Printout."

Conditions

- Connect a printer provided with an EIA (RS-232C) interface to the EIA (RS-232C) connector located on the main unit. After connecting a printer, do not press the RETURN key, if provided on the printer, in 10 seconds.
- When programmed for outgoing toll calls only, printing occurs only for calls which start with the numbers stored in any Denied Code Table from levels 2 to 6. If ARS is employed, not the user-dialed but the modified number is checked against these tables.
- This system can store information up to 100 calls. If more calls are originated or received, previous records are deleted starting from the oldest one.
- This data is not deleted when you reset the system.
- If the system clock is not set by system programming or if the calendar IC is out of order, the date and time is not printed out.

3 Features



- If Register Recall signal is manually sent out during a conversation, the call record is printed and a new record is started.

Connection References

Section 2, Installation,
2.3.8 Printer Connection

Programming References

Section 4, System Programming,
[000] Date and Time Set
[212] Call Duration Count Start Time
[800] SMDR Incoming / Outgoing Call Log Printout
[801] SMDR Format
[802] System Data Printout
[806]–[807] EIA (RS-232C) Parameters — Port 1 / Port 2

Feature References None

Operation References Not applicable.

Station Programming

Description

Allows the digital proprietary telephone (DPT) user to customize the extension to their needs. The following are the programming items available:

For DPT (KX-T7220; KX-T7230; KX-T7235; KX-T7250)

Call Waiting Tone Type Assignment

Flexible Button Assignment

Full One-Touch Dialing Assignment

Intercom Alerting Assignment

Preferred Line Assignment – Incoming / Outgoing

Station Programming Data Default Set

Handset / Headset Selection

Ringing Tone Selection for CO Buttons

For display DPT (KX-T7230; KX-T7235) only,

Charge Fee Reference (pre-assigned extensions only)

Self-Extension Number Confirmation

For large display DPT (KX-T7235) only,

Station Speed Dialing Number / Name Assignment

For operator extension DPT only,

CO Incoming Call Information Log Lock Clear

Remote Station Lock Control

Detailed information and programming instructions are described in the User Manual, Station Programming.

Conditions During Station Programming, the DPT is considered to be in busy status.

Programming References

Station Programming.....User Manual
Operator Service Features.....User Manual
Remote Station Lock Control

Feature References None

Operation References Not applicable.

Station Programming Data Default Set

Description Allows the digital proprietary telephone user to return all the following items programmed on the telephone to default setting.

Programming Items	Default
Call Waiting Tone Type Assignment	Tone 1
Full One-Touch Dialing Assignment	On
Handset / Headset Selection	Handset
Intercom Alerting Assignment	Tone Call
Preferred Line Assignment – Incoming	Ringing Line
Preferred Line Assignment – Outgoing	Intercom Line

Station programming is used to set or cancel these items at individual telephones.

Conditions None

Programming References

Station Programming.....User Manual,
Station Programming Data Default Set

Feature References Section 3, Features,
Station Programming

Operation References Not applicable.

3 Features



Station Speed Dialing

Description Allows an extension user to store frequently dialed numbers in order to place a call with abbreviated dialing. It is performed by dialing the feature number and a speed dial number from 0 through 9. Up to 10 numbers can be stored for each telephone.

- Conditions**
- Station Speed Dialing can be followed by manual dialing to supplement the dialed digits.
 - You may make a call with One-Touch Dialing button, instead of Station Speed Dialing.
 - The single line telephone (SLT) may be replaced to a digital proprietary telephone (DPT) temporarily to store one-touch dialing into memory. The Function Buttons F1 through F10 are corresponded to speed dial numbers as follows:
- | | |
|--------|---------|
| F1 — 0 | F6 — 5 |
| F2 — 1 | F7 — 6 |
| F3 — 2 | F8 — 7 |
| F4 — 3 | F9 — 8 |
| F5 — 4 | F10 — 9 |

Programming References

Section 4, System Programming,
[100] Flexible Numbering, Station speed dialing, Station speed dialing programming

Feature References Section 3, Features,
One-Touch Dialing

Operation References DPT Features, SLT Features;
—User Manual Station Speed Dialing

System Connection*

Description System Connection allows two main units, KX-TD1232 to work together as one system. This expands the capacity of the system, number of extensions, CO lines and so on. Two connected systems are called the master and the slave systems.

*: Available for KX-TD1232 only.

A maximum capacity of the system is as follows:

Item	Maximum Quantity (Single System)	Maximum Quantity (System Connection)
CO Line	12	24
Extension Jack	32	64
DSS Console	4	8
Doorphone	2	4
Door Opener	2	4
External Pager	2	4
Music Source	2	4

Conditions

- The following resources can be used by either system:
 - (a) External pagers
 - (b) Music sources used for Music on Hold
 - (c) Music sources used for Background Music (BGM)
 - (d) Station Message Detail Recording (SMDR); EIA (RS-232C) ports
 - (e) Call Parking areas
- System Inter Connection Card (KX-TD192), optional expansion cards to connect both systems, must be installed for this feature.

Connection References Section 2, Installation,
2.4.10 System Connection

Programming References
No programming required.

Feature References None

Operation References Not applicable.

System Data Default Set

Description This system permits re-initialization of system-programmed data. If all the programmed data is cleared, the system will restart with the default setting.

Conditions The default setting for each programming item is listed in Section 5.2, "Default Values."

Programming References
No programming required.

3 Features



Feature References None

Operation References **Section 2, Installation,**
2.8 System Data Clear

System Programming and Diagnosis with Personal Computer

Description

This system can be programmed and administered using a personal computer. The EIA/Remote Programming & Diagnosis floppy is required to perform this feature. The KX-TD816 cannot perform the diagnosis. There are two programming methods:

On-Site Programming

By connecting a personal computer (PC) to your system, system programming and maintenance can be performed locally. There are two ways available to perform the above:

(Method 1.) Using the EIA (RS-232C) port

Connect the PC to the EIA (RS-232C) port provided. The main unit has an EIA (RS-232C) port which can be used for either system administration or SMDR.

*(Method 2.) Using a modem

Remote Card is required (already installed in the main unit).

Connect the PC to an extension jack. Assign the floating number of the modem in system programming. Dial this number from the PC.

***Remote Programming**

You can perform system programming and maintenance from a remote site using a PC. Remote Card is required (already installed in the main unit). Assign the floating number of the modem in system programming.

Starting system administration from a remote location can be done in the following ways.

- Call an extension (probably the operator) from a remote location and request a transfer to the modem.
- Assign the modem as the destination of the DIL 1:1 feature.

Conditions

- A digital proprietary telephone can be used to perform system programming.
- Only one access is allowed to system programming at any one time.
- To access system administration, a valid password must be entered. The password is factory-programmed and can be changed.

*: Available for KX-TD1232 only.

Features

3-113

- System administration can be performed on-line except for the procedures of diagnosis.
If the system goes off-line, the system functions as if it was in power failure. (Refer to Power Failure Transfer feature.)

Programming References

Section 4, System Programming,
[107] System Password
[813] Floating Number Assignment
[814] Modem Standard*

Feature References

Section 3, Features,
System Programming with Digital Proprietary Telephone Station Message Detail Recording (SMDR)

Operation References Not applicable.

System Programming with Digital Proprietary Telephone

Description

This system can be programmed with a personal computer or a digital proprietary telephone (DPT).
DPTs available for system programming are: KX-T7235 and KX-T7230 (Display DPTs).
Two extensions are allowed to perform system programming. The extensions available are:
(1) An extension that is connected to jack 1.
(2) An extension that is assigned as a manager.
For more information and programming instructions, refer to Section 4, "System Programming."

Conditions

- During system programming the system operates normally.
- During system programming the extension is considered to be busy.
- The display on the DPT permits interactive programming.
- Only one access is allowed to system programming at any one time.
- To access system administration, a valid password must be entered. The password is factory-programmed and can be changed.
- A personal computer can be used to perform system programming.

Programming References

Section 4, System Programming
[006] Operator / Manager Extension Assignment
[107] System Password

3 Features



Feature References **Section 3, Features,**
System Programming and Diagnosis with Personal Computer

Operation References Not applicable.

System Speed Dialing

Description This feature supports 500 abbreviated dial numbers available to all users. A system speed dial number is dialed out by pressing the AUTO button and a 3-digit code (000 through 499). It is possible to store one hundred 24-digit telephone numbers per system (maximum).

Conditions • Overriding Toll Restriction for System Speed Dialing can be enabled or disabled by system programming.
[For digital proprietary telephone users only]
• Speed Dialing, One-Touch Dialing, manual dialing, Last Number Redial and Saved Number Redial can be used in combination.
[For single line telephone users only]
• If a stored feature number includes “*” or “#,” LD single line telephones cannot use it.

Programming References

Section 4, System Programming,
[001] System Speed Dialing Number Set
[002] System Speed Dialing Name Set
[100] Flexible Numbering, System speed dialing
[300] TRS Override for System Speed Dialing

Feature References **Section 3, Features,**
Toll Restriction Override for System Speed Dialing

Operation References **DPT Features, SLT Features;**
—User Manual System Speed Dialing

System Working Report

Description

The Digital Super Hybrid System automatically records the system's working state. A printer connected to the EIA (RS-232C) port can be used to print the recorded data. System programming is required to print out the system working report.

Recorded contents are as follows:

1. Date of record

- The date and time when cleared
- The date and time when printed out

2. Incoming calls

- The number of incoming calls
- The number of answered incoming calls
- The number of unanswered incoming calls
- The ratio of the answered calls to the incoming calls

$$\frac{\text{Number of answered calls}}{\text{Number of incoming calls}} \times 100 (\%)$$

- The average time from receipt of call to answer of the incoming and answered calls
- The average duration time of talk of the answered calls

3. Outgoing calls

- The number of access requested
- The number of access succeeded
- The number of access failed
- The ratio of access succeeded

$$\frac{\text{Number of access succeeded}}{\text{Number of access requested}} \times 100 (\%)$$

- The average duration of the dialed calls

These records can be deleted by system programming and new data will be recorded thereafter.

Conditions

Connect a printer provided with an EIA (RS-232C) connector located on the main unit. After connecting a printer, do not press the RETURN key, if provided on the printer, in 10 seconds.

Connection References

Section 2, Installation
2.3.8 Printer Connection

3 Features

T

Programming References

Section 4, System Programming,
[806]–[807] EIA (RS-232C) Parameters — Port 1/Port 2
[815] System Working Report Printout
[816] System Working Report Clear

Feature References

Section 3, Features,
Station Message Detail Recording (SMDR)

Time-Out, Variable

Description

Provides timers to control various features or functions.
The following timers are programmable:

System Timer Items	Range
Automatic Redial Interval Time	n ~10 s, n: 3 – 120
Automatic Redial Repeated Times	1 – 30 times
Call Forwarding – No Answer Time-Out	1 – 12 rings
CO Dial Starting Time	n ~100 ms, n: 0 – 40
CO-to-CO Duration Time	1 – 64 min
Extension-to-CO Call Duration Time	1 – 64 min
Hold Recall Time	0 – 240 s
Intercept Routing Time-Out	3 – 48 rings
Message Waiting Ring Interval Time	0 – 64 min
Pickup Dialing Waiting Time	1 – 5 s
SMDR Duration Count Starting Time	0 – 60 s
Toll Restriction First Digit Time-Out	5 – 120 s
Toll Restriction Inter-digit Time-Out	5 – 30 s
Transfer Recall Time	3 – 48 rings
CO Line Group Timer Items	
Disconnect Time	0.5 / 2.0 / 4.0 s
Register Recall Signal Time	Disable / 80 / 96 / 112 / 200 / 300 / 400 / 500 / 600 / 700 / 800 / 900 / 1000 / 1100 / 1200 ms
Pause Time	1.5 / 2.5 / 3.5 / 4.5 s
CO Line Timer Items	
CPC Signal Detection Time (Incoming)	n ~8 ms, n: 02 – 75
DTMF Digit Time	80 / 160 ms

3 Features



Conditions

- Be sure that the system clock works.
- Setting a new time clears the preset time.
- The alarm tone continues for 30 seconds. To stop it, lift the handset or, with a digital proprietary telephone, press any button.

Programming References

Section 4, System Programming,
[100] Flexible Numbering, Timed reminder set / cancel / confirm

Feature References

Section 3, Features,
HOTEL APPLICATION – Timed Reminder, Remote (Wake-Up Call)

Operation References —User Manual

DPT Features, SLT Features;
Timed Reminder

Toll Restriction

Description

Toll Restriction is a system programmable feature that, in conjunction with the assigned Class of Service, can prohibit certain extension users from placing unauthorized toll calls.

Every extension is programmed to belong to one of eight Classes of Service. Each Class of Service is programmed to have a toll restriction level for day mode and night mode.

There are eight toll restriction levels available. Toll restriction level 1 is the highest level and the level 8 is the lowest. That is, level 1 allows all toll calls and levels 7 and 8 disallows all toll calls. Levels 2 through 6 are used to restrict calls by combining pre-programmed deny and excepted code tables.

Denied Code Tables

An outgoing outside call made by an extension with a toll restriction level between 2 and 6 is first checked against the selected Denied Code Tables. If the leading seven digits of the dialed number (not including the line access code) are not found in the table, the call is made. There are five system programs for Denied Code Tables: **[301]-[305] TRS Denied Code Entry for Levels 2 through 6**: each program is used to make up a Denied Code Table for Levels 2 through 6 respectively. Complete every table by storing numbers that are to be prohibited. These numbers are defined as denied codes. Each table can store up to 20 denied codes, each of which consisting of seven digits.

Excepted Code Tables

These tables are used to override a programmed denied code. A call denied by the selected Denied Code Tables is checked against the selected Excepted Code Tables, and if a match is found, the call is made.

There are five system programs for these tables:

[306]-[310] TRS Excepted Code Entry for Levels 2 through 6: each programming is used to make up an Excepted Code Table for Levels 2 through 6.

Complete every table by storing numbers that are exceptions to the denied codes. These numbers are defined as excepted codes. Each table can store up to five excepted codes, each of which consisting of seven digits.

Applicable Denied and Excepted Code Tables depend on the assigned toll restriction level of an extension as follows:

	Denied Code Tables	Excepted Code Tables
Level 1	None	None
Level 2	Table for Level 2	Tables for Levels 2 through 6
Level 3	Tables for Levels 2 and 3	Tables for Levels 3 through 6
Level 4	Tables for Levels 2 to 4	Tables for Levels 4 through 6
Level 5	Tables for Levels 2 to 5	Tables for Levels 5 through 6
Level 6	Tables for Levels 2 to 6	Tables for Level 6
Level 7	None	None
Level 8	None	None

[Explanation]

Level 1: allows all calls.

Level 2: denies the codes stored in the Denied Code Table for Level 2 except the codes stored in Excepted Code Tables for Levels 2 through 6.

Level 3: denies the codes stored in the Denied Code Tables for Levels 2 and 3 except the codes stored in Excepted Code Tables for Levels 3 through 6.

Level 4: denies the codes stored in the Denied Code Tables for Levels 2 through 4 except the codes stored in Excepted Code Tables for Levels 4 through 6.

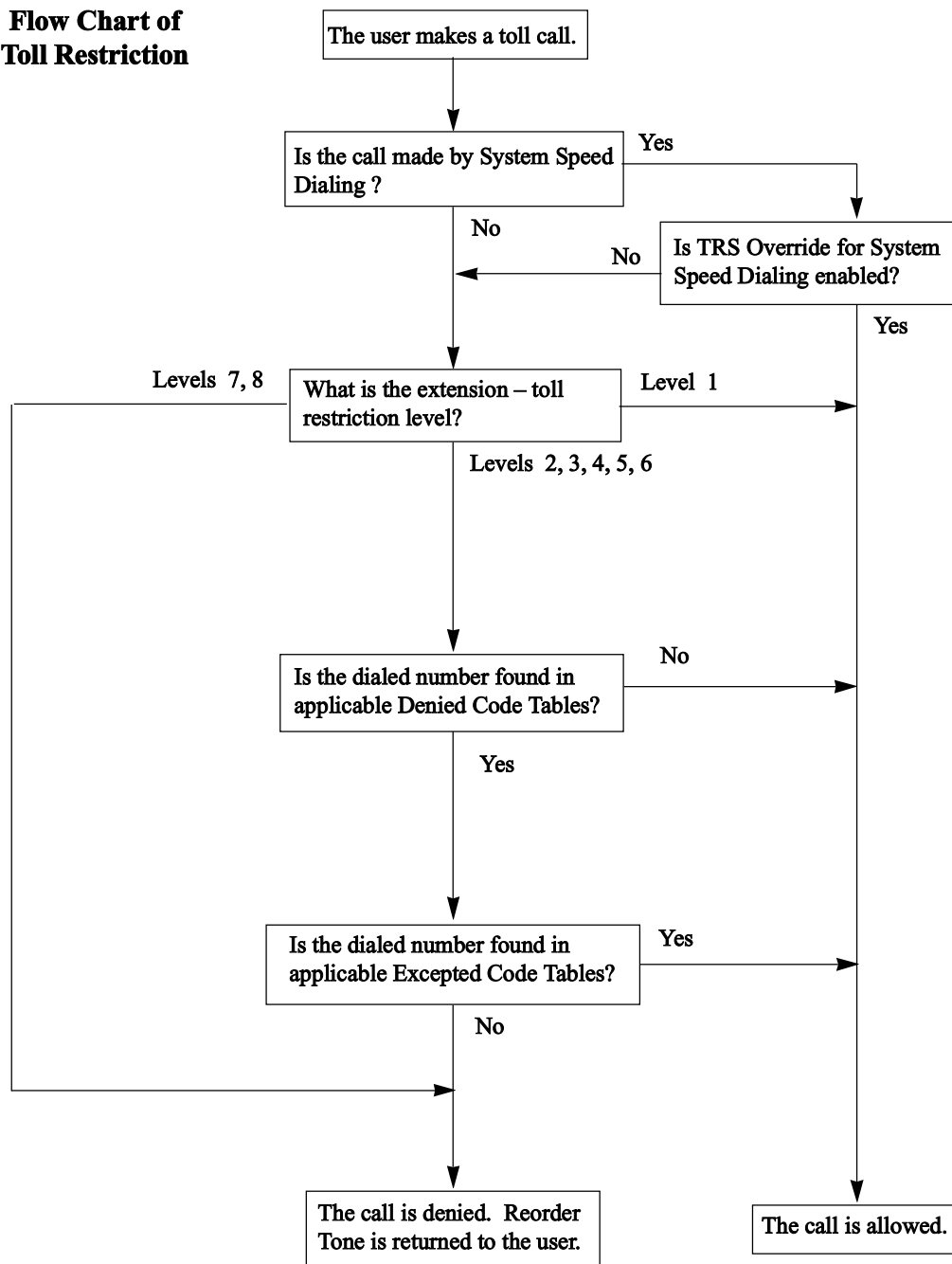
Level 5: denies the codes stored in the Denied Code Tables for Levels 2 through 5 except the codes stored in Excepted Code Tables for Levels 5 and 6.

Level 6: denies the codes stored in the Denied Code Tables for Levels 2 through 6 except the codes stored in Excepted Code Table for Level 6.

Level 7: Allows intercom calls only.

Level 8: Allows operator calls only.

Flow Chart of Toll Restriction



Conditions

- Toll restriction checks are applied to the following:
 - (1) Account Code Entry
 - (2) Automatic Route Selection (ARS)
 - (3) Dial Access, Automatic
 - (4) Line Access, CO Line Group
 - (5) Line Access, Individual
 - (6) System Speed Dialing
- Emergency call numbers such as Police or Fire Department numbers should be stored in program [311] “Emergency Dial Set” so that they are excepted from toll restriction.
- If a stored Host PBX access code is found in the dialed number, a toll restriction check starts for succeeding telephone number.
- Toll restriction for System Speed Dialing can be cancelled for the whole system.
- It is programmable whether the “* ” or “#” the user dials is to be checked or not on the Toll Restriction code. This is useful to prevent unauthorized calls which could be possible through certain Central Offices’ exchange system.
- It is programmable to admit the press of the RECALL button, during an outside call on the extensions in levels 7 and 8.

Programming References

Section 4, System Programming,

- [207] First Digit Time
- [208] Inter Digit Time
- [300] TRS Override for System Speed Dialing
- [301]–[305] TRS Denied Code Entry for Levels 2 through 6
- [306]–[310] TRS Excepted Code Entry for Levels 2 through 6
- [500]–[501] Toll Restriction Level — Day / Night
- [601] Class of Service
- [990] System Additional Information, Field (14)

Feature References

Section 3, Features,

Toll Restriction Override by
Account Code Entry

Toll Restriction Override for
System Speed Dialing

Operation References

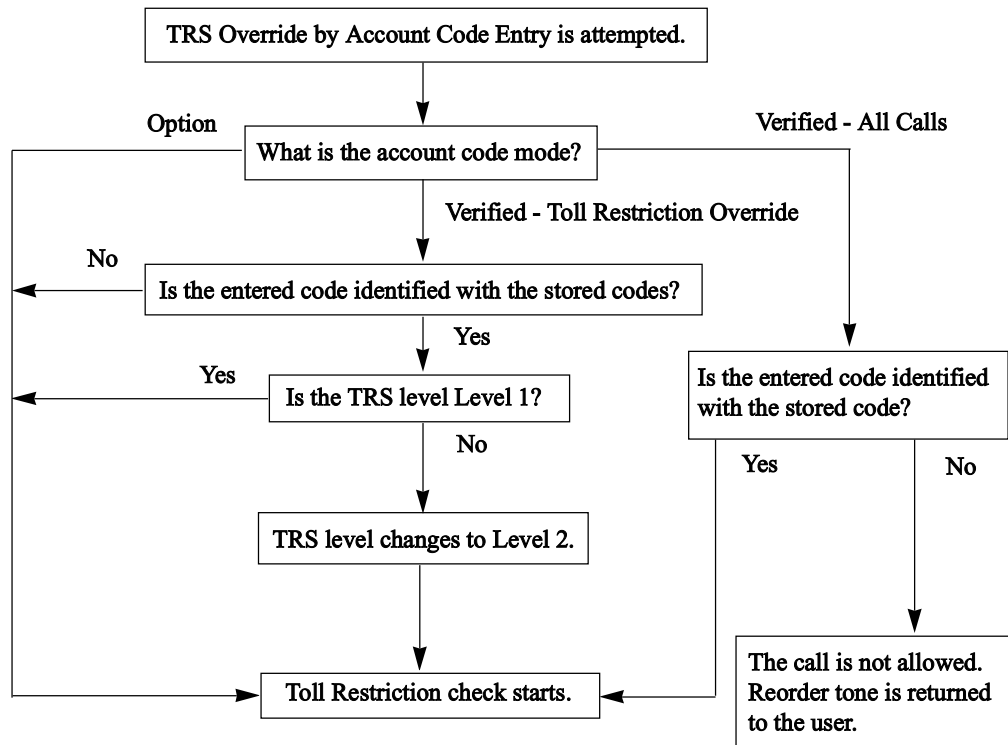
Not applicable.

Toll Restriction Override by Account Code Entry

Description Allows the extension user to override toll restriction temporarily to make a toll call from a toll-restricted telephone. The user can carry out this feature by entering the appropriate account code before dialing the telephone number.

- Conditions**
- The toll restriction level of the user is changed to level 2 by this feature. Thus this can be used by extension users assigned a toll restriction level from 3 through 6. The levels 1 and 2 are not changed.
 - A Class of Service which is assigned Account Code Entry – Verified Toll Restriction Override permits the class members to override their toll restrictions.
 - Up to 40 account codes can be programmed by station programming for Verified Account code operation. These are used for Toll Restriction Override.
 - If the user does not enter any account code or enters an invalid account code, an ordinary toll restriction check is done.

Flow Chart of TRS Override by Account Code Entry



3 Features

T

Trunk (CO Line) Answer From Any Station (TAFAS)

Description	A tone signal is sent from the external pager when an incoming outside call is received. Any extension user can answer the call.
Conditions	<ul style="list-style-type: none">• Connect a user-supplied external paging device.• One external pager can be installed in KX-TD816. Two external pagers can be installed in KX-TD1232 per system, and System Connection* permits four pagers (maximum). These pagers are numbered from 1 through 4. To answer an incoming call dial the feature number and 1 to 4. The feature number is the same as that used to answer Paging – External.• Floating numbers of pagers are programmable.• TAFAS can be used in the following cases:<ul style="list-style-type: none">a) The floating number of an external pager is assigned as the DIL 1:1 destination. In this case all the incoming calls on the specified line will be signalled.b) The floating number of an external pager is assigned as the Intercept Routing destination. In this case incoming calls redirected to the destination will be signalled.• Confirmation tone is sent to the user before being connected to the caller. Eliminating the tone is programmable.
Connection References	Section 2, Installation, 2.3.6 External Pager Connection
Programming References	Section 4, System Programming, [100] Flexible Numbering, Paging – external answer / TAFAS answer [813] Floating Number Assignment [990] System Additional Information, Field (16)
Feature References	Section 3, Features, Floating Station
Operation References —User Manual	DPT Features, SLT Features; Trunk (CO Line) Answer From Any Station (TAFAS)

*: Available for KX-TD1232 only.

Voice Mail Integration

Description

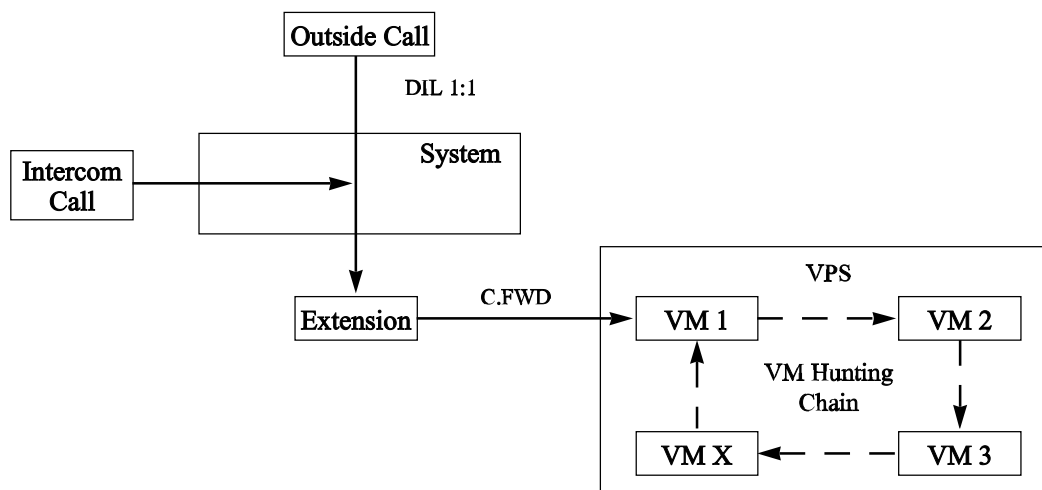
This system can accommodate Voice Processing System (VPS) equipment, which offers the user a Voice Mail and an Automated Attendant Services. If an extension user has set Call Forwarding destination to the VPS, a calling party will be forwarded to the VPS and can leave a voice message in the mailbox of the extension. When a call is transferred to the VPS by the Call Forwarding or Intercept Routing – No Answer features, the mailbox number is sent to the VPS automatically with DTMF signalling (Follow On ID). Up to eight extension jacks can be connected to VPS as extensions in the system.

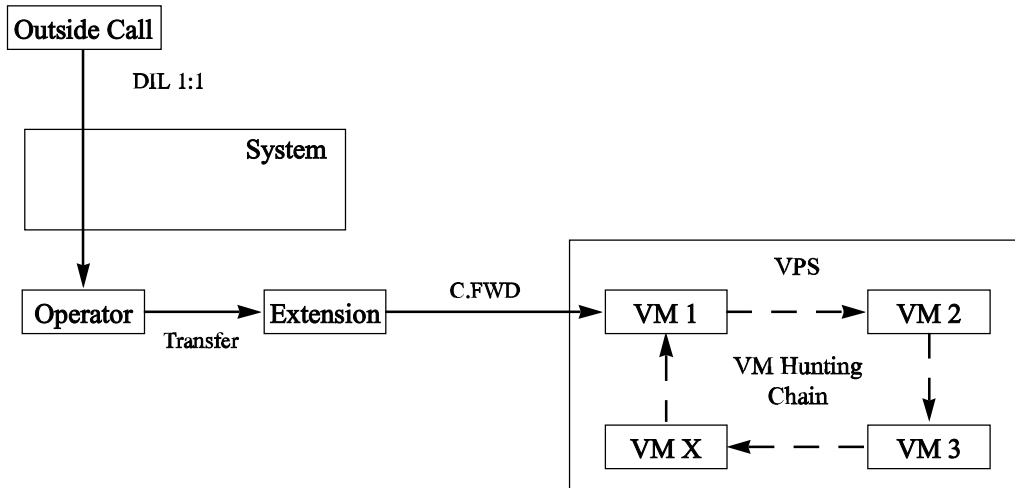
System Explanation

1. Voice Mail Service

1.1 Call Forwarding to VM

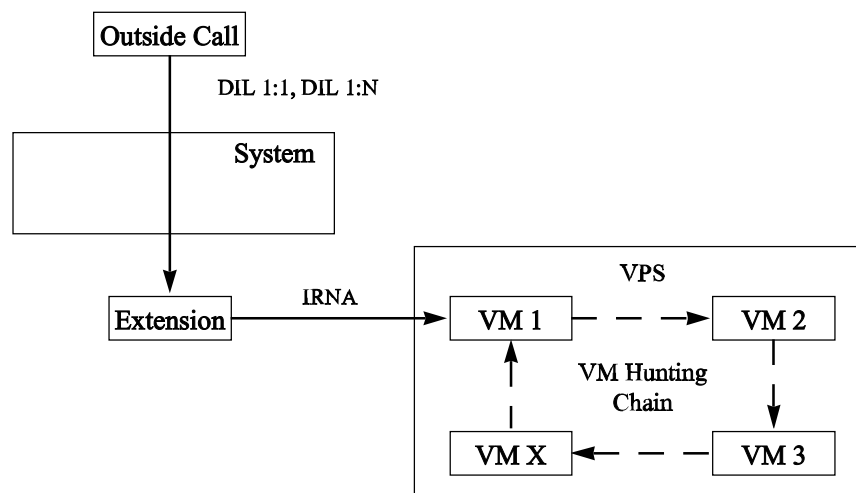
If an extension user sets Call Forwarding (C. FWD) whose destination is the VPS, an incoming call is forwarded to the VPS under the proper conditions. The system sends to the VPS a mailbox number of the corresponding extension at that time. Therefore the calling party can leave his / her message in the mailbox of the desired extension without knowing the mailbox number.





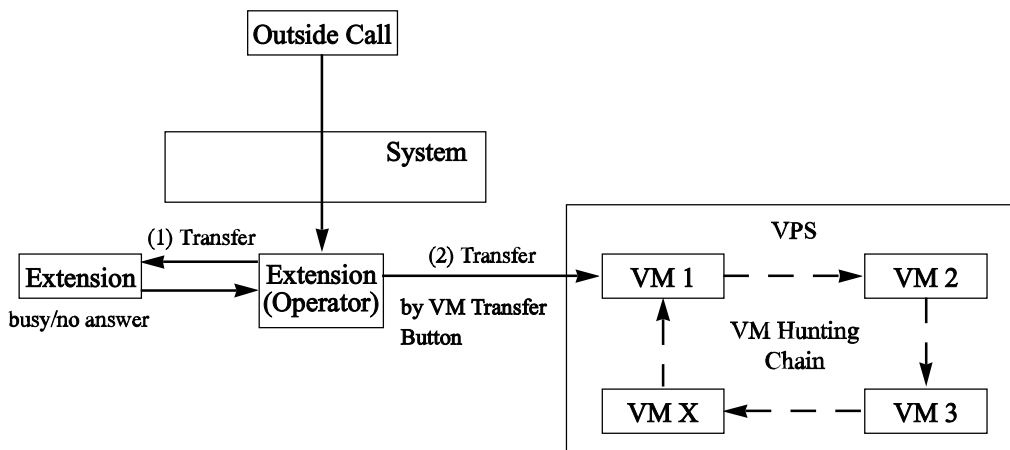
1.2 Intercept Routing to VM

If a CO line is set as Intercept Routing – No Answer (IRNA) whose destination is the VPS, an outside call is forwarded to the VPS under the proper conditions. The system sends to the VPS a mailbox number of the corresponding extension at that time. Therefore the calling party can leave his / her message in the mailbox of the desired extension without knowing the mailbox number.



1.3 Transferring to VM

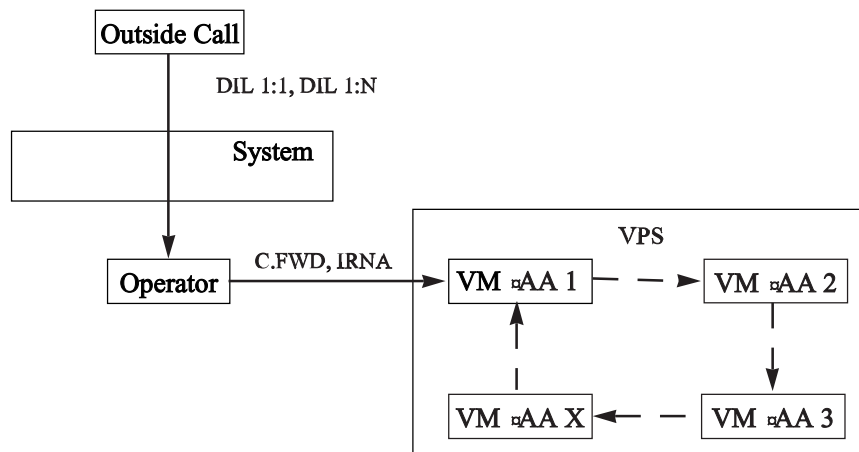
The extension user can transfer an outside call to the VPS so that calling party can leave his / her message in the mailbox of the desired extension. The extension user should use the Voice Mail (VM) Transfer button, when transferring a call to the VPS. Pressing this button and entering the extension number allows the extension user to transfer the call to the mailbox of the corresponding extension.



1.4 Changing from VM to Automated Attendant (AA)

The Automated Attendant Service is automatically activated in the following cases:

- 1) The incoming call is not answered by the operator and IRNA is activated.
- 2) The operator is assigned as a destination of DIL 1:1 and the operator sets the Call Forwarding to VPS.



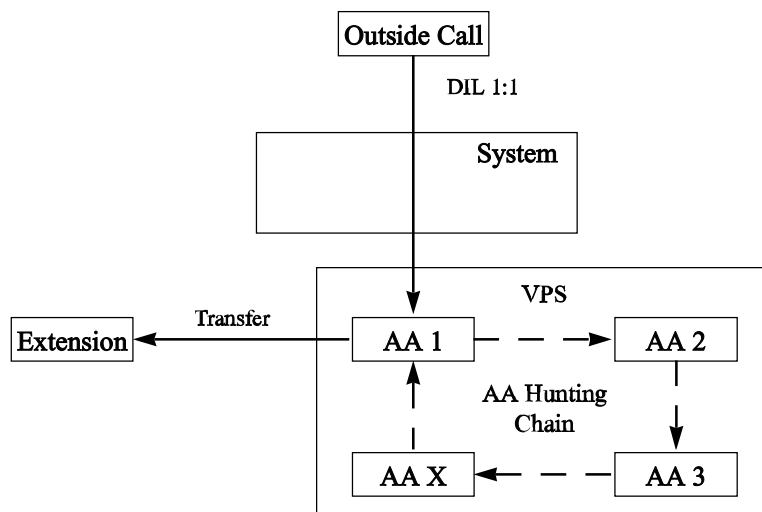
1.5 Listening to a Recorded Message

If the VPS receives a message, the VPS can turn on the MESSAGE button indicator of the corresponding telephone as a notification to the user of the telephone. The VPS notifies the extension user that there is a message waiting in his / her mailbox. When the MESSAGE button indicator is lit, pressing the button allows the extension user to play back the stored message.

2. Automated Attendant (AA) Service

2.1 AA to Extension

AA receives and answers an outside call and offers services such as transferring to a specified extension or the corresponding mailbox by the DTMF signalling which is sent from the calling party.



Conditions

- A VPS can be assigned as the destination of the following features:
 - Call Forwarding – All Calls
 - Call Forwarding – Busy
 - Call Forwarding – Busy / No Answer
 - Call Forwarding – No Answer
 - Intercept Routing – No Answer

In these functions, the caller to the extension need not know the mailbox number of the called extension because the code is automatically transmitted to the VPS (Follow On ID function). If a DIL 1:N call is transferred to the VPS by IRNA, your system transmits the mailbox number of the lowest jack number of the receiving extensions.

- A mailbox number is a respective extension number by default. The mailbox number can be changed, only if program [990] “System Additional Information, Field (18)” is set to “free.”
- Pressing the Voice Mail Transfer button and dialing the extension number allows the extension user to transfer to the corresponding mailbox. In this case, Follow On ID function is available.
- The Voice Mail extension should be set to Data Line Security to achieve proper recording.
- The KX-TD816 has one Extension Cards and can have one 8-Station Line Unit. The KX-TD1232 has two Extension Cards and can have two 8-Station Line Units. It is recommended that you do not connect more than two VM ports to each card or unit.

Connection References

- Section 2, Installation,
 - 2.3.3 Extension Connection
 - 2.4.4 8-Station Line Unit Connection

Programming References

Common

- Section 4, System Programming,
 - [005] Flexible CO Button Assignment
 - [100] Flexible Numbering, Call forwarding / do not disturb set / cancel, Message waiting set / cancel / callback
 - [113] VM Status DTMF Set
 - [114] VM Command DTMF Set
 - [407]–[408] DIL 1:1 Extension — Day / Night
 - [409]–[410] Intercept Extension — Day / Night
 - [603]–[604] DIL 1:N Extension and Delayed Ringing — Day / Night
 - [609] Voice Mail Access Codes
 - [990] System Additional Information, Fields (6) through (9), (18)
- Station Programming.....User Manual, Flexible Button Assignment – MESSAGE Button, Voice Mail (VM) Transfer Button

For VM Service

- Section 4, System Programming,
 - [106] Station Hunting Type (Select Voice Mail Hunting.)
 - [990] System Additional Information, Field (10)

For AA Service

- Section 4, System Programming,
 - [106] Station Hunting Type (Select Automated Attendant Hunting.)
 - [990] System Additional Information, Field (24)

Feature References

- Section 3, Features,

Call Forwarding – All Calls	Call Forwarding – No Answer
Call Forwarding – Busy	Intercept Routing
Call Forwarding – Busy / No Answer	Station Hunting

3 Features



Operation References DPT Features, SLT Features;
—User Manual Voice Mail Integration
Voice Mail Transfer

Volume Control – Speaker / Handset Receiver / Headset / Ringer

Description Allows the digital proprietary telephone user to turn up or down the following volumes as desired:
Handset receiver volume
Headset volume
Ringer volume
Speaker volume

Conditions With a digital proprietary telephone, press the volume control button (VOLUME ^ / v UP / DOWN) to select a desired volume level. However the ringer volume of KX-T7220 and KX-T7250 is selected with Ringer Volume Selector (OFF / LOW / HIGH).

Programming References
No programming required.

Feature References None

Operation References Configuration,
—User Manual Volume Control – Handset Receiver/Headset/Ringer/Speaker

Section 4

System Programming

This section provides step-by-step programming instructions for a proprietary telephone.

4.1 General Programming Instructions

Default Setting

This system has a default factory setting. If any of the programming needs to be changed, you will find the necessary information in Section 3, “Features.” This makes the system very simple to install and customize as required by the customer. Any required changes can be written on “Programming Tables.”

Required Telephone Set

One of the following digital proprietary telephone (DPT) is required for system programming: KX-T7235, KX-T7230

Extensions Used for Programming

Connect one of the above-mentioned telephone sets to either of the following:

- Jack number 1
- Jack programmed as a manager extension

To assign the manager extension, see Section 4.2 [006] “Operator / Manager Extension Assignment.”

User Programming Mode

Some programming items are allowed to any display DPT user in the system. See Section 4.1.4 “User Programming Mode.”

4.1.1 Using the Digital Proprietary Telephone

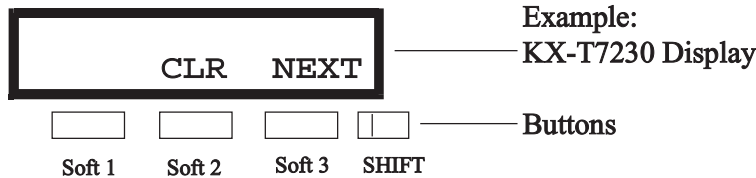
Soft Buttons and SHIFT Button on the Display DPT

Three soft buttons are provided just below the display on the display Digital Proprietary Telephones (DPT). The functions of these soft buttons vary as the programming procedures advance from step to step. Those functions that are currently assigned to the buttons are shown on the lower line of the display. (See “Viewing the Display” on page 4-6 for more information on the display lines.)

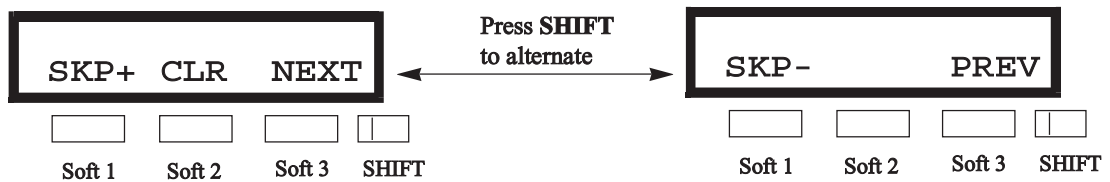
If the **SHIFT** button indicator is on, two functions are available with each soft button. To alternate between the two functions, press the **SHIFT** button on the right side of the display.

Soft button variations

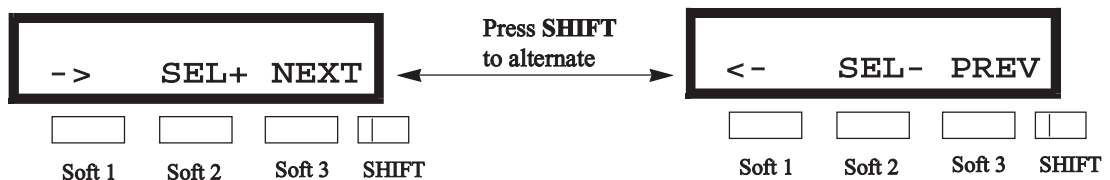
Type 1



Type 2

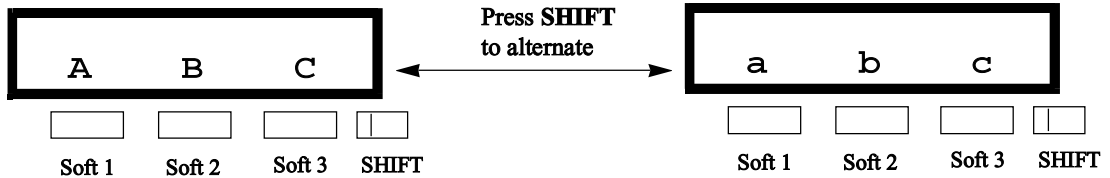


Type 3

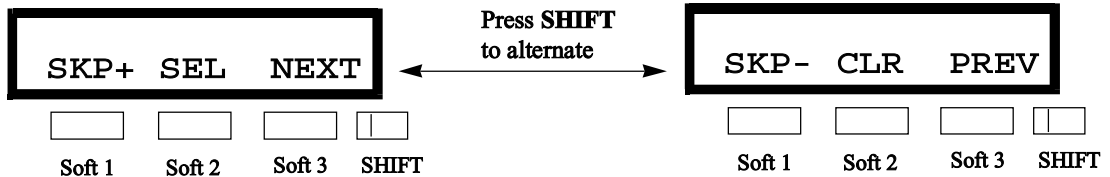


4.1.1 Using the Digital Proprietary Telephone

Type 4



Type 5



You can use either the soft buttons or the overlay buttons. (For overlay buttons, refer to “Using the Overlay” below.) Throughout the programming you will see instructions such as “Press **PREV.**” If you use the soft buttons, this means press **SHIFT**, release **SHIFT** and then press **Soft 3**. The (PREV) function is performed.

Note If you use the soft buttons and if programming instructions tell you to press the following buttons, you may press soft buttons shown below.

Instructions	Soft button
SELECT	SEL+, SEL-, or SEL
CLEAR	CLR

Using the Overlay

A programming overlay is packed with the telephone at the factory. This overlay should be used at all times while in programming mode since the functions of the telephone keys change while in programming mode as follows: (The original names are in parentheses.)

4.1.1 Using the Digital Proprietary Telephone

During Operation

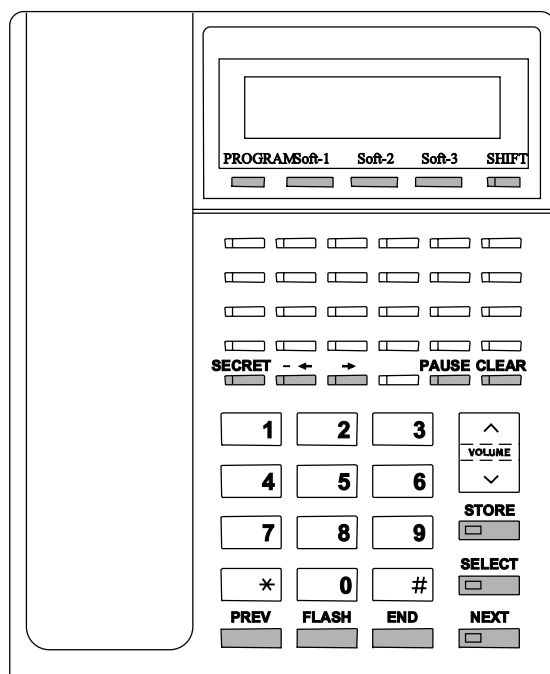
(PAUSE)
 (SP-PHONE)
 (REDIAL)
 (AUTO ANSWER / MUTE)
 (RECALL)
 (TRANSFER)
 (FWD/DND)
 (CONF)
 (INTERCOM)
 (AUTO DIAL / STORE)
 (HOLD)

During Programming

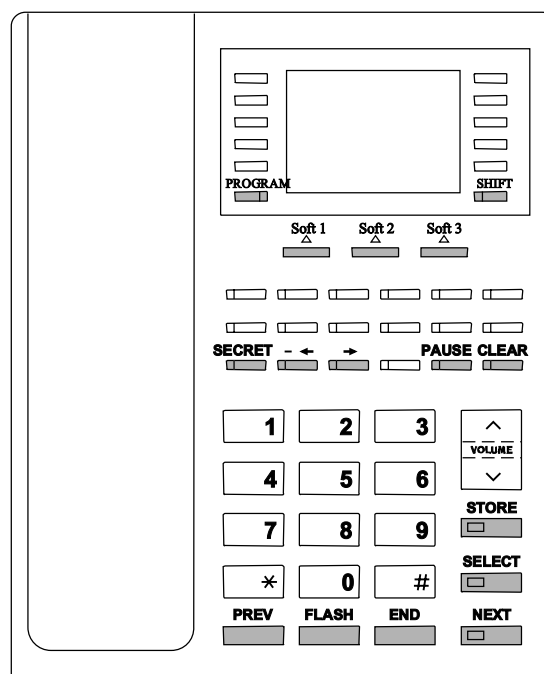
PROGRAM
NEXT
PREV (PREVIOUS)
SELECT
RECALL
CLEAR
➡
- / ⬅
SECRET
STORE
END

Location of Controls with the Overlay

The pictures below show the functions of the buttons of the KX-T7230 and KX-T7235 while in programming mode.



KX-T7230



KX-T7235

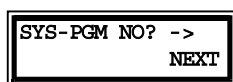
4.1.1 Using the Digital Proprietary Telephone

Viewing the Display

The display gives you helpful information, such as what you should do now, what you have done, etc..

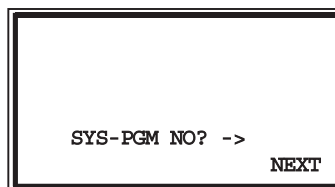
The KX-T7230 and the KX-T7235 both utilize two information lines for programming. The upper line is called the Message Line and the lower one is called the Function Line.

The Message Line (upper) shows you what you should do or what you should select. It also allows you to confirm what you have just entered. The display capacity is 16 digits. If your entry exceeds the capacity, you can shift the display by pressing **▶** or **◀** button. The Function Line (lower) shows the current function of the soft buttons. These functions change with the programming procedures.



KX-T7230 Display

← Message Line
← Function Line



KX-T7235 Display

← Message Line
← Function Line

Before entering the programming mode

Before entering programming mode, confirm that:

- Your telephone is on-hook.
- No calls are on hold at your telephone.

Entering the programming mode

Press **PROGRAM + * + #** and enter your **System Password (default=1234)**.

- The display shows the Initial Message: SYS-PGM NO? ->

- Notes**
- If nothing is entered in five seconds after the **PROGRAM** button is pressed, it is cancelled.
 - The System Password entered is not shown on the display. The System Password can be changed by System Programming. Refer to Section 4.3 [107] "System Password."
 - During the programming mode, your extension is treated as a busy extension.
 - Only one digital proprietary telephone can be in programming mode at any one time.

4.1.2 Programming Ways

Advancing to the next stage

When “SYS-PGM NO? ->” is displayed, you can select one of the following:

- To go to program [000], press the **NEXT** button.
- To go to another program, enter the program address.

Rotation of jack number

Each jack of our Digital Super Hybrid System supports the connection of a digital proprietary telephone and an analog device with different extension numbers (eXtra Device Port: XDP function). To program this function it is necessary to assign two parts for each jack. The first part of jack one is 01-1. The second part of jack one is 01-2. The first part of jack two is 02-1 and so on. The **NEXT** and **PREV** buttons can be used to move from jack to jack as required in programs [003], [004] and [601] through [609].

Example;



Note The first part of a jack is for a DPT of a XDP-assigned jack. The second part is for a single line device. Program [600] “EXtra Device Port” assigns which jacks are XDP.

Storing your data

Press **STORE** to store your data.

- The **STORE** indicator lights red and confirmation tone sounds.

*** Confirmation tone (one beep)**

After pressing **STORE**, you will hear a beep. This informs you that your storage is completed.

*** Alarm tone (three beeps)**

If you hear the alarm, check that your entry is valid.

Making another selection within the same program address

- To make the next higher selection, press **NEXT**.
- To make the previous selection, press **PREV**.
- To make a specific selection, press **SELECT** and then enter the number.

4.1.2 Programming Ways

Going to another program address

After pressing **STORE**, you can go to another program with either of the following two methods:

- (1) • To go to the next larger program address:
Press **Soft 1 (SKP+)** or **VOLUME (DOWN)**.
 - To go to the next smaller program address:
Press **SHIFT + Soft 1 (SKP-)** or **VOLUME (UP)**.
- (2) To go to a specific program address:
Press **END**, then enter the Program Address.

Method (1) is useful when you want to perform a series of programs consecutively. For example, to change the programming in addresses [000] to [008], use this method. You can move from [000] to [001], from [001] to [002], and so on by pressing the **SKP+** or **VOLUME (DOWN)**. You can move in reverse order from [008] to [007], etc. by pressing the **SKP-** or **VOLUME (UP)**. This method can also be used to move between neighboring program groups: For example, you can move between the program addresses [008] and [100], [120] and [200], and so on. Also, you can move between the smallest program address [000] and the largest one [992].

Method (2) is useful when you wish to jump to another program address. For example, you have just finished with program [006] and now you want to go to program [301]. Neither **SKP+/VOLUME (DOWN)** nor **SKP-/VOLUME (UP)** is convenient in this case. So you should press **END** and enter 301.

Note	The following programming instructions suppose that you have already entered programming mode and that you will use Method (2).
-------------	---

Confirming the entries

You may review the stored programming without making any changes.

Going back to the operation mode

Two ways are available to go back to the operation mode:

- (1) Lift the handset while in programming mode.
- (2) When the Initial Message: **SYS-PGM NO? ->** is displayed, press the **PROGRAM** button.
(To display the Initial Message, press **END**.)

4.1.3 Entering Characters

You can enter characters to store names for speed dial numbers, extension numbers, etc., by using the dialing key pad and the buttons.

Each of twelve dialing keys on the dialing key pad has seven characters assigned. See the Combination Tables below.

Step 1. Press	Step 2. Press	Soft 1	Soft 2	Soft 3
		(SHIFT)	(SHIFT)	(SHIFT)
1	Q	Z	!	
	q	z	?	
2	A	B	C	
	a	b	c	
3	D	E	F	
	d	e	f	
4	G	H	I	
	g	h	i	
5	J	K	L	
	j	k	l	
6	M	N	O	
	m	n	o	
7	P	R	S	
	p	r	s	
8	T	U	V	
	t	u	v	
9	W	X	Y	
	w	x	y	
0	.	,	:	
	.	,	:	
*	/	-	<	
	+	=	>	
#	\$	&	(
	%	@)	

Combination Table 1

* Press **SHIFT** to alternate between capital and small letters.

Pressing SELECT (Times) Keys	0	1	2	3	4	5	6
	1	1	Q	q	Z	z	!
2	2	A	a	B	b	C	c
3	3	D	d	E	e	F	f
4	4	G	g	H	h	I	i
5	5	J	j	K	k	L	l
6	6	M	m	N	n	O	o
7	7	P	p	R	r	S	s
8	8	T	t	U	u	V	v
9	9	W	w	X	x	Y	y
0	0	.	,	'	:	:	:
*	*	/	+	-	=	<	>
#	#	\$	%	&	@	()

Combination Table 2

4.1.3 Entering Characters

To select a desired character, press the key which has.
 For example, to select the letter “M”:
 Select either of the following two methods:

- (1) Using the **SHIFT** and **Soft** buttons
 - * See Combination Table 1.
 - 1. Press **6**. (“M” belongs to “6.”)
 - The Function Line shows: M N O
 - 2. Press the **Soft 1 (M)** button.
 (Press **SHIFT** to display the lower case of the above letters.)

- (2) Using the **SELECT** button
 - * See Combination Table 2.
 - 1. Press **6**. (“M” belongs to “6.”)
 - 2. Press the **SELECT** button once.
 - Pressing the **SELECT** button an appropriate number of times gives you the desired letter. Pressing **SELECT** twice gives the letter “m,” pressing three times gives “N,” and so on.

Example of entering characters: to enter “Mike”:

Using method (1)

* See Combination Table 1.

1. Enter **6**.
2. Press **Soft 1 (M)**.
3. Enter **4**.
4. Press **SHIFT**.
5. Press **Soft 3 (i)**.
6. Enter **5**.
7. Press **Soft 2 (k)**.
8. Enter **3**.

The display shows:

			6
M	N	O	

			M
M	N	O	

			M4
G	H	I	

			M4
g	h	i	

			Mi
g	h	i	

			Mi5
j	k	l	

			Mik
j	k	l	

			Mik3
d	e	f	

4.1.3 Entering Characters

9. Press **Soft 2** (e).

	Mike	
d	e	f

Using method (2)

* See Combination Table 2.

The display shows:

- | | |
|------------------------------------|------|
| 1. Enter 6. | 6 |
| 2. Press SELECT . | M |
| 3. Enter 4. | M4 |
| 4. Press SELECT six times. | Mi |
| 5. Enter 5. | Mi5 |
| 6. Press SELECT four times. | Mik |
| 7. Enter 3. | Mik3 |
| 8. Press SELECT four times. | Mike |

- Notes**
- To erase all the letters, press **CLEAR**.
 - To erase the last letter, press **←**.

4.1.4 User Programming Mode

Some programming items are permitted to any display digital proprietary telephone user in the system.
The programming items are listed below:
[000] Date and Time Set
[001] System Speed Dialing Number Set
[002] System Speed Dialing Name Set
[003] Extension Number Set
[004] Extension Name Set

Entering the user programming mode

You can access these programs by entering the User Programming Mode as follows:

Before entering the mode, confirm that:

- Your telephone is on-hook.
- No calls are on hold at your telephone

Press **PROGRAM + * + *** and enter the **User Password (default: 1234)**

After entering the mode, perform the same programming steps as the system programming steps in each program address.

- Notes**
- If nothing is entered in five seconds after the **PROGRAM** button is pressed, it is cancelled.
 - The User Password is not shown on the display. The password can be changed by system programming. Refer to Section 4.3 [120] “User Password.”
 - During the programming mode, your extension is treated as a busy extension.
 - Only one digital proprietary telephone can be in programming mode at any one time.

4.1.5 Example of Programming

The following programming instructions suppose that you have already entered programming mode and that you will employ method (2) on page 4-8.

Example: Program [001] “System Speed Dialing Number Set”

Sample of Description	Explanation
<p>001⁽¹⁾ 4.2 Manager Programming⁽²⁾</p> <p><u><i>System Speed Dialing Number Set</i></u>⁽³⁾</p>	<p>(1) Program address: This address is printed at the top of every page to allow you to quickly find the desired program.</p>
<p>Description⁽⁴⁾ Used to program the System Speed Dial numbers. These numbers are available to all extension users. There are 500 numbers from 000 through 499.</p>	<p>(2) Running title: tells you which group the program belongs to. (3) Program title. (4) Provides a more detailed description of the program.</p>
<p>Selection⁽⁵⁾ • Speed dial number: 000 through 499 • Telephone number: 24 digits (max.)</p>	<p>(5) Shows you choices that you can assign. (6) Shows you the default (factory setting).</p>
<p>Default⁽⁶⁾ All speed dial numbers – Not stored</p>	<p>(7) Shows you programming procedures step by step.</p>
<p>Programming⁽⁷⁾</p> <p>1. Enter 001.⁽⁸⁾ Display: SPD Number Set⁽⁹⁾</p> <p>2. Press NEXT.⁽¹⁰⁾ Display: SPD Code?->⁽¹¹⁾</p> <p>3. Enter a speed dial number. To enter speed dial number 000, you can also press NEXT. Display example: 000:Not Stored⁽¹²⁾</p> <p>4. Enter a telephone number.⁽¹³⁾ To delete the current entry, press CLEAR.⁽¹⁴⁾ To change the current entry, press CLEAR and the new number.</p> <p>5. Press STORE.⁽¹⁵⁾</p> <p>6. To program another speed dial number, press NEXT or PREV, or SELECT and the desired speed dial number.⁽¹⁶⁾</p> <p>7. Repeat steps 4 through 6.⁽¹⁷⁾</p> <p>8. Press END.⁽¹⁸⁾</p>	<p>(7) Shows you programming procedures step by step. • While programming, use the overlay. • Before starting to program, enter the programming mode. (See “Entering the programming mode” on page 4-6.)</p> <p>(8) Enter the program address. (9) The display shows the program title. If your telephone has soft buttons, the lower line shows the functions that are currently assigned to them. (10) Press either Soft 3 (NEXT) shown on the display or the NEXT shown on the overlay. (11) The message line advises you to enter a speed dial number. (12) If the telephone number has already been stored, the number is displayed. (13) Enter the telephone number that you want to store. Your entry is displayed as you enter the digits. (14) Pressing CLEAR erases the whole entry. (15) Your entry is now stored. The indicator lights red and confirmation tone lets you know that the storage is completed. (16) Select the best way for you to store another speed dial number. Pressing the NEXT / PREV allows you to select the next higher / lower speed dial number. You can also keep pressing them until the desired one is displayed. If you press SELECT</p>
<p>Conditions⁽¹⁹⁾ • There is a maximum of 500 speed dial numbers. Each speed dial</p>	

4.1.5 Example of Programming

Sample of Description	Explanation
<p>001 4.2 Manager Programming</p> <p><i>System Speed Dialing Number Set (contd.)</i></p> <p>number has a maximum of 24 digits. The valid characters are 0 through 9, * and # keys, FLASH, PAUSE, SECRET and - (hyphen) buttons.</p> <p style="text-align: center;">• • • • •</p> <p>Feature References⁽²⁰⁾ Section 3, Features, Special Display Features for KX-T7235 — System Speed Dialing System Speed Dialing</p>	<p>and the desired speed dial number, the selected code is displayed.</p> <p>(17) You can continue to program another entry.</p> <p>(18) After you have stored all your entries, finish this program by pressing END. After pressing END you can go to any program address you desire. You can return to the Initial Message mode any time by pressing END.</p> <p>To go to the next larger program address, do not press END but press Soft 1 (SKP+) or VOLUME +.</p> <p>To go to the next smaller program address, do not press END but press SHIFT + Soft 1 (SKP-) or VOLUME -.</p> <p>(19) Tells you what you should notice or consider when doing the programming.</p> <p>(20) Lists all of the features related to the programming. These features are described in Section 3.</p>

Programming Structure

Program Address	Programming Group	Description
[000] – [010]	Manager Programming	These programs may meet frequent changes requested by the customer.
[100] – [121]	System Programming	Entire system programming.
[200] – [213]	Timer Programming	Flexible system timer setting.
[300] – [331]	TRS/ARS Programming	Assignment of Toll Restriction and ARS.
[400] – [435]	CO Line Programming	Setting of CO line and CO line group values.
[500] – [508]	COS Programming	Setting of Class of Service (COS).
[600] – [610]	Extension Programming	Setting of extension values.
[800] – [816]	Resource Programming	Assignment of customer-supplied peripherals connected to the system.
[990] – [991]	Option Programming	Used to answer the user's requirements or troubles, if needed.

4.2 Manager Programming

000

Date and Time Set

NOTICE

It is assumed that you have read Section 4.1 "General Programming Instructions." The use of the soft buttons is discussed in the section, therefore we will not make any reference to them in the following instructions. At any time the soft buttons can be used in place of the overlay keys.

Description	Sets the current date and time.
Selection	<ul style="list-style-type: none">• Day: 1 through 31• Month: Jan. through Dec.• Year: 00 through 99• Day of the week: SUN / MON / TUE / WED / THU / FRI / SAT• Hour: 1 through 12• Minute: 00 through 59• AM / PM
Default	1 Jan. '94 SAT 12:00 AM
Programming	<ol style="list-style-type: none">1. Enter 000. Display: Day/Time Set2. Press NEXT. Display example: 1 Jan. 94 SAT3. Enter the day. To change the current entry, press CLEAR and the new day.4. Press ➡ .5. Keep pressing SELECT until the desired month is displayed.6. Press ➡ .7. Enter the year. To change the current entry, press CLEAR and the new year.8. Press ➡ .9. Keep pressing SELECT until the desired day of the week is displayed.

Date and Time Set (contd.)

10. Press **STORE**.

11. Press **NEXT**.

Display example: 12:00 AM

12. Enter the **hour**.

To change the current entry, press **CLEAR** and the new hour.

13. Press **➡** .

14. Enter the **minute**.

To change the current entry, press **CLEAR** and the new minutes.

15. Press **➡** .

16. Press **SELECT** for AM or PM.

17. Press **STORE**.

18. Press **END**.

Conditions

- After changing an entry, you can press **STORE**. You do not have to perform all of the rest of the steps.
- To go back to the previous field, press **◀** at steps 4 through 9 and steps 13 through 16.
- If you hear the alarm after pressing **STORE**, check that the date is valid.
- The clock starts immediately after the **STORE** button is pressed.
- You cannot leave the entry empty.

Feature References

Section 3, Features,
Display, Time and Date

4.2 Manager Programming

001

System Speed Dialing Number Set

Description	Used to program the System Speed Dial numbers. These numbers are available to all extension users. There are 500 numbers from 000 through 499.
Selection	<ul style="list-style-type: none">• Speed dial number: 000 through 499• Telephone number: 24 digits (max.)
Default	All speed dial numbers – Not stored
Programming	<ol style="list-style-type: none">1. Enter 001. Display: SPD Number Set2. Press NEXT. Display: SPD Code?→3. Enter a speed dial number. To enter speed dial number 000, you can also press NEXT. Display example: 000: Not Stored4. Enter a telephone number. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new number.5. Press STORE.6. To program another speed dial number, press NEXT or PREV, or SELECT and the desired speed dial number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• There is a maximum of 500 speed dial numbers. Each speed dial number has a maximum of 24 digits. The valid characters are 0 through 9, *, and # keys, RECALL, PAUSE, SECRET and – (hyphen) buttons.<ul style="list-style-type: none">– To store the register recall signal, press RECALL. Note: The stored recall will be in effect only during an established call. (Refer to Section 3 “External Feature Access.”)– To store a hyphen, press the “–” button.

System Speed Dialing Number Set (contd.)

- To store a pause, press **PAUSE**.
(Refer to Section 3 “Pause Insertion, Automatic.”)
- To store the feature number to convert pulse signals to DTMF signals, press the *# keys.
(Refer to Section 3 “Pulse to Tone Conversion.”)
- To prevent the display of all or part of the number, press **SECRET** before and after confidential parts of the number. The **SECRET** button must always be entered in a pair. Or your entry is not stored. (Refer to Section 3 “Secret Dialing.”)
- If you are storing an external number, include the line access code (default=9, 81 through 88) before the number. When dialing, pause is automatically inserted after the code.
- If you are storing an account code, enter the account code before the line access code. (Refer to Section 3 “Account Code Entry.”)
- If you are storing a number for CO Incoming Call Information Display with name, enter “-” (hyphen) after the line access code. The system starts to compare the calling party’s number with the System Speed Dialing Number stored after “-.” Example : 9-12345678 (Refer to Section 3 “CO Incoming Call Information Display.”)
- It is possible to store a number consisting of 25 digits or more by storing it in two speed dial numbers. A line access code should not be stored in the second speed dial number.
- To go to another speed dial number at steps 3 through 6, press **SELECT** and start with step 3.
- To display parts of the number which have scrolled off the display, press **➡** or **⬅**.
- Program [002] “System Speed Dialing Name Set” is used to give names to speed dial numbers.

Feature References

Section 3, Features,
Special Display Features for KX-T7235 — System Speed Dialing
System Speed Dialing

4.2 Manager Programming

002

System Speed Dialing Name Set

Description	Assigns names to the system speed dial numbers assigned in program [001] “System Speed Dialing Number Set.” The large display telephone (KX-T7235) shows the stored name when performing System Speed Dialing.
Selection	<ul style="list-style-type: none">• Speed dial number: 000 through 499• Name: 10 characters (max.)
Default	All speed dial numbers – Not stored
Programming	<ol style="list-style-type: none">1. Enter 002. Display: SPD Name Set2. Press NEXT. Display: SPD Code?->3. Enter a speed dial number. To enter speed dial number 000, you can also press NEXT. Display example: 000: Not Stored4. Enter a name. For entering characters, see Section 4.1.3 “Entering Characters.” To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new name5. Press STORE.6. To program another speed dial number, press NEXT or PREV, or SELECT and the desired speed dial number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• Speed dial numbers are programmed in program [001] “System Speed Dialing Number Set.”• There is a maximum of 500 names. Each name has a maximum of 10 characters.• The stored names are applied to the CO Incoming Call Information Display / Log feature.• To go to another speed dial number at steps 3 through 6, press SELECT and start with step 3.
Feature References	Section 3, Features, Special Display Features for KX-T7235 — System Speed Dialing

Description	Assigns an extension number to each extension.
Selection	<ul style="list-style-type: none"> • Jack number: KX-TD816 – 01 through 16 (-1 / -2) KX-TD1232 – 01 through 64 (-1 / -2) (-1 = first part, -2 = second part) • Extension Number: 2 through 4 digits
Default	<p>KX-TD816: Jack 01-1 through 16-1 = 201 through 216; Jack 01-2 through 16-2 = 301 through 316</p> <p>KX-TD1232: Jack 01-1 through 64-1 = 201 through 264; Jack 01-2 through 64-2 = 301 through 364</p>
Programming	<ol style="list-style-type: none"> 1. Enter 003. Display: EXT Number Set 2. Press NEXT. Display: Jack NO?-> 3. Enter a jack number. To enter jack number 01, you can also press NEXT. To select the second part (-2), press NEXT after entering a jack number. Display: #01-1:EXT201 4. Enter an extension number. To change the current entry, press CLEAR and the new number. 5. Press STORE. 6. To program another jack, press NEXT or PREV, or SELECT and the desired jack number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • There is a maximum of 32 extension numbers for KX-TD816, and 128 extension numbers for KX-TD1232. Each extension number can be two, three, or four digits, consisting of 0 through 9. The * and # keys cannot be used. • In the case of KX-TD1232, jack numbers 01 through 32 are for the Master System and 33 through 64 are for the Slave, if available.

Extension Number Set (contd.)

- An extension number is invalid if the leading first or second digits disagree with the setting of the program [100] “Flexible Numbering, (01) – (16) 1st through 16th hundred extension blocks.” If one digit is assigned as the leading digit, some extensions have two digits and some have three digits. If two digits are assigned, some have three digits and some have four digits.
- Two extension numbers can be assigned per jack. If XDP is disabled for the jack in program [600] “EXtra Device Port,” the extension number of the second part (XX-2) is not available. (XX=jack number)
- For an explanation of jack numbering, see “Rotation of jack number” on page 4-7.
- Double entry or incompatible entry is invalid including the assignment of program [813] “Floating Number Assignment.” Valid entry examples: 10 and 11; 10 and 110. Invalid entry examples: 10 and 106; 210 and 21.
- Program [004] “Extension Name Set” is used to give names to extension numbers.

Feature References

Section 3, Features,
Display, Call Information
EXtra Device Port (XDP)
Flexible Numbering
Intercom Calling
Special Display Features for KX-T7235 — Extension Dialing

Extension Name Set

Description	Assigns names to the extension numbers programmed in program [003] "Extension Number Set."
Selection	<ul style="list-style-type: none"> • Jack number: KX-TD816 – 01 through 16 (-1 / -2) KX-TD1232 – 01 through 64 (-1 / -2) (-1 = first part, -2 = second part) • Name: 10 characters (max.)
Default	All jacks – Not stored
Programming	<ol style="list-style-type: none"> 1. Enter 004. Display: EXT Name Set 2. Press NEXT. Display: Jack NO?-> 3. Enter a jack number. To enter jack number 01, you can also press NEXT. To select the second part (-2), press NEXT after entering a jack number. Display: #01-1:Not Stored 4. Enter a name. For entering characters, see Section 4.1.3 "Entering Characters." To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new name. 5. Press STORE. 6. To program another jack, press NEXT or PREV, or SELECT and the desired jack number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • There is a maximum of 32 names for KX-TD816, and 128 names for KX-TD1232. Each name has a maximum of 10 characters. • Program [003] "Extension Number Set" is used to assign extension numbers.

4.2 Manager Programming

004

Extension Name Set (contd.)

- In the case of KX-TD1232, jack numbers 01 through 32 are for the Master System and 33 through 64 are for the Slave, if available.
- For an explanation of jack numbering, see “Rotation of jack number” on page 4-7.

Feature References

Section 3, Features,
Display, Call Information
Intercom Calling
Special Display Features for KX-T7235 — Extension Dialing

*Flexible CO Button Assignment***Description**

Used to determine the use of the flexible CO buttons on digital proprietary telephones from a centralized telephone.

Selection

- Jack number: KX-TD816 – **01 through 16**
KX-TD1232 – **01 through 64**
- Button Code (plus parameter, if required):

Button Code	Parameter
0 (Single-CO)	KX-TD816: 01 through 08 (CO line number) KX-TD1232: 01 through 24 (CO line number)
1 (DSS)	2 through 4 digits (Extension number)
2 (One-Touch)	16 digits max. (Telephone number)
3 (Message Waiting)	None
4 (FWD/DND)	None
5 (Save)	None
6 (Account)	None
7 (Conference)	None
8 (Voice Mail Transfer)	2 through 4 digits (Extension number)
* (Loop-CO)	None
# (Group-CO)	1 through 8 (CO line group number)
CO (ringer frequency)	1 through 8 (ring tone type number)

Default

- KX-TD816
All jacks – CO buttons 1 through 8 = Single-CO 01 through 08;
Ring tone type 2
- KX-TD1232
All jacks – CO buttons 1 through 24 = Single-CO 01 through 24;
Ring tone type 2

Programming

1. Enter **005**.
Display: Flexible Key Asn
2. Press **NEXT**.
Display: Jack NO?->
3. Enter a **jack number**.
To enter jack number 01, you can also press **NEXT**.
Display: PT-PGM Mode
4. Press a **CO button** to be changed.
The display shows the contents pre-assigned to the button.
Display example: CO-01

Flexible CO Button Assignment (contd.)

5. Enter a **button code** (plus **parameter**, if required).
To change the parameter, press **CLEAR** and the new parameter.
6. Press **STORE**.
7.
 - To program another CO button of the same jack, repeat steps 4 through 6.
 - To program another jack, press **SELECT** and repeat steps 3 through 6.
8. Press **END**.

Cancelling

1. Perform the same procedures as steps 1 through 4 above.
2. Enter **2**.
3. Press **STORE**.
4. Press **END**.

Conditions

- A centralized telephone is a telephone connected to jack 01 or a jack programmed as a manager extension in program [006] "Operator / Manager Extension Assignment."
- There is a maximum of 16 proprietary telephones for KX-TD816, and 64 proprietary telephones for KX-TD1232.
- In the case of KX-TD1232, jack numbers 01 through 32 are for the Master System and 33 through 64 are for the Slave, if available. Jack numbers in the out-of-service system are unacceptable.
- The number of the CO buttons available depends on the telephone type. (Refer to Section 3 "Buttons on Digital Proprietary Telephones.") To program 24 CO buttons, use the digital proprietary telephone, KX-T7230.
- If you press the same CO button again at step 5, you can select a desired ringer frequency for the CO button from eight types of ring tone. When you enter the tone type number (1 through 8), you will hear the selected tone type until **STORE** is pressed. This selection is possible only for the CO buttons that have been assigned to Single-CO, Group-CO, or Loop-CO.

Feature References

Section 3, Features,
Button, Flexible
Buttons on Digital Proprietary Telephones

Operator / Manager Extension Assignment

Description	Assigns the jack number for a manager and / or operators. The manager extension can perform system programming. The operator has the ability to perform operator services.
Selection	<ul style="list-style-type: none"> • OPE-1 (operator 1) / OPE-2 (operator 2) / MNGER (manager) • Jack number: KX-TD816 – 01 through 16 KX-TD1232 – 01 through 64
Default	Operator 1 – Jack 01; Operator 2 and Manager – Not stored
Programming	<ol style="list-style-type: none"> 1. Enter 006. Display: Operator/Manager 2. Press NEXT to program operator 1. Display: OPE-1:Jack01 To program another item, you can also keep pressing NEXT or PREV until the desired one is displayed. 3. Enter a jack number. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new jack number. 4. Press STORE. 5. To program another item, press NEXT or PREV. 6. Repeat steps 3 through 5. 7. Press END.
Conditions	<ul style="list-style-type: none"> • Up to two operators and a manager can be programmed. • In the case of KX-TD1232, jack numbers 01 through 32 are for the Master System and 33 through 64 are for the Slave, if available. • The manager cannot be assigned the jack number of the DSS Console Port set in program [007] “DSS Console Port and Paired Telephone Assignment.” • If the assigned jack is in eXtra Device Port mode, the digital proprietary telephone jack is treated as the manager / operator extension. • If there is no operator or manager, press CLEAR at step 3.
Feature References	Section 3, Features, Manager Extension Operator

4.2 Manager Programming

007

DSS Console Port and Paired Telephone Assignment

Description	Assigns the jack numbers for the DSS Console and the paired extension.
Selection	<ul style="list-style-type: none">• DSS Console number: KX-TD816; 1 through 4 KX-TD1232; 1 through 4 (for Master), 5 through 8 (for Slave)• Jack number for DSS Console: KX-TD816; 02 through 16 KX-TD1232; 02 through 32 (for Master), 33 through 64 (for Slave)• Jack number for paired extension: KX-TD816; 01 through 16 KX-TD1232; 01 through 32 (for Master), 33 through 64 (for Slave)
Default	All DSS Consoles – Not stored
Programming	<ol style="list-style-type: none">1. Enter 007. Display: DSS Console Asn2. Press NEXT. Display: DSS NO?->3. Enter a DSS Console number. To enter DSS Console number 1, you can also press NEXT. Display example: DSS-1:# P:#4. Enter a jack number for the console. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new jack number.5. Press ➡ .6. Enter a jack number for the paired extension. To change the current entry, press CLEAR and the new jack number. Display example: DSS-1:#02 P:#037. Press STORE.8. To program another DSS Console, press NEXT or PREV, or SELECT and the desired DSS Console number.

DSS Console Port and Paired Telephone Assignment (contd.)

9. Repeat steps 4 through 8.
10. Press END.

Conditions

- There is a maximum of four DSS Consoles per system. System Connection* permits eight DSS Consoles. Each DSS Console must be assigned to a DSS Console jack and paired with a digital proprietary telephone jack in the same system.
- For KX-TD816, DSS Consoles 1 through 4 must be assigned to a jack number between 02 and 16.
- For KX-TD1232, DSS Consoles 1 through 4 must be assigned to a jack number between 02 and 32 and DSS Consoles 5 through 8 must be assigned to a jack number between 33 and 64, if available.
- DSS Consoles in the out-of-service system are unassignable. Jack numbers in the out-of-service system are unacceptable.
- The jack number for the Console and that for the paired extension must be entered together.
- Multiple DSS Consoles cannot be assigned to the same DSS Console jack.
- Multiple DSS Consoles can be paired with the same digital proprietary telephone jack.
- A DSS Console jack cannot be assigned the jack 01 and the jack number of Manager set in program [006] "Operator / Manager Extension Assignment."
- If all incoming CO calls are set to ring at the operator extension telephone in program [407]–[408] "DIL 1:1 Extension — Day / Night," assigning the DSS Consoles to the operator extension makes the operator's job much easier.

Feature References

Section 3, Features,
DSS Console (KX-T7240)

Absent Messages

Description	Used to program the absent messages. An absent message, if set by the station user, is displayed on the calling extension's telephone to show the reason for the user's absence.								
Selection	<ul style="list-style-type: none">• Message number: 1 through 9• Message: 16 characters (max.)								
Default	<table><tr><td>1: Will Return Soon</td><td>5: Out Until %%/%%</td></tr><tr><td>2: Gone Home</td><td>6: In a Meeting</td></tr><tr><td>3: At Ext %%%</td><td>7 through 9: Blank (not stored)</td></tr><tr><td>4: Back at %%:%%</td><td></td></tr></table>	1: Will Return Soon	5: Out Until %%/%%	2: Gone Home	6: In a Meeting	3: At Ext %%%	7 through 9: Blank (not stored)	4: Back at %%:%%	
1: Will Return Soon	5: Out Until %%/%%								
2: Gone Home	6: In a Meeting								
3: At Ext %%%	7 through 9: Blank (not stored)								
4: Back at %%:%%									
Programming	<ol style="list-style-type: none">1. Enter 008. Display: Message Asn2. Press NEXT. Display: MSG NO?->3. Enter a message number. To enter message number 1, you can also press NEXT. Display example: MSG1:Will Return4. Enter the message. For entering characters, see Section 4.1.3 "Entering Characters." To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new message.5. Press STORE.6. To program another message, press NEXT or PREV, or SELECT and the desired message number.7. Repeat steps 4 through 6.8. Press END.								
Conditions	<ul style="list-style-type: none">• There is a maximum of nine messages. Messages 1 through 6 are programmed at the factory but can be changed. Each message has a maximum of 16 characters.• You can enter a maximum of seven "%" characters per message which can be programmed at each user's station. The station user can enter 0								

Absent Messages (contd.)

through 99, * and # for the % characters. If the user enters digits less than the number of “%” characters, it is recommended to fill the remaining “%” characters with “#” or “*.”

- If there are 4-digit extension numbers available in your system, add one “%” to Message 3.
- To display parts of the message which have scrolled off the display, press **▶** or **◀** .

Feature References

Section 3, Features,
Absent Message Capability

4.2 Manager Programming

009

Budget Management

Description	Assigns the charge limitation of a call on an extension basis.
Selection	<ul style="list-style-type: none">• Jack number: KX-TD816 – 01 through 16, * (-1 / -2) KX-TD1232 – 01 through 64, * (-1 / -2) (* =all jacks, -1= first part, -2= second part)• Charge limitation (Pulse) : 0 through 59999
Default	All jacks – 0 Pulse
Programming	<ol style="list-style-type: none">1. Enter 009. Display: Charge Limit2. Press NEXT. Display: Jack NO?->3. Enter a jack number. To enter jack number 01, you can also press NEXT. Display example: #01-1: 04. Enter a charge limitation. To delete the charge limitation, press CLEAR.5. Press STORE.6. To program another jack, press NEXT or PREV, or SELECT and the desired jack number.7. Press END.
Conditions	<ul style="list-style-type: none">• If the charge limitation is set to “0,” no restriction is applied.• To assign all jack numbers to one selection, press the * key at step 3. In this case, the display shows the contents programmed for Jack 01.
Feature References	Section 3, Features, Budget Management

Description	Assigns the margin rate of a telephone charge.
Selection	Margin (%): 0 through 999
Default	0%
Programming	<ol style="list-style-type: none">1. Enter 010. Display: Charge Margin2. Press NEXT. Display: Margin: 0%3. Enter a charge margin rate. To delete the charge limitation, press CLEAR.4. Press STORE.5. Press END.
Conditions	Telephone charge = Real charge \times $\left(\frac{100 + \text{rate}}{100}\right)$ The telephone charge will be printed out when checking out.
Feature References	Section 3, Features, HOTEL APPLICATION – Check-In / Check-Out

Flexible Numbering

Description	Assigns the leading digits of extension numbers and feature numbers for system features.
Selection	<ul style="list-style-type: none">• Selection number: 01 through 56 (See “Feature Number List” on page 4-35 for the corresponding features.)• Feature number: 1 or 2 digits (for selection numbers 01 through 16); 1 through 3 digits (for selection numbers 17 through 56)
Default	See “Feature Number List” on page 4-35.
Programming	<ol style="list-style-type: none">1. Enter 100. Display: FLX Numbering2. Press NEXT. Display: Select NO?->3. Enter a selection number. To enter selection number 01, you can also press NEXT. Display example: 01. 1-EXT BL:24. Enter the feature number. To delete the feature number, press CLEAR. To change the current entry, press CLEAR and the new number.5. Press STORE.6. To program another selection, press NEXT or PREV, or SELECT and the desired selection number.7. Repeat steps 4 through 6.8. Press END. <p>To remove all the feature numbers except selection numbers (01) through (16) 1st through 16th extension blocks;</p> <ol style="list-style-type: none">1. Enter 100.2. Press NEXT.

Flexible Numbering (contd.)

3. Enter **00**.

Display: All Feature CLR?

4. Press **STORE**.

5. Press **END**.

Conditions

- There is a maximum of 16 extension blocks, and 39 feature numbers for KX-TD816 and 37 feature numbers for KX-TD1232.
- Each extension block has one or two digits, consisting of **0 through 9**. Assign the leading digits for extension numbers of the respective blocks.
- Assignment of extension blocks defines the limits for programs [003] "Extension Number Set" and [813] "Floating Number Assignment."
- Each feature number has one through three digits, consisting of **0 through 9, *, and #**.
- If * or # is included in a feature number, dial pulse telephone users cannot access the feature.
- Double entry and incompatible combinations are invalid. Valid entry example: 30 and 31, 210 and 211. Invalid entry example: 5 and 5, 30 and 301.
- If you delete a feature number, the feature cannot be used by dialing operation.
- You can remove all the feature numbers except selections (01) through (16).
- To clear an extension block (01) through (16), it is required to change the corresponding numbers assigned in program [003] "Extension Number Set" and program [813] "Floating Number Assignment."

Feature References

**Section 3, Features,
Flexible Numbering**

4.3 System Programming

100

Flexible Numbering (contd.)

Feature Number List

Number	Feature	Default
01	1st hundred extension block	2
02	2nd hundred extension block	3
03 - 16	3rd through 16th hundred extension block	None
17	Operator call	0
18	Automatic line access / ARS	9
19	CO line group line access	8
20	System speed dialing	×
21	Station speed dialing	6×
22	Station speed dialing programming	60
23	Doorphone call	61
24	Paging – external	62
25	Paging – external answer / TAFAS answer	42
26	Paging – group	63
27	Paging – group answer	43
28	Call pickup, CO line	4×
29	Call pickup, group	40
30	Call pickup, directed	41
31	Call hold	50
32	Call hold retrieve – intercom	51
33	Call hold retrieve – CO line	53
34	Last number redial	#
35	Call park / call park retrieve	52
36	Account code entry	49
37	Door opener	55
38	External feature access	64
39	Station feature clear	790
40	Message waiting set / cancel / callback	70
42	Call forwarding / do not disturb set / cancel	710
43	Call pickup deny set / cancel	720
44	Data line security set / cancel	730
45	Call waiting set / cancel	731
47	Pickup dialing program set / cancel	74
48	Absent message set / cancel	750
49	Timed reminder set / cancel / confirm	76
50	Electronic station lockout set / cancel	77
51	Night service mode set / cancel	78
52	Parallel telephone mode set / cancel	69
53	Background music – external on / off	65
54	CO incoming call information log mode	56
55	CO incoming call information log lock	57
56	Timed reminder, remote	7×

Day / Night Service Switching Mode

Description	This program is used to determine if night mode is automatic or manual.
Selection	Manual / Auto (automatic)
Default	Manual
Programming	<ol style="list-style-type: none">1. Enter 101. Display: Day/Night Mode2. Press NEXT. Display example: D/N Mode:Manual3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• If automatic switching is assigned, day / night mode is switched at the time programmed in [102] "Day / Night Service Starting Time."• The operator can switch the day / night mode at any time.
Feature References	Section 3, Features, Night Service

Day / Night Service Starting Time

Description	Sets the starting time on a day of the week basis, when automatic day / night switching is programmed in program [101] “Day / Night Service Switching Mode.”
Selection	<ul style="list-style-type: none">• Day of the week selection number: 1 (Sunday) / 2 (Monday) / 3 (Tuesday) / 4 (Wednesday) / 5 (Thursday) / 6 (Friday) / 7 (Saturday) / * (every day of the week)• Hour: 1 through 12 / Disable (no switching)• Minute: 0 through 59• AM / PM
Default	Every day of the week – Day – 9:00 AM / Night – 5:00 PM
Programming	<ol style="list-style-type: none">1. Enter 102. Display: Day/Night Time2. Press NEXT. Display: Day of Week?->3. Enter the day of the week selection number. To select Sunday, you can also press NEXT. Display example: Sun-Day: 9:00 AM To select night mode, press NEXT. Display example: Sun-Nig: 5:00 PM4. Enter the hour. To set no switching, keep pressing SELECT until “Disable” is displayed and go to step 9. If SELECT is pressed, the display shows the previous entry. If the previous setting was “Disable,” press SELECT to enter the starting time. To change the current entry, press CLEAR and the new time.5. Press ➡ .6. Enter the minute. To change the current entry, press CLEAR and the new minutes.7. Press ➡ .

Day / Night Service Starting Time (contd.)

8. Press **SELECT** for AM or PM.
9. Press **STORE**.
10. To program another day / night mode or day of the week, press **NEXT** or **PREV**, or **SELECT** and the **day of the week selection number**.
11. Repeat steps 4 through 10.
12. Press **END**.

Conditions

- To select the desired day, you may keep pressing **NEXT** at step 3. To assign every day of the week to one selection, press the * key at step 3. In this case, the display shows the contents programmed for Sunday.
- If day / night switching is unwanted, select "Disable" at step 4.
- You cannot leave the entry empty.

