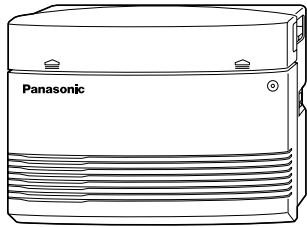# Panasonic

Advanced Hybrid System

Installation Manual

Model No. KX-TA624

Please read this manual before connecting the Advanced Hybrid System.

Thank you for purchasing this Panasonic Model KX-TA624,
Advanced Hybrid System.

System Components

	Model	Description
Service Unit	KX-TA624	Advanced Hybrid System (Main Unit)
Telephone	KX-T7130 KX-T7020 KX-T7030 KX-T7050 KX-T7055	Proprietary telephone with display Proprietary telephone Proprietary telephone with display Proprietary telephone Proprietary telephone
Optional Equipment	KX-TA62460 KX-TA62470 KX-TA62477 KX-TA62491 KX-TA62493	Doorphone/Door Opener Card 8 Extension Expansion Card 3 CO Line and 8 EXT Expansion Card OGM/FAX Detection Card Caller ID Card
	KX-T30865 KX-T30890 KX-T7090	Doorphone Headset (Earphone type) Headset (Headphone type)

System Components Table

Attention

- 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 Advanced 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 SERVICED 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 SUPPLY CORD IS USED AS THE MAIN DISCONNECT DEVICE, ENSURE THAT THE SOCKET-OUTLET IS LOCATED/INSTALLED NEAR THE EQUIPMENT AND IS EASILY ACCESSIBLE.

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

The serial number of this product may be found on the label affixed to the side of the unit. You should note the model number and 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.: _____

Attention

When you ship the product
Carefully pack and send it prepaid, adequately insured and preferably in the original carton. Attach a postage-paid letter, detailing the symptom, to the outside of the carton. DO NOT send the product to the Executive or Regional Sales offices. They are NOT equipped to make repairs.

Product service
Panasonic Factory Servicenters for this product are listed in the servicenter directory. Consult your authorized Panasonic dealer for detailed instructions.

For your future reference

DATE OF PURCHASE _____

NAME OF DEALER _____

DEALER'S ADDRESS _____

_____

_____

_____

DEALER'S TEL NO. _____

Important Safety Instructions

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

1. Read and understand all instructions.

2. Follow all warnings and instructions marked on the product.

3. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

4. Do not use this product near water, for example, near a bathtub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool.

5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.

6. Slots and openings in the cabinet and the back or bottom are provided for ventilation, to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on the bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation unless proper ventilation is provided.

7. This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your dealer or local power company.

8. This product is equipped with a three wire grounding type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding type power outlet. 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 safety purpose of the grounding type plug.

9. Do not allow anything to rest on the power cord. Do not locate this product where the cord will be abused by people walking on it.

10. Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.

Important Safety Instructions

11. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on the product.

12. To reduce the risk of electric shock, do not disassemble this product, but take it to a qualified serviceman when some service or repair work is required. Opening or removing covers may expose you to dangerous voltages or other risks. Incorrect reassembly can cause electric shock when the appliance is subsequently used.

13. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

    A. When the power supply cord or plug is damaged or frayed.

    B. If liquid has been spilled into the product.

    C. If the product has been exposed to rain or water.

    D. If the product does not operate normally by following the operating instructions. Adjust only those controls, that are covered by the operating instructions because improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.

    E. If the product has been dropped or the cabinet has been damaged.

    F. If the product exhibits a distinct change in performance.

14. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.

15. Do not use the telephone to report a gas leak in the vicinity of the leak.

SAVE THESE INSTRUCTIONS

Telephone Company and F.C.C. Requirements and Responsibilities

1. Notification to the Telephone Company

Customers, before connecting terminal equipment to the telephone network, shall upon request of the Telephone Company, inform the Telephone Company of the particular line(s) to which such connection is made, the F.C.C. registration number (see the label on the bottom of the unit) and ringer equivalence number (REN) of the registered terminal equipment.

The REN is useful in determining the quantity of devices you may connect to your telephone line and still have all of those devices ring when your telephone number is called. In most, but not all areas, the sum of the REN's of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to your line, as determined by the REN, you should contact your local telephone company to determine the maximum REN for your calling area.

2. Connection to Telephone Line

This unit must not be connected to a coin operated line. If you are on a party line, check with your local telephone company.

3. Incidence of Harm to the Telephone Lines

Should terminal equipment cause harm to the telephone network, the telephone company shall, where practical, notify the customer that temporary discontinuance of service may be required. However, where prior notice is not practical, the telephone company may temporarily discontinue service forthwith, if such action is reasonable in the circumstances. In case of such unnotified temporary discontinuance of service, the telephone company shall:

   (a) Promptly notify the customer of such temporary discontinuance of service.

   (b) Afford the customer the opportunity to correct the situation which gave rise to the temporary discontinuance.

   (c) Inform the customer of the right to bring a complaint to the Federal Communication Commission pursuant to the procedures set out in Subpart E of Part 68 of FCC Telephone Equipment Rules.

4. Compatibility of the Telephone Network and Terminal Equipment

(a) Availability of telephone interface information.

Technical information concerning interface parameters and specifications not specified in FCC Rules, including the number of Ringers which may be connected to a particular telephone line, which is needed to permit Terminal Equipment to operate in a manner compatible with Telephone Company communications facilities, shall be provided by the Telephone Company upon customer's request.

(b) Changes in Telephone Company Communications Facilities, Equipment, Operations and Procedures.

The Telephone Company may make changes in its communications facilities, equipment, operations or procedures, where such action is reasonably required in the operation of its business and is not inconsistent with the rules and regulations in FCC Part 68.

If such changes can be reasonably expected to render any customer Terminal Equipment incompatible with Telephone Company Communications Facilities, or require modification or alteration of such Terminal Equipment, or otherwise materially affect its use or performance, the customer shall be given adequate notice in writing, to allow the customer an opportunity to maintain uninterrupted service.

Telephone Company and F.C.C. Requirements and Responsibilities

Notify the Telephone Company

Installation must be performed by a qualified professional installer.
Before connecting this equipment to any telephone, call the telephone company and inform them of the following:

- Telephone numbers to which the system will be connected
- Make . . . . Panasonic
- Model KX-TA624
- FCC Registration No. . . . . found on the side of the unit
- Ringer Equivalence No. . . . . found on the side of the unit
- Facility Interface Code 02LS2
- Service Order Code 9.0F
- Required Network Interface Jack . . . . RJ 11

Note :

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
— Reorient or relocate the receiving antenna.
— Increase the separation between the equipment and receiver.
— Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
— Consult the dealer or an experienced radio/TV technician for help.

Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this device.
When programming emergency numbers and/or making test calls to emergency numbers:
1. Remain on the line and briefly explain to the dispatcher the reason for the call before hanging up.
2. Perform such activities in the off-peak hours, such as early morning hours or late evenings.

Introduction

This Installation Manual provides technical information for the Panasonic Advanced Hybrid System, KX-TA624. 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 the tone/ring tone and default values for system programming.

Section 6, Troubleshooting
Provides information for system and telephone troubleshooting.

Section 7, Programming Tables
Provides a hard copy reference for entering user-programmed data.

NOTE
The following document may be used in conjunction with this manual.
• User Manual for the KX-TA624 System, Proprietary Telephones and Single Line
  Telephones

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Section 3 Features

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Contents

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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
Outside (CO) line	**3**	**3**
Extension	**8**	**16**

Paralleled Telephone Connection

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

Hybrid System

This system supports the connection of analog proprietary telephones and single line devices such as single line telephones, fax machines, and data terminals.

Proprietary Telephones (PT)

The system supports five different models of analog proprietary telephones which range from a set with a monitor to a set with a display and speakerphone button.

Programming System

The system is programmed from a proprietary telephone.

Voice Mail Integration

The system supports Voice Processing Systems with in-band DTMF signaling as well as APT Integration. The Panasonic Voice Processing System provides automated attendant, voice mail, interview and custom services.

Caller ID

Allows the user to see the name or telephone number of a caller on the telephone display before answering a call.

Remote Station Lock Control

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

1.2　　Basic System Construction

The KX-TA624 Advanced Hybrid System has a basic capacity of three outside (CO) lines and eight extensions. It is capable of supporting Panasonic analog proprietary telephones, and single line devices such as single line telephones and a fax machine.
To expand its capabilities, the system can be equipped with optional components or customer-supplied peripherals such as an external speaker and external music source (e.g. a radio).
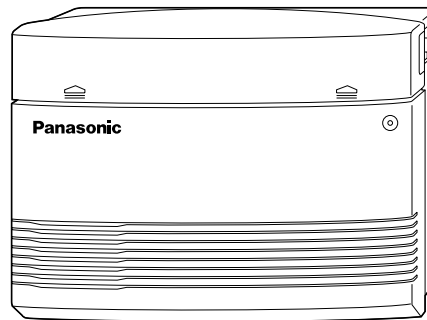
1.3　　Proprietary Telephones

The following Panasonic proprietary telephones are available for use with this system.

Proprietary Telephone	Description
KX-T7130	Display, speakerphone, 12 Flexible CO, 12 PF
KX-T7020	Speakerphone, 12 Flexible CO, 4 PF
KX-T7030	Display, speakerphone, 12 Flexible CO, 4 PF
KX-T7050	Monitor, 12 Flexible CO, 4 PF
KX-T7055	Monitor, 3 Flexible CO, 3 PF

Note:　Flexible CO:　Flexible CO button (programmable)
　　　　　PF:　Programmable Feature button

1.4 Options

1.4.1 3 CO Line and 8 EXT Expansion Card (KX-TA62477)

Adds three outside (CO) lines (outside (CO) lines 4 through 6) and eight extensions (JACK 09 through 16).

1.4.2 8 Extension Expansion Card (KX-TA62470)

Adds eight extensions (JACK 17 through 24).

1.4.3 Caller ID Card (KX-TA62493)

This card supports the following.

Caller ID: Receives the Caller ID Service from the Central Office. A specified display proprietary telephone with Caller ID service can display the information. It can also display caller's information which has been stored in the system according to the Caller ID service.

Up to two cards can be installed to the system. One Caller ID card supports three outside (CO) lines.

1.4.4 OGM/FAX Detection Card (KX-TA62491)

This card supports the following. There are two circuits, therefore up to two calls can be received simultaneously.

Direct Inward System Access (DISA) with an OGM:
One of the system features. An outgoing message greets the external caller and provides information so that the caller can access the extension(s) directly.

Facsimile detection:
When the system receives a facsimile transmission signal by DISA, it automatically connects the specified facsimile extension.