Feature References

Section 3, Features,
Night Service

4.3 System Programming

103

Automatic Access CO Line Group Assignment

Description	Assigns the sequence in which CO line groups will be accessed when in Automatic Line Access mode. When a user dials the feature number for automatic line access (default=9) or presses the L-CO button, an idle line is hunted in the programmed CO line group order.
Selection	CO line group number: 1 through 8, eight entries (max.) in desired order
Default	12345678
Programming	<ol style="list-style-type: none">1. Enter 103. Display: Local Access2. Press NEXT. Display example: Access:123456783. Enter the CO line group numbers in priority from top to bottom. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new order.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• There is a maximum of eight CO line groups. Up to eight CO line group numbers can be entered.• Automatic Line Access feature works only if Automatic Route Selection mode is turned off in program [312] "ARS Mode."
Feature References	Section 3, Features, Line Access, Automatic Line Access, Direct Line Preference – Outgoing

Station Hunting Type

Description	Used to enable or disable hunting and set the Station Hunting type for each extension group. There are four Station Hunting types available: Circular, Termination, Voice Mail (VM), and Automated Attendant (AA). If circular hunting is assigned for a group, all the extensions in the group are hunted until an idle one is found. If termination hunting is assigned, hunting stops at the extension which has the largest jack number in the group. If VM hunting is assigned, all the VM ports of an extension group are hunted until an idle one is found to permit Voice Mail Service. If AA hunting is assigned, all the AA ports of an extension group are hunted until an idle one is found to permit AA Service.		
Selection	<ul style="list-style-type: none"> • Extension group number: 01 through 16, * (* =all extension groups) • Disable (no hunting) / Terminate (termination) / Circular / VM (voice mail) / AA (automated attendant) 		
Default	All extension groups – Disable		
Programming	<ol style="list-style-type: none"> 1. Enter 106. Display: Call Hunting 2. Press NEXT. Display: EXT GRP NO?-> 3. Enter an extension group number. To enter extension group number 1, you can also press NEXT. Display example: Group1: Disable 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. To program another extension group, press NEXT or PREV, or SELECT and the desired extension group number. 7. Repeat steps 4 through 6. 8. Press END. 		
Conditions	<ul style="list-style-type: none"> • Program [602] “Extension Group Assignment” is used to assign the extension group members. • The system supports a maximum of 8 jacks (16 jacks during System Connection for KX-TD1232) for connection to a Voice Processing System as VM or AA ports. 		
Feature References	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Section 3, Features, Station Hunting</td> <td style="width: 50%;">Voice Mail Integration</td> </tr> </table>	Section 3, Features, Station Hunting	Voice Mail Integration
Section 3, Features, Station Hunting	Voice Mail Integration		

4.3 System Programming

107

System Password

Description	Assigns the password required for entering system programming mode and for maintenance from a personal computer.
Selection	Password: 4 through 7 digits
Default	1234
Programming	<ol style="list-style-type: none">1. Enter 107. Display: System Password2. Press NEXT. Display example: Password:12343. Enter a password. To change the current entry, press CLEAR and the new password.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• The password can be from four to seven digits long. The valid numbers are from 0 through 9.• If less than four digits are entered, they are not stored.• You cannot leave the entry empty.
Feature References	Section 3, Features, System Programming and Diagnosis with Personal Computer System Programming with Digital Proprietary Telephone

One-Touch Transfer by DSS Button

Description	Enables or disables the function of automatically holding the outside call when a DSS button on the DSS Console or digital proprietary telephone is pressed.
Selection	Enable / Disable
Default	Enable
Programming	<ol style="list-style-type: none">1. Enter 108. Display: DSS Auto Hold2. Press NEXT. Display example: Auto HLD:Enable3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Conditions	This assignment applies to all DSS buttons on all DSS Consoles and on all digital proprietary telephones in the system.
Feature References	Section 3, Features, One-Touch Transfer by DSS Button

Expansion Card / Unit Type

Description	Assigns the type of expansion cards/units to be used in the system. This allows the system to identify the card and/or unit in each expansion location.
Selection	<p>KX-TD816</p> <ul style="list-style-type: none">• Areas 1; 2 (Expansion Area) = C (4CO) / S (2S0) / E (EXT) / D (4DID) <p>KX-TD1232</p> <ul style="list-style-type: none">• Master / Slave• Areas 1; 2; 3; 4 = 1 (Inside the system) : C (8CO) / S (4S0) 2; 3; 4 (Expansion Area) : C (4CO) / S (2S0) / E1 (EXT1) / E2 (EXT2) / D (4DID)
Default	<p>KX-TD816: C; E KX-TD1232: Master and Slave – C; C; E1; E2</p>
Programming	<p>KX-TD816</p> <ol style="list-style-type: none">1. Enter 109. Display: Expansion Card2. Press NEXT. Display example: Mast.:C;E3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END. <p>KX-TD1232</p> <ol style="list-style-type: none">1. Enter 109. Display: Expansion Card2. Press NEXT to program Master System. To program “Slave,” press NEXT again. Display example: Mast.:C;C;E1;E23. Keep pressing SELECT until the desired selection is displayed.4. Press ▶.5. Keep pressing SELECT until the desired selection is displayed.6. Repeat steps 4 and 5 until all the required entries are completed.

Expansion Card / Unit Type (contd.)

7. Press **STORE**.
If only one system is in operation, go to step 8.
8. Press **NEXT** to program Slave System.
Display example: Slave :C;C;E1;E2
9. Repeat steps 3 and 7.
10. Press **END**.

Conditions

- In case of starting the system for the first time or System Data Clear, the application for location will adapt the practical installation instead of system default setting.
- There are two expansion areas in KX-TD816, areas 1 and 2 from bottom to top.
- For KX-TD1232, there is one expansion area inside the system, area 1, and there are three expansion area on the system, area 2, 3 and 4 from bottom to top.
- If the Slave System of KX-TD1232 is out-of-service, skip the steps 8 and 9.
- After changing the setting, to make your setting effective, unplug the system once and plug it in again. Otherwise the previous setting will be maintained.

Feature References

**Section 3, Features,
Module Expansion**

VM Status DTMF Set

Description

Sets the DTMF signals transmitted to your Voice Processing System (VPS) to inform the VPS of the VPS ports states quickly: The following signals are sent to the VPS with the assigned DTMF signals:

- RBT** (ringback tone) : This signal is sent when calling an extension.
- BT** (busy tone) : This is sent when the called extension is busy.
- ROT** (reorder tone) : This is sent when the dialed number is invalid.
- DND** (DND tone) : This is sent when the other extension has DND assigned.
- Answer** : This is sent when the other extension answers the call.
- Disconnect** : This is sent when the other extension hangs up.
- Confirm** (confirmation tone) :
This is sent when the feature number for “Message Waiting Lamp” is valid.
- FWD VM RBT** (FWD to VM ringback tone) :
Not available (reserved).
- FWD VM BT** (FWD to VM busy tone) :
This is sent when the called extension has set Call Forwarding to VPS.
- FWD EXT RBT** (FWD to extension ringback tone) :
Not available (reserved).

Selection

- **RBT / BT / ROT / DND / Answer / Disconnect / Confirm / FWD VM RBT / FWD VM BT / FWD EXT RBT**
- **DTMF signal number: 3 digits (max.)**

Default

RBT – 1; BT – 2; ROT – 3; DND – 4; Answer – 5; Disconnect – #9
Confirm – 9; FWD VM RBT – 6; FWD VM BT – 7; FWD EXT RBT – 8

Programming

1. Enter **113**.
Display: VM Status Set
2. Press **NEXT** to program ringback tone status.
To program another status, keep pressing **NEXT** until the desired status is displayed.
Display example: RBT :1

VM Status DTMF Set (contd.)

3. Enter a **DTMF signal number**.
To delete the current entry, press **CLEAR**.
To change the current entry, press **CLEAR** and the new number.
4. Press **STORE**.
5. To program another selection, keep pressing **NEXT** or **PREV** until the desired selection is displayed.
6. Repeat steps 3 through 5.
7. Press **END**.

Conditions

- A DTMF signal number can have a maximum of three digits, consisting of **0 through 9, *, #** and **PAUSE**.
- The DTMF signals are sent to the extensions in the extension group that is assigned as “VM” or “AA” in program [106] “Station Hunting Type.”

Feature References

Section 3, Features,
Voice Mail Integration

VM Command DTMF Set

Description

Sets the DTMF command signals transmitted to your Voice Processing System (VPS). There are four commands available: Leave Message; Get Message; Automated Attendant Service; Voice Mail Service. These commands are used in the following ways:

(A) If your VPS is used for Voice Mail (VM) Service

(1) Call Forwarding / Intercept Routing to Voice Mail

If a call is forwarded to the VPS, your system will send a mailbox number to the VM port. This allows the caller to leave a message without knowing the mailbox number.

- Required entries (selections):

- LV-MSG (Leave Message):** This command is transmitted to a VM port if a call is forwarded or intercepted and rerouted to the port.

- AA-SVC (Automated Attendant Service):** If AA Service is set to “Start” in program [990], field (10), the “AA-SVC” command is sent to a VM port if an incoming outside call is answered by the VM port.

- Other programming required (program addresses): [106]; [602]; [609]; [990], field (10); [990], field (18)

(2) Hearing the message at the extension

If the VPS receives a message and lights the MESSAGE button indicator of the concerned telephone, the telephone user can hear the message by pressing the MESSAGE button.

- Required entries (selections):

- GETMSG (Get Message):** This command is transmitted to a VM port when the message receiver presses the MESSAGE button.

- VM-SVC (Voice Mail Service):** The “VM-SVC” command is a code transmitted preceding the “GETMSG” command above.

- This is effective to switch to VM port when an AA port lights the MESSAGE indicator.

- Other programming required (program addresses): [609]; [990], field (18)

(B) If your VPS is used for Automated Attendant (AA) Service

An AA port answers an incoming outside call to provide AA services, such as call transfer, receiving a message.

- Required entries (selections):

- VM-SVC (Voice Mail Service):** The “VM-SVC” command is a code transmitted before “LV-MSG” code if Operator transfers a call to an extension and then it is forwarded to an AA port so that the AA port can be switched to VM port temporarily.

- Other programming required (program addresses): [106], [602]

VM Command DTMF Set (contd.)

Selection	<ul style="list-style-type: none"> • LV-MSG / GETMSG / AA-SVC / VM-SVC • DTMF signal number: 16 digits (max.)
Default	LV-MSG – H; GETMSG – * H; AA-SVC – #8 ; VM-SVC – #6
Programming	<ol style="list-style-type: none"> 1. Enter 114. Display: VM Command Set 2. Press NEXT to program the LV-MSG command. To program another command, keep pressing NEXT until the desired command is displayed. Display example: LV-MSG:H 3. Enter a DTMF signal number. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new number. 4. Press STORE. 5. To program another selection, keep pressing NEXT or PREV until the desired selection is displayed. 6. Repeat steps 3 through 5. 7. Press END.
Conditions	<ul style="list-style-type: none"> • A command signal number can have a maximum of 16 digits, consisting of 0 through 9, *, #, RECALL and PAUSE. • The RECALL button is available only for LV-MSG and GETMSG commands to store “H” which means “Home Position.” • If “H” is stored for “LV-MSG,” a mailbox number programmed in program [609] “Voice Mail Access Codes” or an extension number will be sent to the VM port (Follow On ID function). If certain codes are required before and after the ID code, insert “H” between the codes, as “aaaHbbb.” If nothing is stored, it will operate as “H.” • If “* H” is stored for “GETMSG,” a mailbox number programmed in program [609] “Voice Mail Access Codes” or an extension number will be sent to the port succeeding the “* .”
Feature References	Section 3, Features, Voice Mail Integration

Adjust Time

Description	Used to set the time for checking the normality of the system. Every day at the programmed time, system data is checked. If an error is checked, it is recorded onto error log.
Selection	<ul style="list-style-type: none">• Hour: 1 through 12• Minute: 00 through 59• AM / PM
Default	1:00 AM
Programming	<ol style="list-style-type: none">1. Enter 115. Display: Adjust Time2. Press NEXT to program hour. Display example: 1:00 AM3. Enter the hour. To change the current entry, press CLEAR and the new hour.4. Press ► to program minute.5. Enter the Minute. To change the current entry, enter the new minute.6. Press ► to program AM / PM.7. Press SELECT for AM or PM.8. Press STORE.9. Press END.
Conditions	You cannot leave the entry empty.
Feature References	None

ROM Version Display

Description Confirms the version of the ROM of Master and Slave Systems.

Display example: P011A30101A

| |
Version Date

Selection System Number: **KX-TD816 – 0**
KX-TD1232 – 0 (Master) / 1 (Slave)

Default Not applicable.

- Programming**
1. Enter **116**.
Display: ROM Version
 2. Press **NEXT**.
Display: System NO?->
 3. Enter the **System Number**.
The display shows the ROM version of the specified system.
 4. To confirm the other system, press **SELECT** and enter the **System Number**.
The display shows the ROM version of the specified system.
 5. Press **END**.

- Conditions**
- The out-of-service system number is unacceptable.
 - For KX-TD816, you can enter the system number “0” only. Skip step 4.

Feature References None

4.3 System Programming

117

Charge Display Selection

Description	Assigns the initial display format of charge fee on a display telephone.
Selection	AS \$ / Pulse
Default	AS \$
Programming	<ol style="list-style-type: none">1. Enter 117. Display: Charge Meter2. Press NEXT. Display example: AS \$3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Conditions	None
Feature References	Section 3, Features, Charge Fee Reference Display, Call Information

Charge Verification Assignment

Description	Assigns the extension which is allowed to refer or clear for the call information on the extension, CO line, account code, and the total.
Selection	<ul style="list-style-type: none"> • Jack number: KX-TD816 – 01 through 16, * (*=all jacks) KX-TD1232 – 01 through 64, * (*=all jacks) • Enable / Disable
Default	All jacks – Enable
Programming	<ol style="list-style-type: none"> 1. Enter 118. Display: Charge Refer Ext 2. Press NEXT. Display: Jack NO?-> 3. Enter a jack number. To enter jack number 01, you can also press NEXT. Display example: #01:Enable 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. To program another jack, press NEXT or PREV, or SELECT and the desired jack number. 7. Press END.
Conditions	<ul style="list-style-type: none"> • In the case of KX-TD1232, jack numbers 01 through 32 are for the Master System and 33 through 64 are for the slave. • To assign all jack numbers to one selection, press the * key at step 3. In this case, the display shows the contents programmed for Jack 01.
Feature Reference	Section 3, Features, Charge Fee Reference

4.3 System Programming

119

Charge Verification ID Code Set

Description	Assigns an ID code required to refer the charge information.
Selection	4 digits (0000 through 9999)
Default	1234
Programming	<ol style="list-style-type: none">1. Enter 119. Display: Charge ID Code2. Press NEXT. Display example: Code: 12343. Enter an ID code. To delete the current entry, press CLEAR.4. Press STORE.5. Press END.
Conditions	None
Feature Reference	Section 3, Features, Charge Fee Reference

User Password

Description	Assigns the password required for entering User Programming mode. In the User Programming Mode, any display digital proprietary telephone user in the system can set the following programs: [000] Date and Time Set [001] System Speed Dialing Number Set [002] System Speed Dialing Name Set [003] Extension Number Set [004] Extension Name Set
Selection	Password: 4 through 7 digits
Default	1234
Programming	<ol style="list-style-type: none">1. Enter 120. Display: User Password2. Press NEXT. Display example: Password:12343. Enter a password. To change the current entry, press CLEAR and the new password.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• The password can be from four to seven digits long. The valid numbers are from 0 through 9.• If less than four digits are entered, they are not stored.• You cannot leave the entry empty.
Feature References	None

4.3 System Programming

121

Hotel Application

Description	Assigns whether the hotel application is enabled or disabled.
Selection	Disable / Enable
Default	Disable
Programming	<ol style="list-style-type: none">1. Enter 121. Display: Hotel Apply Asn2. Press NEXT. Display example: Hotel : Disable3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Conditions	If “Enable” is selected, the menu “Hotel” is displayed on the operator extension’s KX-T7235 and the “Check-In / Check-Out” feature is available.
Feature Reference	Section 3, Features, HOTEL APPLICATION

Hold Recall Time

Description	Assigns the length of the hold recall timer. This timer is used to alert an extension that a call has been held for an extended period of time.
Selection	Time (seconds): 0 through 240 (0=Hold Recall disabled)
Default	60 s
Programming	<ol style="list-style-type: none">1. Enter 200. Display: Hold Recall Time2. Press NEXT. Display example: Time: 60 sec3. Enter the time. To change the current entry, press CLEAR and the new time.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• Select "0" if Hold Recall is not required.• You cannot leave the entry empty.
Feature References	Section 3, Features, Hold Recall

4.4 Timer Programming

201

Transfer Recall Time

Description	Sets the number of rings before the transfer recall occurs. If a transferred call is not answered before the programmed time of rings, the call returns to the original caller.
Selection	Number of rings: 3 through 48
Default	12 rings
Programming	<ol style="list-style-type: none">1. Enter 201. Display: Transfer Recall2. Press NEXT. Display example: Time:12 rings3. Enter the number of rings. To change the current entry, press CLEAR and the new number of rings.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• One ring is equivalent to five seconds.• You cannot leave the entry empty.
Feature References	Section 3, Features, Call Transfer, Unscreened – to Extension

Call Forwarding – No Answer Time

Description	Sets the number of rings for the Call Forwarding – No Answer feature. If a call is not answered before the programmed number of rings, the call is forwarded to the destination.
Selection	Number of rings: 1 through 12
Default	3 rings
Programming	<ol style="list-style-type: none">1. Enter 202. Display: No Answer Time2. Press NEXT. Display example: Time: 3 rings3. Enter the number of rings. To change the current entry, press CLEAR and the new number of rings.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• One ring is equivalent to five seconds.• This timer is also used for Intercept Routing.• You cannot leave the entry empty.
Feature References	Section 3, Features, Call Forwarding – Busy / No Answer Call Forwarding – No Answer

4.4 Timer Programming

203

Intercept Time

Description	Sets the number of rings for the Intercept Routing – No Answer (IRNA) feature. If a call is not answered before the programmed number of rings, the call is redirected to the programmed station.
Selection	Number of rings: 3 through 48
Default	12 rings
Programming	<ol style="list-style-type: none">1. Enter 203. Display: Intercept Time2. Press NEXT. Display example: Time: 12 rings3. Enter the number of rings. To change the current entry, press CLEAR and the new number of rings.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• One ring is equivalent to five seconds.• Programs [409]–[410] “Intercept Extension — Day / Night” are used to program the destination of Intercept Routing on a CO line group basis in day and night modes.• If the original extension has set Call Forwarding – No Answer, Intercept Timer starts after the Call Forwarding.• You cannot leave the entry empty.
Feature References	Section 3, Features, Intercept Routing

Pickup Dial Waiting Time

Description	Sets the number of seconds for Pickup Dialing. If the telephone user lifts the handset, the programmed party is called when the time expires.
Selection	Time (seconds): 1 through 5
Default	1 s
Programming	<ol style="list-style-type: none">1. Enter 204. Display: Pickup Dial Time2. Press NEXT. Display example: Time:1 sec3. Enter the time. To change the current entry, enter the new time.4. Press STORE.5. Press END.
Conditions	This time gives the user an opportunity to dial digits before the automatic dialing process takes place.
Feature References	Section 3, Features, Pickup Dialing

4.4 Timer Programming

205

Extension-to-CO Line Call Duration Time

Description	Sets the maximum time allowed for a conversation with an outside party. If an outside call is originated or answered by a programmed extension user and the timer expires, the call is disconnected.
Selection	Time (minutes): 1 through 64
Default	10 min
Programming	<ol style="list-style-type: none">1. Enter 205. Display: CO Dur. Time2. Press NEXT. Display example: Time:10 min3. Enter the time. To change the current entry, press CLEAR and the new time.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• This time-out applies to extensions to which Limited Call Duration is assigned by program [502] "Extension-to-CO Line Call Duration Limit."• This time cannot be set to zero or be left empty.
Feature References	Section 3, Features, Limited Call Duration

CO-to-CO Call Duration Time

Description	Sets the maximum time allowed for a conversation between two outside parties. When the timer expires, the CO-to-CO call is disconnected.
Selection	Time (minutes): 1 through 64
Default	10 min
Programming	<ol style="list-style-type: none">1. Enter 206. Display: CO-CO Dur. Time2. Press NEXT. Display example: Time:10 min3. Enter the time. To change the current entry, press CLEAR and the new time.4. Press STORE.5. Press END.
Conditions	You cannot leave the entry empty.
Feature References	Section 3, Features, Call Forwarding – to CO Line Call Transfer, Screened – to CO Line

4.4 Timer Programming

207

First Digit Time

Description	Sets the maximum time allowed between the start of CO dial tone and the first digit dialed on an outgoing outside call. If an extension user fails to dial any digits during this time, the DTMF receiver is released.
Selection	Time (seconds): 5 through 120
Default	10 s
Programming	<ol style="list-style-type: none">1. Enter 207. Display: 1st Digit Time2. Press NEXT. Display example: Time: 10 sec3. Enter the time. To change the current entry, press CLEAR and the new time.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• This timer is used for toll restriction checking.• You cannot leave the entry empty.
Feature References	Section 3, Features, Toll Restriction

Inter Digit Time

Description	Assigns the maximum time allowed between digits on an outgoing toll call. If an extension user fails to dial any digits during this time, the DTMF receiver is released. This timer applies until the Toll Restriction check is completed.
Selection	Time (seconds): 5 through 30
Default	10 s
Programming	<ol style="list-style-type: none">1. Enter 208. Display: Inter Digit Time2. Press NEXT. Display example: Time:10 sec3. Enter the time. To change the current entry, press CLEAR and the new time.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• This timer is used for toll restriction checking.• You cannot leave the entry empty.
Feature References	Section 3, Features, Toll Restriction

4.4 Timer Programming

209

Automatic Redial Repeat Times

Description	Sets the number of times Automatic Redial is tried. Automatic redialing of the last dialed or saved number is done up to the specified number of times.
Selection	Number of times: 1 through 30
Default	4 times
Programming	<ol style="list-style-type: none">1. Enter 209. Display: Redial Times2. Press NEXT. Display example: Attempt: 43. Enter the number of times. To change the current entry, press CLEAR and the new number of times.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• Program [210] “Automatic Redial Interval Time” is used to set the interval time between Automatic Redial attempts.• You cannot leave the entry empty.
Feature References	Section 3, Features, Redial, Automatic

Automatic Redial Interval Time

Description	Sets the interval time between Automatic Redial attempts.
Selection	Time (seconds): 3 through 120 (×10 is the actual time)
Default	12 (120 s)
Programming	<ol style="list-style-type: none">1. Enter 210. Display: Interval Time2. Press NEXT. Display example: Time: 120 sec3. Enter the time. To change the current entry, press CLEAR and the new time.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• You enter a number from 3 through 120. The actual time is 10 times your input.• Program [209] “Automatic Redial Repeat Times” is used to set the number of times Automatic Redial is tried.• You cannot leave the entry empty.
Feature References	Section 3, Features, Redial, Automatic

4.4 Timer Programming

211

Dial Start Time

Description	Sets the number of milliseconds the system waits before dialing after a CO line is seized.
Selection	Time (milliseconds): 0 through 40 (100 is the actual time)
Default	0 ms
Programming	<ol style="list-style-type: none">1. Enter 211. Display: CO Dial Start2. Press NEXT. Display example: Time: 000 msec3. Enter the time. To change the current entry, press CLEAR and the new time.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• You enter a number from 0 through 40. The actual time is a 100 times your input.• You cannot leave the entry empty.
Feature References	Section 3, Features, Line Access, Automatic Line Access, CO Line Group Line Access, Direct Line Access, Individual

Call Duration Count Start Time

Description	Sets the number of seconds the system waits between the end of dialing and the start of the SMDR timer for outgoing toll calls. When the system has sent out all the digits to the central office and this timer expires, the system starts counting the call. A display telephone shows the elapsed time of the call. The starting time and the duration of a call are recorded in the SMDR record.
Selection	Time (seconds): 0 through 60
Default	0 s
Programming	<ol style="list-style-type: none">1. Enter 212. Display: SMDR Durat Time2. Press NEXT. Display example: Time: 0 sec3. Enter the time. To change the current entry, press CLEAR and the new time.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• The timer starts counting after all the digits are dialed. This timer is not applied to incoming calls. The timer for incoming calls starts immediately.• You cannot leave the entry empty.
Feature References	Section 3, Features, Display, Call Information Station Message Detail Recording (SMDR)

4.4 Timer Programming

213

Message Waiting Ring Interval Time

Description	Set the interval time of Message Waiting ring for a single line telephone.
Selection	Time (minutes) : 0 through 64
Default	10 min
Programming	<ol style="list-style-type: none">1. Enter 213. Display: MW Ring Time2. Press NEXT. Display example: Interval: 10 min3. Enter the time. To change the current entry, press CLEAR and enter the new time.4. Press STORE.5. Press END.
Conditions	When the internal time is set to "0," the telephone does not ring for Message Waiting notification.
Feature References	Section 3, Features, Message Waiting

TRS Override for System Speed Dialing

Description	Allows you to enable toll restriction override for System Speed Dial Numbers. If this is enabled, all extension users can make System Speed Dialing calls with no restriction.
Selection	Enable / Disable
Default	Disable
Programming	<ol style="list-style-type: none">1. Enter 300. Display: SPD Override2. Press NEXT. Display example: Override:Disable3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Conditions	Select "Enable" for toll restriction override; Select "Disable" for toll restriction.
Feature References	Section 3, Features, Toll Restriction Override for System Speed Dialing

4.5 TRS/ARS Programming **301-305**

TRS Denied Code Entry for Levels 2 through 6

Description	These allow you to specify the numbers which are toll-restricted for each toll restriction level as follows: Program [301]: restricts levels 2 through 6 Program [302]: restricts levels 3 through 6 Program [303]: restricts levels 4 through 6 Program [304]: restricts levels 5 through 6 Program [305]: restricts level 6
Selection	<ul style="list-style-type: none">• Location number: 01 through 20• Toll call number: 7 digits (max.)
Default	All locations – Not stored
Programming	<ol style="list-style-type: none">1. Enter a program address (301 through 305). Display example: TRS Deny LVL-22. Press NEXT. Display: Location NO?->3. Enter a location number. To enter location number 01, you can also press NEXT. Display example: 01:Not Stored4. Enter a toll call number. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new number.5. Press STORE.6. To program another location, press NEXT or PREV, or SELECT and the desired location number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• There is a maximum of 20 toll call numbers which can be restricted for each program. Each number has a maximum of seven digits, consisting of 0 through 9, and *. The character “*” can be used as a wild card character.• Programs [306]–[310] “TRS Excepted Code Entry for Levels 2 through 6” are used to assign exceptions to these numbers. Programs [500]–[501] “Toll Restriction Level — Day / Night” are used to set the toll restriction value for each COS.
Feature References	Section 3, Features, Toll Restriction

306-310 4.5 TRS/ARS Programming

TRS Excepted Code Entry for Levels 2 through 6

Description	<p>These allow you to assign numbers which are exceptions to the toll restriction specified in programs [301] through [305] as follows:</p> <ul style="list-style-type: none">Program [306]: applies to level 2Program [307]: applies to levels 2 through 3Program [308]: applies to levels 2 through 4Program [309]: applies to levels 2 through 5Program [310]: applies to levels 2 through 6
Selection	<ul style="list-style-type: none">• Location number: 1 through 5• Exceptional number: 7 digits (max.)
Default	All locations – Not stored
Programming	<ol style="list-style-type: none">1. Enter a program address (306 through 310). Display example: TRS Excp LVL-22. Press NEXT. Display: Location NO?->3. Enter a location number. To enter location number 1, you can also press NEXT. Display example: 1:Not Stored4. Enter an exceptional number. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new number.5. Press STORE.6. To program another location, press NEXT or PREV, or SELECT and the desired location number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<p>There is a maximum of five numbers for each program. Each number has a maximum of seven digits, consisting of 0 through 9, and *. The character “*” can be used as a wild card character.</p>
Feature References	Section 3, Features, Toll Restriction

Emergency Dial Set

Description	Stores up to 10 emergency call numbers. Emergency numbers are not subject to toll restriction, Account Code – Verified mode or Electronic Station Lockout.
Selection	<ul style="list-style-type: none">• Location number: 01 through 10• Emergency number: 3 digits (max.)
Default	Location 01= 114 / Location 02= 000
Programming	<ol style="list-style-type: none">1. Enter 311. Display: Emergency Dial2. Press NEXT. Display: Location NO?->3. Enter a location number. To enter location number 01, you can also press NEXT. Display example: 01: 1144. Enter an emergency number. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new number.5. Press STORE.6. To program another location, press NEXT or PREV, or SELECT and the desired location number.7. Repeat steps 4 through 6.8. Press END.
Conditions	There is maximum of 10 emergency numbers. Each number has a maximum of three digits, consisting of 0 through 9 .
Feature References	Section 3, Features , Automatic Route Selection (ARS) Toll Restriction

ARS Mode

Description	Allows you to turn on or off the Automatic Route Selection (ARS) mode. ARS, if enabled, selects the least expensive route to be used for an outside call.
Selection	On / Off
Default	Off
Programming	<ol style="list-style-type: none">1. Enter 312. Display: ARS Mode2. Press NEXT. Display example: ARS:Off3. Press SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• If “Off” is selected, the Automatic Line Access feature functions in place of ARS.• Programs [313] through [331] are used to program ARS.
Feature References	Section 3, Features, Automatic Route Selection (ARS) Line Access, Automatic

ARS Time

Description	Assigns times for the four ARS time schedules. It is possible to split a day into four time zones (maximum) so that the least expensive line is selected for that time. According to the service hours and charges offered by your carriers, enter the starting time of each zone.
Selection	<ul style="list-style-type: none">• Time schedule: Time-A / Time-B / Time-C / Time-D• Time (hour) : 1 through 12 / Disable (no schedule)• AM / PM
Default	Time-A – 8:00 AM; Time-B – 5:00 PM; Time-C – 9:00 PM; Time-D – Disable
Programming	<ol style="list-style-type: none">1. Enter 313. Display: ARS Time2. Press NEXT to program Time-A. Display example: Time-A: 8:00 AM To program another time schedule, keep pressing NEXT or PREV until the desired time schedule is displayed.3. Enter the hour. To set no schedule (Disable), press SELECT, and go to step 6. If “Disable” is selected, pressing SELECT shows the previous stored hour. To change the current entry, press CLEAR and the new hour.4. Press ➡ to select AM / PM.5. Press SELECT for AM or PM.6. Press STORE.7. To program another time schedule, keep pressing NEXT or PREV until the desired time schedule is displayed.8. Repeat steps 3 through 7.9. Press END.
Conditions	<ul style="list-style-type: none">• The times must be programmed in sequence from Time-A to Time-D. Enter a starting time for each time schedule. Select “Disable” for an unnecessary schedule.• You cannot leave the entry empty.
Feature References	Section 3, Features, Automatic Route Selection (ARS)

314-321 4.5 TRS / ARS Programming

ARS Leading Digit Entry for Plans 1 through 8

Description By entering numbers into each leading digit plan (programs below) you are starting the process to determine which CO line group will be used to route the call.

Program: [314] [315] [316] [317] [318] [319] [320] [321]

Plan: 1 2 3 4 5 6 7 8

These eight plans are used to analyze the number which the user dials and to decide the route plan for the call. If the user-dialed number is registered in plan 1, then Routing Plan 1 is selected for the call. ARS Leading Digit Entry for Plans 1 through 8 match ARS Routing Plans 1 through 8 (programs [322] through [329]) respectively.

Selection

- Location number: **01 through 50**
- Leading digit number: **7 digits (max.)**

Default All locations – Not stored

Programming

1. Enter a **program address (314 through 321)**.
Display example: ARS Leading PL-1
2. Press **NEXT**.
Display: Location NO?->
3. Enter a **location number**.
To enter location number 01, you can also press **NEXT**.
Display example: 01:Not Stored
4. Enter a **leading digit number**.
To delete the current entry, press **CLEAR**.
To change the current entry, press **CLEAR** and the new number.
5. Press **STORE**.
6. To program another location, press **NEXT** or **PREV**, or **SELECT** and the desired **location number**.
7. Repeat steps 4 through 6.
8. Press **END**.

Conditions There is a maximum of 50 leading digit numbers for each plan. Each number has a maximum of seven digits, consisting of **0 through 9**, and *****. The character “*” can be used as a wild card character.

Feature References Section 3, Features,
Automatic Route Selection (ARS)

4.5 TRS / ARS Programming 322-329

ARS Routing Plans 1 through 8

Description Assigns the CO line group and modification plan to be used for each route plan and time schedule.
Program: [322] [323] [324] [325] [326] [327] [328] [329]
Plan: 1 2 3 4 5 6 7 8

Selection

- Time schedule: A / B / C / D
- CO line group number: 1 through 8
- Modification table number: 1 through 8

Default All time schedules – Not stored

Programming

1. Enter a **program address (322 through 329)**.
Display example: ARS Route PL-1
2. Press **NEXT** to program time schedule A.
To program another time schedule, keep pressing **NEXT** or **PREV** until the desired time schedule is displayed.
Display example: A:G M , G M , G M
3. Enter a **CO line group number**.
To delete the current entry, press **CLEAR**.
To change the current entry, enter the new number.
4. Press **➡** to enter the paired modification table number.
5. Enter a **modification table number**.
To delete the current entry, press **CLEAR**.
To change the current entry, enter the new modification table number.
6. Press **➡** to enter the next priority CO line group number.
7. Repeat steps 3 through 6 to enter other CO line group numbers and modification table numbers.
8. Press **STORE**.
9. To program another time schedule, keep pressing **NEXT** or **PREV** until the desired time schedule is displayed.
10. Repeat steps 3 through 9.
11. Press **END**.

322-329 4.5 TRS / ARS Programming

ARS Routing Plans 1 through 8 (contd.)

Conditions

- Up to three CO line groups and modification plans can be assigned for each time schedule. A CO line group number and a modification table number must be entered together. The highest priority CO line group number and modification table number is entered first (left to right).
- Programs [330] “ARS Modify Removed Digit” and [331] “ARS Modify Added Number” are used to make up eight Modification Tables.

Feature References

Section 3, Features,
Automatic Route Selection (ARS)

ARS Modify Removed Digit

Description Determines how the dialed number should be modified before sending to the central office. You can delete the digits from the beginning of the dialed number.

Selection

- Modification table number: **1 through 8**
- Number of digits to be deleted: **0 through 9** (0=no deleting)

Default All modification tables – 0

Programming

1. Enter **330**.
Display: ARS Modify Remov
2. Press **NEXT**.
Display: Modify Table?->
3. Enter a **modification table number**.
To enter table number 1, you can also press **NEXT**.
Display example: 1:0
4. Enter the **number of digits to be deleted**.
To change the current entry, enter the new number.
5. Press **STORE**.
6. To program another modification table, press **NEXT** or **PREV**, or **SELECT** and the desired **modification table number**.
7. Repeat steps 4 through 6.
8. Press **END**.

Conditions There is a maximum of eight Modification Tables. Each table has a 1-digit number of digits to be deleted.

Feature References Section 3, Features,
Automatic Route Selection (ARS)

ARS Modify Added Number

Description	Determines how the dialed number should be modified before sending to the central office. Digits are added to the beginning of the dialed number.
Selection	<ul style="list-style-type: none"> • Modification table number: 1 through 8 • Number to be added: 20 digits (max.)
Default	All modification tables – Not stored
Programming	<ol style="list-style-type: none"> 1. Enter 331. Display: ARS Modify Add 2. Press NEXT. Display: Modify Table?-> 3. Enter a modification table number. To enter table number 1, you can also press NEXT. Display example:1: 4. Enter the number to be added. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new number. 5. Press STORE. 6. To program another modification table, press NEXT or PREV, or SELECT and the desired modification table number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • There is a maximum of eight Modification Tables, each of which can be given a number to be added. • Each number has a maximum of 20 digits, consisting of 0 through 9, *, #, and PAUSE.
Feature References	Section 3, Features, Automatic Route Selection (ARS)

4.6 CO Line Programming

400

CO Line Connection Assignment

Description	Used to identify the CO lines which are connected to the system(s). This prevents users from originating a call to a line which is not connected.
Selection	<ul style="list-style-type: none">• CO line number: KX-TD816 – 01 through 08, * (* =all CO lines) KX-TD1232 – 01 through 24, * (* =all CO lines)• Connect / No Connect
Default	All CO lines – Connect
Programming	<ol style="list-style-type: none">1. Enter 400. Display: CO Connection2. Press NEXT. Display: CO Line NO?->3. Enter a CO line number. To enter CO line number 01, you can also press NEXT. Display example: CO01:Connect4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another CO line, press NEXT or PREV, or SELECT and the desired CO line number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• In the case of KX-TD1232, CO01 through CO12 are for the Master System and CO13 through CO24 are for the Slave, if available.• To assign all CO lines to one selection, press the * key at step 3. In this case, the display shows the contents programmed for CO01.
Feature References	Section 3, Features, CO Line Connection Assignment

CO Line Group Assignment

Description	Each CO line must be assigned to a CO line group. This program defines the CO line group assignment for each CO line. For example, if there are multiple telephone service companies available, the CO lines can be grouped by company.
Selection	<ul style="list-style-type: none"> • CO line (CO) number: KX-TD816 – 01 through 08, * (*=all CO lines) KX-TD1232 – 01 through 24, * (*=all CO lines) • CO line group (TRG) number: 1 through 8
Default	CO01 – TRG 1; CO05 – TRG 5; CO02 – TRG 2; CO06 – TRG 6; CO03 – TRG 3; CO07 – TRG 7; CO04 – TRG 4; CO08 – TRG 8 (for KX-TD816); CO08 through CO24 – TRG 8 (for KX-TD1232)
Programming	<ol style="list-style-type: none"> 1. Enter 401. Display : Trunk Group Asn 2. Press NEXT. Display: CO Line NO?-> 3. Enter a CO line number. To enter CO line number 01, you can also press NEXT. Display example: CO01:TRG1 4. Enter the CO line group number. To change the current entry, enter the new CO line group number. 5. Press STORE. 6. To program another CO line, press NEXT or PREV, or SELECT and the desired CO line number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • In the case of KX-TD1232, CO01 through CO12 are for the Master System and CO13 through CO24 are for the Slave, if available. • To assign all CO lines to one CO line group, press the * key at step 3. In this case, the display shows the contents programmed for CO01.
Feature References	Section 3, Features, CO Line Group

Dial Mode Selection

Description	<p>Each CO line can be programmed for DTMF, pulse (rotary) or call blocking. This program assigns your choice to each line.</p> <p>DTMF: The dialing signals from an extension, either tone or pulse, are converted to tone signals and transmitted to the CO line.</p> <p>Pulse: The dialing signals from an extension, either tone or pulse, are converted to pulse signals and transmitted to the CO line.</p> <p>Call blocking: If your central office can receive both DTMF and pulse signals but you are contracted for pulse, select this mode. When dialing on the line with an MF4 telephone, only the pulse signals are sent to the CO line.</p>
Selection	<ul style="list-style-type: none">• CO line number: KX-TD816 – 01 through 08, * (*=all CO lines) KX-TD1232 – 01 through 24, * (*=all CO lines)• DTMF / Pulse / C. Block (call blocking)
Default	All CO lines – DTMF
Programming	<ol style="list-style-type: none">1. Enter 402. Display : CO Dial Mode2. Press NEXT. Display : CO Line NO?->3. Enter a CO line number. To enter CO line number 01, you can also press NEXT. Display example: CO01:DTMF4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another CO line, press NEXT or PREV, or SELECT and the desired CO line number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• In the case of KX-TD1232, CO01 through CO12 are for the Master System and CO13 through CO24 are for the Slave, if available.• To assign all lines to one selection, press the * key at step 3. In this case, the display shows the contents programmed for CO01.• If DTMF is assigned, set the DTMF time of the line in program [404] “DTMF Time.”• If pulse or call blocking is assigned, set the pulse speed of the line in program [403] “Pulse Speed Selection,” and set the pulse break ratio and inter-digit pause in program [990] “System Additional Information, Field (17)” and in “Field (21),” if needed.
Feature References	Section 3, Features, Dial Type Selection

Pulse Speed Selection

Description	A CO line set for pulse or call blocking mode in program [402] “Dial Mode Selection” can have two pulse rates, 10 pps (low) and 20 pps (high). This program sets the pulse speed for each CO line set to pulse or call blocking mode.
Selection	<ul style="list-style-type: none"> • CO line number: <ul style="list-style-type: none"> KX-TD816 – 01 through 08, * (*=all CO lines) KX-TD1232 – 01 through 24, * (*=all CO lines) • 10 pps / 20 pps
Default	All CO lines – 10 pps
Programming	<ol style="list-style-type: none"> 1. Enter 403. Display: Pulse Speed 2. Press NEXT. Display: CO Line NO?-> 3. Enter a CO line number. To enter CO line number 01, you can also press NEXT. Display example: CO01:10pps 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. To program another CO line, press NEXT or PREV, or SELECT and the desired CO line number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • In the case of KX-TD1232, CO01 through CO12 are for the Master System and CO13 through CO24 are for the Slave, if available. • To assign all CO lines to one selection, press the * key at step 3. In this case, the display shows the contents programmed for CO01. • The pulse speed required is determined by the CO or PBX line. • Program [990] “System Additional Information, Field (17) and Field (21)” are used to select a pulse break ratio and inter-digit pause, if needed.
Feature References	Section 3, Features, Dial Type Selection

4.6 CO Line Programming

404

DTMF Time

Description	A CO line set to DTMF mode in program [402] “Dial Mode Selection” can have two settings. This program sets the duration of the DTMF signals sent to a CO line set to DTMF mode.
Selection	<ul style="list-style-type: none">• CO line number: KX-TD816 – 01 through 08, * (* =all CO lines) KX-TD1232 – 01 through 24, * (* =all CO lines)• Time (milliseconds): 80 / 160
Default	All CO lines – 80 ms
Programming	<ol style="list-style-type: none">1. Enter 404. Display: DTMF Time2. Press NEXT. Display: CO Line NO?->3. Enter a CO line number. To enter CO line number 01, you can also press NEXT. Display example: CO01: 80msec4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another CO line, press NEXT or PREV, or SELECT and the desired CO line number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• In the case of KX-TD1232, CO01 through CO12 are for the Master System and CO13 through CO24 are for the Slave, if available.• To assign all CO lines to one selection, press the * key at step 3. In this case, the display shows the contents programmed for CO01.• The DTMF time required is determined by the CO line or PBX line.
Feature References	Section 3, Features, Dial Type Selection

CPC Signal Detection Incoming Set

Description	Assigns the expected minimum duration of the CPC Signal on incoming outside calls. If this is programmed, the system disconnects the line when the CPC Signal is detected.
Selection	<ul style="list-style-type: none"> • CO line number: KX-TD816 – 01 through 08, * (*=all CO lines) KX-TD1232 – 01 through 24, * (*=all CO lines) • Time (milliseconds): Disable (no detection) / 02 through 75 (× 8 is the actual time) (See the table on the following page.)
Default	All CO lines – 44 (352 ms)
Programming	<ol style="list-style-type: none"> 1. Enter 405. Display : CPC Detection 2. Press NEXT. Display: CO Line NO?→ 3. Enter a CO line number. To enter CO line number 01, you can also press NEXT. Display example: CO01:44 4. Enter the time, or press CLEAR to select “Disable.” To change the current entry, press CLEAR and the new time. 5. Press STORE. 6. To program another CO line, press NEXT or PREV, or SELECT and the desired CO line number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • CPC Signal Detection is effective only with the 4-DID Line Unit (KX-TD185) (KX-TD816: CO05 through CO08, KX-TD1232: CO09 through CO12 – Master / CO21 through CO24 – Slave). In this case, “D (4DID)” must be selected in program [109] “Expansion Card / Unit Type.” • To assign all CO lines to one selection, press the * key at step 3. In this case, the display shows the contents programmed for CO01. • You may disable CPC Signal Detection for a CO line. • Program [415] “CPC Signal Detection Outgoing Set” is used to program CPC Signal Detection for outgoing outside calls.

4.6 CO Line Programming

405

CPC Signal Detection Incoming Set (contd.)

Feature References

Section 3, Features,
Calling Party Control (CPC) Signal Detection

CPC Signal Detection Time Table

Entry	Time (ms)	Entry	Time (ms)	Entry	Time (ms)
02	16	27	216	52	416
03	24	28	224	53	424
04	32	29	232	54	432
05	40	30	240	55	440
06	48	31	248	56	448
07	56	32	256	57	456
08	64	33	264	58	464
09	72	34	272	59	472
10	80	35	280	60	480
11	88	36	288	61	488
12	96	37	296	62	496
13	104	38	304	63	504
14	112	39	312	64	512
15	120	40	320	65	520
16	128	41	328	66	528
17	136	42	336	67	536
18	144	43	344	68	544
19	152	44	352	69	552
20	160	45	360	70	560
21	168	46	368	71	568
22	176	47	376	72	576
23	184	48	384	73	584
24	192	49	392	74	592
25	200	50	400	75	600
26	208	51	408		

DIL 1:1 Extension — Day / Night

Description	The Direct In Lines (DIL) 1:1 feature allows incoming outside calls to be directed to a specific extension. When a CO line is assigned as DIL 1:1, it is necessary to assign the destination. These programs specify the extension number for day or night mode.		
Selection	<ul style="list-style-type: none"> • CO line number: KX-TD816 – 01 through 08, * (*=all CO lines) KX-TD1232 – 01 through 24, * (*=all CO lines) • Extension number: 2 through 4 digits / Disable (no DIL 1:1) 		
Default	All CO lines – Disable — Day / Night		
Programming	<ol style="list-style-type: none"> 1. Enter a program address (407 for day or 408 for night). Display example: DIL 1:1 Asn Day 2. Press NEXT. Display: CO Line NO?-> 3. Enter a CO line number. To enter CO line number 01, you can also press NEXT. Display example: CO01:Disable 4. Enter an extension number. To change the current entry, press CLEAR and the new number. To disable DIL 1:1, press CLEAR. 5. Press STORE. 6. To program another CO line, press NEXT or PREV, or SELECT and the desired CO line number. 7. Repeat steps 4 through 6. 8. Press END. 		
Conditions	<ul style="list-style-type: none"> • In the case of KX-TD1232, CO01 through CO12 are for the Master System and CO13 through CO24 are for the Slave, if available. CO line numbers in the out-of-service system are unacceptable. • To assign all CO lines to one selection, press the * key at step 3. In this case, the display shows the contents programmed for CO01. • You set the extension numbers in program [003] “Extension Number Set” or floating numbers of pagers and the modem in program [813] “Floating Number Assignment.” • If a CO line is also programmed for DIL 1:N in program [603]–[604] “DIL 1:N Extension and Delayed Ringing — Day / Night,” it is regarded as a DIL 1:1 line. 		
Feature References	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;">Section 3, Features, Direct In Lines (DIL)</td> <td style="width: 50%; vertical-align: top;">Night Service</td> </tr> </table>	Section 3, Features, Direct In Lines (DIL)	Night Service
Section 3, Features, Direct In Lines (DIL)	Night Service		

4.6 CO Line Programming **409-410**

Intercept Extension — Day / Night

Description	Intercept Routing provides an automatic re-direction of calls which cannot or have not been answered. These programs set the destination in both day and night modes for each line group.
Selection	<ul style="list-style-type: none">• CO line group (TRG) number: 1 through 8, * (* =all CO line groups)• Extension number: 2 through 4 digits / Disable (no Intercept Routing)
Default	All CO line groups – Disable — Day / Night
Programming	<ol style="list-style-type: none">1. Enter a program address (409 for day or 410 for night). Display example: TRG Intercept Day2. Press NEXT. Display: TRK GRP NO?->3. Enter the CO line group number. To enter CO line group number 1, you can also press NEXT. Display example: TRG1:Disable4. Enter an extension number. To change the current entry, press CLEAR and the new number. To disable Intercept Routing, press CLEAR.5. Press STORE.6. To program another CO line group, press NEXT or PREV, or SELECT and the desired CO line group number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• You set the extension numbers in program [003] “Extension Number Set” or floating numbers of pagers in program [813] “Floating Number Assignment.” You cannot assign the floating number of the modem.• To assign all CO line groups to one selection, press the * key at step 3. In this case, the display shows the contents programmed for CO line group 1.• Program [401] “CO Line Group Assignment” is used to assign each CO line to a CO line group.
Feature References	Section 3, Features, Intercept Routing

Host PBX Access Codes

Description	Assigns Host PBX access codes. If the system is installed behind a host PBX system, an access code is required to make an outside call. Up to four codes can be stored for a CO line group assigned the line.
Selection	<ul style="list-style-type: none"> • CO line group (TRG) number: 1 through 8, * (* =all CO line groups) • Access code: 1 or 2 digits, four different entries (max.)
Default	All CO line groups – Not stored
Programming	<ol style="list-style-type: none"> 1. Enter 411. Display : TRG Host PBX NO. 2. Press NEXT. Display : TRK GRP NO?-> 3. Enter a CO line group number. To enter CO line group number 1, you can also press NEXT. Display example: TRG1: , , , 4. Enter an access code. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new access code. Display example: TRG1:01, , , 5. To enter more access codes for the same CO line group, press ▶ and enter the access codes until all the required entries are completed. Display example: TRG1:01,08,10,22 6. Press STORE. 7. To program another CO line group, press NEXT or PREV, or SELECT and the desired CO line group number. 8. Repeat steps 4 through 7. 9. Press END.

4.6 CO Line Programming

411

Host PBX Access Codes (contd.)

Conditions

- This program is only required if a host PBX line is connected to the system. Program [401] “CO Line Group Assignment” is used to assign the line to a CO line group.
- There is a maximum of four access codes per CO line group. Each code has one or two digits, consisting of **0 through 9**, and *****.
- If conflicting access codes (such as 8 and 81) are stored for the same CO line group, the 1-digit code (8) only will be in effect.
- When the programmed codes are dialed, Automatic Pause Insertion and Toll Restriction are applied to the calls. The programmed pause time (in program [412] “Pause Time”) is automatically inserted after the access code.
- To assign all CO line groups to one selection, press the ***** key at step 3. In this case, the display shows the contents programmed for CO line group 1.

Feature References

Section 3, Features,
External Feature Access Pause Insertion, Automatic
Host PBX Access

Pause Time

Description	Assigns the length of the pause time. The programmed pause time is automatically inserted after a line access code or a host PBX access code programmed in [411] “Host PBX Access Codes” or manually inserted if the PAUSE button is pressed by the user.
Selection	<ul style="list-style-type: none"> • CO line group number: 1 through 8, * (*=all CO line groups) • Time (seconds): 1.5 / 2.5 / 3.5 / 4.5
Default	All CO line groups – 1.5 s
Programming	<ol style="list-style-type: none"> 1. Enter 412. Display: TRG Pause Time 2. Press NEXT. Display: TRK GRP NO?-> 3. Enter a CO line group number. To enter CO line group number 1, you can also press NEXT. Display example: TRG1:1.5sec 4. Keep pressing SELECT until the desired time is displayed. 5. Press STORE. 6. To program another CO line group, press NEXT or PREV, or SELECT and the desired CO line group number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • To assign all CO line groups to one selection, press the * key at step 3. In this case, the display shows the contents programmed for CO line group 1. • Program [401] “CO Line Group Assignment” is used to assign each CO line to a CO line group.
Feature References	<p>Section 3, Features, Host PBX Access</p> <p style="text-align: right;">Pause Insertion, Automatic</p>

Register Recall Signal Time

Description	Assigns the length of the register recall signal time. If your system is installed behind a host PBX, External Feature Access (EFA) is necessary to obtain its services. To enable it, select a required register recall signal sending time for the CO line group.
Selection	<ul style="list-style-type: none">• CO line group (TRG) number: 1 through 8, * (* =all CO line groups)• Time (milliseconds): Disable (no EFA) / 80 / 96 / 112 / 200 / 300 / 400 / 500 / 600 / 700 / 800 / 900 / 1000 / 1100 / 1200
Default	All CO line groups – 96 ms
Programming	<ol style="list-style-type: none">1. Enter 413. Display: Register Recall2. Press NEXT. Display: TRK GRP NO?->3. Enter a CO line group number. To enter CO line group number 1, you can also press NEXT. Display example: TRG1: 600msec4. Keep pressing SELECT until the desired time is displayed.5. Press STORE.6. To program another CO line group, press NEXT or PREV, or SELECT and the desired CO line group number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• You may disable EFA, if not required. The Recall feature will be in effect in place of EFA. Program [414] “Disconnect Time” is used to select the time required for the Recall feature.• The register recall signal time required is determined by the central office or the host PBX lines.• To assign all CO line groups to one selection, press the * key at step 3. In this case, the display shows the contents programmed for CO line group 1.• Program [401] “CO Line Group Assignment” is used to assign each CO line to a CO line group.
Feature References	Section 3, Features, External Feature Access Recall

Disconnect Time

Description	Determines the amount of time between successive accesses to the same CO line.
Selection	<ul style="list-style-type: none"> • CO line group (TRG) number: 1 through 8, * (* =all CO line groups) • Time (seconds): 0.5 / 2.0 / 4.0
Default	All CO line groups – 2.0 s
Programming	<ol style="list-style-type: none"> 1. Enter 414. Display: TRG Discnct Time 2. Press NEXT. Display : TRK GRP NO?-> 3. Enter a CO line group number. To program CO line group number 1, you can also press NEXT. Display example: TRG1:2.0sec 4. Keep pressing SELECT until the desired time is displayed. 5. Press STORE. 6. To program another CO line group, press NEXT or PREV, or SELECT and the desired CO line group number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • The disconnect time must be longer than the requirements of the central office or the host PBX. • To assign all CO line groups to one selection, press the * key at step 3. In this case, the display shows the contents programmed for CO line group 1. • Program [401] “CO Line Group Assignment” is used to assign each CO line to a CO line group.
Feature References	Section 3, Features, Recall

4.6 CO Line Programming

415

CPC Signal Detection Outgoing Set

Description	Enables or disables CPC Signal Detection during the time between the originated outside call and the established outside call. If this is enabled, the system disconnects the line with the time set in program [405] “CPC Signal Detection Incoming Set” when CPC Signal is detected.
Selection	<ul style="list-style-type: none">• CO line number: KX-TD816 – 01 through 08, * (* =all CO lines) KX-TD1232 – 01 through 24, * (* =all CO lines)• Enable (detection) / Disable (no detection)
Default	Disable
Programming	<ol style="list-style-type: none">1. Enter 415. Display: CPC Outgoing Asn2. Press NEXT. Display: CO Line NO?→3. Enter a CO line number. To enter CO line number 01, you can also press NEXT. Display example: CO01:Disable4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another CO line, press NEXT or PREV, or SELECT and the desired CO line number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• Some central offices (CO) may send CPC-like signals during the dialing sequence and an attempt to make a call may be terminated. If your CO is such a type, select “Disable.”• CPC Signal Detection is effective only with the 4-DID Line Unit (KX-TD185) (KX-TD816: CO05 through CO08, KX-TD1232: CO09 through CO12 – Master / CO21 through CO24 – Slave). In this case, “D (4DID)” must be selected in program [109] “Expansion Card / Unit Type.”

CPC Signal Detection Outgoing Set (contd.)

- Program [405] “CPC Signal Detection Incoming Set” is used to set CPC Signal Detection Time.
- To assign all CO lines to one selection, press the * key at step 3. In this case, the display shows the contents programmed for CO01.

Feature References

Section 3, Features,
Calling Party Control (CPC) Signal Detection

4.6 CO Line Programming

416

ISDN Line Number Assignment

Description	Assigns your telephone number of the ISDN network line. Your telephone number is informed to the called party with the CLIP (Calling Line Identification Presentation) feature offered by the ISDN network service.
Selection	<ul style="list-style-type: none">• CO line number: KX-TD816 – 05 through 08 KX-TD1232 – 01 through 24• Telephone number: 16 digits (max.)
Default	All CO lines – Not stored
Programming	<ol style="list-style-type: none">1. Enter 416. Display: ISDN CO NO.2. Press NEXT. Display: CO Line NO?->3. Enter a CO line number. To enter CO line number 01, you can also press NEXT. Display example: CO01:Not Stored4. Enter the telephone number. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new number.5. Press STORE.6. To program another CO line, press NEXT or PREV, or SELECT and the desired CO line number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• In the case of KX-TD1232, CO01 through CO12 are for the Master System and CO13 through CO24 are for the Slave, if available.• To display parts of the number which have scrolled off the display, press ➡ or ⬅.• Your telephone number is informed to the called party if outgoing CLIR feature is disabled for the ISDN S0 line by program [417] "ISDN Outgoing CLIR Service Assignment."
Feature References	Section 3, Features , CO Incoming Call Information Display CO Incoming Call Information Log Direct Dialing In (DDI)

ISDN Outgoing CLIR Service Assignment

Description	Assigns whether ISDN CLIR (Calling Line Identification Restriction) service is enabled or disabled for outgoing outside calls. If disabled, the subscriber's number of your system is informed to the called party.
Selection	<ul style="list-style-type: none"> • CO line number: KX-TD816 – 05 through 08, * (*=all CO lines) KX-TD1232 – 01 through 24, * (*=all CO lines) • Enable / Disable
Default	All CO lines – Enable
Programming	<ol style="list-style-type: none"> 1. Enter 417. Display: ISDN CLIR Send 2. Press NEXT. Display: CO Line NO?-> 3. Enter a CO line number. To enter CO line number 01, you can also press NEXT. Display example: CO01:Enable 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. To program another CO line, press NEXT or PREV, or SELECT and the desired CO line number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • In the case of KX-TD1232, CO01 through CO12 are for the Master System and CO13 through CO24 are for the Slave, if available. • To assign all CO lines to one selection, press the * key at step 3. In this case, the display shows the contents programmed for CO01. • Program [416] "ISDN Line Number Assignment" is used to store the subscriber's number of your system that is informed to the called party.
Feature References	Section 3, Features, Calling Line Identification Restriction (CLIR) CO Incoming Call Information Display

4.6 CO Line Programming

418

ISDN DDI Service Assignment

Description	Enables or disables ISDN DDI service per CO line.
Selection	<ul style="list-style-type: none">• CO line number: KX-TD816 – 05 through 08, * (* =all CO lines) KX-TD1232 – 01 through 24, * (* =all CO lines)• Enable / Disable
Default	All CO lines – Disable
Programming	<ol style="list-style-type: none">1. Enter 418. Display: ISDN DDI2. Press NEXT. Display: CO Line NO?->3. Enter a CO line number. To enter CO line number 01, you can also press NEXT. Display example: CO01:Disable4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another CO line, press NEXT or PREV, or SELECT and the desired CO line number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• In the case of KX-TD1232, CO01 through CO12 are for the Master System and CO13 through CO24 are for the Slave, if available.• To assign all CO lines to one selection, press the * key at step 3. In this case, the display shows the contents programmed for CO01.
Feature References	Section 3, Features, Direct Dialing In (DDI)

CO Line Name Assignment

Description	Used to set names to CO lines. The preset name is shown on a display proprietary telephone when an incoming outside call is placed to the telephone.
Selection	<ul style="list-style-type: none"> • CO line number: KX-TD816 – 01 through 08, * (*=all CO lines) KX-TD1232 – 01 through 24, * (*=all CO lines) • Name: 10 characters (max.)
Default	All CO lines – Not stored
Programming	<ol style="list-style-type: none"> 1. Enter 419. Display: CO Line Name 2. Press NEXT. Display: CO Line NO?-> 3. Enter a CO line number. To enter CO line number 01, you can also press NEXT. Display example: CO01:Not Stored 4. Enter a name. For entering characters, see Section 4.1.3 “Entering Characters.” To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new name 5. Press STORE. 6. To program another CO line, press NEXT or PREV, or SELECT and the desired CO line number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • In the case of KX-TD1232, CO01 through CO12 are for the Master System and CO13 through CO24 are for the Slave, if available. • There is a maximum of 24 names. Each name has a maximum of 10 characters. • To assign all CO lines to one selection, press the * key at step 3. In this case, the display shows the contents programmed for CO01.
Feature References	Section 3, Features, Display, Call Information

4.6 CO Line Programming

420

Reverse Circuit Assignment

Description	Enables or disables to detect Reverse Circuit.
Selection	<ul style="list-style-type: none">• CO line number: KX-TD816 – 01 through 08, * (*=all CO lines) KX-TD1232 – 01 through 24, * (*=all CO lines)• Regular (no detection) / Reverse (detection)
Default	All CO lines – Regular
Programming	<ol style="list-style-type: none">1. Enter 420. Display: Reverse Circuit2. Press NEXT. Display: CO Line NO?->3. Enter a CO line number. To enter CO line number 01, you can also press NEXT. Display example: CO01:Regular4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another CO line, press NEXT or PREV, or SELECT and the desired CO line number.7. Repeat steps 4 through 6.8. Press END.
Conditions	To assign all CO lines to one selection, press the * key at step 3. In this case, the display shows the contents programmed for CO01.
Feature References	Section 3, Features, Reverse Circuit

DID Table Number Assignment

Description	Assigns DID table number to each CO line group.
Selection	<ul style="list-style-type: none"> • CO line group (TRG) number: 1 through 8, * (* =all CO line groups) • DID table number: 1 through 4
Default	All CO line groups – Not stored
Programming	<ol style="list-style-type: none"> 1. Enter 430. Display: DID Table NO. 2. Press NEXT. Display: TRK GRP NO?-> 3. Enter a CO line group number. To enter CO line group number 1, you can also press NEXT. Display example: TRG1:Not Stored 4. Enter a DID table number. To change the current entry, press CLEAR and the new number. 5. Press STORE. 6. To program another CO line group, press NEXT or PREV, or SELECT and the desired CO line group number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	This is the first and the basic programming for the DID feature. If the assignment is changed here, it affects the other programmings ([431] through [435]).
Feature References	Section 3, Features, Direct Inward Dialing (DID)

DID Incoming Assignment

Description	Assigns DID incoming method, immediate or wink, to each DID table in accordance with the service of your central office. Immediate: Incoming DID call can be received right after receiving signal arrives. Wink: Incoming DID call can be received after the wink signal is transmitted to the central office (after receiving signal arrives).
Selection	<ul style="list-style-type: none">• DID table number: 1 through 4, * (*=all DID tables)• Immediate / Wink
Default	All DID tables – Wink
Programming	<ol style="list-style-type: none">1. Enter 431. Display: DID In Asn2. Press NEXT. Display: DID Table NO?->3. Enter a DID table number. To enter DID table number 1, you can also press NEXT. Display example: 1:Wink4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another DID table, press NEXT or PREV, or SELECT and the desired DID table number.7. Repeat steps 4 through 6.8. Press END.
Conditions	To assign all DID tables to one selection, press the * key at step 3. In this case, the display shows the contents programmed for DID table number 1.
Feature References	Section 3, Features, Direct Inward Dialing (DID)

DID Outgoing Assignment

Description	<p>Assigns DID outgoing method, immediate or wink, to each DID table in accordance with the service of your central office.</p> <p>Immediate: Outgoing DID number can be transmitted right after seizing the CO line.</p> <p>Wink: Outgoing DID number can be transmitted after receiving the wink signal from the central office after seizing the CO line.</p>
Selection	<ul style="list-style-type: none"> • DID table number: 1 through 4, * (*=all DID tables) • Immediate / Wink
Default	All DID tables – Wink
Programming	<ol style="list-style-type: none"> 1. Enter 432. Display: DID Out Asn 2. Press NEXT. Display: DID Table NO?-> 3. Enter a DID table number. To enter DID table number 1, you can also press NEXT. Display example: 1:Wink 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. To program another DID table, press NEXT or PREV, or SELECT and the desired DID table number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • The time the system waits for the confirmation wink signal can be programmed in program [435] “DID Wink Time Out Assignment.” The system disconnects the CO line when the time-out time expires. • To assign all DID tables to one selection, press the * key at step 3. In this case, the display shows the contents programmed for DID table number 1.
Feature References	Section 3, Features, Direct Inward Dialing (DID)

DID Subscriber Number Removed Digit and Received Digit

Description	Assigns received digits of DID subscriber number to each DID table. Besides, removed digits from the received digits can be programmed. In this case, digits are removed from the beginning of the received digits.
Selection	<ul style="list-style-type: none">• DID table number: 1 through 4• Number of digits to be deleted (RMV): 0 through 6 (0=no deleting)• Number of digits to be received (RCV): 1 through 7
Default	<ul style="list-style-type: none">• All DID tables – RMV:0• DID table 1 – RCV:1, other DID tables – RCV:3
Programming	<ol style="list-style-type: none">1. Enter 433. Display: DID RMV/RCV Dial2. Press NEXT. Display: DID Table NO?->3. Enter a DID table number. To enter DID table number 1, you can also press NEXT. Display example: 1:RMV:1,RCV:24. Enter the number of digits to be deleted or received. To change the current entry, press CLEAR and the new number.5. Press STORE.6. To program another DID table, press NEXT or PREV, or SELECT and the desired DID table number.7. Repeat steps 4 through 6.8. Press END.
Conditions	You cannot leave the entry empty.
Feature References	Section 3, Features, Direct Inward Dialing (DID)

DID Added Number

Description	Assigns added number to the DID subscriber number which is determined in program [433] “DID Subscriber Number Removed Digit and Received Digit” to make the final number which serves as the extension number. Note that digits are inserted at the beginning of the number.
Selection	<ul style="list-style-type: none">• DID table number: 1 through 4• Number of digits to be added: 3 digits (max.)
Default	All DID tables – Not stored
Programming	<ol style="list-style-type: none">1. Enter 434. Display: DID Add Dial2. Press NEXT. Display: DID Table NO?->3. Enter a DID table number. To enter DID table number 1, you can also press NEXT. Display example: 1:1024. Enter the number to be added. To change the current entry, press CLEAR and the new number.5. Press STORE.6. To program another DID table, press NEXT or PREV, or SELECT and the desired DID table number.7. Repeat steps 4 through 6.8. Press END.
Conditions	Each added number has a maximum of 3 digits, consisting of 0 through 9 .
Feature References	Section 3, Features, Direct Inward Dialing (DID)

DID Wink Time Out Assignment

Description	DID outgoing method can be set to wink mode in program [432] “DID Outgoing Assignment.” This program sets the time the system waits for the confirmation wink signal after CO line is seized in accordance with the service of your central office. The system disconnects the CO line when the time-out time expires.
Selection	<ul style="list-style-type: none">• DID table number: 1 through 4, * (*=all DID tables)• Time: 1 through 127 (× 64 milliseconds is the actual time)
Default	All DID tables – 16
Programming	<ol style="list-style-type: none">1. Enter 435. Display: Wink Timeout2. Press NEXT. Display: DID Table NO?->3. Enter a DID table number. To enter DID table number 1, you can also press NEXT. Display example: 1:164. Enter the time. To change the current entry, press CLEAR and the new number.5. Press STORE.6. To program another DID table, press NEXT or PREV, or SELECT and the desired DID table number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• You cannot leave the entry empty.• To assign all DID tables to one selection, press the * key at step 3. In this case, the display shows the contents programmed for DID table number 1.
Feature References	Section 3, Features, Direct Inward Dialing (DID)

*Pay Tone Assignment**

Description	Enables Pay Tone of the Central Office. Your Central Office sends the pay tone or the ISDN S0 line sends pay message so that the counting for fee starts for the call.
Selection	<ul style="list-style-type: none"> • CO line number: 01 through 24, * (* =all CO lines) • Enable / Disable
Default	All CO lines – Disable
Programming	<ol style="list-style-type: none"> 1. Enter 436. Display: Pay-Tone Asn 2. Press NEXT. Display: CO Line NO?→ 3. Enter a CO line number. To enter CO line number 01, you can also press NEXT. Display example: CO01:Disable 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. To program another CO line, press NEXT or PREV, or SELECT and the desired CO line number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • An optional 4-CO Line Unit (KX-TD180D) or 8-CO Line Card (KX-TD181D) must be installed to receive the pay tone. • An optional 2-ISDN S0 Line Unit (KX-TD280) or 4-ISDN S0 Line Card (KX-TD281) must be installed to receive pay message. • In the case of KX-TD1232, CO01 through CO12 are for the Master System and CO13 through CO24 are for the Slave. • To assign all CO lines to one selection, press the * key in step 3. In this case, the display shows the contents programmed for CO01.
Feature References	Section 3, Features, HOTEL APPLICATION

Toll Restriction Level — Day / Night

Description	Each extension must be assigned a Class of Service (COS). These programs set the toll restriction value for each COS in day or night mode.
Selection	<ul style="list-style-type: none"> • COS number: 1 through 8, * (*=all COS) • Level number: 1 through 8
Default	All COS – Level 1 — Day / Night
Programming	<ol style="list-style-type: none"> 1. Enter a program address (500 for day or 501 for night). Display example: TRS Level Day 2. Press NEXT. Display : COS NO?-> 3. Enter a COS number. To enter COS number 1, you can also press NEXT. Display example: COS1:1 4. Enter a level number. To change the current entry, press CLEAR and the new number. 5. Press STORE. 6. To program another COS, press NEXT or PREV, or SELECT and the desired COS number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • To assign all COS to one selection, press the * key at step 3. In this case, the display shows the contents programmed for COS 1. • Program [601] “Class of Service” is used to assign a Class of Service to each extension.
Feature References	<p>Section 3, Features, Night Service</p> <p style="text-align: right;">Toll Restriction</p>

Extension-to-CO Line Call Duration Limit

Description	This program allows you to restrict the duration of outside calls on a Class of Service (COS) basis.		
Selection	<ul style="list-style-type: none">• COS number: 1 through 8, * (* =all COS)• Disable (no limit) / Enable (limit)		
Default	All COS – Disable		
Programming	<ol style="list-style-type: none">1. Enter 502. Display: CO Durat. Limit2. Press NEXT. Display: COS NO?->3. Enter a COS number. To enter COS number 1, you can also press NEXT. Display example: COS1:Disable4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another COS, press NEXT or PREV, or SELECT and the desired COS number.7. Repeat steps 4 through 6.8. Press END.		
Conditions	<ul style="list-style-type: none">• An outside call originated or answered by the programmed extension user is disconnected when the time specified in program [205] “Extension-to-CO Line Call Duration Time” expires.• Extensions in the limited classes cannot establish a CO-to-CO call, that is, cannot transfer / forward an outside call to another CO line.• To assign all COS to one selection, press the * key at step 3. In this case, the display shows the contents programmed for COS 1.• Program [601] “Class of Service” is used to assign a Class of Service to each extension.• Program [990] “System Additional Information, Field (12)” is used to program Limited Call Duration to be done for outgoing calls only.		
Feature References	<table><tr><td>Section 3, Features, Call Forwarding – to CO Line Call Transfer, Screened – to CO Line</td><td>Conference, Unattended Limited Call Duration</td></tr></table>	Section 3, Features, Call Forwarding – to CO Line Call Transfer, Screened – to CO Line	Conference, Unattended Limited Call Duration
Section 3, Features, Call Forwarding – to CO Line Call Transfer, Screened – to CO Line	Conference, Unattended Limited Call Duration		

Call Transfer to CO Line

Description	This program determines which Classes of Services (COS) are allowed to perform the Call Transfer to CO Line function.
Selection	<ul style="list-style-type: none">• COS number: 1 through 8, * (*=all COS)• Enable / Disable
Default	All COS – Enable
Programming	<ol style="list-style-type: none">1. Enter 503. Display: Transfer to CO2. Press NEXT. Display : COS NO?->3. Enter a COS number. To enter COS number 1, you can also press NEXT. Display example: COS1:Enable4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another COS, press NEXT or PREV, or SELECT and the desired COS number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• To assign all COS to one selection, press the * key at step 3. In this case, the display shows the contents programmed for COS 1.• Program [601] “Class of Service” is used to assign a Class of Service to each extension.
Feature References	Section 3, Features, Call Transfer, Screened – to CO Line

Call Forwarding to CO Line

Description	This program determines which Classes of Services (COS) are allowed to perform the Call Forwarding to CO Line function.
Selection	<ul style="list-style-type: none">• COS number: 1 through 8, * (*=all COS)• Disable / Enable
Default	All COS – Disable
Programming	<ol style="list-style-type: none">1. Enter 504. Display: Call FWD to CO2. Press NEXT. Display: COS NO?->3. Enter a COS number. To enter COS number 1, you can also press NEXT. Display example: COS1:Disable4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another COS, press NEXT or PREV, or SELECT and the desired COS number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• To assign all COS to one selection, press the * key at step 3. In this case, the display shows the contents programmed for COS 1.• Program [601] “Class of Service” is used to assign a Class of Service to each extension.
Feature References	Section 3, Features, Call Forwarding – to CO Line

Do Not Disturb Override

Description	This program determines which Classes of Services (COS) are allowed to perform Do Not Disturb (DND) Override.
Selection	<ul style="list-style-type: none">• COS number: 1 through 8, * (*=all COS)• Disable / Enable
Default	All COS – Disable
Programming	<ol style="list-style-type: none">1. Enter 507. Display: DND Override2. Press NEXT. Display: COS NO?->3. Enter a COS number. To enter COS number 1, you can also press NEXT. Display example: COS1:Disable4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another COS, press NEXT or PREV, or SELECT and the desired COS number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• To assign all COS to one selection, press the * key at step 3. In this case, the display shows the contents programmed for COS 1.• Program [601] “Class of Service” is used to assign a Class of Service to each extension.
Feature References	Section 3, Features, Do Not Disturb (DND) Override

Account Code Entry Mode

Description	<p>There are three account code modes: Option, Verified-All Calls and Verified-Toll Restriction Override. This program determines the mode to be used by each Class of Service (COS).</p> <p>Option mode: The user can enter any account code, if needed.</p> <p>Verified – All Calls mode: The user must always enter a pre-assigned account code to make an outside call.</p> <p>Verified – Toll Restriction Override mode: The user must enter a pre-assigned account code when the user needs to override toll restriction.</p>
Selection	<ul style="list-style-type: none">• COS number: 1 through 8, * (*=all COS)• Option / Verify – All (Verified-All Calls) / Verify – Toll (Verified-Toll Restriction Override)
Default	All COS – Option
Programming	<ol style="list-style-type: none">1. Enter 508. Display: Call Accounting2. Press NEXT. Display: COS NO?->3. Enter a COS number. To enter COS number 1, you can also press NEXT. Display example: COS1:Option4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another COS, press NEXT or PREV, or SELECT and the desired COS number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• To assign all COS to one selection, press the * key at step 3. In this case, the display shows the contents programmed for COS 1.• Station programming is used to define the Account Codes for the Verified modes.• Program [601] “Class of Service” is used to assign a Class of Service to each extension.
Feature References	<p>Section 3, Features, Account Code Entry Toll Restriction Override by Account Code Entry</p>

EXtra Device Port

Description	EXtra Device Port (XDP) allows a single line telephone (SLT) to be connected to the same jack as a digital proprietary telephone (DPT). This program assigns which jacks are XDP. The SLT and DPT of the programmed jack work as independent extensions.
Selection	<ul style="list-style-type: none"> • Jack number: KX-TD816 – 01 through 16, * (*=all jacks) KX-TD1232 – 01 through 64, * (*=all jacks) • Disable / Enable
Default	All jacks – Disable
Programming	<ol style="list-style-type: none"> 1. Enter 600. Display: XDP Assign 2. Press NEXT. Display: Jack NO?-> 3. Enter a jack number. To enter jack number 01, you can also press NEXT. Display example: #01:Disable 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. To program another jack, press NEXT or PREV, or SELECT and the desired jack number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • In the case of KX-TD1232, jack numbers 01 through 32 are for the Master System and 33 through 64 are for the Slave, if available. • To assign all jacks to one selection, press the * key at step 3. In this case, the display shows the contents programmed for Jack 01. • Immediately after changing your assignment, changed setting may not work for a maximum of eight seconds.
Feature References	Section 3, Features, EXtra Device Port (XDP)

Class of Service

Description	Programs each extension for a Class of Service (COS). The COS determines the call handling abilities of each extension. For Check-In Check-Out feature, a primary and secondary COS number can be assigned per extension.
Selection	<ul style="list-style-type: none">• Jack number: KX-TD816 – 01 through 16, * (-1 / -2), KX-TD1232 – 01 through 64, * (-1 / -2), (* =all jacks, -1 = first part, -2 = second part)• COS number: 1 through 8
Default	All jacks-1/2 – Primary, Secondary – COS 1, COS 1
Programming	<ol style="list-style-type: none">1. Enter 601. Display: COS Assign2. Press NEXT. Display: Jack NO?->3. Enter a jack number. To enter jack number 01, you can also press NEXT. To select the second part (-2), press NEXT after entering a jack number. Display example: #01-1: COS1, COS14. Enter a primary COS number. To change the current entry, enter the new number.5. Press ➡.6. Enter a secondary COS number. To change the current entry, enter the new number.7. Press STORE.8. To program another jack, press NEXT or PREV, or SELECT and the desired jack number.9. Repeat steps 4 through 8.10. Press END.

Class of Service (contd)

Conditions

- There is a maximum of eight Classes of Services. Every extension must be assigned to a Class of Service and is subject to the COS Programming of programs [500] through [508] and [991].
- A secondary COS number can be assigned per extension only for Check-In / Check-Out feature. To program other extensions, you need only to enter a primary number.
- In the case of KX-TD1232, jack numbers 01 through 32 are for the Master System and 33 through 64 are for the Slave, if available. Jack numbers in the out-of-service system are unacceptable.
- For an explanation of jack numbering, see “Rotation of jack number” on page 4-7.
- To assign all jacks to one COS, press the * key at step 3. In this case, the display shows the contents programmed for Jack 01.

Feature References

**Section 3, Features,
Class of Service (COS)**

Extension Group Assignment

Description Assigns each extension to an extension group. Extension groups are used for Group Call Pickup, Station Hunting, and Paging – Group. This program is also used to assign all Voice Mail ports / Automated Attendant ports of your Voice Processing System, if available, to an extension group.

Selection

- Jack number: KX-TD816 – **01 through 16**, * (-1 / -2), KX-TD1232 – **01 through 64**, * (-1 / -2), (* =all jacks, -1 = first part, -2 = second part)
- Extension group number: **01 through 16**

Default All jacks-1/2 – Extension group 1

Programming

1. Enter **602**.
Display: EXT Group Asn
2. Press **NEXT**.
Display: Jack NO?->
3. Enter a **jack number**.
To enter jack number 01, you can also press **NEXT**.
To select the second part (-2), press **NEXT** after entering a jack number.
Display example: #01-1:EXG1
4. Enter the **extension group number**.
To change the current entry, enter the new extension group number.
5. Press **STORE**.
6. To program another jack, press **NEXT** or **PREV**, or **SELECT** and the desired **jack number**.
7. Repeat steps 4 through 6.
8. Press **END**.

Conditions

- There is a maximum of 16 extension groups. Each extension can only belong to one group.
- In the case of KX-TD1232, jack numbers 01 through 32 are for the Master System and 33 through 64 are for the Slave, if available.
- For an explanation of jack numbering, see “Rotation of jack number” on page 4-7.
- To assign all jacks to one extension group, press the * key at step 3. In this case, the display shows the contents programmed for Jack 01.

Feature References

Section 3, Features, Call Pickup, Group Extension Group Paging – Group	Station Hunting Voice Mail Integration
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603-604 4.8 Extension Programming

DIL 1:N Extension and Delayed Ringing — Day / Night

- Description** A DIL 1:N line can be assigned to ring more than one extension. All incoming calls from the programmed CO lines are directed to the specified extensions. These programs assign the extensions and the notification method for each CO line in both day and night modes.
- Selection**
- Jack number: **KX-TD816 – 01 through 16, * (-1 / -2), KX-TD1232 – 01 through 64, * (-1 / -2),**
(* =all jacks, -1 = first part, -2 = second part)
 - CO line number:
KX-TD816 – 01 through 08, * (* =all CO lines)
KX-TD1232 – 01 through 24, * (* =all CO lines)
 - **Disab** (disable) / **Immdt** (immediate ringing) / **4RNG** (4 ring delay) / **6RNG** (6 rings delay) / **8RNG** (8 rings delay) / **No RNG** (no ring)
- Default** All jacks-1/2 – all CO lines – Immediate ringing — Day / Night
- Programming**
1. Enter a **program address (603 for day or 604 for night)**.
Display example: DIL 1:N Asn Day
 2. Press **NEXT**.
Display: Jack NO?->
 3. Enter a **jack number**.
To enter jack number 01, you can also press **NEXT**.
To select the second part (-2), press **NEXT** after entering a jack number.
Display example: #01-1:CO01:Immdt
 4. Enter the **CO line number**.
You can also keep pressing **▶** or **◀** until the desired CO line number is displayed.
 5. Keep pressing **SELECT** until the desired selection is displayed.
 6. Press **STORE**.
 7. To program another jack, press **NEXT** or **PREV**, or **SELECT** and the desired **jack number**.

4.8 Extension Programming **603-604**

DIL 1:N Extension and Delayed Ringing — Day / Night (contd.)

8. Repeat steps 4 through 7.
9. Press **END**.

Conditions

- An extension can be assigned as the destination of as many CO lines as is required.
- In the case of KX-TD1232, jack numbers 01 through 32 are for the Master System and 33 through 64 are for the Slave, if available. Jack numbers in the out-of-service system are unacceptable.
- For an explanation of jack numbering, see “Rotation of jack number” on page 4-7.
- To assign all jacks or all CO lines to one selection, press the * key at step 3 or step 4. In these cases, the display shows the contents programmed for Jack 01 or for CO01.
- There are six notification methods:
 - (1) Immediate ringing: rings immediately
 - (2) 4 ring delay
 - (3) 6 rings delay
 - (4) 8 rings delay
 - (5) No ring: only the indicator flashes
 - (6) Disable: no incoming call
- When you change the jack number by pressing **NEXT** or **PREV**, the CO line number is not changed. Example #03-1:CO06.....Press **NEXT**.....#03-2:CO06

Feature References

Section 3, Features,
Direct In Lines (DIL)
Night Service

Ringling, Delayed

Outgoing Permitted CO Line Assignment — Day / Night

Description	Determines the CO lines which can be accessed by an extension in both day and night modes. The extension users can make outgoing outside calls using the assigned CO lines.
Selection	<ul style="list-style-type: none">• Jack number: KX-TD816 – 01 through 16, * (-1 / -2), KX-TD1232 – 01 through 64, * (-1 / -2), (* =all jacks, -1 = first part, -2 = second part)• CO line number: KX-TD816 – 01 through 08, * (* =all CO lines) KX-TD1232 – 01 through 24, * (* =all CO lines)• Enabl (enable) / Disab (disable)
Default	All jacks-1/2 – all CO lines – Enable — Day / Night
Programming	<ol style="list-style-type: none">1. Enter a program address (605 for day or 606 for night). Display example: CO Out Day2. Press NEXT. Display: Jack NO?->3. Enter a jack number. To enter jack number 01, you can also press NEXT. To select the second part (-2), press NEXT after entering a jack number. Display example: #01-1:CO01:Enabl4. Enter the desired CO line number, or keep pressing ➡ or ⬅ until the desired CO line is displayed. To change the current entry, enter the new number.5. Keep pressing SELECT until the desired selection is displayed.6. Press STORE.7. To program another jack, press NEXT or PREV, or SELECT and the desired jack number.8. Repeat steps 4 through 7.9. Press END.

4.8 Extension Programming **605-606**

Outgoing Permitted CO Line Assignment — Day / Night (contd.)

Conditions

- In the case of KX-TD1232, jack numbers 01 through 32 are for the Master System and 33 through 64 are for the Slave, if available. Jack numbers in the out-of-service system are unacceptable.
- For an explanation of jack numbering, see “Rotation of jack number” on page 4-7.
- To assign all jacks or all CO lines to one selection, press the * key at step 3 or 4. In these cases, the display shows the contents programmed for Jack 01 or CO01.
- To assign no CO line group for a station, press **CLEAR** at step 4.

Feature References

Section 3, Features,
CO Line Connection Assignment – Outgoing
Night Service

607-608 4.8 Extension Programming

Doorphone Ringing Assignment — Day / Night

Description	These programs assign the extensions which will ring when a doorphone call is received during the day and night modes. Programmed extensions are also allowed to open the door.
Selection	<ul style="list-style-type: none">• Jack number: KX-TD816 – 01 through 16, * (-1 / -2), KX-TD1232 – 01 through 64, * (-1 / -2), (* =all jacks, -1 = first part, -2 = second part)• Doorphone number: KX-TD816 – 1 and 2, two entries (max.) KX-TD1232 – 1 through 4, four entries (max.)
Default	Jack 01-1– All doorphones; Other jacks – no doorphone — Day / Night
Programming	<ol style="list-style-type: none">1. Enter a program address (607 for day or 608 for night). Display example: Doorphone in Day2. Press NEXT. Display: Jack NO?->3. Enter a jack number. To enter jack number 01, you can also press NEXT. To select the second part (-2), press NEXT after entering a jack number. Display example: #01-1:12344. Enter the doorphone numbers. To assign no doorphone, press CLEAR. To change the current entry, press CLEAR and the new doorphone numbers.5. Press STORE.6. To program another jack, press NEXT or PREV, or SELECT and the desired jack number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• In the case of KX-TD1232, jack numbers 01 through 32 are for the Master System and 33 through 64 are for the Slave, if available.• For an explanation of jack numbering, see “Rotation of jack number” on page 4-7.

4.8 Extension Programming **607-608**

Doorphone Ringing Assignment — Day / Night (contd.)

- To assign all jacks to one selection, press the * key at step 3. In this case, the display shows the contents programmed for Jack 01.
- Two doorphones can be installed in each system. In the case of KX-TD1232, doorphones 1 and 2 are installed in the Master System, 3 and 4 in the Slave, if available.
- You can enter up to two (for KX-TD816) or four (for KX-TD1232) doorphone numbers for each extension.

Feature References

Section 3, Features,

Door Opener

Doorphone Call

Night Service

Voice Mail Access Codes

Description	Assigns a mailbox number for each extension, only if program [990] “System Additional Information, Field (18)” is set to “free.”
Selection	<ul style="list-style-type: none"> • Jack number: KX-TD816 – 01 through 16, (-1 / -2), KX-TD1232 – 01 through 64, (-1 / -2), (-1 = first part, -2 = second part) • Mailbox number: 16 digits (max.)
Default	All jacks – Not stored
Programming	<ol style="list-style-type: none"> 1. Enter 609. Display: Mailbox ID Code 2. Press NEXT. Display: Jack NO?-> 3. Enter a jack number. To enter jack number 01, you can also press NEXT. To select the second part (-2), press NEXT after entering a jack number. Display example: #01-1:Not Stored 4. Enter a mailbox number. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new number. 5. Press STORE. 6. To program another jack, press NEXT or PREV, or SELECT and the desired jack number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • In the case of KX-TD1232, jack numbers 01 through 32 are for the Master System and 33 through 64 are for the Slave, if available. Jack numbers in the out-of-service system are unacceptable. • For an explanation of jack numbering, see “Rotation of jack number” on page 4-7. • The system supports a maximum of eight jacks (16 jacks during System Connection) for connection to a Voice Processing System as the Voice Mail or Automated Attendant ports. • Each mailbox number has a maximum of 16 digits, consisting of 0 through 9, *, # and PAUSE. • To display parts of the mailbox number which have scrolled off the display, press ➡ or ⬅.
Feature References	Section 3, Features , Voice Mail Integration

4.8 Extension Programming

610

ISDN DDI Number / Extension Number Transformation

Description	Used to convert a DDI number to an extension number in order to put an incoming DDI call to a specific extension.
Selection	<ul style="list-style-type: none">• Jack number: KX-TD816 – 01 through 16, (-1 / -2), KX-TD1232 – 01 through 64, (-1 / -2), (-1 = first part, -2 = second part)• DDI Number: 1 through 6 digits
Default	All jacks – Not stored
Programming	<ol style="list-style-type: none">1. Enter 610. Display: DDI No. Trans2. Press NEXT. Display: Jack NO?->3. Enter a jack number. To enter jack number 01, you can also press NEXT. To select the second part (-2), press NEXT after entering a jack number. Display: #01-1:0014. Enter a DDI number. To delete the current entry, press CLEAR.5. Press STORE.6. To program another jack, press NEXT or PREV, or SELECT and the desired jack number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• There is a maximum of 128 DDI numbers. Each DDI number can be one through six digits, consisting of 0 through 9.• In the case of KX-TD1232, jack numbers 01 through 32 are for the Master System and 33 through 64 are for the Slave, if available.• For an explanation of jack numbering, see “Rotation of jack number” on page 4-7.
Feature References	Section 3, Features, Direct Dialing In (DDI)

SMDR Incoming / Outgoing Call Log Printout

Description	Used to determine which calls will produce an SMDR printout.
Selection	<ul style="list-style-type: none"> • Outgoing calls: All (all calls) / Toll (toll calls only) / Off (no printing) • Incoming calls: On (all calls) / Off (no printing)
Default	Outgoing calls – All; Incoming calls – On
Programming	<ol style="list-style-type: none"> 1. Enter 800. Display: Duration Log 2. Press NEXT to program outgoing calls. Display: Outgoing:All 3. Keep pressing SELECT until the desired selection is displayed. 4. Press STORE. 5. Press NEXT to program incoming calls. Display: Incoming:On 6. Keep pressing SELECT until the desired selection is displayed. 7. Press STORE. 8. Press END.
Conditions	<ul style="list-style-type: none"> • It is necessary to connect a printer to the EIA (RS-232C) port provided on the system. • After connecting a printer, do not press the RETURN key, if provided on the printer, in 10 seconds. Otherwise, the usage of the EIA port is changed to system programming and printout will not occur. • If “Toll” is selected, the system will print out all the calls starting from the numbers stored in programs [301]–[305] “TRS Denied Code Entry for Levels 2 through 6.”
Feature References	Section 3, Features, Station Message Detail Recording (SMDR)

SMDR Format

Description	Used to match the SMDR output to the paper size being used in the printer. Page length determines the number of lines per page. Skip perforation determines the number of lines to be skipped at the end of every page.
Selection	<ul style="list-style-type: none">• Page length (lines): 4 through 99• Skip perforation (lines): 0 through 95
Default	Page length – 66; Skip perforation – 0
Programming	<ol style="list-style-type: none">1. Enter 801. Display: SMDR Format2. Press NEXT to program page length. Display example: Page Length:663. Enter the page length. To change the current entry, press CLEAR and the new page length.4. Press STORE.5. Press NEXT to program skip perforation. Display example: Skip Perf: 06. Enter the skip perforation. To change the current entry, press CLEAR and the new skip perforation.7. Press STORE.8. Press END.
Conditions	<ul style="list-style-type: none">• The page length should be four lines or more longer than the skip perforation length.• A title is positioned on the first three lines on every page.• The programmed format becomes valid only if the EIA (RS-232C) cable is connected. If a printer is already connected, disconnect it and connect again. Otherwise the former format becomes valid.
Feature References	Section 3, Features, Station Message Detail Recording (SMDR)

System Data Printout

Description	Starts or stops printing of the system data. All the current system-programmed data is printed out.
Selection	Start / Stop
Default	Not applicable.
Programming	<ol style="list-style-type: none"> 1. Enter 802. Display: System Data Dump 2. Press NEXT. Display: Print-Out:Start 3. Press STORE to start printing. Printing starts. To stop printing in the middle of printing, press SELECT and go to step 4. When printing is completed, the display shows: Display: Print-Out:Finish 4. Press STORE. Display: Print-Out:Stop 5. Press END.
Conditions	<ul style="list-style-type: none"> • It is necessary to connect a printer to the EIA (RS-232C) port provided on the system. • You may stop printing by pressing the END button, while records are being printed out. • You cannot restart the printout while records are being output.
Feature References	Section 3, Features, Station Message Detail Recording (SMDR)

External Pager BGM

Description	Used to determine which external pagers will receive Background Music (BGM). BGM – External is turned on and off by the operator.
Selection	<ul style="list-style-type: none"> • External pager number: KX-TD816 – 1 KX-TD1232 – 1 through 4 • Disable (sends no BGM) / Enable (sends BGM)
Default	All external pagers – Disable
Programming	<ol style="list-style-type: none"> 1. Enter 804. Display: Ext-Pag BGM 2. Press NEXT. Display: Pager NO?-> 3. Enter an external pager number. To enter pager number 1, you can also press NEXT. Display example: Pager1:Disable 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. To program another pager, press NEXT or PREV, or SELECT and the desired external pager number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • For KX-TD816, one external pager can be installed. Please skip steps 6 and 7. • The external pager is a user-supplied item. For KX-TD1232, two external pagers can be installed per system. External pagers 1 and 2 are installed in the Master System, 3 and 4 in the Slave, if available. • Program [006] “Operator / Manager Extension Assignment” is used to assign an extension as an operator. • Program [803] “Music Source Use” is used to select the music source to be used for BGM.
Feature References	Section 3, Features , Background Music (BGM) – External

External Pager Confirmation Tone

Description	Used to remove the confirmation tone for external pagers. The default setting sends confirmation tone 2 to the external pagers before paging is broadcast. This programming applies to all the external pagers.
Selection	On / Off
Default	On
Programming	<ol style="list-style-type: none">1. Enter 805. Display: Ext-Pag Ack-Tone2. Press NEXT. Display example: Tone:On3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Conditions	The external pager is a user-supplied item. For KX-TD816, one external pager can be installed, for KX-TD1232, two external pagers can be installed per system. External pagers 1 and 2 are installed in the Master System, 3 and 4 in the Slave, if available.
Feature References	Section 3, Features, Confirmation Tone Paging – All Paging – External

EIA (RS-232C) Parameters — Port 1 / Port 2

Description

Assigns the communication parameters for the EIA (RS-232C) interface for **Port 1 (for KX-TD816 and Master System of KX-TD1232)** or **Port 2 (for Slave System of KX-TD1232)**.