Central Office

Outside (CO) Line

External Telephone
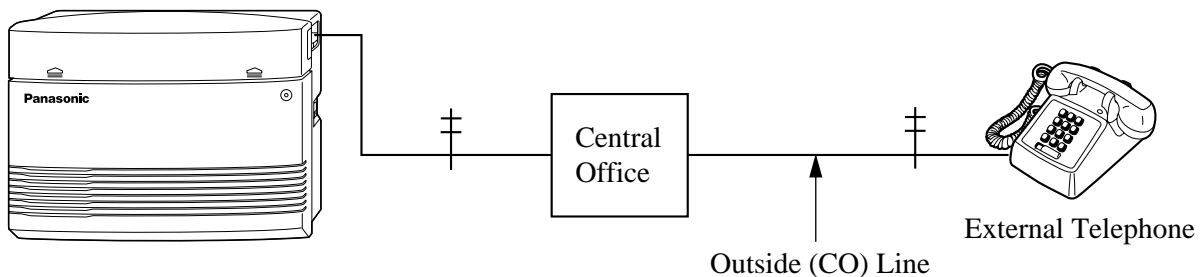
1.4.5   Doorphone/Door Opener Card (KX-TA62460)

This card supports four doorphones and four door openers. The doorphone is optional (KX-T30865).

Doorphone 1   Doorphone 2   Doorphone 3   Doorphone 4

Door Opener 1   Door Opener 2   Door Opener 3   Door Opener 4
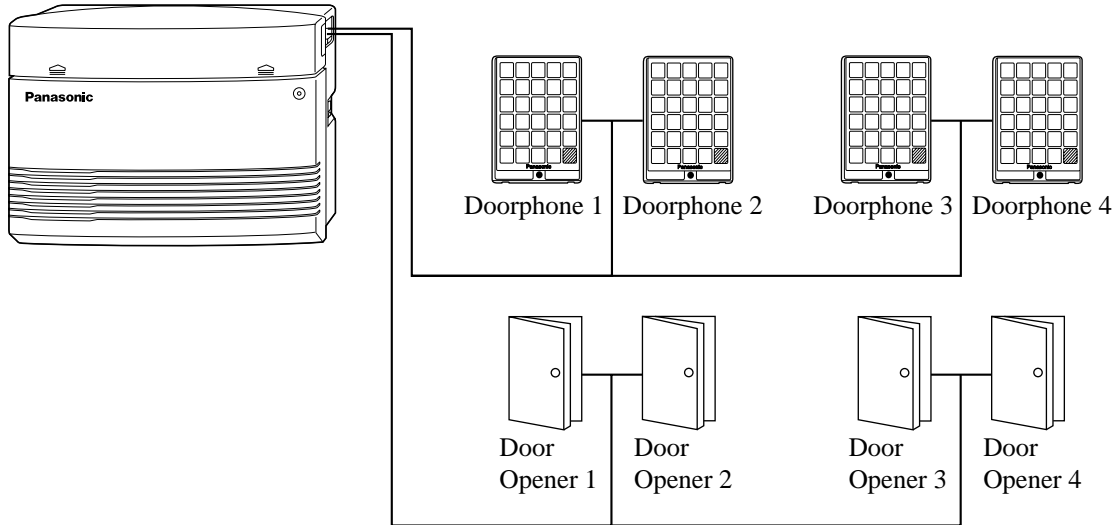
1.4.6   DSS Console (KX-T7040)

Allows easy and quick access to stations and features. The Busy Lamp Field shows the idle or busy status of each station. DSS Consoles are designed for use with a proprietary telephone. The system supports up to two DSS Consoles per system.

Paired Telephone
(Proprietary Telephone)

DSS Console
KX-T7040

Pair

1.5　　　Specifications

1.5.1　　General Description

System Capacity　　　Outside (CO) Lines　3 max. (6 max. with a 3 CO Line and 8 EXT
　　　　　　　　　　　　　　　　　　　　　　　　　　Expansion Card)
　　　　　　　　　　　　Extensions　　　　　8 max. (24 max. with a 3 CO Line and 8 EXT
　　　　　　　　　　　　　　　　　　　　　　　　　　Expansion Card and 8 Extension Expansion
　　　　　　　　　　　　　　　　　　　　　　　　　　Card)

Control Method　　　CPU: 16 bit CPU
　　　　　　　　　　　　Control ROM: 4 Mbit, Control RAM; 1 Mbit

Switching　　　　　Space Division CMOS Crosspoint Switch

Power Supplies　　　Primary　　　　120 V AC, 60 Hz (1.2 A)
　　　　　　　　　　　　Secondary　　　Circuit Volt: +5 V, +26 V

Dialing　　　　　　Dial Pulse (DP) 10 pps, 20 pps, Tone (DTMF) Dialing, DTMF-DP

Intercom Paths　　　4

Connector　　　　　Outside (CO) Lines　　2-pin Modular Connector (RJ11)
　　　　　　　　　　　　Extensions/Doorphone　4-pin Modular Connector
　　　　　　　　　　　　Pager/Music Source　　EIAJ RC-6701 A plug (two-conductor,
　　　　　　　　　　　　　　　　　　　　　　　ø 3.5 mm in diameter)

Extension Connection Cable

Single Line Telephone	1 pair wire (T, R)
KX-T7020 KX-T7030 KX-T7050 KX-T7055 KX-T7130	2 pair wire (T, R, H, L)

SMDR (Station Message Detail Recording)
　　　　　　　　　　　　Interface　　　　　　Serial Interface (RS-232C) (D-SUB, 9-pin)
　　　　　　　　　　　　Output Equipment　　Printer
　　　　　　　　　　　　Recording Details　　Date, Time, Extension Number, Outside
　　　　　　　　　　　　　　　　　　　　　　(CO) Line Number, Dialed Number, Call
　　　　　　　　　　　　　　　　　　　　　　Duration, Account Code, Caller ID

1.5.2   Characteristics

Station Loop Limit   KX-T7020 / KX-T7030 / KX-T7050 /
KX-T7055 / KX-T7130   . . . . 40 Ω
Single Line Telephone . . . . 600 Ω including set
Doorphone   . . . . 20 Ω

Minimum Leakage Resistance   15 000 ohms

Maximum Number of Station Instruments per Line
1 for a KX-T7130, KX-T7020, KX-T7030, KX-T7050, KX-T7055
or single line telephone
2 by Parallel Connection of a proprietary telephone and a single
line telephone

Ring Voltage   80 Vrms at 20 Hz depending on the Ringing Load

Central Office Loop Limit   1 600 ohms max.

Environmental Requirements   0 °C – 40 °C {32 °F – 104 °F},
10 % – 90 % relative humidity

Hookswitch Flash Time Range   204 ms – 1 000 ms

1.5.3 System Capacity

Lines, Cards, Station Equipment

Item	Max. Quantity
Service Units	1
Outside (CO) Lines	6
Extension Jacks	24
Station Terminals	48
3 CO Line and 8 EXT Expansion Card	1
8 Extension Expansion Card	1
Caller ID Card	2
OGM/FAX Detection Card	1
Doorphone/Door Opener Card	1
Doorphones	4
Door Openers	4
External Pager	1
External Music Source	1
DSS Consoles	2

System Data

Item	Max. Quantity	
Operator	1	
System Speed Dialing	100	
One-Touch Dialing	24	per extension (proprietary telephone)
Personal Speed Dialing	10	per extension
Call Park Areas	10	
Absent Messages	6	
Toll Restriction Classes	5	
Extension Groups	8	
Message Waiting	8	per extension (proprietary telephone)

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 and terminal equipment.

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 system is designed 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 system.
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 the system in the same room with the above equipment.)
7. Install at least 1.8 m {6 feet} away from radios and televisions. (Both the system and Panasonic proprietary telephones)
8. Do not obstruct area around the system (for reasons of maintenance and inspection — be especially careful to allow space for cooling above and at the sides of the system).

Wiring Precautions

Be sure to follow these instructions when wiring the unit:

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.

2.1   Before Installation

2. If cables are run on the floor, use protectors to prevent the wires from being 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 Panasonic proprietary telephones (e.g. KX-T7030, KX-T7130).

5. Unplug the system during wiring. After all of the wiring is completed, plug in the system.

6. Mis-wiring may cause the system to operate improperly. Refer to Section 6.1 "Installation" and Section 6.2 "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. Outside (CO) Lines should be installed with lightning protectors. For details, refer to Section 2.3.3 "Outside (CO) Line Connection – Installing Lightning Protectors".

Side View

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

Warning: Static sensitive connectors
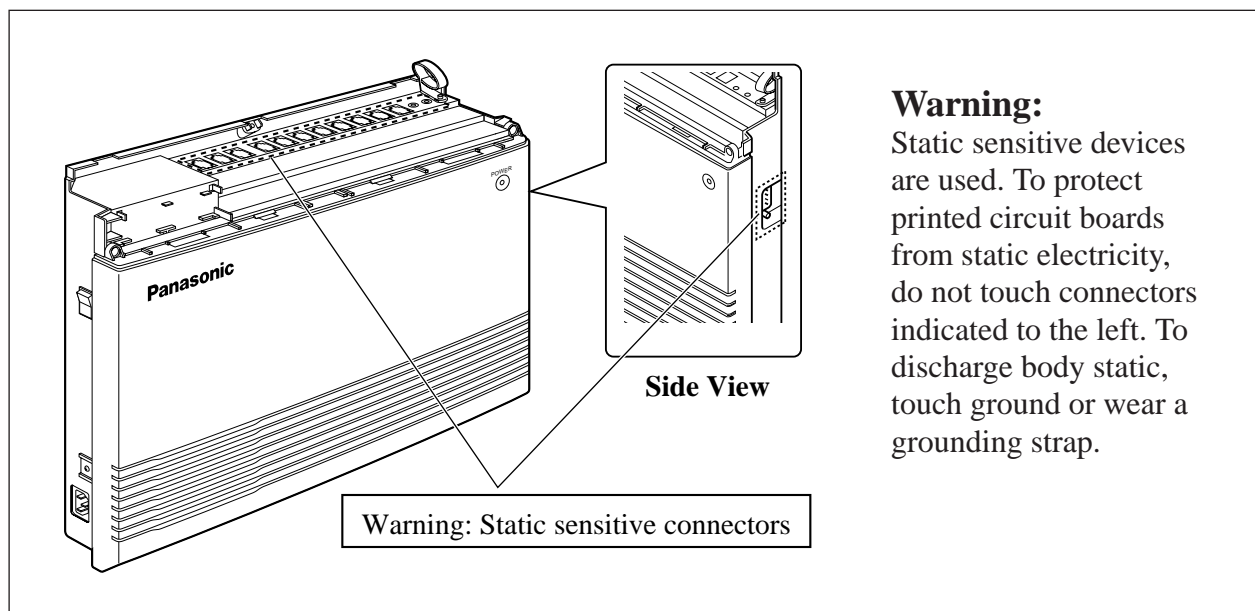
2.2 Installation of the Main Unit

2.2.1 Unpacking

Unpack the box and check the items below.