New line code: Select the code for your printer or personal computer. If your printer or personal computer automatically feeds lines with carriage return, select "CR." If not, select "CR+LF."

Baud rate: A baud rate code indicates the data transmission speed from the system to the printer or personal computer.

Word length: A word length code indicates how many bits compose a character.

Parity: A parity code indicates what type of parity is used to detect an error in the string of bits composing a character. Make an appropriate selection depending on the requirements of your printer or personal computer.

Stop bit: A stop bit code indicates the end of a bit string which composes a character. Select an appropriate value depending on the requirements of your printer or personal computer.

Selection

- New line code: **CR+LF / CR**
(CR=Carriage Return, LF=Line Feed)
- Baud rate (baud): **150 / 300 / 600 / 1200 / 2400 / 4800 / 9600**
- Word length (bits): **7 / 8**
- Parity bit: **None / Mark / Space / Even / Odd**
- Stop bit length (bits): **1 / 2**

Default

New line code = CR+LF; Baud rate = 9600; Word length = 8;
Parity bit = Mark; Stop bit = 1 — Port 1 / Port 2

Programming

1. Enter a **program address (806 for Port 1 or 807 for Port 2)**.
Display example: RS232C Paramet.1
2. Press **NEXT** to program new line code.
Display example: NL-Code:CR+LF
3. Keep pressing **SELECT** until the desired selection is displayed.
4. Press **STORE**.
5. Press **NEXT** to program baud rate.
Display example: Baud Rate:9600
6. Keep pressing **SELECT** until the desired selection is displayed.

4.10 Resource Programming **806-807**

EIA (RS-232C) Parameters — Port 1 / Port 2 (contd.)

7. Press **STORE**.
8. Press **NEXT** to program word length.
Display example: Word Length:8bits
9. Keep pressing **SELECT** until the desired selection is displayed.
10. Press **STORE**.
11. Press **NEXT** to program parity bit.
Display example: Parity:Mark
12. Keep pressing **SELECT** until the desired selection is displayed.
13. Press **STORE**.
14. Press **NEXT** to program stop bit.
Display example: Stop Bit:1bit
15. Keep pressing **SELECT** until the desired selection is displayed.
16. Press **STORE**.
17. Press **END**.

Conditions

- The following combinations are invalid.

Parity	Word Length	Stop Bit
Mark	8	2
Space	8	1
Space	8	2

- The program address of the out-of-service system port is unacceptable.

Feature References

Section 3, Features,
Station Message Detail Recording (SMDR)

Floating Number Assignment

Description	Assigns the floating numbers for External Pagers, modem,* and the Digital Test Access (DTA). These numbers can be used the same way extension numbers are used for station access.
Selection	<ul style="list-style-type: none"> • Floating station: KX-TD816 – Pager1 / DTA KX-TD1232 – Pager1 / Pager2 / Pager3 / Pager4 / MODEM / DTA • Floating number: 2 through 4 digits
Default	<p>KX-TD816 – Pager 1=296; DTA=299 KX-TD1232 – Pager 1=296; Pager 2=297; Pager 3=396; Pager 4=397; MODEM=399; DTA=299</p>
Programming	<ol style="list-style-type: none"> 1. Enter 813. Display: FLT EXT NO. 2. Press NEXT to program Pager 1. Display example: Pager1:EXT296 To program another floating station, keep pressing NEXT or PREV until the desired floating station is displayed. 3. Enter a floating number. To change the current entry, press CLEAR and the new floating number. 4. Press STORE. 5. To program another floating station, keep pressing NEXT or PREV until the desired floating station is displayed. 6. Repeat steps 3 through 5. 7. Press END.
Conditions	<ul style="list-style-type: none"> • A floating number is composed of two through four numerical digits, 0 through 9. • The leading one or two digits of the floating numbers are subject to program [100] “Flexible Numbering, (01) through (16) 1st through 16th hundred extension blocks.” • Floating numbers and extension numbers should be unique. Double entry and incompatible entry for these numbers are invalid. Valid entry example: 10 and 11, 10 and 110; Invalid entry example: 10 and 106, 210 and 21. • You cannot leave the entry empty.
Feature References	Section 3, Features, Floating Station

4.10 Resource Programming

814

*Modem Standard**

Description	Assigns the modem standard. There are two standards available – BELL and CCITT.
Selection	BELL / CCITT
Default	CCITT
Programming	<ol style="list-style-type: none">1. Enter 814. Display: MODEM Standard2. Press NEXT. Display example: MODEM:CCITT3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Conditions	Select the standard used by your modem.
Feature References	Section 3, Features, System Programming and Diagnosis with Personal Computer

*: Available for KX-TD1232 only.

System Working Report Printout

Description	Starts or stops printing of the system working report.
Selection	Start / Stop
Default	Not applicable.
Programming	<ol style="list-style-type: none">1. Enter 815. Display: SWR Data Dump2. Press NEXT. Display: Print-Out:Start3. Press STORE to start printing. Printing starts. To stop printing in the middle of printing, press SELECT and go to step 4. When printing is completed, the display shows: Display: Print-Out:Finish4. Press STORE. Display: Print-Out:Stop5. Press END.
Conditions	<ul style="list-style-type: none">• It is necessary to connect a printer to the EIA (RS-232C) port provided on the system.• After connecting a printer, do not press the RETURN key, if provided on the printer, in 10 seconds. Otherwise, the usage of the EIA port is changed to system programming and printout will not occur.• You cannot restart the printout while records are being output.
Feature References	Section 3, Features, System Working Report

4.10 Resource Programming

816

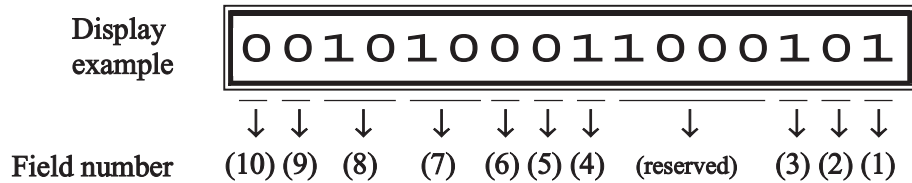
System Working Report Clear

Description	Clears all the recorded data of the System Working Reports.
Selection	None
Default	Not applicable.
Programming	<ol style="list-style-type: none">1. Enter 816. Display: SWR Data Clear2. Press NEXT. Display: Clear3. Press STORE. System Working Report is cleared.4. Press END.
Conditions	None
Feature References	Section 3, Features, System Working Report

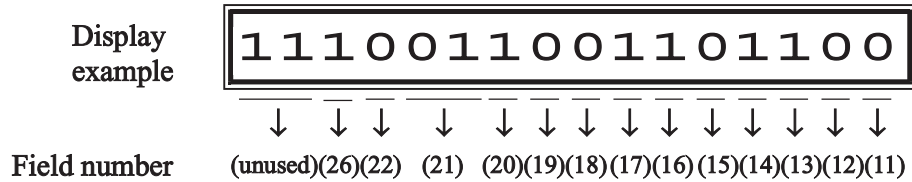
System Additional Information

Description Adds the following programming items, if required:

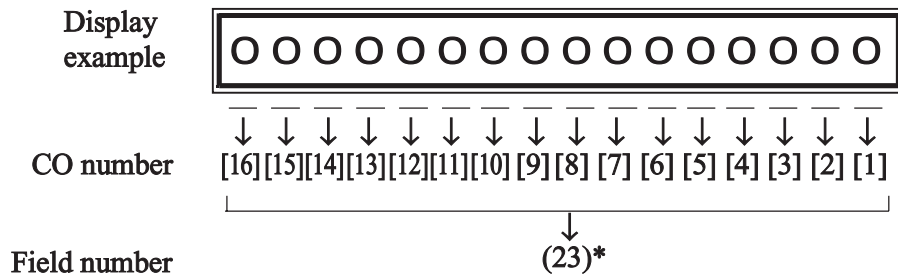
Area 1 There are 10 fields available in Area 1 as follows:



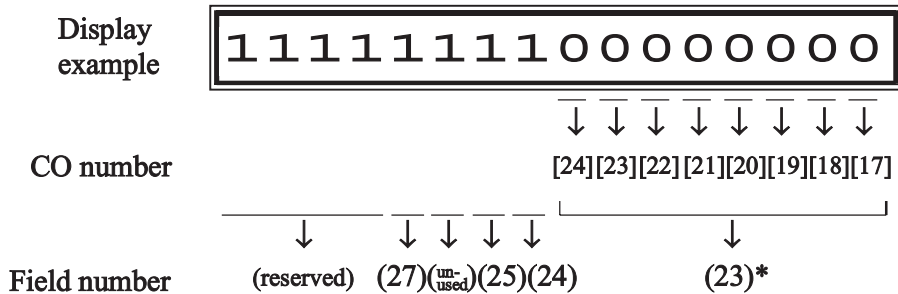
Area 2 There are 13 fields available in Area 2 as follows:



Area 3 KX-TD816 – [1] through [8] below match CO lines 1 through 8:
KX-TD1232 – [1] through [16] below match CO lines 1 through 16:



Area 4 KX-TD1232 – [17] through [24] below match CO lines 17 through 24:



*: CO numbers [9] through [24] in the field number [23] are available for KX-TD1232 only.

4.11 Option Programming

990

System Additional Information (contd.)

Area 5 There is 1 field available in Area 5 as follows:

Display
example

1 1 1 1 1 1 1 1 1 1 1 1 1 0 1 1 0

Field number

↓
(unused)

↓ ↓ ↓
(reserved)(30)(reserved)

Explanation for Areas 1 through 5

Field	Description	Selection	Default	References
(1)	Sound source during transfer.	0 : ringback tone 1 : Music on Hold	1	<ul style="list-style-type: none"> • CALL TRANSFER FEATURES • Music on Hold
(2)	Result of pressing the hookswitch lightly and then placing down the handset (during a CO line call; single line telephones only).	0 : Consultation Hold 1 : disconnection	0	Consultation Hold
(3)	Result of pressing the RECALL button on proprietary telephones (during a CO line call).	0 : disconnection signal 1 : register recall signal	1	<ul style="list-style-type: none"> • External Feature Access • Recall
(4)	Enables or disables the dial tone between obtaining a CO line and dialing the phone number when using the one-touch dial, redial or speed dial function.	0 : disable 1 : enable	1	None
(5)	Result of pressing the hookswitch lightly (single line telephones only).	0 : Consultation Hold 1 : disconnection	0	Consultation Hold
(6)	Sets the duration of the DTMF signals sent to the Voice Processing System (VPS) ports.	0 : 80 ms 1 : 160 ms	0	Voice Mail Integration
(7)	Sets the time the system waits before sending DTMF signals (such as a mailbox number) to VPS after VPS answers a call.	00 : 0.5 s 01 : 1.0 s 10 : 1.5 s 11 : 2.0 s	10	Voice Mail Integration
(8)	Sets the time the system waits before sending DTMF signals (programmed in [113]) to VPS after the VPS calls an extension.	00 : 0.5 s 01 : 1.0 s 10 : 1.5 s 11 : 2.0 s	10	Voice Mail Integration
(9)	Assigns whether the system turns off the Message Waiting lamp or the VPS does when the user hears a message recorded in a mailbox.	0 : system 1 : VPS	0	<ul style="list-style-type: none"> • Message Waiting • Voice Mail Integration

System Additional Information (contd.)

Field	Description	Selection	Default	References
(10)	Assigns whether the system starts the Automated Attendant Service or not if an outside call is directed to VPS by Call Forwarding or Intercept Routing. If "start" is assigned, the "AA-SVC" code programmed in program [114] is transmitted to the voice mail port and the Follow On ID function does not work.	0 : do not start 1 : start	0	Voice Mail Integration
(11)	If an outside party is transferred and unanswered, assigns whether Transfer Recall occurs at the transfer originating extension or at Operator 1.	0 : extension 1 : Operator 1	0	Call Transfer, Unscreened – to Extension
(12)	If Limited Call Duration is enabled in program [502] "Extension-to-CO Line Call Duration Limit," assigns if Limited Call Duration is done for both outgoing and incoming calls or for outgoing calls only.	0 : both calls 1 : outgoing calls only	0	Limited Call Duration
(13)	Allows you to remove confirmation tone 4. By default, a beep tone sounds when a three-party conference is started / ended.	0 : disable 1 : enable	1	Confirmation Tone
(14)	Determines if the dialed "*" and "#" will be checked by Toll Restriction. This assignment is required for certain central offices (CO) to prevent toll fraud. Some CO ignore the user-dialed "*" and "#". If your CO is such a type, select "0" (no check).	0 : no check 1 : check	1	Toll Restriction
(15)	Enables or disables the Recall function when receiving an outside call at a locked or toll-restricted station. Recall, if enabled, allows the user to make an outside call using the same line at the station. This is also allowed for those extensions that have Account Code – Verified – All Calls mode assigned, if "0" (disconnection signal) is selected in field (3) above.	0 : disable 1 : enable	0	Recall
(16)	Allows you to remove Confirmation Tone 3. This tone is sent when a conversation is established just after dialing the feature numbers for accessing the following features: Call Pickup, Paging, Paging Answer, TAFAS Answer, Hold Retrieve and Call Park Retrieve.	0 : disable 1 : enable	1	Confirmation Tone

4.11 Option Programming

990

System Additional Information (contd.)

Field	Description	Selection	Default	References
(17)	A CO line set to pulse or call blocking mode in program [402] "Dial Mode Selection" can have two settings. This assigns the pulse break ratio during dial pulsing. Select an appropriate ratio depending on the standard in your country.	0 : 60 % 1 : 67 %	1	Dial Type Selection
(18)	Assigns if an extension's mailbox number is substituted by the extension number or it is programmable (free). If a call is forwarded or rerouted to the VPS, this system automatically transmits the mailbox number to the VPS to specify the user's mailbox. To make it programmable, select "1 (free)," then assign the number in program [609] "Voice Mail Access Codes."	0 : extension number 1 : free	0	Voice Mail Integration
(19)	Assigns the first display of a digital large display digital proprietary telephone (KX-T7235) in Station Speed Dialing.	0 : names 1 : numbers	0	Special Display Features for KX-T7235 — Station Speed Dialing
(20)	Assigns the source of Music Source 1 for Music on Hold and BGM.	0 : internal music source 1 : external music source	1	<ul style="list-style-type: none"> • Background Music (BGM) • Background Music (BGM) – External • Music on Hold
(21)	Selects inter-digit pause for pulse dialing.	00 : 630 ms 01 : 830 ms 10 : 1030 ms	01	None
(22)	Selects intercom dial tone frequency.	0 : normal 1 : distinctive	0	None
(23)	This field is provided to assign PAD Switch Control (volume control of received calls on a CO line). This can be assigned per CO line. The CO numbers [1] through [8] correspond to CO lines 1 through 8 for KX-TD816, and CO numbers [1] through [24] correspond to CO lines 1 through 24 for KX-TD1232 respectively.	0 : 0 dB 1 : -3 dB	0	None
(24)	Prevents or allows a call originated by an AA port of VPS to another AA port.	0 : prevent 1 : allow	1	Voice Mail Integration
(25)	Prevents or allows sending pulse dialing signals during an outside call.	0 : prevent 1 : allow	0	None

System Additional Information (contd.)

Field	Description	Selection	Default	References
(26)	Selects the extension-hooking signal detection time.	0 : 32-1000 ms 1 : 32-136 ms	1	None
(27)	Enables or disables the Digital Test Access.	0 : enable 1 : disable	1	None
(30)	Assigns whether the system disconnects the CO line or not if nothing is dialed after seizing a CO line.	0 : disconnect 1 : do not disconnect	1	None

Selection

- Area code: **01 through 12** (06 through 12 are reserved)
- Selection: See “**Selection**” shown above for each area.

Default

See “**Default**” shown above.

Programming

1. Enter **990**.
Display: System Add Inf.
2. Press **NEXT**.
Display: Area NO?->
3. Enter an **area code (01 through 05)**.
Display example: 0010100011000001
4. Keep pressing **➡** or **⬅** to move the cursor to the desired field.
5. Enter your **selection (0 or 1)**.
To change the current entry, press **STORE** and the new selection.
6. To program another field, repeat steps 4 and 5.
7. Press **STORE**.
8. To program another area, press **SELECT** and the desired **area code**.
9. Repeat steps 4 through 8.
10. Press **END**.

Conditions

None

Feature References

See “**References**” shown above.

COS Additional Information (contd.)

5. Enter your **selection (0 or 1)**.
To change the current entry, press **STORE** and the new selection.
6. To program another field, repeat steps 4 and 5.
7. Press **STORE**.
8. To program another COS, press **SELECT** and the desired **COS number**.
9. Repeat steps 4 through 8.
10. Press **END**.

Conditions

None

Feature References

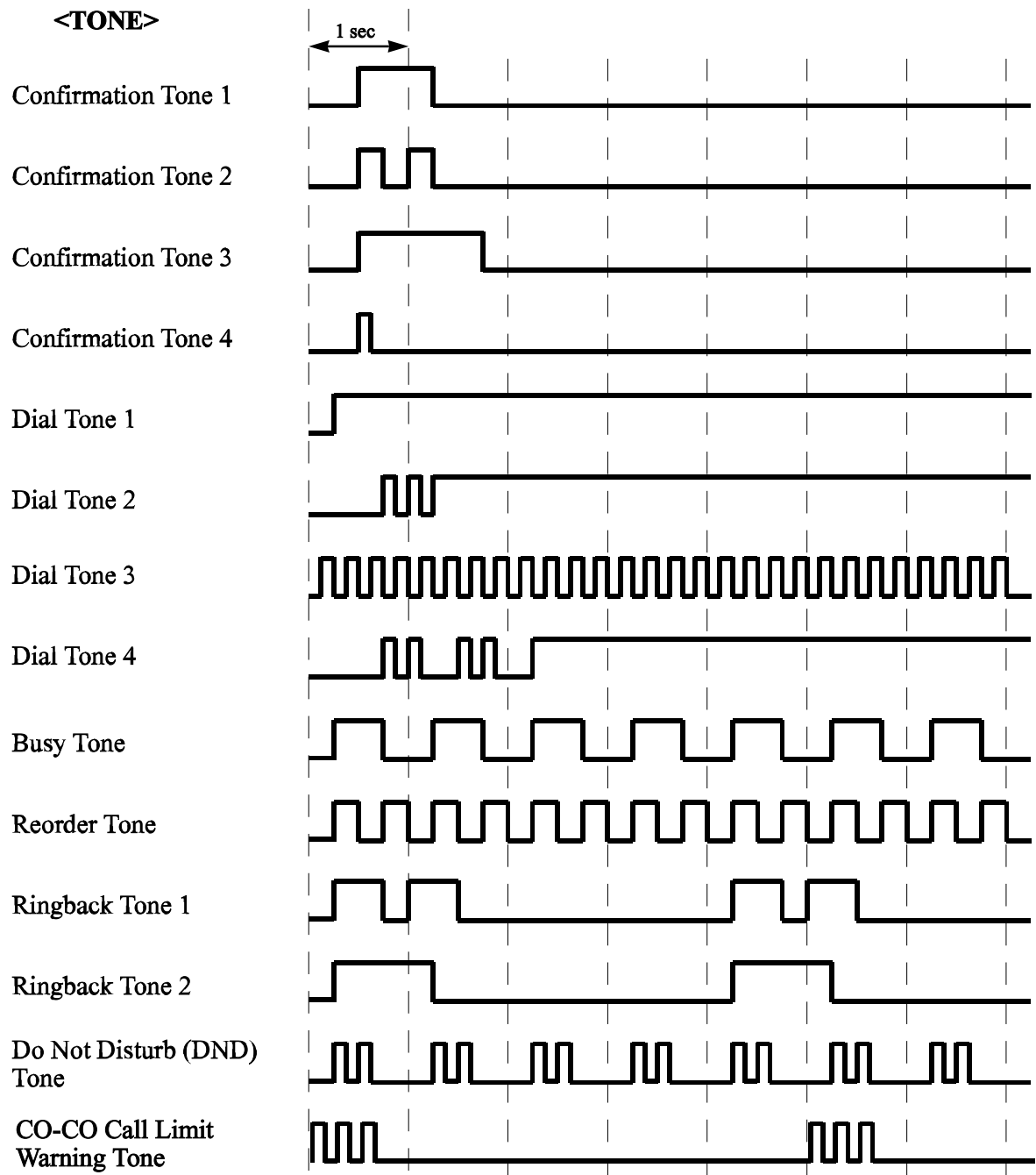
Section 3, Features,
Call Forwarding – Follow Me
Calling Party Control (CPC) Signal Detection
Class of Service (COS)

Section 5

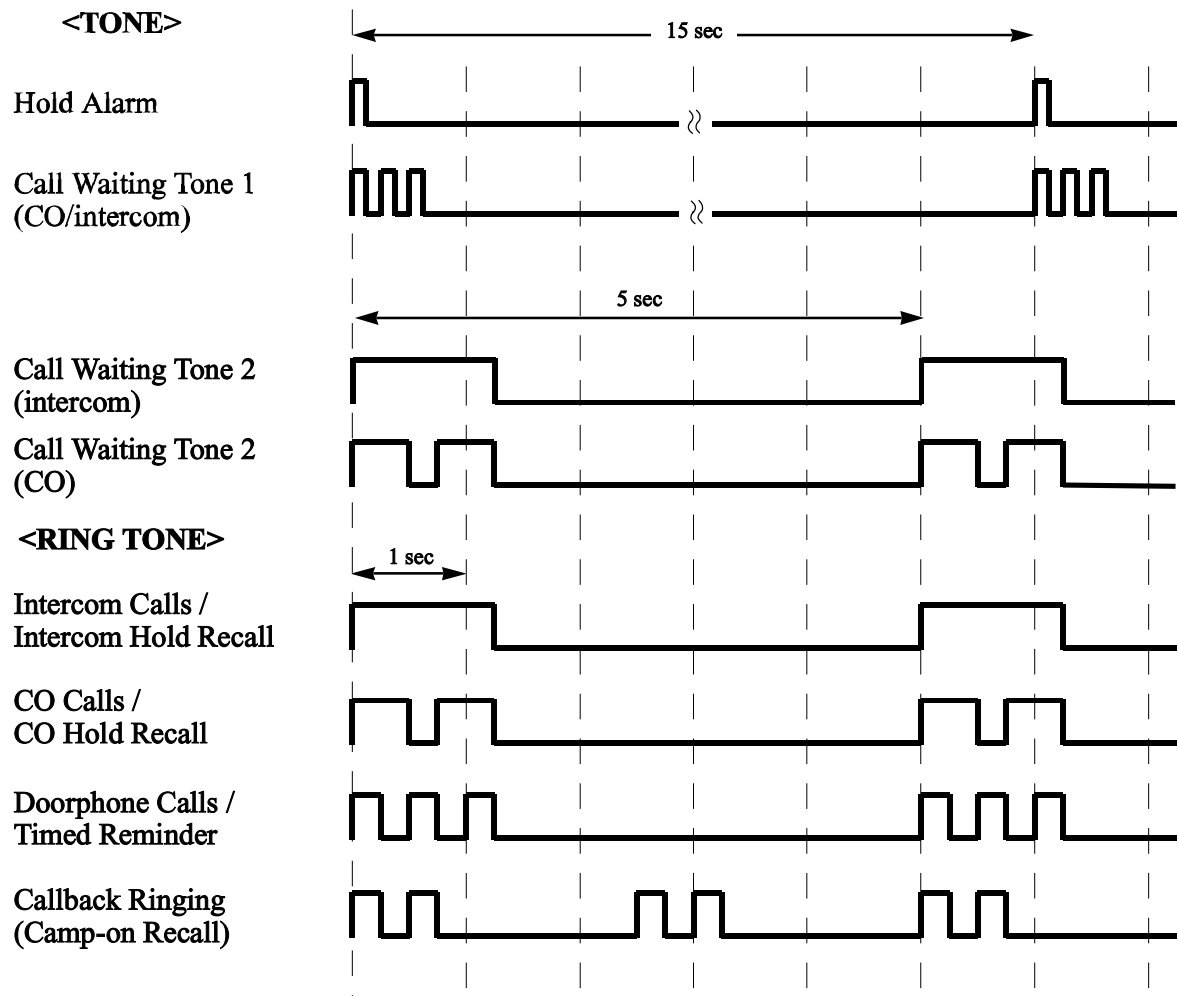
List

This section lists tone, ring tone and default values of system programming.

5.1 Tone / Ring Tone



5.1 Tone / Ring Tone



5.2 Default Values

Address	Program	Default
Manager Programming		
[000]	Date and Time Set	1 Jan. '94 12:00 am
[001]	System Speed Dialing Number Set	Not Stored
[002]	System Speed Dialing Name Set	Not Stored
[003]	Extension Number Set	<ul style="list-style-type: none"> • KX-TD816 Jack 01-1 through 16-1=201 through 216 Jack 01-2 through 16-2=301 through 316 • KX-TD1232 Jack 01-1 through 64-1=201 through 264 Jack 01-2 through 64-2=301 through 364
[004]	Extension Name Set	Not Stored
[005]	Flexible CO Button Assignment	<ul style="list-style-type: none"> • KX-TD816 CO Buttons 1 through 8 of All Jacks=Single - CO 01 through 08; ringing tone type 2 • KX-TD1232 CO Buttons 1 through 24 of All Jacks=Single -CO 01 through 24; ringing tone type 2
[006]	Operator / Manager Extension Assignment	Operator 1=Jack 01; Operator 2 and Manager=Unassigned
[007]	DSS Console Port and Paired Telephone Assignment	Not Stored
[008]	Absent Messages	1: Will Return Soon; 2: Gone Home 3: At Ext %%%; 4: Back at %%.%% 5: Out Until %%/%%%; 6: In a Meeting 7 through 9: Not Stored
[009]	Budget Management	0 Pulse
[010]	Charge Margin Rate	0 %
System Programming		
[100]	Flexible Numbering	See page 4-35.
[101]	Day / Night Service Switching Mode	Manual
[102]	Day / Night Service Starting Time	Every Day of the Week – Day=9:00 am / Night=5:00 pm
[103]	Automatic Access CO Line Group Assignment	12345678
[106]	Station Hunting Type	All Extension Groups=Disable
[107]	System Password	1234
[108]	One-Touch Transfer by DSS Button	Enable
[109]	Expansion Card / Unit Type	<ul style="list-style-type: none"> • KX-TD816: C;E • KX-TD1232: Master and Slave=C;C;E1;E2

5.2 Default Values

Address	Program	Default
[113]	VM Status DTMF Set	RBT=1; BT=2; ROT=3; DND=4; Answer=5; Disconnect=#9; Confirm =9; FWD VM RBT=6; FWD VM BT=7; FWD EXT RBT=8
[114]	VM Command DTMF Set	LV-MSG=H; GETMSG= *H; AA-SVC=#8; VM-SVC=#6
[115]	Adjust Time	1:00 am
[116]	ROM Version Display	Not Applicable
[117]	Charge Display Selection	AS \$
[118]	Charge Verification Assignment	Enable
[119]	Charge Verification ID Code Set	1234
[120]	User Password	1234
[121]	Hotel Application	Disable
Timer Programming		
[200]	Hold Recall Time	60 s
[201]	Transfer Recall Time	12 rings
[202]	Call Forwarding – No Answer Time	3 rings
[203]	Intercept Time	12 rings
[204]	Pickup Dial Waiting Time	1 s
[205]	Extension-to-CO Line Call Duration Time	10 min
[206]	CO-to-CO Call Duration Time	10 min
[207]	First Digit Time	10 s
[208]	Inter Digit Time	10 s
[209]	Automatic Redial Repeat Times	4 times
[210]	Automatic Redial Interval Time	120 s
[211]	Dial Start Time	0 ms
[212]	Call Duration Count Start Time	0 s
[213]	Message Waiting Ring Interval Time	10 min
TRS/ARS Programming		
[300]	TRS Override for System Speed Dialing	Disable
[301]–[305]	TRS Denied Code Entry for Levels 2 through 6	Not Stored
[306]–[310]	TRS Excepted Code Entry for Levels 2 through 6	Not Stored
[311]	Emergency Dial Set	Location 01=114; Location 02=000
[312]	ARS Mode	Off
[313]	ARS Time	Time-A=8:00 am; Time-B=5:00 pm; Time-C=9:00 pm; Time-D=Disable
[314]–[321]	ARS Leading Digit Entry for Plans 1 through 8	Not Stored

5.2 Default Values

Address	Program	Default
[322]–[329]	ARS Routing Plans 1 through 8	Not Stored
[330]	ARS Modify Removed Digit	All Modification Tables=0 (digits)
[331]	ARS Modify Added Number	Not Stored
CO Line Programming		
[400]	CO Line Connection Assignment	All CO Lines=Connect
[401]	CO Line Group Assignment	CO01=TRG 1; CO02=TRG 2; CO03=TRG 3; CO04=TRG 4; CO05=TRG 5; CO06=TRG 6; CO07=TRG 7; (KX-TD816) CO08=TRG 8; (KX-TD1232) CO08 through CO24=TRG8
[402]	Dial Mode Selection	All CO Lines=DTMF
[403]	Pulse Speed Selection	All CO Lines=10 pps
[404]	DTMF Time	All CO Lines=80 ms
[405]	CPC Signal Detection Incoming Set	All CO Lines=352 ms
[407]–[408]	DIL 1:1 Extension—Day/Night	All CO Lines=Disable—Day/Night
[409]–[410]	Intercept Extension—Day/Night	All CO Line Groups=Disable—Day/Night
[411]	Host PBX Access Codes	Not Stored
[412]	Pause Time	All CO Line Groups=1.5 s
[413]	Register Recall Signal Time	All CO Line Groups=96 ms
[414]	Disconnect Time	All CO Line Groups=2.0 s
[415]	CPC Signal Detection Outgoing Set	Disable
[416]	ISDN Line Number Assignment	All CO Lines — Not Stored
[417]	ISDN Outgoing CLIR Service Assignment	All CO Lines — Enable
[418]	ISDN DDI Service Assignment	All CO Lines — Disable
[419]	CO Line Name Assignment	All CO Lines — Not Stored
[420]	Reverse Circuit Assignment	All CO Lines — Regular
[430]	DID Table Number Assignment	All CO Line Groups — Not Stored
[431]	DID Incoming Assignment	All DID Tables — Wink
[432]	DID Outgoing Assignment	All DID Tables — Wink
[433]	DID Subscriber Number Removed Digit and Received Digit	All DID Tables — RMV:0 DID Table 1 — RCV:1, Other DID Tables — RCV:3
[434]	DID Added Number	All DID Tables — Not Stored
[435]	DID Wink Time Assignment	All DID Tables — 16
[436]*	Pay Tone Assignment	All CO Lines — Disable
COS Programming		
[500]–[501]	Toll Restriction Level—Day/ Night	All COS=Level 1—Day/Night

5.2 Default Values

Address	Program	Default
[502]	Extension-to-CO Line Call Duration Limit	All COS=Disable
[503]	Call Transfer to CO Line	All COS=Enable
[504]	Call Forwarding to CO Line	All COS=Disable
[507]	Do Not Disturb Override	All COS=Disable
[508]	Account Code Entry Mode	All COS=Option
Extension Programming		
[600]	EXtra Device Port	All Jacks=Disable
[601]	Class of Service	All Jacks-1/2=COS 1
[602]	Extension Group Assignment	All Jacks-1/2=Extension Group 1
[603]–[604]	DIL 1:N Extension and Delayed Ringing—Day/Night	All Jacks-1/2=All CO Lines=Immediate Ringing—Day/Night
[605]–[606]	Outgoing Permitted CO Line Assignment—Day/Night	All Jacks-1/2=All CO Lines=Enable—Day/Night
[607]–[608]	Doorphone Ringing Assignment—Day/Night	Jack 01-1= All Doorphones; Other Jacks=No Doorphone—Day/Night
[609]	Voice Mail Access Codes	Not Stored
[610]	ISDN DDI Number / Extension Number Transformation	Not Stored
Resource Programming		
[800]	SMDR Incoming / Outgoing Call Log Printout	Outgoing Calls=All; Incoming Calls=On
[801]	SMDR Format	Page Length=66; Skip Perforation=0
[802]	System Data Printout	Not Applicable
[803]	Music Source Use	Hold and BGM=Music 1
[804]	External Pager BGM	All External Pagers=Disable
[805]	External Pager Confirmation Tone	On
[806]–[807]	EIA (RS-232C) Parameters—Port 1/ Port 2	New Line Code=CR+LF; Baud Rate=9600; Word Length=8; Parity Bit=Mark; Stop Bit=1—Port1/Port2
[813]	Floating Number Assignment	• KX-TD816: Pager 1=296; DTA=299 • KX-TD1232: Pager 1=296; Pager 2=297; Pager 3=396; Pager 4=397; MODEM=399; DTA=299
[814]*	Modem Standard	CCITT
[815]	System Working Report Printout	Not Applicable
[816]	System Working Report Clear	Not Applicable
Option Programming		
[990]	System Additional Information	See pages 4-139 through 4-142.
[991]	COS Additional Information	See page 4-143.

*: Available for KX-TD1232 only.

List

5-7

Section 6

Troubleshooting

This section provides information for system and telephone troubleshooting.

6.1 Troubleshooting

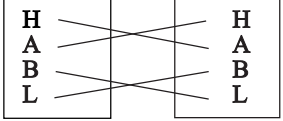
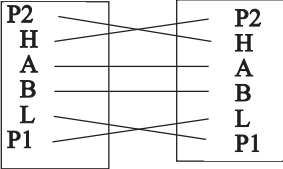
6.1.1 Installation

PROBLEM	PROBABLE CAUSE	POSSIBLE SOLUTION
Extension does not operate.	Bad printed circuit board (Extension Card). Bad connection between the system and extension. A telephone with an A-A1 relay is connected. Bad extension.	Exchange printed circuit board for another printed circuit board. Take that extension and plug it into the same extension port using a short telephone cord. If the telephone does not work, connection between the system and the extension must be repaired. Use a 2 wires cord. Set the A-A1 relay switch of the telephone to "OUT" or "OFF" position. Take that extension and plug it into another extension port that is working. If the telephone does not work, replace the phone.
Improper reset operation.		Press the Reset Button.
Noise in external paging.	Induced noise on the wire between the system and the amplifier.	Use a shielded cable as the connection wire between the system and amplifier. A short shielded cable is recommended.
Volume distortion from external music source.	Excessive input level from external music source.	Decrease the output level of the external music source by using the volume control on the music source.
Speed Dialing or One-Touch Dialing does not function.	Bad programming.	Enter the CO line access number (9, 81 through 88) into programming.

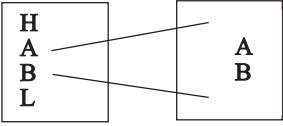
6.1 Troubleshooting

6.1.2 Connection

Connection between the DSHS and a proprietary telephone:

<p>Can you dial an extension?</p> <p>No</p>	<p>CAUSE</p> <p>The A/B is connected to the H/L.</p>  <p>DSHS extension</p>	<p>SOLUTION</p> <p>Use the correct cord (inner 2 wires are for A/B and the outer 2 wires are for H/L).</p>
	<p>*The P1/P2 is connected to the L/H.</p>  <p>DSHS extension</p>	<p>SOLUTION</p> <p>Use the correct cord (2 wires second from the outside for H/L and the outer 2 wires are for P1/P2).</p>

Connection between the DSHS and a single line telephone:

<p>Yes</p>	<p>CAUSE</p> <p>The A/B is connected to the H/L.</p>  <p>DSHS extension</p>	<p>SOLUTION</p> <p>Use the correct cord (inner 2 wires are for A/B).</p> <ul style="list-style-type: none"> • If a telephone equipped with an A-A1 relay is connected to the DSHS, set the A-A1 relay switch of the telephone to "OFF."
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(Continued to the following page.)

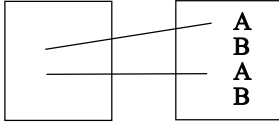
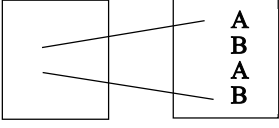
6.1 Troubleshooting

Connection between the central office and the DSHS:

(Continued from the previous page.)

Can you dial out on a CO line?

No

CAUSE	SOLUTION
<p>CO lines are connected to the A/A.</p>  <p>CO line DSHS</p>	<p>Reconnect the CO lines to the paired A/B of the telephone jack using 2-conductor wiring.</p>
<p>CO lines are connected to the A/B that is not in a pair.</p>  <p>CO line DSHS</p>	

6.1.3 Operation

PROBLEM	PROBABLE CAUSE	POSSIBLE SOLUTION
When using the speaker-phone/monitor mode with a DPT, KX-T7220/KX-T7230/KX-T7235/KX-T7250, nothing is audible.	The "HEADSET" mode is selected by station programming, "Handset/Headset Selection."	When the headset is not used, select the "HANDSET" mode by station programming.
The unit does not ring.	The Ringer Volume Selector is set to "OFF."	Set to "HIGH" or "LOW."
During a power interruption, extensions connected to Power Failure Transfer jacks do not operate.	<ul style="list-style-type: none"> A DPT is connected to the jack. The dialing mode (tone or pulse) is improper. 	<ul style="list-style-type: none"> Disconnect the DPT and connect a single line telephone. Set the Tone / Pulse switch to the other position.

6.1 Troubleshooting

PROBLEM	PROBABLE CAUSE	POSSIBLE SOLUTION
During system connection* operation, originating an intercom/outside call from a system to the other system is not possible.	Interface between the systems is disconnected.	Connect the interface between the systems and press the Reset Button on both systems.
Originating an outside call, Call Transfer, or Conference cannot be performed.	The corresponding CO button does not exist on the proprietary telephone.	Program the CO button. See Section 4.2 [005] "Flexible CO Button Assignment."

6.1.4 Using Reset Button

If the system does not operate properly, use the Reset Button. (If Master and Slave Systems are in operation by System Connection*, reset both systems.)

Before using the Reset Button, try the system feature again to confirm whether there definitely is a problem or not.

Notes:

(a) When the System Clear Switch is set to "NORMAL," pressing the Reset Button causes the following:

1. Camp-on is cleared.
2. Calls on Hold are terminated.
3. Calls on Exclusive Hold are terminated.
4. Calls in progress are terminated.
5. Call Park is cleared.

Other data stored in memory except the above are not cleared.

(b) When the System Clear Switch is set to the "CLEAR" position, you must press the Reset Button with caution, because all data stored in memory will be cleared by the following operation: pressing the Reset Button and setting the System Clear Switch to the "NORMAL" position while the Power Indicator is flashing.

*: Available for KX-TD1232 only.

6.1 Troubleshooting

Operation

- (A) If the system does not operate properly,
1. Make sure that the System Clear Switch is set to the “NORMAL” position.
 2. Press the Reset Button with a pointed tool.
- (B) If the system still does not operate properly,
1. Set the System Clear Switch to the “CLEAR” position.
 2. Press the Reset Button with a pointed tool.
 3. Return the System Clear Switch to the “NORMAL” position while the Power Indicator is flashing (approximately within 10 seconds).
- (C) If the system still does not work, switch the power off and on again after five minutes.
- (D) If the system still does not work,
1. Switch the power off.
 2. Set the System Clear Switch to the “CLEAR” position.
 3. Switch the power on.
 4. Press the Reset Button with a pointed tool.
 5. Set the System Clear Switch to the “NORMAL” position while the Power Indicator is flashing (approximately within 10 seconds).
- (E) If the system still does not work, switch the power off. If car batteries are connected to the system, disconnect them, too. Then consult an authorized service person.

When the power supply stops, single line telephones are automatically connected straight to specific CO lines:

KX-TD816 :

CO 1 is connected to the extension jack 1

CO 2 is connected to the extension jack 2

CO 5 is connected to Power Failure Transfer jack

KX-TD1232 :

three SLTs can be connected to CO 1, CO 2 and CO 9 which are connected to Power Failure Transfer jacks

Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan

Printed in Japan

PQQX11289XA S1294MT3108CK

Panasonic

Digital Super Hybrid System
KX-TD816AL/1232AL

Installation Manual Addendum

Please read this manual first and then the Installation Manual.
In this manual, the last letters “AL” of each model number are omitted.

Attention

- The ISDN Line Unit / Card (KX-TD280 / KX-TD281 / KX-TD286 / KX-TD290) is in accordance with the European Telecommunication Standards (ETS). If your telephone company provides an ISDN service which follows the standards other than ETS, some ISDN features in this manual may not work properly. (E.g. Charge Fee Reference, CLIP, COLP, etc.)

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Simple Guide on How to Use

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	See Installation Manual Addendum Page 232.	_____	_____
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	See Installation Manual Addendum Page 49.	_____	_____

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*: Available for KX-TD1232 only.

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1.3 Digital Proprietary Telephones

The following Panasonic proprietary telephones have become available with this system.

Proprietary Telephone	Description
KX-T7425	Digital, speakerphone, 24 Flexible CO
KX-T7433	Digital, 3-line display, speakerphone, 24 Flexible CO
KX-T7436	Digital, 6-line display, speakerphone, 24 Flexible CO
KX-T7450	Digital, monitor, 12 Flexible CO

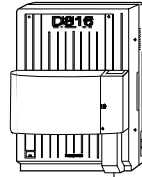
1.4 Options

6-ISDN S0 Line Unit (KX-TD286)

This unit adds six ISDN S0 lines.



6 ISDN S0 lines
can be added.



6 ISDN S0 lines
can be added.

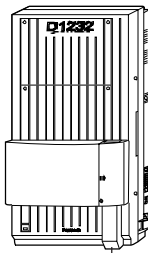
Note Either one KX-TD280, one KX-TD286, one KX-TD290*, one KX-TD180, or one KX-TD185 can be installed in a system.

Primary Rate Interface ISDN Expansion Unit (KX-TD290)*

This unit adds one PRI ISDN line.

When this unit is installed in the system for the system connection, the maximum number of available CO lines is limited to 38.

Therefore, if another CO line card or unit is used, it is required to program which area it is installed in by program [450] beforehand. One PRI ISDN line adds 30 CO lines (CO25 through CO54) to the system. This unit can be only installed to the KX-TD1232 Master system.



1 PRI ISDN line
can be added.

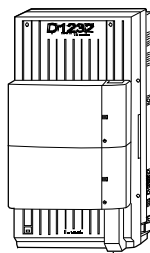
Note Either one KX-TD280, one KX-TD286, one KX-TD290, one KX-TD180, or one KX-TD185 can be installed in a system.

1.4 Options

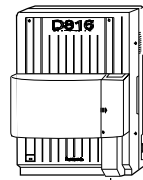
16 SLT Line Circuit Unit (KX-TD174)

Each unit adds eight extensions. You can connect two single line telephones to each extension. The unit can support up to 16 single line telephones per unit. One unit for the KX-TD816 and up to two units for the KX-TD1232 can be installed per system.

Each single line telephone in the same jack has different extension number so that it can act as completely different extension like an eXtra Device Port feature.



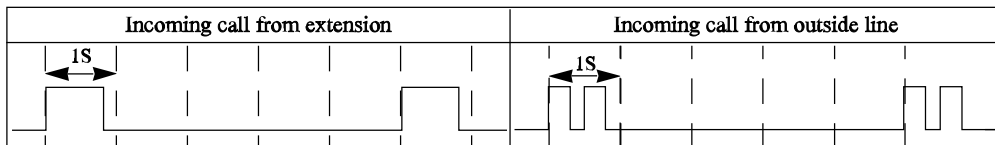
16 or 32 single line telephones can be added.



16 single line telephones can be added.

Note:

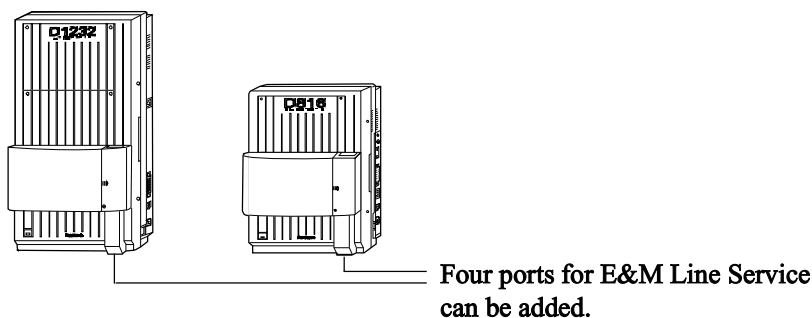
- If this unit is installing, the eXtra Device Port is automatically set to “Enable” in system program [600]. However, assigning “Disable” makes a single line telephone which is connected to the second jack (Jack xx-2) disable to use.
- This unit cannot support proprietary telephones and Voice Mail Integration for the Digital Proprietary Telephone.
- This unit has four DTMF receivers; two receivers in the first eight ports and two receivers in the last eight ports.
- The Ringing Patterns for all single line telephones which are connected to the system are changed as below;



1.4 Options

E&M (TIE) Line Unit (KX-TD184)

This unit can be used for E&M Line Service and has four ports.



- Note**
- This unit can be installed to any of the expansion areas provided on the front of the system.

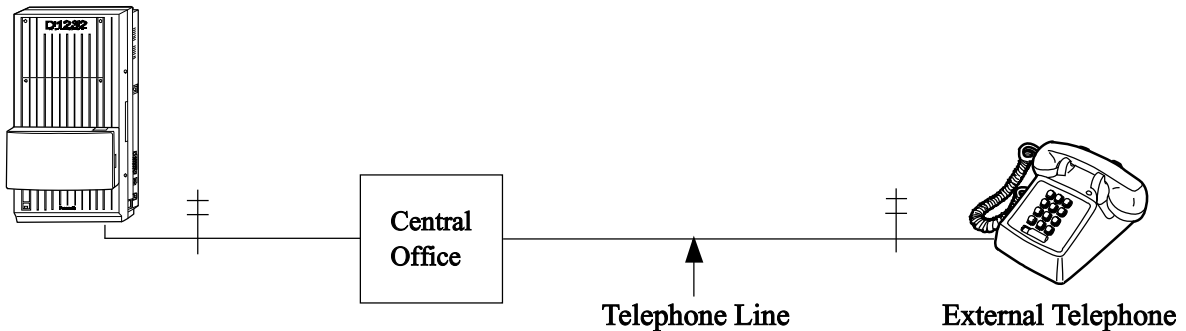
Specifications

- (1) E&M (TIE) Line Types Type 5 only
- (2) Transmission 2-wire or 4-wire voice path (Programmable)
(Note) Maximum cabling distance of the E&M line cord (twisted cable):
22 AWG: Under 9.6 km
- (3) Signaling DTMF or Pulse
- (4) E lead Battery -48 VDC, 20 mA to ground (max.)
Sensitivity 5 mA or 2000 Ω to ground (max.)
(min.)
- (5) M lead Available current : 60mA (max.)
Available voltage: ± 100 V (max.)

1.4 Options

Message Unit (KX-TD190)

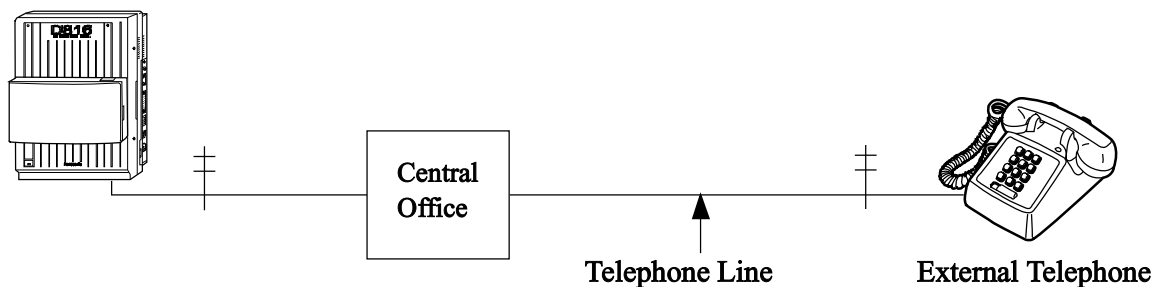
This unit requires recording an Outgoing Message (OGM). OGM for external callers and/or an OGM for Timed Reminder can be recorded.



- Note**
- The KX-TD1232 is illustrated as the main unit.
 - Be sure not to install this unit and the Message Card (KX-TD199), which is installed in the 9600bps Speed Remote Unit (KX-TD198)*, at the same time.

Message Card (KX-TD199)*

This card requires recording an Outgoing Message (OGM) for the KX-TD816. OGM for external callers and/or an OGM for Timed Reminder can be recorded. This card can be installed to the 9600bps Speed Remote Unit (KX-TD198).



- Note**
- Be sure not to install the 9600bps Speed Remote Unit (KX-TD198) with this card and the Message Unit (KX-TD190) at the same time.

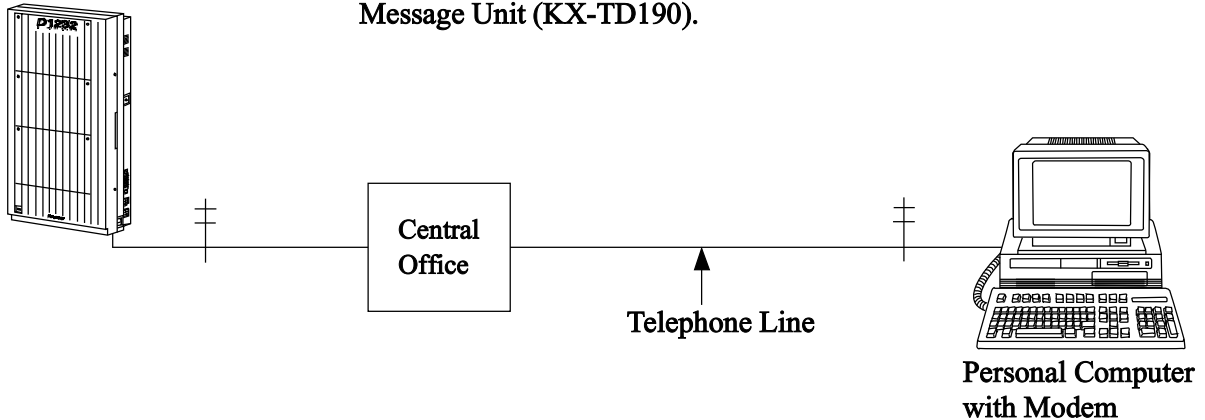
*: Available for KX-TD816 only.

1.4 Options

9600bps Speed Remote Card (KX-TD197)

This card allows system programming and maintenance from a remote location.

This card can be installed both inside the KX-TD1232 and to the Message Unit (KX-TD190).

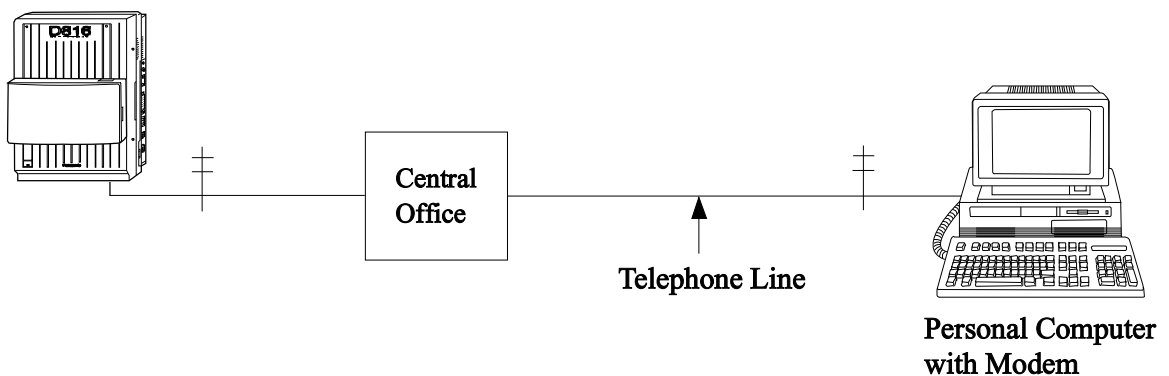


Note

- The KX-TD1232 is illustrated as the main unit.
- Be sure not to install this card and the 9600bps Speed Remote Unit (KX-TD198)* at the same time.

9600bps Speed Remote Unit (KX-TD198)*

This unit allows system programming and maintenance from a remote location for the KX-TD816.



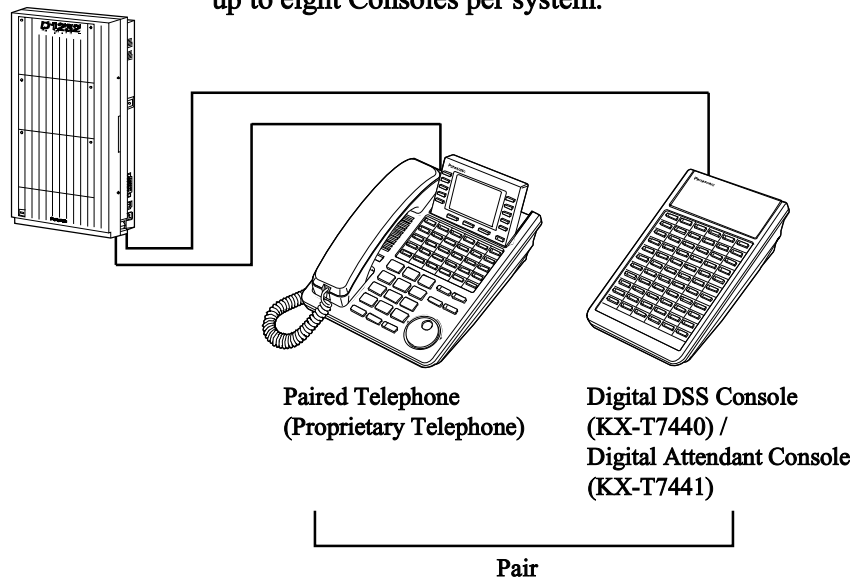
Note

Be sure not to install this unit and the 9600bps Speed Remote Card (KX-TD197), which is installed in the Message Unit (KX-TD190), at the same time.

1.4 Options

Digital DSS Console (KX-T7440) / Digital Attendant Console (KX-T7441)

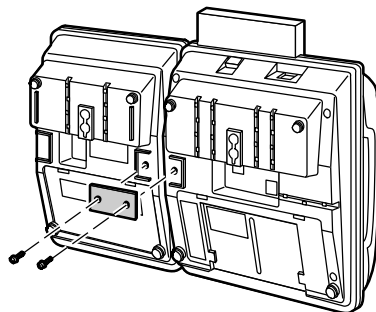
Permits easy and quick access to stations and features. The Busy Lamp Field (BLF) shows the idle, busy or Do Not Disturb state of each station. If the Operator uses a Console as well as a proprietary telephone, the BLF will show the check-in/check-out status. Consoles are designed for use with a proprietary telephone. The KX-TD816 supports up four Consoles. The KX-TD1232 supports up to eight Consoles per system.



Note The KX-T7436 and KX-T7440 are illustrated as an example.

Connection

To attach the KX-T7440 or KX-T7441 and the KX-T7400 series telephone, use the attached plate and screws.



1.5 Specifications

1.5.1 General Description

System Capacity	KX-TD816	
	CO lines (ISDN S0 lines)	8 max. (4 max.)
	Extensions	16 max. (32 max. with XDP)
	KX-TD1232	
	CO lines (ISDN S0 lines)	12 max. (6 max.)
	Extensions	32 max. (64 max. with XDP)
	ISDN PRI line	1 max.
Control Method	Stored Program CPU: 16 bits CPU	
Switching	Non Blocking PCM Time Sharing Switch	
Power Supplies	Primary	240 VAC, 50 Hz
	Secondary	Station Supply Volt: 30V Circuit Volt: $\pm 5V, \pm 15V$
	Power Failure	<ul style="list-style-type: none">• Memory back-up duration: seven years by factory-provided lithium battery• 3 CO lines max. automatically assigned to SLTs (Power Failure Transfer)• System operation for several hours by recommended batteries (consisting of two 12 VDC car batteries)
Dialing	Outward	Dial Pulse (DP) 10 pps, 20 pps Tone (DTMF) Dialing
	Internal	Dial Pulse (DP) 10 pps, 20 pps Tone (DTMF) Dialing
	Mode Conversion	DP-DTMF, DTMF-DP
Connector	KX-TD816	
	CO lines	Modular jack
	Extensions	Modular jack
	KX-TD1232	
	CO lines	4-pin connector
	Extensions	Amphenol Connector
Paging Output	Pin Jack (RCA JACK)	
External Music Input	Two-conductor Jack (MINIJACK 3.5 mm diameter)	

1.5 Specifications

SMDR (Station Message Detail Recording)

Interface	EIA (RS-232C)
Output Equipment	Printer
Detail Recording	Date, Time, Extension Number, CO Line Number, Dialed Number, Ring Duration, Call Duration, Cost, Account Code

1.5.3 System Capacity

Lines, Cards, Units, Station Equipment

Item	KX-TD816 Max. Quantity	KX-TD1232 Max. Quantity	
		Single System	System Connection
System Inter Connection Card	—	—	2
Service Unit	1	1	2
8-CO Line Card or 4-ISDN S0 Line Card	—	1	2
4-CO Line Unit, 4-DID Line Unit, 2-ISDN S0 Line Unit, or 6-ISDN S0 Line Unit	1	1	2
1-ISDN PRI Line Unit	—	1	1
CO Line	8	12	24
ISDN S0 Line	4	6	12
8-Station Line Unit or 16 SLT Line Circuit Unit	1	2	4
Extension Jack	16	32	64
Station Terminal (including DSS Consoles)	32	64	128
{DSS Console}	{4}	{8}	{16}
Remote Card	—	1	2
9600bps Speed Remote Card*	—	1	2
9600bps Speed Remote Unit	1	—	—
Message Unit	1	1	2
Message Card**	1	—	—

1.5 Specifications

Doorphone	2	2	4
Door Opener	2	2	4
External Pager	1	2	4
External Music Source	1	2	4

*: 9600bps Speed Remote Card cannot be installed directly in KX-TD816, but can be installed in the Message Unit (KX-TD190) and then to the KX-TD816.

** : Message Card cannot be installed directly in KX-TD816, but can be installed in the 9600bps Speed Remote Unit (KX-TD198) and then to the KX-TD816.

System Data

Item	Max. Quantity
Operators	2
System Speed Dialing numbers	500
One-Touch Dialing numbers	24 per station (proprietary telephone)
Station Speed Dialing numbers	10 per station
Call Park areas	10
Absent Message expressions	9
CO Line Groups	8
Toll Restriction Levels	8
Extension Groups	16
Class of Service levels	8
Message Waiting settings	128
Hunting Groups	32

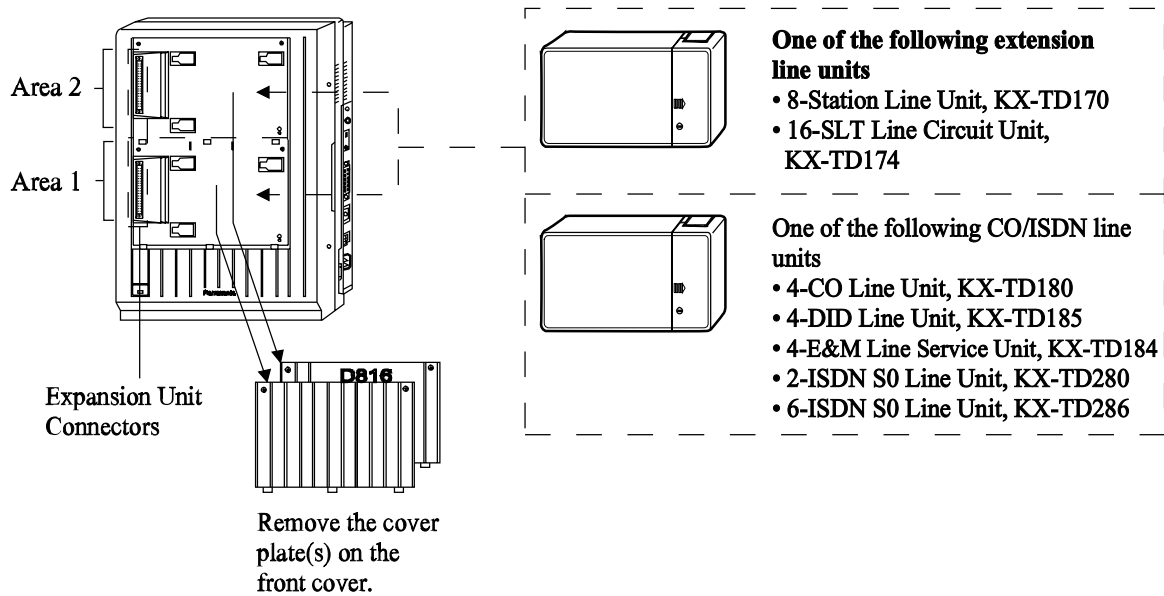
2.4.1 Location of Optional Cards and Units

The locations of the optional units are shown below.

Precautions To protect the printed circuit boards (P-boards) from static electricity, do not touch parts on the P-boards in the main unit and on the optional units. ISDN unit (KX-TD280, KX-TD286, KX-TD290) installation; The ISDN unit should not be installed only to the Slave system.

Expansion Unit for KX-TD816

One Extension Line Unit (KX-TD170, KX-TD174) and/or one CO/ISDN Line Unit (KX-TD180, KX-TD185, KX-TD280, KX-TD286) can be installed to any expansion area.



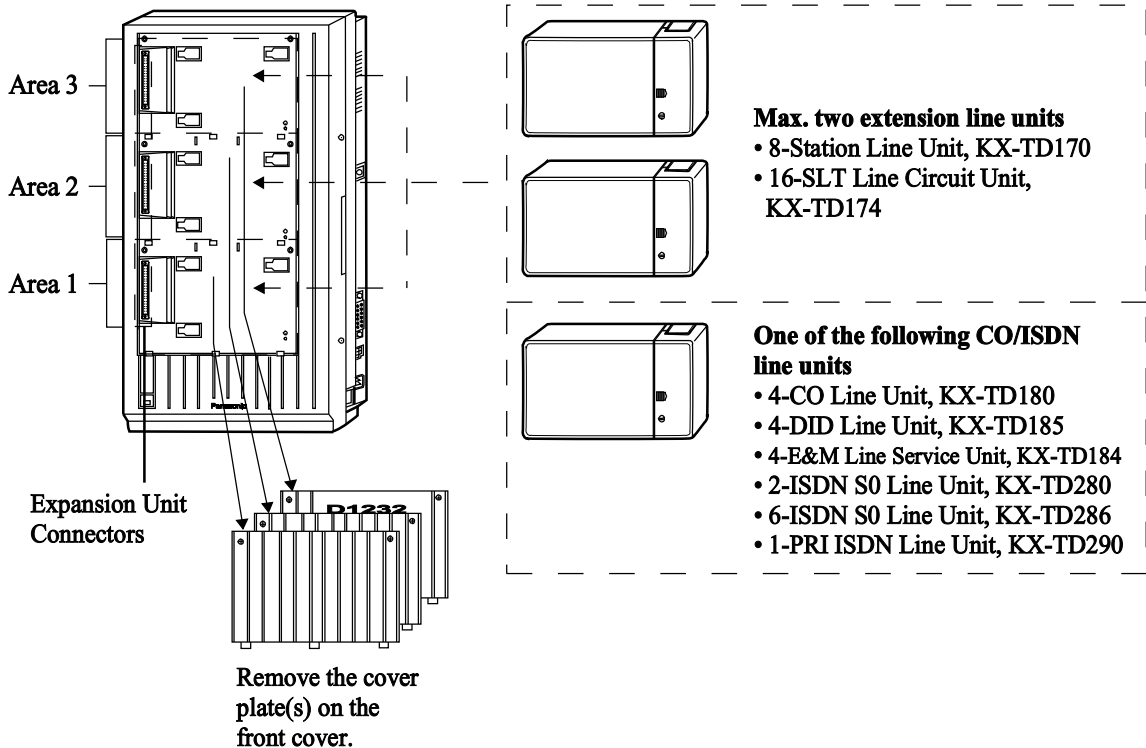
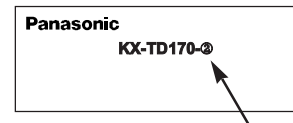
Note

- When starting the system for the first time or performing System Data Clear, the location application will use the actual installation settings instead of the system default settings.
- System Programming is required for location identification. Refer to [109] “Expansion Card / Unit Type” in this manual. Default: Bottom = 4-CO Line Unit, Top = 8-Station Line Unit

2.4.1 Location of Optional Cards and Units

Expansion Unit for KX-TD1232

A maximum of two Extension Line Units (KX-TD170, KX-TD174) and/or one CO/ISDN Line Unit (KX-TD180, KX-TD185, KX-TD280, KX-TD286, KX-TD290) can be installed to any expansion area. You must use the KX-TD170-② when you install the KX-TD290. The former KX-TD170 does not work properly with the KX-TD290. Please see the back of the unit and check “KX-TD170-②” is marked.



Note

- When starting the system for the first time or performing System Data Clear, the location application will use the actual installation settings instead of the system default settings.
- System Programming is required for location identification. Refer to [109] “Expansion Card / Unit Type” in this manual.
Default: Bottom = 4-CO Line Unit,
Middle and top = 8-Station Line Unit

2.4.7-i 6-ISDN S0 Line Unit Connection

To add six ISDN S0 lines, use the optional ISDN 6-S0 Line Unit (KX-TD286). This unit can be installed in any of the expansion areas provided on the front of the main unit. When the KX-TD286 is installed in the KX-TD816, only four ISDN S0 lines are available for outside lines and the other ports are for extension lines (ISDN extensions). Then the two basic analog ports cannot be used. System programming is required for unit location identification.

Programming Reference

Section 4, System Programming
[109] Expansion Card / Unit Type

2.4.7-ii Primary Rate Interface ISDN Expansion Unit Connection*

To add one PRI ISDN line, use the Primary Rate Interface (PRI) ISDN Expansion Unit (KX-TD290).
When this unit is installed to the system, the maximum number of available CO lines is limited to 38.
One PRI ISDN line adds 30 CO lines (CO 25 through CO 54) to the system.
This unit can be only installed to the KX-TD1232 Master system. System programming is required for unit location identification.

Programming Reference

Section 4, System Programming
[109] Expansion Card / Unit Type
[450] PRI Configuration
[451] PRI Reference CO

2.4.7-iii 16 SLT Line Circuit Unit Connection

To add 16 single line telephones (SLT's) to be connected to jacks 09 through 16 for the KX-TD816, or jacks 17 through 24 or jacks 25 through 32 for the KX-TD1232, use the optional 16 SLT Line Circuit Unit (KX-TD174).
Installing two units allows 32 SLT's to be connected to jacks 17 through 32 for the KX-TD1232. This unit can be installed in any of the expansion areas provided on the front of the main unit. System programming is required for unit location identification.

Programming Reference

Section 4, System Programming
[109] Expansion Card / Unit Type

*: Available for KX-TD1232 only.

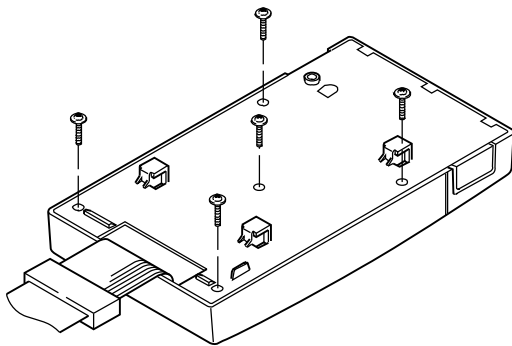
2.4.8 Installing Expansion Unit (KX-TD170 / KX-TD180(D) / KX-TD185 / KX-TD280)

Preparation (KX-TD816 only)

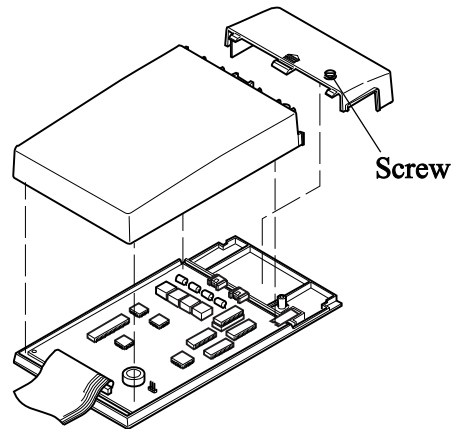
When the KX-TD280 is installed in the KX-TD816, the following jumper change procedures are necessary. Otherwise, the system may not work properly. However, when the ROM Version P421L or later is installed, these procedures are not necessary.

Note To protect the printed circuit board (P-board) from static electricity, discharge the static electricity from your body (for example, touch an iron bar etc.). If you take the P-board out of the cabinet, place the removed P-board on an insulated surface.

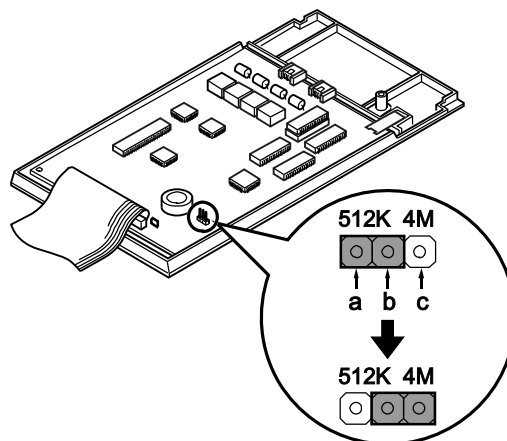
1. Loosen the five screws on the back cover of the unit.



2. Loosen the screw and remove the front covers.



3. Remove the jumper cover from the pins of 512K ("a" and "b") and cover the pins of 4M ("b" and "c"). Replace all of the disassembled parts.

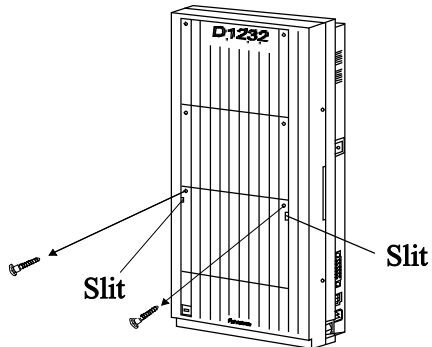


2.4.8-i Installing the Expansion Unit (KX-TD286 / KX-TD290 / KX-TD174)

Installation

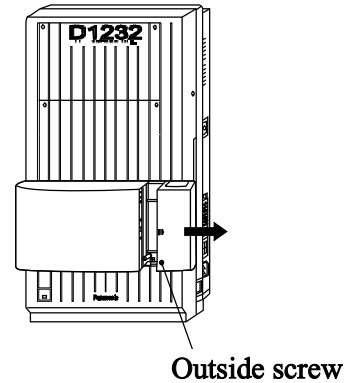
The following procedures can be used to install the optional units. The KX-TD1232 is illustrated as the main unit.

1. Loosen the two screws on the cover plate. Insert fingers into the slits to remove the cover plate.

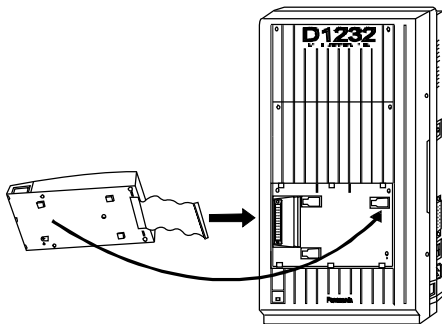


Note Any of the cover plates can be removed, as needed.

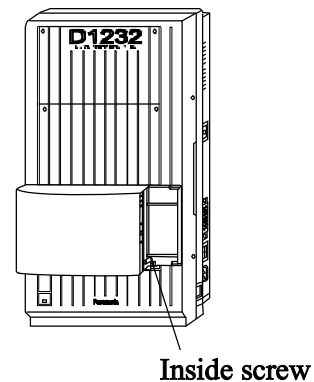
4. Loosen the outside screw and slide the cover to the right.



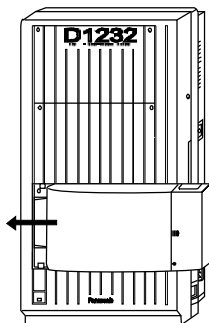
2. Connect the cabinet cord to the connector in the main unit firmly.



5. Secure the inside screw (included) to fix the cabinet to the main unit.



3. Hook the cabinet on the main unit and slide the cabinet to the left until it is secured.



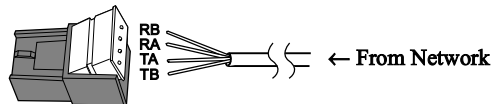
Note Be sure to fix the inside screw to the main unit, or the unit may not work properly.

2.4.8-i Installing the Expansion Unit (KX-TD286 / KX-TD290 / KX-TD174)

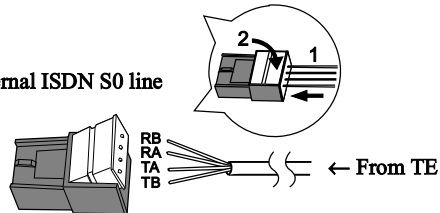
6. ■ If a KX-TD286 is to be installed:

- 6-1. Prepare the required plugs. Six 4-pin plugs are included in KX-TD286 to connect CO lines.

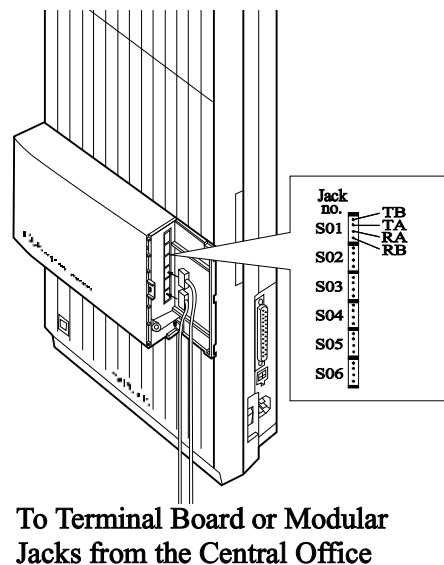
Wiring for external ISDN S0 line



Wiring for internal ISDN S0 line



- 6-1. Insert the plug into a jack on the unit.
Connect an earth wire to the earth terminal on the KX-TD286.

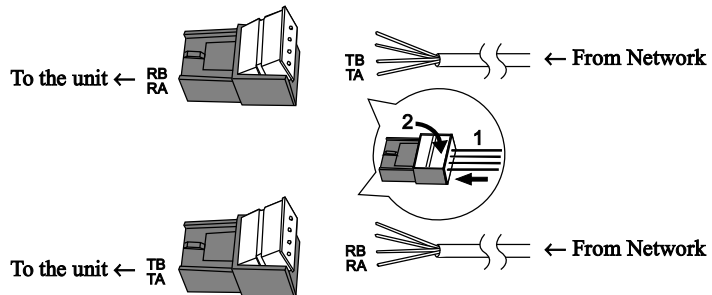


Note For the KX-TD816, Jack numbers S05 and S06 are fixed as extension lines and for the KX-TD1232, all ports can be either for CO line or extension line.

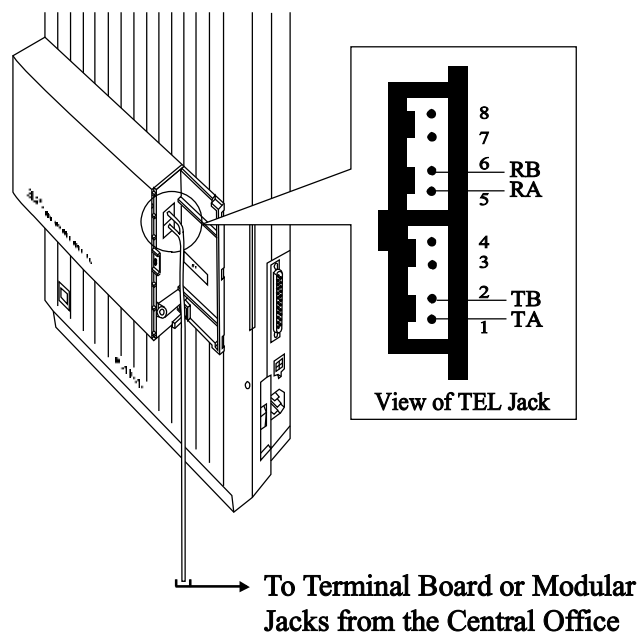
2.4.8-i Installing the Expansion Unit (KX-TD286 / KX-TD290 / KX-TD174)

■ If a KX-TD290 is to be installed (KX-TD1232 only):

- 6-1. Prepare the required plugs. Two 4-pin plugs are included with the KX-TD290.



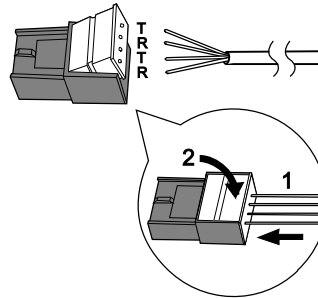
- 6-2. Insert the plug into a jack on the unit.
Connect an earth wire to the earth terminal on the extension expansion unit.



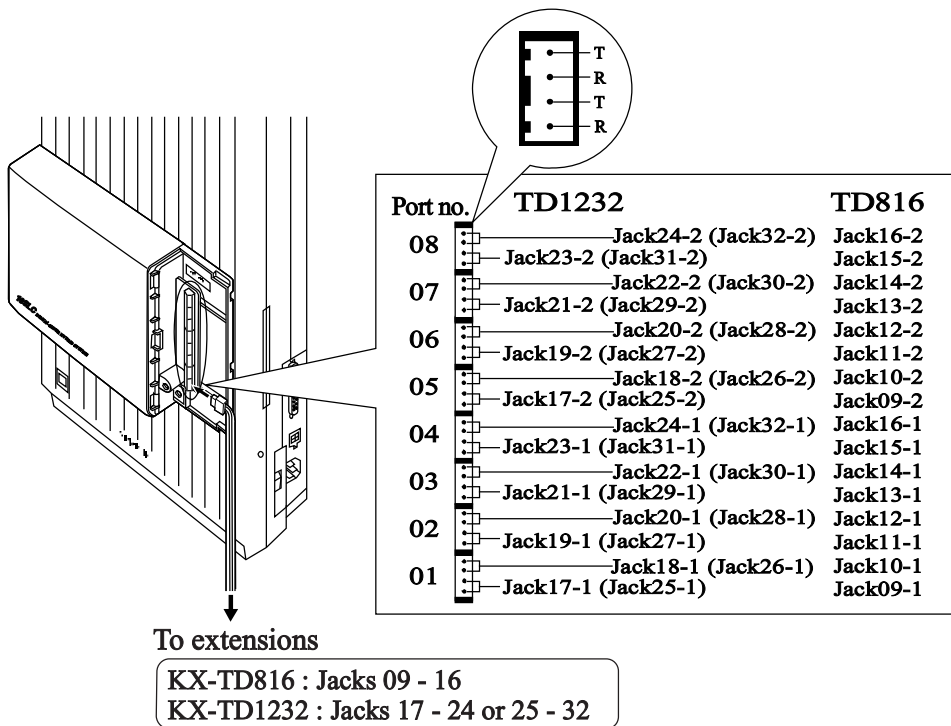
2.4.8-i Installing the Expansion Unit (KX-TD286 / KX-TD290 / KX-TD174)

■ If a KX-TD174 is to be installed:

6-1. Prepare the required plugs. Two 4-pin plugs are included with the KX-TD174.



6-2. Insert the plug into a jack on the unit.



Note:

- The Jacks are arranged in numerical order from bottom to top in the connector. The first four ports are for the first jack (Jack xx - 1) and the last four ports are for the second jack (Jack xx - 2).

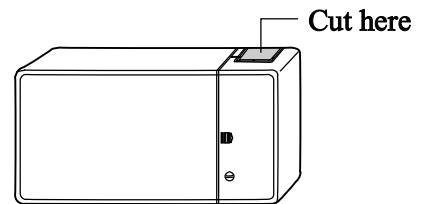
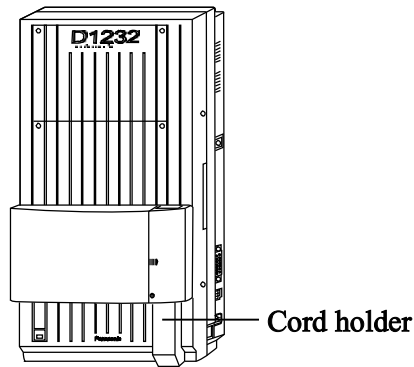
SAFETY CAUTION

The small cover which provides access to connectors CN301, CN302 and CN303 shall not have its cable knock-out section removed, unless another expansion unit is mounted above which would prevent finger access via the cable knock-out opening. This safety requirement is necessary to prevent user access to network voltages.

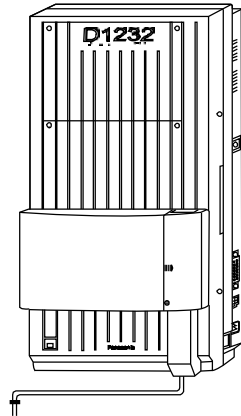
2.4.8-i Installing the Expansion Unit (KX-TD286 / KX-TD290 / KX-TD174)

7. Tie all of the cords into a bundle. If other cords are exposed in the upper cabinets, tie them also.
8. Close the cabinet cover and secure the outside screw.
9. Cover the cords with the cord holder (included).

Note If two or three expansion units are installed, cut the cabinet cover(s) on the lower cabinet(s) to allow the cords from upper cabinet to go down through the cabinet cover(s). To protect the cords, smooth the cut edges.



10. Fix the cords to the wall as shown so that the front cover can be opened.



2.4.8-ii Installing the Expansion Unit (KX-TD184)

Installation

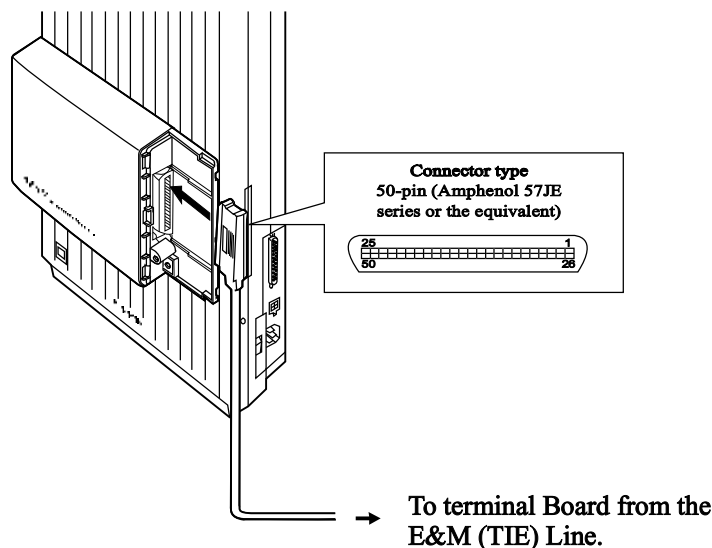
Installing one unit to the system allows four E&M (TIE) lines to be connected to CO lines 05 through 08 for the KX-TD816, or CO lines 09 through 12 or 21 through 24 for the KX-TD1232. This unit can be installed to any of the expansion areas provided on the front of the system.

For unit installation, refer to the procedure “Section 2.4.8-i Installing Expansion Unit (KX-TD286 / KX-TD290 /KX-TD174)” in this manual. Steps 1 through 5 and 7 through 10 of the installation procedure are the same as other expansion units. Step 6 is different for each unit. Please note the following instructions below instead of step 6 (Installation Manual) for this unit.

- Note**
- System Programming [109] Expansion Unit Type is required for expansion unit location identification.

Step 6

- If the KX-TD184 is installed, use an Amphenol Connector to connect the E&M (TIE) lines. Insert the connector into the jack.



- Be sure to secure the inside screw, or the unit may not work properly.
- To fix the connector, refer to “Section 2.4.4 Installing Expansion Unit (KX-TD170/KX-TD180), Amphenol 57 Type (screw-attach-type 50-pin connector) Connection for KX-TD170” in the main Installation Manual.
- For jack connection, please see “Cable Pin Numbers to Be Connected” on the next page.
- The KX-TD1232 is illustrated above.