Main Unit	one
AC Cord	one
Screws (Wall Mounting)	three
Washers (Wall Mounting)	three
Pager Connector	one
Music Source Connector	one

2.2.2 Location of Interfaces

External Music Jack
Paging Jack
Extension Modular Jacks
Strap (for cables)
Outside (CO) Line Modular Jacks

Power Switch

Protective Earth Terminal

AC Inlet

Power Indicator

Serial Interface Connector (RS-232C)

Side View
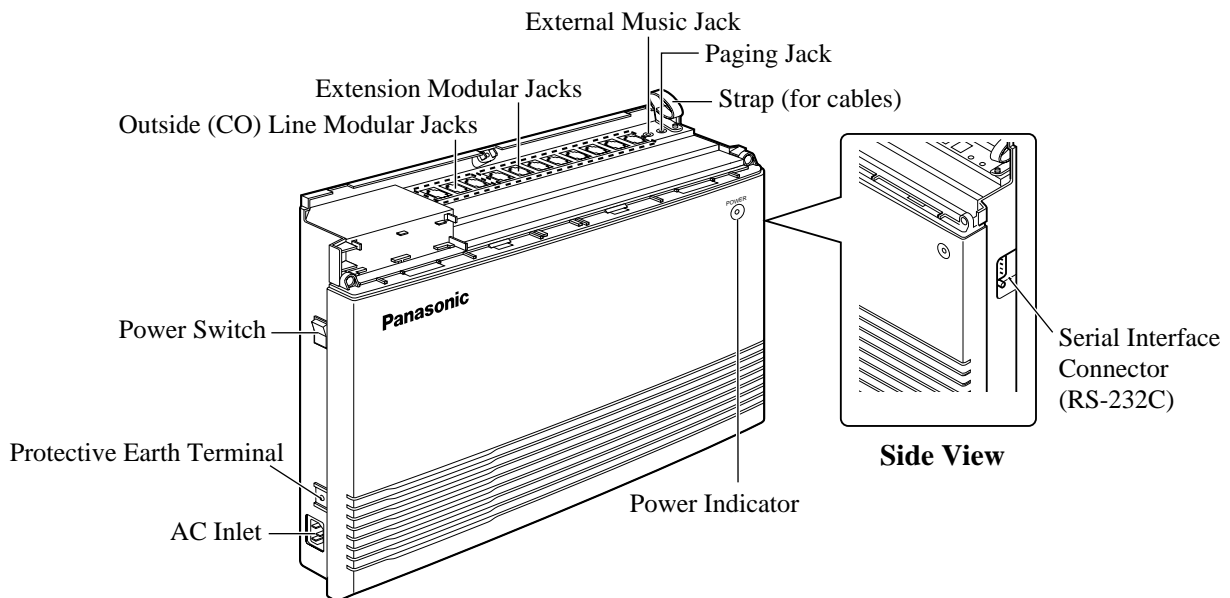
2.2.3   Wall Mounting

This set is designed 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 screws with the same diameter as the ones enclosed.

Mounting on a Wooden Wall

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

Template

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

Wooden Wall
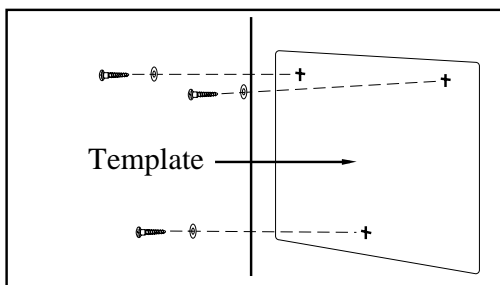
Drive the screw to this position
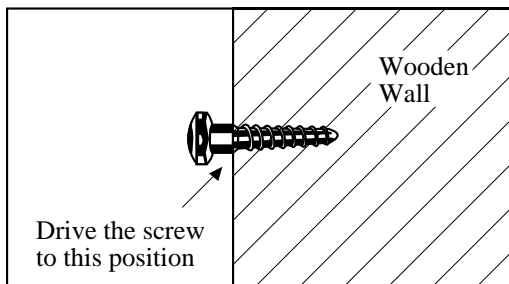
3. Hook the main unit on the screw heads.
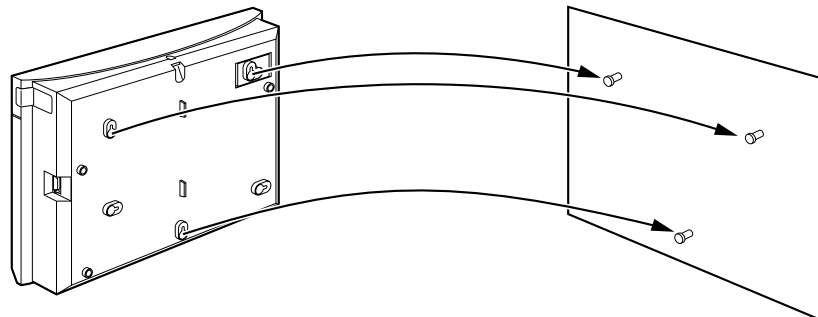
Mounting on a Concrete or Mortar Wall

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

2. Drill holes and drive the anchor plugs (user-supplied) with a hammer, flush to the wall.

To the wall surface   Concrete Wall
Anchor Plug
6.4 mm
{1/4 inch}
29 mm
{1 1/8 inch}
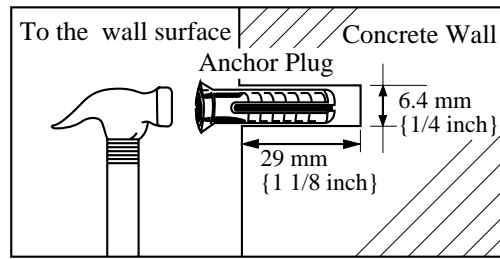
3. Install the screws (included) into the anchor plugs.

Drive the screw to this position
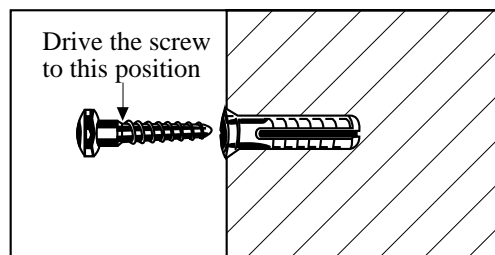
4. Hook the main unit on the screw heads.

2.2.4   Frame Ground Connection

IMPORTANT!!!
Connect the frame of the main unit to the ground.

1. Loosen the screw.

2. Insert the grounding wire.

3. Tighten the screw.

4. Connect the grounding wire to the ground.

To the ground

Screw
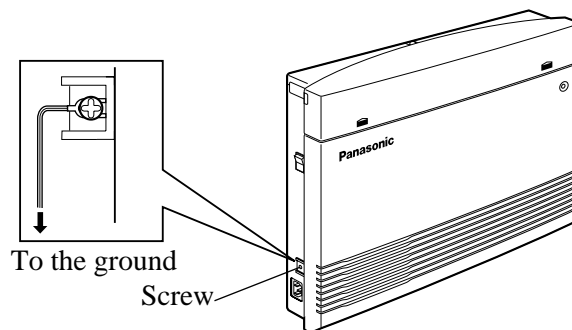
In most of North America, the ground provided by the "Third wire ground" at the commercial power outlet will be satisfactory. However, in some cases this ground may be installed incorrectly. Therefore, the following test procedure should be performed.

Test Procedure
1. Obtain a suitable voltmeter and set it for a possible reading of up to 250 V AC.
2. Connect the meter probes between the two main AC voltage points on the wall outlet. The reading obtained should be 108 V AC – 132 V AC.
3. Move one of the meter probes to the 3rd prong terminal (GND).
   Either the same reading or a reading of 0 V should be obtained.
4. If a reading of 0 V at one terminal and a reading of 108 V AC – 132 V AC at the other terminal is not obtained, the outlet is not properly grounded.
   This condition should be corrected by a qualified electrician (per article 250 of the National Electrical Code).
5. If a reading of 0 V at one terminal and a reading of 108 V AC – 132 V AC at the other terminal is obtained, then set the meter to the "OHMS/RX1" scale, place one probe at the GND Terminal and the other probe at the terminal which gave a reading of 0 V.
   A reading of less than 1 Ω should be obtained.
   If the reading is not obtained, the outlet is not adequately grounded. See a qualified electrician.

2.3   Connection

2.3.1   System Connection Diagram

[ ] : needs an Optional Card.

6 Outside (CO) Lines

to outside (CO) lines 1 – 3 (initial)
to outside (CO) lines 4 – 6 (additional)
(Lightning Protectors)

External Music Source

Printer   or   Computer

Amplifier   Speaker

24 Extensions

Extension jacks 01 – 08 (initial)
Extension jacks 09 – 24 (additional)

(one pair)

(two pair)

Single Line Telephone

KX-T7020

(one pair)

(two pair)

Data Terminal

KX-T7130

KX-T7040

(one pair)

(two pair)

(two pair)

Cordless Phone

KX-T7030

KX-T7050

Door Openers

(one pair)

(two pair)

Telephone Answering Machine
with Facsimile

KX-T7055

(one pair)

Note
- It is recommended that the extension of jack 01 is a display proprietary telephone.
- Parallel connection of telephones is possible. Refer to Section 2.3.7, "Paralleled Telephone Connection".

Doorphones
KX-T30865   Voice Processing System

2.3.2 Opening the Front Cover

1. Loosen the screw.

2. Remove the top front cover.
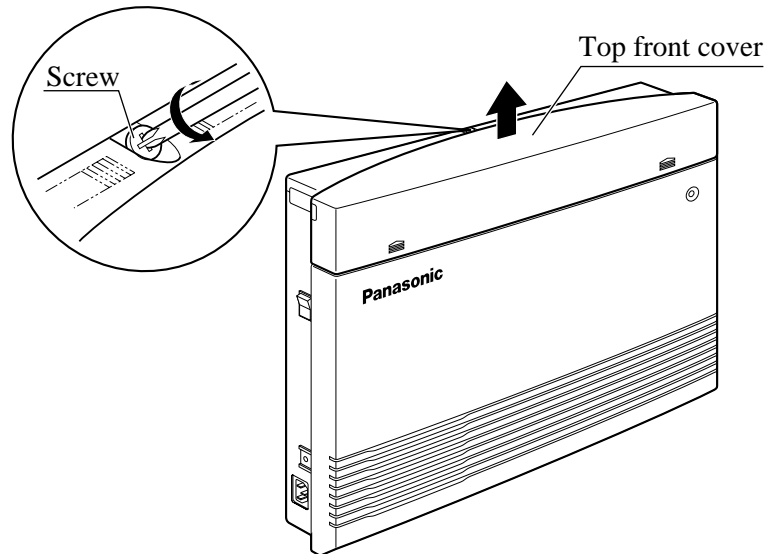
Note The screw cannot be removed from the cover.

2.3.3   Outside (CO) Line Connection

Connection

1. Insert the modular plugs of the telephone line cords (2-conductor wiring) into the modular jacks on the system.

2. Connect the line cord to the terminal board or the modular jacks from the Central Office jack.

View of TEL Jack (Outside (CO) Line)

T: Tip
R: Ring

T R

To Terminal Board or Modular Jacks from the Central Office

Panasonic

POWER
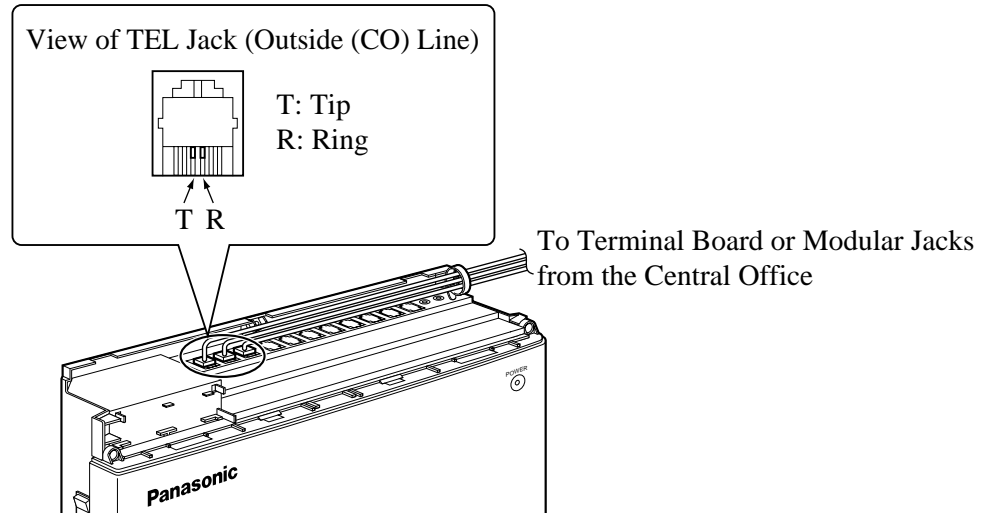
2.3.3　Outside (CO) Line Connection

Installing Lightning Protectors

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

A dangerous surge can occur if a telephone line comes in contact with a power line. Problems due to lightning surges have been steadily increasing 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 {33 feet} above ground can be as high as 200 000 V. This system should be installed with lightning protectors. In addition, grounding (connection to earth ground) is very important to protect the system.

Recommended lightning protectors
• TELESPIKE BLOK MODEL TSB (TRIPPE MFG. CO.)
• SPIKE BLOK MODEL SK6-0 (TRIPPE MFG. CO.)
• Super MAX™ (PANAMAX)
• MP1 (ITW LINK)

Installation
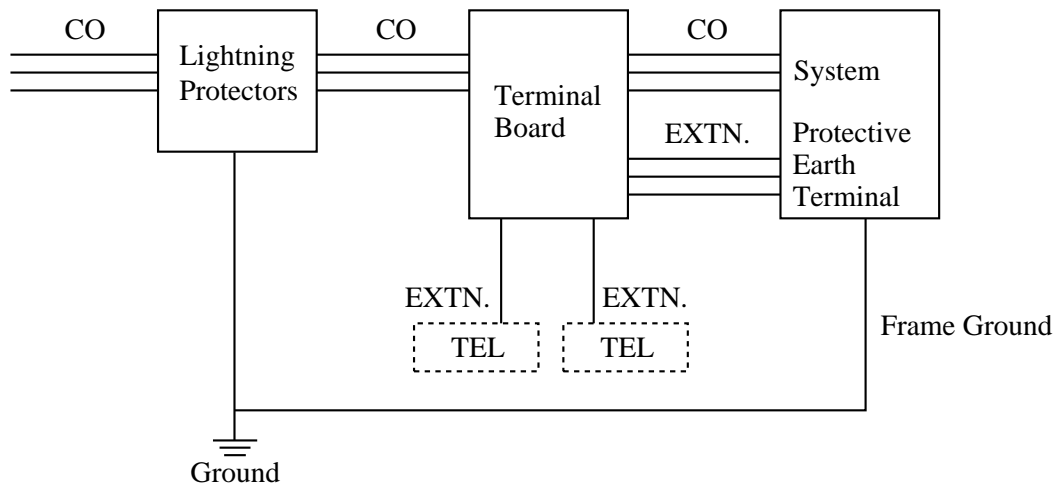
CO:　　Outside (CO) line
EXTN.: Extension line
TEL:　　Telephone

2.3.3   Outside (CO) Line Connection

Installation of an Earth Rod

Lightning
Protectors

CO

Grounding Wire

System

(Underground)

Rod

1) Installation location of the earth rod . . . . Near the protector
2) Check obstructions . . . . None
3) Composition of the earth rod . . . . Metal
4) Depth of the earth rod   . . . . More than 50 cm
                                                                      {20 inches}
5) Size of the grounding wire . . . . Thickness more than
                                                                      16 AWG

Note   • The above example is only a recommendation.
             • The length of the earth rod and required depth depend on the
                composition of the soil.

2.3.4   Extension Connection

Extension jacks 01 – 08 are for all kinds of telephones.

Telephone Wiring

The maximum length of the extension line cord (twisted cable) which connects the system and the extension is as follows.

	Diameter of the line	Max. length
Single Line Telephone	22 AWG	1798 m {5900 feet}
(Station Loop Limit:	24 AWG	1128 m {3700 feet}
600 Ω including set)	26 AWG	698 m {2290 feet}
Proprietary Telephone	22 AWG	360 m {1180 feet}
(Station Loop Limit:	24 AWG	229 m {750 feet}
40 Ω)	26 AWG	140 m {460 feet}

2 or 4-conductor wiring is required for each extension as listed below. There are four pins possible for connection: "T" (Tip), "R" (Ring), "L" (Low) and "H" (High).

Telephone	Wiring
Single line telephone	1 pair wire (T, R)
Proprietary telephone (e.g., KX-T7030, KX-T7130)	2 pair wire (L, H, T, R)

Note
- **If a KX-TA62493 is installed;**
  Note the jack numbers for the facsimile and single line telephone which have Caller ID service.
- If a telephone or answering machine with an A-A1 relay is connected to the system, set the A-A1 relay switch on the telephone or answering machine to the OFF position.

Connection

Insert the modular plugs of the telephone line cords (2 or 4-conductor wiring) into the modular jacks on the system.

View of TEL Jack (Extension)

H: High
T: Tip
R: Ring
L: Low

H T R L

To extensions
(JACK 01–08)
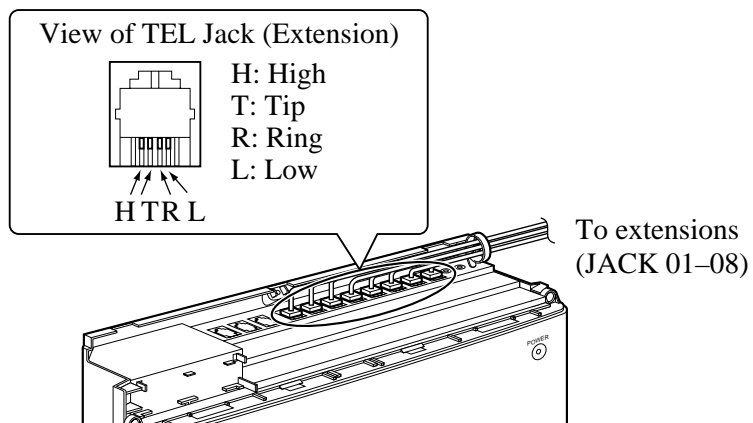
2.3.5   External Pager (Paging Equipment) Connection

One external pager (user-supplied) can be connected to the KX-TA624 as illustrated below.

Use an EIAJ RC-6701 A plug (two-conductor, ø 3.5 mm in diameter).
• Output impedance: 600 Ω

Maximum length of the cable
AWG 18 – 22: Under 10 m {33 feet}
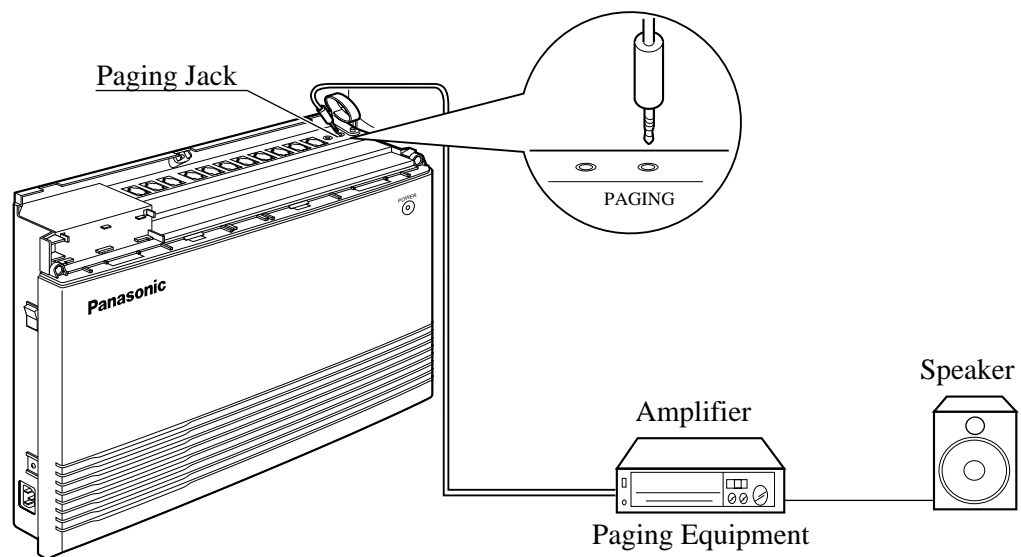
Note   • To adjust the sound level of the pager, use the volume control on the amplifier.

Programming Reference

Section 4, System Programming
[106] External Paging Access Tone

Feature References

Section 3, Features
Paging – All
Paging – External

2.3.6   External Music Source Connection

One music source, such as a radio (user-supplied), can be connected to the KX-TA624 as illustrated below.