2.4.8-ii Installing the Expansion Unit (KX-TD184)

■ Cable Pin Numbers to be Connected (E&M Line)

Connect Pin	Cable Color	Clip No.	Number of Dots	E&M Line	
1	ORN-RED	1	1	NO.1	T } 2-wire or 4-wire - send
26	ORN-BLK	2	1		R } 2-wire or 4-wire - send
2	YEL-RED	3	1		T1 } 4-wire - receive
27	YEL-BLK	4	1		R1 } 4-wire - receive
3	GRY-RED	5	1		E Lead
28	GRY-BLK	6	1		SG Lead
4	WHY-RED	7	1		SB Lead
29	WHY-BLK	8	1		M1 Lead
5	ORN-RED	9	1		SG0
30	ORN-BLK	10	1		M Lead only for Type 5
6	YEL-RED	11	2	NO.2	T } 2-wire or 4-wire - send
31	YEL-BLK	12	2		R } 2-wire or 4-wire - send
7	GRY-RED	13	2		T1 } 4-wire - receive
32	GRY-BLK	14	2		R1 } 4-wire - receive
8	WHY-RED	15	2		E Lead
33	WHY-BLK	16	2		SG Lead
9	ORN-RED	17	2		SB Lead
34	ORN-BLK	18	2		M1 Lead
10	YEL-RED	19	2		SG0
35	YEL-BLK	20	2		M Lead only for Type 5
11	GRY-RED	21	3	NO.3	T } 2-wire or 4-wire - send
36	GRY-BLK	22	3		R } 2-wire or 4-wire - send
12	WHY-RED	23	3		T1 } 4-wire - receive
37	WHY-BLK	24	3		R1 } 4-wire - receive
13	ORN-RED	25	3		E Lead
38	ORN-BLK	26	3		SG Lead
14	YEL-RED	27	3		SB Lead
39	YEL-BLK	28	3		M1 Lead
15	GRY-RED	29	3		SG0
40	GRY-BLK	30	3		M Lead only for Type 5
16	WHY-RED	31	4	NO.4	T } 2-wire or 4-wire - send
41	WHY-BLK	32	4		R } 2-wire or 4-wire - send
17	ORN-RED	33	4		T1 } 4-wire - receive
42	ORN-BLK	34	4		R1 } 4-wire - receive
18	YEL-RED	35	4		E Lead
43	YEL-BLK	36	4		SG Lead
19	GRY-RED	37	4		SB Lead
44	GRY-BLK	38	4		M1 Lead
20	WHY-RED	39	4		SG0
45	WHY-BLK	40	4		M Lead only for Type 5

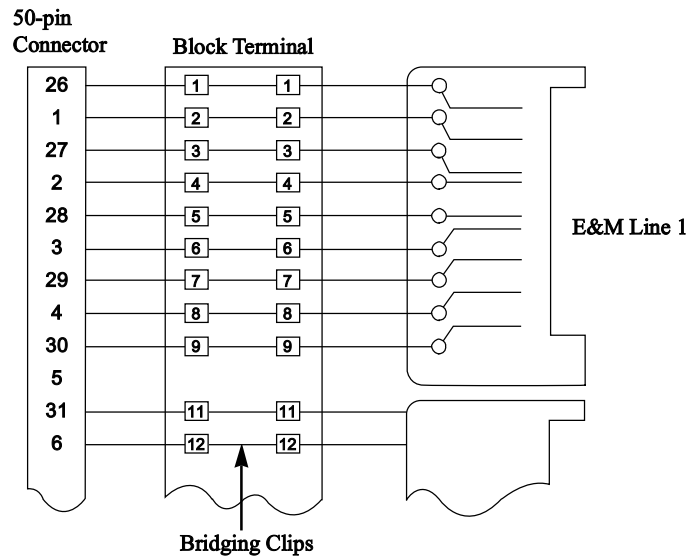
Note:

21-25, 46-50: Cannot be connected

2.4.8-ii Installing the Expansion Unit (KX-TD184)

■ Cable Pin Numbers to be Connected (E&M Line)

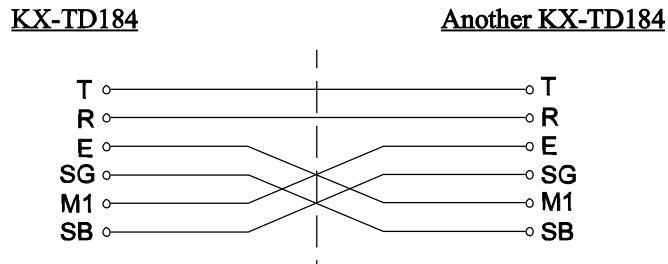
- E&M Line Wiring



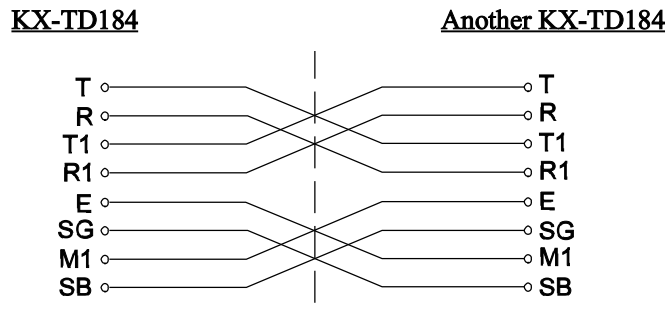
2.4.8-ii Installing the Expansion Unit (KX-TD184)

■ Connecting to another KX-TD816/KX-TD1232 system (KX-TD184)

(1) 2-wire voice path



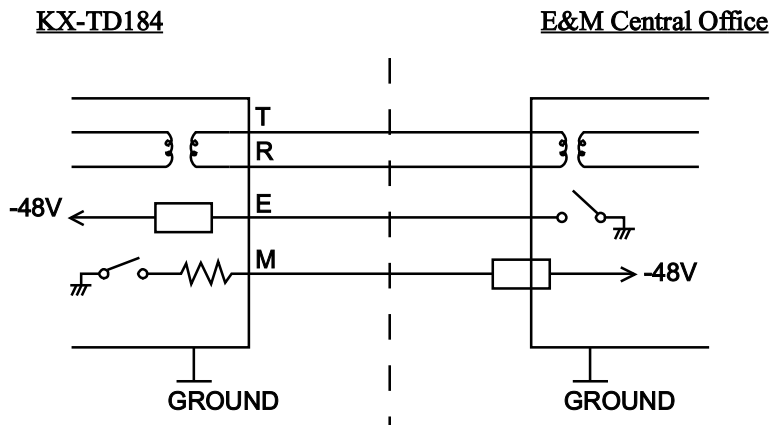
(2) 4-wire voice path



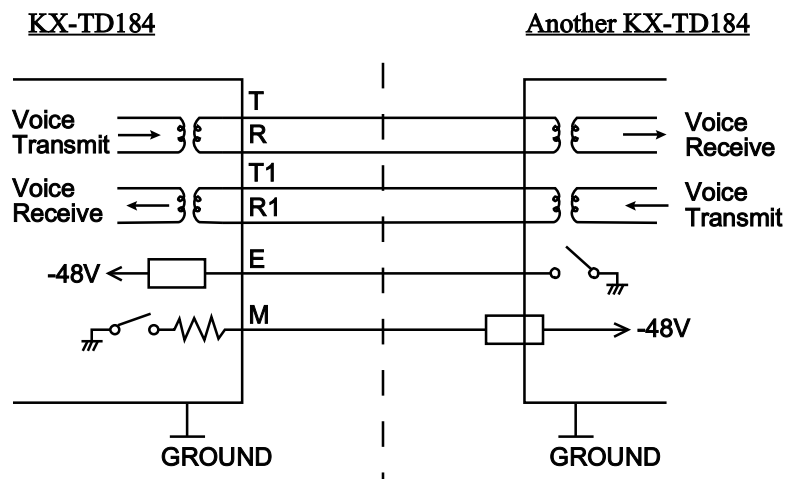
2.4.8-ii Installing the Expansion Unit (KX-TD184)

■ Connecting to the E&M Central Office

(1) 2-wire voice path



(2) 4-wire voice path



2.4.8-iii Internal ISDN S0 Line Connection

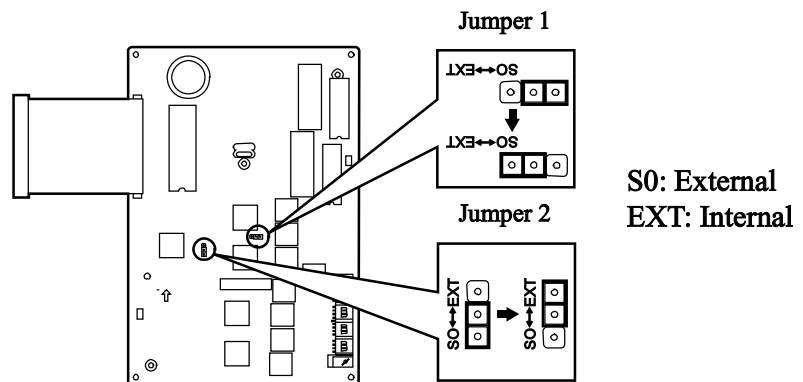
The ISDN S0 Bus on the KX-TD280, KX-TD281 and the KX-TD286 can be used as internal S0 bus. Some ports can be used as either external or internal ISDN S0 Lines. Some System Programs and hardware changes are required to use the S0 bus as internal ISDN S0 lines beforehand.

Preparation

For KX-TD281 only

(Not necessary for KX-TD280 and KX-TD286.)

1. Take the appropriate jumper cover out of the first and second pins from the left on the jumper of the P-board ("S0" side).
Jumper 1 for Port number 03 Jumper 2 for Port number 04
2. Cover the jumper cover on the first and second pins from the right on the jumper of the P-board ("EXT" side).

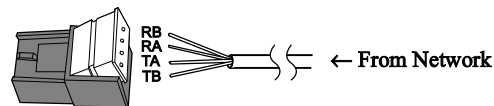


Connection

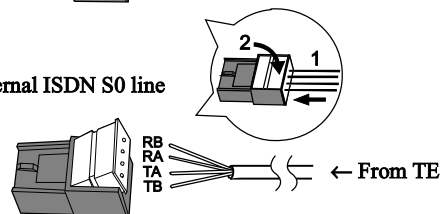
Use 4-pin plugs (included) to connect ISDN S0 lines. A single plug is able to connect one ISDN S0 line. Mis-connection may cause the system to operate improperly.

1. Re-arrange telephone wires in reverse order of the plug.

Wiring for external ISDN S0 line



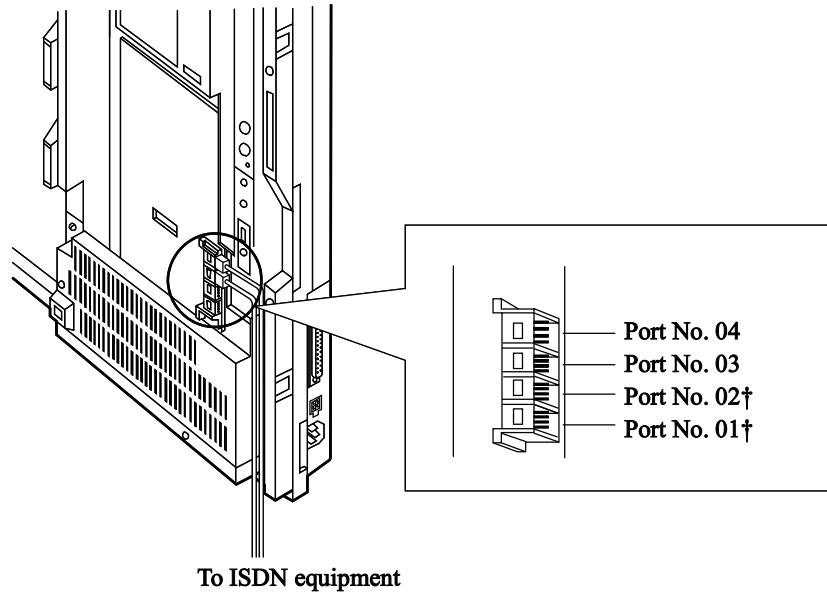
Wiring for internal ISDN S0 line



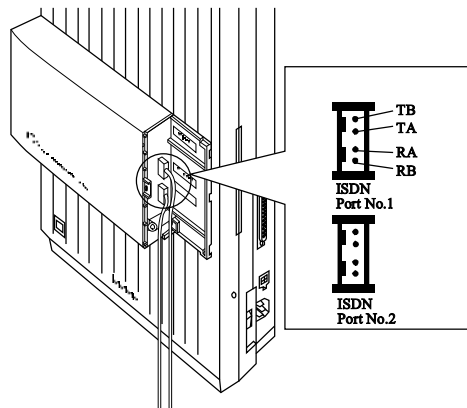
2.4.8-iii Internal ISDN S0 Line Connection

2. Insert the plug into a ISDN S0 port on the unit.

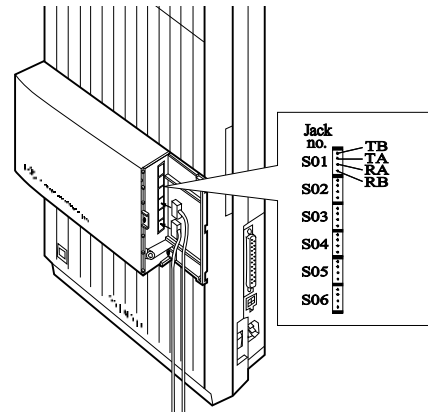
KX-TD281



KX-TD280



KX-TD286



Notes For installing the KX-TD280 or KX-TD286 to main unit, refer to “2.4.8 and 2.4.8-i Installing Expansion Unit” respectively.

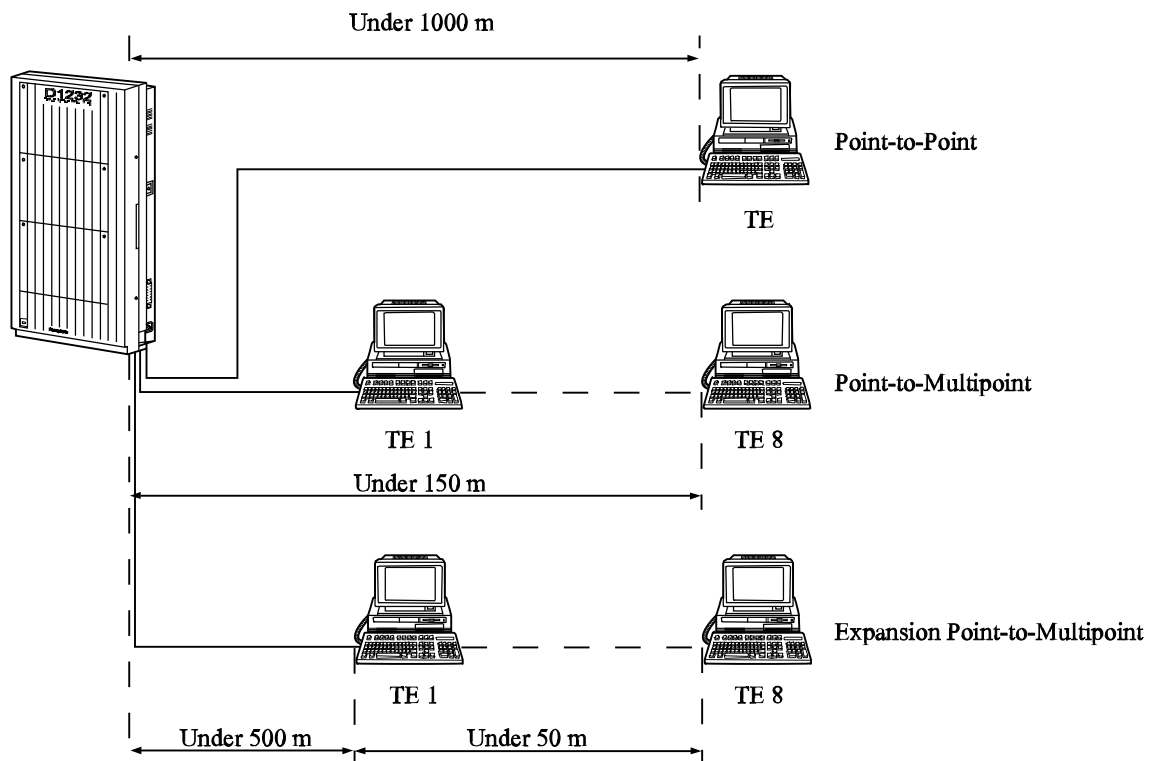
†: Available for external ISDN S0 Line only

3. Connect the lines between the ISDN board and the ISDN device.
4. Plug the AC power cord into the system and an AC outlet.
5. Program “[422] ISDN Port Type” or “[440] TD286 ISDN Port” and other required programs in System Programming.
6. Press the Reset Button with a pointed tool on the main unit.

2.4.8-iii Internal ISDN S0 Line Connection

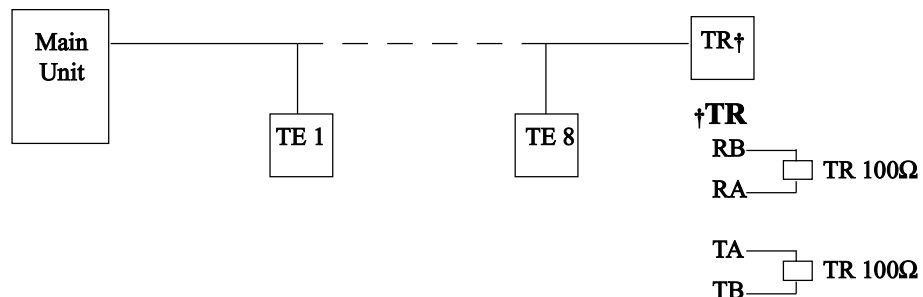
Maximum cabling distance of S0 bus connection

The maximum length of the extension line cord that connects the main unit and the ISDN terminal equipment (TE) is shown below:



Wiring with Terminating Resistors (TR)

The ISDN S0 bus should be terminated with two 100Ω terminating resistors (TR).



Power Supply for ISDN Terminal Equipment (TE)

The system does not provide a power supply to terminal equipment (TE). Depending on the type of TE's, the external power supply is required on ISDN S0 line to operate.

2.4.13 Installing the Message Unit (KX-TD190) / 9600bps Speed Remote Unit (KX-TD198)*

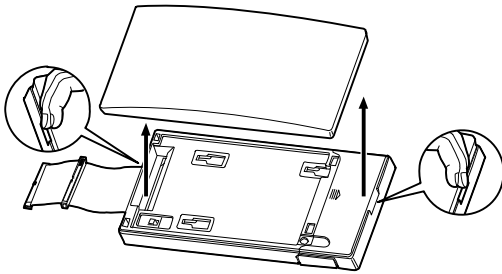
Preparation

The following preparations are necessary before installing the Message or 9600bps Speed Remote Unit.

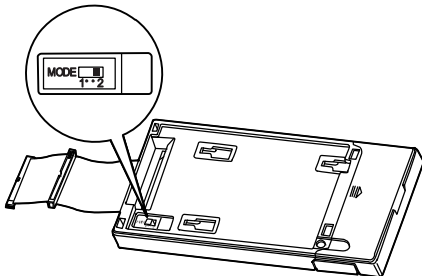
■ KX-TD198 (KX-TD816 only)

It is necessary to set the MODE switch before installing the Remote Unit to the KX-TD816.

1. Remove the front cover of the Remote Unit.



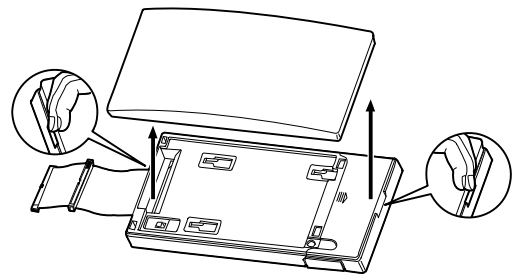
2. Set the MODE switch to 2.



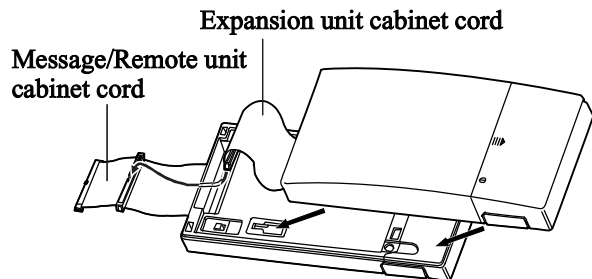
■ KX-TD190 / KX-TD198

It is possible to attach another expansion unit to the Message or Remote Unit and install them to the system. In this case, the following procedures are necessary.

1. Remove the front cover of the Message or Remote Unit.



2. Attach the expansion unit to the Message or Remote Unit as shown below. Be sure to connect the cabinet cords by inserting the expansion unit cabinet cord through the slot in the Message or Remote Unit.



Note The KX-TD198 users must set the MODE switch to 2.

2.4.13 Installing the Message Unit (KX-TD190) / 9600bps Speed Remote Unit (KX-TD198)*

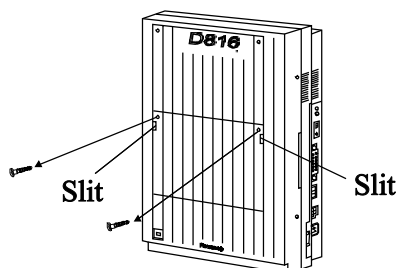
Installation

The following procedures can be used to install the Message or 9600bps Speed Remote Unit.

If it is attached to another expansion unit, refer to the installing procedures of the expansion unit.

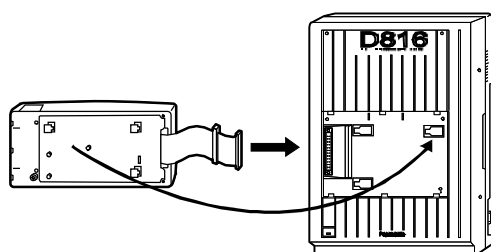
The KX-TD816 is illustrated as the main unit.

1. Loosen the two screws on the cover plate. Insert fingers into the slits to remove the cover plate.

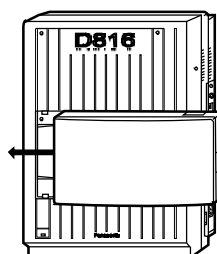


Note Any of the cover plates can be removed, as needed.

2. Connect the cabinet cord to the connector in the main unit firmly.



3. Hook the cabinet on the main unit and slide the cabinet to the left until it is secured.



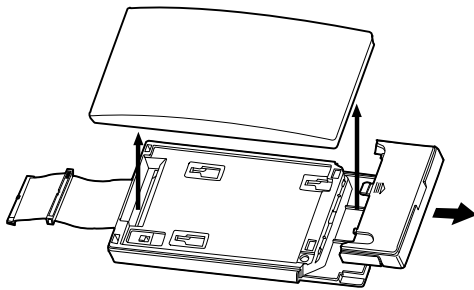
2.4.14 Installing the 9600bps Speed Remote Card (KX-TD197) / Message Card (KX-TD199)

The KX-TD816 user can install the 9600bps Speed Remote Card (KX-TD197) to the Message Unit (KX-TD190), and the Message Card (KX-TD199) to the 9600bps Speed Remote Unit (KX-TD198)*.

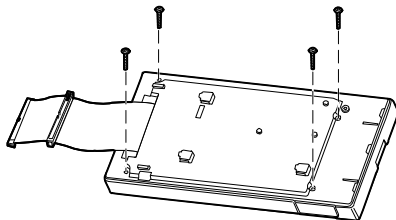
The KX-TD1232 user can install the 9600bps Speed Remote Card (KX-TD197) in the main unit.

KX-TD816

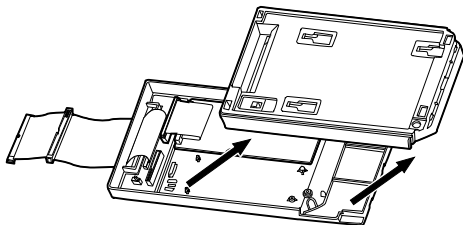
1. Open the front cover of the unit, slide the side cover to the right and remove it.



2. Turn over the unit and remove the four screws.

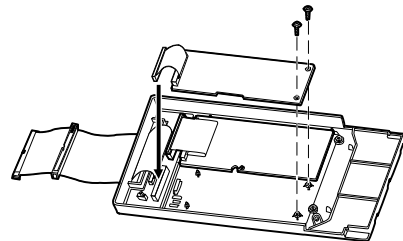


3. Turn over the unit again and remove the inside cover.

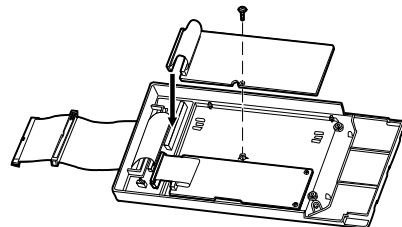


4. Install the card, secure the screw(s) (included with the KX-TD190 or KX-TD198) and connect the cable to the connector.

To install the KX-TD197 to the KX-TD190



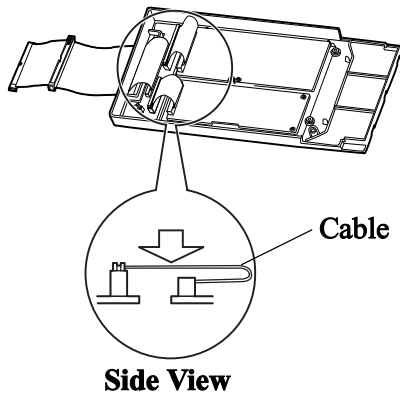
To install the KX-TD199 to the KX-TD198



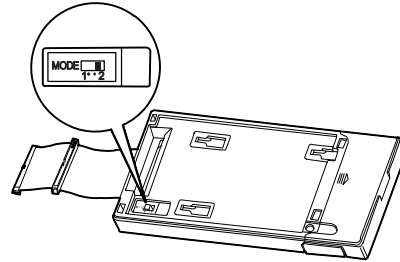
Note The KX-TD190 is illustrated as an example.

2.4.14 Installing the 9600bps Speed Remote Card (KX-TD197) / Message Card (KX-TD199)

5. Flatten the cable to replace the inside cover properly.

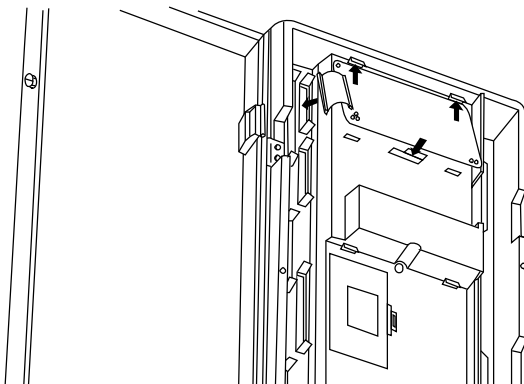


6. Replace the inside cover and secure the four screws on the back.
Also, replace the side cover.
7. Set the MODE switch to 2.

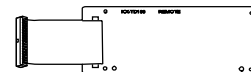


8. Replace the front cover.
9. Install the unit to the main unit.
Refer to pages 38 and 39 for installation.

KX-TD1232



1. Open the front cover.
2. Insert the top side of the Remote card into the two hooks on the main unit.
3. Press down on the two corners of the bottom side of the Remote card.
4. Connect the cord to the Remote card connector.



9600bps Speed Remote Card

Programming Reference

Section 4, System Programming
[817] TD197 Baud Rate Set

Feature Reference

Section 3, Features
System Programming and Diagnosis with Personal Computer

Alert Indication

Description

If the following situations occur, the pre-warning indication is displayed on the proprietary telephone of Operator 1 in Day mode.

Memory: When the system finds the wrong system data, the indication “System Data Err 1” is displayed.

Printer: When the paper of the printer for SMDR runs out or the printer is out-of-service, the indication “Check Printer” is displayed. Check the printer.

Connection*: When a system inter-connection error occurs and system connection operation is interrupted, the indication “System Link Down” is displayed. Connect the interface between the systems and press the Reset Button on both systems.

Conditions

None

Programming Reference

No Programming required.

Feature Reference

None

Operation References

—User Manual
Addendum

Operator Service Features
Alert Indication

Automatic Callback Busy (Camp-On)

Description

Allows the caller to be informed when the called party has completed the current call.

Automatic Callback – Extension

If the caller answers the callback ringing, the called extension automatically starts ringing again.

Automatic Callback – CO Line

If the caller answers the callback ringing, the line is automatically selected to allow the user to make an outside call.

Conditions

- If the callback ringing is not answered in four rings (within 10 seconds) the callback is cancelled.
- More than one extension user can set this function to one extension or CO line at the same time.

3 Features



Programming References

Section 4, System Programming
[100] Flexible Numbering, Automatic callback busy cancel

Feature References None

Operation References DPT Features, SLT and ISDN Telephone Features
—User Manual & Automatic Callback Busy (Camp-On)
User Manual
Addendum

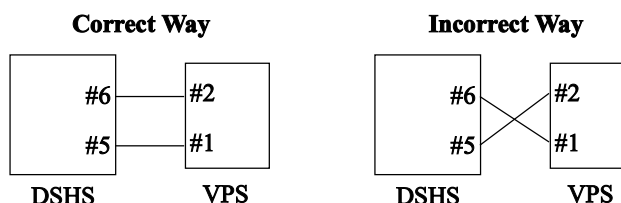
Automatic Configuration†

Description The system sends the VPS data which contains the extension number configuration information and the VPS automatically creates mailboxes with this data (Quick Setup).

Conditions

- The data is transmitted to the VPS on the lowest jack port.
- If two or more lines are connected with the VPS, the port(s) with lower number(s) on the system need to be connected to one(s) with lower number(s) on the VPS.

<Example>



Programming References

No programming required.

Feature References None

Operation References Not applicable.

†: Available when the Digital Super Hybrid System is connected to a Digital Proprietary Telephone capable Panasonic Voice Processing System (one that supports digital proprietary telephone integration; e.g. KX-TVP100).

Automatic Overflow and Hurry-Up Transfer

Description

When Operator 1 is busy and an outside call reaches Operator 1 directly, the incoming call can be held until the waiting queue is over the assigned number. When the incoming call is over the assigned number, the last call will be transferred to Operator 2.

(Automatic Overflow)

Operator 1 can refer the waiting queue with the indicator of the Hurry-Up button, and transfer the first waiting call to the pre-assigned extension with the Hurry-Up button. (Hurry-Up Transfer)

Conditions

- Automatic Overflow does not function in the following cases;
 - a) The waiting queue is set to “0.”
 - b) Operator 2 is not set.
 - c) Operator 1 belongs to a Station Hunting Group.
- Hurry-Up Transfer does not function in the following cases;
 - a) The waiting queue is set to “0.”
 - b) Hurry-Up Button is not assigned.
 - c) Operator 1 belongs to a Station Hunting Group.

Programming References

Section 4, System Programming

[005] Flexible CO Button Assignment

[129] Operator Queue

Station ProgrammingUser Manual

Flexible Button Assignment, Hurry-Up Button

Feature References

Section 3, Features

Operator

Operation References

—User Manual
Addendum

Operator Service Features

Automatic Overflow and Hurry-Up Transfer

3 Features

B

Button, Flexible

Description

The use of flexible buttons is determined by either System or Station Programming. The following three types of flexible buttons are provided on proprietary telephones (PT) and Consoles:

- Flexible CO buttons (provided on PT only)
- Flexible DSS buttons (provided on Console only)
- Programmable Feature (PF) buttons

The below-mentioned table shows all of the features which can be assigned to flexible buttons. In the table, “✓” indicates that the feature can be assigned to the button.

Features to be assigned	Button	CO (PT)	DSS (DSS)	PF (DSS)
Single-CO		✓		
Group-CO		✓		
Loop-CO		✓		
Alert		✓		
Hurry-Up		✓		
Log-In / Log-Out* ¹		✓		
Call Forwarding from Hunting Group* ¹		✓	✓	
Call Pickup Deny* ¹		✓	✓	
Call Waiting* ²		✓	✓	
Calling Line Identification Restriction (CLIR)* ¹		✓	✓	
Connected Line Identification Restriction (COLR)* ¹		✓	✓	
Direct Station Selection (DSS)		✓	✓	
Do Not Disturb for Direct Dialling In Call (DND for DDI)* ¹		✓	✓	
Doorphone Call Forwarding to CO Line* ¹		✓	✓	
Executive Busy Override Deny* ¹		✓	✓	
Live Call Screening†		✓	✓	
Live Call Screening Cancel†		✓	✓	
Message Waiting		✓	✓	
Night* ¹		✓	✓	
Paging Deny* ¹		✓	✓	

†: Available when the Digital Super Hybrid System is connected to a Digital Proprietary Telephone capable Panasonic Voice Processing System (one that supports digital proprietary telephone integration; e.g. KX-TVP100).

Features to be assigned	Button	CO (PT)	DSS (DSS)	PF (DSS)
Paralleled Telephone Connection* ¹		✓	✓	
Phantom Extension		✓	✓	
Pickup Dialling (Hot Line)* ¹		✓	✓	
Two-Way Record†		✓	✓	
Two-Way Transfer†		✓	✓	
Account Code Entry		✓	✓	✓
Conference		✓	✓	✓
FWD/DND		✓	✓	✓
ISDN Service		✓	✓	✓
One-Touch Dialling		✓	✓	✓
One-Touch Dialling with Auto Hold		✓	✓	✓
Saved Number Redial		✓	✓	✓
Terminate		✓	✓	✓
Voice Mail Transfer		✓	✓	✓

†: Available for the KX-TD816/1232 when the Digital Super Hybrid System is connected to a Digital Proprietary Telephone capable Panasonic Voice Processing System (one that supports digital proprietary telephone integration; e.g. KX-TVP100).

*¹ : The buttons which alternate the on / off setting of the corresponding feature.

*² : Pressing this button changes the settings as follows:

Receiving Call Waiting tone → OHCA → Whisper OHCA → none of these

Conditions

- A CO line can only appear on one Single-CO button of any given telephone. A station can only appear on one DSS button of any given telephone or Console.
- It is possible to have multiple appearances of the same Group-CO or Loop-CO buttons on the same telephone. Incoming and outgoing calls on the line are shown on the button in the following priority:
Single-CO > Group-CO > Loop-CO

Programming References

Section 4, System Programming,

[005] Flexible CO Button Assignment

Station ProgrammingUser Manual, Customising the Buttons

Feature References

Section 3, Features,

Buttons on Proprietary Telephones Console

Operation References

Not applicable.

CALL FORWARDING FEATURES – SUMMARY

Description

Call forwarding enables you to have your calls forwarded to a specified destination. You may specify the circumstances under which your calls are forwarded. The following Call Forwarding features are available:

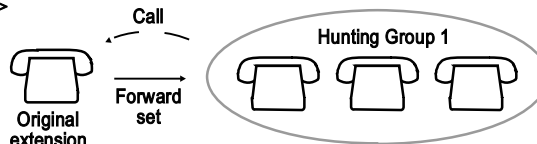
- Call Forwarding – All Calls**
- Call Forwarding – Busy**
- Call Forwarding – Busy / No Answer**
- Call Forwarding – Follow Me**
- Call Forwarding – No Answer**
- Call Forwarding – to CO Line**
- Call Forwarding – by ISDN Line**
- Call Forwarding – from Hunting Group**

Assignable forwarding destinations are: (1) extension, (2) ISDN extension, (3) Hunting Group.

There can be up to four stages of Call Forwarding. The fifth stage will be disregarded. If disregarded, the call will be treated according to the condition of the fourth destination.

It is only possible to call an original extension or Hunting Group from the destination extension or Hunting Group immediately before it (Boss Secretary function).

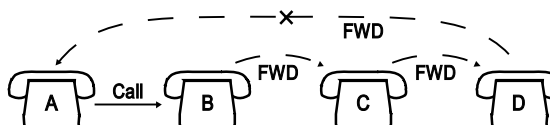
<Example>



Conditions

- Although calls are forwarded, Message Waiting is not. The MESSAGE button indicator is lit on the extension which was originally called.
- Setting this function cancels any other Call Forwarding functions.
- DIL 1:N calls can only be forwarded one stage.
- If the final destination of the Call Forwarding is Voice Processing System, the mailbox number of the extension which was originally called is automatically sent (Follow On ID), even if it is forwarded more than one stage.
- The call will not return to the calling extension by the Call Forwarding function.

<Example>



Call Forwarding – from Hunting Group

Description

Pre-assigned extension users can forward calls arriving at any Hunting Group or calls arriving just at your own Hunting Group. The destination can be another Hunting Group or a specific extension.

Conditions

- Types of calls which are forwarded by this function are:
 - Outside calls – DDI; DIL 1:1; MSN; Intercept Routing; DND transfer; Call Forwarding; Station Hunting
 - Intercom calls – Extension; Transfer; Call Forwarding; Station Hunting
- Class of Service programming determines the extensions that are able to perform this function.
- This feature does not work if the Station Hunting type of the forwarding Hunting Group is Voice Mail (VM) or Automated Attendant (AA).

Programming References

Section 4, System Programming,
[005] Flexible CO Button Assignment
[100] Flexible Numbering, Call forwarding from hunting group
[520] Call Forwarding from Hunting Group
[990] System Additional Information, Area 06 – Bits 10 and 11
Station ProgrammingUser Manual,
Customising the Buttons – Call Forwarding from Hunting Group Button

Feature References

Section 3, Features,
Station Hunting

Operation References —User Manual

Operation – Before Leaving Your Desk
Forwarding Calls from a Receiving Group (Call Forwarding – from Hunting Group)

3 Features



Calling / Connected Line Identification Presentation (CLIP/COLP)

Description

Calling Line Identification Presentation (CLIP) enables showing the calling party's number on the display of the called party's telephone when a call is received.

Connected Line Identification Presentation (COLP) enables showing the called party's number on the display of the calling party's telephone when the called party answers a call.

These features are one of ISDN's services.

To use the CLIP or COLP service, number assignments are required as follows:

- CLIP/COLP number for each outside line
- CLIP/COLP number for each extension

Conditions

- The CLIP service for outgoing CO calls can be restricted by System Programming (CLIR: Calling Line Identification Restriction).
- The number actually sent to the calling or called party may be different from the system programmed number. It depends on the contract with your ISDN supplier.
- It is possible to send the desired CLIP number for one time even if the CLIP number is not assigned.

Programming References

Section 4, System Programming

- [419] Subscriber Number Assignment
- [516] Calling Line Identification Restriction
- [517] Connected Line Identification Restriction
- [623] CLIP/COLP Number Assignment for Extension
- [624] CLIP/COLP Number Assignment for ISDN Extension
- [632] CLIP/COLP Number Assignment for KX-TD286 Extension

Feature References

Section 3, Features

Caller ID

Operation References

—User Manual
Addendum

DPT Features, SLT and ISDN Telephone Features

Calling/Connected Line Identification Presentation (CLIP/COLP)

Call Park

Description

Allows the extension user to place a held call into a system parking area. This releases the user from the parked call to perform other operations. The parked call can be retrieved from any extension.

Conditions

- The system contains 10 parking areas, each of which has its own call park number. Up to 10 calls can be parked at the same time in the system. Under the System Connection,* all users may access the same call parking area. The number of holding slots remains at 10.
- If a parked call is not retrieved within Transfer Recall Timer period, Transfer Recall starts to the operator or the extension that parked the call.
- If Call Park Recall is not retrieved in 30 minutes, it is automatically disconnected.
- A confirmation tone is sent to the user when the parked call is retrieved. Eliminating the tone is programmable.

Programming References

Section 4, System Programming

[100] Flexible Numbering, Call park / call park retrieve

[201] Transfer Recall Time

[990] System Additional Information, Fields (11), (16)

Feature References

None

Operation References —User Manual

DPT Features, SLT and ISDN Telephone Features
Call Park

3 Features



Class of Service (COS)

Description

COS is used to define the features which are allowed for a group of extensions. Each extension is assigned a primary and a secondary COS number. Eight Classes of Service are available.

Conditions

- The operator can switch the extension's COS between primary and secondary.
- A list of the programmable items is given below:
 - (1) The ability to forward a call to an outside party
 - (2) The ability to transfer a call to an outside party
 - (3) The ability to override Do Not Disturb of the called extension
 - (4) Account Code Entry operation – verified - all calls / verified - toll restriction override / option
 - (5) Outgoing call restriction level (Day mode / Night mode) – 1 through 8
 - (6) Restriction of outside call duration
 - (7) The number of permitted dialing digits during an outside call
 - (8) The ability to set Call Forwarding – Follow Me
 - (9) System speed dialing call restriction level (Day / Night mode)
 - (10) The ability to switch the Day/Night service
 - (11) The ability to unlock the door opener
 - (12) The ability to set Do Not Disturb for Direct Dialing In Call
 - (13) The ability to set Connected Line Identification Restriction
 - (14) The ability to set Calling Line Identification Restriction
 - (15) The ability to perform Off-Hook Call Announcement (OHCA)
 - (16) The ability to set Call Forwarding – from Hunting Group
 - (17) The ability to set Doorphone Call Forwarding to CO Line

Programming References

Section 4, System Programming

- [500]–[501] Toll Restriction Level — Day / Night
- [502] Extension-to-CO Line Call Duration Limit
- [503] Call Transfer to CO Line
- [504] Call Forwarding to CO Line
- [507] Do Not Disturb Override
- [508] Account Code Entry Mode
- [509]–[510] Toll Restriction Level for System Speed Dialing — Day / Night
- [511] Door Opener Access
- [512] External Relay Access
- [513] Night Service Access
- [514] Do Not Disturb for Direct Dialing In Call
- [516] Calling Line Identification Restriction
- [517] Connected Line Identification Restriction
- [519] Off-Hook Call Announcement (OHCA)

- [520] Call Forwarding from Hunting Group
- [521] Doorphone Call Forwarding to CO Line
- [601] Class of Service
- [613] ISDN Class of Service
- [627] TD286 Class of Service
- [991] COS Additional Information

Feature References None

Operation References **Operator Service Features**
 —User Manual Class of Service (COS) Switch
 Addendum

CO Incoming Call Information Display

Description Provides the display proprietary telephone user with pre-assigned information if an incoming outside call is received. You can select one of the following by system programming.

- The caller's telephone number and name — available for an ISDN line provided with the CLIP (Calling Line Identification Presentation) feature.
- The CO line number and CO line name — this information is useful in the following case:
 When several divisions or companies are connected to one system and they have their own CO lines, a user can check the called party by the LCD before answering the call if each division's or company's name is assigned to a CO line.
- DDI number and Name of the called party — available for incoming DDI calls only.

The initial display on the LCD of the called extension is as follows:

Called to Type	Extension including Operator	Phantom Extension	Hunting Group
DIL 1:N	Selected Caller / CO line /DDI	No incoming call is received.	No incoming call is received.
DIL 1:1	Selected Caller / CO line /DDI	Selected Caller / CO line /DDI	DDI number of hunting group
DDI	Selected Caller / CO line /DDI	Selected Caller / CO line /DDI	DDI number of hunting group

3 Features



Conditions

- It is required to name CO lines and extensions by system programming.
- With the CLIP feature, the ISDN line informs the system of the caller's telephone number. To display the name, the system compares the informed number with the System Speed Dialing Numbers stored in program [001] and if a match is found, determines the caller's name by using the System Speed Dialing Names stored in program [002].
- The display DPT (KX-T7230, KX-T7235, KX-T7433 or KX-T7436) user can record the call information received by the CLIP feature (CO Incoming Call Information Log feature).
- If the assigned information cannot be displayed, it will be shown according to the following priority:
 Caller → CO Line → DDI

Connection References

Section 2, Installation

- 2.4.2 CO Line Connection (KX-TD1232: CO1 through CO8)
- 2.4.7 2-ISDN S0 Line Connection
- 2.4.7-i 6-ISDN S0 Line Connection
- 2.4.7-ii Primary Rate Interface ISDN Expansion Unit Connection

Programming References

Section 4, System Programming

- [001] System Speed Dialing Number Set
- [002] System Speed Dialing Name Set
- [003] Extension Number Set
- [004] Extension Name Set
- [012] ISDN Extension Number Set
- [013] ISDN Extension Name Set
- [421] CO Line Name Assignment
- [622] Incoming Call Display

Feature References

Section 3, Features

- CO Incoming Call Information Log

Operation Reference

—User Manual
Addendum

DPT Features

- CO Incoming Call Information Display

Completion of Calls to Busy Subscriber (CCBS)

Description

Allows the extension users to set the telephone to receive callback ringing when a busy called party on an ISDN line becomes free. A special dial tone informs the caller that the called party is busy. When the caller answers the callback ringing, other party's number is automatically dialed.

This feature is one of ISDN's services and its availability depends on the service of your telephone company.

This feature is in accordance with the ETS 300 359.

(ETS: European Telecommunication Standard)

Conditions

- This feature is enabled or disabled by System Programming.
- An extension can set only one CCBS at a time.
- A proprietary telephone (PT), single line telephone (SLT) and portable station (PS) can set the CCBS to a busy party.
- The CCBS that has been set by an outside party works only if the called busy extension is a PT or SLT and the call arrives via DIL 1:1, DDI 1:1 and MSN 1:1.
- If the callback ringing is not answered in four rings (within 10 seconds) the callback is cancelled.
- The callback rings even if the extension has set the Call Forwarding or Do Not Disturb (DND).
- The caller can use the telephone before the callback rings. The setting is cancelled only in the following conditions.
 - By the cancelling operation.
 - If there is no callback ringing within 60 minutes.
 - If the system power is off. / If you reset the system.
- This feature does not work if the extension has set Data Line Security.
- The time the system waits before sending a CCBS signal while hearing a special dial tone is programmable.
- To activate this feature, use the following software version of the ISDN Card or Unit.

ISDN Card / Unit Type	Software Version
KX-TD280 / KX-TD281 / KX-TD282 / KX-TD283	P071V / P072V or after
KX-TD286	P831H / P832H or after
KX-TD290	P851F / P852F or after

Programming References

Section 4, System Programming,

[100] Flexible Numbering, CCBS cancel

[153] Completion of Calls to Busy Subscriber (CCBS)

3 Features

C

[990] System Additional Information, Area 07 – Bits 16 and 15

Feature References

Section 3, Features,
Dial Tone, Distinctive

Operation References —User Manual

Operation – Making Calls
When the Dialed Line is Busy or There is No Answer
– Completing a call to a busy party on an ISDN line (Completion of Calls to Busy Subscriber [CCBS])

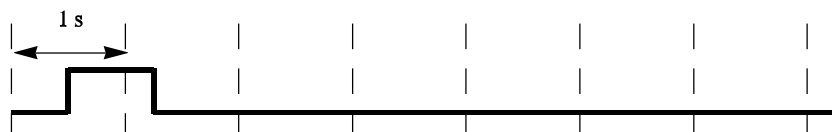
Confirmation Tones

Description

At the end of many different functions the system confirms the success of the operation by sending a confirmation tone to the extension user through the speaker of the telephone.

Confirmation tone 1:

- (a) Indicates that the new setting differs from the previous setting.
- (b) Set or cancel Electronic Station Lockout.



Confirmation tone 2:

- (a) Indicates that the new setting is identical to the previous setting.
- (b) In addition, sent when various features are successfully performed or accessed. (e.g. Call Hold; Automatic Callback Busy)
- (c) Sent when accessing external paging equipment. (e.g. Paging – All; Paging – External) Confirmation tone from external pagers can be enabled or disabled.



Confirmation tone 3:

Sent when a conversation is established just after dialing.

For example, when accessing the following features by the feature numbers:

- Call Park Retrieve
- Call Pickup
- Hold Retrieve
- Paging / Paging Answer
- TAFAS Answer

This tone can be eliminated by system programming so that the user can start talking instantly.



3 Features



Confirmation tone 4:

Sent when changing from a two-party call to a three-party call, and vice versa (Conference, Unattended Conference). It is possible to eliminate this tone by system programming.



Conditions

Confirmation Tone 1 and 2 are provided to reconfirm the assigned feature.

Programming References

Section 4, System Programming

[805] External Pager Confirmation Tone

[990] System Additional Information, Fields (13), (16)

Feature References

None

Operation References

Not applicable.

Connected Line Identification Restriction (COLR)

Description Allows the extension user to restrict the presentation of the called party's number to the calling party when the calling party is making the call. This feature is one of the ISDN services.

Conditions If the presentation is enabled, the calling party can check the the called party's number before the called party answers (Connected Line Identification Presentation).

Programming References

Section 4, System Programming
[100] Flexible Numbering, COLR
[419] Subscriber Number Assignment
[517] Connected Line Identification Restriction

Feature References None

Operation References **DPT Features, SLT and ISDN Telephone Features**
—User Manual
Addendum
Connected Line Indication Restriction (COLR)

Data Line Security

Description

Data Line Security is a function that can be set by system programming. Once set, communication between the extension and the other end is protected from signal intrusions such as Call Waiting and Hold Recall. Data equipment or a facsimile may be connected to an extension jack so that the user can perform data communications. During the communication, Data Line Security maintains secure data transmission against tones or barging in from other extensions.

Conditions

- If one extension in a conversation has set Data Line Security, it applies to the both extensions.
- The Intercept Routing – No Answer (IRNA) feature is not available for incoming calls to the extensions to which the Data Line Security feature is assigned.

Programming References

Section 4, System Programming
[612] Data Line Security

Feature References

None

Operation References

Not applicable.

Direct Dialing In (DDI)

Description

Provides automatic direction of an incoming ISDN line call to a specific extension. Assignable destinations are: (1) Operator, (2) extension, (3) Hunting Group, (4) TAFAS, (5) modem, (6) Phantom extension, (7) Voice Mail extension, and (8) ISDN extension. This requires a number received from the ISDN network. The number is converted to a specific extension number by using a pre-programmed conversion table.

Location No.	[150] ISDN DDI Translation Table	[151] ISDN DDI Ringing Assignment — Day	[152] ISDN DDI Ringing Assignment — Night
000	2011111	101	201
001	2012222	102	202
:	:	:	:
399	2019999	109	109

Conditions

- To use the DDI service, “DDI” must be selected in program [420]/[429] “ISDN Ringing Service Assignment — Day / Night.”
- An incoming DDI call is converted as programmed in [111] “ISDN DDI / MSN Removed Digit / Added Number Assignment.”
- If an incoming DDI call cannot be sent to a specific extension, it will be sent to an operator or extension according to DIL 1:N. Selecting an operator or extension depends on program [990] “System Additional Information, Fields (33), (34).”
- It is possible to deny answering the DDI call on a Class of Serve basis.

Programming References

Section 4, System Programming

[111] ISDN DDI / MSN Removed Digit / Added Number Assignment

[150] ISDN DDI Translation Table

[151]–[152] ISDN DDI Ringing Assignment — Day / Night

[420]/[429] ISDN Ring Service Assignment — Day / Night

[990] System Additional Information, Fields (33), (34)

Feature References

Section 3, Features

Do Not Disturb for Direct Dialling In Call

Integrated Services Digital Network (ISDN)

Operation References Not applicable.

Do Not Disturb (DND)

Description

Allows an extension user to appear busy to an incoming extension call or allows to transfer an incoming outside call to the assigned extension. This can be set or cancelled by the extension user.

Conditions

- If your proprietary telephone (PT) is not supplied with the FWD/DND button, it can be assigned on a flexible button.
- DND does not work for the following calls: doorphone calls; recalls for hold / Timed Reminder alarm.
- A PT user in DND mode can answer a call by pressing the button showing the arrival of the call.
- An extension in DND mode can be called by other extension users who are allowed to override DND in their Class of Service (Do Not Disturb Override).
- The following extension cannot set DND: operator, the Call Forwarding (C.FWD) destination or the DND destination.
- When the extension has set the C.FWD, DND or DND for Direct Dialing In Call, the extension cannot be a DND destination.
- Setting this feature cancels C.FWD or DND for Direct Dialing In Call.
- If the destination extension has DND activated, then the DSS button corresponding to it will light up red. This indicates to the proprietary telephone or DSS console user that the destination extension is unavailable.

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
[100] Flexible Numbering, Call forwarding / do not disturb
Station ProgrammingUser Manual
Flexible Button Assignment – FWD/DND Button

Feature References

Section 3, Features
Do Not Disturb for Direct Dialing In Call Do Not Disturb (DND) Override

Operation References

—User Manual
Addendum

DPT Features, SLT and ISDN Telephone Features
Do Not Disturb (DND)

Do Not Disturb for Direct Dialing In Call

Description

Allows the pre-assigned extension user to reject answering the direct dialing in call on a Class of Service basis. The rejected call will be transferred to the operator. The operator cannot reject the direct dialing in call. This feature is one of the ISDN services.

Conditions

- Setting this feature cancels Call Forwarding or DND.
- If the destination extension has DND activated, then the DSS button corresponding to it will light up red. This indicates to the proprietary telephone or DSS console user that the destination extension is unavailable.

Programming References

Section 4, System Programming

[100] Flexible Numbering, Do not disturb for DDI

[514] Do Not Disturb for Direct Dialing In Call

Feature References

Section 3, Features

Direct Dialing In (DDI)

Operation References

—User Manual
Addendum

DPT Features, SLT and ISDN Telephone Features

Do Not Disturb For Direct Dialing In Call

Doorphone Call Forwarding to CO Line

Description

Allows the system to forward doorphone calls to ISDN lines. The extension user can change the forwarding destination, to an extension or outside party, for each doorphone. If an outside party is selected, calls to the doorphone are forwarded to the destination assigned in program [021]–[022] “Doorphone Call Forwarding – Day / Night.” If an extension is selected, calls to the doorphone are forwarded to the destination assigned in program [607]–[608] “Doorphone Ringing Assignment – Day / Night.”

Conditions

- Class of Service programming determines the extension users who can forward the doorphone calls to ISDN lines.
- If the transferred call is not answered within the programmed intercept time, the line will be disconnected.
- If a call between a party at a doorphone and an outside party is established with this feature, the duration of the call period may be restricted depending on the setting of the system timer.
- When a doorphone call is transferred to an outside party, either the extension at Jack 01-1 or Operator 1 can be selected for the charge account.

Programming References

Section 4, System Programming,
[005] Flexible CO Button Assignment
[021]–[022] Doorphone Call Forwarding — Day / Night
[100] Flexible Numbering, Doorphone call forwarding to CO line / Doorphone call forwarding mode switch
[218] Doorphone-to-CO Line Call Duration Time
[521] Doorphone Call Forwarding to CO Line
[607]–[608] Doorphone Ringing Assignment — Day / Night
[990] System Additional Information, Area 06 – Bit 14
Station ProgrammingUser Manual,
Customising the Buttons – Doorphone Call Forwarding to CO Line Button

Feature References

Section 3, Features,
Doorphone Call

Operation References —User Manual

Operation – Using User-supplied Equipment
If a Doorphone / Door Opener is Connected – Forwarding doorphone calls to outside parties (Doorphone Call Forwarding to Outside Line)

DSS Console

Description

The Direct Station Selection (DSS) Console provides direct access to extensions and features and busy lamp display.

The DSS Console must be programmed to work with a proprietary telephone (PT). System Programming assigns the jack numbers of the DSS Console and its associated PT.

Up to four consoles for the KX-TD816 and up to eight consoles for the KX-TD1232 can be installed. System Connection* provides for 16 consoles. The paired telephone user can carry out the following operations using the DSS Console:

- Direct access to an extension (Direct Station Selection)
- Quick access to an outside party (One-Touch Dialing)
- Easy transfer of an outside call to an extension (The programmable One-Touch Transfer feature provides simplified operation.)
- Quick access to a system feature

The above functions are activated simply by pressing buttons on the console which were pre-programmed as function buttons.

DSS Consoles are provided with the following buttons listed below:

KX-T DSS Consoles:

Buttons	7240	7440	7441
DSS	✓ (32)	✓ (64)	✓ (48)
PF (Programmable Feature)	✓ (16)		
ANSWER			✓
RELEASE			✓

✓ : The button is provided on the designated telephones.

(x) : Shows the number of buttons only if multiple buttons are provided.

The functions of the listed buttons are described below:

DSS (Direct Station Selection) buttons: Used to access extensions.

Every button is programmed to correspond to an extension. Pressing a button allows the user to call the corresponding extension. Every button is provided with an indicator (Busy Lamp Field), which shows the current state of the corresponding extension as shown in the Table below:

To meet the user's various needs, DSS buttons can be changed to the other function buttons.

Light	State of extension
Off	Idle
On	Busy

Busy Lamp Field Table

E&M (TIE) Line Service

Description

An E&M (TIE) line is a privately leased communication line between two or more PBXs, which provides cost effective communications between company members at different locations. The TIE lines can be used to call through your system to reach another switching system (PBX or CO). By utilizing TIE lines, your system can support not only communications with the public network but with other company locations in the private network where your system is included.

System Explanation

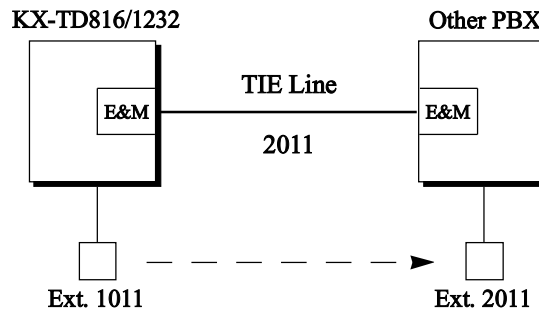
1. Making a TIE Call

One of the following two methods can be used to make a TIE call.

1.1 Extension Number method

Dial the [Extension Number] only to make a TIE call.

<Example>



Explanation

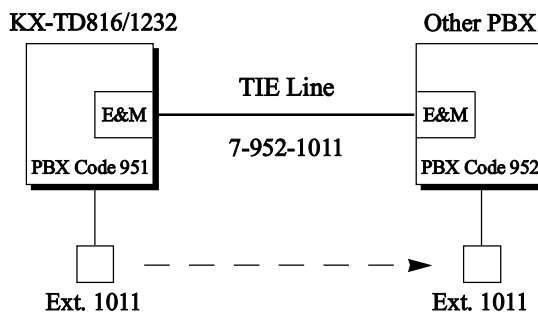
To use this method, it is necessary to change the first one or two digits of extension numbers of either PBX to avoid having the same extension number.

1. Extension 1011 dials extension number "2011".
2. Extension 1011 is connected to extension "2011" of the other PBX.

1.2 PBX Code method

Dial the [TIE Line Access Code] [PBX Code] [Extension Number] to make a TIE call.

<Example>



Explanation

To use this method, it is necessary to have each PBX code in order to identify the location of an extension.

1. Extension 1011 dials TIE line access code “7”, PBX code “952” and extension number “1011”.
2. Extension 1011 is connected to extension 1011 of the other PBX which has PBX code “952”.

2. TIE Line and CO Line Connection

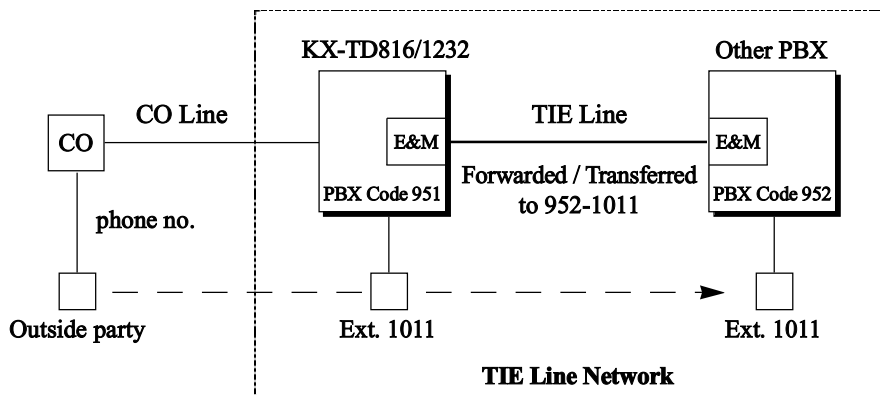
To connect the TIE line with the CO line, the following patterns are available.

2.1 CO-to-TIE Transfer

The system transfers incoming outside calls to the other PBX through the TIE line. The following patterns are available.

■ Call Forwarding / Call Transfer to the TIE line

<Example>



Explanation

The outside caller dials the phone number, and the call is forwarded or transferred to extension 1011 of the other PBX which has PBX code "952".

Note: Setting the destination of Call Forwarding to the TIE line is the same as Call Forwarding to a CO Line.

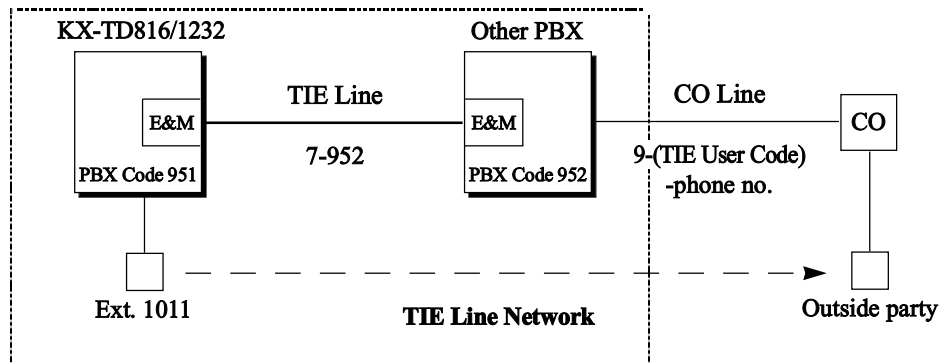
Transferring a call to the TIE line is the same as a Call Transfer to a CO Line.

2.2 TIE-to-CO Transfer

The system transfers TIE calls to the CO line of the other PBX through the TIE line. The following patterns are available.

■ Outside call through the other PBX

<Example>



Explanation

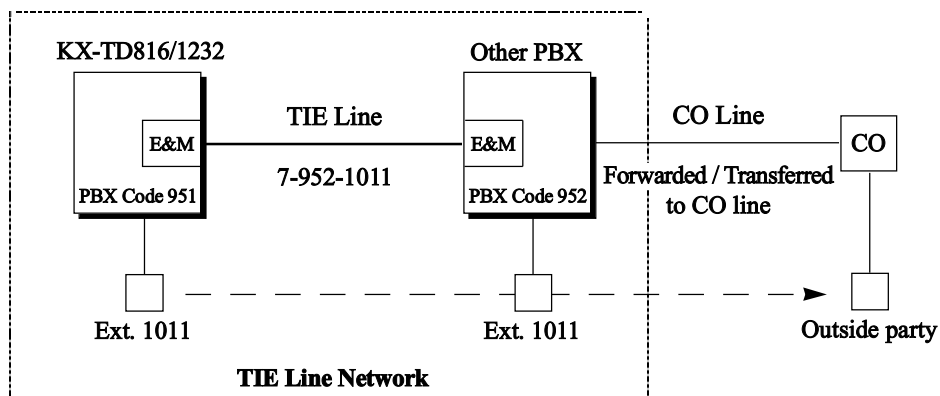
Extension 1011 dials as follows:

1. TIE line access code "7", PBX code "952" and CO line access code "9", and a special dial tone is heard.
 2. The TIE user code (if required) and desired phone number.
- Extension 1011 is connected to the desired outside party through the other PBX which has PBX code "952".

Note: The TIE user code (assigned in program [811]) is required when the CO line security mode is selected in program [455].

■ Call Forwarding / Call Transfer to CO line

<Example>



Explanation

Extension 1011 dials as follows:

1. TIE line access code "7", PBX code "952" and extension number "1011".
2. The call is forwarded or transferred by extension 1011 of the other PBX which has PBX code "952" to the designated CO line.

3. TIE Line Routing Table

The TIE Line Routing Table is referenced by the system to identify the CO line route, when an extension user makes a TIE call.

It is necessary to make unified routing tables with each PBX in your TIE line network.

A routing pattern appropriate for each call is decided by the first three digits (except the TIE line access code) of the dialed number.

There are two system programs for the tables:

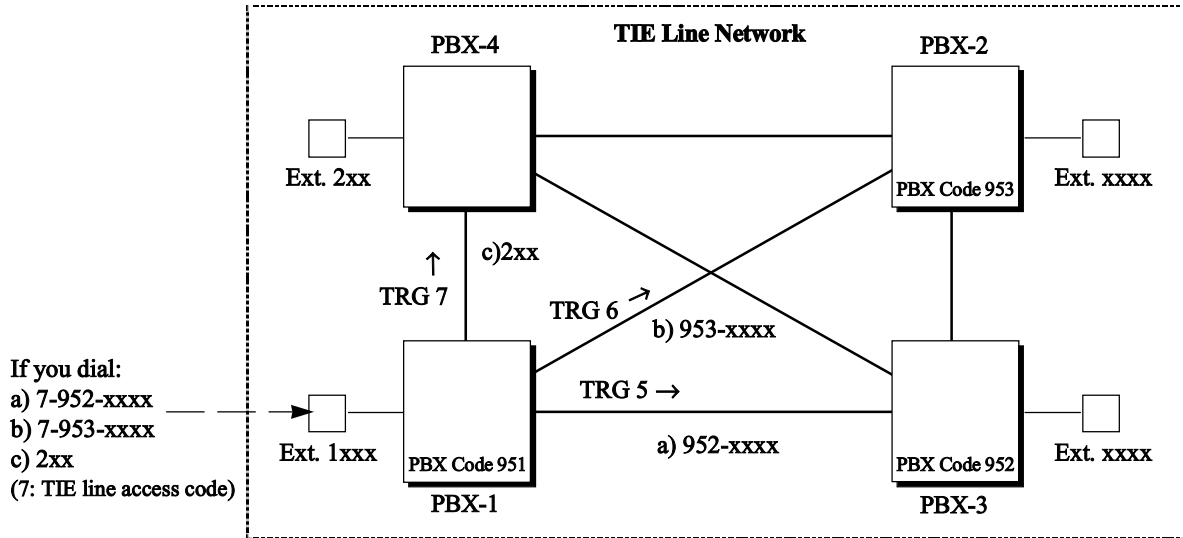
[340] TIE Line Routing Table: used to assign the access number (PBX code or extension number) and CO line group hunt sequence.

[341] TIE Modify Removed / Added Digit: used to assign removed and added digits of the dialed digits of the TIE call.

Programming Example

<Example>

Your system is PBX-1 and there are four PBXs in your TIE line network. To identify the CO line route as illustrated below, you should make the following routing table.



TIE Line Routing Table of PBX-1

Location No.	PBX Code / Ext. No.	Removed Digit	Added Digit	CO Line Group Hunt Sequence				
				01	02	03	04	05
01	952	0		5	6			
02	953	0		6	5			
03	2xx	0		7				

Explanation

Location 01: The hunt sequence by dialing [7+PBX Code 952]:

The 1st route — CO line group (TRG) 5

The 2nd route — CO line group (TRG) 6

Location 02: The hunt sequence by dialing [7+PBX Code 953]:

The 1st route — CO line group (TRG) 6

The 2nd route — CO line group (TRG) 5

Location 03: The hunt sequence by dialing [Ext.no. 2xx]:

The 1st route — CO line group (TRG) 7

If the received number does not match the PBX Code, the system checks the number in the routing table. If it is found, the system automatically sends the number to the corresponding PBX.

For example, if PBX-1 receives the number “952-xxxx” from PBX-4, PBX-1 automatically sends the number through CO line group 5.

4. TIE Call Dialing Method

The following patterns are TIE call dialing methods. The dial number modification depends on the dialing method.

In addition to the methods above, the system can use the TIE line for sending CO line access code “9” through other PBX. When you dial the CO line access code and the CO line is busy, the system automatically sends CO line access code “9” to a TIE line so that you can access the CO line through other PBX. This is enabled by program [990] “System Additional Information, Area 08 (Bit 03)”.

Conditions

5. TIE Line Routing Flow Chart

- It is possible to program the E&M signal, voice path type and voice level (transmit / receive) of the E&M Line Unit by system programming. For details about the E&M signal, voice path type and voice level, refer to “Installation” in this manual.
- The FLASH button does not function as the disconnection key.
- The ability to perform Call Forwarding/Call Transfer to TIE line is determined on a Class of Service basis. See programs [503] and [504].

Programming References

Section 4, System Programming

- [100] Flexible Numbering
- [109] Expansion Unit Type
- [154] PBX Code
- [155] E&M Signal Assignment
- [220] TIE First / Inter Digit Time
- [340] TIE Line Routing Table
- [341] TIE Modify Removed / Added Digit
- [430] DID TIE Table Number Assignment
- [431] DID TIE Incoming Assignment
- [432] DID TIE Outgoing Assignment
- [433] DID TIE Subscriber Number Removed Digit
- [434] DID TIE Added Number
- [435] DID TIE Wink Time Out Assignment
- [452] CO-to-TIE Transfer
- [453] TIE-to-CO Transfer
- [454] TIE-to-TIE Transfer
- [455] TIE Security Type
- [456] Line Hunt Sequence
- [457] Voice Path Type
- [458] Voice Level (Transmit)
- [459] Voice Level (Receive)
- [460] TIE Receive Dial

- [503] Call Transfer to CO Line
- [504] Call Forwarding to CO Line
- [811] TIE User Codes
- [990] System Additional Information, Area 08 (Bit 03)

3 Features

E

Emergency Call

Description Allows the extension user to dial out a pre-assigned emergency number after seizing the CO line.

Conditions

- Emergency numbers are allowed to call even in the following cases;
 - in Account Code – Verified mode
 - in any toll restriction level
 - after the pre-assigned charge limit is reached
 - in Electronic Station Lockout
- A maximum of ten emergency numbers are assignable. Any number can be stored as an emergency number. (114) and (000) are already stored by default settings.

Programming References

Section 4, System Programming
[311] Emergency Dial Number Set

Feature References None

Operation References DPT Features, SLT and ISDN Telephone Features
—User Manual
Addendum
Emergency Call

Extension Connection Assignment

Description Assigns whether the extension user can perform all accesses or not.

Conditions

- The extension of the jack number 01 should be set to “connect.”
- If the destination of DIL 1:1 or DDI is set to “disconnect,” the call is transferred to an operator.

Programming References

Section 4, System Programming
[611] Extension Connection Assignment

Feature References None

Operation References Not applicable.

Extension Group

Description

The system supports sixteen extension groups. Any member of an extension group can pick up a call directed to another member of the same group (Group Call Pickup). In addition, there is the Paging – Group feature.

Conditions

- Every extension should belong to an extension group and can belong to more than one group simultaneously.
- If System Connection* is employed, an extension group can include extensions on both systems.

Programming References

Section 4, System Programming
[602] Extension Group Assignment

Feature References

Section 3, Features
Call Pickup, Group

Paging – Group

Operation References

Not applicable.

3 Features

E

EXtra Device Port (XDP)

Description

EXtra Device Port (XDP) expands the number of telephones available in the system by allowing an extension jack to contain two telephones. A digital proprietary telephone (DPT) and a single line telephone (SLT) or DSS console and SLT can be connected to the same jack but have different extension numbers so that they can act as completely different extensions.

Conditions

- XDP requires previous programming of the individual jack. Enable XDP mode for the desired jack by system programming. Immediately after changing the assignment, changed setting may not work for a maximum of eight seconds.
- If an SLT is connected to an XDP-enabled jack, neither telephones work.
- If XDP is disabled for the jack, DPT and SLT may be used as Paralleled Telephones.

Connection References

Section 2, Installation
2.3.5 EXtra Device Port (XDP) Connection

Programming References

Section 4, System Programming
[600] EXtra Device Port

Feature References

Section 3, Features
Paralleled Telephone

Operation References Not applicable.

Flexible Numbering

Description

The numbers used for the access codes of system features and the number used for extension numbers are not fixed. They can be set as required provided there are no conflicts. Feature numbers can be from one to three digits, utilizing numbers “0 through 9” as well as “*” and “#.” Extension numbers can be two to four digits in length. Any number can be set as the leading first or second digit. If one digit is assigned as the leading digit, some extensions have 2-digit numbers and some have 3-digit numbers. If two digits are assigned as the leading digits, some have 3-digit numbers and some have 4-digit numbers.

Flexible Feature Numbers

Number	Feature	Default
01	1st hundred extension block	2
02	2nd hundred extension block	3
03 - 16	3rd through 16th hundred extension block	None
17	Operator call	0
18	Automatic line access / ARS	9
19	CO line group line access	8
20	System speed dialing	*
21	Station speed dialing	6 *
22	Station speed dialing programming	60
23	Doorphone call	61
24	Paging – external	62
25	Paging – external answer / TAFAS answer	42
26	Paging – group	63
27	Paging – group answer	43
28	Call pickup, CO line	4 *
29	Call pickup, group	40
30	Call pickup, directed	41
31	Call hold	50
32	Call hold retrieve – intercom	51
33	Call hold retrieve – CO line	53

3 Features

F

Flexible Feature Numbers

Number	Feature	Default
34	Last number redial	#
35	Call park / call park retrieve	52
36	Account code entry	49
37	Door opener	55
38	External feature access	64
39	Station feature clear	790
40	Message waiting	70
41	Not available	—
42	Call forwarding / do not disturb	710
43	Call pickup deny	720
44	Not available	—
45	Call waiting / OHCA / whisper OHCA	731
46	Not available	—
47	Pickup dialing	74
48	Absent message	750
49	Timed reminder	76
50	Electronic station lockout	77
51	Night service mode	78
52	Parallel telephone mode	69
53	Background music – external	65
54	Paging – deny	721
55	Primary COS select	791
56	Secondary COS select	793
57	Log-in / log-out	45
58	Operator 1 call	None
59	Operator 2 call	None
60	Automatic callback busy cancel	46
61-68	Not available	—
69	Not available	—
70	Timed reminder remote	7 ×
71	CO incoming call information log mode	56
72	Do not disturb for DDI	54
73	CLIR	59
74	COLR	58
75	CO incoming call information log lock	57
76†	Live call screening password control†	799
77	System working report	794
78	Reserved	—
79	Outgoing message	712
80	CLIP / COLP	711
81	Reserved	—
82	Call forwarding from hunting group	714
83	Doorphone call forwarding to CO line	715
84	Doorphone call forwarding mode switch	716
85	CCBS cancel	713

†: Available when the Digital Super Hybrid System is connected to a Digital Proprietary Telephone capable Panasonic Voice Processing System (one that supports digital proprietary telephone integration; e.g. KX-TVP100).

Fixed Feature Numbers

Feature	Default
While busy tone is heard Automatic Callback Busy / Completion of Calls to Busy Subscriber (CCBS) Busy Station Signalling (BSS) / Off-Hook Call Announcement (OHCA) / Whisper OHCA	6 2
While Do Not Disturb tone is heard Do Not Disturb Override	2
While calling or talking Conference Door Open Alternate Calling – Ring / Voice Pulse to Tone Conversion Account Code Delimiter	3 5 × ×# #/99
When the set is on-hook Background music on / off Time display / date display switching Day / night mode display	HOLD (TRANSFER) × #

Conditions

- Flexible feature numbers can only be dialled during dial tone.
- The following are examples of feature number conflicts:
Examples: 1 and 11, 0 and 00, 2 and 21, 10 and 101, 32 and 321, etc.
- Some flexible feature numbers require additional digits to make the feature active. For example, to set Call Waiting, the feature number for “Call Waiting” must be followed by “1” and to cancel it, the same feature number should be followed by “0.”

Programming References

Section 4, System Programming
[003] Extension Number Set
[100] Flexible Numbering
[813] Floating Number Assignment

Feature References None

Operation References Not applicable.

Floating Station

Description

You can assign virtual extension numbers for resources to make them appear to be extensions. These numbers are defined as floating numbers (FN). The following resources can have floating numbers:

- (1) External paging instruments: used for TAFAS feature. For KX-TD816, two FNs are available. For KX-TD1232, four FNs are available. These FNs can be assigned as:
 - a) DIL 1:1 destination
 - b) Intercept Routing destination
- * (2) Modem: used for system administration. One FN is available. This can be assigned as:
 - a) DIL 1:1 destination
 - b) and also can be used as an extension number to call the modem.
- (3) Hunting group: used for the station hunting feature. Thirty-two FNs are available. These FNs can be assigned as :
 - a) DIL 1:1 destination
 - b) Extension
 - c) Intercept Routing destination
 - d) DDI/MSN destination
 - e) Hunting Group – Overflow
- (4) Digital Test Access: used for testing. One DTA is available. The FN can be used as an extension.

Conditions

Floating numbers cannot be used for setting a feature such as Call Forwarding, etc.

Programming References

Section 4, System Programming
[100] Flexible Numbering, 1st through 16th hundred extension blocks
[813] Floating Number Assignment

Feature References

None

Operation References

Not applicable.

* : Available for KX-TD1232 only.

Handset Microphone Mute

Description

Allows the KX-T7400 series digital proprietary telephone user to turn off the handset microphone, for privacy.

Conditions

- This is effective for the handset microphone only. Only your voice will be muted during a handset conversation.
- The user can hear the other party's voice during Handset Microphone Mute.

Programming References

No programming required.

Feature References

None

Operation References

—User Manual
Addendum

DPT Features
Handset Microphone Mute

3 Features

H

Handsfree Answerback

Description

Allows the speakerphone telephone user to talk to a caller without lifting the handset, if the user has set handsfree answerback mode. If the user receives an intercom call in the mode, handsfree conversation is established immediately after the user hears beep tone and the caller hears confirmation tone.

Conditions

- Handsfree answerback mode is set or cancelled by pressing the AUTO ANSWER button.
- This feature does not work for calls from outside parties or doorphone calls.
- Handsfree Answerback set on a telephone overrides the Ring / Voice Intercom Alerting mode preset on the telephone; Handsfree conversation mode is established as soon as confirmation tone is sent.
- The handsfree answerback mode is overridden and a ring tone is heard when an outside call is transferred to the extension where the mode is set.

Programming Reference

No programming required.

Feature References

Section 3, Features
Alternate Calling – Ring / Voice

Operation References
—User Manual

DPT Features
Handsfree Answerback

HOTEL APPLICATION

Description

Allows the operator to handle front/operator services such as check-in / check-out, timed reminder (wake-up call) and room management. This operation is applicable to only the operator extension with the KX-T7235 and KX-T7436.

Check-In / Check-Out

Description

Allows the operator to operate the check-in / check-out service. This feature can control the usage of an outside call by switching the Class of Service between primary and secondary, and count and print out the telephone charge and the other charges such as mini-bar.

Conditions

- It is required to enable the hotel application by system programming.
- When the check-in is assigned, the Class of Service is set to the primary one and the charge counter will be cleared. When the check-out is assigned, the Class of Service is set to the secondary one and the total telephone charge and the other charges will be displayed and printed out.
- The telephone charge can be added the surcharge according to the pre-assigned margin rate. The pre-assigned tax rate can be also added.
- If the operator uses the paired DSS console, the operator can refer the check-in status on DSS console.
- It is possible to give a header to the printed bill such as hotel's name or greeting or to assign the starting location of output data with a personal computer.
- It is possible to limit the telephone usage on a pre-assigned amount by system programming.
- The set Timed Reminder (Wake-Up Call) is cleared by check-out.

Programming References

Section 4, System Programming
[010] Budget Management
[011] Charge Margin and Tax Rate
[123] Hotel Application
[990] System Additional Information, Fields (33) through (35)

Feature References

Section 4, Features
Budget Management Charge Fee Reference

Operation References

—User Manual **Operator Service Features**
Addendum Hotel Application

3 Features



Room Management

Description Allows the extension user to print out the information of a guest room (e.g. cleaning status of the room and the total of the minibar charge) with a telephone in each room. Absent messages No.6-No.9 can be printed out.

Conditions None

Programming References

Section 4, System Programming
[008] Absent Messages
[990] System Additional Information, Field (34)

Feature References **Section 3, Features**
Absent Message Capability

Operation References **DPT Features, SLT and ISDN Telephone Features;**
—User Manual Hotel Application
Addendum

Timed Reminder, Remote (Wake-Up Call)

Description Allows the operator to set, cancel and confirm the wake-up call remotely for an extension.

Conditions

- When either the operator or an extension sets a new time, the pre-set time is cleared.
- If a wake-up call is not answered, the operator's Alert indicator (KX-T7235 and KX-T7436 only) will flash.

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
[100] Flexible Numbering, Timed reminder, remote
Station Programming.....User Manual Addendum
Flexible Button Assignment – Alert Button

Feature References **Section 3, Features**
Timed Reminder

Operation References **Operator Service Features**
—User Manual Hotel Application
Addendum

Hunting Group

Description

The system supports thirty-two hunting groups. The station hunting feature is assigned on a hunting group basis.

Hunting works when an incoming call arrives at an floating number for a hunting group. However, for VM/AA hunting, an incoming call to any extension number which belongs to a hunting group is hunted as well.

The following assignments are determined for the hunting group.

- Floating Extension Number
- The Hunting Group Name
- Numbers of Waiting Queues
- Overflow Status
- The Destination of Intercept Routing — Day/Night
- Hunting Type

Conditions

- Each extension can belong to more than one group simultaneously.

Programming References

Section 4, System Programming

- [106] Station Hunting Type
- [131] Hunting Group Assignment
- [132] Hunting Group Name
- [133] Hunting Overflow
- [134]-[135] Hunting Intercept — Day/Night
- [813] Floating Number Assignment

Feature References

Section 3, Features

- No Reply Group
- Ring Group

- Station Hunting
- Uniform Call Distribution (UCD)

Operation References

Not applicable.

3 Features



Integrated Services Digital Network (ISDN)

Description

The system can manage a call received from the ISDN line by point-to-point or point-to-multi-point configuration. An optional ISDN Line Card/Unit, KX-TD280, KX-TD281, KX-TD286, or KX-TD290 is required. The KX-TD290 can only use “point-to point” configuration.

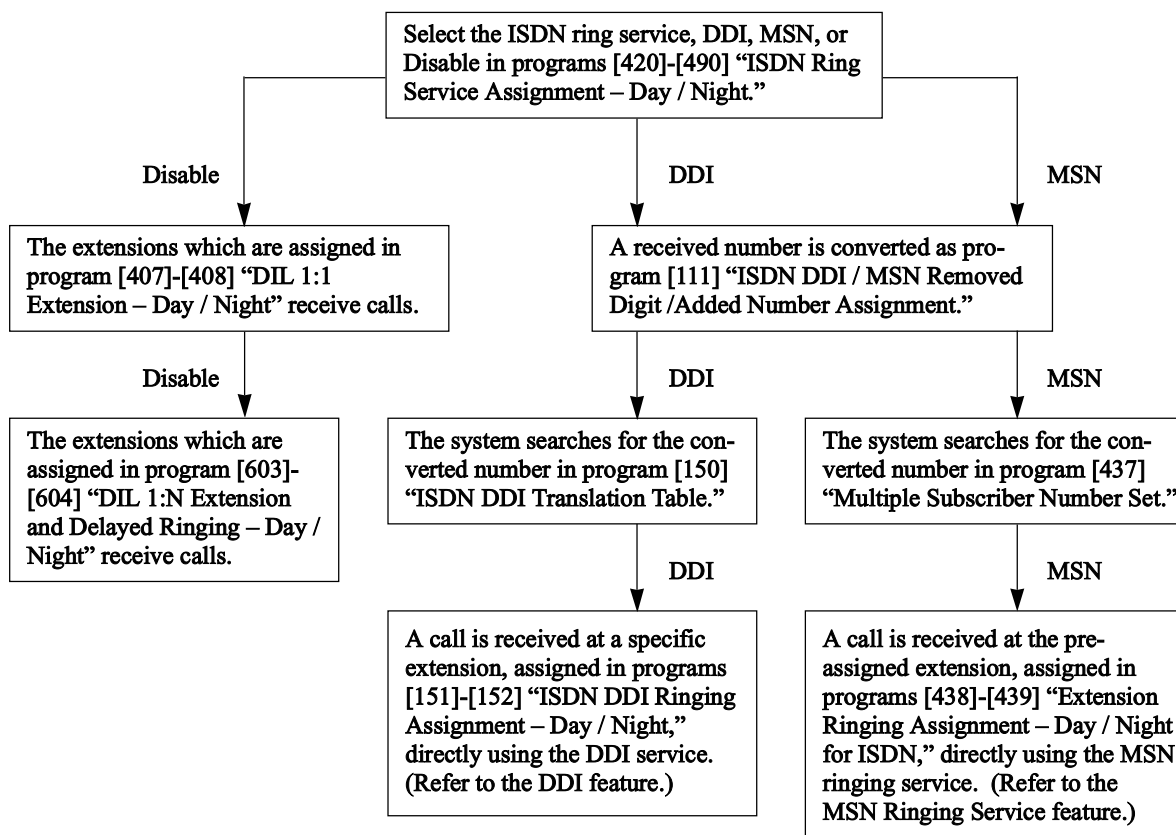
Point-to-point

A call received through one ISDN port is sent directly to a specific extension using a Direct Dialing In (DDI) service.

Point-to-multi-point

One ISDN port can support a maximum of ten Multiple Subscriber Numbers (MSN). A call received through an ISDN port is sent directly to the pre-assigned extension if the dialed number matches the stored MSN.

Flow chart of required programs for ISDN



Conditions

- If “Disable” is assigned in programs [420]/[429] “ISDN Ring Service Assignment — Day / Night” and an extension is not assigned in programs [407]–[408] “DIL 1:1 Extension — Day / Night,” the call will be received by DIL 1:N.

Conditions

None

Connection References

Section 2, Installation

- 2.4.2 CO Line Connection (KX-TD1232: CO1 through CO8)
- 2.4.7 2-ISDN S0 Line Connection
- 2.4.7-i 6-ISDN S0 Line Connection
- 2.4.7-ii Primary Rate Interface ISDN Expansion Unit Connection

Programming References

Section 4, System Programming

- [109] Expansion Card / Unit Type
- [111] ISDN DDI / MSN Removed Digit / Added Number Assignment
- [150] ISDN DDI Translation Table
- [151]–[152] ISDN DDI Ringing Assignment — Day / Night
- [407]–[408] DIL 1:1 Extension – Day / Night
- [420]/[429] ISDN Ring Service Assignment — Day / Night
- [422] ISDN Port Type
- [423] ISDN Layer 1 Active Mode
- [424] ISDN Configuration
- [425] ISDN Data Link Mode
- [426] ISDN TEI Mode
- [437] Multiple Subscriber Number Set
- [438]–[439] Extension Ringing Assignment
— Day / Night for ISDN MSN
- [440] TD286 ISDN Port Type
- [441] TD286 ISDN Layer 1 Active Mode
- [442] TD286 ISDN Configuration
- [443] TD286 ISDN Data Link Mode
- [444] TD286 ISDN TEI Mode
- [450] PRI Configuration

3 Features



- The recommended parameter combinations are listed below. The underlined selections are recommended.

Program	[422]/[440] ISDN Port Type	[423]/[441] ISDN Layer 1 Active Mode	[424]/[442] ISDN Configuration	[425]/[443] ISDN Date Link Mode	[426]/[444] ISDN TEI Mode
Parameter	CO (DDI)	Call/ <u>Permanent</u>	Point	Call/ <u>Permanent</u>	Fix
	CO (MSN)	Call/ <u>Permanent</u>	Multipoint	<u>Call</u> / Permanent	Automatic
	Extension	<u>Call</u> / Permanent	Multipoint	Call	Automatic

Feature References

Section 3, Features
Direct Dialing In (DDI)

Multiple Subscriber Number
(MSN) Ringing Service

Operation References Not Applicable.

Intercept Routing

Description

Provides automatic redirection of incoming outside calls. There are two types of Intercept Routing. In the first case, a call cannot be placed to the called party. This is called Rerouting. In the second case the call is not answered within a programmed time period. This is called Intercept Routing – No Answer (IRNA).

Items which can have the Intercept Routing destination are: (1) CO Line Group, (2) Extension, and (3) Hunting Group.

Conditions

- Intercept Routing applies to DIL 1:1, DIL 1:N, TAFAS, Call Forwarding, and Station Hunting.
- The final destination of intercepted calls must be programmed for day and night modes. There are five possible destinations:
 - 1) an extension
 - 2) an external pager
 - 3) a hunting group
 - 4) a phantom extension
 - 5) a voice mail extension
- Intercept Routing is activated as shown below, depending on the combination of incoming type and called destination.

Destination Type	Extension including Operator	External Pager/ Internal ISDN/ Phantom Extension	Hunting Group
DIL 1:N	Assigned CO line group	No incoming calls are received.	No incoming calls are received.
DIL 1:1	Registered extension	Assigned CO line group	Assigned hunting group
DDI	Registered extension	Assigned CO line group	Assigned hunting group
Intercept	No more Intercept Routing	No more Intercept Routing	Assigned hunting group

Programming References

Section 4, System Programming

[203] Intercept Time

[409]–[410] Intercept Extension — Day / Night

[620]–[621] Extension Intercept Routing — Day / Night

Feature References

None

Operation References

Not applicable.

3 Features



ISDN Extension

Description

The system supports terminal equipment with separate power supplies. For example, ISDN telephone, G4 Facsimile and personal computers which are connected to optional ISDN S0 Line Unit or Card: KX-TD280, KX-TD281 or KX-TD286. The system itself does not supply the power to ISDN extensions. Some terminal equipment need the power supplies for the network. In this case, the separate power supply units are necessary.

A maximum of eight terminals can be connected to each ISDN S0 bus with point-to-multi-point configuration. Terminal equipment can be addressed individually with Multiple Subscriber Numbers (MSN). The MSN consists of the ISDN extension number and an additional digit, 0 through 9. If MSN is not assigned, all equipment on the same S0 bus are called simultaneously.

The following bearer capabilities can be supported:

Transfer Mode

Circuit

Transfer Capability

Unrestricted digital

Speech

3.1 kHz Audio

The functions of terminal equipment are similar to single line telephone functions, but the following features are not available.

- Automatic Callback Busy
- Call Hold
- Call Park
- Call Pickup
- Call Transfer
- Call Waiting
- Conference
- Do Not Disturb
- Log-In / Log-Out
- Message Waiting
- Paging – Group Answer
- Pickup Dialing
- Timed Reminder

Conditions

- Class of Service for ISDN extension port applies to all terminal equipment on the same S0 bus.

- Each port can be assigned as follows:
 - *1 and *2: can be either an external or internal ISDN S0 line.
 - *1: when assigned as internal, the corresponding analog CO ports or CO ports on KX-TD281 become available.
- If the KX-TD286 is installed together with the KX-TD281, it is not possible to assign the same port as an external ISDN S0 line. If it is done, only the port of the KX-TD286 becomes available.

TD816				TD1232				
CO No.	ISDN Port	TD280	TD286	CO No.	ISDN Port	TD280	TD281	TD286
1, 2	1	—	*1	1, 2	1	—	External	*1
3, 4	2	—	*1	3, 4	2	—	External	*1
5, 6	3	*2	*2	5, 6	3	—	*2	*1
7, 8	4	*2	*2	7, 8	4	—	*2	*1
—	5	—	Internal	9, 10	5	*2	—	*2
—	6	—	Internal	11, 12	6	*2	—	*2

Connection References

Section 2, Installation

2.4.8-ii Internal ISDN S0 Line Connection

Programming References

Section 4, System Programming

- [012] ISDN Extension Number Set
- [013] ISDN Extension Name Set
- [014] Budget Management on ISDN Port
- [017] TD286 Extension Number Set
- [018] TD286 Extension Name Set
- [019] Budget Management on TD286 Port
- [109] Expansion Card / Unit Type
- [422] ISDN Port Type
- [423] ISDN Layer 1 Active Mode
- [424] ISDN Configuration
- [425] ISDN Data Link Mode
- [426] ISDN TEI Mode
- [427] ISDN Extension Multiple Subscriber Number
- [428] ISDN Extension Progress Tone
- [437] Multiple Subscriber Number Set
- [438]–[439] Extension Ringing Assignment — Day / Night for ISDN MSN
- [440] TD286 ISDN Port Type
- [441] TD286 ISDN Layer 1 Active Mode
- [442] TD286 ISDN Configuration
- [443] TD286 ISDN Data Link Mode

3 Features



- [444] TD286 ISDN TEI Mode
- [445] TD286 ISDN Extension Multiple Subscriber Number
- [446] TD286 ISDN Extension Progress Tone
- [613] ISDN Class of Service
- [615]–[616] Outgoing Permitted CO Line Assignment — Day / Night for ISDN Extension
- [627] TD286 Class of Service
- [629]–[630] Outgoing Permitted CO Line Assignment — Day / Night for TD286 Extension

• The possible parameter combinations are listed below. The underlined selections are recommended.

Program	[422]/[440] ISDN Port Type	[423]/[441] ISDN Layer 1 Active Mode	[424]/[442] ISDN Configuration	[425]/[443] ISDN Date Link Mode	[426]/[444] ISDN TEI Mode
Parameter	CO (DDI)	Call/ <u>Permanent</u>	Point	Call/ <u>Permanent</u>	Fix
	CO (MSN)	Call/ <u>Permanent</u>	Multipoint	Call/ Permanent	Automatic
	Extension	Call/ <u>Permanent</u>	Multipoint	Call	Automatic

Feature References None

Operation References None

Live Call Screening (LCS)[†]

Description

Allows a proprietary telephone user to monitor their voice mailbox while incoming callers are leaving a message and, if desired, intercept the call. The voice mailbox can be monitored in one of two ways — Hands-free or Private.

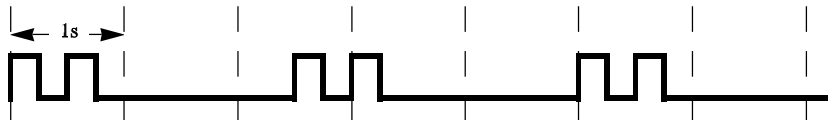
Hands-free Mode

The voice mailbox is monitored through the built-in speaker of the proprietary telephone.

Private Mode

A proprietary telephone emits an alert tone when callers are connected to the voice mailbox. To monitor the call, the user goes off hook on the handset or speakerphone.