Insert the plug to the earphone/headphone jack on the external music source.
Use an EIAJ RC-6701 A plug (two-conductor, ø 3.5 mm in diameter).
• Input impedance: 8 Ω

Maximum length of the cable
AWG 18 – 22: Under 10 m {33 feet}

External Music Jack

EXT.
MUSIC

Panasonic

External Music source
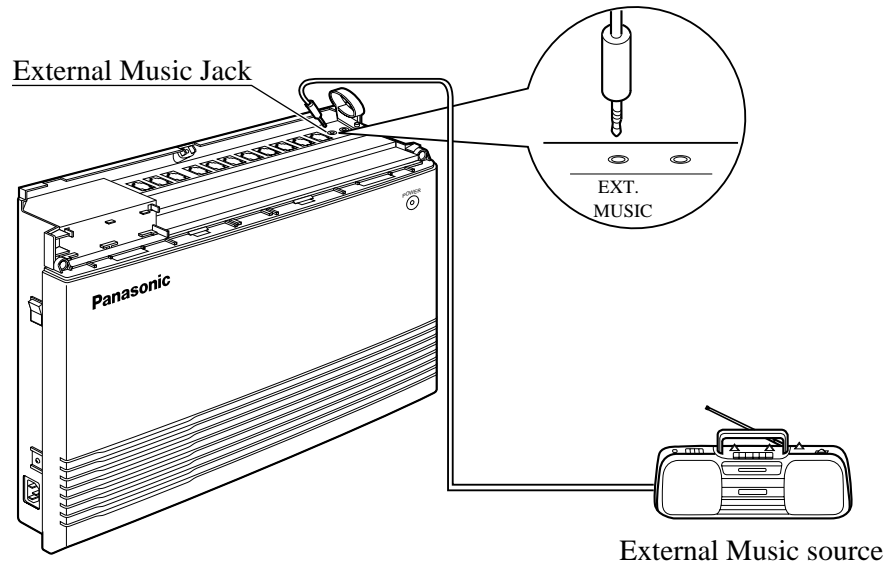
Note   • System programming for the music source used for Music on Hold is required.
• To adjust the sound level of the Music on Hold, use the volume control on the external music source.

Programming Reference

Section 4, System Programming
[111] Hold Music Selection

Feature References

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

2.3.7　Paralleled Telephone Connection
(for a Proprietary Telephone and a Single Line Telephone)

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

Using a Modular T-Adaptor
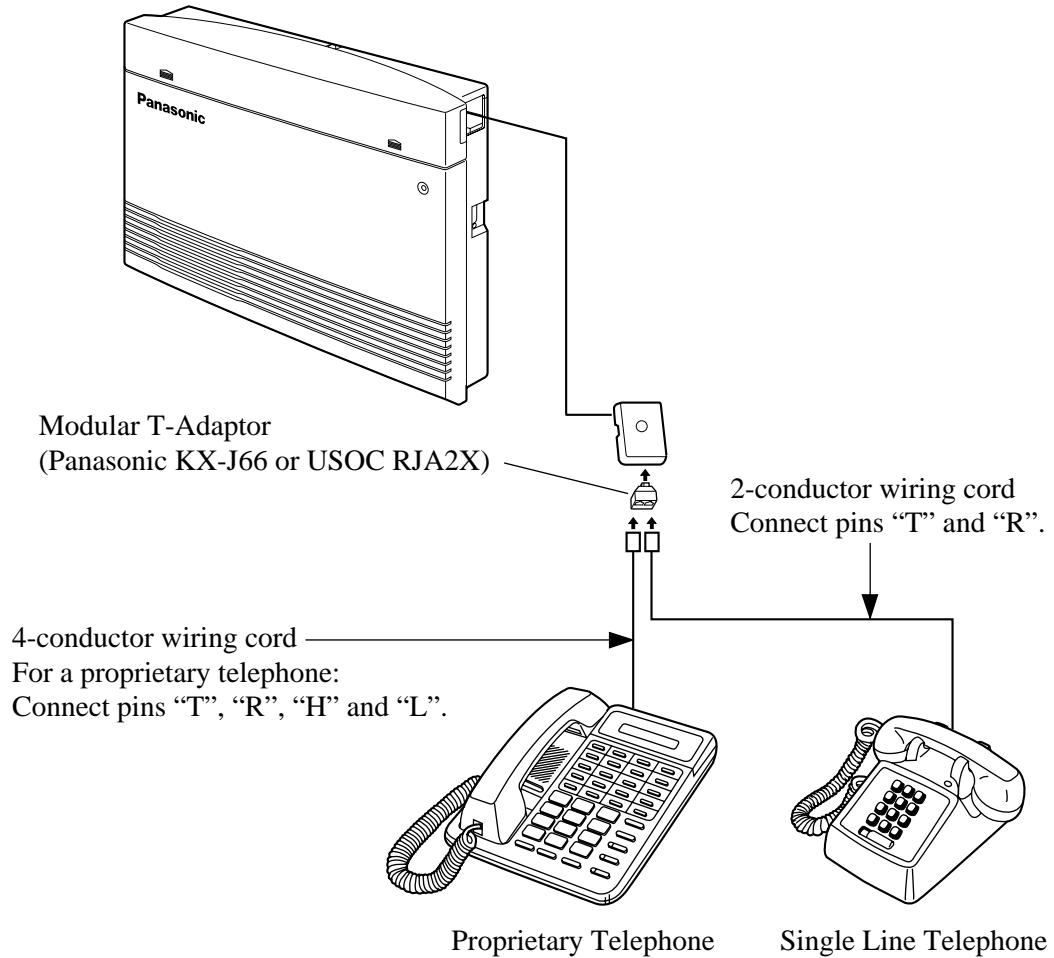
Modular T-Adaptor
(Panasonic KX-J66 or USOC RJA2X)

2-conductor wiring cord
Connect pins "T" and "R".

4-conductor wiring cord
For a proprietary telephone:
Connect pins "T", "R", "H" and "L".

Proprietary Telephone   Single Line Telephone

Programming Reference

Section 4, System Programming
[610] Paralleled Telephone Connection

Feature Reference

Section 3, Features
Paralleled Telephone

2.3.8   Polarity Sensitive Telephone Connection

If the telephone is polarity sensitive, follow the procedure below:

Outside (CO) Line

Extension

Reverse here

Outside (CO) Line

Extension
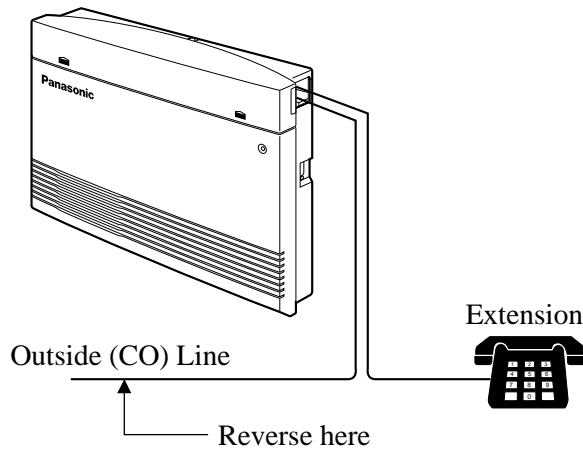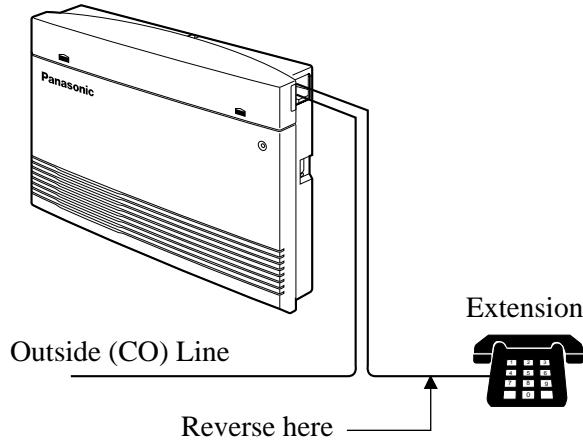
Reverse here

1. Complete all the required extension wiring.

2. Confirm that dialing can be done from all the extensions using a touch-tone telephone.
   If dialing fails, the polarity between the extension and the system must be reversed.

3. Reverse as shown.

4. Unplug the system.

5. Connect all outside (CO) lines.

6. Confirm that dialing can be done on the following extension using a touch-tone telephone.
   Extension (T, R) of jack 01: Outside (CO) line 1
   If dialing fails, the polarity between the system and the outside (CO) line must be reversed.

7. Reverse as shown.

8. Every time an extension telephone is replaced, repeat the procedure above.

2.3.9   Printer and PC Connection

A user-supplied printer or personal computer (PC) can be connected to the system. These are used to print out or refer to the SMDR call records and system programming data.
Connect the printer cable or the PC cable to the Serial Interface (RS-232C) connector. The cable must be shielded and the maximum length is 2 m {6.5 feet}.

Serial Interface
(RS-232C) (D-SUB, 9-pin)

Printer   or   Computer
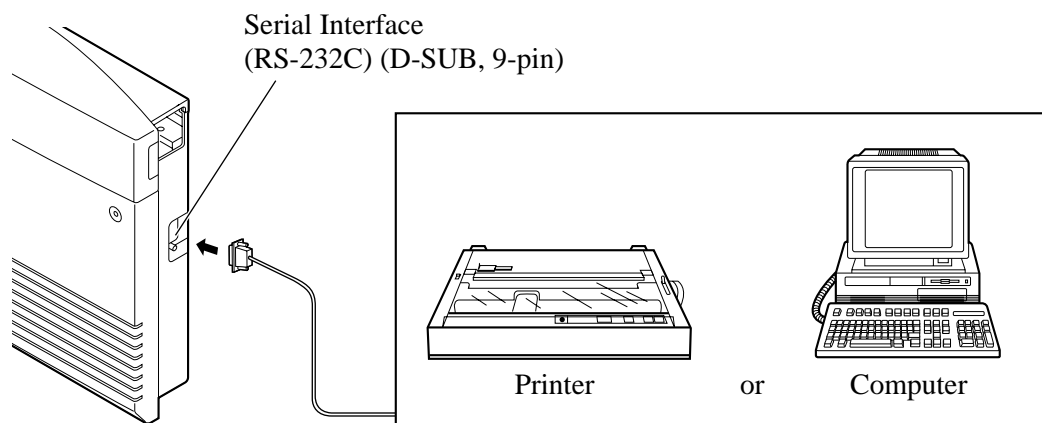
Arrange the cables so that the printer will be connected to the system as shown in the appropriate chart on the following page.

The pin configuration of the Serial Interface (RS-232C) Connector is as follows.

Pin no.	Signal name		Circuit type	
			EIA	CCITT
2	RXD	Received Data	BB	104
3	TXD	Transmitted Data	BA	103
4	DTR	Data Terminal Ready	CD	108.2
5	SG	Signal Ground	AB	102
6	DSR	Data Set Ready	CC	107
7	RTS	Request To Send	CA	105
8	CTS	Clear To Send	CB	106

2.3.9　　Printer and PC Connection

Connection Chart for a Printer / Personal Computer with the KX-TA624

If a printer or a PC with a 9-pin cable is connected, follow the chart below.

System				9-pin Cable Printer/PC		
Circuit type (EIA)	**Signal name**	**Pin no.**		**Pin no.**	**Signal name**	**Circuit type (EIA)**
BB	RXD	2		2	RXD	BB
BA	TXD	3		3	TXD	BA
CD	DTR	4		4	DTR	CD
AB	SG	5		5	SG	AB
CC	DSR	6		6	DSR	CC
CA	RTS	7		7	RTS	CA
CB	CTS	8		8	CTS	CB
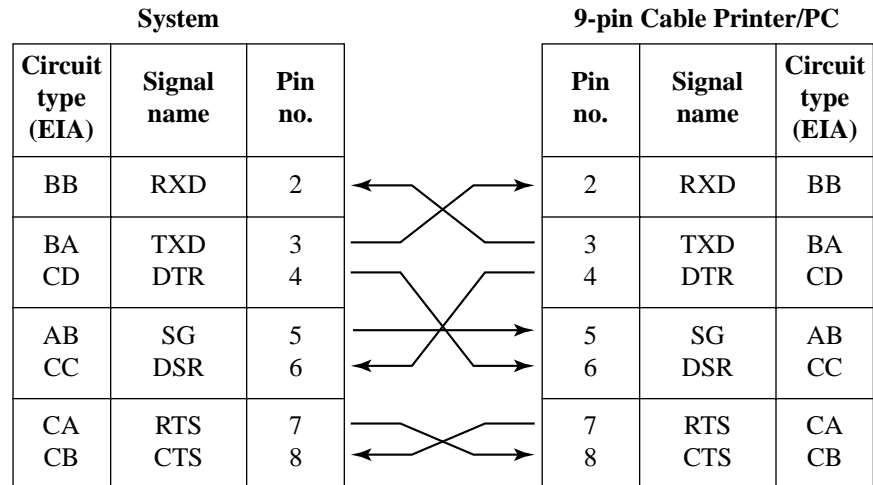
If a printer or a PC with a 25-pin cable is connected, follow the chart below.

System				25-pin Cable Printer/PC		
Circuit type (EIA)	**Signal name**	**Pin no.**		**Pin no.**	**Signal name**	**Circuit type (EIA)**
BB	RXD	2		1	FG	AA
				3	RXD	BB
BA	TXD	3		2	TXD	BA
CD	DTR	4				
AB	SG	5		20	DTR	CD
CC	DSR	6		7	SG	AB
CA	RTS	7		5	CTS	CB
CB	CTS	8		6	DSR	CC
				8	DCD	CF
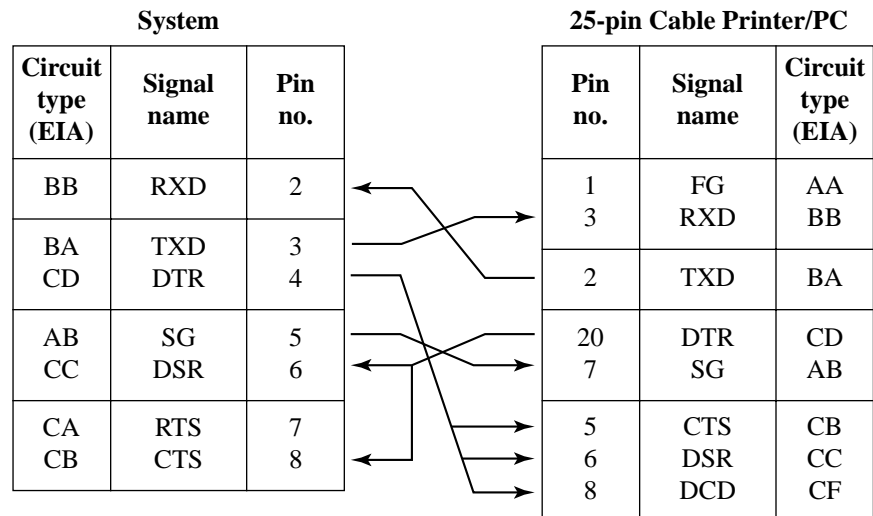
2.3.9   Printer and PC Connection

Serial Interface (RS-232C) Signals

Frame Ground: FG
Connects 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 remains ON whenever DR (DSR) is ON.

Clear To Send: CS (CTS) . . . . **(input)**
When the CS (CTS) circuit is ON, it 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: DR (DSR) . . . . **(input)**
When the DR (DSR) circuit is ON, it indicates the printer is ready. The DR (DSR) circuit being ON does not indicate that communication has been established with the printer.

Signal Ground: SG
Connects 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 ON LINE. The ER (DTR) circuit being ON does not indicate that communication has been established with the printer. It is switched OFF when the unit is OFF LINE.

Data Carrier Detect: CD (DCD) . . . . **(input)**
When ON, it indicates the data terminal (DTE) that the carrier signal is being received.

Programming References

Section 4, System Programming
[800] SMDR RS-232C Communication Parameters
[801] SMDR Parameter

Feature Reference

Section 3, Features
Station Message Detail Recording (SMDR)

2.4   Installation of Optional Cards

2.4.1   Location of Optional Cards

The location of the optional cards is shown below.

Precaution 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. If accessing the part is required, wear a grounding strap.

3 CO Line and 8 EXT Expansion Card (KX-TA62477) or 8 Extension Expansion Card (KX-TA62470) Connector

Doorphone/Door Opener Card (KX-TA62460) Connector

The front covers are open.

OGM/FAX Detection Card (KX-TA62491) Connector

Caller ID Card (KX-TA62493) Connector
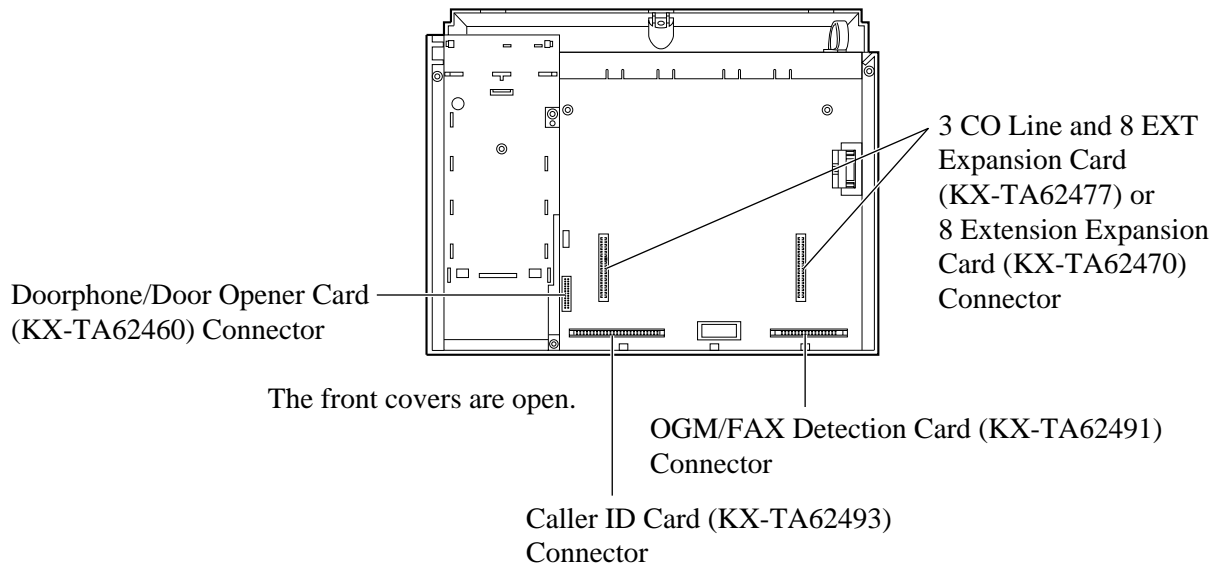
Note:
Power off the System, and unplug the AC cord before installing an optional card.

2.4.2　Caller ID and OGM/FAX Detection Card Installation

A Caller ID Card (KX-TA62493) and OGM/FAX Detection Card (KX-TA62491) can be installed to the system.

The Caller ID Card supports the following.
Caller ID: Receives the Caller ID Service from the Central Office. A display proprietary telephone with Caller ID service can display the information. It can also display caller's information which has been stored in the system according to the Caller ID service.

The OGM/FAX Detection Card supports the following.
Direct Inward System Access (DISA) with an OGM:
One of the system features. An outgoing message greets the external caller and gives information so that the caller can access the extension(s) directly.

Facsimile detection:
When the system receives a facsimile transmission signal by DISA, it automatically connects the specified facsimile extension.

1. Remove the two screws.

Screws
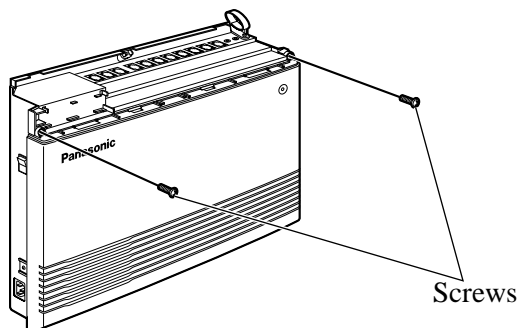
2. Open the bottom front cover.

Bottom front cover
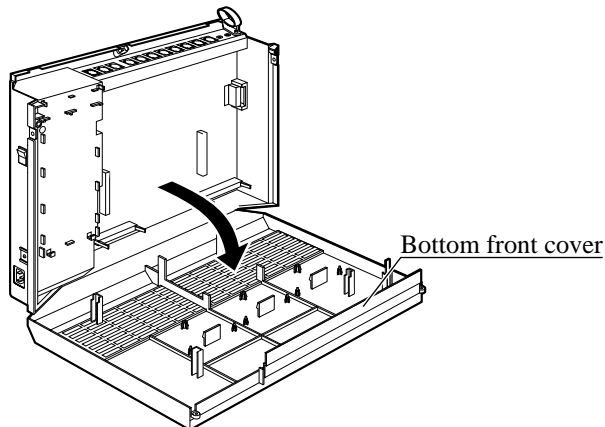
2.4.2 Caller ID and OGM/FAX Detection Card Installation

3. Attach the optional cards.

Caller ID Card
(KX-TA62493)

Install the Caller ID Card for
the KX-TA62477 here.