Alert Tone



To intercept the call in either Hands-Free or Private mode, press the LCS button.

A single line telephone, which is connected to a proprietary telephone in parallel, can be also used to monitor a message recording. Be sure that Live Call Screening on the connected proprietary telephone has been activated.

This feature is useful when you are using a cordless telephone (SLT). The handset emits an alert tone to let you know that a message is being recorded. To intercept the call, lift the handset and flash the hookswitch.

Conditions

- If the extension user is having a conversation, a call waiting tone is sent. The user can put an existing call on hold before accessing LCS.
- A flexible CO and DSS button can be assigned as a Live Call Screening button.
- To prevent unauthorized monitoring, a three-digit password must be set by the LCS user. If the user forgets their password, it can be cleared by the operator.
- Each extension can be programmed to either close the mailbox or continue recording the conversation after the call is intercepted.

3 Features

L

Programming References

System Programming

[005] Flexible CO Button Assignment

[617] Live Call Screening Recording Mode Assignment

Station Programming

Live Call Screening Mode Set

Flexible Button Assignment – Live Call Screening Button

Live Call Screening Cancel Button

Feature References

None

Operation References

—User Manual
Addendum

DPT Features

Live Call Screening (LCS)

Operator Service Features

Live Call Screening Password Control

Log-In / Log-Out

Description

Assigns an extension to join (log-in) or leave (log-out) a hunting group. Extensions in log-out status do not receive calls via Station Hunting but can receive other calls, unlike the Do Not Disturb (DND) feature.

Conditions

- The lighting patterns of the Log-In/Log-Out button and the statuses are shown below.

Lighting pattern	CO Line Status
Red on	Log-Out (no reception)
Flashing Red	Log-In (multiple reception)
Off	Log-In

Programming References

Section 4, System Programming

[100] Flexible Numbering, Log-in / log-out

Station Programming.....User Manual Addendum

Flexible Button Assignment – Log-In / Log-Out Button

Feature References

Section 3, Features

Station Hunting

Uniform Call Distribution (UCD)

Operation References

—User Manual
Addendum

DPT Features, SLT and ISDN Telephone Features

Log-In / Log-Out

Module Expansion

Description

The KX-TD816 starts with 4 CO line and 8 extension jacks. The KX-TD1232 starts with 16 extension jacks. They can be expanded by installing optional cards and units.

- An 8-Station Line Unit (KX-TD170) adds 8 extension jacks.
- A 16-SLT Line Circuit Unit (KX-TD174) adds 16 single line telephones.
- A 4-CO Line Unit (KX-TD180) adds 4 CO line jacks.
- A 2-ISDN S0 Line Unit (KX-TD280) adds 2 ISDN S0 lines.
- A 6-ISDN S0 Line Unit (KX-TD286) adds 6 ISDN S0 lines.
- A 4-DID Line Unit (KX-TD185) adds 4 DID line jacks.
- A Primary Rate Interface ISDN Expansion Unit (KX-TD290) adds 1 PRI ISDN line jacks.
- An 8-CO Line Card (KX-TD181) adds 8 CO line jacks.
- A 4-ISDN S0 Line Card (KX-TD281) adds 4 ISDN S0 lines.
- A E&M Line Service Unit (KX-TD184) adds 4 ports.

The KX-TD816 can have the following units:

- One Extension Line Unit (KX-TD170 or KX-TD174)
- One CO/ISDN Line Unit (KX-TD180, KX-TD185, KX-TD280 or KX-TD286)
- One E&M Line Service Units (KX-TD184)

The KX-TD1232 can have the following units and/or cards:

- Up to two Extension Line Units (KX-TD170 and/or KX-TD174)
- One CO/ISDN Line Unit (KX-TD180, KX-TD185, KX-TD280, KX-TD286 or KX-TD290)
- One CO/ISDN Line Card (KX-TD181 or KX-TD281)
- One E&M Line Service Units (KX-TD184)

Conditions

- The number of extension jacks may be different from the number of telephones if the Paralleled Telephone or the eXtra Device Port feature is enabled. These features allow one extension jack to have two telephones.
- When an expansion unit is installed, the unit identification is set by system programming.

Connection References

Section 2, Installation

- 2.4.2 CO Line Connection (KX-TD1232: CO 1 through CO 8)
- 2.4.4 8-Station Line Unit Connection
- 2.4.5 4-CO Line Unit Connection
- 2.4.6 4-DID Line Unit Connection
- 2.4.7 2-ISDN S0 Line Unit Connection
- 2.4.7-i 6-ISDN S0 Line Unit Connection

2.4.7-ii Primary Rate Interface ISDN Expansion Unit Connection

2.4.7-iii 16 SLT Line Circuit Unit Connection

Programming References

Section 4, System Programming

[109] Expansion Card / Unit Type

Feature References

Section 3, Features

Multiple Subscriber Numbers (MSN) Ringing Service

Description

Provides automatic direction of an incoming ISDN line call to a pre-assigned extension. One ISDN port can support a maximum of ten Multiple Subscriber Numbers (MSN).

Assignable destinations are: (1) Operator, (2) extension, (3) Hunting Group, (4) TAFAS, (5) modem, (6) Phantom extension, (7) Voice Mail extension, and (8) ISDN extension.

The extensions which are assigned in programs [438]–[439] “Extension Ringing Assignment – Day / Night for ISDN” receive a call if the dialled number matches the stored MSN.

<Example>

ISDN Port No.	Location No.	[437] Multiple Subscriber Number Set	[438] Extension Ringing Assignment — Day for ISDN	[439] Extension Ringing Assignment — Night for ISDN
01	-1	2011111	101	201
	-2	2012222	102	202
	:			
	-10			

Conditions

- An incoming MSN number is converted as programmed in [111] “ISDN DDI / MSN Removed Digit / Added Number Assignment.”
- To use the MSN ringing service, “MSN” must be selected in program [420]/[429] “ISDN Ring Service Assignment — Day / Night.”
- If an MSN number through the ISDN line does not match the number assigned in program [437] “Multiple Subscriber Number Set,” the call will not be received. If no MSN numbers are assigned in program [437], the call will be sent to an extension according to DIL 1:1 or DIL 1:N.

- When using point-to-multi-point configuration with a Basic Rate Interface (BRI), we recommend not connecting another ISDN equipment in parallel with your system. As only two channels can be used at one time with the BRI, other ISDN equipment may monopolize the channels.

Programming References

Section 4, System Programming

- [111] ISDN DDI / MSN Removed Digit / Added Number Assignment
- [407]–[408] DIL 1:1 Extension – Day / Night
- [420]/[429] ISDN Ring Service Assignment — Day / Night
- [437] Multiple Subscriber Number Set
- [438]–[439] Extension Ringing Assignment — Day / Night for ISDN
- [990] System Additional Information, Fields (50), (51)

Feature References

Section 3, Features

Integrated Services Digital Network (ISDN)

Operation References Not applicable.

Night Service

Description

This system supports both Night and Day modes of operation. The system operation for originating and receiving calls can be different for day and night modes. The system operation for restricting toll calls can be arranged separately to prevent unauthorized toll calls at night.

Switching of the Day / Night Mode

Day / Night mode can be switched either automatically or manually.

Automatic Night Service: Your system will switch the Day / Night mode at the programmed time each day. The starting time of the Day / Night mode can be set for each day.

Manual Night Service: The pre-assigned extension and the operator can switch the Day / Night mode by dialing the feature number. Class of Service programming determines the extensions that can perform it.

Conditions

The following programming items may be assigned differently for day mode and night mode:

- [006] Operator / Manager Extension Assignment — Day / Night
- [137]–[138] UCD Time Table Assignment — Day / Night
- [151]–[152] ISDN DDI Ringing Assignment — Day / Night
- [407]–[408] DIL 1:1 Extension — Day / Night
- [409]–[410] Intercept Extension — Day / Night
- [420]/[429] ISDN Ring Service Assignment — Day / Night
- [500]–[501] Toll Restriction Level — Day / Night
- [509]–[510] Toll Restriction for System Speed Dialing — Day / Night
- [603]–[604] DIL 1:N Extension and Delayed Ringing — Day / Night
- [605]–[606] Outgoing Permitted CO Line Assignment — Day / Night
- [607]–[608] Doorphone Ringing Assignment — Day / Night
- [615]–[616] Outgoing Permitted CO Line Assignment
— Day / Night for ISDN Extension
- [629]–[630] Outgoing Permitted CO Line Assignment
— Day / Night for TD286 Extension

Programming References

Section 4, System Programming

- [100] Flexible Numbering, Night service mode
- [101] Day / Night Service Switching Mode
- [102] Day / Night Service Starting Time
- [513] Night Service Access

Feature References

None

Operation References

—User Manual
Addendum

DPT Features, SLT and ISDN Telephone Features
Night Service

No Reply Group

Description Extensions or ring groups can belong to the no reply group. If the floating number of this group is dialed, the call is hunted in the group in the order of registration at a pre-programmed “Call Forwarding — No Answer Time.” If the called extension or ring group is busy, the call skips to the next extension or the ring group. A no reply group can be a Station Hunting type.

- Conditions**
- Types of calls whose destination can be the no reply group are:
Outside calls – DIL1:1; DDI; MSN; IRNA; Hunting Group-Overflow
Intercom calls – Extension; Transfer
 - The floating number of the hunting group is used for all other hunting types, Circular, Voice Mail (VM), Automated Attendant (AA), Uniform Call Distribution (UCD) and Ring.

Programming References

Section 4, System Programming
[106] Station Hunting Type
[131] Hunting Group Assignment
[813] Floating Number Assignment

Feature References

Section 3, Features
Floating Station Station Hunting

Operation References Not applicable.

Notebook Function

Description Allows the proprietary telephone user to store the phone number in the memory during conversation on the phone or on-hook status. The stored number is dialed automatically with a simple operation.

- Conditions**
- The outside line, which was connected when the user stored the number is selected when re-dialing the number. If the line is busy, the busy tone is sent.
 - The pause, if programmed, can be inserted between the CO line access number and the following phone number (Automatic Pause Insertion).

Programming References

No programming required.

Feature References

None

Operation References

—User Manual
Addendum

DPT Features
Notebook Function

Off-Hook Call Announcement (OHCA)

Description

OHCA allows you to inform a busy extension that another call is waiting by talking through the built-in speaker of the called party's proprietary telephone. If the existing call is using the handset, the second conversation is made with the speakerphone so that the called party can talk to two parties independently. OHCA is performed the same way as Busy Station Signalling (BSS) or Whisper OHCA. It depends on the telephone type used by the called party whether Call Waiting, OHCA or Whisper OHCA is activated by the operation. If the called telephone is one of the following, OHCA becomes active: KX-T7235, KX-T7436.

Conditions

- Class of Service programming determines which extensions can perform this feature.
- If none of three features, Call Waiting, OHCA or Whisper OHCA is set at the called party, the caller will hear a reorder tone.

Programming References

Section 4, System Programming

[100] Flexible Numbering, Call waiting / OHCA / whisper OHCA

[519] Off-Hook Call Announcement (OHCA)

Feature References

Section 3, Features

Busy Station Signaling (BSS) Whisper OHCA

Call Waiting

Operation References

—User Manual

Addendum

DPT Features

Off-Hook Call Announcement (OHCA)

3 Features



Operator

Description

The system supports up to two operators during day and night modes separately. Any extension can be appointed as an operator. The extension assigned as an operator has the ability to perform the following operations:

- Controlling CO Incoming Call Information Log Lock mode
- Clearing the Live Call Screening Password
- Performing the Hotel Application
- Printing / clearing the System Working Report
- Setting / clearing the Remote Station Lock
- Switching the Class of Service – primary / secondary
- Switching Day / Night mode manually
- Turning Background Music – External on and off
- Recording / playing outgoing messages

Only Operator 1 has the ability to perform the following operations:

- Setting the Automatic Overflow
- Setting the Hurry-Up Transfer
- Receiving the Alert Indication
- Receiving the call which is transferred from DND extension

Conditions

- If eXtra Device Port mode is enabled at the operator's extension, the proprietary telephone user is regarded as the operator.
- The operator can be assigned as the destination of Transfer Recall by system programming.
- When a Direct Dialing In call reaches an extension where the Do Not Disturb for Direct Dialing In Call feature has been assigned, it is forwarded to the operator. If a wrong number is dialed, the call is also forwarded to the operator.
- The Alert Indication is only available for Operator 1 in Day mode.

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
[006] Operator / Manager Extension Assignment — Day / Night
[129] Operator Queue
[990] System Additional Information, Field (11)
Station ProgrammingUser Manual & User Manual Addendum
Flexible Button Assignment – Hurry-UP Button,
Voice Mail (VM) Transfer Button

Feature References

None

Operation References —User Manual Addendum

Operator Service Features

Operator Call

Description

Allows the extension user to call an extension operator by dialing the feature number, if at least one operator is assigned. There can be one or two extensions assigned as Operator 1 and 2.

When an operator call (default: 0) is made, the call is connected to Operator 1. If Operator 1's line is busy, the call is connected to Operator 2.

Conditions

None

Programming References

Section 4, System Programming

[006] Operator / Manager Extension Assignment — Day / Night

[100] Flexible Numbering, Operator call, Operator 1 call, Operator 2 call

Feature References

None

Operation References

—User Manual
Addendum

DPT Features, SLT and ISDN Telephone Features
Operator Call

Outgoing Message (OGM)

Description

Allows the extension assigned as an operator to record outgoing voice messages. There are two types of outgoing messages that can be recorded.

UCD (Uniform Call Distribution) message:

If assigned in the UCD Time Table, this message is played when all extensions in an UCD group are busy or not available. There can be four different UCD messages.

Timed Reminder message:

This message is used in Timed Reminder. When answering the Timed Reminder alarm (often used as a wake-up call), the user will hear this message. There can be only one Timed Reminder message.

After recording these messages, the operator can also play them back for confirmation.

Conditions

- A Message Unit or Card is required to program the OGM. One unit or card can be installed per system. System Connection* permits two Message Units or Cards. If there are two Message Units or Cards, the same message is recorded for both simultaneously.
- A maximum of four messages can be recorded per Message Unit or Card, and two messages can be played at the same time.
- To use the Timed Reminder message, the recorded OGM number must be selected by system programming.

Connection References

Section 2, Installation

2.4.13 Installing the Message Unit (KX-TD190) /
9600bps Speed Remote Unit (KX-TD198)

2.4.14 Installing the 9600bps Speed Remote Card (KX-TD197) /
Message Card (KX-TD199)

Programming References

Section 4, System Programming

[216] Outgoing Message Time

[818] Timed Reminder Message Assignment

Feature References

Section 3, Features

Timed Reminder

Uniform Call Distribution (UCD)

Operation References —User Manual Addendum

Operator Service Features

Outgoing Message (OGM)

* : Available for KX-TD1232 only.

Phantom Extension

Description

Allows the system to route the calls to a phantom extension. A call to a phantom extension is sent to an extension who has the corresponding Phantom button. A phantom button can be assigned by Station Programming.

Conditions

- Types of calls whose destination can be the phantom extension are:
 Outside calls – DIL 1:1; DDI; MSN; IRNA;
 Hunting Group-Overflow
 Intercom calls – Extension; Transfer
- You can call the phantom extension by pressing the Phantom button or by dialing the phantom extension number. If several extensions have the same phantom extension button, they will ring simultaneously.
- A phantom number must be assigned by System Programming before assigning the Phantom button by Station Programming.
- There is a maximum of 128 phantom numbers. Each number has two to four digits, consisting of numbers **0 through 9**.
- The phantom number cannot be used for feature settings such as Call Forwarding.
- The lighting patterns and statuses of the Phantom button are shown below.

Lighting pattern	Phantom Extension Status
Off	Idle
Red on	Calling a phantom extension
Flashing green rapidly	Incoming call

- A DSS button can be assigned as the Phantom button so that the operator can use the button for transferring a call.

Programming References

Section 4, System Programming
 [130] Phantom Number Assignment
Station ProgrammingUser Manual Addendum
 Flexible Button Assignment – Phantom Button

Feature References

None

Operation References

—User Manual
 Addendum
DPT Features
 Phantom Extension

3 Features

P

Power Failure Restart

Description	When power is restored, the system restarts the stored data automatically. Before restarting, the system records the error logs if necessary.
Conditions	<ul style="list-style-type: none">• If System Connection* is established, the Slave system makes a copy of the restored data of the Master system.• In the event of a power failure, system memory is protected by the factory-provided lithium battery. There is no memory loss except the memories of Camp-On and Call Park. However if the system finds the wrong system data, the indication “Memory data loss” is displayed on the display proprietary telephone of Operator 1.
Programming References	No programming required.
Feature References	None
Operation References	Not applicable.

Predial

Description	Allows the display proprietary telephone user to check and correct the dialed number in on-hook state before going off-hook. When going off-hook, making a call is initiated.
Conditions	<ul style="list-style-type: none">• This feature is available during stand-by state only.• A line access number is always required to make an outgoing outside call.• Making a call is performed at the time the handset is lifted up or the CO or SP-PHONE button is pressed.
Programming References	No programming required.
Feature References	None
Operation References —User Manual Addendum	DPT Features Predial Preparation

* : Available for KX-TD1232 only.

Private Call

Description

Allows the user to exclude private calls from the SMDR printout. When making a private call, if the user enters the pre-set account code, the dialed number is not included in the SMDR printout.

Conditions

- It is required to program the account code for private calls in program [105] "Account Code." The location 001 of the entries is used as the account code for this feature.
- To prevent private calls, clear the entry above.

Programming References

Section 4, System Programming

[105] Account Codes

Station Programming.....User Manual

Change Fee Reference – Account Code Set

Feature References

Section 3, Features

Account Code Entry

Station Message Detail Recording
(SMDR)

Operation References

—User Manual &
User Manual
Addendum

DPT Features, SLT and ISDN Telephone Features

Account Code Entry

3 Features



Quick Dialling

Description

Quick Dialling offers the extension user one-touch access to a desired party. This is enabled by storing an extension number or a telephone number up to 24-digits as a quick dial number.

Conditions

- Up to eighty quick dial numbers can be stored.
- For example, Quick Dialling is convenient for room service calls in a hotel.
- You must assign a feature number first in program [104] “Quick Dial Assignment,” and then a quick dial number in program [009] “Quick Dial Number Set” in order for Quick Dial to be effective.

Example: If you want to dial “1” to call extension 201;

- 1) Change or clear the feature numbers which have “1” in the first digit in program [100].
- 2) Assign “1” in the location number 01 in program [104].
- 3) Assign “201” in a quick dial location number 01 (same location number as the location number 01 in program [104]) in program [009].

Now you can dial the quick dial number 1 to call extension 201.

Programming References

Section 4, System Programming

[009] Quick Dial Number Set

[104] Quick Dial Assignment

Feature References

None

Operation Reference —User Manual Addendum

DPT Features, SLT and ISDN Telephone Features
Quick Dialling

Ring Group

- Description** All extensions in a ring group ring simultaneously by dialing the floating number of the hunting group. A ring group can be a Station Hunting type.
- Conditions**
- Types of calls whose destination can be the ring group are:
 - Outside calls — DIL1:1; DDI; MSN; IRNA;
Hunting Group-Overflow
 - Intercom calls — Extension; Transfer
 - The floating number of the hunting group is used for all other hunting types, Circular, Voice Mail (VM), Automated Attendant (AA), Uniform Call Distribution (UCD) and No Reply.

Programming References

Section 4, System Programming
[106] Station Hunting Type
[131] Hunting Group Assignment
[813] Floating Number Assignment

Feature References

Section 3, Features
Floating Station Station Hunting

Operation References Not applicable.

Ringtone Selection for the Intercom Button

Description Allows the digital proprietary telephone user to select the desired ringer frequency for the intercom button. This distinguishes incoming intercom calls.

Conditions There are eight ringer frequencies available. One of them can be assigned to an intercom button.

Programming References

Station Programming.....User Manual Addendum
Ringtone Selection for Intercom Button

Feature References None

Operation References Not applicable.

Special Display Features

The KX-T7235, KX-T7433 and KX-T7436 feature a display that allows the user to originate calls or to access system facilities with ease. The display prompts the user with information related to the desired feature. Examples of this special function are shown below:

CO Outgoing Call Log

Extension Dialing

Hotel Application (operator only) (→ See the “HOTEL APPLICATION.”)

Station Speed Dialing

System Feature Access Menu

System Speed Dialing

Station Feature Clear

Description

Allows the extension user to cancel the functions set on the user's own telephone. The following functions will be cancelled by this feature:

- Absent Message Capability – The message set on the telephone
- Automatic Callback Busy (Camp-On)
- Background Music that has been turned on
- Call Forwarding
- Call Pickup Deny
- Call Waiting enabled
- Calling Line Identification Restriction (CLIR)
- CO Incoming Call Information Log – Over-stored mode
- Connected Line Identification Restriction (COLR)
- Do Not Disturb (DND)
- Log-Out status
- Message Waiting – All the messages that have been left by other extension users
- Paralleled Telephone enabled
- Paging Deny
- Pickup Dialing
- Timed Reminder

Conditions

None

Programming References

Section 4, System Programming
[100] Flexible Numbering, Station feature clear

Feature References

None

Operation References

—User Manual
Addendum

DPT Features, SLT and ISDN Telephone Features
Station Feature Clear

Station Hunting

Description

If a call reaches a floating number of a hunting group, Station Hunting redirects the incoming call to an idle member of the hunting group. There are a maximum of 32 hunting groups. Idle extensions are automatically hunted according to the programmed type. There are six hunting types available – Circular, UCD (Uniform Call Distribution), Voice Mail (VM), Automated Attendant (AA), Ring and No Reply.

Circular hunting: The extensions are hunted until an idle one is found, regardless of the jack number.

UCD: Refer to “Uniform Call Distribution (UCD)” in this section.

AA hunting: All of the AA ports are hunted until an idle one is found to permit AA Service.

VM hunting: All of the VM ports are hunted until an idle one is found to permit VM Service.

Ring: All of the extensions in the group ring simultaneously.

No Reply hunting: The extensions are hunted in the order of registration at a programmed “Call Forwarding— No Answer” time. If the called extension is busy, the call hunts the following extensions.

One hunting type is selected for each hunting group. The hunting order corresponds to the order of registration in program [131]. For VM/AA Hunting, an incoming call to any extension number which belongs to a hunting group is hunted as well.

Incoming Call Arrives at	Hunting Type				
	Circular	VM/AA	UCD	Ring	No Reply
Floating Extension	✓	✓	✓	✓	✓
Extension which belongs to a hunting group		✓			

✓: A call is hunted.

Conditions

- Even if the called extension has set Do Not Disturb, or Call Forwarding, they are disregarded and the call reaches the extension.

Programming References

Section 4, System Programming

- [106] Station Hunting Type
- [131] Hunting Group Assignment
- [132] Hunting Group Name Assignment
- [133] Hunting Overflow
- [134]-[135] Hunting Intercept — Day/Night

Feature References

Section 3, Features

- Hunting Group
- No Reply Group
- Log-In / Log-Out
- Ring Group
- Uniform Call Distribution (UCD)

Operation References Not applicable.

3 Features



Station Message Detail Recording (SMDR)

Description

Station Message Detail Recording (SMDR) automatically records detailed call information for outside calls. A printer connected to the EIA (RS-232C) port can be used to print incoming and outgoing outside calls as well as print a hard copy of system programming. To print the record of system programming items that have been assigned, use program [802] "System Data Printout." To print the charge fee, use the station programming. To print the call records, use the program [800] "SMDR Incoming / Outgoing Call Log Printout," which allows you to print out the following records:

- Record all outgoing outside calls or outgoing toll calls
- Record all incoming outside calls.

An example of a call record printout:

Date	Time	Ext	CO	Dial Number	ANS	Duration	Cost:\$	Acc	CD
24/06/96	10:00AM	200	01	0344853233		00:05'12	00012.00	12345	
24/06/96	10:10AM		01	<I>0344853233	0'12			12345	TR
24/06/96	10:20AM	200	01	<I>0344853233	0'10	00:20'12		12345	FW
24/06/96	10:30AM	202	01	<I>MARY WARD					RC
24/06/96	10:38AM	205	03	<I>0924312111	0'22				AN
24/06/96	10:40AM	201	03	<I>1022220	0'45				NA
24/06/96	10:42AM	202	01	<Private>		00:3'10		09876	
.
.
.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

SMDR printout format:

Explanation

- (1) Date: shows the date of the call as Day / Month / Year.
- (2) Time: shows the end time of a call as Hours/Minutes / AM or PM.
- (3) Ext: shows the extension number, floating number, etc., which was engaged in the call.
- (4) CO: shows the CO line number used for the call.

(5) Dial Number

Outgoing call: shows the other party's telephone number (maximum 20 digits). Valid digits are 0 through 9, *, #, P (if the PAUSE button is pressed), or the mark "—" (if a host PBX access code is entered).

Received call: shows <I> that indicates 'Incoming.' If the call is carried by an ISDN network, it also shows the name or telephone number of the calling party.

Private call: shows <Private>.

(6) ANS: shows the ring duration of the incoming call in Minutes / Seconds.

(7) Duration: shows the duration of the call in Hours / Minutes / Seconds.

(8) Cost: shows the charge amount; Pulse or Dollars.

(9) Acc (Account Code): shows the account code appended to the call.

(10) CD (Condition Code): shows call handling type with the following codes:

TR: Transfer

FW: Call Forwarding to CO Line

RM: Remote access to a modem*

RC: Received an incoming call

AN: Answered an incoming call

NA: Unanswered an incoming call

DP: Doorphone Call Forwarding to CO line

Conditions

- Connect a printer provided with an EIA (RS-232C) interface to the EIA (RS-232C) connector located on the main unit. After connecting a printer, do not press the RETURN key, if provided on the printer, in 10 seconds.
- When programmed for outgoing toll calls only, printing occurs only for calls which start with the numbers stored in any Denied Code Table from levels 2 to 6. If ARS is employed, the modified number is checked against these tables.
- It is possible to select the SMDR format, page length, skip perforation and page width. If 80 characters for page width is selected, the last five digits of account codes are not printed out.
- This system can store information of up to 100 calls. If more calls are originated or received, previous records are deleted starting from the oldest one.
- This data is not deleted when you reset the system.
- If the system clock is not set by system programming or if the calendar IC is out of order, the date and time will not be printed out.
- If Register Recall signal is manually sent out during a conversation, the call record is printed and a new record is started.

- “(8) Cost” is printed out in the format selected in program [117] “Charge Display Selection.”
- It is programmable to enable or disable the printout of secret dial numbers.
- If the account code stored in location 001 of the programming table is dialed, the dialed number is not printed out to SMDR (Private Call). Refer to the seventh line on an example of printed call records.
- When the paper of the printer runs out or the printer is out-of-service, the indication “Check Printer” is displayed on the telephone of Operator 1.

Connection References

Section 2, Installation
2.3.8 Printer Connection

Programming References

Section 4, System Programming
[000] Date and Time Set
[212] Call Duration Count Start Time
[800] SMDR Incoming / Outgoing Call Log Printout
[801] SMDR Format
[802] System Data Printout
[806]–[807] EIA (RS-232C) Parameters — Port 1 / Port 2
[990] System Additional Information, Field (53)

Feature References None

Operation References Not applicable.

Station Programming

Description Allows the proprietary telephone (PT) user to customize the extension to their needs. The following are the programming items available:
For the PT (KX-T7220; KX-T7230; KX-T7235; KX-T7250; KX-T7425; KX-T7433; KX-T7436; KX-T7450)
Call Waiting Tone Type Assignment
Flexible Button Assignment
Full One-Touch Dialing Assignment
Handset / Headset Selection
Intercom Alerting Assignment

Preferred Line Assignment – Incoming / Outgoing
Ringing Tone Selection for CO Buttons
Ringing Tone Selection for the Intercom Button
Station Programming Data Default Set
For display PT (KX-T7230; KX-T7235; KX-T7433; KX-T7436) only,
Charge Fee Reference (pre-assigned extensions only)
Self-Extension Number Confirmation
For digital large display PT (KX-T7235; KX-T7433; KX-T7436) only,
Station Speed Dialing Number / Name Assignment
For operator extension PT only,
CO Incoming Call Information Log Lock Clear
Live Call Screening Password Control
Remote Station Lock Control
Detailed information and programming instructions are described in the User Manual, Station Programming.

Conditions During Station Programming, the PT is considered to be in busy status.

Programming References
Station Programming.....User Manual & User Manual Addendum
Operator Service Features.....User Manual Addendum
CO Incoming Call Information Log Lock Clear
Live Call Screening Password Control
Remote Station Lock Control

Feature References None

Operation References Not applicable.

System Working Report

Description The Digital Super Hybrid System automatically records the system's working state. A printer connected to the EIA (RS-232C) port can be used to print the recorded data.

Recorded contents are as follows:

1. Date of record
 - The date and time when cleared
 - The date and time when printed out
2. Incoming calls

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- The number of incoming calls
- The number of answered incoming calls
- The number of unanswered incoming calls
- The ratio of the answered calls to the incoming calls

$$\frac{\text{Number of answered calls}}{\text{Number of incoming calls}} \times 100 (\%)$$

- The average time from receipt of call to answer of the incoming and answered calls
 - The average duration time of talk of the answered calls
3. Outgoing calls
- The number of accesses requested
 - The number of successful accesses
 - The number of accesses failed
 - The ratio of successful accesses

$$\frac{\text{Number of successful accesses}}{\text{Number of accesses requested}} \times 100 (\%)$$

- The average duration of the dialed calls

These records can be deleted by the manager and the operator, and new data will be recorded thereafter.

Conditions

Connect a printer to the EIA (RS-232C) connector located on the main unit. After connecting a printer, do not press the RETURN key, if provided on the printer, in 10 seconds.

Connection References

Section 2, Installation
2.3.8 Printer Connection

Programming References

Section 4, System Programming
[100] Flexible Numbering, System working report
[806]–[807] EIA (RS-232C) Parameters — Port 1 / Port 2

Feature References

Section 3, Features
Station Message Detail Recording (SMDR)

Operation References

—User Manual
Addendum

DPT Features
System Working Report

Terminate

Description The Terminate button is used to allow the proprietary telephone user to disconnect the current call and originate another call without hanging up first.

- Conditions**
- Pressing the Terminate button disconnects the conversation, outputs an SMDR record, and retrieves an internal dial tone.
 - The proprietary telephone is provided with no Terminate button originally. However a flexible CO button can be assigned as the Terminate button either by system or station programming.

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
Station ProgrammingUser Manual Addendum
Flexible Button Assignment – Terminate Button

Feature References None

Operation References DPT Features
—User Manual Terminate
Addendum

Toll Restriction Override for System Speed Dialing

Description Calls originated by System Speed Dialing are restricted depending on the extension's toll restriction level for System Speed Dialing.

Conditions Same as the conditions of Toll Restriction feature except that the data for System Speed Dialing are used as the toll restriction levels.

Programming References

Section 4, System Programming
[001] System Speed Dialing Number Set
[100] Flexible Numbering, System speed dialing
[509]–[510] Toll Restriction Level for System Speed Dialing
— Day / Night

Feature References Section 3, Features
System Speed Dialing Toll Restriction

Operation References DPT Features, SLT and ISDN Telephone Features;
—User Manual Toll Restriction Override – Toll Restriction Override for System Speed
Addendum Dialing

3 Features

T

Trunk (CO Line) Answer From Any Station (TAFAS)

Description A tone signal is emitted from the external pager when an incoming outside call is received. Any extension user can answer the call.

- Conditions**
- Connect a user-supplied external paging device.
 - One external pager can be installed in KX-TD816. Two external pagers can be installed in KX-TD1232 per system. System Connection* permits four pagers (maximum). These pagers are numbered from 1 through 4. To answer an incoming call dial the feature number and 1 to 4. The feature number is the same as that used to answer Paging – External.
 - Floating numbers of pagers are programmable.
 - TAFAS can be used in the following cases:
 - a) The floating number of an external pager is assigned as the DIL 1:1 destination. In this case all the incoming calls on the specified line will be signalled.
 - b) The floating number of an external pager is assigned as the Intercept Routing destination. In this case incoming calls redirected to the destination will be signaled.
 - c) The floating number of an external pager is assigned as the Direct Dialing In destination.
 - A confirmation tone is sent to the user before being connected to the caller. Eliminating the tone is programmable.

Connection References

Section 2, Installation
2.3.6 External Pager Connection

Programming References

Section 4, System Programming
[100] Flexible Numbering, Paging – external answer / TAFAS answer
[813] Floating Number Assignment
[990] System Additional Information, Field (16)

Feature References

Section 3, Features
Floating Station

Operation References —User Manual

DPT Features, SLT and ISDN Telephone Features
Trunk (CO Line) Answer From Any Station (TAFAS)

* : Available for KX-TD1232 only.

Two-Way Recording into Voice Mail†

Description

Allows the proprietary telephone user to record a conversation into one's mailbox or another mailbox, while talking on the phone.

Note:

When you record Two-Way telephone conversations, you should inform the other party that the conversation is being recorded.

Conditions

- A flexible CO and DSS button can be assigned as the Two-Way Record button or the Two-Way Transfer button.
- When all the voice mail ports are busy, pressing the Two-Way Record button sends an alarm tone.
- When all the voice mail ports are busy, pressing the Two-Way Transfer button followed by an extension number sends an alarm tone.

Programming References

System Programming

[005] Flexible CO Button Assignment

Station Programming.....User Manual Addendum

Flexible Button Assignment — Two-Way Record Button, Two-Way Transfer Button

Feature References

None

Operation References

DPT Features

—User Manual Addendum

Two-Way Recording into Voice Mail

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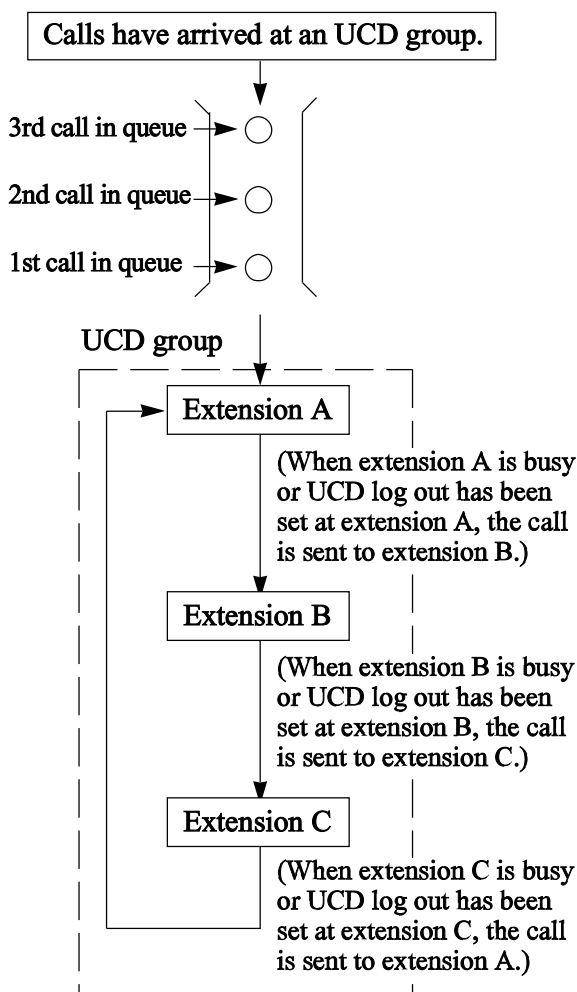
Uniform Call Distribution (UCD)

Description

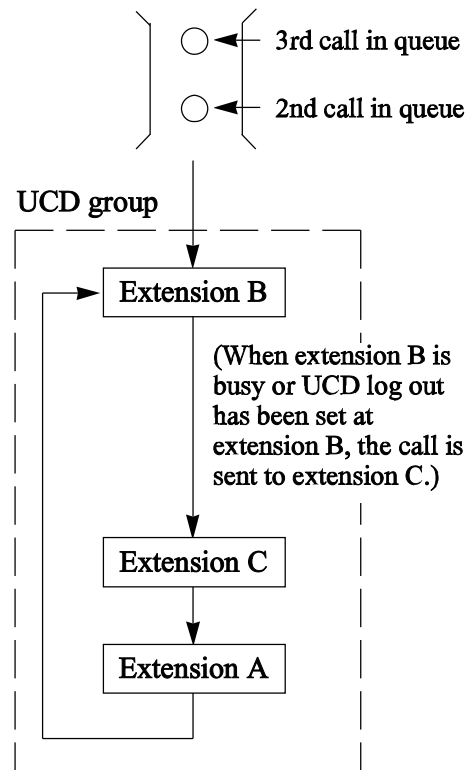
Allows incoming calls to be distributed uniformly to a specific group of extensions called an UCD group. Calls to an UCD group hunt for an idle station in a circular way. This UCD feature is particularly helpful when a certain extension receives a high volume of calls compared with other extensions.

If all extensions in an UCD group are busy or not available, the incoming outside call will be handled by the UCD Time Table. An outline sketch of an UCD is shown below.

- (1) When a number of calls have arrived at an UCD group, the 1st call is sent to extension A first.



- (2) When the 1st call arrives at extension A, the 2nd call is sent to extension B.



- (3) When the 2nd call arrives at extension C, the 3rd call will be sent to extension A.

- (4) When all extensions in an UCD group are busy or not available, the incoming outside call will be handled by the UCD Time Table.

An example is shown below.

UCD Time Table Assignment

UCD	FN	TT
1	291	1
2	292	2
:	:	:
32		

UCD : UCD Group Number (1 – 32)
 FN : Floating Number of the Hunting Group
 TT : Time Table Number (1 – 4)

Sequence Assignment

TT	SEQUENCE
1	S1 → 4T → 4T → TR →
2	S1 → 2T → → →
3	S4 → RT → → →
4	TR → → → →

S1 : Send Outgoing Message (OGM) 1
 S2 : Send OGM 2
 S3 : Send OGM 3
 S4 : Send OGM 4
 TR : Transfer to overflow extension
 RT : Return to top
 Blank : Disconnect the line
 1T : Timer – 16 seconds
 2T : Timer – 32 seconds
 3T : Timer – 48 seconds
 4T : Timer – 64 seconds

Sequence Activation Examples

- S4 → → → → : Sends OGM 4 and then disconnects the line.
- S4 → TR → N/A → N/A → N/A : Sends OGM 4 and then transfers to an overflow extension.
- S4 → 1T → → → : Sends OGM 4, Music on Hold for 16 seconds and then disconnects the line.
- S1 → S2 → S3 → → : Sends OGM 1, OGM 2, OGM 3 and then disconnects the line.
- S4 → 1T → S1 → → : Sends OGM 4, Music on Hold for 16 seconds, OGM 1 and then disconnects the line.
- S4 → 1T → 4T → RT → N/A : Sends OGM 4, Music on Hold for 16 + 64 seconds and then OGM 4 again.
- S4 → RT → N/A → N/A → N/A : Sends OGM 4 repeatedly.
- TR → N/A → N/A → N/A → N/A : Directly transfers to an overflow extension.
- RT → N/A → N/A → N/A → N/A : Waits for an idle extension. The caller hears a ringback tone. (Intercept Routing – No Answer (IRNA) works.)
- → N/A → N/A → N/A → N/A : Waits for an idle extension. The caller hears a ringback tone. (IRNA works.)
- 1T → → → → : Waits for an idle extension. The caller hears a ringback tone. (IRNA does not work.)
- 1T → RT → N/A → N/A → N/A : Waits for an idle extension. The caller hears a ringback tone. (IRNA does not work.)
- 1T → TR → N/A → N/A → N/A : Waits for an idle extension for 16 seconds and then transfers to an overflow extension.

† N/A: not available for assignment.

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Note:

- The UCD Time Table is not available for incoming extensions or transferred calls.
- The overflow extension is the IRNA destination of the hunting group or the CO line group assigned by program [134]–[135] “Hunting Intercept — Day / Night” or [409]–[410] “Intercept Extension — Day / Night.” If both of them are assigned, the IRNA destination of the hunting group will be effective.
- If the overflow extension is not assigned, the system will not answer the call and waits for an idle extension.
- If the Time Table number is not assigned, the system will not answer the call. In this case, IRNA will be employed.
- In sequence assignment, “Sx” can be assigned to a space other than the first only when another “Sx” is assigned in the first space.
- In sequence assignment, an assignment after “TR,” “RT” or “Blank” is not available.
- If a timer is the first item in a Time Table sequence, it will delay answering according to the Timer’s setting. The caller will hear a ringback tone.
- Music on Hold after an OGM can be changed to a ringback tone by program [990] “System Additional Information, Field (1).”

Conditions

- UCD can be used in the following cases:
 - a) The floating number of UCD is assigned as the Direct In Lines (DIL) 1:1 destination.
 - b) The floating number of UCD is assigned as the Intercept Routing destination.
 - c) The floating number of UCD is dialed from an extension.
 - d) The floating number of UCD is assigned as the Direct Dialing In (DDI) destination.
 - e) The floating number of UCD is assigned as the UCD Overflow destination.
- This feature requires assigning an UCD group in System Programming. An extension can belong to two or more UCD groups.
- The floating number can be assigned on a hunting group basis. The UCD group is based on the hunting group.
- It is possible to set the log-in or log-out status on an extension basis. An UCD call can be sent to an extension in log-in status within the UCD group, but cannot be sent to extensions in log-out status. If the extension would like to leave the group temporarily, the extension sets the log-out status by the feature number to prevent UCD calls being sent to his/her extension. When the extension re-joins the group, the extension sets the log-in status.
- If all extensions are in log-out status, the system will not answer the call. In this case, IRNA will be employed.

3 Features



Voice Mail Integration for Digital Proprietary Telephones†

Description

The Digital Proprietary Telephone capable Panasonic Voice Processing System can be connected to the Digital Super Hybrid System (DSHS) in a tightly integrated fashion. The system sends the VPS data which contains the extension number configuration information and the VPS automatically creates mailboxes with this data (Automatically Configuration — Quick Setup).

Conditions

- A maximum of one VPS can be connected to each DSHS cabinet.
- A maximum of 6 DSHS jacks can be connected to a digital proprietary telephone capable VPS. Because a digital proprietary telephone connection supports up to two simultaneous voice calls, only one DSHS jack needs to be connected to every 2 VPS ports.
- Connect the jacks and ports in order. In other words, the lowest number DSHS jack used for VPS connection must be connected to the lowest number VPS port.
- The VPS data is transmitted to the VPS on the lowest jacks port.
- Only extensions which are assigned as “Connect” in the program [611] can have mailboxes.
- The voice mail service codes and names can be stored in station speed dialing.

Programming References

- [126] Voice Mail Number Assignment
- [127] Voice Mail Extension Number Assignment
- [128] Voice Mail Extension Group Assignment
- [611] Extension Connection Assignment
- [617] Live Call Screening Recording Mode Assignment

Feature References

Section 3, Features
Voice Mail Integration

Operation References

Not applicable.

†: Available when the Digital Super Hybrid System is connected to a Digital Proprietary Telephone capable Panasonic Voice Processing System (one that supports digital proprietary telephone integration; e.g. KX-TVP100).

Whisper OHCA

Description When attempting to call a busy extension, Whisper OHCA allows the extension user to notify the busy party through the handset, which will only be heard by the party. Only KX-T7400 series telephone users can send or receive the Whisper OHCA.

- Conditions**
- Class of Service programming determines which extensions are able to perform this feature.
 - You can select receiving Call Waiting tone, Off-Hook Call Announcement (OHCA), Whisper OHCA or none of these at your extension. However, the setting may change depending on each telephone setting or the telephone type as listed below.

Calling Party's OHCA COS mode	Called party's call waiting mode			
	OFF	ON		
	0: Cancel	1: Call Waiting	2: OHCA	3: Whisper OHCA
Disable	Call Waiting disabled	Call Waiting tone	Call Waiting tone	Call Waiting tone
Enable (default)	Call Waiting disabled	Call Waiting tone	OHCA, Call Waiting tone	Whisper OHCA, OHCA, Call Waiting tone

- <Example> If the user selects 3 (Whisper OHCA mode);
- If using the KX-T7400 series telephone handsetWhisper OHCA
 - If using the KX-T7400 series telephone SP-PHONECall Waiting tone
 - Other.....OHCA, Call Waiting tone
 - If the Whisper OHCA sender does not use a KX-T7400 series telephone, it will work as OHCA. If the receiver does not use a KX-T7400 series telephone, the announcement may also be heard by the other party.
 - It is possible to enable the Whisper OHCA by any telephone by system programming. However, it may not work properly. (E.g. the announcement may be heard by the other party.)

Programming References

Section 4, System Programming
 [100] Flexible Numbering, Call waiting
 [519] Off-Hook Call Announcement (OHCA)
 [990] System Additional Information, Field (61)

Feature References

Section 3, Features
 Busy Station Signaling (BSS) Call Waiting
 Off-Hook Call Announcement (OHCA)

Operation References

—User Manual
 Addendum

DPT Features
 Off-Hook Call Announcement (OHCA)
 Whisper OHCA

4.1.3 Entering Characters

You can enter characters to store names or messages by using the dialing key pad, buttons or the Jog Dial.
See the Combination Tables below.

Combination Tables

SHIFT & Soft Combination		S1	SHIFT + S1	S2	SHIFT + S2	S3	SHIFT + S3	SHIFT + SHIFT +S1	SHIFT + SHIFT +S2	
Pressing SELECT (Times)	Keys	0	1	2	3	4	5	6	7	8
1	1	Q	q	Z	z	!	?			
2	2	A	a	B	b	C	c			
3	3	D	d	E	e	F	f			
4	4	G	g	H	h	I	i			
5	5	J	j	K	k	L	l			
6	6	M	m	N	n	O	o			
7	7	P	p	Q	q	R	r	S	s	
8	8	T	t	U	u	V	v			
9	9	W	w	X	x	Y	y	Z	z	
0	0		.	,	'	:	;			
*	*	/	+	-	=	<	>			
#	#	\$	%	&	@	()			

Combination Table 1

Rotating Jog Dial (Pulses)	Keys	0	1	2	3	4	5	6	7	8
1	1	Q	q	R	r	S	s	T	t	
2	2	A	a	B	b	C	c	D	d	
3	3	D	d	E	e	F	f	G	g	
4	4	G	g	H	h	I	i	J	j	
5	5	J	j	K	k	L	l	M	m	
6	6	M	m	N	n	O	o	P	p	
7	7	P	p	Q	q	R	r	S	s	
8	8	T	t	U	u	V	v	W	w	
9	9	W	w	X	x	Y	y	Z	z	
0	0		!	?	.	,	'	:	;	
*	*	/	+	-	=	<	>	#	\$	
#	#	\$	%	&	@	()	A	a	

Combination Table 2

- Note**
- The alphabetical characters correspond to the letters shown on the twelve dialing keys on the proprietary telephone. (except symbols)
 - In Combination Table 2:** If you keep rotating the Jog Dial, all of the characters in the table will be displayed.

4.1.3 Entering Characters

Please see the following example which shows how to select a desired character.

For example, to select the letter “M”:

Select either of the following three methods:

- (1) Using the **SHIFT** and **Soft** buttons
(for KX-T7230 / KX-T7235 / KX-T7433 / KX-T7436 only)
* See Combination Table 1.
 1. Press **6**. (“M” belongs to “6.”)
 - The Function Line shows: M N O
 2. Press the **Soft 1 (M)** button.
(Press **SHIFT** to display the lower case of the above letters.)

- (2) Using the **SELECT** button
* See Combination Table 1.
 1. Press **6**. (“M” belongs to “6.”)
 2. Press the **SELECT** button once.
 - Pressing the **SELECT** button an appropriate number of times gives you the desired letter. Pressing **SELECT** twice gives the letter “m,” pressing three times gives “N,” and so on.

- (3) Using the **Jog Dial**
(for KX-T7433 / KX-T7436 only)
* See Combination Table 2.
 1. Press **6**. (“M” belongs to “6.”)
 2. Rotate the **Jog Dial** one pulse.
 - Rotating the **Jog Dial** an appropriate number of pulses gives you the desired letter. Rotating the **Jog Dial** two pulses gives the letter “m,” rotating three pulses gives “N,” and so on.

OR

1. Press **any dialing keypad**.
2. Rotate the **Jog Dial** until the desired character appears.
 - If you keep rotating the **Jog Dial**, all of the characters will be displayed. For example, If you rotate the **Jog Dial** after pressing 2, characters will appear in the following order:
A a B b … Z z (space) ! ? . , ' : ; * / + - = <
> # \$ % & @ () A a B b …

4.1.3 Entering Characters

Example of entering characters: to enter “Mike”:

Using method (1)

* See Combination Table 1.

1. Enter 6.
2. Press **Soft 1 (M)**.
3. Enter 4.
4. Press **SHIFT**.
5. Press **Soft 3 (i)**.
6. Enter 5.
7. Press **Soft 2 (k)**.
8. Enter 3.
9. Press **Soft 2 (e)**.

The display shows:

M	N	6	O
---	---	---	---

M	N	M	O
---	---	---	---

G	H	M4	I
---	---	----	---

g	h	M4	i
---	---	----	---

g	h	Mi	i
---	---	----	---

j	k	Mi5	l
---	---	-----	---

j	k	Mik	l
---	---	-----	---

d	e	Mik3	f
---	---	------	---

d	e	Mike	f
---	---	------	---

Using method (2)

* See Combination Table 1.

1. Enter 6.
2. Press **SELECT**.
3. Enter 4.
4. Press **SELECT** six times.
5. Enter 5.
6. Press **SELECT** four times.
7. Enter 3.
8. Press **SELECT** four times.

The display shows:

6

M

M4

Mi

Mi5

Mik

Mik3

Mike

4.1.3 Entering Characters

Using method (3)

* See Combination Table 2.

The display shows:

- | | | |
|----|-------------------------------------|------|
| 1. | Enter 6. | 6 |
| 2. | Rotate Jog Dial one pulse. | M |
| 3. | Enter 4. | M4 |
| 4. | Rotate Jog Dial six pulses. | Mi |
| 5. | Enter 5. | Mi5 |
| 6. | Rotate Jog Dial four pulses. | Mik |
| 7. | Enter 3. | Mik3 |
| 8. | Rotate Jog Dial four pulses. | Mike |

OR

- | | | |
|----|---|------|
| 1. | Enter 2. | 2 |
| 2. | Rotate Jog Dial until “M” appears. | M |
| 3. | Enter 2. | M2 |
| 4. | Rotate Jog Dial until “i” appears. | Mi |
| 5. | Enter 2. | Mi2 |
| 6. | Rotate Jog Dial until “k” appears. | Mik |
| 7. | Enter 2. | Mik2 |
| 8. | Rotate Jog Dial until “e” appears. | Mike |

- Notes**
- To erase all the letters, press **CLEAR**.
 - To erase the last letter, press **←**.

4.2 Manager Programming

005

Flexible CO Button Assignment

Description Used to determine the use of the flexible CO buttons on digital proprietary telephones from a centralized telephone.

Selection

- Jack number: KX-TD816 – **01 through 16**
KX-TD1232 – **01 through 64**
- Button Code (plus parameter, if required):

Button Code	Parameter
0 (Single-CO)	KX-TD816: 01 through 08 (CO line number) KX-TD1232: 01 through 54 (CO line number)
1 (DSS)	2 through 4 digits (Extension number)
2 (One-Touch)	24 digits max. (Telephone number)
3 (Message Waiting)	None
4 (FWD/DND)	None
5 (Save)	None
6 (Account)	None
7 (Conference)	None
80 (Log-In/Log-Out)	2 through 4 digits (Hunting group extension number)
81 (Hurry-Up)	2 through 4 digits (Extension number)
82 (Voice Mail Transfer)	2 through 4 digits (Voice mail extension number)
83 (Two-Way Record)†	2 through 4 digits (Voice mail extension number)
84 (Two-Way Transfer)†	2 through 4 digits (Voice mail extension number)
85 (Live Call Screening)†	None
86 (Live Call Screening Cancel)†	None
87 (Alert)	None
88 (Phantom Extension)	2 through 4 digits (Phantom extension number)
8*00 (Night)	None
8*01 (Call Pickup Deny)	None
8*02 (Call Waiting)	None
8*03 (CLIR)	None
8*04 (COLR)	None
8*05 (DND for DDI)	None
8*06 (Executive Busy Override Deny)	None
8*07 (Paging Deny)	None
8*08 (Paralleled Telephone Connection)	None
8*09 (Pickup Dialling)	None
8*10 (Call Forwarding from Hunting Group)	2 through 4 digits (Forwarding hunting group extension number)

†: Available when the Digital Super Hybrid System is connected to a Digital Proprietary Telephone capable Panasonic Voice Processing System (one that supports digital proprietary telephone integration; e.g. KX-TVP100).

Flexible CO Button Assignment (contd.)

Button Code	Parameter
8*11 (Doorphone Call Forwarding to CO Line)	1 through 4 (Doorphone number)
8# (One-Touch Dialling with Auto Hold)	24 digits max. (Telephone number)
9 (Terminate)	None
* (Loop-CO)	None
# (Group-CO)	1 through 8 (CO line group number)
CO (ringer frequency)	1 through 8 (Ring tone type number)

Default

- KX-TD816
All jacks – CO buttons 1 through 8 = Single-CO 01 through 08;
Ring tone type 2
- KX-TD1232
All jacks – CO buttons 1 through 24 = Single-CO 01 through 24;
Ring tone type 2

Programming

1. Enter **005**.
Display: Flexible Key Asn
2. Press **NEXT**.
Display: Jack NO?→
3. Enter a **jack number**.
To enter jack number 01, you can also press **NEXT**.
Display: PT-PGM Mode
4. Press a **CO button** to be changed.
The display shows the contents pre-assigned to the button.
Display example: CO-01
5. Enter a **button code (plus parameter, if required)**.
To change the parameter, press **CLEAR** and the new parameter.
6. Press **STORE**.
7.
 - To program another CO button of the same jack, repeat steps 4 through 6.
 - To program another jack, press **SELECT** and repeat steps 3 through 6.
8. Press **END**.

4.2 Manager Programming

005

Flexible CO Button Assignment (contd.)

Cancelling

1. Perform the same procedures as steps 1 through 4 above.
2. Enter **2**.
3. Press **STORE**.
4. Press **END**.

Conditions

- A centralized telephone is a telephone connected to jack 01 or a jack programmed as the manager extension in program [006] "Operator / Manager Extension Assignment."
- There is a maximum of 16 proprietary telephones for KX-TD816, and 64 proprietary telephones for KX-TD1232.
- For KX-TD1232, jack numbers 01 through 32 are for the Master System and 33 through 64 are for the Slave, if available. Jack numbers in the out-of-service system are unacceptable.
- The number of the CO buttons available depends on the telephone type. (Refer to Section 3 "Buttons on Digital Proprietary Telephones.") To program 24 CO buttons, use the digital proprietary telephone, KX-T7230.
- If you press the same CO button again in step 5, you can select a desired ringer frequency for the CO button from eight types of ring tone. When you enter the tone type number (1 through 8), you will hear the selected tone type until **STORE** is pressed. This selection is possible only for the CO buttons that have been assigned to Single-CO, Group-CO, or Loop-CO.

Feature References

Section 3, Features
Button, Flexible
Buttons on Digital Proprietary Telephones

4.2 Manager Programming

Quick Dial Number Set

Description	Stores up to eighty quick dial numbers.
Selection	<ul style="list-style-type: none"> • Location number: 01 through 80 • Desired quick dial number: 24 digits (max.)
Default	All location numbers – Not Stored
Programming	<ol style="list-style-type: none"> 1. Enter 009. Display: Quick Dial 2. Press NEXT. Display: Location NO?→ 3. Enter a location number. To enter location number 1, you can also press NEXT. Display example: 1: Not Stored 4. Enter a desired quick dial number. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and enter the new number. 5. Press STORE. 6. To program another location, press NEXT or PREV, or SELECT and the desired location number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • There is a maximum of eighty quick dial numbers. A maximum of 24 digits, consisting of 0 through 9, can be assigned to a quick dial number. • Before programming, assign a feature number for each location first in program [104] “Quick Dial Assignment.”
Feature References	Section 3, Features Quick Dialing

4.2 Manager Programming

010

Budget Management

Description	Assigns the charge limitation of a call on an extension basis.
Selection	<ul style="list-style-type: none">• Jack number : KX-TD816 – 01 through 16, * (-1 / -2) KX-TD1232 – 01 through 64, * (-1 / -2) (* =all jacks, -1= first part, -2= second part)• Charge limitation (Charge): 0 through 99999999
Default	All jacks – 0
Programming	<ol style="list-style-type: none">1. Enter 010. Display: Charge Limit2. Press NEXT. Display: Jack NO?→3. Enter a jack number. To enter jack number 01, you can also press NEXT. To select the second part (-2), press NEXT after entering the jack number. Display example: #01-1: 0\$4. Enter a charge limitation. To delete the charge limitation, press CLEAR.5. Press STORE.6. To program another jack, press NEXT or PREV, or SELECT and the desired jack number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• If the charge limitation is set “0,” no restriction is applied.• To assign all jack numbers to the same selection, press the * key in step 3. In this case, the display shows the contents programmed for Jack01.• The displayed currency denomination can be programmed by [125] “Assignment of Denomination.”
Feature References	Section 3, Features Budget Management Charge Fee Reference

Charge Margin and Tax Rate

Description	Assigns the margin rate of a telephone charge and the tax rate to the total charge. This program is used for printing out the total charge when a guest checks out.
Selection	Margin (%): 0.0 through 999.9 Tax 1, 2 and 3 (%): 0.0 through 200.0
Default	Margin: 0.0%, Tax1, 2 and 3: 0.0%
Programming	<ol style="list-style-type: none"> 1. Enter 011. Display: Charge Margin 2. Press NEXT. Display example: Margin: 0.0% 3. Enter a charge margin rate (whole number part). To delete the current entry, press CLEAR. 4. Press ➡. 5. Enter a charge margin rate (decimal fraction part). To delete the current entry, press CLEAR. 6. Press STORE. 7. Press NEXT. Display example: Tax: 0.0% 8. Enter a tax 1 rate (whole number part). To delete the current entry, press CLEAR. 9. Press ➡. 10. Enter a tax 1 rate (decimal fraction part). To delete the current entry, press CLEAR. 11. To program another tax rate, press NEXT or PREV, or SELECT and the desired tax rate number. 12. Repeat steps 8 through 10. 13. Press STORE. 14. Press END.
Conditions	None
Feature References	Section 3, Features HOTEL APPLICATION – Check-In / Check-Out

4.2 Manager Programming

012

ISDN Extension Number Set

Description	Assigns an extension number to each port which is connected to the ISDN S0 unit or card.
Selection	<ul style="list-style-type: none">• Port number: KX-TD816 – 03 or 04 KX-TD1232 – 03 through 06, 09 through 12• Extension Number: 1 through 3 digits
Default	All ports – Not stored
Programming	<ol style="list-style-type: none">1. Enter 012. Display: ISDN EXT NO.2. Press NEXT. Display: Port NO?→3. Enter a port number. To enter port number 03, you can also press NEXT. Display: #03:Not Stored4. Enter an extension number. To change the current entry, press CLEAR and the new number.5. Press STORE.6. To program another port, press NEXT or PREV, or SELECT and the desired port number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• Each extension number can be two or three digits, consisting of 0 through 9. The * and # keys cannot be used.• A multiple subscriber number (MSN) is determined regarding this assignment. The MSN consists of the assigned extension number and an additional number (1 or 2 digits). The MSN additional number digit can be selected in programs [427] “ISDN Extension Multiple Subscriber Number” and [445] “TD286 ISDN Extension Multiple Subscriber Number”. Example) In case that the ISDN extension number is assigned “3”; 30 through 39 are effective as MSN's. The extension user can call any terminal equipment on the ISDN S0 bus with MSN individually. Pressing “30” calls all extensions on the ISDN S0 bus simultaneously.

ISDN Extension Number Set (contd.)

- For KX-TD1232, port numbers 03 through 06 are for the Master System and 09 through 12 are for the Slave, if available.
- An extension number is invalid if the leading first or second digits disagree with the setting of the program [100] "Flexible Numbering, 1st through 16th hundred extension blocks." If one digit is assigned as the leading digit, some extensions have two digits and some have three digits. If two digits are assigned, some have three digits and some have four digits.
- Double entry or incompatible entry is invalid including the assignment of program [813] "Floating Number Assignment." Valid entry examples: 10 and 11; 10 and 110. Invalid entry examples: 10 and 106; 210 and 21.
- Program [013] "ISDN Extension Name Set" is used to give names to the extension numbers.

Feature References

Section 3, Features
ISDN Extension

4.2 Manager Programming

013

ISDN Extension Name Set

Description	Assigns names to the ISDN extension numbers programmed in program [012] "ISDN Extension Number Set."
Selection	<ul style="list-style-type: none">• Port number: KX-TD816 – 03 or 04 KX-TD1232 – 03 through 06, 09 through 12• Name: 10 characters (max.)
Default	All ports – Not stored
Programming	<ol style="list-style-type: none">1. Enter 013. Display: ISDN EXT. Name.2. Press NEXT. Display: Port NO?→3. Enter a port number. To enter port number 03, you can also press NEXT. Display: #03:Not Stored4. Enter a name. For entering characters, see Section 4.1.3 "Entering Characters." To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new name.5. Press STORE.6. To program another port, press NEXT or PREV, or SELECT and the desired port number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• For KX-TD1232, port numbers 03 through 06 are for the Master System and 09 through 12 are for the Slave, if available.
Feature References	Section 3, Features ISDN Extension

Budget Management on ISDN Port

Description	Assigns the charge limitation of a call on an ISDN extension port basis.
Selection	<ul style="list-style-type: none"> • Port number: KX-TD816 – 03 or 04, * KX-TD1232 – 03 through 06, 09 through 12, * (* =all ports) • Charge limitation (Charge): 0 through 99999999
Default	All ports – 0
Programming	<ol style="list-style-type: none"> 1. Enter 014. Display: ISDN Charge Lim. 2. Press NEXT. Display: Port NO?→ 3. Enter a port number. To enter port number 03, you can also press NEXT. Display example: #03: 0 \$ 4. Enter a charge limitation. To delete the charge limitation, press CLEAR. 5. Press STORE. 6. To program another port, press NEXT or PREV, or SELECT and the desired port number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • If the charge limitation is set “0,” no restriction is applied. • To assign all ports to the same selection, press the * key in step 3. In this case, the display shows the contents programmed for the first port. • For KX-TD1232, port numbers 03 through 06 are for the Master System and 09 through 12 are for the Slave, if available. • The displayed currency denomination can be programmed by [125] “Assignment of Denomination.”
Feature References	<p>Section 3, Features Budget Management Charge Fee Reference ISDN Extension</p>

4.2 Manager Programming

015

Charge Rate Fractional Point Assignment

Description	Assigns how many decimal places to set for the charge rate.
Selection	Number of decimal places: 0 through 8
Default	3
Programming	<ol style="list-style-type: none">1. Enter 015. Display: Decimal Point2. Press NEXT. Display example: Fraction place 33. Enter the desired number. To delete the current entry, press CLEAR.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• This program is used when the rate is assigned in the [016] Charge Rate Assignment program.• According to this assignment, the charge is displayed during the conversation and shown on the SMDR print out.• This assignment is used for the charge fee reference.• You cannot leave the entry empty.
Feature References	Section 3, Features Charge Fee Reference

4.2 Manager Programming

Charge Rate Assignment

Description	Assigns the rate to each CO line.
Selection	<ul style="list-style-type: none"> • CO line number: KX-TD816 – 01 through 08, * KX-TD1232 – 01 through 24, 25, * (25=for KX-TD290, *=all CO lines) • Desired number: 9 digits max. (including the decimal point)
Default	0.001
Programming	<ol style="list-style-type: none"> 1. Enter 016. Display: Charge Rate Asn 2. Press NEXT. Display: CO Line NO?→ 3. Enter a CO line number. To enter CO line number 01, you can also press NEXT. Display example: CO01: 0.001 4. Enter a charge rate (to the left of the decimal point). To delete the current entry, press CLEAR. 5. Press ➡. 6. Enter a charge rate (to the right of the decimal point). To delete the current entry, press CLEAR. 7. Press STORE. 8. To program another CO line, press NEXT or PREV, or SELECT and the desired CO line number. 9. Repeat steps 4 through 7. 10. Press END.
Conditions	<ul style="list-style-type: none"> • A maximum of nine digits, consisting of 0 through 9, can be assigned as the rate. The number of decimal places depends on the assignment in program [015] “Charge Rate Fractional Point Assignment.”

Charge Rate Assignment (contd.)

- When the ISDN card or unit is installed to the system, the rate cannot be assigned per CO line. The rate which is assigned to the lowest CO line number is used for the other lines.
For example, when the KX-TD280 is installed to the KX-TD1232, the rate assigned to CO09 is used for CO 10 through 12.
- If a different rate is assigned to each CO line, the extension charge fee, account code charge fee and total extension charge fee meters will not be displayed correctly. In this case, the meter is calculated by the rate assigned to CO1.
- When the ISDN S0 line unit or card is installed, you have to restart the system after programming. Otherwise, the correct charge may not be displayed. See the “2.7 System Restart” section.

Feature References

Section 3, Features
Charge Fee Reference

TD286 Extension Number Set

Description	Assigns an extension number to each port which is connected to the ISDN S0 unit TD286.
Selection	<ul style="list-style-type: none"> • Port number: KX-TD816 – 01 through 06 KX-TD1232 – 01 through 12 • Extension Number: 1 through 3 digits
Default	All ports – Not stored
Programming	<ol style="list-style-type: none"> 1. Enter 017. Display: TD286 EXT.Number 2. Press NEXT. Display: Port NO?→ 3. Enter a port number. To enter port number 01, you can also press NEXT. Display: #01:Not Stored 4. Enter an extension number. To change the current entry, press CLEAR and the new number. 5. Press STORE. 6. To program another port, press NEXT or PREV, or SELECT and the desired port number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • Each extension number can be two or three digits, consisting of 0 through 9. The * and # keys cannot be used. • A multiple subscriber number (MSN) is determined regarding this assignment. The MSN consists of the assigned extension number and an additional digit, 0 through 9. Example) In case that the ISDN extension number is assigned “3”; 30 through 39 are effective as MSN's. The extension user can call any terminal equipment on the ISDN S0 bus with MSN individually. Pressing “30” calls all extensions on the ISDN S0 bus simultaneously. • For the KX-TD1232, port number 01 through 06 are for the Master System and 07 through 12 are for the Slave, if available.

TD286 Extension Number Set (contd.)

- An extension number is invalid if the leading first or second digits disagree with the setting of the program [100] “Flexible Numbering, 1st through 16th hundred extension blocks.” If one digit is assigned as the leading digit, some extensions have two digits and some have three digits. If two digits are assigned, some have three digits and some have four digits.
- Double entry or incompatible entry is invalid including the assignment of program [813] “Floating Number Assignment.” Valid entry examples: 10 and 11; 10 and 110. Invalid entry examples: 10 and 106; 210 and 21.
- Program [018] “TD286 Extension Name Set” is used to give names to the extension numbers.

Feature References

Section 3, Features
ISDN Extension

TD286 Extension Name Set

Description	Assigns names to the TD286 extension numbers programmed in program [017] “TD286 Extension Number Set.”
Selection	<ul style="list-style-type: none"> • Port number: KX-TD816 – 01 through 06 KX-TD1232 – 01 through 12 • Name: 10 characters (max.)
Default	All ports – Not stored
Programming	<ol style="list-style-type: none"> 1. Enter 018. Display: TD286 EXT. Name 2. Press NEXT. Display: Port NO?→ 3. Enter a port number. To enter port number 01, you can also press NEXT. Display: #01:Not Stored 4. Enter a name. For entering characters, see Section 4.1.3 “Entering Characters.” To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new name. 5. Press STORE. 6. To program another port, press NEXT or PREV, or SELECT and the desired port number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • For the KX-TD1232, port number 01 through 06 are for the Master System and 07 through 12 are for the Slave, if available.
Feature References	Section 3, Features ISDN Extension

4.2 Manager Programming

019

Budget Management on TD286 Port

Description	Assigns the charge limitation of a call on a TD286 port basis.
Selection	<ul style="list-style-type: none">• Port number: KX-TD816 – 01 through 06, * KX-TD1232 – 01 through 12, * (* =all ports)• Charge limitation (Charge): 0 through 99999999
Default	All ports – 0
Programming	<ol style="list-style-type: none">1. Enter 019. Display: TD286 Charge Lim2. Press NEXT. Display: Port NO?→3. Enter a port number. To enter port number 01, you can also press NEXT. Display example: #01: 0 \$4. Enter a charge limitation. To delete the charge limitation, press CLEAR.5. Press STORE.6. To program another port, press NEXT or PREV, or SELECT and the desired port number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• If the charge limitation is set “0,” no restriction is applied.• To assign all ports to the same selection, press the * key in step 3. In this case, the display shows the contents programmed for the first port.• For the KX-TD1232, port number 01 through 06 are for the Master System and 07 through 12 are for the Slave, if available.• The displayed currency denomination can be programmed by [125] “Assignment of Denomination.”
Feature References	<p>Section 3, Features Budget management Charge Fee Reference ISDN Extension</p>

Doorphone Call Forwarding — Day / Night

Description	Assigns the phone number where doorphone calls are forwarded. This feature is one of the ISDN service.
Selection	<ul style="list-style-type: none">• Doorphone number: 1 through 4 (3 or 4 is for KX-TD1232 only.)• Line access code: 9 or 81 through 88• Phone number: 24 digits (max.) (including a line access code) / Disable (not forwarded)
Default	All doorphone numbers – Disable
Programming	<ol style="list-style-type: none">1. Enter a program address (021 for day or 022 for night). Display example: D-phone FWD Day2. Press NEXT. Display: D-phone NO ?→3. Enter a doorphone number. Display example: #1:Disable4. Enter a line access code and a phone number. To assign no forwarding, press CLEAR.5. Press STORE.6. To program the other doorphone, press NEXT.7. Repeat steps 4 and 5.8. Press END.
Conditions	<ul style="list-style-type: none">• When “Disable” is selected, the call is received by the extension programmed in [607]–[608].
Feature References	Section 3, Features, Doorphone Call Forwarding to CO Line Night Service

Flexible Numbering

Description	Assigns the leading digits of extension numbers and feature numbers for system features.
Selection	<ul style="list-style-type: none">• Selection number: 01 through 102 (See “Feature Number List” on the following page for the corresponding features.)• Feature number: 1 or 2 digits (for selection numbers 01 through 16, 86); 1 through 3 digits (for selection numbers 17 through 85, 87 through 102)
Default	See “Feature Number List” on the next page.
Programming	<ol style="list-style-type: none">1. Enter 100. Display: FLX Numbering2. Press NEXT. Display: Select NO?→3. Enter a selection number. To enter selection number 01, you can also press NEXT. Display example: 01. 1-EXT BL:24. Enter the feature number. To delete the feature number, press CLEAR. To change the current entry, press CLEAR and the new number.5. Press STORE.6. To program another selection, press NEXT or PREV, or SELECT and the desired selection number.7. Repeat steps 4 through 6.8. Press END. <p>To remove all the feature numbers except selection numbers (01) through (16) 1st through 16th extension blocks;</p> <ol style="list-style-type: none">1. Enter 100.2. Press NEXT.3. Enter 00. Display: All Feature CLR?

Flexible Numbering

4. Press **STORE**.

5. Press **END**.

Conditions

- Each extension block has one or two digits, consisting of **0 through 9**. Assign the leading digits for extension numbers of the respective blocks.
- Assignment of extension blocks defines the limits for programs [003] “Extension Number Set,” [012] “ISDN Extension Number Set,” [127] “Voice Mail Extension Number Assignment,” [130] “Phantom Extension Number Assignment” and [813] “Floating Number Assignment.”
- To clear an extension block (01) through (16), it is required to change the corresponding numbers assigned in programs [003] “Extension Number Set,” [012] “ISDN Extension Number Set,” [127] “Voice Mail Extension Number Assignment,” [130] “Phantom Extension Number Assignment” and [813] “Floating Number Assignment.”
- Each feature number has one through three digits, consisting of **0 through 9, *, and #**.
- If * or # is included in a feature number, dial pulse telephone users cannot access the feature.
- Double entry and incompatible combinations are invalid. Valid entry example: 30 and 31, 210 and 211. Invalid entry example: 5 and 5, 30 and 301.
- If you delete a feature number, the feature cannot be used by dialling operation.
- You can remove all the feature numbers except selections (01) through (16).

Feature References

**Section 3, Features,
Flexible Numbering**

Flexible Feature Numbers

Number	Feature	Default
01	1st hundred extension block	2
02	2nd hundred extension block	3
03 - 16	3rd through 16th hundred extension block	None
17	Operator call	9
18	Automatic line access	0
19	CO line group line access	8
20	System speed dialling	*
21	Station speed dialling	6*

4.3 System Programming

100

Flexible Numbering

Number	Feature	Default
22	Station speed dialling programming	60
23	Doorphone call	68
24	Paging – external	64
25	Paging – external answer / TAFAS answer	44
26	Paging – group	63
27	Paging – group answer	43
28	Call pickup, CO line	4*
29	Call pickup, group	40
30	Call pickup, directed	41
31	Call hold	50
32	Hold retrieve – intercom	51
33	Hold retrieve – CO line	53
34	Last number redial	#
35	Call park / call park retrieve	52
36	Account code entry	49
37	Door opener	55
38	External feature access	66
39	Station program clear	790
40	Message waiting	70
41	External relay on	67
42	Call forwarding / do not disturb	710
43	Call pickup deny	720
44	External ringer	730
45	Call waiting / OHCA / whisper OHCA	731
46	Executive busy override deny	733
47	Pickup dialling program	74
48	Absent message	750
49	Timed reminder	76
50	Electronic station lockout	77
51	Night service mode	78
52	Parallel telephone mode	69
53	Background music – external	65
54	Paging – deny	721
55	Primary COS select	791
56	Secondary COS select	793
57	log-in / log-out	45
58	Operator 1 call	61
59	Operator 2 call	62
60	Automatic callback busy cancel	46
61-68	Reserved	—
69	External ringer answer	47
70	Timed reminder remote	7*
71	Call log, incoming	54
72	Do not disturb for DDI	56

Flexible Numbering

Number	Feature	Default
73	CLIR	57
74	COLR	58
75	Call log lock control, incoming	59
76†	Live call screening password	799
77	System working report	794
78	SXDP	48
79	Outgoing message	712
80	CLIP / COLP	711
81	Reserved	—
82	Call Forwarding from hunting group	714
83	Doorphone call forwarding to CO line	715
84	Doorphone call forwarding mode switch	716
85	CCBS cancel	713
86	TIE line access code	None
87-102	Other PBX Extension 01-16	None

4.3 System Programming

104

Quick Dial Assignment

Description	Assign a feature number for each quick dial location number.
Selection	<ul style="list-style-type: none">• Location number: 01 through 80• Feature number: 4 digits (max.)
Default	All location numbers – Not Stored
Programming	<ol style="list-style-type: none">1. Enter 104. Display: FLX Quick Dial2. Press NEXT. Display: Location NO?→3. Enter a quick dial number. To enter location number 1, you can also press NEXT. Display example:01: Not Stored4. Enter a desired number. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and enter the new number.5. Press STORE.6. To program another location, press NEXT or PREV, or SELECT and the desired location number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• There is a maximum of eighty quick dial numbers. A maximum of four digits, consisting of 0 through 9, can be assigned to a quick number.
Feature References	Section 3, Features Quick Dialing

Description	Assigns the account codes for Account Code Entry, Verified – All Calls and Verified – Toll Restriction Override modes. If Verified – All Calls is assigned in program [508] “Account Code Entry Mode,” an account code is required to make an outside call. If Verified – Toll Restriction Override is assigned, an account code is only required for a toll call and overrides toll restriction.
Selection	<ul style="list-style-type: none"> • Location number: 001 through 128 • Account code: 10 digits (max.)
Default	All locations – Not stored
Programming	<ol style="list-style-type: none"> 1. Enter 105. Display: Account Code 2. Press NEXT. Display: Location NO?→ 3. Enter a location number. To enter location number 001, you can also press NEXT. Display example: 001:Not Stored 4. Enter an account code. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new account code. 5. Press STORE. 6. To program another location, press NEXT or PREV, or SELECT and the desired location number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • There is a maximum of 128 verifiable account codes. Each code has a maximum of 10 digits, consisting of 0 through 9. • Program [508] “Account Code Entry Mode” is used to select the Account Code Entry mode. • Account codes having “99” in any part or ending with “9” are invalid, as “99” is used as a delimiter when entering an account code. • The location 001 of the entries is used as the account code for Private Call.
Feature References	<p>Section 3, Features, Account Code Entry Private Call Toll Restriction Override by Account Code Entry</p>

Station Hunting Type

Description	Used to enable or disable hunting and set the Station Hunting type for each hunting group. There are six Station Hunting types available: Circular, Uniform Call Distribution (UCD), Voice Mail (VM), Automated Attendant (AA), Ring, and No Reply . If circular hunting is assigned for a group, all of the extensions in the group are hunted until an idle one is found. If VM hunting is assigned, all of the VM ports of an extension group are hunted until an idle one is found to allow Voice Mail Service. If AA hunting is assigned, all of the AA ports of an extension group are hunted until an idle one is found to allow AA Service. If UCD is assigned, group members are hunted in circular way, starting at the extension following the last one called. If Ring hunting is assigned, all of the extensions in the group ring simultaneously. If No Reply hunting is assigned, the extensions in the group are hunted in order of registration for a programmed interval of time.								
Selection	<ul style="list-style-type: none"> • Hunting group number: 01 through 32 • Disable (no hunting) / Circular / VM (voice mail) / AA (automated attendant) / UCD / Ring / No Reply 								
Default	All hunting groups – Disable								
Programming	<ol style="list-style-type: none"> 1. Enter 106. Display: Hunt Type 2. Press NEXT. Display: Group NO?→ 3. Enter a hunting group number. To enter hunting group number 1, you can also press NEXT. Display example: 01: Disable 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. To program another hunting group, press NEXT or PREV, or SELECT and the desired hunting group number. 7. Repeat steps 4 through 6. 8. Press END. 								
Conditions	<ul style="list-style-type: none"> • For KX-TD1232, the system supports a maximum of eight jacks (16 jacks during System Connection) for connection to a Voice Processing System as VM or AA port. 								
Feature References	<table border="0" style="width: 100%;"> <tr> <td colspan="2">Section 3, Features</td> </tr> <tr> <td>Hunting Group</td> <td>Uniform Call Distribution (UCD)</td> </tr> <tr> <td>No Reply Group</td> <td>Voice Mail Integration</td> </tr> <tr> <td>Ring Group</td> <td></td> </tr> </table>	Section 3, Features		Hunting Group	Uniform Call Distribution (UCD)	No Reply Group	Voice Mail Integration	Ring Group	
Section 3, Features									
Hunting Group	Uniform Call Distribution (UCD)								
No Reply Group	Voice Mail Integration								
Ring Group									

Expansion Card / Unit Type

Description	Assigns the type of expansion cards/units to be used in the Master and Slave systems. This allows the system to identify the card and/or unit in each expansion location.
Selection	<p>KX-TD816</p> <ul style="list-style-type: none"> • Areas 1; 2 = C (4CO) / S (2S0) / E (8EXT) / A (16SLT) / D (4DID) / S2 (6S0) / EM (4E&M) <p>KX-TD1232</p> <ul style="list-style-type: none"> • Master / Slave • Areas 1; 2; 3; 4 = 1 (Inside the system): C (8CO) / S (4S0) / 2; 3; 4 (Expansion Area): C (4CO) / S (2S0) / E1 (8EXT-1) / E2 (8EXT-2) / A1 (16SLT-1) / A2 (16SLT-2) / D (4DID) / S2 (6S0) / S3 (1 PRI) / EM (4E&M)
Default	<p>KX-TD816: C; E</p> <p>KX-TD1232: Master and Slave – C; C; E1; E2</p>
Programming	<p>KX-TD816</p> <ol style="list-style-type: none"> 1. Enter 109. Display: Expansion Card 2. Press NEXT. Display example: Mast.:C;E 3. Keep pressing SELECT until the desired selection is displayed. 4. Press ➡ . 5. Keep pressing SELECT until the desired selection is displayed. 6. Repeat steps 4 and 5 until the all of the required entries are completed. 7. Press STORE. 8. Press END. <p>KX-TD1232</p> <ol style="list-style-type: none"> 1. Enter 109. Display: Expansion Card 2. Press NEXT to program the Master system. To program "Slave," press NEXT twice. Display example: Master: C; C ;E1; E2

Expansion Card / Unit Type (contd.)

3. Keep pressing **SELECT** until the desired selection is displayed.
4. Press **➡** .
5. Keep pressing **SELECT** until the desired selection is displayed.
6. Repeat steps 4 and 5 until the all of the required entries are completed.
7. Press **STORE**.
If only one system is in operation, go to step 8.
8. Press **NEXT** to program the Slave system.
Display example: Slave: C; C; E1; E2
9. Repeat steps 3 through 7.
10. Press **END**.

Conditions

- When starting the system for the first time or performing System Data Clear, the application for location will use practical installation instead of the system default setting.
- There are two expansion areas in KX-TD816, areas 1 and 2 from bottom to top.
- For KX-TD1232, there is one expansion area inside the system, area 1, and there are three expansion area on the system, area 2, 3 and 4 from bottom to top.
- In the KX-TD1232, if the Slave System only is in operation, the display shows "Slave" in step 2.
- If the Slave System of KX-TD1232 is out-of-service, skip steps 8 and 9.
- After changing the setting, to make your setting effective, unplug the system once and plug it in again. Otherwise, the previous setting will be maintained.

Feature References

Section 3, Features
Module Expansion

Network Type Assignment

Description	Assigns the type of ISDN network.
Selection	National / Euro
Default	National
Programming	<ol style="list-style-type: none">1. Enter 110. Display: Network Type2. Press NEXT. Display example: National3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Conditions	None
Feature References	None

4.3 System Programming

111

ISDN DDI / MSN Removed Digit / Added Number Assignment

Description	Assigns the removed digits and added number to a subscriber's number and the DDI number sent from the network to make an extension number which receives the call.
Selection	<ul style="list-style-type: none">• CO line number: KX-TD816 – 01 through 08, * KX-TD1232 – 01 through 24, * (* =all CO lines)• Removed digit: 0 through 16 (0=no deletion)• Added number: 4 digits (max.)
Default	All CO Lines – 0 (removed digit), Not stored (added number)
Programming	<ol style="list-style-type: none">1. Enter 111. Display: DDI Removed/Add2. Press NEXT. Display: CO Line NO?→3. Enter the CO line number.4. Enter the digit(s) to be deleted. To change the current entry, press CLEAR and the new number.5. Press ➡. Display example: CO01: 3,6. Enter the number(s) to be added. To change the current entry, press CLEAR and the new number.7. Press STORE.8. Press END.
Conditions	<p>Example: If the removed digits are assigned as "6" and the added number is assigned as "2," the number sent from the network is changed as follows: <u>85492603</u> (DDI number: 2 digits) Six digits are deleted and "2" is added, and the number becomes "203."</p> <ul style="list-style-type: none">• To assign all CO lines to one, press the * key in step 3. In this case, the display shows the contents programmed for CO01.
Feature References	Section 3, Features Direct Dialing In (DDI)

Pulse Dial Reception Assignment

Description	Assigns whether the pulse dial from the extension can be received or not by the system.
Selection	Puls : Enable / Puls : Disable
Default	Puls : Enable
Programming	<ol style="list-style-type: none">1. Enter 121. Display: Ext Pulse Dial2. Press NEXT. Display example: Ext Puls:Enable3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Conditions	None
Feature References	Section 3, Features Mixed Station Capacities

4.3 System Programming

122

Automatic Door Open Assignment

Description	Assigns whether the door is automatically unlocked or not, when pressing Call button.
Selection	<ul style="list-style-type: none">• KX-TD816 – D1–Day / D1–Night / D2–Day / D2–Night KX-TD1232 – D1–Day / D1–Night / D2–Day / D2–Night / D3–Day / D3–Night / D4–Day / D4–Night (D1: Doorphone 1, D2: Doorphone 2, D3: Doorphone 3, D4: Doorphone 4)• Disable / Enable
Default	All selections – Disable
Programming	<ol style="list-style-type: none">1. Enter 122. Display: Auto. Door Open2. Press NEXT to program D1–Day. To program another status, keep pressing NEXT until the desired one is displayed. Display example: D1-Day: Disable3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. To program another selection, press NEXT or PREV until the desired selection is displayed.6. Repeat steps 3 and 4.7. Press END.
Conditions	<ul style="list-style-type: none">• This programming is applied to the doorphone which provided the door opener.
Feature Reference	Section 3, Features Door Opener

Hotel Application

Description	Assigns whether the hotel application is enabled or disabled.
Selection	Disable / Enable
Default	Disable
Programming	<ol style="list-style-type: none"> 1. Enter 123. Display: Hotel Apply Asn 2. Press NEXT. Display example: Hotel : Disable 3. Keep pressing SELECT until the desired selection is displayed. 4. Press STORE. 5. Press END.
Conditions	If “Enable” is selected, the menu “Hotel” is displayed on the operator extension’s KX-T7235 or KX-T7436 and “Check-In / Check-Out” feature is available.
Feature Reference	Section 3, Features HOTEL APPLICATION

Assignment of Denomination

Description	Assigns the currency denomination used in your country.
Selection	2 characters (Max.)
Default	\$
Programming	<ol style="list-style-type: none">1. Enter 125. Display: Denomination2. Press NEXT. Display example: denomi.:3. Enter a denomination. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new denomination. To enter characters, see Section 4.1.3 “Entering Characters.”4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• If more than two digits are entered, they are ignored.
Feature References	Section 3, Features Display, Call Information

Voice Mail Number Assignment (contd.)†

Description	Assigns the jack number corresponding to the voice mail port for data transmission to the Voice Processing System.
Selection	<p>KX-TD816</p> <ul style="list-style-type: none"> • Jack number: 02 through 16 <p>KX-TD1232</p> <ul style="list-style-type: none"> • Master / Slave • Jack number: 02 through 32 / Master; 33 through 64 / Slave
Default	All jacks – Blank
Programming	<p>KX-TD816</p> <ol style="list-style-type: none"> 1. Enter 126. Display: VMS Port Asn 2. Press NEXT. Display example: Mast.1:# # # 3. Enter a jack number. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and enter the new jack number. 4. Press ▶ to enter another jack number. 5. Repeat steps 3 through 4 to enter another jack number. 6. Press STORE. 7. Press NEXT to program another jack number. Display example: Mast.2:# # # 8. Repeat steps 3 through 5 to enter another jack number. 9. Press STORE. 10. Press END. <p>KX-TD1232</p> <ol style="list-style-type: none"> 1. Enter 126. Display: VMS Port Asn 2. Press NEXT to program the Master System. Display example: Mast.1:# # #

Voice Mail Number Assignment (contd.)

3. Enter a **jack number**.
To delete the current entry, press **CLEAR**.
To change the current entry, press **CLEAR** and enter the new jack number.
4. Press **➡** to enter another jack number.
5. Repeat steps 3 through 4 to enter another jack number.
6. Press **STORE**.
7. Press **NEXT** to program another jack number.
Display example: Mast.2:# # #
8. Repeat steps 3 through 5 to enter another jack number.
9. Press **STORE**.
10. Press **NEXT** to program the Slave System.
Display example: Slav.1:# # #
11. Repeat steps 3 through 5 to enter another jack number.
12. Press **STORE**.
13. Press **NEXT** to program another jack number.
Display example: Slav.2:# # #
14. Repeat steps 3 through 5 to enter other jack numbers.
15. Press **STORE**.
16. Press **END**.

Conditions

- A maximum of six jacks can be assigned (twelve jacks during System Connection for KX-TD1232).
- Neither Jack number 01 nor the manager extension can be assigned as a voice mail port jack.
- The jack numbers correspond to the voice mail port in numerical order.
Example: Stored jack numbers: Jacks 02, 03, 05, 08, 11, 13
Jack 02=Voice mail numbers 01, 02; Jack 03=Voice mail numbers 03, 04; Jack 05=Voice mail numbers 05, 06; Jack 08=Voice mail numbers 07, 08; Jack 11=Voice mail numbers 09, 10; Jack 13=Voice mail numbers 11, 12

Feature References

Section 3, Features
Voice Mail Integration for Digital Proprietary Telephones

Voice Mail Extension Number Assignment †

Description	Assigns the extension number for the voice mail number. These numbers can be used the same way extension numbers are used for station access.
Selection	<ul style="list-style-type: none"> • Voice mail number (VM): KX-TD816 – 01 through 12 KX-TD1232 – 01 through 24 • Extension Number: 2 to 4 digits
Default	VM-01=265, VM-02=266, VM-03=267, VM-04=268, VM-05=269, VM-06=270, VM-07=277, VM-08=278, VM-09=281, VM-10=282, VM-11=283, VM-12=284, VM-13=271, VM-14=272, VM-15=273, VM-16=274, VM-17=275, VM-18=276, VM-19=279, VM-20=280, VM-21=285, VM-22=286, VM-23=287, VM-24=288
Programming	<ol style="list-style-type: none"> 1. Enter 127. Display: VM EXT NO. Set 2. Press NEXT. Display: VM NO?→ 3. Enter a voice mail number. To enter voice mail number 01, you can also press NEXT. Display: VM-01:#02-1:265 4. Enter an extension number. To change the current entry, press CLEAR and enter the new number. 5. Press STORE. 6. To program another voice mail number, press NEXT or PREV, or SELECT and the desired voice mail number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • You cannot leave an entry empty. • For the KX-TD1232, VM-01 through VM-12 are for the Master system and VM-13 through VM-24 are for the Slave system, if available.