OGM/FAX Detection Card
(KX-TA62491)

Note
Please do not damage this part.
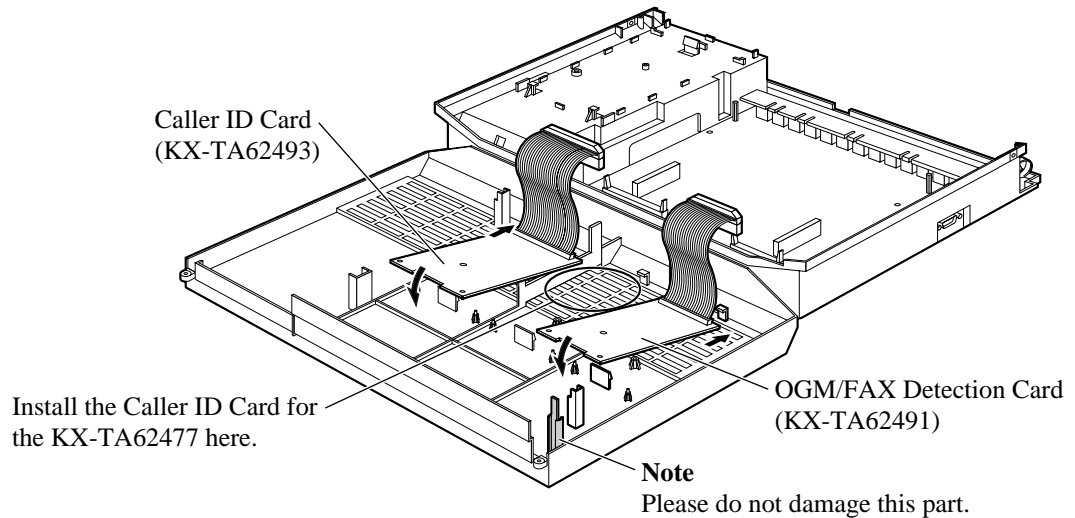
4. Insert the flat cables to each card connector.

Flat cables
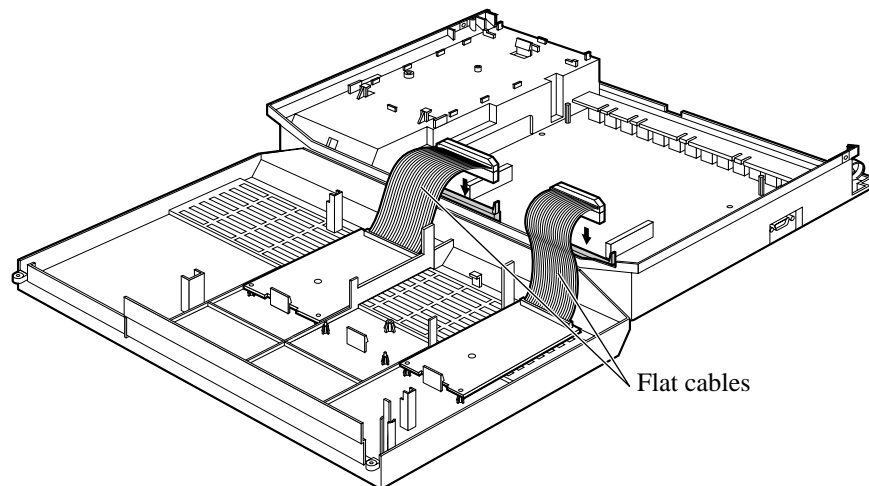
5. Close the cover.

Condition
• Be sure the frame of the main unit is connected to the ground. Refer to
Section 2.2.4 "Frame Ground Connection".

Programming Reference
See "Programming References" in Section 3, Features, Caller ID and
Direct Inward System Access (DISA).

Feature References
Section 3, Features
Caller ID
Direct Inward System Access (DISA)
Outgoing Message (OGM)

2.4.3 Doorphone and Door Opener Connection

Four doorphones (KX-T30865) and four door openers (user-supplied) can be installed.

Maximum cable length

The maximum length of the doorphone and door opener line cord which connects the system is as follows.

	Diameter of the line	Max. length
Doorphone	22 AWG	180 m {590 feet}
(Station Loop	24 AWG	113 m {370 feet}
Limit: 20 Ω)	26 AWG	70 m {230 feet}
Door Opener	22 AWG	180 m {590 feet}

Installing the Doorphone
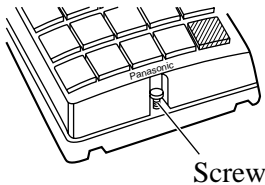
Screw

1. Loosen the screw to open the doorphone unit.
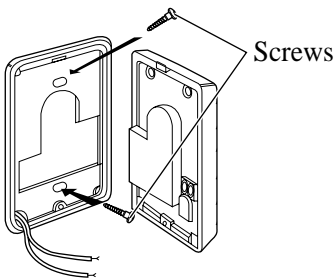
Screws

2. Attach the base cover to a wall using two screws.

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

Type 1: When a 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 to the screws located in the front cover.

To the terminal box ◄
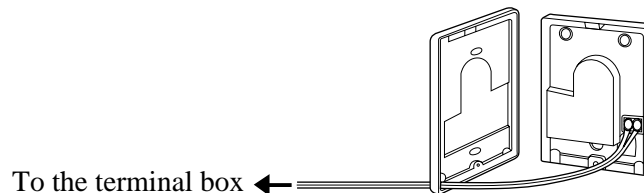
4. Put the doorphone together and re-install the screw.

2.4.3   Doorphone and Door Opener Connection

Doorphone/Door Opener Installation

Attach the Doorphone/Door Opener Card to the main unit, connect the cord to the doorphone/door opener card connector and secure the screw.

Screw — Doorphone Connectors
— Door Opener Terminal
Doorphone/Door Opener Card
  (KX-TA62460)
Doorphone/Door Opener Card
  Card Connector
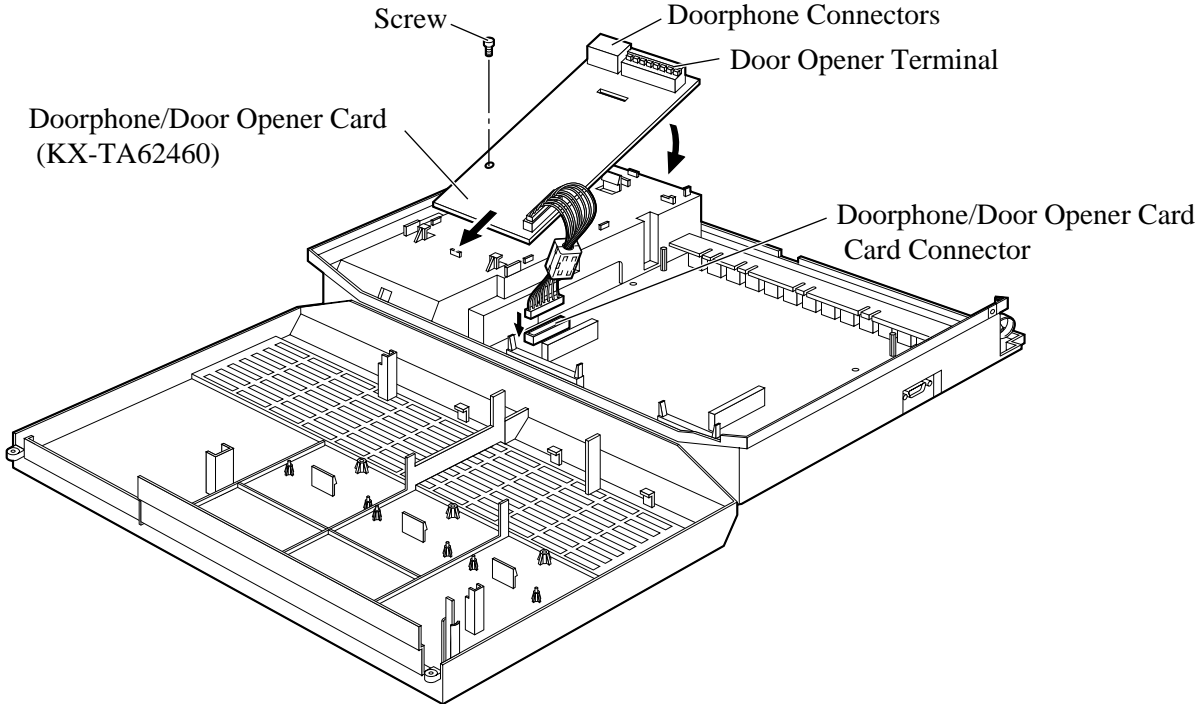
2.4.3   Doorphone and Door Opener Connection

Wiring of the Doorphone

1. Connect the Doorphone/Door Opener Card to the terminal boxes using 4-conductor modular connectors.

2. Connect the wires of doorphones 1 and 3 to the red and green screws on the terminal box.

3. Connect the wires of doorphones 2 and 4 to the yellow and black screws on the terminal box.

View of Doorphone Connector Jack

Doorphone 2   Doorphone 4
Doorphone 1   Doorphone 3

4-conductor wiring is required.

Yellow   Black
Red   Green

Doorphone 1   Doorphone 2
(KX-T30865)   (KX-T30865)

4-conductor wiring is required.

Yellow   Black
Red   Green

Doorphone 3   Doorphone 4
(KX-T30865)   (KX-T30865)
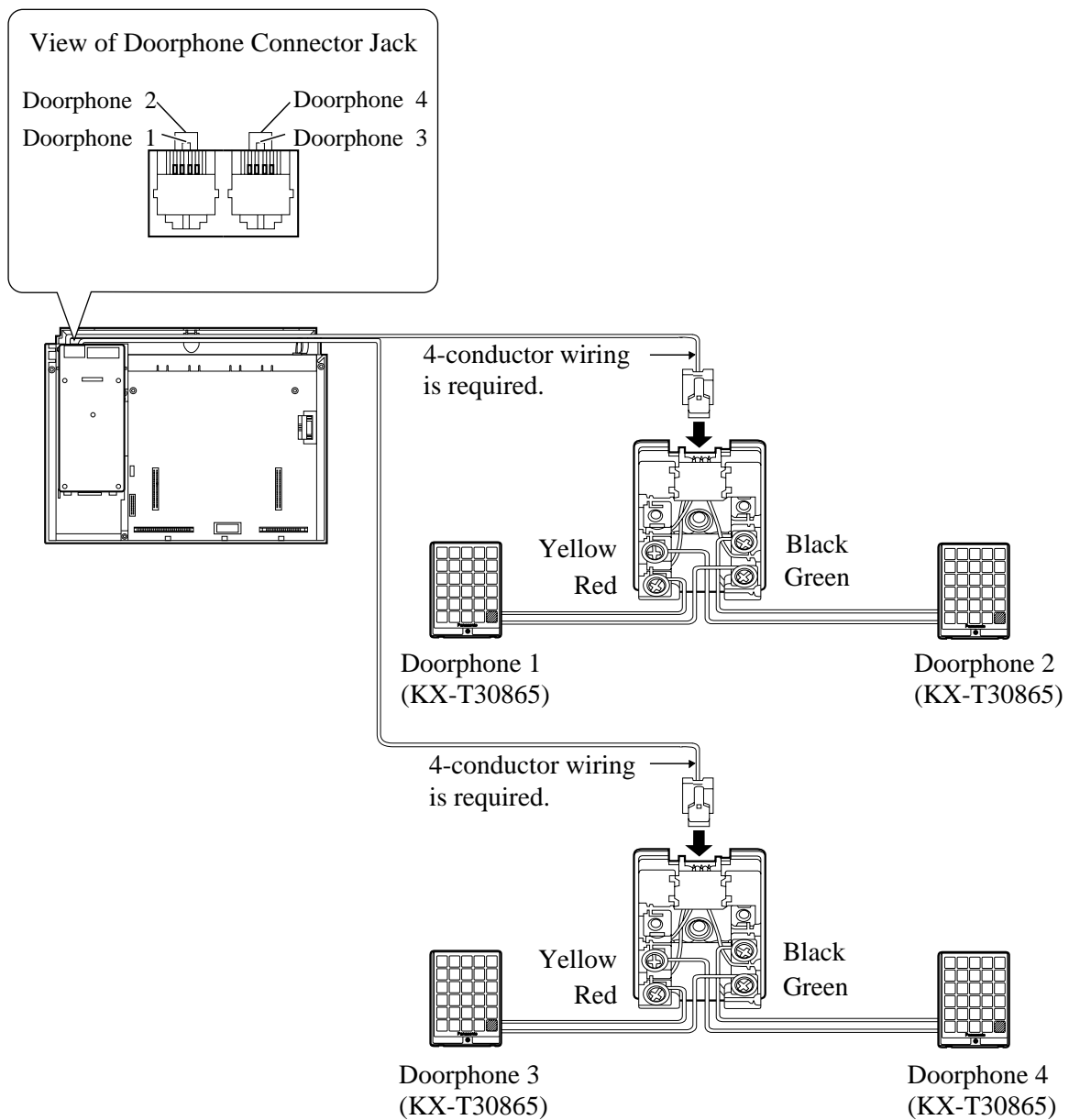
2.4.3   Doorphone and Door Opener Connection