Voice Mail Extension Number Assignment (contd.)

- Double entries and incompatible entries for extension numbers are invalid.
To avoid making an invalid entry, check the other extension numbers in programs [003] “Extension Number Set,” [012] “ISDN Extension Number Set,” [130] “Phantom Extension Number Assignment” and [813] “Floating Number Assignment.”
- The display shows “VM-XX:#YY-1:ZZZ” in step 3.
“XX” means the voice mail number. “YY” means the jack number of the voice mail port programmed in [126] “Voice Mail Number Assignment.”
“-1” of YY-1 means the first part of jack number in digital line.
YY-2 means the second number of the jack number in digital line.

Feature References

Section 3, Features

Voice Mail Integration for Digital Proprietary Telephones

Voice Mail Extension Group Assignment †

Description	Assigns each voice mail number to a voice mail extension group number.
Selection	<ul style="list-style-type: none"> • Voice mail number (VM): KX-TD816 – 01 through 12, * KX-TD1232 – 01 through 24, * (* =all voice mail numbers) • Voice mail extension group number (EXG): 1 through 8
Default	All voice mail numbers – EXG 1
Programming	<ol style="list-style-type: none"> 1. Enter 128. Display: VM EXT Group Asn 2. Press NEXT. Display: VM NO?→ 3. Enter a voice mail number. To enter voice mail number 01, you can also press NEXT. Display example: VM-01:#02-1:EXG1 4. Enter the voice mail extension group number. To delete the current entry, press CLEAR. To change the current entry, enter the new number. 5. Press STORE. 6. To program another voice mail number, press NEXT or PREV, or SELECT and the desired voice mail number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • For the KX-TD1232, VM-01 through VM-12 are for the Master system and VM-13 through VM-24 are for the Slave system, if available. • The display shows “VM-XX:#YY-1:EXG Z” in step 3. “XX” means a voice mail number. “YY” means the jack number of the voice mail port programmed in [126] “Voice Mail Number Assignment.” “-1” of YY-1 means the first part of jack number in digital line. “YY-2” means the second part of the jack number in digital line. • To assign all voice mail numbers to one selection, press the * key in step 3. In this case, the display shows the contents programmed for voice mail number 01.
Feature References	Section 3, Features Voice Mail Integration for Digital Proprietary Telephones

Operator Queue

Description	Assigns the limited number of the queue and the number the of Hurry-Up Transfer.
Selection	<ul style="list-style-type: none">• Queue: 0 through 8• Number of Hurry-Up Transfer (H-UP): 0 through 8
Default	Queue : 8, H-UP : 4
Programming	<ol style="list-style-type: none">1. Enter 129. Display: Operator Queue2. Press NEXT. Display example: Queue:8, H-UP: 43. Enter a queue. To change the current entry, press CLEAR and the new number.4. Press ➡ .5. Enter a number of Hurry-Up Transfer. To change the current entry, press CLEAR and the new number.6. Press STORE.7. Press END.
Condition	The number of Hurry-Up should be lower than the number of the queue. They also can be the same number.
Feature Reference	Section 3, Features Automatic Overflow and Hurry-Up Transfer

Phantom Extension Number Assignment

Description	Assigns the phantom extension number.
Selection	<ul style="list-style-type: none"> • Location number: 001 through 128 • Phantom extension number : 2 through 4 digits
Default	All locations – Not stored
Programming	<ol style="list-style-type: none"> 1. Enter 130. Display: Phantom NO. 2. Press NEXT. Display: Location NO?→ 3. Enter a location number. To enter location number 001, you can also press NEXT. Display example: 001: Not Stored 4. Enter a phantom extension number. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new number. 5. Press STORE. 6. To program another location, press NEXT or PREV, or SELECT and the desired location number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • There is a maximum of 128 phantom numbers. Each number has two to four digits, consisting of numbers 0 through 9. • The first one or two digits of the phantom extension numbers are subject to program [100] “Flexible Numbering, (01) through (16) 1st through 16th hundred extension blocks.” • Phantom extension numbers and other extension numbers should be unique. Double entry and incompatible entry for these numbers are invalid. Valid entry examples are: 10 and 11, 10 and 110. Invalid entry examples are: 10 and 106, 210 and 21. • To avoid making an invalid entry, check the other extension numbers in programs [003] “Extension Number Set,” [012] “ISDN Extension Number Set,” [127] “Voice Mail Extension Number Assignment” and [813] “Floating Number Assignment.”
Feature Reference	Section 3, Features Phantom Extension

Hunting Group Assignment

Description	Assigns the extension numbers which belong to each hunting group. An incoming call is hunted in the order of registration except for Ring hunting.
Selection	<ul style="list-style-type: none">• Hunting group number: 01 through 32• Extension number: 2 through 4 digits, 12 numbers (max.) / Disable (No entry)
Default	All hunting groups – Disable
Programming	<ol style="list-style-type: none">1. Enter 131. Display: Hunt Group Asn2. Press NEXT. Display: Group NO?→3. Enter a hunting group number. To enter hunting group number 01, you can also press NEXT. Display example: 01:01 Disable4. Enter an extension number. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new number.5. Press STORE.6. To program another extension to the same group, press NEXT and repeat steps 4 and 5.7. To program another hunting group, press SELECT and repeat steps 3 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• One extension can belong to more than one hunting group simultaneously.• You can assign the floating number of the Ring hunting group for No Reply hunting.• It is possible to assign the ISDN extension numbers. In this case, the MSN additional number can be added. The MSN must be up to 4 digits, consisting of an ISDN extension number and an additional number (1 or 2 digits). The MSN additional number digit can be selected in programs [427] “ISDN Extension Multiple Subscriber Number” and [445] “TD286 ISDN Extension Multiple Subscriber Number.”
Feature References	Section 3, Features, Hunting Group Station Hunting

Hunting Group Name Assignment

Description	Assigns a hunting group name to the hunting group. When an incoming outside call is received, the assigned name and the extension number of the group are displayed on the LCD.
Selection	<ul style="list-style-type: none"> • Hunting group number: 01 through 32 • Name: 10 characters (max.)
Default	All hunting groups – Not Stored
Programming	<ol style="list-style-type: none"> 1. Enter 132. Display: Hunt Group Name 2. Press NEXT. Display: Group NO?→ 3. Enter a hunting group number. To enter hunting group number 01, you can also press NEXT. Display: 01: Not Stored 4. Enter a name. For entering characters, see Section 4.1.3 “Entering Characters.” To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new name. 5. Press STORE. 6. To program another group, press NEXT or PREV, or SELECT and the desired hunting group number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	None
Feature Reference	Section 3, Features Hunting Group Station Hunting

Hunting Overflow

Description

Assigns the limited number of a queue and the management of an incoming call when the queue is full. There are three types of management mentioned below:

Overflow: When the queue is full, a new incoming call is transferred to the Intercept destination for the group. If the number in the queue is assigned as "0" and all extensions are busy or logout, the call is transferred to the Intercept destination for the group.

Busy Tone: This assignment is available only when the call is made through an ISDN line or intercom call. If the queue is full, a busy tone is sent to a caller. If the number in the queue is assigned as "0" and all extensions are busy or logout, a busy tone is sent to the caller. If the call is made through an analog line, the number in the queue is assigned as "0," and all extensions are busy or logout, the caller will hear a ringback tone but the call cannot be received.

No: As the queue is treated as infinite, overflow will not occur and a busy tone will not be sent. The call will be kept waiting until an extension in the group becomes idle (or logs in). IRNA starts.

Selection

- Hunting group number: **01 through 32**
- Call management : **OVF (Overflow) / Busy (Busy Tone)/ No**
- The number in the queue: **0 through 8, 1 digit**

Default

All hunting groups – Busy, 0

Programming

1. Enter **133**.
Display: Hunt Overflow
2. Press **NEXT**.
Display: Group NO?→
3. Enter a **hunting group number**.
To enter hunting group number 01, you can also press **NEXT**.
Display example: 01: Busy, 0
4. Keep pressing **SELECT** until the desired selection is displayed.
5. Press **➡**.

Hunting Overflow (contd.)

6. Enter the **number in the queue**.
To change the current entry, press **CLEAR** and the new number.
7. Press **STORE**.
8. To program another group, press **NEXT** or **PREV**, or **SELECT** and the desired **hunting group number**.
7. Repeat steps 4 through 6.
8. Press **END**.

Conditions

None

Feature Reference

Section 3, Features
Hunting Group
Station Hunting

4.3 System Programming

134-135

Hunting Intercept — Day / Night

Description	Sets the Intercept destination in both day and night modes for each hunting group.
Selection	<ul style="list-style-type: none">• Hunting group number: 01 through 32• Extension number: 2 through 4 digits / Disable (no Intercept Routing)
Default	All hunting groups – Disable — Day / Night
Programming	<ol style="list-style-type: none">1. Enter a program address (134 for day or 135 for night). Display example: Hunt Intercp Day2. Press NEXT. Display: Group NO.?→3. Enter the hunting group number. To enter hunting group number 01, you can also press NEXT. Display example: 01: Disable4. Enter an extension number. To change the current entry, press CLEAR and the new number. To disable Intercept Routing, press CLEAR.5. Press STORE.6. To program another hunting group, press NEXT or PREV, or SELECT and the desired hunting group number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• You can set the extension numbers in programs [003] “Extension Number Set,” [127] “Voice Mail Extension Number Assignment,” [130] “Phantom Extension Number Assignment” and also floating numbers of the external ringer, hunting groups, and pagers in program [813] “Floating Number Assignment.”
Feature References	Section 3, Features Intercept Routing

UCD Time Table Assignment — Day / Night

Description	Assigns the Time Table when all extensions in the Uniform Call Distribution (UCD) group are busy.
Selection	<ul style="list-style-type: none">• UCD group number: 01 through 32• Time Table number: 1 through 4
Default	All UCD groups – Not stored
Programming	<ol style="list-style-type: none">1. Enter a program address (137 for day or 138 for night). Display example: UCD T.Table Day2. Press NEXT. Display: Group No?→3. Enter a UCD group number. To enter UCD group number 1, you can also press NEXT. Display example: UCD01:4. Enter a Time Table number. Display example: UCD01:15. Press STORE.6. Press END.
Conditions	<ul style="list-style-type: none">• If the Time Table number is not assigned, the system will not answer the call and waits for any extension to become idle. In this case, Intercept Routing – No Answer (IRNA) will be employed.
Feature References	Section 3, Features Uniform Call Distribution (UCD)

UCD Time Table

Description	Assigns the queuing sequence in the Uniform Call Distribution (UCD) Time Table. The queuing sequences are as follows: S1 : Sends the outgoing message 1. S2 : Sends the outgoing message 2. S3 : Sends the outgoing message 3. S4 : Sends the outgoing message 4. TR : Transfers to the overflow extension. RT : Returns to the top of the sequence. Blank : Disconnects. 1T : Timer — 16 seconds 2T : Timer — 32 seconds 3T : Timer — 48 seconds 4T : Timer — 64 seconds
Selection	<ul style="list-style-type: none">• Time Table number: 1 to 4• S1 / S2 / S3 / S4 / TR / RT / 1T / 2T / 3T / 4T / Blank
Default	All time tables – Not stored
Programming	<ol style="list-style-type: none">1. Enter 139. Display: UCD T.Table2. Press NEXT. Display: Table No.?→3. Enter a Time Table number. To enter Time Table number 1, you can also press NEXT. Display example: 1: → → → →4. Keep pressing SELECT until the desired selection is displayed. Display example: 1:S4→ → → →5. Press ➡.6. Repeat steps 4 and 5.7. Press STORE.8. Press END.
Conditions	<ul style="list-style-type: none">• “Sx” can be assigned to a space other than the first only when another “Sx” is assigned in the first space.• An assignment after “TR,” “RT” or “Blank” is not available.
Feature References	Section 3, Features Uniform Call Distribution (UCD)

ISDN DDI Translation Table

Description	Assigns a destination location of incoming DDI numbers. Incoming DDI numbers are received at extensions assigned to each location number.
Selection	<ul style="list-style-type: none"> • Location number: 000 through 399 • DDI number: 16 digits max.
Default	All locations – Not stored
Programming	<ol style="list-style-type: none"> 1. Enter 150. Display: DDI Assign 2. Press NEXT. Display: Location NO?→ 3. Enter a location number. To enter location number 000, you can also press NEXT. Display example: 000:Not Stored 4. Enter a DDI number. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and enter the new number. 5. Press STORE. 6. To program another location, press NEXT or PREV, or SELECT and the desired location number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • The DDI number can be a maximum of 16 digits. Valid numbers are from 0 to 9. • Programs [151]–[152] “ISDN DDI Ringing Assignment — Day / Night” are used to assign an extension to each location number in the day and night modes. • This program becomes available when “DDI” is selected in program [420]/[429] “ISDN Ring Service Assignment — Day / Night.”
Feature References	<p>Section 3, Features Direct Dialing In (DDI) Integrated Services Digital Network (ISDN)</p>

4.3 System Programming 151-152

ISDN DDI Ringing Assignment — Day / Night

Description Assigns the destination of each DDI number in the day and night modes.

Selection

- Location number: **000 through 399**
- Extension number: **1 to 4 digits / 0 (operator) / Not Stored**

Default All locations – N.gespei.

Programming

1. Enter a **program address (151 for day or 152 for night)**.
Display example: DuWa Ruf Tag
2. Press **NEXT**.
Display: Eintrag Nr?→
3. Enter a **location number**.
To enter location number 000, you can also press **NEXT**.
Display example: 000:N.gespei.
4. Enter an **extension number or 0**.
Display example:000:Nst 201
To change the current entry, press **CLEAR** and enter the new number.
5. Press **STORE**.
6. To program another location, press **NEXT** or **PREV**, or **SELECT** and the desired **location number**.
7. Repeat steps 4 through 6.
8. Press **END**.

Conditions

- Each extension number can be 1 to 4 digits, consisting of **0 through 9**.
- When “0” is assigned, the incoming DDI number is sent to the destination assigned in program [990] “System Additional Information, Area 01 – Bits 5 and 6.”
- These programs become available when “DDI” is selected in program [420]/[429] “ISDN Ring Service Assignment — Day / Night.”
- You can set the extension numbers in programs [003] “Extension Number Set,” [012] “ISDN Extension Number Set,” [127] “Voice Mail Extension Number Assignment,” [130] “Phantom Extension Number Assignment” and also floating numbers in program [813] “Floating Number Assignment.”

- When assigning ISDN extension numbers, the MSN additional number can be added. The MSN must be up to 4 digits, consisting of an ISDN extension number and an additional number (1 or 2 digits). The MSN additional number digit can be selected in programs [427] “ISDN Extension Multiple Subscriber Number” and [445] “TD286 ISDN Extension Multiple Subscriber Number.”

Feature References

Section 3, Features,
Direct Dialling In (DDI)
Integrated Services Digital Network (ISDN)

4.4 Timer Programming

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Completion of Calls to Busy Subscriber (CCBS)

Description	Assigns whether the Completion of Calls to Busy Subscriber (CCBS) function is enabled or disabled.
Selection	Enable / Disable
Default	Disable
Programming	<ol style="list-style-type: none">1. Enter 153. Display: CCBS2. Press NEXT. Display example: CCBS: Disable3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Conditions	None
Feature Reference	Section 3, Features, Completion of Calls to Busy Subscriber (CCBS)

PBX Code

Description	Assigns the PBX Code as your location number if the “PBX Code method” is employed for Tie Line Network calling.
Selection	PBX Code: 1 to 3 digits
Default	Not Stored
Programming	<ol style="list-style-type: none">1. Enter 154. Display: PBX Code2. Press NEXT. Display: Code:3. Enter a PBX Code. To change the current entry, press CLEAR and enter the new code.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• Valid numbers for the PBX Code are 0 through 9.• The PBX Code method is: PBX Code + Extension number.

4.4 Timer Programming

155

E&M Signal Assignment

Description	Assigns the E&M signal. There are three signals available: Continuous: Continuous E&M (Wink/Immediate) Pulsed Ans: Pulsed E&M with Answer Signal (Wink only) Pulsed No Ans: Pulsed E&M without Answer Signal (Wink only)
Selection	Continuous / Pulsed Ans / Pulsed No Ans
Default	Continuous
Programming	<ol style="list-style-type: none">1. Enter 155. Display: E&M Signal2. Press NEXT. Display example: Continuous3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• If you select “Pulsed Ans” or “Pulsed No Ans”, you must select “Wink” as the start type.

Message Waiting Ring Interval Time

Description	Sets the Message Waiting ring interval time for a single line telephone.
Selection	Time (minutes) : 0 through 64
Default	10 min
Programming	<ol style="list-style-type: none">1. Enter 214. Display: MW Ring Time2. Press NEXT. Display example: Interval: 10 min3. Enter the time. To change the current entry, press CLEAR and enter the new time.4. Press STORE.5. Press END.
Conditions	When the interval time is set to "0," the telephone does not ring for Message Waiting notification.
Feature References	Section 3, Features Message Waiting

4.4 Timer Programming

216

Outgoing Message Time

Description	Sets the maximum allowable recording time for outgoing messages (OGM).						
Selection	Time (seconds): 0 / 16 / 32 / 64 (0=no recording)						
Default	32, 0, 32, 0 (for OGM 1 through 4 from left to right)						
Programming	<ol style="list-style-type: none">1. Enter 216. Display: OGM MSG Time2. Press NEXT to program the time for OGM 1. Display example: OGM:32, 0,32, 03. Keep pressing SELECT until the desired selection is displayed.4. Press ➡ to program the time for OGM 2.5. Keep pressing SELECT until the desired selection is displayed.6. Repeat steps 4 and 5 to program the time for OGM's 3 and 4.7. Press STORE.8. Press END.						
Conditions	<ul style="list-style-type: none">• Enter the times starting from the left for OGM 1 to OGM 4.• The total time of the outgoing messages cannot exceed 64 seconds.						
Feature References	<table><tr><td>Section 3, Features</td><td></td></tr><tr><td>Outgoing Message (OGM)</td><td>Uniform Call Distribution (UCD)</td></tr><tr><td>Timed Reminder</td><td></td></tr></table>	Section 3, Features		Outgoing Message (OGM)	Uniform Call Distribution (UCD)	Timed Reminder	
Section 3, Features							
Outgoing Message (OGM)	Uniform Call Distribution (UCD)						
Timed Reminder							

Timed Reminder Alarm Ring Time

Description	Sets the number of seconds the Timed Reminder alarm rings.
Selection	Time (seconds): 30 through 240
Default	30 s
Programming	<ol style="list-style-type: none">1. Enter 217. Display: Timed Remind2. Press NEXT. Display example: Reminder: 30sec3. Enter the time. To change the current entry, enter the new time.4. Press STORE.5. Press END.
Conditions	None
Feature References	Section 3, Features Timed Reminder Timed Reminder, Remote (Wake-Up Call)

4.4 Timer Programming

218

Doorphone-to-CO Line Call Duration Time

Description	Sets the maximum time allowed for a conversation between a caller at a doorphone and an outside party. When the timer expires, the call is disconnected.
Selection	Time (minutes): 0 through 30 (× 10 is the actual time)
Default	0 sec
Programming	<ol style="list-style-type: none">1. Enter 218. Display: Door-CO Dur.Time2. Press NEXT. Display example: Time: 0 sec3. Enter the time. To change the current entry, press CLEAR and enter the new time.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• You can enter a number from 0 through 30. The actual time is 10 times your input.• If the duration time is set to “0,” there will be no time limit.
Feature References	Section 3, Features, Doorphone Call Forwarding to CO Line

TIE First / Inter Digit Time

Description	Assigns the maximum time allowed between the start of the dial tone and the first digit dialed (First Digit Time), and between digits (Inter Digit Time) on an TIE call. If an extension user fails to dial any digits during this time, the DTMF receiver is released. This timer applies until the Toll Restriction check is completed.
Selection	Time (seconds): 3 to 30
Default	5 s
Programming	<ol style="list-style-type: none"> 1. Enter 220. Display: TIE Timer 2. Press NEXT. Display example: Time:5 sec 3. Enter the time. To change the current entry, press CLEAR and enter the new time. 4. Press STORE. 5. Press END.
Conditions	<ul style="list-style-type: none"> • This timer is used for toll restriction checking. • You cannot leave the entry empty.
Feature References	Section 3, Features Toll Restriction

TIE Line Routing Table

Description	<p>The TIE line routing table can be programmed. This table is referenced by the system to identify the CO line route, when an extension user makes a TIE call.</p> <p>A routing pattern appropriate for each call is decided by the first three digits (except the TIE line access code) of the dialed number. This program assigns the TIE line access code and CO line group hunt sequence.</p>
Selection	<ul style="list-style-type: none">• Location number: 01 through 32• TIE line access code: 1 to 3 digits• CO line group hunt sequence number: 1 through 8 (5 entry max.)
Default	All locations – Not stored
Programming	<ol style="list-style-type: none">1. Enter 340. Display example: TIE Route2. Press NEXT. Display: Location NO?→3. Enter a location number. To enter location number 01, you can also press NEXT. Display example: 01: ,4. Enter a TIE line access code. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and enter the new number.5. Press ➡ to program the CO line group hunt sequence number.6. Enter a CO line group hunt sequence number. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and enter the new number.7. Press STORE.8. To program another location, press NEXT or PREV, or SELECT and the desired location number.9. Repeat steps 4 through 8.10. Press END.
Conditions	<ul style="list-style-type: none">• Each TIE line access code has a maximum of three digits, consisting of 0 through 9 and *. The character “*” can be used as a wild card character.• Program [341] “TIE Removed / Added Digit” is used to modify the TIE line access code.

TIE Modify Removed / Added Digit

Description	Assigns the removed and added digits of the TIE call received digits. Digits are removed and added from the beginning of the dialed digits.
Selection	<ul style="list-style-type: none"> • Location number: 01 through 32 • Number of digits to be deleted: 0 to 4 (0=no deletion) • Number to be added: 4 digits (max.)
Default	All locations – Deleted digit: 0, Added digit: Blank
Programming	<ol style="list-style-type: none"> 1. Enter 341. Display: TIE Remove / Add 2. Press NEXT. Display: Location NO?→ 3. Enter a location number. To enter location number 01, you can also press NEXT. Display example: 01:0, 4. Enter the number of digits to be deleted. To change the current entry, press CLEAR and enter the new number. 5. Press ▶ to program the number to be added. 6. Enter the number to be added. To change the current entry, press CLEAR and enter the new number. 7. Press STORE. 8. To program another location, press NEXT or PREV, or SELECT and the desired location number. 9. Repeat steps 4 through 8. 10. Press END.
Conditions	Each added number has a maximum of 4 digits, consisting of 0 through 9 .

4.6 CO Line Programming

416

Reverse Circuit Assignment

Description	Enables or disables detection of the Reverse Circuit.
Selection	<ul style="list-style-type: none">• CO line number: KX-TD816 – 01 through 08, * KX-TD1232 – 01 through 24, * (* =all CO lines)• Regular (no detection) / Reverse (detection)
Default	All CO lines – Regular
Programming	<ol style="list-style-type: none">1. Enter 416. Display: Reverse Circuit2. Press NEXT. Display: CO Line NO?→3. Enter a CO line number. To enter CO line number 01, you can also press NEXT. Display example: CO01: Regular4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another CO line, press NEXT or PREV, or SELECT and the desired CO line number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• For KX-TD1232, CO01 through CO12 are for the Master System and CO13 through CO24 are for the Slave, if available.• To assign all CO lines to one, press the * key in step 3. In this case, the display shows the contents programmed for CO01.
Feature References	Section 3, Features Reverse Circuit

Subscriber Number Assignment

Description	Assigns the subscriber number which is assigned to a CO line to a central office for Calling Line Identification Presentation or Connected Line Identification Presentation.
Selection	<ul style="list-style-type: none"> • CO line number: KX-TD816 – 01 through 08, * KX-TD1232 – 01 through 54, * (* =all CO lines) • Telephone number: 16 digits (max.)
Default	All CO lines – Not stored
Programming	<ol style="list-style-type: none"> 1. Enter 419. Display: Telephone Number 2. Press NEXT. Display: CO Line NO?→ 3. Enter a CO line number. To enter CO line number 01, you can also press NEXT. Display example: CO01: Not Stored 4. Enter a telephone number. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new number. 5. Press STORE. 6. To program another CO line number, press NEXT or PREV, or SELECT and the desired CO line number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • The valid characters are 0 through 9. • To assign all CO lines to the same selection, press the * key in step 3. In this case, the display shows the contents programmed for CO01. • For KX-TD1232, CO 01 through CO 12 are for the Master System and CO 13 through CO 24 are for the Slave, If available. • CO 25 through CO 54 become available if the KX-TD290 is installed to the KX-TD1232. • To display parts of the number which have scrolled off the display, press ➡ or ⬅.
Feature References	Section 3, Features Calling Line Identification Restriction (CLIR) Connected Line Identification Restriction (COLR)

4.6 CO Line Programming 420/429

ISDN Ring Service Assignment — Day / Night

Description Assigns the contract status of the Direct Dialing In (DDI) Service or Multiple Subscriber Number on a CO line basis in both day and night modes.

Selection

- CO line number: KX-TD816 – 01 through 08, *
KX-TD1232 – 01 through 24, *
(* = all CO lines)
- **DDI / MSN / Disable**

Default All CO lines – DDI

Programming

1. Enter a **program address (420 for day or 429 for night)**.
Display example: DDI/MSN Day
2. Press **NEXT**.
Display: CO Line NO?→
3. Enter a **CO line number**.
To enter CO line number 01, you can also press **NEXT**.
Display example: #01: DDI
4. Keep pressing **SELECT** until the desired selection is displayed.
5. Press **STORE**.
6. To program another CO line, press **NEXT** or **PREV**, or **SELECT** and the desired **CO line number**.
7. Repeat steps 4 through 6.
8. Press **END**.

Conditions

- This assignment depends on the contract with your ISDN supplier.
- For the KX-TD1232, CO01 through CO12 are for the Master System and CO13 through CO24 are for the Slave, if available.
- To assign all CO lines to same selection, press the * key in step 3. In this case, the display shows the contents programmed for CO01.

Feature References **Section 3, Features**
Direct Dialing In (DDI)
Multiple Subscriber Number (MSN) Ringing Service

CO Line Name Assignment

Description	Used to set names to CO lines. The preset name is shown on a display proprietary telephone when an incoming outside call is placed to the telephone.
Selection	<ul style="list-style-type: none"> • CO line number: KX-TD816 – 01 through 08, * KX-TD1232 – 01 through 54, * (* =all CO lines) • Name: 10 characters (max.)
Default	All CO lines – Not stored
Programming	<ol style="list-style-type: none"> 1. Enter 421. Display: CO Line Name 2. Press NEXT. Display: CO Line NO?→ 3. Enter a CO line number. To enter CO line number 01, you can also press NEXT. Display example: CO01:Not Stored 4. Enter a name. For entering characters, see Section 4.1.3 “Entering Characters.” To delete the current entry, press CLEAR. To change the current entry, press CLEAR and the new name 5. Press STORE. 6. To program another CO line, press NEXT or PREV, or SELECT and the desired CO line number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • For KX-TD1232, CO01 through CO12 are for the Master System and CO13 through CO24 are for the Slave, if available. • CO 25 through CO 54 become available if the KX-TD290 is installed to the KX-TD1232. • Each name has a maximum of 10 characters. • To assign all CO lines to one selection, press the * key in step 3. In this case, the display shows the contents programmed for CO01.
Feature References	Section 3, Features Display, Call Information

ISDN Port Type

Description	Assigns the type of each port either a CO line or extension line on an ISDN port basis.
Selection	<ul style="list-style-type: none">• Port number: KX-TD816 – 03 or 04, * KX-TD1232 – 03 through 06, 09 through 12, * (* =all ports)• CO (CO line) / Extension
Default	All ports – CO
Programming	<ol style="list-style-type: none">1. Enter 422. Display: ISDN Line Type2. Press NEXT. Display: Port NO?→3. Enter a port number. To enter port number 03, you can also press NEXT. Display example: #03:CO4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another port, press NEXT or PREV, or SELECT and the desired port number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• For KX-TD1232, port numbers 03 through 06 are for the Master System and 09 through 12 are for the Slave, if available.• To assign all ports to the same selection, press the * key in step 3. In this case, the display shows the contents programmed for the first port.• After this assignment, you should reset the system so that this assignment is effective.
Feature References	Section 3, Features ISDN Extension

ISDN Layer 1 Active Mode

Description	Assigns the active mode of Layer 1 on an ISDN port basis.
Selection	<ul style="list-style-type: none"> • Port number: KX-TD816 – 03 or 04, * <li style="padding-left: 40px;">KX-TD1232 – 01 through 12, * <li style="padding-left: 40px;">(* =all ports) • Permanent / Call
Default	All ports – Call
Programming	<ol style="list-style-type: none"> 1. Enter 423. Display: L1 Active Mode 2. Press NEXT. Display: Port NO?→ 3. Enter a port number. To enter the first port, you can also press NEXT. Display example: #01:Permanent 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. To program another port, press NEXT or PREV, or SELECT and the desired port number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • For KX-TD1232, port numbers 01 through 06 are for the Master System and 07 through 12 are for the Slave, if available. • To assign all ports to the same selection, press the * key in step 3. In this case, the display shows the contents programmed for the first port. • After this assignment, you should reset the system so that this assignment is effective.
Feature References	Section 3, Features ISDN Extension

4.6 CO Line Programming

424

ISDN Configuration

Description	Assigns the configuration on an ISDN port basis.
Selection	<ul style="list-style-type: none">• Port number: KX-TD816 – 03 or 04, * KX-TD1232 – 01 through 12, * (* =all ports)• Point (point to point) / Multipoint (point to multipoint)
Default	All ports – Point
Programming	<ol style="list-style-type: none">1. Enter 424. Display: Access Mode2. Press NEXT. Display: Port NO?→3. Enter a port number. To enter port number 01, you can also press NEXT. Display example: #01:Point4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another port, press NEXT or PREV, or SELECT and the desired port number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• Port numbers 01 through 06 are for the Master System and 07 through 12 are for the Slave, if available.• If one equipment is connected to the ISDN port, select "Point." If multiple equipment are connected, select "Multipoint."• To assign all ports to the same selection, press the * key in step 3. In this case, the display shows the contents programmed for the first port.• After this assignment, you should reset the system so that this assignment is effective.
Feature References	Section 3, Features ISDN Extension

ISDN Data Link Mode

Description	Assigns the data link mode on an ISDN port basis.
Selection	<ul style="list-style-type: none"> • Port number: KX-TD816 – 03 or 04, * <li style="padding-left: 40px;">KX-TD1232 – 01 through 12, * <li style="padding-left: 40px;">(* =all ports) • Permanent / Call
Default	All ports – Call
Programming	<ol style="list-style-type: none"> 1. Enter 425. Display: Data Link Mode 2. Press NEXT. Display: Port NO?→ 3. Enter a port number. To enter the first port number, you can also press NEXT. Display example: #01:Permanent 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. To program another port, press NEXT or PREV, or SELECT and the desired port number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • For KX-TD1232, port numbers 01 through 06 are for the Master System and 07 through 12 are for the Slave, if available. • To assign all ports to the same selection, press the * key in step 3. In this case, the display shows the contents programmed for the first port. • After this assignment, you should reset the system so that this assignment is effective.
Feature References	Section 3, Features ISDN Extension

4.6 CO Line Programming

426

ISDN TEI Mode

Description	Assigns the Terminal Endpoint Identifier (TEI) mode on an ISDN port basis.
Selection	<ul style="list-style-type: none">• Port number: KX-TD816 – 03 or 04, * KX-TD1232 – 01 through 12, * (* =all ports)• Fix 0 through 63 / Automatic
Default	All ports – Fix 0
Programming	<ol style="list-style-type: none">1. Enter 426. Display: TEI Assign2. Press NEXT. Display: Port NO?→3. Enter a port number. To enter port number 01, you can also press NEXT. Display example: #01:Fix 04. Enter the TEI. To change the current entry, press CLEAR and the new number. To assign "Automatic," press CLEAR.5. Press STORE.6. To program another port, press NEXT or PREV, or SELECT and the desired port number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• For KX-TD1232, port numbers 01 through 06 are for the Master System and 07 through 12 are for the Slave, if available.• If the "Point" is selected in program [424], assign the fixed TEI. If "Multipoint" is selected, assign "Automatic."• To assign all ports to the same selection, press the * key in step 3. In this case, the display shows the contents programmed for the first port.• After this assignment, you should reset the system so that this assignment is effective.
Feature References	Section 3, Features ISDN Extension

ISDN Extension Multiple Subscriber Number

Description	Selects whether the Multiple Subscriber Number (MSN) is allocated to each terminal equipment on ISDN S0 bus or not on ISDN port basis. Additional number for MSN can be 1 or 2 digits.
Selection	<ul style="list-style-type: none"> • Port number: KX-TD816 – 01 through 04, * KX-TD1232 – 03 through 06, 09 through 12, * (* =all ports) • Disable (no number) / 1 digit / 2 digits
Default	All ports – Disable
Programming	<ol style="list-style-type: none"> 1. Enter 427. Display: MSN Service 2. Press NEXT. Display: Port NO?→ 3. Enter a port number. To enter a first port number, you can also press NEXT. Display example: #03:Disable 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. To program another port, press NEXT or PREV, or SELECT and the desired port number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • Port numbers 03 through 06 are for the Master System and 09 through 12 are for the Slave, if available. • To assign all ports to one selection, press the * key in step 3. In this case, the display shows the contents programmed for a first port. • After this assignment, you should reset the system so that this assignment is effective.
Feature References	Section 3, Features, ISDN Extension

4.6 CO Line Programming

428

ISDN Extension Progress Tone

Description	Enables or disables to send the progress tone to ISDN extension on an ISDN port basis.
Selection	<ul style="list-style-type: none">• Port number: KX-TD816 – 03 or 04, * KX-TD1232 – 03 through 06, 09 through 12, * (* =all ports)• Enable / Disable (no tone)
Default	All ports – Disable
Programming	<ol style="list-style-type: none">1. Enter 428. Display: ISDN EXT Tone2. Press NEXT. Display: Port NO?→3. Enter a port number. To enter port number 03, you can also press NEXT. Display example: #03:Disable4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another port, press NEXT or PREV, or SELECT and the desired port number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• For KX-TD1232, port numbers 03 through 06 are for the Master System and 09 through 12 are for the Slave, if available.• To assign all ports to the same selection, press the * key in step 3. In this case, the display shows the contents programmed for the first port.• After this assignment, you should reset the system so that this assignment is effective.
Feature References	Section 3, Features ISDN Extension

DID / TIE Table Number Assignment

Description	Assigns a DID / TIE table number to each CO line group.
Selection	<ul style="list-style-type: none"> • CO line group (TRG) number: 1 through 8, * (* =all CO line groups) • DID / TIE table number: 1 to 4
Default	All CO line groups – Not stored
Programming	<ol style="list-style-type: none"> 1. Enter 430. Display: Modify Table NO. 2. Press NEXT. Display: TRK GRP NO?→ 3. Enter a CO line group number. To enter CO line group number 1, you can also press NEXT. Display example: TRG1:Not Stored 4. Enter a TIE table number. To change the current entry, press CLEAR and the new number. 5. Press STORE. 6. To program another CO line group, press NEXT or PREV, or SELECT and the desired CO line group number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	This is the first and basic programming for the TIE features. If this assignment is changed, it affects other programming ([431] through [435]).

4.6 CO Line Programming

431

DID / TIE Incoming Assignment

Description	<p>Assigns a and DID and TIE incoming method, immediate or wink, to each DID / TIE table according to your central office service.</p> <p>Immediate: Incoming and DID and TIE calls can be received right after the receiving signal arrives.</p> <p>Wink: Incoming and DID and TIE calls can be received after the wink signal is transmitted to the central office (after the receiving signal arrives).</p>
Selection	<ul style="list-style-type: none">• DID / TIE table number: 1 to 4, * (* =all DID / TIE tables)• Immediate / Wink
Default	All DID / TIE tables – Wink
Programming	<ol style="list-style-type: none">1. Enter 431. Display: Signal In2. Press NEXT. Display: Table NO?→3. Enter a DID / TIE table number. To enter DID / TIE table number 1, you can also press NEXT. Display example: 1:Wink4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another DID / TIE table, press NEXT or PREV, or SELECT and the desired DID / TIE table number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<p>To assign all DID / TIE tables to one selection, press the * key in step 3. In this case, the display shows the contents programmed for DID / TIE table number 1.</p>

DID / TIE Outgoing Assignment

Description	<p>Assigns a and DID and TIE outgoing method, immediate or wink, to each TIE table according to your central office service.</p> <p>Immediate: Outgoing DID and TIE numbers can be transmitted right after seizing the CO line.</p> <p>Wink: Outgoing and DID and TIE numbers can be transmitted after receiving the wink signal from the central office after seizing the CO line.</p>
Selection	<ul style="list-style-type: none"> • TIE table number: 1 to 4, * (*=all DID / TIE tables) • Immediate / Wink
Default	All DID / TIE tables – Wink
Programming	<ol style="list-style-type: none"> 1. Enter 432. Display: Signal Out 2. Press NEXT. Display: Table NO?→ 3. Enter a DID / TIE table number. To enter DID / TIE table number 1, you can also press NEXT. Display example: 1:Wink 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. To program another DID / TIE table, press NEXT or PREV, or SELECT and the desired DID / TIE table number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • The time the system waits for the confirmation wink signal can be programmed in program [435] “DID / TIE Wink Time Out Assignment”. The system disconnects the CO line when the time-out time expires. • To assign all DID / TIE tables to one selection, press the * key in step 3. In this case, the display shows the contents programmed for DID / TIE table number 1.

4.6 CO Line Programming

433

DID / TIE Subscriber Number Removed Digit

Description	Assigns the removed digits of the received DID and TIE subscriber numbers to each DID / TIE table. Digits are removed from the beginning of the received digits.
Selection	<ul style="list-style-type: none">• DID / TIE table number: 1 to 4• Number of digits to be deleted (RMV): 0 through 6 (0=no deletion)
Default	All DID / TIE tables – RMV:0
Programming	<ol style="list-style-type: none">1. Enter 433. Display: RMV / RCV Digit2. Press NEXT. Display: Table NO?→3. Enter a DID / TIE table number. To enter DID / TIE table number 1, you can also press NEXT. Display example: 1:RMV:1, RCV:24. Enter the number of digits to be deleted. To change the current entry, press CLEAR and the new number.5. Press STORE.6. To program another DID / TIE table, press NEXT or PREV, or SELECT and the desired DID / TIE table number.7. Repeat steps 4 through 6.8. Press END.
Conditions	You cannot leave the entry empty.

DID / TIE Added Number

Description	Assigns the added number to the and DID and TIE subscriber number which is determined in program [433] “DID / TIE Subscriber Number Removed Digit”. This makes the final number which serves as the extension number. Note that digits are inserted at the beginning of the number.
Selection	<ul style="list-style-type: none"> • DID / TIE table number: 1 to 4 • Number to be added: 4 digits (max.)
Default	All DID / TIE tables – Not Stored
Programming	<ol style="list-style-type: none"> 1. Enter 434. Display: Add Dial 2. Press NEXT. Display: Table NO?→ 3. Enter a DID / TIE table number. To enter DID table number 1, you can also press NEXT. Display example: 1:2 4. Enter the number to be added. To change the current entry, press CLEAR and enter the new number. 5. Press STORE. 6. To program another DID / TIE table, press NEXT or PREV, or SELECT and the desired DID / TIE table number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	Each added number has a maximum of 4 digits, consisting of 0 through 9 .

4.6 CO Line Programming

435

DID / TIE Wink Time Out Assignment

Description	The and DID and TIE outgoing method can be set to the wink mode in program [432] “DID / TIE Outgoing Assignment”. This program sets the time the system waits for the confirmation wink signal after a CO line is seized according to your central office service. The system disconnects the CO line when the time-out expires.
Selection	<ul style="list-style-type: none">• DID / TIE table number: 1 to 4, * (* =all DID / TIE tables)• Time: 1 through 127 (× 64 milliseconds is the actual time)
Default	All DID / TIE tables – 16
Programming	<ol style="list-style-type: none">1. Enter 435. Display: Wink Timeout2. Press NEXT. Display: Table NO?→3. Enter a DID / TIE table number. To enter DID / TIE table number 1, you can also press NEXT. Display example: 1:164. Enter the time. To change the current entry, press CLEAR and enter the new number.5. Press STORE.6. To program another DID / TIE table, press NEXT or PREV, or SELECT and the desired DID / TIE table number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• You cannot leave the entry empty.• To assign all DID / TIE tables to one selection, press the * key in step 3. In this case, the display shows the contents programmed for DID / TIE table number 1.

Conditions

- For the KX-TD1232, port number 01 through 06 are for the Master System and 07 through 12 are for the Slave, if available.
- Each extension number consists of **0 through 9**. The * and # keys cannot be used.
- You can set the extension numbers in programs [003] “Extension Number Set,” [127] “Voice Mail Extension Number Assignment,” [130] “Phantom Extension Number Assignment” and also floating numbers of the external ringer, hunting groups, and pagers in program [813] “Floating Number Assignment.”
- When assigning ISDN extension numbers, the MSN additional number can be added. The MSN must be up to 4 digits, consisting of an ISDN extension number and an additional number (1 or 2 digits). The MSN additional number can be selected in programs [427] “ISDN Extension Multiple Subscriber Number” and [445] “TD286 ISDN Extension Multiple Subscriber Number.”
- When “0” is assigned, the incoming MSN number is sent to the destination assigned in program [990] “System Additional Information, Area 01 – Bits 5 and 6.”

Feature References

Section 3, Features
Integrated Services Digital Network (ISDN)
Night Service

4.6 CO Line Programming

440

TD286 ISDN Port Type

Description	Assigns the type of each port either CO line or extension line on a TD286 ISDN port basis.
Selection	<ul style="list-style-type: none">• Port number: KX-TD816 – 01 through 04, * KX-TD1232 – 01 through 12, * (* =all ports)• CO (CO line) / Extension
Default	All ports – Extension
Programming	<ol style="list-style-type: none">1. Enter 440. Display: TD286 Line Type2. Press NEXT. Display: Port NO?→3. Enter a port number. To enter port number 01, you can also press NEXT. Display example: #01:Extension4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another port, press NEXT or PREV, or SELECT and the desired port number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• For the KX-TD816, port numbers 05 and 06 are fixed as “Extension.”• For the KX-TD1232, port number 01 through 06 are for the Master System and 07 through 12 are for the Slave, if available.• To assign all ports to the same selection, press the * key in step 3. In this case, the display shows the contents programmed for the first port.• After this assignment, you should reset the system so that this assignment is effective.
Feature References	Section 3, Features ISDN Extension

TD286 ISDN Layer 1 Active Mode

Description	Assigns the active mode of Layer 1 on a TD286 ISDN port basis.
Selection	<ul style="list-style-type: none"> • Port number: KX-TD816 – 01 through 06, * KX-TD1232 – 01 through 12, * (* =all ports) • Permanent / Call
Default	All ports – Call
Programming	<ol style="list-style-type: none"> 1. Enter 441. Display: TD286 L1 Mode 2. Press NEXT. Display: Port NO?→ 3. Enter a port number. To enter port number 01, you can also press NEXT. Display example: #01:Call 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. To program another port, press NEXT or PREV, or SELECT and the desired port number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • For the KX-TD1232, port number 01 through 06 are for the Master System and 07 through 12 are for the Slave, if available. • To assign all ports to the same selection, press the * key in step 3. In this case, the display shows the contents programmed for the first port. • After this assignment, you should reset the system so that this assignment is effective.
Feature References	Section 3, Features ISDN Extension

4.6 CO Line Programming

442

TD286 ISDN Configuration

Description	Assigns the configuration on a TD286 ISDN port basis.
Selection	<ul style="list-style-type: none">• Port number: KX-TD816 – 01 through 06, * KX-TD1232 – 01 through 12, * (* =all ports)• Point (point to point) / Multipoint (point to multipoint)
Default	All ports – Multipoint
Programming	<ol style="list-style-type: none">1. Enter 442. Display: TD286 Accs. Mode2. Press NEXT. Display: Port NO?→3. Enter a port number. To enter port number 01, you can also press NEXT. Display example: #01:Multipoint4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another port, press NEXT or PREV, or SELECT and the desired port number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• For KX-TD1232, port number 01 through 06 are for the Master System and 07 through 12 are for the Slave, if available.• If one equipment is connected to the ISDN port, select “Point.” If multiple equipment are connected, select “Multipoint.”• To assign all ports to the same selection, press the * key in step 3. In this case, the display shows the contents programmed for the first port.• After this assignment, you should reset the system so that this assignment is effective.
Feature References	Section 3, Features ISDN Extension

TD286 ISDN Data Link Mode

Description	Assigns the data link mode on a TD286 ISDN port basis.
Selection	<ul style="list-style-type: none"> • Port number: KX-TD816 – 01 through 06, * KX-TD1232 – 01 through 12, * (* =all ports) • Permanent / Call
Default	All ports – Call
Programming	<ol style="list-style-type: none"> 1. Enter 443. Display: TD286 Link Mode 2. Press NEXT. Display: Port NO?→ 3. Enter a port number. To enter port number 01, you can also press NEXT. Display example: #01:Call 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. To program another port, press NEXT or PREV, or SELECT and the desired port number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • For the KX-TD1232, port number 01 through 06 are for the Master System and 07 through 12 are for the Slave, if available. • To assign all ports to the same selection, press the * key in step 3. In this case, the display shows the contents programmed for the first port. • After this assignment, you should reset the system so that this assignment is effective.
Feature References	Section 3, Features ISDN Extension

4.6 CO Line Programming

444

TD286 ISDN TEI Mode

Description	Assigns the Terminal Endpoint Identifier (TEI) mode on a TD286 ISDN port basis.
Selection	<ul style="list-style-type: none">• Port number: KX-TD816 – 01 through 06, * KX-TD1232 – 01 through 12, * (* =all ports)• Fix 0 through 63 / Automatic
Default	All ports – Automatic
Programming	<ol style="list-style-type: none">1. Enter 444. Display: TD286 TEI Assign2. Press NEXT. Display: Port NO?→3. Enter a port number. To enter port number 01, you can also press NEXT. Display example: #01:Automatic4. Enter the TEI. To change the current entry, press CLEAR and the new number. To assign “Automatic,” press CLEAR.5. Press STORE.6. To program another port, press NEXT or PREV, or SELECT and the desired port number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• For the KX-TD1232, port number 01 through 06 are for the Master System and 07 through 12 are for the Slave, if available.• If the “Point” is selected in program [442], assign the fixed TEI. If “Multipoint” is selected, assign “Automatic.”• To assign all ports to the same selection, press the * key in step 3. In this case, the display shows the contents programmed for the first port.• After this assignment, you should reset the system so that this assignment is effective.
Feature References	Section 3, Features ISDN Extension

TD286 ISDN Extension Multiple Subscriber Number

Description	Selects whether the Multiple Subscriber Number (MSN) is allocated to each terminal equipment on TD286 ISDN S0 bus or not on an ISDN port basis. Additional number for MSN can be 1 or 2 digits.
Selection	<ul style="list-style-type: none"> • Port number: KX-TD816 – 01 through 06, * KX-TD1232 – 01 through 12, * (* =all ports) • Disable (no number) / 1 digit / 2 digits
Default	All ports – Disable
Programming	<ol style="list-style-type: none"> 1. Enter 445. Display: TD286 MSN 2. Press NEXT. Display: Port NO?→ 3. Enter a port number. To enter port number 01, you can also press NEXT. Display example: #01:Disable 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. To program another port, press NEXT or PREV, or SELECT and the desired port number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • For the KX-TD1232, port number 01 through 06 are for the Master System and 07 through 12 are for the Slave, if available. • To assign all ports to the same selection, press the * key in step 3. In this case, the display shows the contents programmed for the first port. • After this assignment, you should reset the system so that this assignment is effective. • You must assign the extension number to an ISDN terminal beforehand. For details, refer to your terminal's manual.
Feature References	Section 3, Features , Integrated Services Digital Network (ISDN) Extension

4.6 CO Line Programming

446

TD286 ISDN Extension Progress Tone

Description	Enables or disables to send the progress tone to TD286 ISDN extension on an ISDN port basis.
Selection	<ul style="list-style-type: none">• Port number: KX-TD816 – 01 through 06, * KX-TD1232 – 01 through 12, * (* =all ports)• Enable / Disable (no tone)
Default	All ports – Disable
Programming	<ol style="list-style-type: none">1. Enter 446 Display: TD286 EXT Tone2. Press NEXT. Display: Port NO?→3. Enter a port number. To enter port number 01, you can also press NEXT. Display example: #01:Disable4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another port, press NEXT or PREV, or SELECT and the desired port number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• For the KX-TD1232, port number 01 through 06 are for the Master System and 07 through 12 are for the Slave, if available.• To assign all ports to the same selection, press the * key in step 3. In this case, the display shows the contents programmed for the first port.• After this assignment, you should reset the system so that this assignment is effective.
Feature References	Section 3, Features ISDN Extension

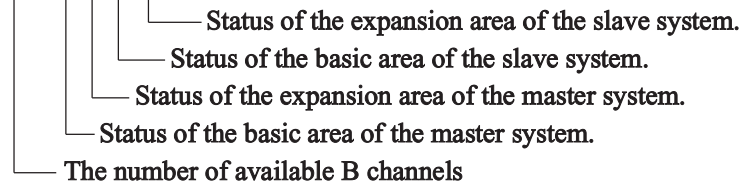
Description

Assigns the maximum number of B channels which are actually used out of the 30 PRI line channels and the installation location of the BRI card (KX-TD281) or BRI unit (KX-TD280, KX-TD286). The CRC4 mode can be also assigned.

Selection

- A maximum B channel number and installation spot:
**30 Y-NN / 30 N-YN / 30 N-NY / 26 Y-NY /
 26 N-YY / 22 Y-YN / 18 Y-YY / 0 YYYY**
 (Y=the card can be installed, -=this area is not changeable, N=the card is not installed.)

ex.: 30 Y - N N

*Programming example:*

1. To install TD290 and TD281 to the Master system: 30 Y-NN
2. To install TD290 to the Master and TD280 to the Slave systems:
30 N-NY

- CRC4: **Disable / Enable**

Default

0YYYYY / CRC4 – Enable

Programming

1. Enter **450**.
Display: PRI Config.
2. Press **NEXT**.
Display example: 0 YYYY
3. Keep pressing **SELECT** until the desired combination of the channel number and the card status is displayed.
4. Press **STORE**.
5. Press **NEXT** to assign the CRC4 mode.
Display example: CRC4:Enable
6. Keep pressing **SELECT** until the desired selection is displayed.
7. Press **STORE**.
8. Press **END**.

4.6 CO Line Programming

450

PRI Configuration (contd.)

Conditions

- When system connection is activated, the number of available CO lines is limited to 38. Therefore, this program is required.
- When you assign the number of B channels to 18, 22 or 26, ISDN Fractional Service must be provided by a telephone company.
- The available CO line numbers in program [400] are changed according to this program, but the maximum number of B channels of CO25 through CO54 which are assigned in this program can be set to "Connect." Moreover, the CO line of the card which is set at the area of "N" cannot be set to "Connect."
- If you use all ports of the KX-TD286 as CO lines, the status of both the basic and expansion area of the slave system must be "Y." The available combinations are: "26 N-YY," "18 Y-YY" or "0 YYYY."

Feature References

None

*PRI Reference CO**

Description	<p>Assigns which CO line number system data each PRI line uses except for the following programs:</p> <ul style="list-style-type: none"> • [401] CO Line Group Assignment • [419] Subscribers Number Assignment • [421] CO Line Name Assignment <p>After assigning this program, the following program data will become available for PRI line CO 25 through 54.</p> <ul style="list-style-type: none"> • [407]–[408] DIL 1:1 Extension — Day / Night • [418] External Ringer Assignment • [420] / [429] ISDN Ring Service Assignment — Day / Night • [603]–[604] DIL 1:N extension and Delayed ringing — Day / Night • [605]–[606] Outgoing Permitted CO Line Assignment — Day / Night • [615]–[616] Outgoing Permitted CO Line Assignment — Day / Night for ISDN Extension • [629]–[630] Outgoing Permitted CO Line Assignment — Day / Night for TD286 Extension
Selection	<ul style="list-style-type: none"> • CO line number of PRI line: 25 through 54, * (*=all CO lines) • CO line number: 01 through 24
Default	All CO lines (PRI line) – CO09
Programming	<ol style="list-style-type: none"> 1. Enter 451. Display: PRI Reference CO 2. Press NEXT. Display: CO Line NO?→ 3. Enter the CO Line number of PRI. Display example: CO25 : CO09 4. Enter the desired CO Line number. 5. Press STORE.
Conditions	<ul style="list-style-type: none"> • For the KX-TD1232, CO01 through CO12 are for the Master system and CO13 through CO24 are for the Slave, if available. • CO 25 through CO54 become available when the expansion unit KX-TD290 is installed in the KX-TD1232.
Feature References	None

CO-to-TIE Transfer

Description	Enables or disables transferring an incoming outside call to the TIE line on a CO line group basis. This restriction applies to the following: 1) Call Forwarding to a DID/TIE line 2) Call Transfer to a TIE line.
Selection	<ul style="list-style-type: none">• CO line group (TRG) number: 1 through 8, * (* =all CO line groups)• Enable / Disable
Default	All CO line groups – Disable
Programming	<ol style="list-style-type: none">1. Enter 452. Display : CO-TIE Transfer2. Press NEXT. Display: TRK GRP NO?→3. Enter a CO line group number. To enter CO line group number 1, you can also press NEXT. Display example: TRG1:Disable4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another CO line group, press NEXT or PREV, or SELECT and the desired CO line group number.7. Repeat steps 4 through 6.8. Press END.
Conditions	None

TIE-to-CO Transfer

Description	Enables or disables transferring TIE calls to a CO line on a CO line group basis. This restriction applies to the following: 1) An outside call through another PBX 2) Call Forwarding to a CO line 3) Call Transfer to a CO line.
Selection	<ul style="list-style-type: none"> • CO line group (TRG) number: 1 through 8, * (* =all CO line groups) • Enable / Disable
Default	All CO line groups – Disable
Programming	<ol style="list-style-type: none"> 1. Enter 453. Display : TIE-CO Transfer 2. Press NEXT. Display: TRK GRP NO?→ 3. Enter a CO line group number. To enter CO line group number 1, you can also press NEXT. Display example: TRG1:Disable 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. To program another CO line group, press NEXT or PREV, or SELECT and the desired CO line group number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	None

4.6 CO Line Programming

454

DID/TIE-to-DID/TIE Transfer

Description	Enables or disables transferring DID/TIE calls to a DID/TIE line on a CO line group basis. This restriction applies to the following: 1) A DID/TIE call through another PBX 2) Call Forwarding to a DID/TIE line 3) Call Transfer to a DID/TIE line.
Selection	<ul style="list-style-type: none">• CO line group (TRG) number: 1 through 8, * (* =all CO line groups)• Enable / Disable
Default	All CO line groups – Enable
Programming	<ol style="list-style-type: none">1. Enter 454. Display : DID/TIE TIE Transfer2. Press NEXT. Display: TRK GRP NO?→3. Enter a CO line group number. To enter CO line group number 1, you can also press NEXT. Display example: TRG1:Enable4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another CO line group, press NEXT or PREV, or SELECT and the desired CO line group number.7. Repeat steps 4 through 6.8. Press END.
Conditions	None

DID/TIE Security Type

Description	Assigns the security mode for DID/TIE calls. There are two modes, Non Security and Trunk Security (CO line security). Non Security mode allows the caller to access a CO line without dialing a DID/TIE user code. Trunk Security mode requires the caller to enter a DID/TIE User Code assigned in program [811] “DID/TIE User Codes” before making a DID/TIE call.
Selection	<ul style="list-style-type: none"> • CO line group (TRG) number: 1 through 8, * (* =all CO line groups) • Non (non security) / Trunk (trunk security)
Default	Non
Programming	<ol style="list-style-type: none"> 1. Enter 455. Display: TIE Security 2. Press NEXT. Display: TRK GRP NO?→ 3. Enter a CO line group number. To enter CO line group number 1, you can also press NEXT. Display example: TRG1:Non 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. Press END.
Conditions	None

Line Hunting Sequence

Description	Assigns the hunting sequence of idle lines, seizing from the smallest to the largest line number or vice versa in a CO line group, on a CO line group basis.
Selection	<ul style="list-style-type: none">• CO line group (TRG) number: 1 through 8, * (* =all CO line groups)• Small → Large / Large → Small
Default	All CO line groups – Large → Small
Programming	<ol style="list-style-type: none">1. Enter 456. Display : Line Hunting2. Press NEXT. Display: TRK GRP NO?→3. Enter a CO line group number. To enter CO line group number 1, you can also press NEXT. Display example: TRG1:Large→Small4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another CO line group, press NEXT or PREV, or SELECT and the desired CO line group number.7. Repeat steps 4 through 6.8. Press END.
Conditions	The default setting (Large → Small) often may cause a busy situation between two PBXs, as the same line may be seized by both sides simultaneously. In this case, we recommend changing the setting of either PBX to Small → Large.

Voice Path Type

Description	Assigns the voice path type on a CO line basis.
Selection	<ul style="list-style-type: none"> • CO line number: KX-TD816 – 05 through 08, * (*=all CO lines) KX-TD1232 – 09 through 12 (Master), 21 through 24 (Slave), * (*=all CO lines) • 2 wire / 4 wire
Default	All CO lines – 4 wire
Programming	<ol style="list-style-type: none"> 1. Enter 457. Display: Voice Path Type 2. Press NEXT. Display: CO Line NO?→ 3. Enter a CO line number. To enter CO line number 09, you can also press NEXT. Display example: C009:2 Wire 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. Press END.
Condition	To assign all CO lines to one selection, press the * key in step 3.

4.6 CO Line Programming

458

Voice Level (Transmit)

Description	Assigns the transmitted voice level on a CO line port basis. This program is valid only when the voice path type is set to “4 wire”.
Selection	<ul style="list-style-type: none">• CO line number: KX-TD816 – 05 through 08, * (*=all CO lines) KX-TD1232 – 09 through 12 (Master), 21 through 24 (Slave), * (*=all CO lines)• -6 db / -3 db / 0 db / +3 db
Default	All CO lines – -3db
Programming	<ol style="list-style-type: none">1. Enter 458. Display: Voice Level (TX)2. Press NEXT. Display: CO Line NO?→3. Enter a CO line number. To enter CO line number 09, you can also press NEXT. Display example: CO09:2 -3db4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. Press END.
Condition	To assign all CO lines to one selection, press the * key in step 3.

459

4.6 CO Line Programming

Voice Level (Receive)

Description

Assigns the received voice level on a CO line port basis. This program is valid only when the voice path type is set to “4 wire”.

Selection

- CO line number:
KX-TD816 – **05 through 08**, * (*=all CO lines)
KX-TD1232 – **09 through 12 (Master), 21 through 24 (Slave)**,
* (*=all CO lines)
- **-6 db / -3 db / 0 db / +3 db**

Default

All CO lines – -3db

Programming

1. Enter **459**.
Display: Voice Level (RX)
2. Press **NEXT**.
Display: CO Line NO?→
3. Enter a **CO line number**.
To enter CO line number 09, you can also press **NEXT**.
Display example: CO09:2 -3db
4. Keep pressing **SELECT** until the desired selection is displayed.
5. Press **STORE**.
6. Press **END**.

Condition

To assign all CO lines to one selection, press the * key in step 3.

4.6 CO Line Programming

460

DID/TIE Receive Dial

Description	Assigns whether the system receives DID/TIE dial numbers on a CO line basis. If “No” is selected, the dialed number is treated as a local number and sent to DIL 1 : 1 or DIL 1 : N.
Selection	<ul style="list-style-type: none">• CO line number: KX-TD816 – 05 through 08, * (*=all CO lines) KX-TD1232 – 09 through 12 (Master), 21 through 24 (Slave), * (*=all CO lines)• Yes / No
Default	All CO line ports – Yes
Programming	<ol style="list-style-type: none">1. Enter 460. Display: TIE Receive Dial2. Press NEXT. Display: CO Line NO?→3. Enter a CO line number. To enter CO line number 09, you can also press NEXT. Display example: CO09:Yes4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. Press END.
Conditions	To assign all CO lines to one selection, press the * key in step 3.

Toll Restriction Level for System Speed Dialing — Day / Night

Description	These programs set the toll restriction value used in System Speed Dialing for each Class of Service (COS) in day or night mode. When the user makes a call with System Speed Dialing, the system will check the phone number with this level.
Selection	<ul style="list-style-type: none">• COS number: 1 through 8, * (* =all COS)• Level number: 1 through 8
Default	All COS – Level 1 – Day / Night
Programming	<ol style="list-style-type: none">1. Enter a program address (509 for day or 510 for night). Display: SPD TRS LVL Day2. Press NEXT. Display : COS NO?→3. Enter a COS number. To enter COS number 1, you can also press NEXT. Display example: COS1:14. Enter a level number. To change the current entry, press CLEAR and the new number.5. Press STORE.6. To program another COS, press NEXT or PREV, or SELECT and the desired COS number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• To assign all COS to one selection, press the * key in step 3. In this case, the display shows the contents programmed for COS 1.
Feature References	Section 3, Features Toll Restriction for System Speed Dialing

4.7 COS Programming

511

Door Opener Access

Description	Unlocking the door opener by the feature number is enabled or disabled on a Class of Service (COS) basis.
Selection	<ul style="list-style-type: none">• COS number: 1 through 8, * (* =all COS)• Enable / Disable
Default	All COS – Enable
Programming	<ol style="list-style-type: none">1. Enter 511. Display example: Door Opener2. Press NEXT. Display: COS NO?→3. Enter a COS number. To enter COS number 01, you can also press NEXT. Display example: COS1: Enable4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another COS number, press NEXT or PREV, or SELECT and the desired COS number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• To assign all COS to one selection, press the * key in step 3. In this case, the display shows the contents programmed for COS 1.
Feature References	Section 3, Features Door Opener

Night Service Access

Description	Enables or disables the ability to switch the Day/Night service on a Class of Service (COS) basis.
Selection	<ul style="list-style-type: none"> • COS number: 1 through 8, * (*=all COS) • Enable / Disable
Default	All COS – Enable
Programming	<ol style="list-style-type: none"> 1. Enter 513. Display example: Night Service 2. Press NEXT. Display: COS NO?→ 3. Enter a COS number. To enter COS number 01, you can also press NEXT. Display example: COS1: Enable 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. To program another COS number, press NEXT or PREV, or SELECT and the desired COS number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • To assign all COS to one selection, press the * key in step 3. In this case, the display shows the contents programmed for COS 1. • The operator extension can switch the mode regardless of setting.
Feature References	Section 3, Features Night Service

4.7 COS Programming

514

Do Not Disturb for Direct Dialing In Call

Description	Enables or disables the ability to reject Direct Dialing In call on a Class of Service (COS) basis.
Selection	<ul style="list-style-type: none">• COS number: 1 through 8, * (* =all COS)• Enable / Disable
Default	All COS – Disable
Programming	<ol style="list-style-type: none">1. Enter 514. Display: DND for DDI2. Press NEXT. Display: COS NO?→3. Enter a COS number. To enter COS number 01, you can also press NEXT. Display example: COS1: Enable4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another COS number, press NEXT or PREV, or SELECT and the desired COS number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• To assign all COS to one selection, press the * key in step 3. In this case, the display shows the contents programmed for COS 1.• The operator extension cannot reject the call regardless of setting.
Feature References	Section 3, Features Night Service

Calling Line Identification Restriction

Description	Enables or disables the Calling Line Identification Restriction (CLIR) Service on a Class of Service (COS) basis.
Selection	<ul style="list-style-type: none"> • COS number: 1 through 8, * (*=all COS) • Enable / Disable
Default	All COS – Disable
Programming	<ol style="list-style-type: none"> 1. Enter 516. Display: CLIR 2. Press NEXT. Display: COS NO?→ 3. Enter a COS number. To enter COS number 1, you can also press NEXT. Display example: COS1-Disable 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. To program another COS number, press NEXT or PREV, or SELECT and the desired COS number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • To assign all COS to one selection, press the * key in step 3. In this case, the display shows the contents programmed for COS 1.
Feature References	<p>Section 3, Features Calling Line Identification Restriction (CLIR)</p>

4.7 COS Programming

517

Connected Line Identification Restriction

Description	Enables or disables the Connected Line Identification Restriction (COLR) Service on a Class of Service (COS) basis.
Selection	<ul style="list-style-type: none">• COS number: 1 through 8, * (* =all COS)• Enable / Disable
Default	All COS – Disable
Programming	<ol style="list-style-type: none">1. Enter 517. Display: COLR2. Press NEXT. Display: COS NO?→3. Enter a COS number. To enter COS number 01, you can also press NEXT. Display example: COS1: Disable4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another COS number, press NEXT or PREV, or SELECT and the desired COS number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• To assign all COS to one selection, press the * key in step 3. In this case, the display shows the contents programmed for COS 1.
Feature References	Section 3, Features Connected Line Identification Restriction (COLR)

Off-Hook Call Announcement (OHCA)

Description	Enables or disables to perform the Off-Hook Call Announcement (OHCA) and Whisper OHCA on a Class of Service (COS) basis.
Selection	<ul style="list-style-type: none"> • COS number: 1 through 8, * (*=all COS) • Enable / Disable
Default	All COS – Enable
Programming	<ol style="list-style-type: none"> 1. Enter 519. Display: OHCA 2. Press NEXT. Display: COS NO?→ 3. Enter a COS number. To enter COS number 1, you can also press NEXT. Display example: COS1:Enable 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. To program another COS, press NEXT or PREV, or SELECT and the desired COS number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • To assign all COS to one selection, press the * key in step 3. In this case, the display shows the contents programmed for COS 1. • Program [601] “Class of Service” is used to assign a Class of Service to each extension. • Program [613] “ISDN Class of Service” is used to assign a Class of Service to each ISDN extension.
Feature References	<p>Section 3, Features Off-hook Call Announcement (OHCA) Whisper OHCA</p>

Call Forwarding from Hunting Group

Description	Enables or disables to perform the Call Forwarding from Hunting Group on a Class of Service (COS) basis. Calls arriving at any Hunting Groups (“All”) or just calls arriving at your Hunting Group (“Connect”) can be forwarded to your extension.
Selection	<ul style="list-style-type: none">• COS number: 1 through 8, * (*=all COS)• Disable / Connect (connected Hunting Group) / All (all Hunting Groups)
Default	All COS – Disable
Programming	<ol style="list-style-type: none">1. Enter 520. Display: Hunt Group FWD2. Press NEXT. Display: COS NO?→3. Enter a COS number. To enter COS number 1, you can also press NEXT. Display example: COS1:Disable4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another COS, press NEXT or PREV, or SELECT and the desired COS number.7. Repeat steps 4 through 6.8. Press END.
Conditions	To assign all COS to one selection, press the * key in step 3. In this case, the display will show the contents programmed for COS 1.
Feature References	Section 3, Features, Call Forwarding – from Hunting Group

Doorphone Call Forwarding to CO Line

Description	Enables or disables to perform the Doorphone Call Forwarding to CO Line on a Class of Service (COS) basis.
Selection	<ul style="list-style-type: none"> • COS number: 1 through 8, * (*=all COS) • Disable / Enable
Default	All COS – Disable
Programming	<ol style="list-style-type: none"> 1. Enter 521. Display: Door Phone FWD 2. Press NEXT. Display: COS NO?→ 3. Enter a COS number. To enter COS number 1, you can also press NEXT. Display example: COS1:Disable 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. To program another COS, press NEXT or PREV, or SELECT and the desired COS number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	To assign all COS to one selection, press the * key in step 3. In this case, the display will show the contents programmed for COS 1.
Feature References	Section 3, Features, Doorphone Call Forwarding to CO Line

Extension Group Assignment

Description	Assigns each extension to an extension group. Extension groups are used for Group Call Pickup and Paging – Group.
Selection	<ul style="list-style-type: none">• Jack number: KX-TD816 – 01 through 16, * (-1 / -2) KX-TD1232 – 01 through 64, * (-1 / -2) (* =all jacks, -1 = first part, -2 = second part)• Extension group number: 01 through 16, * (* =all groups)• Disable (not belong) / Enable (belong)
Default	All jacks-1/2 – Extension group 01:Enable
Programming	<ol style="list-style-type: none">1. Enter 602. Display: EXT Group Asn2. Press NEXT. Display: Jack NO?→3. Enter a jack number. To enter jack number 01, you can also press NEXT. To select the second part (-2), press NEXT after entering the jack number. Display example: #01-1:EG01:Enabl4. Enter the extension group number. You can also keep pressing ➡ or ⬅ until the desired extension group number is displayed.5. Keep pressing SELECT until the desired selection is displayed.6. Press STORE.7. To program another jack, press NEXT or PREV, or SELECT and the desired jack number.8. Repeat steps 4 through 7.9. Press END.
Conditions	<ul style="list-style-type: none">• There is a maximum of sixteen extension groups. Each extension can belong to more than one group.• For the KX-TD1232, jack numbers 01 through 32 are for the Master System and 33 through 64 are for the Slave, if available.• For an explanation of jack numbering, see “Rotation of jack number” on page 4-7 in the main Installation Manual.

Extension Group Assignment (contd.)

- To assign all jacks to the same extension group, press the * key in step 3. In this case, the display shows the contents programmed for Jack 01.

Feature References

Section 3, Features

Call Pickup, Group

Paging – Group

Extension Group

4.8 Extension Programming

611

Extension Connection Assignment

Description	Assigns whether the extension can perform all accesses or not.
Selection	<ul style="list-style-type: none">• Jack number: KX-TD816 – 01 through 16, * (-1 / -2) KX-TD1232 – 01 through 64, * (-1 / -2) (* =all jacks, -1 = first part, -2 = second part)• Connect / No Connect
Default	All jacks – Connect
Programming	<ol style="list-style-type: none">1. Enter 611. Display: Ext Connection2. Press NEXT. Display: Jack NO?→3. Enter a jack number. To enter jack number 01, you can also press NEXT. To select the second part (-2), press NEXT after entering the jack number. Display example: #01-1: Connect4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another jack, press NEXT or PREV, or SELECT and the desired jack number.7. Repeat steps 4 through 7.8. Press END.
Conditions	<ul style="list-style-type: none">• The extension of the jack number 01 should be set to “Connect.”• For the KX-TD1232, jack numbers 01 through 32 are for the Master System and 33 through 64 are for the Slave, if available.• For an explanation of jack numbering, see “Rotation of jack number” on page 4-7 in the main Installation manual.• To assign all jacks to one extension group, press the * key in step 3. In this case, the display shows the contents programmed for Jack 01.
Feature References	Section 3, Features Extension Connection Assignment

Data Line Security

Description	Sets or cancels the Data Line Security mode on an extension basis.
Selection	<ul style="list-style-type: none"> • Jack number: KX-TD816 – 01 through 16, * (-1 / -2) KX-TD1232 – 01 through 64, * (-1 / -2) (* =all jacks, -1 = first part, -2 = second part) • On / Off
Default	All jacks – Off
Programming	<ol style="list-style-type: none"> 1. Enter 612. Display: Data Mode 2. Press NEXT. Display: Jack NO?→ 3. Enter a jack number. To enter jack number 01, you can also press NEXT. To select the second part (-2), press NEXT after entering the jack number. Display example: #01-1: Off 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. To program another jack, press NEXT or PREV, or SELECT and the desired jack number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • For the KX-TD1232, jack numbers 01 through 32 are for the Master System and 33 through 64 are for the Slave, if available. • For an explanation of jack numbering, see “Rotation of jack number” on page 4-7 in the main Installation manual. • To assign all jacks to one extension group, press the * key in step 3. In this case, the display shows the contents programmed for Jack 01.
Feature References	Section 3, Features Data Line Security

ISDN Class of Service

Description	Programs each ISDN port for Class of Service (COS). The COS determines the call handling abilities of each port. A primary and a secondary COS numbers can be assigned per port.
Selection	<ul style="list-style-type: none">• Port number: KX-TD816 – 03 or 04, * KX-TD1232 – 03 through 06, 09 through 12, * (* =all ports)• COS number: 1 through 8
Default	All ports – COS1, COS1
Programming	<ol style="list-style-type: none">1. Enter 613. Display: ISDN COS Assign2. Press NEXT. Display: Port NO?→3. Enter a port number. To enter port number 03, you can also press NEXT. Display example: #03: COS1, COS14. Enter a COS number for primary number. To change the current entry, press CLEAR and the new number.5. Press ►.6. Enter a COS number for secondary number. To change the current entry, press CLEAR and the new number.7. Press STORE.8. To program another port, press NEXT or PREV, or SELECT and the desired port number.9. Repeat steps 4 through 8.10. Press END.
Conditions	<ul style="list-style-type: none">• There is a maximum of eight Classes of Services. Every ISDN extension must be assigned to a Class of Service and is subject to the COS Programming of programs [500] through [519] and [991]. The restriction of program [991], field (1), applies only for analog outside lines.• For the KX-TD1232, port numbers 03 through 06 are for the Master System and 09 through 12 are for the Slave, if available.• To assign all ports to the same selection press the * key in step 3.

ISDN Class of Service (contd.)

In this case, the display shows the contents programmed for the first port.

Feature References

Section 3, Features
Class of Service (COS)
ISDN Extension

4.8 Extension Programming **615-616**

Outgoing Permitted CO Line Assignment — Day / Night for ISDN Extension

Description	Determines the CO lines which can be accessed by an ISDN extension in both day and night modes. The extension users can make outgoing outside calls using the assigned CO lines.
Selection	<ul style="list-style-type: none">• Port number: KX-TD816 – 03 or 04, * KX-TD1232 – 03 through 06, 09 through 12, * (* =all ports)• CO line number: KX-TD816 – 01 through 08, * KX-TD1232 – 01 through 24, * (* =all CO lines)• Enabl (enable) / Disab (disable)
Default	All ports – all CO lines – Enabl — Day / Night
Programming	<ol style="list-style-type: none">1. Enter a program address (614 for day or 615 for night). Display example: CO Out (ISDN) Day2. Press NEXT. Display: Port NO?→3. Enter a port number. To enter first port number, you can also press NEXT. Display example: #03:CO01:Enabl4. Enter the desired CO line number, or keep pressing ▶ or ◀ until the desired CO line is displayed. To change the current entry, enter the new number.5. Keep pressing SELECT until the desired selection is displayed.6. Press STORE.7. To program another jack, press NEXT or PREV, or SELECT and the desired port number.8. Repeat steps 4 through 7.9. Press END.

Outgoing Permitted CO Line Assignment — Day / Night for ISDN Extension (contd.)

Conditions

- For KX-TD1232, port numbers 03 through 06 are for the Master System and 09 through 12 are for the Slave, if available.
- To assign all ports to the same selection, press the * key in step 3. In this case, the display shows the contents programmed for the first port.
- To assign all CO lines to the same selection, press the * key in step 4. In this case, the display shows the contents programmed for CO 01.
- When you change a port number by pressing NEXT or PREV, the CO line number is not changed.

Example #03:CO02.....Pressing NEXT....#04:CO02

Feature References

Section 3, Features

CO Line Connection Assignment – Outgoing
Night Service

4.8 Extension Programming

617

Live Call Screening Recording Mode Assignment†

Description	Assigns whether to close the mailbox or to continue recording the conversation after a call is intercepted.
Selection	<ul style="list-style-type: none">• Jack number: KX-TD816 – 01 through 16, * KX-TD1232 – 01 through 64, * (* =all jacks)• Stop Record / Keep Record
Default	All jacks = Stop Record (Stop recording)
Programming	<ol style="list-style-type: none">1. Enter 617. Display: LCS Rec. Mode2. Press NEXT. Display: Jack NO?→3. Enter a jack number. To enter jack number 01, you can also press NEXT. Display example: #01:Stop Record4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another jack number, press NEXT or PREV, or SELECT and desired jack number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• For KX-TD1232, jack numbers 01 through 32 are for the Master System and 33 through 64 are for the Slave, if available.• For an explanation of jack numbering, see “Rotation of jack number” on page 4-7 in the main Installation Manual.• To assign all jacks to the same selection, press the * key in step 3. In this case, the display shows the contents programmed for jack 01.
Feature References	Section 3, Features Live Call Screening (LCS) Voice Mail Integration for Digital Proprietary Telephones

†: Available when the Digital Super Hybrid System is connected to a Proprietary Telephone capable Panasonic Voice Processing System (one that supports proprietary telephone integration; e.g. KX-TVP100).

620-621 4.8 Extension Programming

Extension Intercept Routing — Day / Night

Description	Sets the Intercept Routing destination for each jack in both day and night modes.
Selection	<ul style="list-style-type: none">• Jack number: KX-TD816 – 01 through 16, * (-1 / -2) KX-TD1232 – 01 through 64, * (-1 / -2) (* =all jacks, -1 = first part, -2 = second part)• Extension number: 2 through 4 digits / Disable (no Intercept Routing)
Default	All jacks – Disable — Day / Night
Programming	<ol style="list-style-type: none">1. Enter a program address (620 for day or 621 for night). Display example: EXT Intercep Day2. Press NEXT. Display: Jack NO?→3. Enter a jack number. To enter jack number 01, you can also press NEXT. To select the second part (-2), press NEXT after entering the jack number. Display example: #01-1: Disable4. Enter an extension number. To change the current entry, press CLEAR and the new number. To disable Intercept Routing, press CLEAR.5. Press STORE.6. To program another jack number, press NEXT or PREV, or SELECT and the desired jack number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• You can set the extension numbers in programs [003] “Extension Number Set,” [127] “Voice Mail Extension Number Assignment,” [130] “Phantom Extension Number Assignment” and also floating numbers of the external ringer, hunting groups, and pagers in program [813] “Floating Number Assignment.”• To assign all jacks to the same selection, press the * key in step 3. In this case, the display shows the contents programmed for jack 01.• When “Disable” is selected, Intercept Routing is provided according to the assignment in program [409]–[410].
Feature References	Section 3, Features Intercept Routing

Incoming Call Display

Description	<p>Allows you to choose between three display types when an incoming call is received.</p> <p>“Caller” means the incoming caller’s telephone number and name are displayed. “CO Line” means the CO line number and CO line name assigned in the program [421] are displayed. “DDI” means the called party’s DDI number and extension name are displayed.</p>
Selection	<ul style="list-style-type: none">• Jack number: KX-TD816 – 01 through 16, * KX-TD1232 – 01 through 64, * (* =all jacks)• Display Types: Caller / CO Line / DDI
Default	All jacks – Caller
Programming	<ol style="list-style-type: none">1. Enter 622. Display: Incoming Display2. Press NEXT. Display: Jack NO?→3. Enter a jack number. To enter jack number 01, you can also press NEXT. Display example: #01:Caller4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another jack, press NEXT or PREV, or SELECT and the desired jack number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• For the KX-TD1232, jack numbers 01 through 32 are for the Master System and 33 through 64 are for the Slave, if available.• To assign all jacks to one selection, press the * key in step 3. In this case, the display shows the contents programmed for jack 01.
Feature References	<p>Section 3, Features CO Incoming Call Information Display Display, Call Information</p>

623

4.8 Extension Programming

CLIP / COLP Number Assignment for Extension

Description	Assigns a CLIP/COLP number for each extension.
Selection	<ul style="list-style-type: none">• Jack number: KX-TD816 – 01 through 16, * (-1 / -2) KX-TD1232 – 01 through 64, * (-1 / -2) (* =all jacks, -1 = first part, -2 = second part)• CLIP/COLP number: 16 digits (max.)
Default	All jacks – Not Stored
Programming	<ol style="list-style-type: none">1. Enter 623. Display: CLIP/COLP NO.2. Press NEXT. Display: Jack NO?→3. Enter a jack number. To enter jack number 01, you can also press NEXT. To select the second part (-2), press NEXT after entering the jack number. Display example: #01-1:Not Stored4. Enter a CLIP/COLP number. To change the current entry, press CLEAR and enter the new number.5. Press STORE.6. To program another jack, press NEXT or PREV, or SELECT and the desired jack number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• Each CLIP/COLP number consists of 0 through 9.• For the KX-TD1232, jack numbers 01 through 32 are for the Master System and 33 through 64 are for the Slave, if available.• To assign all jacks to one selection, press the * key in step 3. In this case, the display shows the contents programmed for jack 01.
Feature References	Section 3, Features Calling / Connected Line Identification Presentation (CLIP / COLP)

4.8 Extension Programming

624

CLIP / COLP Number Assignment for ISDN Extension

Description	Assigns a CLIP/COLP number for each ISDN extension port.
Selection	<ul style="list-style-type: none">• Port number: KX-TD816 – 01 through 04, * KX-TD1232 – 03 through 06, 09 through 12, * (*=all ports)• CLIP/COLP number: 16 digits (max.)
Default	All ports – Not Stored
Programming	<ol style="list-style-type: none">1. Enter 624. Display: ISDN CLIP/COLP2. Press NEXT. Display: Port NO?→3. Enter a port number. To enter port number 01 or 03, you can also press NEXT. Display example: #03:Not Stored4. Enter a CLIP/COLP number. To change the current entry, press CLEAR and enter the new number.5. Press STORE.6. To program another port, press NEXT or PREV, or SELECT and the desired port number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• Each CLIP/COLP number consists of 0 through 9.• For the KX-TD1232, port numbers 03 through 06 are for the Master System and 09 through 12 are for the Slave, if available.• To assign all jacks to one selection, press the * key in step 3. In this case, the display shows the contents programmed for the first port.
Feature References	Section 3, Features Calling / Connected Line Identification Presentation (CLIP / COLP)

TD286 Class of Service

Description	Programs each TD286 ISDN port for Class of Service (COS). The COS determines the call handling abilities of each port. A primary and a secondary COS numbers can be assigned per port.		
Selection	<ul style="list-style-type: none"> • Port number: KX-TD816 – 01 through 06, * KX-TD1232 – 01 through 12, * (* =all ports) • COS number: 1 through 8 		
Default	All ports – COS1, COS1		
Programming	<ol style="list-style-type: none"> 1. Enter 627. Display: TD286 COS Assign 2. Press NEXT. Display: Port NO?→ 3. Enter a port number. To enter a first number, you can also press NEXT. Display example: #01: COS1, COS1 4. Press SELECT until the desired selection is displayed and enter the number, if required. To change the current entry, press CLEAR and the new number. 5. Press STORE. 6. To program another port, press NEXT or PREV, or SELECT and the desired port number. 7. Repeat steps 3 through 6. 8. Press END. 		
Conditions	<ul style="list-style-type: none"> • There is a maximum of eight Classes of Services. Every ISDN extension must be assigned to a Class of Service and is subject to the COS Programming of programs [500] through [519] and [991]. The restriction of program [991], field (1), applies only for analog outside lines. • For KX-TD1232 port number 01 through 06 are for the Master System and 07 through 12 are for the Slave, if available. • To assign all ports to the same selection press the * key in step 3. In this case, the display shows the contents programmed for the first port. 		
Feature References	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;">Section 3, Features Class of Service</td> <td style="width: 50%; vertical-align: top;">ISDN Extension</td> </tr> </table>	Section 3, Features Class of Service	ISDN Extension
Section 3, Features Class of Service	ISDN Extension		

4.8 Extension Programming **629-630**

Outgoing Permitted CO Line Assignment — Day / Night for TD286 Extension

Description Determines the CO lines which can be accessed by a TD286 extension in both day and night modes. The extension users can make outgoing outside calls using the assigned CO lines.

Selection

- Port number: KX-TD816 – 01 through 06, *
KX-TD1232 – 01 through 12, *
(* =all ports)
- CO line number: KX-TD816 – 01 through 08, *
KX-TD1232 – 01 through 24, *
(* =all CO lines)
- **Enabl** (enable) / **Disab** (disable)

Default All ports – all CO lines – Enabl — Day / Night

Programming

1. Enter a **program address (629 for day or 630 for night)**.
Display example: CO Out (TD286) Day
2. Press **NEXT**.
Display: Port NO?→
3. Enter a **port number**.
To enter port number 01, you can also press **NEXT**.
Display example: #01:CO01:Enabl
4. Enter the desired **CO line number**, or keep pressing **▶** or **◀** until the desired CO line is displayed.
To change the current entry, enter the new number.
5. Keep pressing **SELECT** until the desired selection is displayed.
6. Press **STORE**.
7. To program another port, press **NEXT** or **PREV**, or **SELECT** and the desired **port number**.
8. Repeat steps 4 through 7.
9. Press **END**.

Conditions

- For KX-TD1232, port number 01 through 06 are for the Master System and 07 through 12 are for the Slave, if available.
- To assign all ports to one selection, press the * key in step 3. In this case, the display shows the contents programmed for the first port.
- To assign all CO lines to the same selection, press the * key in step 4. In this case, the display shows the contents programmed for CO 01.
- When you change a port number by pressing NEXT or PREV, the CO line number is not changed.
Example #01:CO02.....Pressing NEXT....#02:CO02

Feature References**Section 3, Features**

CO Line Connection Assignment – Outgoing

ISDN Extension

Night Service

4.8 Extension Programming

632

CLIP / COLP Number Assignment for TD286 Extension

Description	Assigns a CLIP/COLP number for KX-TD286 ISDN extension.
Selection	<ul style="list-style-type: none">• Port number: KX-TD816 – 01 through 06, * KX-TD1232 – 01 through 12, * (* =all ports)• CLIP/COLP number: 16 digits (max.)
Default	All ports – Not Stored
Programming	<ol style="list-style-type: none">1. Enter 632. Display: TD286 CLIP/COLP2. Press NEXT. Display: Port NO?→3. Enter a port number. To enter port number 01, you can also press NEXT. Display example: #01:Not Stored4. Enter a CLIP/COLP number. To change the current entry, press CLEAR and enter the new number.5. Press STORE.6. To program another port, press NEXT or PREV, or SELECT and the desired port number.7. Repeat steps 3 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• For KX-TD1232, port number 01 through 06 are for the Master System and 07 through 12 are for the Slave, if available.• To assign all ports to one selection, press the * key in step 3. In this case, the display shows the contents programmed for the first port.
Feature References	Section 3, Features Calling / Connected Line Identification Presentation (CLIP / COLP)

SMDR Format

Description	Used to match the SMDR output to the paper size being used in the printer. Page length determines the number of lines per page. Skip perforation determines the number of lines to be skipped at the end of every page. Page width determines the number of characters per line.
Selection	<ul style="list-style-type: none">• Page length (lines): 4 through 99• Skip perforation (lines): 0 through 95• Page width (characters): 80 / 100
Default	Page length – 66; Skip perforation – 0; Page width – 80
Programming	<ol style="list-style-type: none">1. Enter 801. Display: SMDR Format2. Press NEXT to program page length. Display example: Page Length:663. Enter the page length. To change the current entry, press CLEAR and the new page length.4. Press STORE.5. Press NEXT to program skip perforation. Display example: Skip Perf: 06. Enter the skip perforation. To change the current entry, press CLEAR and the new skip perforation.7. Press STORE.8. Press NEXT to program page width. Display example: Page Width: 809. Keep pressing SELECT until the desired selection is displayed.10. Press STORE.11. Press END.

SMDR Format

Conditions

- The page length should be at least four lines longer than the skip perforation length.
- If 80 characters for page width is selected, the last five digits of account codes are not printed out.
- A title is positioned on the first three lines on every page.
- The programmed format becomes valid only if the Serial Interface (RS-232C) cable is connected. If a printer is already connected, disconnect it and connect again. Otherwise the former format becomes valid.

Feature References

Section 3, Features,
Station Message Detail Recording (SMDR)

TIE User Codes

Description	Assigns the TIE User Codes and a Class of Service (COS) to each code. The code COS determines the toll restriction level of the TIE caller.
Selection	<ul style="list-style-type: none"> • TIE user code number: 01 through 32 • TIE user code: 4 to 10 digits • COS number: 1 through 8
Default	<p>Code 01=0001 – COS 1 Code 02=0002 – COS 1 Code 03=0003 – COS 1 : Code 32=0032 – COS 1</p>
Programming	<ol style="list-style-type: none"> 1. Enter 811. Display: User Code 2. Press NEXT. Display: User Code NO?→ 3. Enter a TIE user code number. To enter user code number 01, you can also press NEXT. Display example: 01:0001 C:1 4. Enter a TIE user code. To change the current entry, enter the new code. 5. Press ➡ to program the COS. 6. Enter a COS number. To change the current entry, enter the new COS number. 7. Press STORE. 8. To program another user code, press NEXT or PREV, or SELECT and the desired TIE user code number. 9. Repeat steps 4 through 8. 10. Press END.
Conditions	<ul style="list-style-type: none"> • This setting is required if the Trunk (CO line) Security mode is selected in programs [455] “TIE Security Type”. • Each user code should be unique and composed of eight numerical digits, 0 through 9. • You cannot leave an entry empty.

Floating Number Assignment

Description	Assigns the floating numbers for the External Pager, modem, Digital Test Access (DTA) and Hunting Groups. These numbers can be used the same way extension numbers are used for station access.
Selection	<ul style="list-style-type: none">• Floating station: Pager1 / Pager2* / Pager3* / Pager4* / DTA / Modem / Hunting Groups 01 through 32• Floating number: 2 through 4 digits / No floating number
Default	Pager 1=296; Pager 2=297; Pager 3=396; Pager 4=397; DTA=299; Modem=399, Hunting Groups 01 through 32=Not stored
Programming	<ol style="list-style-type: none">1. Enter 813. Display: FLT EXT NO.2. Press NEXT to program Pager 1. Display example: Pager1:296 To program another floating station, keep pressing NEXT or PREV until the desired floating station is displayed.3. Enter a floating number. To program no floating number, press CLEAR. To change the current entry, press CLEAR and the new floating number.4. Press STORE.5. To program another floating station, keep pressing NEXT or PREV until the desired floating station is displayed.6. Repeat steps 3 through 5.7. Press END.
Conditions	<ul style="list-style-type: none">• A floating number is composed of two to four numerical digits, 0 through 9.• The leading one or two digits of the floating numbers are subject to program [100] "Flexible Numbering, (01) through (16) 1st through 16th hundred extension blocks."• Floating numbers and extension numbers should be unique. Double entry and incompatible entry for these numbers are invalid. Valid entry example: 10 and 11, 10 and 110. Invalid entry example: 10 and 106, 210 and 21.• You can leave the entry empty.

*: Available for the KX-TD1232 only.

Floating Number Assignment (contd.)

- To avoid making an invalid entry, check the other extension number in programs [003] “Extension Number Set,” [012] “ISDN Extension Number Set,” [127] “Voice Mail Extension Number Assignment” and [130] “Phantom Extension Number Assignment.” The default of each extension number is as follows:

- [003] Extension Number Set
KX-TD816 – 201 through 216, 301 through 316
KX-TD1232 – 201 through 264, 301 through 364
- [012] ISDN Extension Number Set
Not stored
- [127] Voice Mail Extension Number Assignment
265 through 288
- [130] Phantom Extension Number Assignment
Not stored

Feature References

Section 3, Features
Floating Station

4.9 Resource Programming

817

TD197 Baud Rate Set

Description	Assigns the KX-TD197 modem standard. There are two standards available – BELL and CCITT-V.34.
Selection	<ul style="list-style-type: none">• Master / Slave• BELL / V.34-9600 / V.34-14400 / V.34-19200 / V.34-28800 / V.34-33600
Default	Master and Slave – V.34-33600
Programming	<ol style="list-style-type: none">1. Enter 817. Display: TD197 TYPE2. Press NEXT. Display example: Mast.:V.34-336003. Keep pressing SELECT until the desired selection is displayed.4. Press NEXT. Display example: Slave:V.34-336005. Keep pressing SELECT until the desired selection is displayed.6. Press STORE.7. Press END.
Conditions	<ul style="list-style-type: none">• Normally, if V.34-33600 is selected, the modem's transmission is as fast as possible. However, if the line quality is not good and causes many errors, please select the lower speed standard.
Feature References	Section 3, Features System Programming and Diagnosis with Personal Computer

Timed Reminder Message Assignment

Description	Assigns the message number which is used when the Outgoing Message (OGM) for Timed Reminder is set.
Selection	Message number: 1 to 4
Default	Not Stored
Programming	<ol style="list-style-type: none">1. Enter 818. Display: T-Remind MSG Asn2. Press NEXT. Display example: MSG:Not Stored3. Enter a message number. To delete the current entry, press CLEAR. Display example: MSG:14. Press STORE.5. Press END.
Conditions	None
Feature References	Section 3, Features Outgoing Message (OGM) Timed Reminder

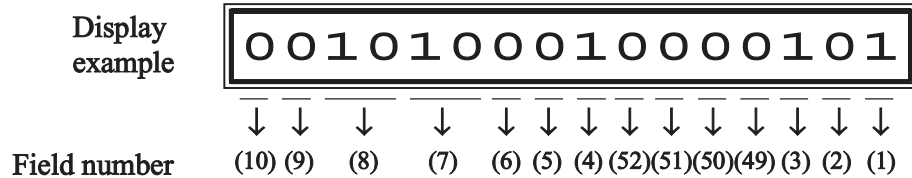
4.10 Option Programming

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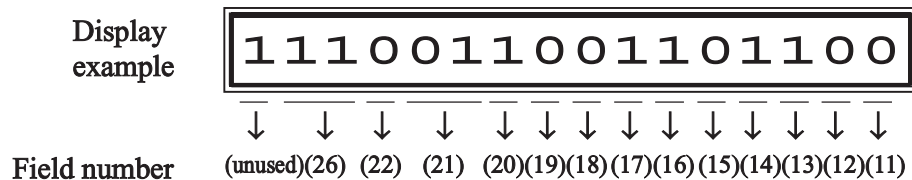
System Additional Information

Description Adds the following programming items, if required:

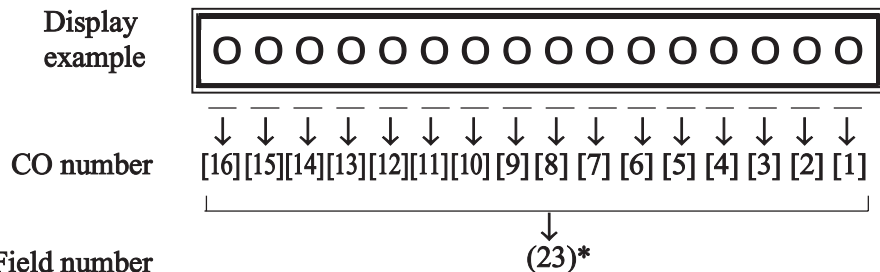
Area 1 There are 14 fields available in Area 1 as follows:



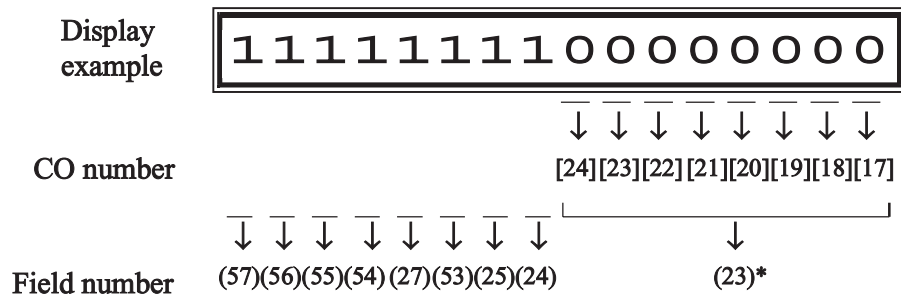
Area 2 There are 13 fields available in Area 2 as follows:



Area 3 [1] through [16] below match CO lines 1 through 16:



Area 4 [17] through [24] below match CO lines 17 through 24:



*: CO numbers [5] through [8] are available for KX-TD816 only.
CO numbers [9] through [24] are available for KX-TD1232 only.

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System Additional Information (contd.)

Explanation for Area 1

Field	Description	Selection	Default	References
(1)	Sound source during transfer.	0 : ringback tone 1 : Music on Hold	1	<ul style="list-style-type: none"> CALL TRANSFER FEATURES Music on Hold
(2)	Result of pressing the hookswitch lightly and then placing down the handset (during an outside call; single line telephones only).	0 : Consultation Hold 1 : disconnection	0	Consultation Hold
(3)	Result of pressing the RECALL button on proprietary telephones (during an outside call).	0 : disconnection signal 1 : register recall signal	1	<ul style="list-style-type: none"> External Feature Access Recall
(4)	Enables or disables the dial tone between obtaining a CO line and dialing the phone number when using the one-touch dial, redial or speed dial function.	0 : disable 1 : enable	1	None
(5)	Result of pressing the hookswitch lightly (single line telephones only).	0 : Consultation Hold 1 : disconnection	0	Consultation Hold
(6)	Sets the duration of the DTMF signals sent to the Voice Processing System (VPS) ports.	0 : 80 ms 1 : 160 ms	0	Voice Mail Integration
(7)	Sets the time the system waits before sending DTMF signals (such as a mailbox number) to VPS after VPS answers a call.	00 : 0.5 s 01 : 1.0 s 10 : 1.5 s 11 : 2.0 s	10	Voice Mail Integration
(8)	Sets the time the system waits before sending DTMF signals (programmed in [113]) to VPS after the VPS calls an extension.	00 : 0.5 s 01 : 1.0 s 10 : 1.5 s 11 : 2.0 s	10	Voice Mail Integration
(9)	Assigns whether the system turns off the Message Waiting lamp or the VPS does when the user hears a message recorded in a mailbox.	0 : system 1 : VPS	0	<ul style="list-style-type: none"> Message Waiting Voice Mail Integration
(10)	Reserved			
(49)	Enables or disables the CO Pulse feedback tone.	0 : disable 1 : enable	0	Dial Type Selection
(50)	Selects the destination during the day mode, when operator number is sent as a Direct Dialing In number.	0 : DIL 1:N 1 : Operator	0	Direct Dialing In (DDI)

System Additional Information (contd.)**Explanation for Area 1 (contd.)**

Field	Description	Selection	Default	References
(51)	Selects the destination during the night mode, when operator number is sent as a Direct Dialing In number.	0 : DIL 1:N 1 : Operator	0	Direct Dialing In (DDI)
(52)	Assigns the operation when the Master and Slave system of KX-TD1232 are disconnected.	0 : Reset automatically 1 : Not reset	0	None

Explanation for Area 2

Field	Description	Selection	Default	References
(11)	If an outside party is parked or transferred and unanswered, assigns whether Transfer Recall occurs at the park/transfer originating extension or at Operator 1.	0 : extension 1 : Operator 1	0	• Call Park • Call Transfer, Unscreened – to Extension
(12)	If Limited Call Duration is enabled in program [502] “Extension-to-CO Line Call Duration Limit,” assigns if Limited Call Duration is done for both outgoing and incoming calls or for outgoing calls only.	0 : both calls 1 : outgoing calls only	0	Limited Call Duration
(13)	Allows you to remove confirmation tone 4. By default, a beep tone sounds when a three-party conference is started / ended.	0 : disable 1 : enable	1	Confirmation Tone
(14)	Determines if the dialed “*” and “#” will be checked by Toll Restriction. This assignment is required for certain central offices (CO) to prevent toll fraud. Some CO ignore the user-dialed “*” and “#.” If your CO is such a type, select “0” (no check).	0 : no check 1 : check	1	Toll Restriction
(15)	Enables or disables the Recall function when receiving an outside call at a locked or toll-restricted station. Recall, if enabled, allows the user to make an outside call using the same line at the station. This is also allowed for those extensions that have Account Code – Verified – All Calls mode assigned, if “0” (disconnection signal) is selected in field (3) above.	0 : disable 1 : enable	0	Recall

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System Additional Information (contd.)

Explanation for Area 2 (contd.)

Field	Description	Selection	Default	References
(16)	Allows you to remove Confirmation Tone 3. This tone is sent when a conversation is established just after dialing the feature numbers for accessing the following features: Call Pickup, Paging, Paging Answer, TAFAS Answer, Hold Retrieve and Call Park Retrieve.	0 : disable 1 : enable	1	Confirmation Tone
(17)	A CO line set to pulse or call blocking mode in program [402] "Dial Mode Selection" can have two settings. This assigns the pulse break ratio during dial pulsing. Select an appropriate ratio depending on the standard in your country.	0 : 60 % 1 : 67 %	1	Dial Type Selection
(18)	Assigns if an extension's mailbox number is substituted by the extension number or it is programmable (free). If a call is forwarded or rerouted to the VPS, this system automatically transmits the mailbox number to the VPS to specify the user's mailbox. To make it programmable, select "1 (free)," then assign the number in program [609] "Voice Mail Access Codes."	0 : extension number 1 : free	0	Voice Mail Integration
(19)	Assigns the first display of a digital large display proprietary telephone (KX-T7235 / KX-T7433 / KX-T7436) in Station Speed Dialing.	0 : names 1 : numbers	0	Special Display Features – Station Speed Dialing
(20)	Assigns the source of Music Source 1 for Music on Hold and BGM.	0 : internal music source 1 : external music source	1	<ul style="list-style-type: none"> • Background Music (BGM) • Background Music (BGM) – External • Music on Hold
(21)	Selects inter-digit pause for pulse dialing.	00 : 630 ms 01 : 830 ms 10 : 1030 ms	01	None
(22)	Selects intercom dial tone frequency.	0 : normal 1 : distinctive	0	None
(26)	Selects the maximum time for detecting a hooking signal from the SLT.	00 : 1000 ms 01 : 300 ms 10 : 196 ms 11 : 148 ms	11	None

*System Additional Information (contd.)***Explanation for Area 3**

Field	Description	Selection	Default	References
(23)	This field is provided to assign PAD Switch Control (volume control of received calls on a CO line). This can be assigned per CO line. The CO numbers [1] through [8] corresponds to CO lines 1 through 8 for KX-TD816, and CO numbers [1] through [24] corresponds to CO lines 1 through 24 for KX-TD1232 respectively.	0 : 0 dB 1 : -3 dB	0	None

Explanation for Area 4

Field	Description	Selection	Default	References
(24)	Prevents or allows a call originated by an AA port of VPS to another AA port.	0 : prevent 1 : allow	1	Voice Mail Integration
(25)	Prevents or allows sending pulse dialing signals during an outside call.	0 : prevent 1 : allow	1	None
(27)	Enables or disables the Digital Test Access.	0 : enable 1 : disable	1	None
(53)	Enables or disables the SMDR printout of the secret dial numbers.	0 : disable 1 : enable	1	Station Message Detail Recording (SMDR)
(54-57)	Reserved			

Explanation for Area 5

Field	Description	Selection	Default	References
(28)	Reserved			
(29)	Selects the result when an outside call is routed by Call Forwarding to a voice mail port which is in Automated Attendant (AA) service mode. [For both Inband and Digital Proprietary Telephone (DPT) Integration] disable : AA service mode enable : The mode will change to the Voice Mail (VM) service mode and a Follow-On ID is sent. When the voice mail port is in VM service mode, this program is not affected.	0 : disable 1 : enable	1	Voice Mail Integration

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System Additional Information (contd.)

Explanation for Area 5 (contd.)

Field	Description	Selection	Default	References
(30)	Selects the result when an outside call is routed to a voice mail port by IRNA. [For both Inband and DPT Integration] When the voice mail port is in VM service mode; enable : VM service mode disable : The mode will change to the AA service mode. [Only when Inband] When the voice mail port is in AA service mode; enable : The mode will change to the VM service mode and a Follow-On ID is sent. disable : AA service mode	0 : disable 1 : enable	1	Voice Mail Integration
(31)	Assigns how an SLT user replies to a message left by the Message Waiting feature.	0 : off-hook and feature number 1 : off-hook	1	Message Waiting
(32)	Assigns how to treat the extension user who reaches the pre-assigned limit of the Budget Management feature.	0 : sends an alarm sound and then disconnects the line in fifteen seconds. 1 : sends an alarm sound	1	Budget Management
(33)	Assigns whether the data (the date and room number) is printed out or not when a guest checks-in and checks-out.	0 : enable 1 : disable	1	HOTEL APPLICATION
(34)	Assigns whether to send an absent message, No.6-9, to an extension or to output it to the printer when the feature number is dialed. Outputting the message to the printer is useful when informing a receptionist of the cleaning status of a room or the total of the minibar at the hotel.	0 : SMDR (printer) 1 : extension	1	<ul style="list-style-type: none"> • Absent Message Capability • HOTEL APPLICATION
(35)	Assigns whether or not the new page will start whenever printing out the data in the Hotel Application feature.	0 : enable 1 : disable	1	HOTEL APPLICATION
(36)	Assigns whether or not to print out the data when the system receives a call and a call is answered.	0 : enable 1 : disable	1	None
(37-38)	Reserved			

*System Additional Information (contd.)***Explanation for Area 6**

Field	Description	Selection	Default	References
(39)	Disables or enables sending dial tone after seizing a CO line.	0 : disable 1 : enable	0	None
(40)	Reserved			
(41)	Assigns whether the system disconnects the CO line or not if nothing is dialed after seizing a CO line.	0 : disconnect 1 : do not disconnect	1	None
(42)	Reserved			
(43)	Selects the way to access a CO line to apply ARS.	0 : any dialing method 1 : Dial 9 or press L-CO button	1	Automatic Route Selection (ARS)
(44-45)	Reserved			
(46)	Assigns whether an incoming DID call is forwarded to CO line or not.	0 : enable 1 : disable	1	Direct Inward Dialing (DID)
(47)	Reserved			
(48)	When an incoming call reaches the Hunting group (Circular, UCD, Ring and No Reply) this program determines whether the extension which the Do Not Disturb Feature is set receives the call or not.	0 : receive 1 : not receive	1	None
(58)	When an incoming call reaches the Hunting group (Circular, UCD, Ring and No reply), this program determines whether the extension which the Call Forwarding feature is set receives the call or not.	0 : receive 1 : not receive	1	None
(63-64)	Reserved			
(65)	Selects the charge account destination of a doorphone call transferred to an outside party.	0 : Operator 1 1 : Jack 01-1	1	Doorphone Call Forwarding to CO Line
(66-67)	Reserved			

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System Additional Information (contd.)

Explanation for Area 7

Field	Description	Selection	Default	References
(59)	Enables or disables the ARS with DTMF function.	0 : DTMF 1 : Data	1	Automatic Route Selection (ARS)
(60)	Assigns the incoming bell frequency for SLT.	0 : 25Hz 1 : 32Hz	1	None
(61)	Determines the telephone which can activate the Whisper OHCA feature.	0 : any telephone 1 : KX-T7400 series telephone only	1	Whisper OHCA
(62)	Determines to use a tone or a music source for Music on Hold. Internal or external music source can be selected in field (20).	0 : tone 1 : setting of field (20)	1	Music on Hold
(68-76)	Reserved			
(77)	Determines whether the account code is printed out or not (shown in dots) by the SMDR.	0 : shown in dots 1 : shown	1	Account Code Entry
(78-79)	Sets the time the system waits before sending a CCBS signal (by dialing "6" or pressing "CCBS" button) while hearing dial tone 3.	11 : 5 s 10 : 10 s 01 : 15 s 00 : 20 s	11	Completion of Calls to Busy Subscriber (CCBS)
(80)	Enables or disables sending CO line access code "9" to a TIE line. When you dial CO line access code "9" and the CO line is busy, the system can automatically send CO line access code "9" to TIE line so that you can access the CO line through another PBX.	0 : enable 1 : disable	1	E&M (TIE) Line Service

System Additional Information (contd.)

Selection	<ul style="list-style-type: none"> • Area code: 01 through 12 (09 through 12 are reserved) • Selection: See “Selection” section for each area.
Default	See “ Default ” section for each area.
Programming	<ol style="list-style-type: none"> 1. Enter 990. Display: System Add Inf. 2. Press NEXT. Display: Area NO?→ 3. Enter an area code (01 through 08). Display example: 0010100011000001 4. Keep pressing ➡ or ⬅ to move the cursor to the desired field. 5. Enter your selection (0 or 1). To change the current entry, press STORE and the new selection. 6. To program another field, repeat steps 4 and 5. 7. Press STORE. 8. To program another area, press SELECT and the desired area code. 9. Repeat steps 4 through 8. 10. Press END.
Conditions	None
Feature References	See “ References ” section for each area.

Changed Features and Programs

Changed Features and Programs

FEATURE TITLE	MANUAL SECTION	REVISION
1.5.1 General Description	Section 1 System Outline	The description has been changed as shown on page 24.
1.5.3 System Capacity	Section 1 System Outline	The description has been changed as shown on page 25.
2.4.1 Location of Optional Cards and Units	Section 2 Installation	The description has been changed as shown on page 27.
2.4.10 System Connection	Section 2 Installation	The following note is added to the Notes section. <ul style="list-style-type: none"> • Install the ISDN card in proper order from the Master system to the Slave system. If the ISDN card is only installed to the Slave system, noise may occur during communication.
Absent Message Capability	Section 3 Features	The following program is added to the Programming References section. [990] System Additional Information, Field (34)
Account Code Entry	Section 3 Features	The following conditions are added to the Conditions section. <ul style="list-style-type: none"> • If the account code stored in location 001 of the programming table is used, the dialed number is not printed out to SMDR (Private Call). • It is possible to select whether the account code is printed out or not by the SMDR. If it is not printed out, it is shown in dots. The following program is added to the Programming References section. [105] Account Codes

Changed Features and Programs

FEATURE TITLE	MANUAL SECTION	REVISION
Automatic Callback Busy (Camp-On)	Section 3 Features	The feature has been changed as shown on page 48.
Automatic Route Selection (ARS)	Section 3 Features	<p>The following conditions are added to the Conditions section.</p> <ul style="list-style-type: none"> • It is possible to select the way to access a CO line to apply ARS, any dialing method or dialing 9 or pressing Loop-CO (L-CO) button, in program [990], "System Additional Information, Area 06-Field (43)". • ARS with DTMF: When making a call to an ISDN line using the memory dialing, and the number has a pause in it, the number after the pause will be sent to the line as DTMF signals. This function is useful when accessing a special network service which can be accessed only by the DTMF signaling. This function is enabled or disabled in program [990], "System Additional Information, Area 07 – Field (59)" (default: disable). <p>The following program is added to the Programming References section. [990] System Additional Information, Field (59)</p>
Automatic Station Release	Section 3 Features	<p>The following sentence in the Conditions section is changed as follows.</p> <p>(2) After a digit is dialed, the next one is not dialed within <u>ten seconds</u> (Intercom call only).</p>
Budget Management	Section 3 Features	<p>The following programs are added to the Programming References section.</p> <p>[014] Budget Management on ISDN Port [019] Budget Management on TD286 Port [990] System Additional Information, Field (32)</p>
Busy Lamp Field	Section 3 Features	<p>The following condition is added to the Conditions section.</p> <ul style="list-style-type: none"> • The DSS indicator on a proprietary telephone also informs you of incoming calls except for the DIL 1:N and doorphone call to the corresponding extensions. You can pick up calls by pressing the corresponding flashing DSS buttons.

Changed Features and Programs

FEATURE TITLE	MANUAL SECTION	REVISION
Button, Direct Station Selection (DSS)	Section 3 Features	The following feature is added to the Operation References section. DPT Features Call Transfer – to Extension
Button, Flexible	Section 3 Features	The feature has been changed as shown on page 51.
Button, Loop-CO (L-CO)	Section 3 Features	The fourth condition is changed as follows. • Immediate, delayed, no ringing or no incoming call (disable) can be selected on an extension – CO line basis.
Button, Single-CO (S-CO)		
Call Forwarding – All Calls, Busy, Busy / No Answer, No Answer	Section 3 Features	The first condition is changed as follows. • Types of calls which are forwarded by this function are: Outside calls – DDI; DIL 1:1; DIL 1:N; Intercept Routing Intercom calls – Extension; Transfer
Call Forwarding – to CO Line	Section 3 Features	The first condition is changed as follows. • Types of calls which are forwarded by this function are: Outside calls – DIL 1:1; DID; DDI Intercom calls – Extension; Transfer A call between two external parties can be established by this feature only when both outside lines are ISDN S0 lines.
CALL FORWARDING FEATURES – SUMMARY	Section 3 Features	The feature has been changed as shown on page 53.
Calling Line Identification Restriction (CLIR)	Section 3 Features	The Programming References section is changed as follows. Section 4, System Programming [100] Flexible Numbering, CLIR [419] Subscriber Number Assignment [516] Calling Line Identification Restriction The following feature is added to the Operation References section. –User Manual DPT Features, SLT and ISDN Addendum Telephone Features Calling Line Identification Restriction (CLIR)

Changed Features and Programs

FEATURE TITLE	MANUAL SECTION	REVISION
Call Park	Section 3 Features	The feature has been changed as shown on page 56.
Call Pickup, Directed	Section 3 Features	The following condition is added to the Conditions section. <ul style="list-style-type: none"> • You can pick up a call by pressing a flashing DSS button assigned on a proprietary telephone.
Charge Fee Reference	Section 3 Features	The following condition is added to the Conditions section. <ul style="list-style-type: none"> • The displayed currency denomination can be programmed by system programming. The following program is added to the Programming References section. [125] Assignment of Denomination
Class of Service (COS)	Section 3 Features	The feature has been changed as shown on page 49.
CO Incoming Call Information Display	Section 3 Features	The feature has been changed as shown on page 50.
CO Incoming Call Information Log	Section 3 Features	The Programming References section is changed as follows. <p>Section 4, System Programming</p> [001] System Speed Dialing Number Set [002] System Speed Dialing Name Set [100] Flexible Numbering, CO incoming call information log mode/CO incoming call information log lock [419] Subscriber Number Assignment [421] CO Line Name Assignment
CO Line Connection Assignment – Outgoing	Section 3 Features	The following programs are added to the Programming References section. [615]-[616] Outgoing Permitted CO Line Assignment — Day / Night for ISDN Extension [629]-[630] Outgoing Permitted CO Line Assignment — Day / Night for TD286 Extension
CO Line Group	Section 3 Features	The following program is added to the Programming References section. [100] Flexible Numbering, CO line group access

Changed Features and Programs

FEATURE TITLE	MANUAL SECTION	REVISION
Confirmation Tones	Section 3 Features	The feature has been changed as shown on page 52.
Date Line Security	Section 3 Features	The feature has been changed as shown on page 55.
Dial Tone, Distinctive	Section 3 Features	The Dial tone 3 in the Description section is changed as follows. Dial tone 3: Sounds when performing Account Code Entry or Completing Calls to Busy Subscriber (CCBS). Also sounds when answering Timed Reminder call.
Dial Type Selection	Section 3 Features	The following program is added to the Programming References section. [990] System Additional Information, Field (49)
Direct Dialing In (DDI)	Section 3 Features	The feature has been changed as shown on page 56.
Display, Call Information	Section 3 Features	The following condition is added to the Conditions section. <ul style="list-style-type: none"> • The displayed currency denomination can be programmed by system programming. The Programming References section is changed as follows. Section 4, System Programming [003] Extension Number set [004] Extension Name Set [117] Charge Display Selection [125] Assignment of Denomination [212] Call Duration Count Start Time [421] CO Line Name Assignment The following feature is added to the Feature References section. Charge Fee Reference

Changed Features and Programs

FEATURE TITLE	MANUAL SECTION	REVISION
Do Not Disturb (DND)	Section 3 Features	The feature has been changed as shown on page 57.
Do Not Disturb for Direct Dialing In Call	Section 3 Features	The feature has been changed as shown on page 68.
Door Opener	Section 3 Features	<p>The following condition is added to the Conditions section.</p> <ul style="list-style-type: none"> • When a visitor presses the Call button on the doorphone, the system may automatically open the door, if the doorphone has a built-in door opener. It is required to set by system programming. <p>The following programs are added to the Programming References section.</p> <p>[122] Automatic Door Open Assignment [511] Door Open Access</p>
Extension Group	Section 3 Features	The feature has been changed as shown on page 80.
EXtra Device Port (XDP)	Section 3 Features	The feature has been changed as shown on page 81.
Flexible Numbering	Section 3 Features	The feature has been changed as shown on page 82.
Floating Station	Section 3 Features	The feature has been changed as shown on page 85.
Handsfree Answerback	Section 3 Features	The feature has been changed as shown on page 87.
Intercept Routing	Section 3 Features	The feature has been changed as shown on page 94.

Changed Features and Programs

FEATURE TITLE	MANUAL SECTION	REVISION
Intercom Calling	Section 3 Features	<p>The first condition is changed as follows.</p> <ul style="list-style-type: none"> • Extension numbers are assigned to all extensions by system programming. An extension number is programmed to be two, three, or four digits. The ISDN extension number is programmed to be one, two or three digits. <p>The following programs are added to the Programming References section.</p> <p>[012] ISDN Extension Number Set [013] ISDN Extension Name Set</p>
Manager Extension	Section 3 Features	<p>The following condition is added to the Conditions section.</p> <ul style="list-style-type: none"> • Manager extension can print out and clear the system working report.
Message Waiting	Section 3 Features	<p>The Programming References section is changed as follows.</p> <p>Section 4, System Programming [005] Flexible CO Button Assignment [100] Flexible Numbering, Message waiting [214] Message Waiting Ring Interval Time [990] System Additional Information Fields (9), (31) Station ProgrammingUser Manual, Flexible Button Assignment – Message Waiting (MESSAGE) Button</p>
Mixed Station Capacities	Section 3 Features	<p>The following condition is added to the Conditions section.</p> <ul style="list-style-type: none"> • It is possible to ignore the pulse dial by system programming. In this case, a single line LD telephone does not function. <p>The following program is added to the Programming References section.</p> <p>Section 4, System Programming [121] Pulse Dial Reception Assignment</p>
Module Expansion	Section 3 Features	The feature has been changed as shown on page 101.
Music on Hold	Section 3 Features	<p>The following program is added to the Programming References section.</p> <p>[990] System Additional Information, Field (62)</p>

Changed Features and Programs

FEATURE TITLE	MANUAL SECTION	REVISION
Night Service	Section 3 Features	The feature has been changed as shown on page 104.
Off-Hook Call Announcement (OHCA)	Section 3 Features	The feature has been changed as shown on page 106.
PAGING FEATURES – SUMMARY	Section 3 Features	The following sentence is added to the Description section. It is also possible to deny the page.
Paging – All, External, Group	Section 3 Features	The following program is added to the Programming References section. [100] Flexible Numbering, Paging – deny The following feature is added to the Operation References section. Paging — DENY
Power Failure Transfer	Section 3 Features	The following condition is added to the Conditions section. • If the power is restored during a call using a SLT, the call is disconnected.
Redial, Automatic	Section 3 Features	The Description section is changed as follows: This is a special feature for the digital proprietary telephones, that provides automatic redialing of the last dialed, saved number or call log, if the called party is busy. If the Last Number Redial, Saved Number Redial, CO Incoming / Outgoing Call Log operation or Notebook function is performed handsfree, the telephone set will hang up and try again after a pre-determined period of time.
Reverse Circuit	Section 3 Features	The Programming References section is changed as follows. Section 4, System Programming [416] Reverse Circuit Assignment

Changed Features and Programs

FEATURE TITLE	MANUAL SECTION	REVISION
Secret Dialing	Section 3 Features	The following programs are added to the Programming References section. Section 4, System Programming [001] System Speed Dialing Number Set [990] System Additional Information, Field (53) Station ProgrammingUser Manual Flexible Button Assignment – One-Touch Dialing Button
Special Display Features for KX-T7235	Section 3 Features	The feature has been changed as shown on page 115.
Special Display Features – Extension Dialing	Section 3 Features	The following programs are added to the Programming References section. [012] ISDN Extension Number Set [013] ISDN Extension Name Set
Special Display Features – System Feature Access Menu	Section 3 Features	The operator can also have the display of the following feature. Class of Service (primary / secondary)
Station Feature Clear	Section 3 Features	The feature has been changed as shown on page 116.
Station Hunting	Section 3 Features	The feature has been changed as shown on page 117.
Station Message Detail Recording (SMDR)	Section 3 Features	The feature has been changed as shown on page 119.
Station Programming	Section 3 Features	The feature has been changed as shown on page 121.
System Connection	Section 3 Features	The following condition is added to the Conditions section. <ul style="list-style-type: none"> • Once this feature is employed, the data adjustment in both systems are performed at the programmed time (default is 1:00) every day. The time can be changed by system programming. The following program is added to the Programming References section. Section 4, System Programming [115] Adjust Time

Changed Features and Programs

FEATURE TITLE	MANUAL SECTION	REVISION				
System Programming and Diagnosis with Personal Computer	Section 3 Features	The following program is added to the Programming References section. [813] Floating Number Assignment				
System Speed Dialing	Section 3 Features	The description is changed as follows. This feature supports 500 abbreviated dial numbers available to all users. A system speed dial number is dialed out by pressing the AUTO button and a 3-digit code (000 through 499). It is possible to store five hundred 24-digit telephone numbers per system (maximum). The Programming References section is changed as follows. Section 4, System Programming [001] System Speed Dialing Number Set [002] System Speed Dialing Name Set [100] Flexible Numbering, System speed dialing [509]-[510] Toll Restriction Level for System Speed Dialing — Day / Night				
System Working Report	Section 3 Features	The feature has been changed as shown on page 122.				
Time-out, Variable	Section 3 Features	The following Item and Range added to the Description section. <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">System Timer Items</td> <td style="text-align: center;">Range</td> </tr> <tr> <td style="text-align: center;">Doorphone-to-CO Line Call Duration Time</td> <td style="text-align: center;">0-300 s</td> </tr> </table> The following program is added to the Programming Reference section. [218] Doorphone-to-CO Line Call Duration Time	System Timer Items	Range	Doorphone-to-CO Line Call Duration Time	0-300 s
System Timer Items	Range					
Doorphone-to-CO Line Call Duration Time	0-300 s					

Changed Features and Programs

FEATURE TITLE	MANUAL SECTION	REVISION
Toll Restriction	Section 3 Features	<p>The Programming References section is changed as follows.</p> <p>Section 4, System Programming</p> <p>[207] First Digit Time</p> <p>[208] Inter Digit Time</p> <p>[301]-[305] TRS Denied Code Entry for Levels 2 through 6</p> <p>[306]-[310] TRS Excepted Code Entry for Levels 2 through 6</p> <p>[500]-[501] Toll Restriction Level — Day / Night</p> <p>[509]-[510] Toll Restriction Level for System Speed Dialing — Day / Night</p> <p>[990] System Additional Information, Field (14)</p>
Toll Restriction Override by Account Code Entry	Section 3 Features	<p>The following feature is added to the Operation References section.</p> <p>Station Programming</p> <p>Charge Fee Reference</p>
Toll restriction Override for System Speed Dialling	Section 3 Features	The feature has been changed as shown on page 124.
Trunk (CO Line) Answer From Any Station (TAFAS)	Section 3 Features	The feature has been changed as shown on page 125.
Voice Mail Integration	Section 3 Features	<p>The following program is added to the Programming References section.</p> <p>[990] System Additional Information, Fields (29), (30)</p>

Changed Features and Programs

FEATURE TITLE	MANUAL SECTION	REVISION
System Programs	Section 4 System Programming	<p>The program addresses of the following programs have been changed. Please refer to each program in this manual.</p> <p>[009]→[010] Budget Management [010]→[011] Charge Margin and Tax Rate [121]→[123] Hotel Application [213]→[214] Message Waiting Ring Interval Time [416]→[419] Subscriber Number Assignment [419]→[421] CO Line Name Assignment [420]→[416] Reverse Circuit Assignment</p> <p>The following programs have become unavailable. Please disregard all descriptions about them.</p> <p>[300] TRS Override for System Speed Dialing [417] ISDN Outgoing CLIR Service Assignment [418] ISDN DDI Service Assignment [610] ISDN DDI Number / Extension Number Transformation [815] System Working Report Printout [816] System Working Report Clear</p>
4.1.3 Entering Characters	Section 4 System Programming	The description has been changed as shown on page 133.
[005] Flexible CO Button Assignment	Section 4 System Programming	The programming has been changed as shown on page 137.
[006] Operator / Manager Extension Assignment	Section 4 System Programming	The default setting of Manger is changed from “Not Stored”to “Jack 01.”
[100] Flexible Numbering	Section 4 System Programming	The programming has been changed as shown on page 155.
[106] Station Hunting Type	Section 4 System Programming	The programming has been changed as shown on page 161.

Changed Features and Programs

FEATURE TITLE	MANUAL SECTION	REVISION
[109] Expansion Card / Unit Type	Section 4 System Programming	The programming has been changed as shown on page 162.
[400] CO Line Connect Assignment	Section 4 System Programming	<p>The Selection section for the KX-TD1232 is changed as follows:</p> <ul style="list-style-type: none"> • CO line number: KX-TD1232 – 01 through 54, * (* =all CO lines) <p>The following condition is added to the Conditions section.</p> <ul style="list-style-type: none"> • If the KX-TD290 is installed to the KX-TD1232 master system, CO25 through CO54 become available. However, CO25 through CO54 of the maximum number of B channels which are assigned in the program [450] “PRI Configuration” can be set to “Connect.” Moreover, the CO line of the card which is set at the area of “N (no used)” cannot be set to “Connect.” <p>We recommend to set the required CO lines from CO25 of the required number of B channels to “Connect.”</p>
[401] CO Line Group Assignment	Section 4 System Programming	<p>If the KX-TD290 is installed to the KX-TD1232 master system, CO25 through CO54 become available. In this case, the Selection section for the KX-TD1232 is changed as follows:</p> <ul style="list-style-type: none"> • CO line number: KX-TD1232 – 01 through 54, * (* =all CO lines) <p>The default setting for CO08 through 54 are TRG 8.</p>
[602] Extension Group Assignment	Section 4 System Programming	The programming has been changed as shown on page 245.
[625-626] Doorphone Call Forwarding — Day/Night	Section 4 System Programming	This programming has been changed from [625-626] to [021-022].

Changed Features and Programs

FEATURE TITLE	MANUAL SECTION	REVISION
[801] SMDR Format	Section 4 System Programming	The programming has been changed as shown on page 262.
[813] Floating Number Assignment	Section 4 System Programming	The programming has been changed as shown on page 265.
[990] System Additional information	Section 4 System Programming	The programming has been changed as shown on page 269.

Programming Tables

009, 104

	[009] Quick Dial Number Set	[104] Quick Dial Assignment
Location No.	Parameter: Quick Dial No. (24 digits max.)	Parameter: Feature No. (4 digits max.)
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
40		

	[009] Quick Dial Number Set	[104] Quick Dial Assignment
Location No.	Parameter: Quick Dial No. (24 digits max.)	Parameter: Feature No. (4 digits max.)
Default	All : Not stored	All : Not stored
01		
02		
03		
04		
05		
06		
07		
08		
09		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		

009, 104

		[009]	[104]
		Quick Dial Number Set	Quick Dial Assignment
Location No.	Parameter: Quick Dial No. (24 digits max.)	Parameter: Quick Dial No. (24 digits max.)	Parameter: Feature No. (4 digits max.)
Default	All : Not stored	All : Not stored	All : Not stored
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55			
56			
57			
58			
59			
60			
61			
62			
63			
64			
65			
66			
67			
68			
69			
70			
71			
72			
73			
74			
75			
76			
77			
78			
79			
80			

011 – 016

[011] Charge Margin and Tax Rate	
Item	Parameter : Default Margin : 0.0 through 999.9 Tax : 0.0 through 200.0
Margin	0.0%
Tax 1	0.0%
Tax 2	0.0%
Tax 3	0.0%

[015] Charge Rate Fractional Point Assignment	
Default	Parameter : 0 – 8
3	

	[012] ISDN Extension Number Set	[013] ISDN Extension Name Set	[014] Budget Management on ISDN Port
Item: ISDN Port No.	Ext. No. (1 – 3 digits) Default : Not stored	Ext. Name (10 characters max.) Default : Not stored	Parameter: 0 through 99999999 Default : 0
All ports			
03			
04			
05			
06			
09			
10			
11			
12			

	[016] Charge Rate Assignment
Item : CO Line No.	Parameter: Rate (9 digits max., consisting of 0 –9)
Default : all all CO Lines	0.001
01	
02	
03	
04	
05	
06	
07	
08	
09	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

<Note> Port No.: TD816 (03 – 04), TD1232 (03 – 06 for Master, 09 – 12 for Slave)

<Note> CO No.: TD816 (CO01 – 08),
TD1232 (CO01 – 12 for Master,
CO13 – 24 for Slave, CO25 for

021-022

[021]-[022] Doorphone Call Forwarding—Day / Night		
Item:	Disable	Selection
Doorphone No.		Line access code (9 or 81 through 88) & phone number (24 digits max.)
Default: all	✓	
1 – Day		
1 – Night		
2 – Day		
2 – Night		
3 – Day		
3 – Night		
4 – Day		
4 – Night		

<Note> Doorphone No.: TD816 (1 – 2),
 TD1232 (1 – 2 for Master,
 3 – 4 for Slave)

[100] Flexible Numbering							
Item	Feature	Default	Parameter	Item	Feature	Default	Parameter
54	Paging – deny	721		79	Outgoing message	712	
55	Primary COS select	791		80	CLIP / COLP	711	
56	Secondary COS select	793		81	Reserved	—	
57	Log-in / log-out	45		82	Call Forwarding from hunting group	714	
58	Operator 1 call	—		83	Doorphone call forwarding to CO line	715	
59	Operator 2 call	—		84	Doorphone call forwarding mode switch	716	
60	Automatic callback busy cancel	46		85	CCBS cancel	713	
61	Not available	—		86	TIE line access code	None	
62	Not available	—		87	Other PBX Extension	None	
63	Not available	—		88	Other PBX Extension	None	
64	Not available	—		89	Other PBX Extension	None	
65	Not available	—		90	Other PBX Extension	None	
66	Not available	—		91	Other PBX Extension	None	
67	Not available	—		92	Other PBX Extension	None	
68	Not available	—		93	Other PBX Extension	None	
69	Not available	—		94	Other PBX Extension	None	
70	Timed reminder remote	7*		95	Other PBX Extension	None	
71	CO incoming call information log mode	56		96	Other PBX Extension	None	
72	Do not disturb for DDI	54		97	Other PBX Extension	None	
73	CLIR	59		98	Other PBX Extension	None	
74	COLR	58		99	Other PBX Extension	None	
75	CO incoming call information log lock	57		100	Other PBX Extension	None	
76	Live call screening password control	799		101	Other PBX Extension	None	
77	System working report	794		102	Other PBX Extension	None	
78	Reserved	—					

(Selection) No.54 – 80, 86: 1 – 3 digits (Valid Entries) No.54 – 80: 0 – 9, *, #

<Notes>

The item number 44 “Data line security set / cancel” has become unavailable.
The former item numbers 54 through 56 have been changed as shown above.

105, 110, 121 – 123, 125

[105] Account Codes		
Item : Location No.	Parameter : 5 digits max, consisting of 0 – 9	Item : Location No. consisting of 0 – 9
Default	All : Not stored	
01		21
02		22
03		23
04		24
05		25
06		26
07		27
08		28
09		29
10		30
11		31
12		32
13		33
14		34
15		35
16		36
17		37
18		38
19		39
20		40

[110] Network Type Assignment		
	Default	Selection
National	✓	
Euro		

[123] Hotel Application		
	Default	Parameter
Enable		
Disable	✓	

[121] Pulse Dial Reception Assignment		
	Default	Selection
Puls : Inhibit	✓	
Puls : Disallow		

[125] Assignment of Denomination	
Default	Parameter :
\$	2 characters max.

[122] Automatic Door Open Assignment		
Item: D (Doorphone) No.	Selection	
	Enable	Disable
Default : all		✓
D1–Day		
D1–Night		
D2–Day		
D2–Night		
D3–Day		
D3–Night		
D4–Day		
D4–Night		

<Note> Doorphone No.: TD816 (D1 – D2),
 TD1232 (D1 – D2 for Master,
 D3 – D4 for Slave)

[106] Station Hunting Type						
Item : Hunting group No.	Disable	Circular	VM	Selection		
				AA	UCD	Ring
Default	✓					
01						
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

		[109] Extension Card / Unit Type																														
		1				2				3				4																		
Area No.		C	S	S2	A	D	EM	C	S	S2	E	A	D	EM	C	S	S2	E1	E2	A1	A2	D	EM	C	S	S2	E1	E2	A1	A2	D	EM
TD816		✓									✓																					
	Parameter																															
TD1232																																
	Area No.	1						2						3																		
	Selection	C	S	C	S	S2	A <td>D<th>EM</th> <td>C</td><td>S</td><td>C</td><td>S</td><td>S2</td><td>E1 <td>E2</td><th>A1</th> <td>A2<th>D</th> <td>EM</td><td>C</td><td>S</td><td>C</td><td>S</td><td>S2</td><td>E1 <td>E2</td><th>A1</th> <td>A2<th>D</th> <td>EM</td> </td></td></td></td></td>	D <th>EM</th> <td>C</td> <td>S</td> <td>C</td> <td>S</td> <td>S2</td> <td>E1 <td>E2</td><th>A1</th> <td>A2<th>D</th> <td>EM</td><td>C</td><td>S</td><td>C</td><td>S</td><td>S2</td><td>E1 <td>E2</td><th>A1</th> <td>A2<th>D</th> <td>EM</td> </td></td></td></td>	EM	C	S	C	S	S2	E1 <td>E2</td> <th>A1</th> <td>A2<th>D</th> <td>EM</td><td>C</td><td>S</td><td>C</td><td>S</td><td>S2</td><td>E1 <td>E2</td><th>A1</th> <td>A2<th>D</th> <td>EM</td> </td></td></td>	E2	A1	A2 <th>D</th> <td>EM</td> <td>C</td> <td>S</td> <td>C</td> <td>S</td> <td>S2</td> <td>E1 <td>E2</td><th>A1</th> <td>A2<th>D</th> <td>EM</td> </td></td>	D	EM	C	S	C	S	S2	E1 <td>E2</td> <th>A1</th> <td>A2<th>D</th> <td>EM</td> </td>	E2	A1	A2 <th>D</th> <td>EM</td>	D	EM	
	Default	✓																														
	Parameter																															
				</																												

111, 416, 420, 429

Item : CO Line No.	[111] ISDN DDI / MSN Removed Digit / Added Number Assignment		[416] Reverse Circuit Assignment		[420] ISDN Ring Service Assignment - Day		[429] ISDN Ring Service Assignment - Night	
	Removed digit: (0 - 16)	Added number: (4 digits max.)	Regular	Reverse	Enable	Disable	Enable	Disable
Default: All	0	Not Stored	✓		✓		✓	
All CO lines								
01								
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								

<Note> CO No.: TD816 (CO01 - 08), TD1232 (CO01 - 12 for Master, CO13 - 24 for Slave)

126 – 129

[126] Voice Mail Number Assignment	
Item	Default
Parameter: Jack 02 – 16 (TD816) Jack 02 – 64 (TD1232)	
Master	Not Stored
Slave (TD1232 only)	Not Stored

[129] Operator Queue	
	Default
Queue (0 – 8)	8
Number of Hurry-Up (0 – 8)	4

<Note>
 VM No.:
 TD816 (01 – 12),
 TD1232 (01 – 24)

Item : VM No. (01 – 24)	[127] Voice Mail Extension Number Assignment		[128] Voice Mail Extension Group Assignment								
	Jack No. : -1 -2	Parameter : Ext. No. (2 – 4 digits)	Parameter : Ext. Group No. (1 – 8)								
		Default	Change	1	2	3	4	5	6	7	8
01	-1	265									
02	-2	266									
03	-1	267									
04	-2	268									
05	-1	269									
06	-2	270									
07	-1	277									
08	-2	278									
09	-1	281									
10	-2	282									
11	-1	283									
12	-2	284									
13	-1	271									
14	-2	272									
15	-1	273									
16	-2	274									
17	-1	275									
18	-2	276									
19	-1	279									
20	-2	280									
21	-1	285									
22	-2	286									
23	-1	287									
24	-2	288									
All VM No.											

[130] Phantom Extension Number Assignment									
Phantom Extension No. (2 – 4 digits, consisting of 0 – 9)									
Not Stored									
Location No.	Parameter	Location No.	Parameter	Location No.	Parameter	Location No.	Parameter	Location No.	Parameter
001		031		061		091		121	
002		032		062		092		122	
003		033		063		093		123	
004		034		064		094		124	
005		035		065		095		125	
006		036		066		096		126	
007		037		067		097		127	
008		038		068		098		128	
009		039		069		099			
010		040		070		100			
011		041		071		101			
012		042		072		102			
013		043		073		103			
014		044		074		104			
015		045		075		105			
016		046		076		106			
017		047		077		107			
018		048		078		108			
019		049		079		109			
020		050		080		110			
021		051		081		111			
022		052		082		112			
023		053		083		113			
024		054		084		114			
025		055		085		115			
026		056		086		116			
027		057		087		117			
028		058		088		118			
029		059		089		119			
030		060		090		120			

132 – 135

Item : Hunting group No.	[132] Hunting Group Name Assignment		[133] Hunting Overflow			[134] Hunting Intercept – Day		[135] Hunting Intercept – Night	
	Parameter: Name (10 characters max.)	Not Stored	OVF	Selection		Parameter: Extension No. (2 – 4 digits)	Disable	Parameter: Extension No. (2 – 4 digits)	Disable
Default				Busy	No				
01			<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
02									
03									
04									
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									

	[137] UCD Time Table Assignment – Day	[138] UCD Time Table Assignment – Night
Item : UCD group No.	Parameter: Time Table No. (1 – 4) Default: all – Not Stored	
01		
02		
03		
04		
05		
06		
07		
08		
09		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		

[139] UCD Time Table	
	Sequence
Table 1	↑ ↑ ↑ ↑
Table 2	↑ ↑ ↑ ↑
Table 3	↑ ↑ ↑ ↑
Table 4	↑ ↑ ↑ ↑
Selection : S1 / S2 / S3 / S4 / TR / RT / 1T / 2T / 3T / 4T / Blank	

150 – 152

[150] ISDN DDI Translation Table / [151]–[152] ISDN DDI Ringing Assignment — Day / Night					
Location No.	Parameter for [150]: DDI Number (16 digits max.)	Parameter for [151] (Day): [152] (Night): Ext No. or 0	Location No.	Parameter for [150]: DDI Number (16 digits max.)	Parameter for [151] (Day): [152] (Night): Ext No. or 0
Default	All: Not Stored			All: Not Stored	
000			025		
001			026		
002			027		
003			028		
004			029		
005			030		
006			031		
007			032		
008			033		
009			034		
010			035		
011			036		
012			037		
013			038		
014			039		
015			040		
016			041		
017			042		
018			043		
019			044		
020			045		
021			046		
022			047		
023			048		
024			049		

<Note> Ext No.: extension number (2 – 4 digits) / 0: the same as [990] fields (31) and (32) assignments

150 – 152

[150] ISDN DDI Translation Table / [151]–[152] ISDN DDI Ringing Assignment — Day / Night						
Location No.	Parameter for [150]: DDI Number (16 digits max.)	Parameter for [151] (Day): [152] (Night): Ext No. or 0	Location No.	Parameter for [150]: DDI Number (16 digits max.)	Parameter for [151] (Day): Ext No. or 0	Parameter for [152] (Night): Ext No. or 0
Default	All: Not Stored			All: Not Stored		
050			075			
051			076			
052			077			
053			078			
054			079			
055			080			
056			081			
057			082			
058			083			
059			084			
060			085			
061			086			
062			087			
063			088			
064			089			
065			090			
066			091			
067			092			
068			093			
069			094			
070			095			
071			096			
072			097			
073			098			
074			099			

<Note> Ext No.: extension number (2 – 4 digits) / 0: the same as [990] fields (31) and (32) assignments

150 – 152

[150] ISDN DDI Translation Table / [151]–[152] ISDN DDI Ringing Assignment — Day / Night					
Location No.	Parameter for [150]: DDI Number (16 digits max.)	Parameter for [151] (Day): [152] (Night): Ext No. or 0	Location No.	Parameter for [150]: DDI Number (16 digits max.)	Parameter for [151] (Day): [152] (Night): Ext No. or 0
Default	All: Not Stored			All: Not Stored	
100			125		
101			126		
102			127		
103			128		
104			129		
105			130		
106			131		
107			132		
108			133		
109			134		
110			135		
111			136		
112			137		
113			138		
114			139		
115			140		
116			141		
117			142		
118			143		
119			144		
120			145		
121			146		
122			147		
123			148		
124			149		

<Note> Ext No.: extension number (2 – 4 digits) / 0: the same as [990] fields (31) and (32) assignments

150 – 152

[150] ISDN DDI Translation Table / [151]–[152] ISDN DDI Ringing Assignment — Day / Night						
Location No.	Parameter for [150]: DDI Number (16 digits max.)	Parameter for [151] (Day): [152] (Night): Ext No. or 0	Location No.	Parameter for [150]: DDI Number (16 digits max.)	Parameter for [151] (Day): Ext No. or 0	Parameter for [152] (Night): Ext No. or 0
Default	All: Not Stored			All: Not Stored		
150			175			
151			176			
152			177			
153			178			
154			179			
155			180			
156			181			
157			182			
158			183			
159			184			
160			185			
161			186			
162			187			
163			188			
164			189			
165			190			
166			191			
167			192			
168			193			
169			194			
170			195			
171			196			
172			197			
173			198			
174			199			

<Note> Ext No.: extension number (2 – 4 digits) / 0: the same as [990] fields (31) and (32) assignments

150 – 152

[150] ISDN DDI Translation Table / [151]–[152] ISDN DDI Ringing Assignment — Day / Night					
Location No.	Parameter for [150]: DDI Number (16 digits max.)	Parameter for [151] (Day): [152] (Night): Ext No. or 0	Location No.	Parameter for [150]: DDI Number (16 digits max.)	Parameter for [151] (Day): [152] (Night): Ext No. or 0
Default	All: Not Stored			All: Not Stored	
200			225		
201			226		
202			227		
203			228		
204			229		
205			230		
206			231		
207			232		
208			233		
209			234		
210			235		
211			236		
212			37		
213			238		
214			239		
215			240		
216			241		
217			42		
218			243		
219			244		
220			245		
221			246		
222			247		
223			248		
224			249		

<Note> Ext No.: extension number (2 – 4 digits) / 0: the same as [990] fields (31) and (32) assignments

150 – 152

[150] ISDN DDI Translation Table / [151]–[152] ISDN DDI Ringing Assignment — Day / Night					
Location No.	Parameter for [150]: DDI Number (16 digits max.)	Parameter for [151] (Day): [152] (Night): Ext No. or 0	Location No.	Parameter for [150]: DDI Number (16 digits max.)	Parameter for [151] (Day): Ext No. or 0 Parameter for [152] (Night): Ext No. or 0
Default	All: Not Stored			All: Not Stored	
250			275		
251			276		
252			277		
253			278		
254			279		
255			280		
256			281		
257			282		
258			283		
259			284		
260			285		
261			286		
262			287		
263			288		
264			289		
265			290		
266			291		
267			292		
268			293		
269			294		
270			295		
271			296		
272			297		
273			298		
274			299		

<Note> Ext No.: extension number (2 – 4 digits) / 0: the same as [990] fields (31) and (32) assignments

[150] ISDN DDI Translation Table / [151]–[152] ISDN DDI Ringing Assignment — Day / Night					
Location No.	Parameter for [150]: DDI Number (16 digits max.)	Parameter for [151] (Day): [152] (Night): Ext No. or 0	Location No.	Parameter for [150]: DDI Number (16 digits max.)	Parameter for [151] (Day): [152] (Night): Ext No. or 0
Default	All: Not Stored			All: Not Stored	
300			325		
301			326		
302			327		
303			328		
304			329		
305			330		
306			331		
307			332		
308			333		
309			334		
310			335		
311			336		
312			337		
313			338		
314			339		
315			340		
316			341		
317			342		
318			343		
319			344		
320			345		
321			346		
322			347		
323			348		
324			349		

<Note> Ext No.: extension number (2 – 4 digits) / 0: the same as [990] fields (31) and (32) assignments

150 – 152

[150] ISDN DDI Translation Table / [151]–[152] ISDN DDI Ringing Assignment — Day / Night						
Location No.	Parameter for [150]: DDI Number (16 digits max.)	Parameter for [151] (Day): [152] (Night): Ext No. or 0	Location No.	Parameter for [150]: DDI Number (16 digits max.)	Parameter for [151] (Day): Ext No. or 0	Parameter for [152] (Night): Ext No. or 0
Default	All: Not Stored			All: Not Stored		
350			375			
351			376			
352			377			
353			378			
354			379			
355			380			
356			381			
357			382			
358			383			
359			384			
360			385			
361			386			
362			387			
363			388			
364			389			
365			390			
366			391			
367			392			
368			393			
369			394			
370			395			
371			396			
372			397			
373			398			
374			399			

<Note> Ext No.: extension number (2 – 4 digits) / 0: the same as [990] fields (31) and (32) assignments

153 – 155, 214, 216 – 218, 220

[153] Completion of Calls to Busy Subscriber (CCBS)		
	Default	Selection
Enable		
Disable		✓

[154] PBX Code	
Default	Parameter : 1 – 3 digits, 0 – 9
Not stored	

[155] E&M Signal Assignment	
	Default Selection
Continuous	✓
Pulsed Ans	
Pulsed No Ans	

	[216] Outgoing Message Time							
	Default			Selection				
	0	16	32	64	0	16	32	64
OGM 1			✓					
OGM 2	✓							
OGM 3			✓					
OGM 4	✓							

The total time of Outgoing Messages cannot exceed 64 seconds.

	[214] Message Waiting Ring Interval Time	[217] Timed Reminder Alarm Ring Time	[218] Doorphone-to-CO Line Call Duration Time	[220] TIE First / Inter Digit Time
Default	10 min	30 sec	0 sec	5 sec
Parameter				
Selection	0 – 64	30 – 240	0 – 30	3 – 30

340-341

Item : Location No.	[340] TIE Line Routing Table		[341] TIE Modify Removed / Added Digit	
	Parameter : TIE line access code (3 digits max.), consisting of 0-9, * Not Stored	Parameter : CO line group build sequence no. (1-8), 5 entries max., consisting of 0-9, *, * Not Stored	Parameter : No. of digits to be deleted (0-4) 0	Parameter : No. to be added (4 digits max.), consisting of 0-9. Not Stored
Default: all locations				
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

340-341

Item : Location No.	[340] TIE Line Routing Table		[341] TIE Modify Removed / Added Digit	
	Parameter : TIE line access code (3 digits max.), consisting of 0-9, *, max.	Parameter : CO line group build sequence no. (1-8), 5 entries max., consisting of 0-9, *, max.	Parameter : No. of digits to be deleted (0-9)	Parameter : No. to be added (4 digits max.), consisting of 0-9.
Default: all locations	Not Stored	Not Stored	0	Not Stored
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				

400, 401, 419, 421

CO Line No.	[400] CO Line Connection Assignment		[401] CO Line Group Assignment		[419] Subscriber Number Assignment	[421] CO Line Name Assignment
	Connect	Selection No Connect	Parameter: CO Line Group No. (1-8)	Change		
Default : all	✓		Default	Change	Not Stored	Parameter : Telephone No. (16 digits max.) Not Stored
all CO Lines			—			
01			1			
02			2			
03			3			
04			4			
05			5			
06			6			
07			7			
08			8			
09			8			
10			8			
11			8			
12			8			
13			8			
14			8			
15			8			
16			8			
17			8			
18			8			
19			8			
20			8			
21			8			
22			8			
23			8			
24			8			
25			8			
26			8			
27			8			

<Note> CO Line No.: TD816 (01 – 08), TD1232 (01 – 54)

400, 401, 419, 421

CO Line No.	[400] CO Line Connection Assignment		[401] CO Line Group Assignment		[419] Subscriber Number Assignment	[421] CO Line Name Assignment
	Connect	Selection No Connect	Parameter: CO Line Group No. (1-8)	Change		
Default : all	✓		Default	Change	Not Stored	Not Stored
all CO Lines			—			
28			8			
29			8			
30			8			
31			8			
32			8			
33			8			
34			8			
35			8			
36			8			
37			8			
38			8			
39			8			
40			8			
41			8			
42			8			
43			8			
44			8			
45			8			
46			8			
47			8			
48			8			
49			8			
50			8			
51			8			
52			8			
53			8			
54			8			

<Note> CO Line No.: TD816 (01 - 08), TD1232 (01 - 54)

422 – 427

Item: ISDN Port No.	[422] ISDN Port Type		[423] ISDN Layer 1 Active Mode		[424] ISDN Configuration		[425] ISDN Data Link Mode		[426] ISDN TEI Mode		[427] ISDN Extension Multiple Subscriber Number	
	Selection	CO	Permanent	Call	Point	Multipoint	Permanent	Call	Fix 0 – 63	Automatic	Enable	Disable
All ports		Default: CO		Default: Call		Default: Point		Default: Call		Default: Fix 0		Default: Disable
01												
02												
03												
04												
05												
06												
07												
08												
09												
10												
11												
12												

<Note> Port No.: TD816 (01 – 04),
 TD1232 (01 – 06 for Master, 07 – 12 for Slave)

428, 624

Item: ISDN Port No.	[428] ISDN Extension Progress Tone		[624] CLIP/COLP Number Assignment for Extension
	Selection Enable	Disable	Parameter: CLIP/COLP No. (16 digits max.) Default: Not Stored
All ports			
01	/	/	
02	/	/	
03	/	/	
04	/	/	
05	/	/	
06	/	/	
07	/	/	
08	/	/	
09	/	/	
10	/	/	
11	/	/	
12	/	/	

<Note> Port No.: TD816 (01 – 04),
TD1232 (01 – 06 for Master, 07 – 12 for Slave)

430-432, 452-456

Item : CO Line Group No.	[430] TIE Table Number Assignment Parameter: TIE Table No. (1 - 4) Not Stored	[452] CO-to-TIE Transfer		[453] TIE-to-CO Transfer		[454] TIE-to-TIE Transfer	
		Selection Enable	Selection Disable	Selection Enable	Selection Disable	Selection Enable	Selection Disable
Default : all			✓		✓		✓
all CO line groups							
1							
2							
3							
4							
5							
6							
7							
8							

Item : CO Line Group No.	[455] TIE Security Type		[456] Line Hunting Sequence	
	Selection Non	Trunk	Selection Small→Large	Selection Large→Small
Default : all	✓			✓
all CO line groups				
1				
2				
3				
4				
5				
6				
7				
8				

Item : TIE Table No. Default : all all tables 1 2 3 4	[431] TIE Incoming Assignment		[432] TIE Outgoing Assignment	
	Selection Immediate	Selection Wink	Selection Immediate	Selection Wink
		✓		✓

433-435, 457, 460

Item : TIE Table No.	[433] TIE Subscriber Number Removed Digit Parameter : No. of digits to be deleted (0 - 6)	[434] TIE Added Number Parameter : No. to be added (4 digits max.), consisting of 0 - 9. Not Stored	[435] TIE Wink Time Out Assignment Selection: 1 - 127 (X 64 msec)
Default: all all tables	0		16
1			
2			
3			
4			

Item : CO Line No.	[457] Voice Path Type		[460] TIE Receive Dial	
	Selection 2 wire	Selection 4 wire	Selection Yes	Selection No
Default : all		✓		✓
all lines				
05				
06				
07				
08				
all lines				
09				
10				
11				
12				
21				
22				
23				
24				

[437] Multiple Subscriber Number Set						
Item: Location No.	ISDN Port No.					
	01	02	03	04	05	06
Multiple Subscriber Number: 16 digits max.						
All ports: Not Stored						
Default						
01						
02						
03						
04						
05						
06						
07						
08						
09						
10						
ISDN Port No.						
Item: Location No.	07	08	09	10	11	12
Multiple Subscriber Number: 16 digits max.						
All ports: Not Stored						
Default						
01						
02						
03						
04						
05						
06						
07						
08						
09						
10						

<Note> Port No.: TD816 (01 – 04), TD1232 (01 – 06 for Master, 07 – 12 for Slave)

[438] Extension Ringing Assignment – Day for ISDN MSN												
ISDN Port No.												
Item:	01		02		03		04		05		06	
Location No.	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable
Default	All ports – all locations: Disable											
Selection	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable
01												
02												
03												
04												
05												
06												
07												
08												
09												
10												
Item:	ISDN Port No.											
Location No.	07		08		09		10		11		12	
Default	All ports – all locations: Disable											
Selection	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable
01												
02												
03												
04												
05												
06												
07												
08												
09												
10												

<Note> Port No.: TD816 (01 – 04), TD1232 (01 – 06 for Master, 07 – 12 for Slave)

[439] Extension Ringing Assignment – Night. for ISDN MSN												
ISDN Port No.												
Item:	01		02		03		04		05		06	
Location No.	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable
Default	All ports – all locations: Disable											
Selection	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable
01												
02												
03												
04												
05												
06												
07												
08												
09												
10												
Item:	ISDN Port No.											
Location No.	07		08		09		10		11		12	
Default	All ports – all locations: Disable											
Selection	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable	Extension No.	Disable
01												
02												
03												
04												
05												
06												
07												
08												
09												
10												

<Note> Port No.: TD816 (01 – 04), TD1232 (01 – 06 for Master, 07 – 12 for Slave)

017 – 019, 440 – 442

Item: Ext. No. Port No.	[017] TD286 Extension Number Set	[018] TD286 Extension Name Set	[019] Budget Management on TD286 Port	[440] TD286 ISDN Port Type	[441] TD286 ISDN Layer 1 Active Mode	[442] TD286 ISDN Configuration
	Ext. No. (1 – 3 digits) Default: Not stored	Ext. Name (10 characters max.) Default: Not stored	Parameter: 0 through 999999999 Default: 0	Selection CO Extension Default: Extension	Selection Permanent Call Default: Call	Selection Point Multipoint Default: Multipoint
All ports						
01						
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						

[017-019]

<Note> Port No.: TD816 (01 – 06), TD1232 (01 – 06 for Master, 07 – 12 for Slave)

[440-442]

<Note> Port No.: TD816 (01 – 04), TD1232 (01 – 06 for Master, 07 – 12 for Slave)

443 – 446, 632

Item: XX-1DE2h Port No.	[443] TD286 ISDN Data Link Mode		[444] TD286 ISDN TEI Mode		[445] TD286 ISDN Extension Multiple Subscriber Number		[446] TD286 ISDN Extension Progress Tone		[632] CLIP/COLP Number Assignment for TD286 Extension
	Permanent	Selection Call	Fix 0 – 63	Selection Automatic	Enable	Selection Disable	Enable	Selection Disable	Parameter: CLIP/COLP No. (16 digits max.)
All ports	Default : Call		Default : Automatic		Default : Disable		Default : Disable		Default : Not Stored
01									
02									
03									
04									
05									
06									
07									
08									
09									
10									
11									
12									

<Note> Port No.: TD816 (01 – 06), TD1232 (01 – 06 for Master, 07 – 12 for Slave)

[450] PRI Configuration		
The number of available B channels, and the card status		
Selection	Default	Change
30Y-NN		
30N-YN		
30N-NY		
26Y-NY		
26N-YY		
22Y-YN		
18Y-YY		
0 YYY	✓	
CRC4 mode		
Selection	Default	Change
Enable	✓	
Disable		

<Note>

- Y = the card can be installed
- = this area is not changeable.
- N = the card is not installed

CO Line no. of PRI Default : all	[451] PRI Reference CO	
	CO Line No. (01 - 24)	CO 09
25		40
26		41
27		42
28		43
29		44
30		45
31		46
32		47
33		48
34		49
35		50
36		51
37		52
38		53
39		54

509 – 511, 513 – 514, 516 – 517, 519

	Parameter / Selection	Default	Item : COS											
			all COS	COS 1	COS 2	COS 3	COS 4	COS 5	COS 6	COS 7	COS 8			
[509] Toll Restriction Level for System Speed Dialing – Day	Level 1	all ✓												
	2													
	3													
	4													
	5													
	6													
	7													
	8													
[510] Toll Restriction Level for System Speed Dialing – Night	Level 1	✓												
	2													
	3													
	4													
	5													
	6													
	7													
	8													
[511] Door Opener Access	Enable	✓												
	Disable													
[513] Night Service Access	Enable	✓												
	Disable													
[514] Do Not Disturb for Direct Dialing In Call	Enable													
	Disable	✓												
[516] Calling Line Identification Restriction	Enable													
	Disable	✓												
[517] Connected Line Identification Restriction	Enable													
	Disable	✓												
[519] Off-Hook Call Announcement (OHCA)	Enable	✓												
	Disable													

520 – 521

Item : COS number	[520] Call Forwarding from Hunting Group			[521] Doorphone Call Forwarding to CO Line	
	Disable	Connect	All	Disable	Enable
Default	✓			✓	
1					
2					
3					
4					
5					
6					
7					
8					

[602] Extension Group Assignment																
Item : Jack No. (01 - 16)-1 -2	Ext. Group No.(01 - 16)															
	Default: all jacks - Ext. Group 01: Enable Selection D=Disable, E=Enable															
All jacks	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
01-1	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E
01-2																
02-1																
02-2																
03-1																
03-2																
04-1																
04-2																
05-1																
05-2																
06-1																
06-2																
07-1																
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12-1																
12-2																
13-1																
13-2																
14-1																
14-2																
15-1																
15-2																
16-1																
16-2																

[602] Extension Group Assignment																	
Item : Jack No. (33 – 48)-1 -2 All jacks	Ext. Group No.(01 – 16)																
	Default: all jacks – Ext. Group 01: Enable																
	Selection D=Disable, E=Enable																
All	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	
D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E
33-1																	
33-2																	
34-1																	
34-2																	
35-1																	
35-2																	
36-1																	
36-2																	
37-1																	
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42-1																	
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43-1																	
43-2																	
44-1																	
44-2																	
45-1																	
45-2																	
46-1																	
46-2																	
47-1																	
47-2																	
48-1																	
48-2																	

[602] Extension Group Assignment																	
Item : Jack No. (49 - 64)-1 -2	Ext. Group No.(01 - 16)																
	Default: all jacks - Ext. Group 01: Enable Selection D=Disable, E=Enable																
All	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	
D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E
All jacks																	
49-1																	
49-2																	
50-1																	
50-2																	
51-1																	
51-2																	
52-1																	
52-2																	
53-1																	
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61-2																	
62-1																	
62-2																	
63-1																	
63-2																	
64-1																	
64-2																	

010, 611, 612, 620, 621

Item : Jack No. (01-16)-1 -2	[010] Budget Management		[611] Extension Connection Assignment		[612] Data Line Security		[620] Extension Intercept Routing - Day		[621] Extension Intercept Routing - Night		
	Default : all - 0 \$	Parameter : 0 through 999999999 \$	Default : all - Connect	No Connect	Connect	Off	On	Ext. No. (2 - 4 digits)	Disable	Ext. No. (2 - 4 digits)	Disable
All jacks											
01-1											
01-2											
02-1											
02-2											
03-1											
03-2											
04-1											
04-2											
05-1											
05-2											
06-1											
06-2											
07-1											
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08-1											
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12-1											
12-2											
13-1											
13-2											
14-1											
14-2											
15-1											
15-2											
16-1											
16-2											

<Note> Jack numbers 17-1 through 32-2 are for KX-TD1232 only.

010, 611, 612, 620, 621

Item : Jack No. (17-32)-1 -2	[010] Budget Management		[611] Extension Connection Assignment		[612] Data Line Security		[620] Extension Intercept Routing - Day		[621] Extension Intercept Routing - Night	
	Default : all - 0 \$ Parameter : 0 through 999999999 \$		Default : all - Connect		Default : all - Off		Default: all - Disable		Default: all - Disable	
	Connect	No Connect	On	Off	Ext. No. (2 - 4 digits)	Disable	Ext. No. (2 - 4 digits)	Disable	Ext. No. (2 - 4 digits)	Disable
All jacks										
17-1										
17-2										
18-1										
18-2										
19-1										
19-2										
20-1										
20-2										
21-1										
21-2										
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28-1										
28-2										
29-1										
29-2										
30-1										
30-2										
31-1										
31-2										
32-1										
32-2										

<Note> Jack numbers 17-1 through 32-2 are for KX-TD1232 only.

010, 611, 612, 620, 621

Item : Jack No. (33-48)-1 -2	[010] Budget Management		[611] Extension Connection Assignment		[612] Data Line Security		[620] Extension Intercept Routing - Day		[621] Extension Intercept Routing - Night	
	Default : all - 0 \$ Parameter : 0 through 999999999 \$	Default : all - Connect	Connect	No Connect	On	Off	Ext. No. (2 - 4 digits)	Disable	Ext. No. (2 - 4 digits)	Disable
All jacks										
33-1										
33-2										
34-1										
34-2										
35-1										
35-2										
36-1										
36-2										
37-1										
37-2										
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43-1										
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44-1										
44-2										
45-1										
45-2										
46-1										
46-2										
47-1										
47-2										
48-1										
48-2										

<Note> Jack numbers 17-1 through 32-2 are for KX-TD1232 only.

010, 611, 612, 620, 621

Item : Jack No. (49-64)-1 -2	[010] Budget Management		[611] Extension Connection Assignment		[612] Data Line Security		[620] Extension Intercept Routing - Day		[621] Extension Intercept Routing - Night	
	Default : all - 0 \$ Parameter : 0 through 99999999 \$		Default : all - Connect		Default : all - Off		Default: all - Disable		Default: all - Disable	
	Connect	No Connect	On	Off	Ext. No. (2 - 4 digits)	Disable	Ext. No. (2 - 4 digits)	Disable	Ext. No. (2 - 4 digits)	Disable
All jacks										
49-1										
49-2										
50-1										
50-2										
51-1										
51-2										
52-1										
52-2										
53-1										
53-2										
54-1										
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61-1										
61-2										
62-1										
62-2										
63-1										
63-2										
64-1										
64-2										

<Note> Jack numbers 17-1 through 32-2 are for KX-TD1232 only.

613, 617

[613] ISDN Class of Service		Default: all ports							
		Primary, Secondary, COS1, COS1 Selection							
Item: Port No.	1	2	3	4	5	6	7	8	
All ports -Primary									
-Secondary									
03-Primary									
-Secondary									
04-Primary									
-Secondary									
05-Primary									
-Secondary									
06-Primary									
-Secondary									
09-Primary									
-Secondary									
10-Primary									
-Secondary									
11-Primary									
-Secondary									
12-Primary									
-Secondary									

[613]
<Note> Port No.: TD816 (03 – 04),
TD1232 (03 – 06 for Master, 09 –
12 for Slave)

[617]
<Note> Jack No.: TD816 (01 – 16),
TD1232 (01 – 32 for Master, 33 –
64 for Slave)

[617] Live Call Screening Recording Mode Assignment					
Item : Jack No. (01 – 32) Default : all	Selection		Item : Jack No. (33 – 64)	Selection	
	Stop Record	Keep Record		Stop Record	Keep Record
01	✓		33		
02			34		
03			35		
04			36		
05			37		
06			38		
07			39		
08			40		
09			41		
10			42		
11			43		
12			44		
13			45		
14			46		
15			47		
16			48		
17			49		
18			50		
19			51		
20			52		
21			53		
22			54		
23			55		
24			56		
25			57		
26			58		
27			59		
28			60		
29			61		
30			62		
31			63		
32			64		

615, 616

[615] Outgoing Permitted CO Line Assignment - Day for ISDN Extension																									
Item:		CO01	CO02	CO03	CO04	CO05	CO06	CO07	CO08	CO09	CO10	CO11	CO12	CO13	CO14	CO15	CO16	CO17	CO18	CO19	CO20	CO21	CO22	CO23	CO24
ISDN		E : Enable D : Disable																							
Port No.		E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D
All ports		Default: All ports, all CO lines – Enable																							
03																									
04																									
05																									
06																									
09																									
10																									
11																									
12																									

[616] Outgoing Permitted CO Line Assignment - Night for ISDN Extension																									
Item:		CO01	CO02	CO03	CO04	CO05	CO06	CO07	CO08	CO09	CO10	CO11	CO12	CO13	CO14	CO15	CO16	CO17	CO18	CO19	CO20	CO21	CO22	CO23	CO24
ISDN		E : Enable D : Disable																							
Port No.		E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D
All ports		Default: All ports, all CO lines – Enable																							
03																									
04																									
05																									
06																									
09																									
10																									
11																									
12																									

<Note> Port No.: TD816 (03 – 04), TD1232 (03 – 06 for Master, 09 – 12 for Slave)
 CO No.: TD816 (CO01 – 08), TD1232 (CO01 – 12 for Master, CO13 – 24 for Slave)

[622] Incoming Call Display									
Item : Jack No.	Default: all jacks – Caller Selection			Item : Jack No.	Default: all jacks – Caller Selection				
	Caller	CO Line	DDI		Caller	CO Line	DDI		
All jacks									
01				33					
02				34					
03				35					
04				36					
05				37					
06				38					
07				39					
08				40					
09				41					
10				42					
11				43					
12				44					
13				45					
14				46					
15				47					
16				48					
17				49					
18				50					
19				51					
20				52					
21				53					
22				54					
23				55					
24				56					
25				57					
26				58					
27				59					
28				60					
29				61					
30				62					
31				63					
32				64					

<Note> Jack No.: TD816 (01 – 16), TD1232 (01 – 32 for Master, 33 – 64 for Slave)

[623] CLIP/COLP Number Assignment for Extension			
Item : Jack No. (01 – 16)-1 -2	Default: all jacks – Not Stored	Item : Jack No. (17 – 32)-1 -2	Default: all jacks – Not Stored
	Parameter: CLIP/COLP No. (16 digits max.)		Parameter: CLIP/COLP No. (16 digits max.)
01-1		17-1	
01-2		17-2	
02-1		18-1	
02-2		18-2	
03-1		19-1	
03-2		19-2	
04-1		20-1	
04-2		20-2	
05-1		21-1	
05-2		21-2	
06-1		22-1	
06-2		22-2	
07-1		23-1	
07-2		23-2	
08-1		24-1	
08-2		24-2	
09-1		25-1	
09-2		25-2	
10-1		26-1	
10-2		26-2	
11-1		27-1	
11-2		27-2	
12-1		28-1	
12-2		28-2	
13-1		29-1	
13-2		29-2	
14-1		30-1	
14-2		30-2	
15-1		31-1	
15-2		31-2	
16-1		32-1	
16-2		32-2	

<Note> Jack numbers 17-1 through 32-2 are for KX-TD1232 only.

[623] CLIP/COLP Number Assignment for Extension			
Item : Jack No. (33 – 48)-1 -2	Default: all jacks – Not Stored Parameter: CLIP/COLP No. (16 digits max.)	Item : Jack No. (49 – 64)-1 -2	Default: all jacks – Not Stored Parameter: CLIP/COLP No. (16 digits max.)
33-1		49-1	
33-2		49-2	
34-1		50-1	
34-2		50-2	
35-1		51-1	
35-2		51-2	
36-1		52-1	
36-2		52-2	
37-1		53-1	
37-2		53-2	
38-1		54-1	
38-2		54-2	
39-1		55-1	
39-2		55-2	
40-1		56-1	
40-2		56-2	
41-1		57-1	
41-2		57-2	
42-1		58-1	
42-2		58-2	
43-1		59-1	
43-2		59-2	
44-1		60-1	
44-2		60-2	
45-1		61-1	
45-2		61-2	
46-1		62-1	
46-2		62-2	
47-1		63-1	
47-2		63-2	
48-1		64-1	
48-2		64-2	

<Note> Jack numbers 17-1 through 32-2 are for KX-TD1232 only.

[627] TD286 Class of Service		Default: all ports – Primary, Secondary COS1, COS1							
		Selection							
Item: Port No.		1	2	3	4	5	6	7	8
All ports - Primary									
-Secondary									
01-Primary									
-Secondary									
02-Primary									
-Secondary									
03-Primary									
-Secondary									
04-Primary									
-Secondary									
05-Primary									
-Secondary									
06-Primary									
-Secondary									
07-Primary									
-Secondary									
08-Primary									
-Secondary									
09-Primary									
-Secondary									
10-Primary									
-Secondary									
11-Primary									
-Secondary									
12-Primary									
-Secondary									

<Note> Port No.: TD816 (01 – 06),
 TD1232 (01 – 06 for Master,
 07 – 12 for Slave)

[629] Outgoing Permitted CO Line Assignment - Day for TD286 Extension																								
E : Enable D : Disable																								
Item:	CO01	CO02	CO03	CO04	CO05	CO06	CO07	CO08	CO09	CO10	CO11	CO12	CO13	CO14	CO15	CO16	CO17	CO18	CO19	CO20	CO21	CO22	CO23	CO24
ISDN	Default: All ports, all CO lines - Enable																							
Port No.	E	D	E	G	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D
All ports																								
01																								
02																								
03																								
04																								
05																								
06																								
07																								
08																								
09																								
10																								
11																								
12																								

<Note> Port No.: TD816 (01 - 06), TD1232 (01 - 06 for Master, 07 - 12 for Slave)
CO No.: TD816 (CO01 - 08), TD1232 (CO01 - 12 for Master, CO13 - 24 for Slave)

[630] Outgoing Permitted CO Line Assignment - Night for TD286 Extension																										
																		E : Enable								
																		D : Disable								
Item:	CO01	CO02	CO03	CO04	CO05	CO06	CO07	CO08	CO09	CO10	CO11	CO12	CO13	CO14	CO15	CO16	CO17	CO18	CO19	CO20	CO21	CO22	CO23	CO24		
ISDN	Default: All ports, all CO lines - Enable																									
Port No.	E	D	E	G	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D
All ports																										
01																										
02																										
03																										
04																										
05																										
06																										
07																										
08																										
09																										
10																										
11																										
12																										

<Note> Port No.: TD816 (01 - 06), TD1232 (01 - 06 for Master, 07 - 12 for Slave)
 CO No.: TD816 (CO01 - 08), TD1232 (CO01 - 12 for Master, CO13 - 24 for Slave)

[811] TIE User Codes										
Item : Code No.	Default		Parameter		Item :		Default		Parameter	
	Code	COS	Code (4 digits)	COS (1 – 8)	Code No.		Code	COS	Code (4 digits)	COS (1 – 8)
1	0001	1			17		0017	1		
2	0002	1			18		0018	1		
3	0003	1			19		0019	1		
4	0004	1			20		0020	1		
5	0005	1			21		0021	1		
6	0006	1			22		0022	1		
7	0007	1			23		0023	1		
8	0008	1			24		0024	1		
9	0009	1			25		0025	1		
10	0010	1			26		0026	1		
11	0011	1			27		0027	1		
12	0012	1			28		0028	1		
13	0013	1			29		0029	1		
14	0014	1			30		0030	1		
15	0015	1			31		0031	1		
16	0016	1			32		0032	1		

813, 817, 818

[813] Floating Number Assignment					
Item: Floating Ext. No.	Default	Selection		Item: Floating Ext. No.	Default
		Parameter: Floating No. (2 - 4 digits)	No floating number		
Pager 1	296			H.G. 14	Not stored
Pager 2*	297			H.G. 15	Not stored
Pager 3*	396			H.G. 16	Not stored
Pager 4*	397			H.G. 17	Not stored
DTA	299			H.G. 18	Not stored
MOBILE*	399			H.G. 19	Not stored
H.G. 01	Not stored			H.G. 20	Not stored
H.G. 02	Not stored			H.G. 21	Not stored
H.G. 03	Not stored			H.G. 22	Not stored
H.G. 04	Not stored			H.G. 23	Not stored
H.G. 05	Not stored			H.G. 24	Not stored
H.G. 06	Not stored			H.G. 25	Not stored
H.G. 07	Not stored			H.G. 26	Not stored
H.G. 08	Not stored			H.G. 26	Not stored
H.G. 09	Not stored			H.G. 28	Not stored
H.G. 10	Not stored			H.G. 29	Not stored
H.G. 11	Not stored			H.G. 30	Not stored
H.G. 12	Not stored			H.G. 31	Not stored
H.G. 13	Not stored			H.G. 32	Not stored

[817] TD197 Baud Rate Set		
	Default	Selection
	All	TD816 or Master
BELL		Slave
V:34-9600		
V:34-14400		
V:34-19200		
V:34-28800		
V:34-33600	✓	

[818] Timed Reminder Message Assignment	
Default	Parameter : Message No. (1 - 4)
Not Stored	

<Notes> H.G. = Hunting Group
 *: Available for KX-TD1232 only.

		[990] System Additional Information																			
AREA 01 [Fields 1 through 10, 49 through 52]		7	: 00 (0.5 sec) / 01 (1.0 sec) / 10 (1.5 sec) / 11 (2.0 sec)																		
Field	10 9 8 7 6 5 4 52 51 50 49 3 2 1	8	: 00 (0.5 sec) / 01 (1.0 sec) / 10 (1.5 sec) / 11 (2.0 sec)																		
Default	0 0 1 0 1 0 0 0 1 0 0 0 0 1 0 0 1 0 1	9	: 0 (System) / 1 (VPS)																		
Selection		10	: 0 (do not start) / 1 (start)																		
AREA 02 [Fields 11 through 22, 26]		11	: 0 (extension) / 1 (Operator 1)																		
Field	(un-used) 26 22 21 20 19 18 17 16 15 14 13 12 11	12	: 0 (both calls) / 1 (outgoing calls only)																		
Default	— 1 1 0 0 1 1 0 0 1 1 0 1 0 0	13	: 0 (disable) / 1 (enable)																		
Selection		14	: 0 (no check) / 1 (check)																		
AREA 03 [Field 23]		15	: 0 (disable) / 1 (enable)																		
Field	23 23 23 23 23 23 23 23 23 23 23 23 23 23 23	16	: 0 (disable) / 1 (enable)																		
Default	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	17	: 0 (60 %) / 1 (67 %)																		
Selection		18	: 0 (extension number) / 1 (free)																		
AREA 04 [Fields 23 through 25, 27, 53 through 57]		19	: 0 (names) / 1 (numbers)																		
Field	(16) (15) (14) (13) (12) (11) (10) (9) (8) (7) (6) (5) (4) (3) (2) (1)	20	: 0 (internal) / 1 (external)																		
Default	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	21	: 00 (630 ms) / 01 (830 ms) / 10 (1030 ms)																		
Selection		22	: 0 (normal) / 1 (distinctive)																		
		23-(1)	: CO1 : 0 (0 dB) / 1 (-3 dB)																		
		23-(2)	: CO2 : 0 (0 dB) / 1 (-3 dB)																		
		:	:																		
		23-(23)	: CO23 : 0 (0 dB) / 1 (-3 dB)																		
		23-(24)	: CO24 : 0 (0 dB) / 1 (-3 dB)																		
Field	57 56 55 54 27 53 25 24 23 23 23 23 23 23 23	24	: 0 (prevent) / 1 (allow)																		
Default	— — — — 1 1 1 1 0 0 0 0 0 0 0	25	: 0 (prevent) / 1 (allow)																		
Selection		26	: 00 (1000 ms) / 01 (300 ms) / 10 (196 ms) / 11 (148 ms)																		
<Selection>		27	: 0 (enable) / 1 (disable)																		
Field		49	: 0 (disable) / 1 (enable)																		
		50	: 0 (DIL 1:N) / 1 (Operator)																		
		51	: 0 (DIL 1:N) / 1 (Operator)																		
		52	: 0 (Reset automatically) / 1 (Not reset)																		
		53	: 0 (disable) / 1 (enable)																		
		54	: Reserved																		
		55	: Reserved																		
		56	: Reserved																		
		57	: Reserved																		
		1	: 0 (ringback tone) / 1 (Music on Hold)																		
		2	: 0 (Consultation Hold) / 1 (Disconnection)																		
		3	: 0 (disconnection signal) / 1 (register recall signal)																		
		4	: 0 (disable) / 1 (enable)																		
		5	: 0 (Consultation Hold) / 1 (Disconnection)																		
		6	: 0 (80 ms) / 1 (160 ms)																		

PSQX1290VA KW0897KM3079M

Panasonic

**Digital Super Hybrid System
KX-TD816AL
KX-TD1232AL**

**Installation Manual Addendum
for
KX-TD144AL / KX-TD146AL / KX-TD142AL
/ KX-T7500AL / KX-PH15AL**

System Components

	MODEL NO.	DESCRIPTION
Service Unit	KX-TD816AL KX-TD1232AL	Digital Super Hybrid System (Main Unit)
	KX-TD142AL	Cell Station Unit
	KX-TD144AL	Cell Station Interface Unit (2 CSs + 4 PITs)
	KX-TD146AL KX-A277AL	Cell Station Interface Unit (6 CSs) AC Adaptor
Telephone	KX-T7500AL KX-PH15AL	Portable Station

- NOTICE:**
- In this manual, the suffix “AL” of each model number is omitted.
 - A Portable Station is abbreviated as “PS”.

Introduction

This Installation Manual Addendum provides information for the wireless system, which can be equipped optionally with the Panasonic Digital Super Hybrid System, KX-TD816 / KX-TD1232. To connect the wireless system, the following equipment is required:

Cell Station Interface Unit / 2-RF Interface Unit with 4-StationLine (KX-TD144)

One KX-TD144 supports up to two Cell Station Units (KX-TD142). One KX-TD144 can be connected to the KX-TD816 and up to two KX-TD144s can be connected to the KX-TD1232 (Master system only).

Cell Station Interface Unit (KX-TD146)

One KX-TD146 supports up to six Cell Station Units (KX-TD142). One KX-TD146 can be connected to the KX-TD816 and up to two KX-TD146s can be connected to the KX-TD1232 (Master system only).

Cell Station Unit (KX-TD142)

This unit determines the range of the supporting PSs. Three simultaneous calls can be made in one range.

Portable Station (KX-T7500 / KX-PH15)

Up to 16 PSs in the KX-TD816 system and up to 64 PSs in the KX-TD1232 system can be used as extensions. For more details about the PS, please refer to the User Manual Addendum for the KX-T7500 or the Operating Instructions for KX-PH15.

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Wireless System Outline

System Capacity

Extension Line

	KX-TD816		KX-TD1232		KX-TD1232 × 2 (System Connection)	
	Wired	Wireless	Wired	Wireless	Wired	Wireless
Basic	8	0	16	0	32	0
KX-TD170 × 1	16	0	24	0	48	0
KX-TD170 × 2	—	—	32	0	64	0
KX-TD144 × 1	12	16	20	64	36	64
KX-TD144 × 2	—	—	24	64	40	64
KX-TD146 × 1	8	16	16	64	32	64
KX-TD146 × 2	—	—	16	64	32	64

Note **KX-TD170:** 8-Station Line Unit
 For details about the optional units, refer to the KX-TD816/KX-T1232 Installation Manual. Additionally, the KX-TD144 or the KX-TD146 can only be connected to the Master system of the System Connection.

RF Specifications

ITEM	DESCRIPTION
Radio Access Method	Multi Carrier TDMA-TDD
Multiplex	4
Carrier Frequency Interval	300 KHz
Transmission Speed	384 Kbps
Frame Structure	5 msec / frame (T×4 slots + R×4 slots)
Modulation Scheme	$\pi / 4$ shift QPSK Roll-off factor = 0.5 50% roll-off in the transmitter
Data Coding for Modulator	Differential Coding
Voice CODEC	32 Kbps ADPCM (CCITT G.721)
Transmission Output	TYP. 10 mW
Frequency Band	1895.150 – 1899.650 MHz (16 Channels)

Site Planning

Choosing the best site for the Cell Station Unit (KX-TD142) requires careful planning and testing of essential areas. The best location may not always be convenient for installation. Please read the following information before you install the unit.

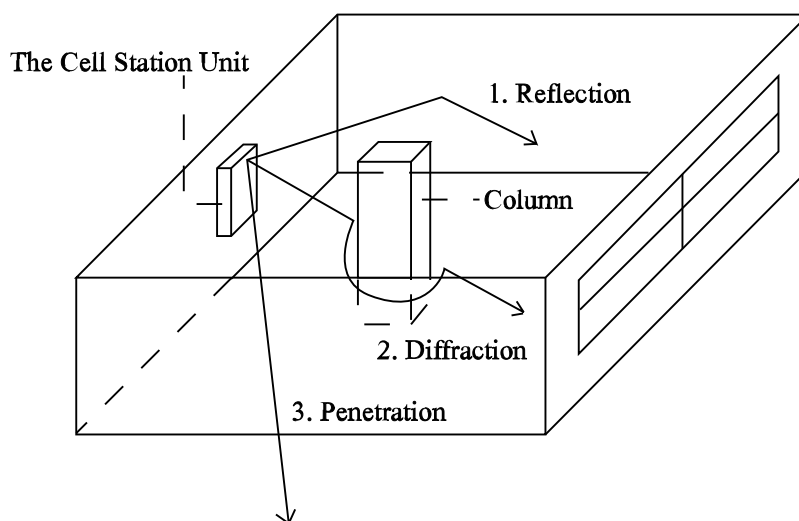
Characteristics of Radio Waves

The transmission of radio waves and the operating range depend on the structure and materials of the building.

Office equipment, such as computers and fax machines, can interfere with radio waves.

Such equipment may create noise or interfere with the performance of the portable station.

The illustration below shows the special transmitting patterns of radio waves.



1. Radio waves are reflected by objects such as those made of metal.
2. Radio waves are diffracted by objects such as metallic columns.
3. Radio waves penetrate objects such as those made of glass.

Site Planning

The Relationship between Radio Waves and the Structure and Materials of a Building

- The transmitting range is affected more by the materials of the building and thickness of the material than the number of obstacles.
- Radio waves tend to be reflected or diffracted by conductive objects and rarely penetrate them.
- Radio waves tend to penetrate insulated objects and are rarely reflected by them.
- Radio waves penetrate thin objects more than thick objects.
- The table below shows the transmission tendency of radio waves when they reach certain objects made from certain materials.

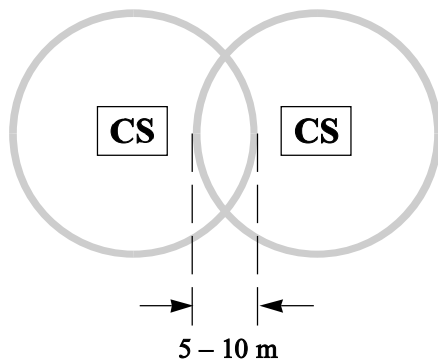
OBJECTS	MATERIALS	TRANSMISSION TENDENCY
Walls	Concrete	The thicker they are, the less radio waves penetrate them.
	Ferroconcrete	Radio waves can penetrate them, but the more iron there is, the more radio waves are reflected.
Windows	Glass	Radio waves usually penetrate them.
	Glass with wire nets	Radio waves can penetrate them, but tend to be reflected.
	Glass covered with heat-resist film	Radio waves are weakened considerably when they penetrate windows.
Floor	Ferroconcrete	Radio waves can penetrate them, but the more iron there is, the more radio waves are reflected.
Partitions	Steel	Radio waves are reflected and rarely penetrate them.
	Plywood, Glass	Radio waves usually penetrate them.
Columns	Ferroconcrete	Radio waves can penetrate them, but the more iron there is, the more radio waves tend to be reflected or diffracted.
	Metal	Radio waves tend to be reflected or diffracted.
Cabinets	Steel	Radio waves are usually reflected or diffracted, and rarely penetrate them.
	Wood	Radio waves can penetrate them, but they are weakened.

Site Planning

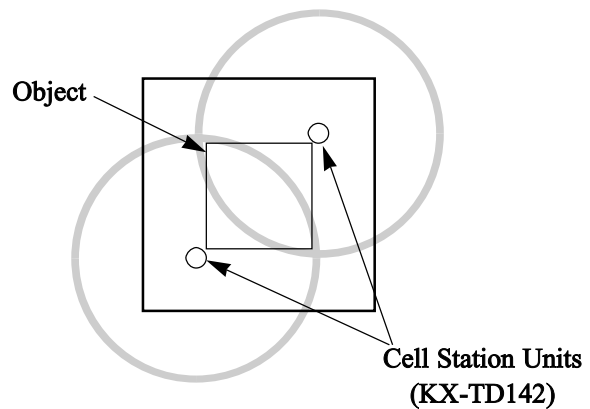
Installation Preparation

1. Prepare a drawing of the building where you want to install the Cell Station Unit.
(A drawing which shows the size or the main structural material of the wall, partition wall or ceiling is preferable.)
2. Consider the service area required for the users.
3. Investigate the service area on the drawing.
 - 1) Make a circle centering around the installable area by determining the radio transmission range (inside: 25 – 50 m, outside: 70 – 100 m). Note that the Cell Station Unit cannot be installed outside but only inside a building.
 - 2) If more than one Cell Station Unit is required, each radio transmission range should overlap. The overlapping range should be at least 5 to 10 meters.

<Basic location>



<Location example for a building which has an object in the center.>



Site Planning

Precautions

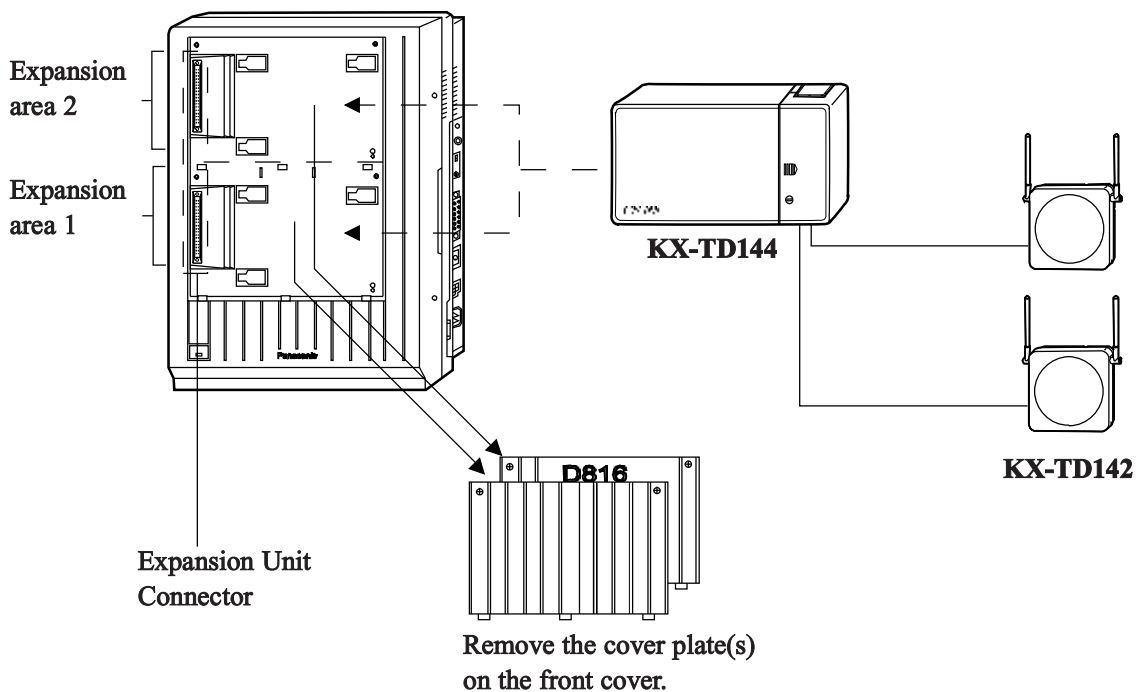
- The Cell Station Unit should be kept free of dust, moisture, high temperature (more than 35°C), low temperature (less than 5°C), vibration, and should not be exposed to direct sunlight.
- Do not use two PSs near the Cell Station Unit (within 2 meters), or the third PS may not be able to make a call.
- If a backup system for use during a Cell Station Unit power failure is required, set the system cable resistance within 20 Ω.
- Keep distance between the equipment listed below in order to prevent noise, interference or the disconnection of a conversation.

EQUIPMENT	DISTANCE
Two Cell Station Units	more than 1 meter
Cell Station Unit and office equipment such as computers, telex, fax, etc., or microwaves	more than 1.8 meters
Cell Station Unit and portable station	more than 1 meter
Two portable stations	more than 0.5 meter
Portable station and proprietary wired telephone	more than 1 meter
The system and Cell Station Unit	more than 2 meters

Location of the Unit

KX-TD816 with the KX-TD144

One Cell Station Interface Unit, KX-TD144 can be connected to either of the two expansion areas on the main unit, KX-TD816. Up to two Cell Station Units (KX-TD142) can be connected to the KX-TD144.



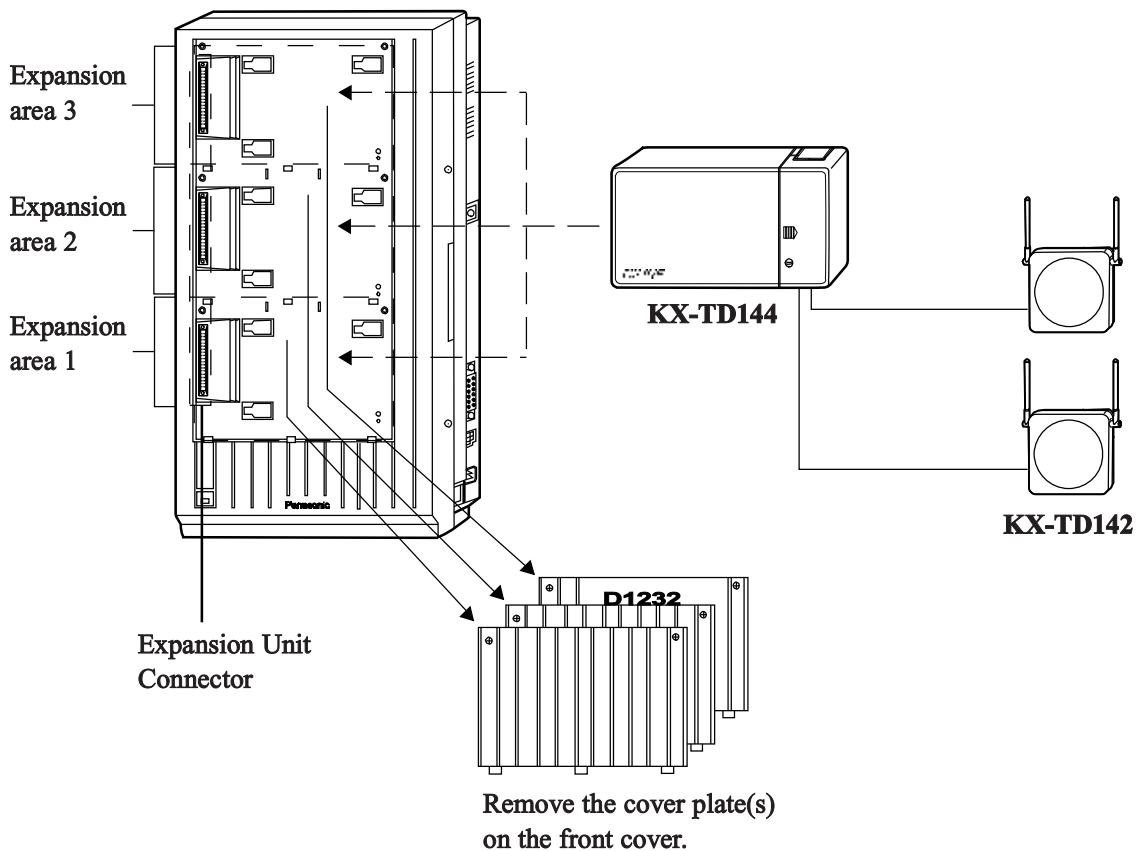
Note

- System Programming is required for expansion unit location. Select "E" in the program [109] "Expansion Unit Type". Refer to the System Programming section of this manual and Section 4.3 in the KX-TD816/KX-TD1232 Installation Manual.
Default : Area 1=4-CO Line Unit (C)
Area 2=8-Station Line Unit (E)

Location of the Unit

KX-TD1232 with the KX-TD144

Up to two Cell Station Interface Units, KX-TD144s can be connected to either of the three expansion areas on the main unit, KX-TD1232. Up to two Cell Station Units (KX-TD142) can be connected to the KX-TD144.



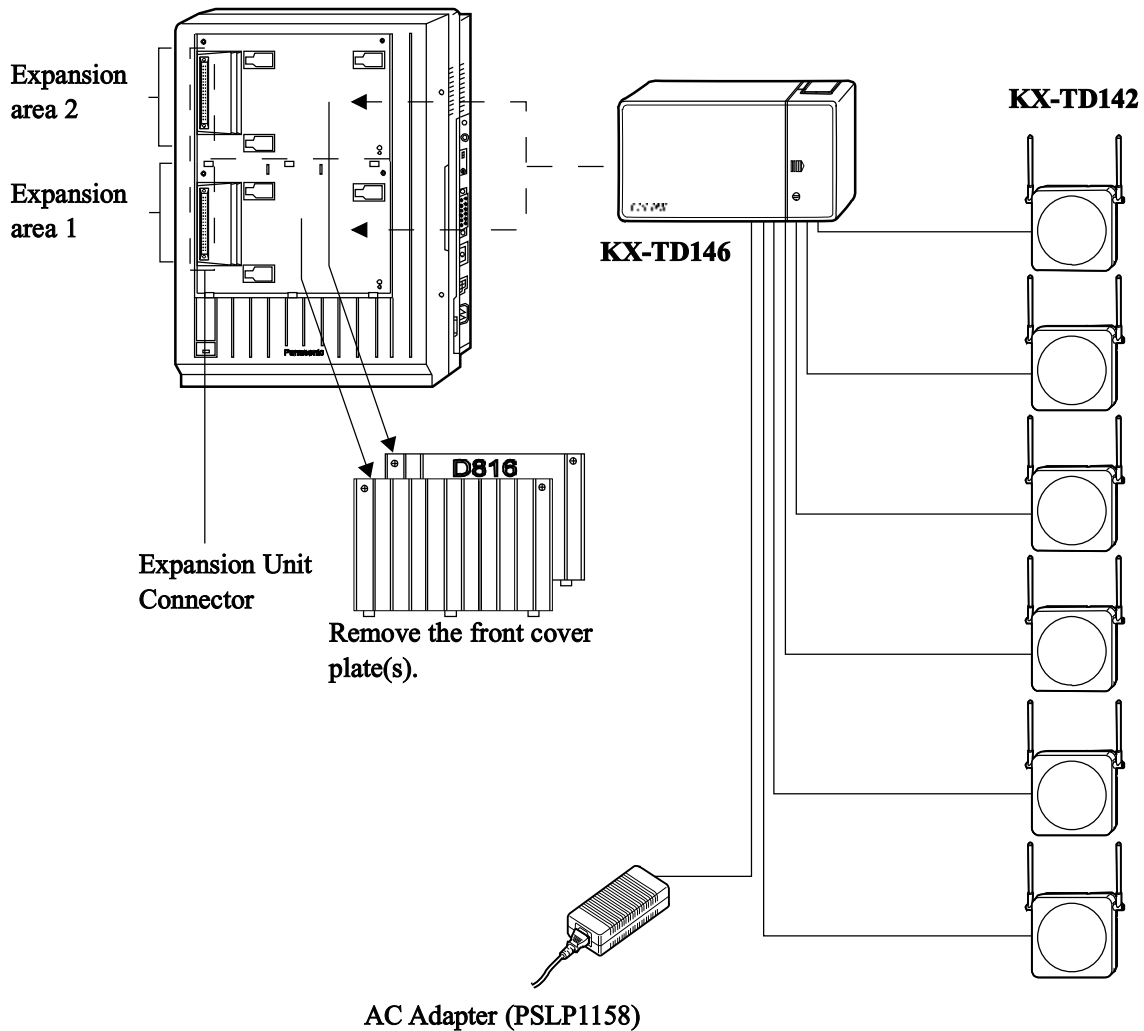
Note

- System Programming is required for expansion unit location. Select "E1" and "E2" in the program [109] "Expansion Unit Type". Refer to the System Programming section of this manual and Section 4.3 in the KX-TD816/KX-TD1232 Installation Manual.
Default : Area 1=4-CO Line Unit (C)
Area 2=8-Station Line Unit (E1)
Area 3=8-Station Line Unit (E2)
- KX-TD144 and KX-TD142 can only be connected to the Master system.

Location of the Unit

KX-TD816 with the KX-TD146

One Cell Station Interface Unit, KX-TD146 can be connected to either of the two expansion areas on the main unit, KX-TD816. Up to six Cell Stations (KX-TD142) can be connected to the KX-TD146.



Note

- System Programming is required for expansion unit location. Select “E” in the program [109] “Expansion Unit Type”. Refer to the System Programming section of this manual and Section 4.3 in the KX-TD816/KX-TD1232 Installation Manual.

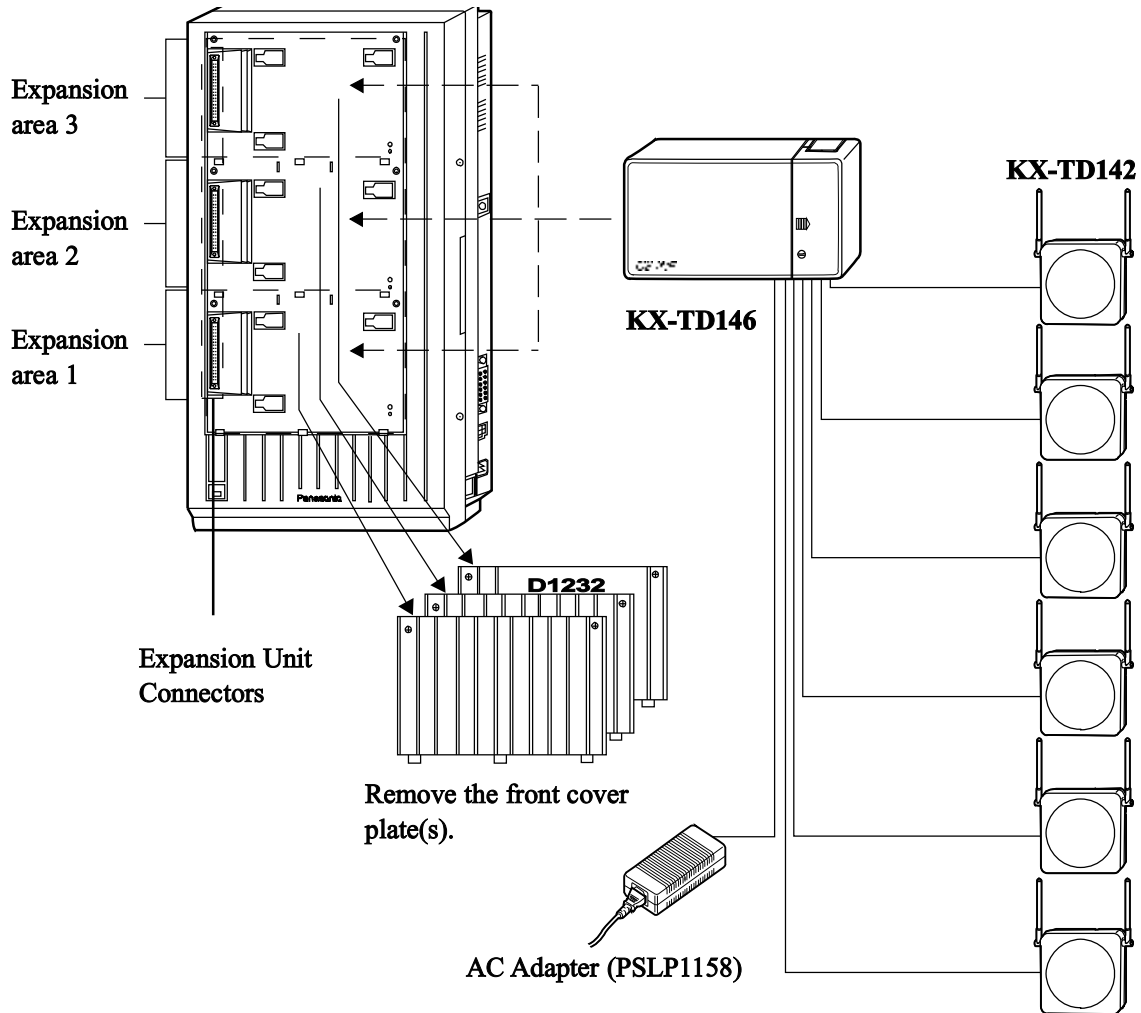
Default : Area 1 = 4-CO Line Unit (C)
Area 2 = 8-Station Line Unit (E)

- The AC adapter (KX-A277) is necessary.

Location of the Unit

KX-TD1232 with the KX-TD146

Up to two Cell Station Interface Units, KX-TD146 can be connected to any of the three expansion areas on the main unit, KX-TD1232. Up to six Cell Stations (KX-TD142) can be connected to the KX-TD146.



Note

- • System Programming is required for expansion unit location. Select “E1” and “E2” in the program [109] “Expansion Unit Type”. Refer to the System Programming section of this manual and Section 4.3 in the KX-TD816/KX-TD1232 Installation Manual.
- Default : Area 1=4-CO Line Unit (C)
Area 2=8-Station Line Unit (E1)
Area 3=8-Station Line Unit (E2)
- An AC adapter (KX-A277) is necessary.
- KX-TD146 and KX-TD142 can only be connected to the Master system.

Extension Connection

Wireless Extension Connection

To support portable stations, connect the Cell Station Interface Unit (KX-TD144 / KX-TD146) to the main unit first and then the Cell Station Unit (KX-TD142) to the KX-TD144 / KX-TD146. The Installation method of the KX-TD144 / KX-TD146 is the same as for the KX-TD170 except for steps 6 and 7 of 2.4.8. Installing Expansion Unit (KX-TD170 / KX-TD180(D) / KX-TD185 / KX-TD280) in the KX-TD816/KX-TD1232 Installation Manual. Use a Cell Station Unit Cord (4-conductor wiring – included) and 4-pin plug (included) to connect the cell station line. There are 2 plugs for the KX-TD144 and 6 plugs for the KX-TD146 to connect the Cell Stations. Maximum length of the cable: AWG 24 (ø 0.6 mm): Under 200 m

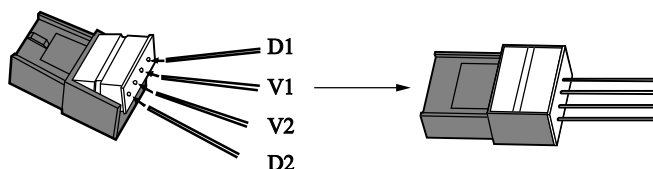
6. Insert the wires of the 4-conductor wiring cord into the holes of the 4-pin plug to connect pins “D1”, “D2”, “V1” and “V2”.

D1: Data 1 V1: Voltage +
D2: Data 2 V2: Voltage –

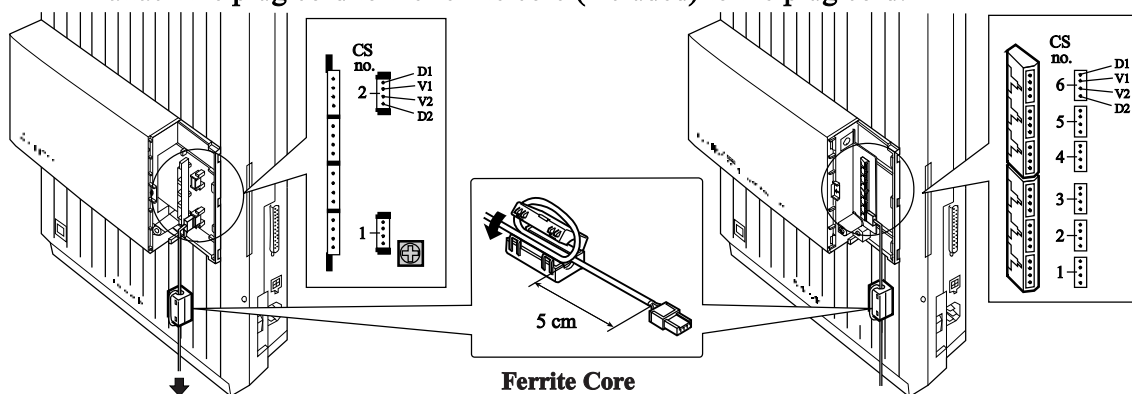
Then press the transparent part into the black part firmly.

Note : Do not peel off the wire coating. Insert the wires all the way.


4-pin plug



- 7.1 Insert the 4-pin plug into a cell station jack on the Cell Station Interface Unit and attach the plug cord to the ferrite core (included) to the plug cord.



To the Cell Station

-  Connect the ground terminal to ground.
Note: If other expansion units are installed, the frame ground connection is required for only one unit.

Ferrite Core

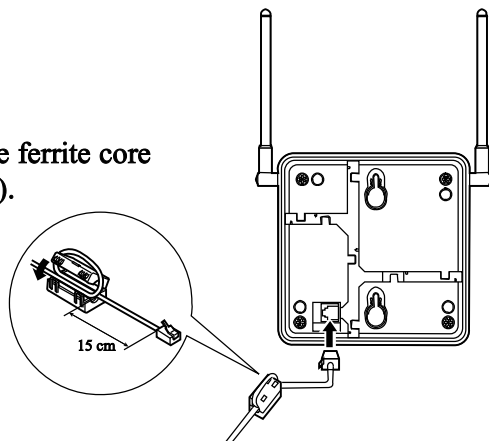
Roll the cord once around the ferrite core and close the core.

Note: Put it in the cabinet when closing the cabinet cover.

Extension Connection

7.2 Connect the other end of the wire to the Cell Station Unit, and pass the cord through the groove on the unit.

Attach the ferrite core
(included).



Installing the Unit

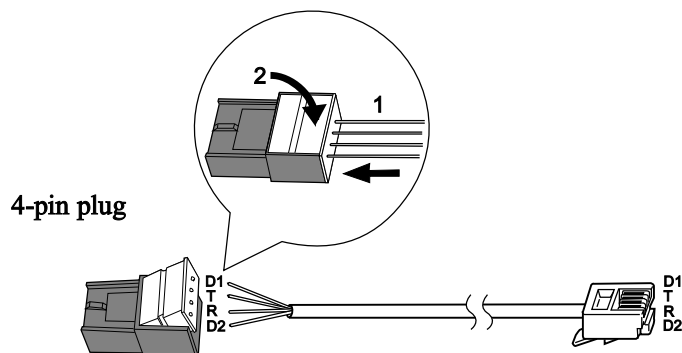
Wired Extension Connection (KX-TD144 only)

A Cell Station Interface Unit can support four wired extensions as well as wireless extensions.

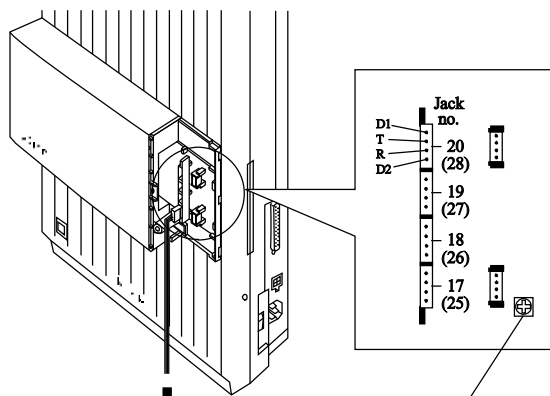
Use 4-pin plugs to connect the wired extensions.

6. Insert the required telephone wires into the holes in the plug.
Press the transparent part into the black part.

Note: Do not peel off the wire coating. Insert the wires all the way.



7. Insert the plug into a jack on the unit.

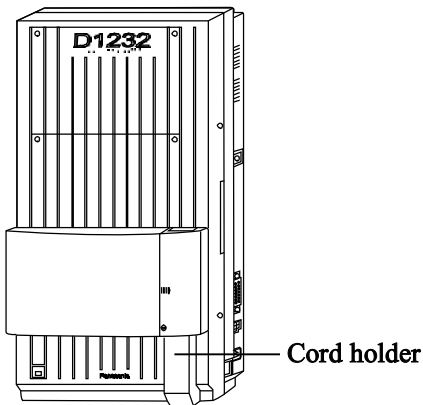


Connect the ground terminal to ground.

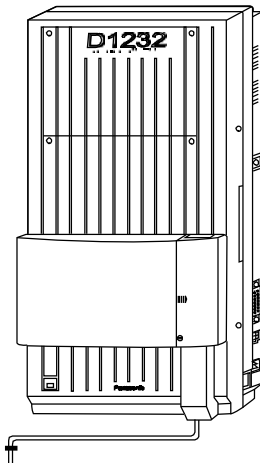
Note: If other expansion units are installed, the frame ground connection is required for only one unit.

Installing the Unit

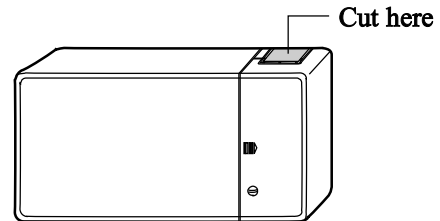
8. Tie all of the cords into a bundle. If other cords are exposed in the upper cabinet, tie them also.
9. Close the cabinet cover and secure the outside screw.
10. Cover the cords with the cord holder (included).



11. Fix the cords to the wall as shown so that the front cover can be opened.



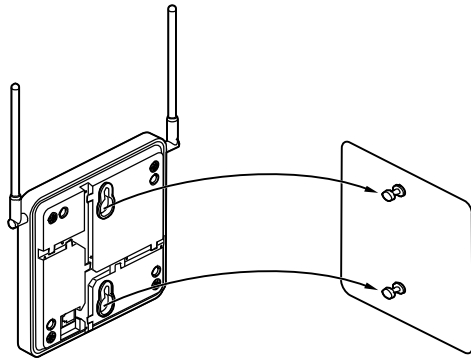
- Note** If two expansion units are installed, cut the cabinet cover(s) on the lower cabinet(s) to allow the cords from the upper cabinet to go down through the cabinet cover(s). To protect the cords, smooth any cut edges.



SAFETY CAUTION FOR KX-TD144

The small cover which provides access to connectors CN402, CN403, CN404 and CN405 must not have its cable knock-out section removed, unless another expansion unit is mounted above which would prevent finger access via the cable knock-out opening. This safety requirement is necessary to protect users from network voltages.

Wall Mounting

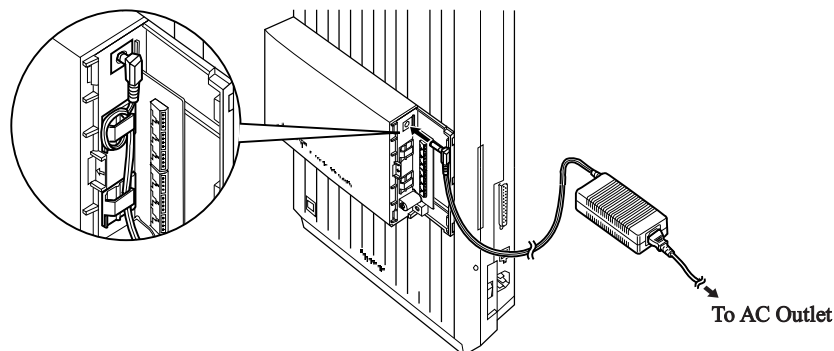


1. Place the (template) on the wall to mark the two screw positions.
2. Install the two screws (included) into the wall.
3. Hook the Cell Station Unit on the screw heads.

Mounting on Concrete or Mortar Walls

In step 2, drill two holes and drive the anchor plugs (included) with a hammer flush to the wall, and install the screws into the anchor plugs.

- Notes**
- System Programming is required to assign an extension number to each portable station.
 - The KX-TD1232 is illustrated as a main unit.
 - For the KX-TD146, the AC adaptor is necessary.



Programming References

System Programming

- [650] PS Registration
- [653] PS Extension Name Set
- [671] PS Extension Number Set
- [672] PS Password Set
- [673] PS CLIP/COLP Number Assignment
- [680] Cell Station Number Assignment for PS Registration

Feature References

- Features**
- Digital Wireless Connection

Features

PS Feature Conditions

Most of the features described in the Installation Manual for the model KX-TD816/KX-TD1232 are supported by a system with a portable station (PS). However the following features are not supported:

UNAVAILABLE FEATURES FOR THE PS	
Answering, Direct CO Line Background Music (BGM) Background Music (BGM) – External Bilingual Display Busy Lamp Field Button, Direct Station Selection (DSS) Button, Flexible Button, Group-CO (G-CO) Button, Single-CO (S-CO) Buttons on Proprietary Telephones Caller ID Conference, Unattended EXtra Device Port (XDP) Full One-Touch Dialing Handset / Headset Selection Handsfree Answerback Line Access, Direct	Line Preference – Outgoing (Idle Line / No Line / Prime Line) Live Call Screening (LCS) Log-In / Log-Out Microphone Mute One-Touch Dialing One-Touch Transfer by DSS Button Paralleled Telephone Phantom Extension Redial, Automatic / Saved Number Ringing Tone Selection for CO Buttons Two Way Recording into Voice Mail Uniform Call Distribution (UCD) User Programming (Manager Programming) Voice Mail Integration for Digital Proprietary Telephones

The list from the next page describes the available feature conditions which are required to use with the PS.

- Note**
- In the list, for programs [650] through [680], refer to System Programming. For other programs, refer to the KX-TD816/KX-TD1232 Installation Manual.

Features

TITLE	CONDITION FOR THE PS
Budget Management	<ul style="list-style-type: none"> • Program [655], “PS Budget Management”, is required to assign the charge limit of a call on a PS basis.
Button, Loop-CO (L-CO)	<ul style="list-style-type: none"> • The provided CO button on a PS serves as a Loop-CO (L-CO) button. Pressing the CO button provides the same operation as dialing an automatic line access code (default : 9). This results in Automatic Line Access or Automatic Route Selection (ARS), if programmed.
Class of Service (COS)	<ul style="list-style-type: none"> • Program [657] “PS Class of Service” is required for assigning each PS to a Class of Service (COS).
CO Line Connection Assignment – Outgoing	<ul style="list-style-type: none"> • Program [661]–[662] “PS Outgoing Permitted CO Line Assignment — Day / Night” is applied for PS programming.
Consultation Hold	<ul style="list-style-type: none"> • For a PS, Consultation Hold is established by pressing the XFER or CONF button.
Direct Dialing In (DDI)	<ul style="list-style-type: none"> • Program [673], “PS CLIP / COLP Number Assignment”, is used to assign a CLIP/COLP number to each portable station.
Direct In Lines (DIL)	<ul style="list-style-type: none"> • PSs can be assigned as the DIL 1:N destination. In this case, program [659]–[660] “PS DIL 1:N Extension — Day / Night” is required. • Intercept Routing applies to DIL 1:1, when the line is busy, the PS is out of the range or the power switch of the PS is set to OFF.
Doorphone Call	<ul style="list-style-type: none"> • Program [663]–[664] “PS Doorphone Ringing Assignment — Day / Night” is required for assigning each PS to receive a doorphone call.
DSS Console (KX-T7240/KX-T7040/KX-T7440/KX-T7441)	<ul style="list-style-type: none"> • The DSS Console cannot work with a PS.

Features

TITLE	CONDITION FOR THE PS
Extension Connection Assignment	<ul style="list-style-type: none"> • Program [667], “PS Extension Connection Assignment”, is used to assign whether the PS user can perform all accesses or not.
Extension Group	<ul style="list-style-type: none"> • The extension group of the PS can be used with the Group Call Pickup and Group Paging features. • The PS extension group can be assigned in program [658] “PS Extension Group Assignment”.
Flexible Numbering	<ul style="list-style-type: none"> • In addition to current flexible numbering, the feature number for the Super EXtra Device Port (SXDP) can be assigned. For details, refer to the program [100] “Flexible Numbering” (System Programming) and SXDP (PS Operation) in this manual.
Floating Station	<ul style="list-style-type: none"> • The resources of the floating numbers which can be used with the PS are the extension group and the modem.
Module Expansion	<ul style="list-style-type: none"> • In addition to the current expansion unit, a Cell Station Interface Unit (KX-TD144 / KX-TD146) can be connected to the KX-TD816/KX-TD1232. One KX-TD144 supports up to two Cell Stations. And one KX-TD146 supports up to six cell stations. One KX-TD144 / KX-TD146 can be connected to the KX-TD816, and up to two KX-TD144s / KX-TD146s can be connected to the KX-TD1232.
Paging — All / Group	<ul style="list-style-type: none"> • PS users can page wired proprietary telephone users, but cannot receive a page.
Ringing, Discriminating	<ul style="list-style-type: none"> • When there are multiple incoming calls and the wireless extension goes from off-hook to on-hook, the calls are sent according to the following priority: <ul style="list-style-type: none"> <1> Consultation Hold <2> Call Waiting <3> Incoming calls; Hold Recall; Transfer Recall <4> Timed Reminder <5> Automatic Callback Busy (Camp-On)

Features

TITLE	CONDITION FOR THE PS
Time-Out, Variable	<ul style="list-style-type: none"> • The following timers are programmable for a PS: <ul style="list-style-type: none"> System Timer Items Call Forwarding – No Answer Time-Out (1 – 12 rings) Extension-to-CO Call Duration Time (1 – 64 min) Hold Recall Time (0 – 240 s) Intercept Routing Time-Out (3 – 48 rings) Pickup Dialing Waiting Time (1 – 5 s) Transfer Recall Time (3 – 48 rings) Programming References [200] Hold Recall Time [201] Transfer Recall Time [202] Call Forwarding – No Answer Time [203] Intercept Time [204] Pickup Dialing Waiting Time [205] Extension-to-CO Line Call Duration Time [207] First Digit Time [208] Inter Digit Time
Voice Mail Integration	<ul style="list-style-type: none"> • A mailbox number can be assigned for each wireless extension in

Features

Feature for KX-T7500

Digital Wireless Connection

Description

The system supports the connection of a portable station (PS), KX-T7500. It can be used in the system with other telephones as an extension.

Conditions

- KX-TD816 supports up to 16 PSs and KX-TD1232 supports up to 64 PSs.
- To support the PSs, the Cell Station Interface Unit (KX-TD144 / KX-TD146) and a Cell Station Unit (KX-TD142) are required. KX-TD144 / KX-TD146 can be installed only to the master system.
- Up to three simultaneous calls can be made in the range.
- If your PS is out of range, the display shows “NO SERVICE”.
- One PS can be assigned to up to two PBXs. Alternating the PBX is possible from the PS at any time.
- If a PS user does not answer a call within three minutes, it is automatically disconnected.
- You can confirm your PS registration number in the PS programming mode.

Programming References

System Programming

- [109] Expansion Unit Type
 - [650] PS Registration (KX-T7500)
 - [651] PS Termination
 - [653] PS Extension Name Set
 - [654] PS SXDP Assignment
 - [655] PS Budget Management
 - [657] PS Class of Service
 - [658] PS Extension Group Assignment
 - [659]–[660] PS DIL 1:N Extension — Day / Night
 - [661]–[662] PS Outgoing Permitted CO Line Assignment — Day / Night
 - [663]–[664] PS Doorphone Ringing Assignment — Day / Night
 - [665] PS Voice Mail Access Codes
 - [667] PS Extension Connection Assignment
 - [668] PS Data Line Security
 - [671] PS Extension Number Set
 - [672] PS Password Set
 - [673] PS CLIP / COLP Number Assignment
 - [674]–[675] PS Extension Intercept Routing — Day / Night
 - [680] Cell Station Number Assignment for PS Registration
- PS Programming (User Manual Addendum for KX-T7500)**

Feature References

User Manual Addendum for KX-T7500

Features

Electronic Telephone Directory

- Description** Portable station (PS), KX-T7500, users can store up to 100 names and phone numbers in a directory. It is possible to make a call by selecting a name or phone number in the directory.
- Conditions** • It is possible to lock the directory contents.
• All directory items can be searched in alphabetical order or by frequency-of-use.
- Programming References**
PS Programming (User Manual Addendum for KX-T7500)
Directory Lock
Directory Registration Count Confirmation
Directory Search Sequence
- Feature References** None
- Operation References** PS Operations (User Manual Addendum for KX-T7500)
Electronic Telephone Directory

Features

PS programming

Description

Portable station (PS), KX-T7500, users can change the default settings of PS Programming according to their needs. The programming items are as follows.

Directory Lock
Directory Registration Count Confirmation
Key Confirmation Tone, ON / OFF
Out-of-Range Warning Tone, ON / OFF
Directory Search Sequence
Self PS Registration Number Display
Main Unit Switch
Recall Button Assignment
PS Registration Cancellation

Conditions

- During in the PS Programming mode, the PS is considered to be in busy status.

Programming References

PS Programming (User Manual Addendum for KX-T7500)

Feature References

None

Operation References

None

Super EXtra Device Port (SXDP)

Description

The Super EXtra Device Port (SXDP) allows a portable station (PS), KX-T7500, to be used in parallel with a proprietary wired (PT) or single line telephone (SLT). When in the SXDP mode, your PS can make or receive calls as usual, but can also receive calls reaching the paired telephone.

Conditions

- To execute this mode, the paralleled telephones' Class of Service (COS) must be the same.
- When the paralleled wired telephone receives a call, both the wired telephone and PS will ring. When the wired telephone is busy, a busy tone is sent to the calling party.
- Call types which are programmed for paralleled wired telephones will not be sent to the PS.
DIL 1:N; Doorphone; Ring Group

Features

- This feature can only be set from a PS. The wired telephone can enable or disable this feature by System Programming.
- When making a call, a PS can use its programmed data, but the memory of Call Log and the Last Number Redial is used together with the paralleled wired telephone.
- When making a call while in the SXDP mode, the wired telephone extension number and name will be shown on the called party's display.
- When timers expire (Hold Recall, Transfer Recall, etc.), an alarm tone is sent only to the telephone which set the timer.
- When the Timed Reminder is set at the paralleled wired telephone, an alarm is sent to both telephones.
- This feature is not canceled by the Station Feature Clear from the PS.
- Paralleled telephones can call each other by dialing their own extension number.
- The Call Forwarding – All feature for the paralleled wired telephone can be set from a PS so that all incoming calls to the wired telephone will be forwarded to the desired destination.

Programming References

System Programming

[100] Flexible Numbering, Super extra device port mode set / cancel

[654] PS SXDP Assignment

[657] PS Class of Service

Section 4, System Programming (KX-TD816/KX-TD1232

Installation Manual)

[601] Class of Service

Feature References

Section 3, Features (KX-TD816/KX-TD1232 Installation Manual)

Class of Service (COS)

Operation References

PS Operations (User Manual Addendum for KX-T7500)

Other Operations – Super EXtra Device Port (SXDP)

Features

Feature for KX-PH15

Call Log Dialing

Description Portable station (PS), KX-PH15, automatically records information of up to ten incoming outside calls, so that you can check the records and call back the caller easily.

Conditions

- When memory is full, a new call will overwrite the oldest call.
- When you use Call Log Dialing, the data will be stored in the Redialing data.

Programming References
Not applicable.

Feature References None

Operation References **Memory Dialing Features (Operating Instructions for KX-PH15)**
Call Log Dialing

Features

Digital Wireless Connection

Description The system supports the connection of a portable station (PS), KX-PH15. It can be used in the system with other telephones as an extension.

- Conditions**
- KX-TD816 supports up to 16 PSs and KX-TD1232 supports up to 64 PSs.
 - To support the PSs, a Cell Station Interface Unit (KX-TD144 / KX-TD146) and a Cell Station Unit (KX-TD142) are required. KX-TD144 / KX-TD146 can be installed only to the master system.
 - Up to three simultaneous calls can be made in the range.
 - If your PS is out of range, the display shows “NO SERVICE”.
 - One PS can be assigned to up to four PBXs. Switching the PBX is possible from the PS at any time.

Programming References

System Programming

- [109] Expansion Unit Type
 - [650] PS Registration (KX-PH15)
 - [651] PS Termination
 - [653] PS Extension Name Set
 - [654] PS SXDP Assignment
 - [655] PS Budget Management
 - [657] PS Class of Service
 - [658] PS Extension Group Assignment
 - [659]–[660] PS DIL 1:N Extension — Day / Night
 - [661]–[662] PS Outgoing Permitted CO Line Assignment — Day / Night
 - [663]–[664] PS Doorphone Ringing Assignment — Day / Night
 - [665] PS Voice Mail Access Codes
 - [667] PS Extension Connection Assignment
 - [668] PS Data Line Security
 - [671] PS Extension Number Set
 - [672] PS Password Set
 - [673] PS CLIP / COLP Number Assignment
 - [674]–[675] PS Extension Intercept Routing — Day / Night
 - [680] Cell Station Number Assignment for PS Registration
- Useful Features (Operating Instructions for KX-PH15)**
System Change

Feature References None

Features

Memo Directory

Description

Portable station (PS), KX-PH15, users can store characters as a memo. Up to 100 characters can be stored per memo. Setting the timer which alerts you with an alarm tone and shows the memo at the pre-set time is also possible. The timer can be with up to ten memos.

Conditions

- The alarm sounds for one minute. To stop the alarm, press any key.
- Even though the PS power is off, the power will turn on automatically and the alarm will sound at the pre-set time.
- If you receive an incoming call during the alarm, the ringing will start after the alarm stops.
- If you are having a conversation during the alarm time, the alarm will start after the conversation.

Programming References

Not applicable.

Feature References

None

Operation References

Useful Features (Operating Instructions for KX-PH15)
Memo Directory

Features

PS programming

Description	<p>Portable station (PS), KX-PH15, users can change the default settings of PS Programming according to their needs. The programming items are as follows.</p> <ul style="list-style-type: none">Timed Reminder SetTelephone Directory LockOutgoing Call RestrictionRinger Type SelectionVibrator and RingerTAM Answering Message Recording / DeletingTAM Answering Message Playing Back (Confirming)Quick Dialing Number AssignmentTelephone Directory Stored/Remaining Number ConfirmationDo Not Disturb (DND)Initial Display Message AssignmentKey Click Tone SetOut of Range Alarm SetTime and Date SetAutomatic Answer SetPower On / Off Timer SetPassword SetLCD Contrast AdjustmentBack Light SetAutomatic Answering Call Type SelectionTAM Recording Time Set
Conditions	None
Programming References	PS Programming (Operating Instructions for KX-PH15)
Feature References	None
Operation References	None

Features

Quick Dialing

Description	Portable station (PS), KX-PH15, users can make a quick dial call by selecting a preassigned number. Up to ten numbers can be stored. You can also assign the Private Ring feature which sound a special ring when a call is received from the assigned numbers.
Conditions	None
Programming References	Memory Dialing Features (Operating Instructions for KX-PH15) Quick Dialing
Feature References	None
Operation References	Memory Dialing Features (Operating Instructions for KX-PH15) Quick Dialing

Super EXtra Device Port (SXDP)

Description	The Super EXtra Device Port (SXDP) allows a portable station (PS), KX-PH15, to be used in parallel with a proprietary wired (PT) or single line telephone (SLT). When in the SXDP mode, your PS can make or receive calls as usual, but can also receive calls reaching the paired telephone.
Conditions	<ul style="list-style-type: none">• To execute this mode, the paralleled telephones' Class of Service (COS) must be the same.• When the paralleled wired telephone receives a call, both the wired telephone and PS will ring. When the wired telephone is busy, a busy tone is sent to the calling party.• Call types which are programmed for paralleled wired telephones will not be sent to the PS. DIL 1:N; Doorphone; Ring Group• This feature can only be set from a PS. The wired telephone can enable or disable this feature by System Programming.• When making a call while in the SXDP mode, the wired telephone extension number and name will be shown on the called party's display.• When timers expire (Hold Recall, Transfer Recall, etc.), an alarm tone is sent only to the telephone which set the timer.

Features

- When the Timed Reminder is set at the paralleled wired telephone, an alarm is sent to both telephones.
- This feature is not canceled by the Station Feature Clear from the PS.
- Paralleled telephones can call each other by dialing their own extension number.
- The Call Forwarding – All feature for the paralleled wired telephone can be set from a PS so that all incoming calls to the wired telephone will be forwarded to the desired destination.

Programming References

System Programming

[100] Flexible Numbering, Super extra device port mode set / cancel

[654] PS SXDP Assignment

[657] PS Class of Service

Section 4, System Programming (KX-TD816/KX-TD1232

Installation Manual)

[601] Class of Service

Feature References

Section 3, Features (KX-TD816/KX-TD1232 Installation Manual)

Class of Service (COS)

Operation References

None

Features

TAM Recording / Call Recording / Voice Memo Recording

Description

Portable station (PS), KX-PH15, users can use the recording and playing back features as follows.

TAM Recording

When the PS answers a call, an answering message is played and the caller's message is recorded. You can play back the message later. To use this feature, an answering message must be recorded beforehand.

Call Recording

A conversation can be recorded.

Voice Memo Recording

While idle, a memo in memory can be recorded.

Recording time and the number of messages:

The total number of recording messages:

a maximum of 10 messages

The total recording time: about 135 seconds

Conditions

- Each TAM recording time is 30 seconds. It can be changed from 15 through 60 seconds in PS Programming.
- It is possible to confirm the recording feature count display. If "Record Memory Full" is displayed, some messages must be deleted.

Programming References

PS Programming (Operating Instructions for KX-PH15)

TAM Recording Time Set

Feature References

None

Operation References

Memory Dialing Features (Operating Instructions for KX-PH15)

Features

Telephone Directory

Description Portable station (PS), KX-PH15, users can store names, phone numbers and memos (e.g. address, company, etc.) in the directory. Up to three phone numbers can be stored per name.
<Example> 1) Home; 2) Company; 3) Portable station
There are 200 locations where you can store one phone number per name. If you store two or three phone numbers or/and a memo, the remaining locations will decrease.
Using the directory, you can make a call by selecting a name or number shown on the display.

Conditions

- It is possible to lock the directory contents.
- All directory items are stored in alphabetical order.

Programming References

PS Programming (Operating Instructions for KX-PH15)
Telephone Directory Lock

Feature References None

Operation References **Memory Dialing Features (Operating Instructions for KX-PH15)**
Telephone Directory

System Programming

System Programming Conditions for a PS

Most of the system programming described in the KX-TD816/KX-TD1232 Installation Manual is supported by a system with a proprietary portable station (PS). The additional programming required to use the PS is as follows:

- [650] PS Registration
- [651] PS Termination
- [653] PS Extension Name Set
- [654] PS SXDP Assignment
- [655] PS Budget Management
- [657] PS Class of Service
- [658] PS Extension Group Assignment
- [659]–[660] PS DIL 1:N Extension — Day / Night
- [661]–[662] PS Outgoing Permitted CO Line Assignment
— Day / Night
- [663]–[664] PS Doorphone Ringing Assignment — Day / Night
- [665] PS Voice Mail Access Codes
- [667] PS Extension Connection Assignment
- [668] PS Data Line Security
- [671] PS Extension Number Set
- [672] PS Password Set
- [673] PS CLIP / CLOP Number Assignment
- [674]–[675] PS Extension Intercept Routing — Day / Night
- [680] Cell Station Number Assignment of PS Registration

Use your display proprietary wired telephone for programming. Programming with a portable station is only required for program [650] “PS Registration”.


System Programming

The list below describes the conditions for the current programming required to use a PS.

For programming, refer to the KX-TD816/KX-TD1232 Installation Manual.

TITLE	CONDITION FOR THE PS
[100] Flexible Numbering	<ul style="list-style-type: none">• In addition to current flexible numbering, a feature number for the Super EXtra Device Port (SXDPA) can be assigned. <p>Selection</p> <ul style="list-style-type: none">• Selection number: 78• Feature number: 1 through 3 digits• Default: 48
[109] Expansion Unit Type	<ul style="list-style-type: none">• To assign a Cell Station Interface Unit (KX-TD144 / KX-TD146), select “E” for the KX-TD816 or “E1” or “E2” for the KX-TD1232. This is the same for on 8-Station Line Unit (KX-TD170).• One KX-TD144 / KX-TD146 can be installed to the KX-TD816 and up to two KX-TD144s / KX-TD146s can be installed to the KX-TD1232.• KX-TD144 / KX-TD146 can be installed only to the master system.

PS Registration (KX-T7500)

Description	Assigns a registration number to each PS. Steps 1 through 4 and 10 through 12 must be operated with your display PT, and steps 5 through 9 with the PS whose registration number is to be set. Before this program, the PS extension number should be assigned first in program [671], "PS Extension Number Set".
Selection	<ul style="list-style-type: none">• PS registration number: KX-TD816 – 01 through 16 KX-TD1232 – 01 through 64• PS extension number: 2 to 4 digits• PS password: 4 digits• Extension group number: 1 through 8
Default	All PSs – Not stored
Programming	<p>(With a display PT)</p> <ol style="list-style-type: none">1. Enter 650. Display: PS Registration2. Press NEXT. Display: PS NO?→3. Enter the PS registration number. Display example: PS01:Ext 2814. Press STORE. <p>(With a PS)</p> <ol style="list-style-type: none">5. While pressing #, 5 and 1 at the same time, slide the PWR switch to ON. Display: REGISTER PS-No.=6. Enter a PS registration number and press #. Display: SECURITY No.=7. Enter a PS password and press #. Display: GROUP No.=8. Enter a extension group number and after  appears, press #. Display: REGISTER OKAY9. Slide the PWR switch to OFF.

PS Registration (KX-T7500) (contd.)

(With a display PT)

10. To program another PS, press **SELECT** and enter the desired **PS registration number**.
11. Repeat steps 3 through 9 with a display PT and PS.
12. Press **END**.

Conditions

- Each PS extension number can be two to four digits, consisting of 0 through 9. The * and # keys cannot be used.
- If “REGISTER FAILED” is displayed after step 8, just finish up to step 9 once and reprogram from step 1.
- One PS can be assigned to up to two PBXs. In this case, program again for the desired PBX. However, change step 5 to “While pressing #, 5 and 2 at the same time, slide the **PWR switch to “ON”**”.
- If you assigned your PS to two PBXs, choose which PBX to use. Alternating is possible from your PS at any time. To alternate, refer to PS Programming, “Main Unit Switch”, in this manual.
- Program [680] “Cell Station Number Assignment for PS Registration” is used to assign the cell station number which the PS uses for PS registration.
- The PS password can be assigned in program [672] “PS Password Set”.
- A PS extension number is invalid if the leading first or second digits do not match with the setting in program [100] “Flexible Numbering, (01) – (16) 1st through 16th hundred extension blocks”. If one digit is assigned as the leading digit, some PS extension numbers have two digits on three digits. If two digits are assigned, they have three digits and some have four digits.
- Double entry or incompatible entry is invalid including the assignment in programs [003] “Extension Number Set”, [118] “Voice Mail Extension Number Assignment”, [124] “Phantom Extension Number Assignment” and [813] “Floating Number Assignment”. Valid entry examples: 10 and 11; 10 and 110. Invalid entry examples: 10 and 106; 210 and 21.
- Be sure to check the PS registration number with each PS extension number, which is displayed in step 8, as it is used in other PS programming.
- Program [653] “PS Extension Name Set” is used to give names to PSs.

Feature References**Features**

Digital Wireless Connection

Section 3, Features (KX-TD816/KX-TD1232 Installation Manual)

Flexible Numbering

PS Registration (KX-PH15)

Description

Assigns a registration number to each PS.
Registration must be done with the display PT and the PS whose registration number is to be set.

Selection

- PS registration number: **KX-TD816 – 01 through 16**
KX-TD1232 – 01 through 64
- PS password: **4 digits**
- System number: **1 through 4**

Default

All PSs – Not stored

Programming

(With a display PT)

1. Enter **650**.
Display: PS Registration
2. Press **NEXT**.
Display: PS NO?→
3. Enter the **PS registration number**.
Display example: PS01:Ext 281
4. Press **STORE**.

(With a PS)

5. While pressing **1, 5** and **#** at the same time, turn the power on by pressing the **POWER** button.
Display: PS Register

Register=*
Delete =#
6. Press *****.
Display: PS Register
PS-No.
=
=
=
7. Enter a **PS registration number** and press **STORE**.
Display: PS Register
Password
=
=
=
8. Enter a **PS password** and press **STORE**.
Display: PS Register
System-No.
=
=
=

PS Registration (KX-PH15) (contd.)

9. Enter a **system number** and press **STORE**.
 Display: Executing
 When registration is completed, a confirmation tone is audible.
 Display: Registered
 10. Turn the power **off** by pressing the **POWER** button.
- (With a display PT)**
11. To program another PS, press **SELECT** and enter the desired **PS registration number**.
 12. Repeat steps 3 through 10 with a display PT and PS.
 13. Press **END**.

Conditions

- Each PS extension number can be two to four digits, consisting of 0 through 9. The * and # keys cannot be used.
- If “Rejected” is displayed after step 9, just finish up to step 10 once and reprogram from step 1.
- **One PS can be assigned to up to four PBXs.** To assign a PS to another PBXs, program repeatedly from step 5 through 10 to select each system number.
- If you assigned your PS to more than one PBXs, choose which PBX to use. Switching is possible from your PS at any time. To switch, refer to PS Programming, “System Change”, in the Operating Instructions.
- Program [680] “Cell Station Number Assignment for PS Registration” is used to assign the cell station number which the PS uses for PS registration.
- The PS password can be assigned in program [672] “PS Password Set”.
- A PS extension number is invalid if the leading first or second digits do not match with the setting in program [100] “Flexible Numbering, (01) – (16) 1st through 16th hundred extension blocks”. If one digit is assigned as the leading digit, some PS extension numbers have two digits on three digits. If two digits are assigned, they have three digits and some have four digits.
- Double entry or incompatible entry is invalid including the assignment in programs [003] “Extension Number Set”, [127] “Voice Mail Extension Number Assignment”, [130] “Phantom Extension Number Assignment” and [813] “Floating Number Assignment”. Valid entry examples: 10 and 11; 10 and 110. Invalid entry examples: 10 and 106; 210 and 21.
- Be sure to check the PS registration number with each PS extension number, as it is used in other PS programming.
- Program [653] “PS Extension Name Set” is used to give names to PSs.

Feature References**Features**

Digital Wireless Connection

Section 3, Features (KX-TD816/KX-TD1232 Installation Manual)

Flexible Numbering

PS Termination

Description	Deletes a stored portable station so that it cannot be used in the system.
Selection	<ul style="list-style-type: none">• PS registration number: KX-TD816 – 01 through 16, KX-TD1232 – 01 through 64
Default	Not applicable.
Programming	<ol style="list-style-type: none">1. Enter 651. Display: PS Termination2. Press NEXT. Display: PS NO?→3. Enter a PS registration number. You can also keep pressing NEXT until the desired PS registration number is displayed. Display example: PS NO?→014. Press STORE. Display example: Delete 01?5. To terminate another PS, press NEXT or PREV, or SELECT and the desired PS registration number.6. Repeat steps 3 through 5.7. Press END.
Conditions	None
Feature References	Features Digital Wireless Connection

PS Extension Name Set

Description	Assigns names to the PS extension numbers programmed in program [671], "PS Extension Number Set".
Selection	<ul style="list-style-type: none"> • PS registration number: KX-TD816 – 01 through 16 KX-TD1232 – 01 through 64 (*=all PS registration numbers) • Name: 10 characters (max.)
Default	All PSs – Not stored
Programming	<ol style="list-style-type: none"> 1. Enter 653. Display: PS EXT Name Set 2. Press NEXT. Display: PS NO?→ 3. Enter the PS registration number. You can also keep pressing NEXT until the desired PS registration number is displayed. Display example: PS01:Not Stored 4. Enter the name. For entering characters, see Section 4.1.3 "Entering Characters" in the KX-TD816/KX-TD1232 Installation Manual. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and enter the new name. 5. Press STORE. 6. To program another PS, press NEXT or PREV, or SELECT and the desired PS registration number. 7. Repeat steps 4 through 6. 8. Press END.
Feature References	Features Digital Wireless Connection

PS SXDP Assignment

Description	Disables or enables the Super EXtra Device Port (SXDP) feature for wired extensions.
Selection	<ul style="list-style-type: none">• Jack number: KX-TD816 – 01 through 16 (-1 / -2), * KX-TD1232 – 01 through 64 (-1 / -2), * (-1= first part, -2= second part, *=all jacks)• Disable / Enable
Default	All jacks – Disable
Programming	<ol style="list-style-type: none">1. Enter 654. Display: SXDP Assign2. Press NEXT. Display: Jack NO?→3. Enter the jack number. To enter jack number 01, you can also press NEXT. To select the second part (-2), press NEXT after entering the jack number. Display example: #01-1:Disable4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another jack, press NEXT or PREV, or SELECT and the desired jack number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• To assign all jacks to one selection, press the * key in step 3. In this case, the display shows the contents programmed for the jack 01.
Feature References	Features Super EXtra Device Port (SXDP)

PS Budget Management

Description	Assigns the charge limit for a call on a PS basis.
Selection	<ul style="list-style-type: none"> • PS registration number: KX-TD816 – 01 through 16, * KX-TD1232 – 01 through 64, * (*=all PS registration numbers) • Charge limit (Charge): 0 through 99999999
Default	All PSs – 0
Programming	<ol style="list-style-type: none"> 1. Enter 655. Display: PS Charge Limit 2. Press NEXT. Display: PS NO?→ 3. Enter the PS registration number. You can also keep pressing NEXT until the desired PS registration number is displayed. Display example: PS01: 0 \$ 4. Enter a charge limit. To delete the charge limit, press CLEAR. 5. Press STORE. 6. To program another PS, press NEXT or PREV, or SELECT and the desired PS registration number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • If the charge limit is set “0”, no restriction is applied. • To assign all PSs to one selection, press the * key in step 3. In this case, the display shows the contents programmed for the PS which has the lowest PS registration number. • The displayed currency denomination can be programmed by program [125], “Assignment of Denomination”.
Feature References	<p>Section 3, Features (KX-TD816/KX-TD1232 Installation Manual) Budget Management Charge Fee Reference</p>

PS Class of Service

Description	Programs each PS a Class of Service (COS). The COS determines the call handling abilities for each PS. Primary and secondary COS numbers can be assigned for each PS.
Selection	<ul style="list-style-type: none">• PS registration number: KX-TD816 – 01 through 16, * KX-TD1232 – 01 through 64, * (*=all PS registration numbers)• COS number: 1 through 8
Default	All PSs – Primary / Secondary – COS 1
Programming	<ol style="list-style-type: none">1. Enter 657. Display: PS COS Assign2. Press NEXT. Display: PS NO?→3. Enter the PS registration number. You can also keep pressing NEXT until the desired PS registration number is displayed. Display example: PS01: COS1, COS14. Enter a primary COS number. To change the current entry, enter the new number.5. Press ➡.6. Enter a secondary COS number. To change the current entry, enter the new number.7. Press STORE.8. To program another PS, press NEXT or PREV, or SELECT and the desired PS registration number.9. Repeat steps 4 through 8.10. Press END.
Conditions	<ul style="list-style-type: none">• There is a maximum of eight Classes of Service. Every PS must be assigned to a Class of Service and is subject to COS Programming in programs [5XX] and [991].• To assign all PSs to one COS, press the * key in step 3. In this case, the display shows the contents programmed for the PS which has the lowest PS registration number.
Feature References	Section 3, Features (KX-TD816/KX-TD1232 Installation Manual) Class of Service (COS)

PS Extension Group Assignment

Description	Assigns each PS to an extension group. Extension groups are used for Group Call Pickup, Station Hunting and Uniform Call Distribution.						
Selection	<ul style="list-style-type: none"> • PS registration number: KX-TD816 – 01 through 16, * KX-TD1232 – 01 through 64, * (*=all PS registration numbers) • Extension group number: 1 through 16, * • Enable / Disable 						
Default	All PSs – Extension group 01 – Enable						
Programming	<ol style="list-style-type: none"> 1. Enter 658. Display: PS EXT Group 2. Press NEXT. Display: PS NO?→ 3. Enter the PS registration number. You can also keep pressing NEXT until the desired PS registration number is displayed. Display example: PS01:EXG01:Enabl 4. Enter an extension group number. To change the current entry, press CLEAR and enter the new extension group number. 5. Keep pressing SELECT until the desired selection is displayed. 6. Press STORE. 7. To program another PS, press NEXT or PREV, or SELECT and the desired PS registration number. 8. Repeat steps 4 through 7. 9. Press END. 						
Conditions	<ul style="list-style-type: none"> • There is a maximum of 16 extension groups. Each PS can only belong to one group. • To assign all PSs to one selection, press the * key in step 3. In this case, the display shows the contents programmed for the PS which has the lowest PS registration number. 						
Feature References	<table border="0" style="width: 100%;"> <tr> <td colspan="2">Section 3, Features (KX-TD816/KX-TD1232 Installation Manual)</td> </tr> <tr> <td>Call Pickup, Group</td> <td>Station Hunting</td> </tr> <tr> <td>Extension Group</td> <td>Uniform Call Distribution (UCD)</td> </tr> </table>	Section 3, Features (KX-TD816/KX-TD1232 Installation Manual)		Call Pickup, Group	Station Hunting	Extension Group	Uniform Call Distribution (UCD)
Section 3, Features (KX-TD816/KX-TD1232 Installation Manual)							
Call Pickup, Group	Station Hunting						
Extension Group	Uniform Call Distribution (UCD)						

PS DIL 1:N Extension — Day / Night

Description

A DIL 1:N line can be assigned to call more than one extension. All incoming calls from the programmed CO lines are directed to the specified PSs. This program assigns the PSs for each CO line in both the day and night modes.

Selection

- PS registration number: **KX-TD816 – 01 through 16, ***
KX-TD1232 – 01 through 64, *
(* = all PS registration numbers)
- CO line number : **KX-TD816 – 01 through 08, ***
KX-TD1232 – 01 through 24, *
(* = all CO lines)
- **Immdt** (immediate ringing) / **Disab** (disable)

Default

All PSs – all CO lines – Disable – Day / Night

Programming

1. Enter a program address (**659 for day or 660 for night**).
Display example: PS DIL 1:N Day
2. Press **NEXT**.
Display: PS NO?→
3. Enter the **PS registration number**.
You can also keep pressing **NEXT** until the desired PS registration number is displayed.
Display example: PS01:CO01:Disab
4. Enter the **CO line number**.
You can also keep pressing **▶** or **◀** until the desired CO line number is displayed.
To change the current entry, enter the new number.
5. Keep pressing **SELECT** until the desired selection is displayed.
6. Press **STORE**.
7. To program another PS, press **NEXT** or **PREV**, or **SELECT** and the desired **PS registration number**.
8. Repeat steps 4 through 7.
9. Press **END**.

Conditions

- To assign all PSs or all CO lines to “Disable”, press the * key in step 3 or 4. In this case, the display shows the contents programmed for CO line 01 or the PS01.
- A maximum of three PSs can be assigned to each CO line number.
- When you change the PS registration number by pressing **NEXT** or **PREV**, the CO line number will not be changed.
<Example> PS01:CO06.....Press **NEXT**.....PS02:CO06

Feature References

Section 3, Features (KX-TD816/KX-TD1232 Installation Manual)
Direct In Lines (DIL)
Night Service

PS Outgoing Permitted CO Line Assignment — Day / Night

- Description** Determines which CO lines can be accessed by a portable station in both the day and night modes. PS users can make outgoing outside calls using the assigned CO lines.
- Selection**
- PS registration number: KX-TD816 – **01 through 16**, *
KX-TD1232 – **01 through 64**, *
(* = all PS registration numbers)
 - CO line number: KX-TD816 – **01 through 08**, *
KX-TD1232 – **01 through 24**, *
(* = all CO lines)
 - **Enabl** (enable) / **Disab** (disable)
- Default** All PSs – all CO lines – Enable – Day / Night
- Programming**
1. Enter a program address (**661 for day or 662 for night**).
Display example: 661 PS CO DAY
 2. Press **NEXT**.
Display: PS NO?→
 3. Enter a **PS registration number**.
You can also keep pressing **NEXT** until the desired PS registration number is displayed.
Display example: PS01:CO01:Enabl
 4. Enter a **CO line number**.
You can also keep pressing **▶** or **◀** until the desired CO line number is displayed.
To change the current entry, enter the new number.
 5. Keep pressing **SELECT** until the desired selection is displayed.
 6. Press **STORE**.
 7. To program another PS, press **NEXT** or **PREV**, or **SELECT** and the desired **PS registration number**.
 8. Repeat steps 4 through 7.
 9. Press **END**.

PS Outgoing Permitted CO Line Assignment — Day / Night (contd.)

Conditions

- To assign all PSs or all CO lines, press the * key in step 3 or 4. In this case, the display shows the contents programmed for CO line 01 or the PS01.
- When you change the PS registration number by pressing **NEXT** or **PREV**, the CO line number is not changed.
<Example> PS01:CO06.....Press **NEXT**.....PS02:CO06

Feature References

Section 3, Features (KX-TD816/KX-TD1232 Installation Manual)
CO Line Connection Assignment – Outgoing
Night Service

PS Doorphone Ringing Assignment — Day / Night

Description	These programs assign which PSs will ring when a doorphone call is received during the day and night modes. Programmed PSs are also allowed to open the door.
Selection	<ul style="list-style-type: none">• PS registration number: KX-TD816 – 01 through 16, * KX-TD1232 – 01 through 64, *• Doorphone number: KX-TD816 – 1 or 2, Disable, two entries (max) KX-TD1232 – 1 through 4, Disable, four entries (max.)
Default	All PSs – Disable (No doorphones) – Day / Night
Programming	<ol style="list-style-type: none">1. Enter a program address (663 for day or 664 for night). Display example: PS DPH in Day2. Press NEXT. Display: PS NO?→3. Enter the PS registration number. You can also keep pressing NEXT until the desired PS registration number is displayed. Display example: PS01:124. Enter the doorphone number. To not assign a doorphone, press CLEAR. To change the current entry, press CLEAR and enter the new doorphone number.5. Press STORE.6. To program another PS, press NEXT or PREV, or SELECT and the desired PS registration number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• To assign all PSs or all CO lines to “Disable”, press the * key in step 3 or 4. In this case, the display shows the contents programmed for CO line 01 or the PS01.• A maximum of three PSs can be assigned to one doorphone.• For the KX-TD1232, Doorphone 1 and 2 are connected to the Master System and 3 and 4 to the Slave, if available.• You can enter up to two (KX-TD816) or up to four (KX-TD1232) doorphone numbers for each extension.
Feature References	Section 3, Features (KX-TD816/KX-TD1232 Installation Manual) Door Opener Night Service Doorphone Call

PS Voice Mail Access Codes

Description	Assigns a mailbox number for each PS only if program [990], “System Additional Information, Field (18)”, is set to “free”.
Selection	<ul style="list-style-type: none"> • PS registration number: KX-TD816 – 01 through 16, KX-TD1232 – 01 through 64, • Mailbox number: 16 digits (max.)
Default	All PSs – Not stored
Programming	<ol style="list-style-type: none"> 1. Enter 665. Display: PS VM ID Code 2. Press NEXT. Display: PS NO?→ 3. Enter the PS registration number. You can also keep pressing NEXT until the desired PS registration number is displayed. Display example: PS01:Not Stored 4. Enter the mailbox number. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and enter the new number. 5. Press STORE. 6. To program another PS, press NEXT or PREV, or SELECT and the desired PS registration number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • The system supports a maximum of eight jacks (16 jacks during System Connection) for connection to a Voice Processing System as the Voice Mail or Automated Attendant ports. • Each mailbox number has a maximum of 16 digits, consisting of 0 through 9, *, # and PAUSE. • To display parts of the mailbox number which have scrolled off the display, press ▶ or ◀.
Feature References	Section 3, Features (KX-TD816/KX-TD1232 Installation Manual) Voice Mail Integration

PS Extension Connection Assignment

Description	Assigns whether the PS can perform all accesses or not.
Selection	<ul style="list-style-type: none">• PS registration number: KX-TD816 – 01 through 16, * KX-TD1232 – 01 through 64, * (*=all PS registration numbers)• Connect / No Connect
Default	All PSs – Connect
Programming	<ol style="list-style-type: none">1. Enter 667. Display: PS EXT Connect2. Press NEXT. Display: PS NO?→3. Enter the PS registration number. You can also keep pressing NEXT until the desired PS registration number is displayed. Display example: PS01:Connect4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another PS, press NEXT or PREV, or SELECT and the desired PS registration number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• To assign all PSs to one selection, press the * key in step 3. In this case, the display shows the contents programmed for the PS which has the lowest PS registration number.
Feature References	Section 3, Features (KX-TD816/KX-TD1232 Installation Manual) Extension Connection Assignment

PS Data Line Security

Description	Sets or cancels the Data Line Security mode on a PS basis.
Selection	<ul style="list-style-type: none"> • PS registration number: KX-TD816 – 01 through 16, * KX-TD1232 – 01 through 64, * (*=all PS registration numbers) • On / Off
Default	All PSs – Off
Programming	<ol style="list-style-type: none"> 1. Enter 668. Display: PS Data Mode 2. Press NEXT. Display: PS NO?→ 3. Enter the PS registration number. You can also keep pressing NEXT until the desired PS registration number is displayed. Display example: PS01:Off 4. Keep pressing SELECT until the desired selection is displayed. 5. Press STORE. 6. To program another PS, press NEXT or PREV, or SELECT and the desired PS registration number. 7. Repeat steps 4 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • To assign all PSs to one selection, press the * key in step 3. In this case, the display shows the contents programmed for the PS which has the lowest PS registration number.
Feature References	Section 3, Features Data Line Security

PS Extension Number Set

Description	Assigns an extension number to each PS.
Selection	<ul style="list-style-type: none">• PS registration number: KX-TD816 – 01 through 16 KX-TD1232 – 01 through 64• PS extension number: 2 through 4 digits
Default	All PSs – Not stored
Programming	<ol style="list-style-type: none">1. Enter 671. Display: PS EXT NO Set2. Press NEXT. Display: PS NO?→3. Enter the PS registration number. You can also keep pressing NEXT until the desired PS registration number is displayed. Display example: PS01:Not Stored4. Enter the PS extension number. To delete the current entry, press CLEAR. To change the current entry, press CLEAR and enter the new name. Display example: PS01:EXT 2815. Press STORE.6. To program another PS, press NEXT or PREV, or SELECT and the desired PS registration number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• Each PS extension number can be two to four digits, consisting of 0 through 9. The * and # keys cannot be used.• A PS extension number can also be assigned in program [650], “PS Registration”.

PS Extension Number Set (contd.)

- A PS extension number is invalid if the first or second digits do not match with the setting in program [100], “Flexible Numbering, (01) – (16) 1st through 16th hundred extension blocks”. If one digit is assigned as the leading digit, some PS extension numbers have two or three digits. If two digits are assigned, they have three digits and some may have four digits.
- Double entries or incompatible entries are invalid including the assignment in program [813], “Floating Number Assignment”. Valid entry examples are: 10 and 11; 10 and 110. Invalid entry examples are: 10 and 106; 210 and 21.
- Program [653], “PS Extension Name Set”, is used to name the PSs.
- It is possible to modify the extension number in this program. If the PS extension number was modified, re-register the PS to the system in program [650] “PS Registration”, in order to use the extension number.

Feature References**Features**

Digital Wireless Connection

PS Password Set

Description	Assigns a registration password, which is used for registration (program [650], "PS Registration"), to each PS.
Selection	<ul style="list-style-type: none">• PS registration number: KX-TD816 – 01 through 16 KX-TD1232 – 01 through 64• PS password: 4 digits
Default	All PSs – 1234
Programming	<ol style="list-style-type: none">1. Enter 672. Display: PS Password Set2. Press NEXT. Display: PS NO?→3. Enter the PS registration number. You can also keep pressing NEXT until the desired PS registration number is displayed. Display example: PS01:12344. Enter the PS password. Display example: PS01:56785. Press STORE.6. To program another PS, press NEXT or PREV, or SELECT and the desired PS registration number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• If you modify the PS password, re-register the PS to the system in order to use the password.
Feature References	None

PS CLIP / COLP Number Assignment

Description	Assigns a CLIP/COLP number for each PS.
Selection	<ul style="list-style-type: none"> • PS registration number: KX-TD816 – 01 through 16, * KX-TD1232 – 01 through 64, * (*=all PS registration numbers) • CLIP/COLP number: 16 digits (max.)
Default	All PSs – Not Stored
Programming	<ol style="list-style-type: none"> 1. Enter 673. Display: PS CLIP/COLP 2. Press NEXT. Display: PS NO?→ 3. Enter the PS registration number. You can also keep pressing NEXT until the desired PS registration number is displayed. Display example: PS01:Not Stored 4. Enter a CLIP/COLP number. To change the current entry, press CLEAR and enter the new number. 5. Press STORE. 6. To program another PS, press NEXT or PREV, or SELECT and the desired PS registration number. 7. Repeat steps 3 through 6. 8. Press END.
Conditions	<ul style="list-style-type: none"> • Each CLIP/COLP number consists of 0 through 9. • To assign all PSs to one selection, press the * key in step 3. In this case, the display shows the contents programmed for PS 01.
Feature References	Section 3, Features, Calling / Connected Line Identification Presentation (CLIP / COLP)

PS Extension Intercept Routing – Day / Night

Description	Sets the Intercept Routing destination for each PS in both day and night modes.
Selection	<ul style="list-style-type: none">• PS registration number: KX-TD816 – 01 through 16, * KX-TD1232 – 01 through 64, * (*=all PS registration numbers)• Extension number: 2 through 4 digits / Disable (no Intercept Routing)
Default	All PSs – Disable – Day / Night
Programming	<ol style="list-style-type: none">1. Enter a program address (674 for day or 675 for night). Display example: PS Intercept Day2. Press NEXT. Display: PS NO?→3. Enter the PS registration number. You can also keep pressing NEXT until the desired PS registration number is displayed. Display example: PS01: Disable4. Enter an extension number. To change the current entry, press CLEAR and enter the new number. To disable Intercept Routing, press CLEAR.5. Press STORE.6. To program another PS, press NEXT or PREV, or SELECT and the desired PS registration number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• You can set the extension numbers in programs [650] “PS Registration,” [671] “PS Extension Number Set,” [003] “Extension Number Set,” [127] “Voice Mail Extension Number Assignment,” [130] “Phantom Extension Number” and also floating numbers of the external ringer, hunting groups, and pagers in program [813] “Floating Number Assignment.”• To assign all PSs to one selection, press the * key in step 3. In this case, the display shows the contents programmed for PS 01.• When “Disable” is selected, Intercept Routing is provided according to the assignment in program [409-410].
Feature References	Section 3, Features Intercept Routing

Cell Station Number Assignment for PS Registration

Description	Assigns the cell station number which is used for PS registration.
Selection	<ul style="list-style-type: none"> • Cell Station Number: KX-TD816 – RIF1 / RIF2 / RIF3 / RIF4 / RIF5 / RIF6 KX-TD1232 – E1-RIF1 / E1-RIF2 / E1-RIF3 / E1-RIF4 / E1-RIF5 / E1-RIF6 E2-RIF1 / E2-RIF2 / E2-RIF3 / E2-RIF4 / E2-RIF5 / E2-RIF6 <p>(E1: Cell Station Interface Unit 1 / E2: Cell Station Interface Unit 2 / RIF1: Cell Station1 / RIF2: Cell Station2 / RIF3: Cell Station3 / RIF4: Cell Station4 / RIF5: Cell Station5 / RIF6: Cell Station6)</p>
Default	KX-TD816 – RIF1; KX-TD1232 – E1-RIF1
Programming	<ol style="list-style-type: none"> 1. Enter 680. Display: PS Regist CS 2. Press NEXT. Display example: Reg CS:E1-RIF1 3. Keep pressing SELECT until the desired selection is displayed. 4. Press STORE. 5. Press END.
Condition	• PS registration is executed in program [650] “PS Registration”.
Feature References	None

Programming Tables

[653]/[655]/[657]/[658]/[671]/[672]

PS Regist No.	[653] PS Extension Name Set	[671] PS Extension Number Set	[672] PS Password Set	[658] PS Extension Group Assignment	[655] PS Budget Management	[657] PS Class of Service	
						COS No. (1 – 8)	Primary Secondary
Default: all	Name 10 characters (max.) Not stored	PS Extension No. (2–4 digits) Not stored	PS Password (4 digits) 1234	Extension Group No. (1 – 16) 1	Charge Limitation (0 through 999999999) 0	1	1
All PSs							
01							
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
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Programming Tables

[653]/[655]/[657]/[658]/[671]/[672]

PS Regist No.	[653] PS Extension Name Set Name 10 characters (max.)	[671] PS Extension Number Set PS Extension No. (2-4 digits)	[672] PS Password Set PS Password (4 digits)	[658] PS Extension Group Assignment Extension Group No. (1 - 16)	[655] PS Budget Management Charge Limitation (0 through 99999999)	[657] PS Class of Service	
						Primary	Secondary
Default: all	Not stored	Not stored	1234	1	0	1	1
All PSs							
23							
24							
25							
26							
27							
28							
29							
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Programming Tables

[653]/[655]/[657]/[658]/[671]/[672]

PS Regist No.	[653] PS Extension Name Set		[671] PS Extension Number Set	[672] PS Password Set	[658] PS Extension Group Assignment	[655] PS Budget Management	[657] PS Class of Service	
	Name 10 characters (max.)						PS Extension No. (2-4 digits)	PS Password (4 digits)
Default: all	Not stored	Not stored	Not stored	1234	1	0	1	1
All PSs								
45								
46								
47								
48								
49								
50								
51								
52								
53								
54								
55								
56								
57								
58								
59								
60								
61								
62								
63								
64								

PS Regist No.	[659] PS DIL 1:N Extension – Day																								<Note> I : Immediate, D : Disable			
	CO01	CO02	CO03	CO04	CO05	CO06	CO07	CO08	CO09	CO10	CO11	CO12	CO13	CO14	CO15	CO16	CO17	CO18	CO19	CO20	CO21	CO22	CO23	CO24	I	D	I	D
Default: all	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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PS Regist No.	[659] PS DIL 1:N Extension – Day																								<Note> I : Immediate, D : Disable			
	CO01	CO02	CO03	CO04	CO05	CO06	CO07	CO08	CO09	CO10	CO11	CO12	CO13	CO14	CO15	CO16	CO17	CO18	CO19	CO20	CO21	CO22	CO23	CO24	I	D	I	D
Default: all	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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Programming Tables

[661]

		[661] PS Outgoing Permitted CO Line Assignment – Day																								<Note> E : Enable, D : Disable			
PS Regist No.																									CO20	CO21	CO22	CO23	CO24
	CO01	CO02	CO03	CO04	CO05	CO06	CO07	CO08	CO09	CO10	CO11	CO12	CO13	CO14	CO15	CO16	CO17	CO18	CO19	CO20	CO21	CO22	CO23	CO24					
Default: all	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
All PSs																													
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02																													
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Programming Tables

[661]

		[661] PS Outgoing Permitted CO Line Assignment – Day																								<Note> E : Enable, D : Disable			
PS Regist No.	CO01 CO02 CO03 CO04 CO05 CO06 CO07 CO08 CO09 CO10 CO11 CO12 CO13 CO14 CO15 CO16 CO17 CO18 CO19 CO20 CO21 CO22 CO23 CO24																												
	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	
Default: all	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
All PSs																													
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Programming Tables

[661]

		[661] PS Outgoing Permitted CO Line Assignment – Day																								<Note> E : Enable, D : Disable			
PS Regist No.																									CO20	CO21	CO22	CO23	CO24
	CO01	CO02	CO03	CO04	CO05	CO06	CO07	CO08	CO09	CO10	CO11	CO12	CO13	CO14	CO15	CO16	CO17	CO18	CO19	CO20	CO21	CO22	CO23	CO24					
Default: all	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
All PSs																													
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Programming Tables

[662]

		[662] PS Outgoing Permitted CO Line Assignment – Night																								<Note> E : Enable, D : Disable			
PS Regist No.	Default: all All PSs	CO01	CO02	CO03	CO04	CO05	CO06	CO07	CO08	CO09	CO10	CO11	CO12	CO13	CO14	CO15	CO16	CO17	CO18	CO19	CO20	CO21	CO22	CO23	CO24				
		E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D
23																													
24																													
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Programming Tables

[662]

		[662] PS Outgoing Permitted CO Line Assignment – Night																								<Note> E : Enable, D : Disable										
PS Regist No.	Default: all All PSs	CO01	CO02	CO03	CO04	CO05	CO06	CO07	CO08	CO09	CO10	CO11	CO12	CO13	CO14	CO15	CO16	CO17	CO18	CO19	CO20	CO21	CO22	CO23	CO24											
		E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D									
45		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓								
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Programming Tables

[663]-[665]/[667]

	[663] PS Doorphone Ringing Assignment – Day	[664] PS Doorphone Ringing Assignment – Night	[665] PS Voice Mail Access Codes	[667] PS Extension Connection Assignment
PS Regist No.	Doorphone No.: TD816 (1-2/Disable), TD1232 (1-4, 4 entries max./Disable)		Mailbox No. (16 digits max.)	Connect No Connect
Default: all	Disable	Disable	Not Stored	✓
All PSs				
01				
02				
03				
04				
05				
06				
07				
08				
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11				
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21				
22				

Programming Tables

[663]-[665]/[667]

	[663] PS Doorphone Ringing Assignment – Day	[664] PS Doorphone Ringing Assignment – Night	[665] PS Voice Mail Access Codes	[667] PS Extension Connection Assignment
PS Regist No.	Doorphone No.: TD816 (1-2/Disable), TD1232 (1-4, 4 entries max./Disable)		Mailbox No. (16 digits max.)	Connect No Connect
Default: all	Disable	Disable	Not Stored	✓
All PSs				
23				
24				
25				
26				
27				
28				
29				
30				
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Programming Tables

[663]-[665]/[667]

	[663] PS Doorphone Ringing Assignment – Day	[664] PS Doorphone Ringing Assignment – Night	[665] PS Voice Mail Access Codes	[667] PS Extension Connection Assignment
PS Regist No.	Doorphone No.: TD816 (1-2/Disable), TD1232 (1-4, 4 entries max./Disable)		Mailbox No. (16 digits max.)	Connect No Connect
Default: all	Disable	Disable	Not Stored	✓
All PSs				
45				
46				
47				
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Programming Tables

[654]/[680]

[654] PS SXDP Assignment												
Default: All jacks – Disable												
Jack No. All jacks	E		D		Jack No.		E		D		Jack No.	
01-1			14-1			27-1			40-1			53-1
01-2			14-2			27-2			40-2			53-2
02-1			15-1			28-1			41-1			54-1
02-2			15-2			28-2			41-2			54-2
03-1			16-1			29-1			42-1			55-1
03-2			16-2			29-2			42-2			55-2
04-1			17-1			30-1			43-1			56-1
04-2			17-2			30-2			43-2			56-2
05-1			18-1			31-1			44-1			57-1
05-2			18-2			31-2			44-2			57-2
06-1			19-1			32-1			45-1			58-1
06-2			19-2			32-2			45-2			58-2
07-1			20-1			33-1			46-1			59-1
07-2			20-2			33-2			46-2			59-2
08-1			21-1			34-1			47-1			60-1
08-2			21-2			34-2			47-2			60-2
09-1			22-1			35-1			48-1			61-1
09-2			22-2			35-2			48-2			61-2
10-1			23-1			36-1			49-1			62-1
10-2			23-2			36-2			49-2			62-2
11-1			24-1			37-1			50-1			63-1
11-2			24-2			37-2			50-2			63-2
12-1			25-1			38-1			51-1			64-1
12-2			25-2			38-2			51-2			64-2
13-1			26-1			39-1			52-1			
13-2			26-2			39-2			52-2			

[680] Cell Station Number Assignment for PS Registration			
	Item	Default	Change
TD816	RIF1	✓	
	RIF2		
TD1232	E1-RIF1	✓	
	E1-RIF2		
	E1-RIF3		
	E1-RIF4		
	E1-RIF5		
	E1-RIF6		
	E2-RIF1		
	E2-RIF2		
	E2-RIF3		
	E2-RIF4		
	E2-RIF5		
	E2-RIF6		

<Note> E : Enable, D : Disable

Programming Tables

[668]/[673]-[675]

PS Regist No.	[668] PS Data Line Security		[673] PS CLIP / COLP Number Assignment	[674] PS Extension Intercept Routing – Day		[675] PS Extension Intercept Routing – Night	
	On	Off		Disable	Extension No. (2-4 digits)	Disable	Extension No. (2-4 digits)
Default: all	✓		Not Stored	✓		✓	
All PSs							
01							
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Programming Tables

[668]/[673]-[675]

PS Regist No.	[668] PS Data Line Security		[673] PS CLIP / COLP Number Assignment	[674] PS Extension Intercept Routing – Day		[675] PS Extension Intercept Routing – Night	
	On	Off		Disable	Extension No. (2-4 digits)	Disable	Extension No. (2-4 digits)
Default: all	✓		Not Stored	✓		✓	
All PSs							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
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37							
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40							
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42							
43							
44							

Programming Tables

[668]/[673]-[675]

PS Regist No.	[668] PS Data Line Security		[673] PS CLIP / COLP Number Assignment	[674] PS Extension Intercept Routing – Day		[675] PS Extension Intercept Routing – Night	
	On	Off		Disable	Extension No. (2-4 digits)	Disable	Extension No. (2-4 digits)
Default: all	<input checked="" type="checkbox"/>		Not Stored	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
All PSs							
45							
46							
47							
48							
49							
50							
51							
52							
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Printed in Japan

PSQX1544YA S0798MT1079