Connecting Door Openers

While pressing the button below a hole with a driver, insert the wire from the door opener into the hole.
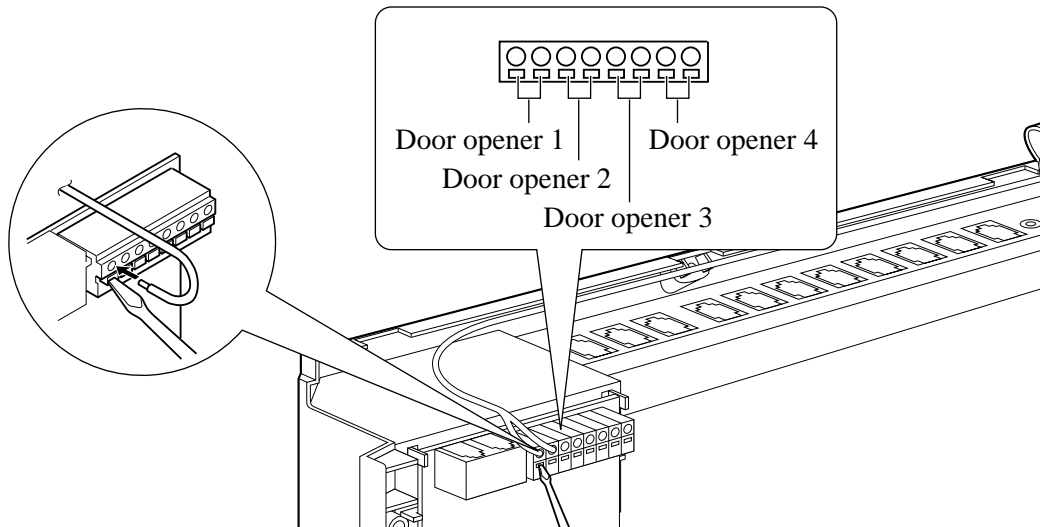
Note   • We recommend using UL1015 wire or the equivalent for wiring.
             • The wire should be between 0.4 mm and 1.2 mm {1/64 inch – 3/64 inch} in diameter including the coating.
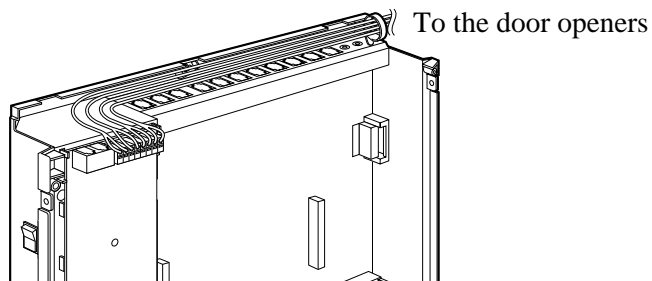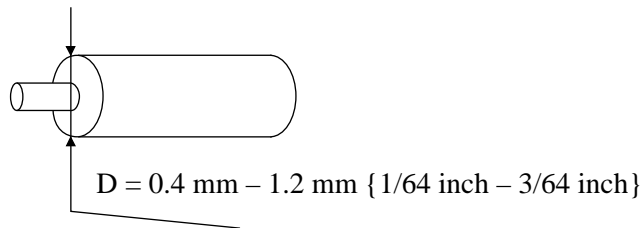
D = 0.4 mm – 1.2 mm {1/64 inch – 3/64 inch}

To the door openers

2.4.3   Doorphone and Door Opener Connection

Programming References

Section 4, System Programming
[700]–[702] Doorphone Ringing Assignment — Day/Night/Lunch
[703]–[705] Door Opener Assignment — Day/Night/Lunch

Feature References   **Section 3, Features**
Door Opener
Doorphone Call

2.4.4 Installing a 3 CO Line and 8 EXT Expansion Card (KX-TA62477) and 8 Extension Expansion Card (KX-TA62470)

3 CO Line and 8 EXT Expansion Card Installation (KX-TA62477)

To add three outside (CO) lines (outside (CO) lines 4 through 6) and eight extensions (JACK 09 through 16), use an optional 3 CO Line and 8 EXT Expansion card (KX-TA62477).

8 Extension Expansion Card Installation (KX-TA62470)

To add eight extensions (JACK 17 through 24), use an optional 8 Extension Expansion card (KX-TA62470).
This card can be installed directly to the system or to the KX-TA62477.

Installing the KX-TA62477

1. Power off the system, and unplug the AC cord.

2. Loosen the screws and open the top and bottom front covers.

3. Remove the lower front panel with pliers as shown below.

Lower front panel
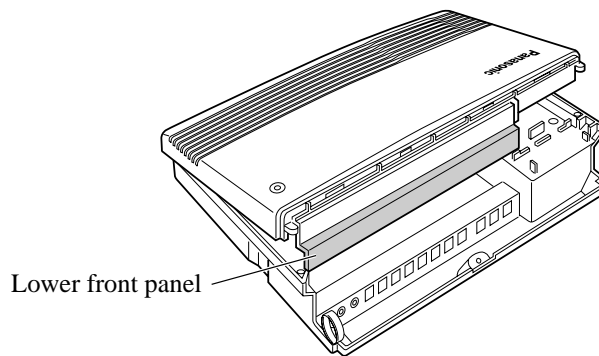
Cut the six areas marked with a circle.
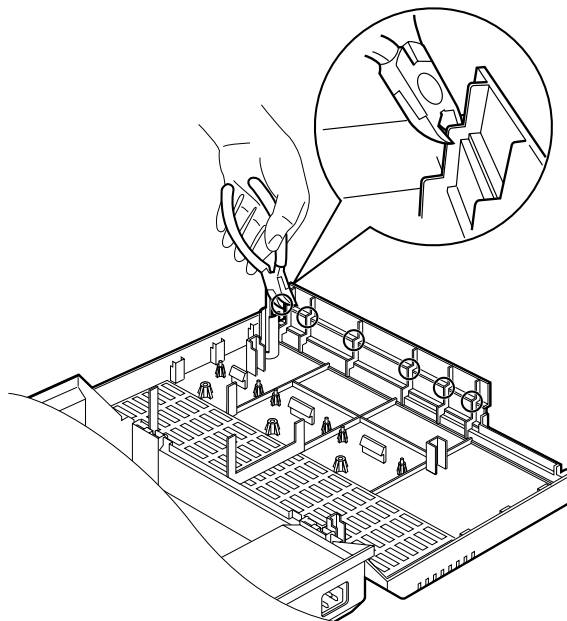
2.4.4 Installing a 3 CO Line and 8 EXT Expansion Card (KX-TA62477) and 8 Extension Expansion Card (KX-TA62470)

4. After cutting the areas, be sure to cut off any excess plastic in order to make the surface smooth.
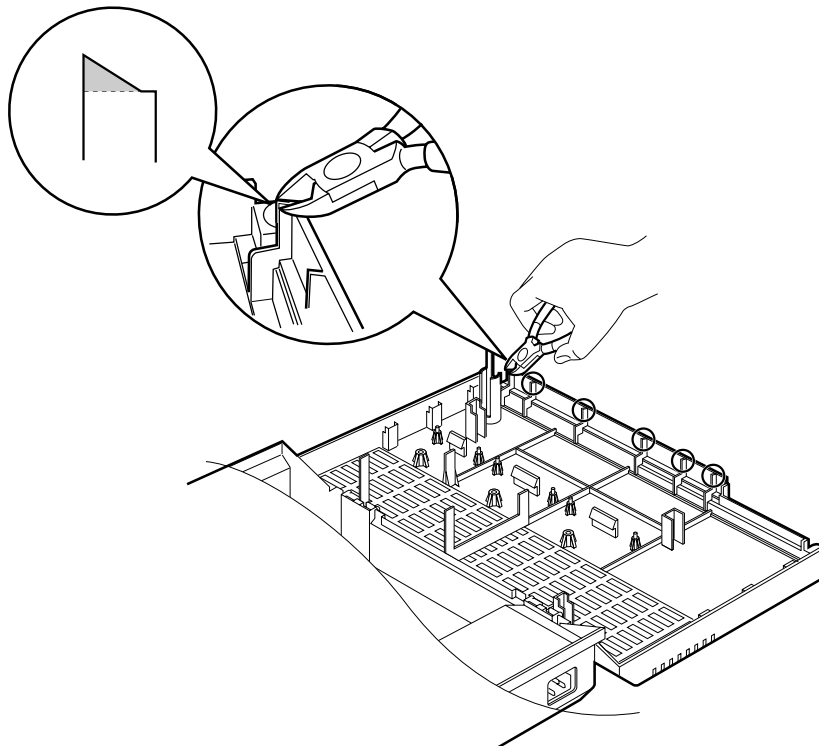
2.4.4 Installing a 3 CO Line and 8 EXT Expansion Card (KX-TA62477) and 8 Extension Expansion Card (KX-TA62470)

5. First, insert the plastic spacer into the hole near the Caller ID card connector on the KX-TA62477. Attach the extension connectors to the system, install the KX-TA62477 and secure the two extension bolts.

Extension Bolts

3 CO Line and 8 EXT Expansion Card (KX-TA62477)

Caller ID Card Connector

Extension Connectors

Spacer
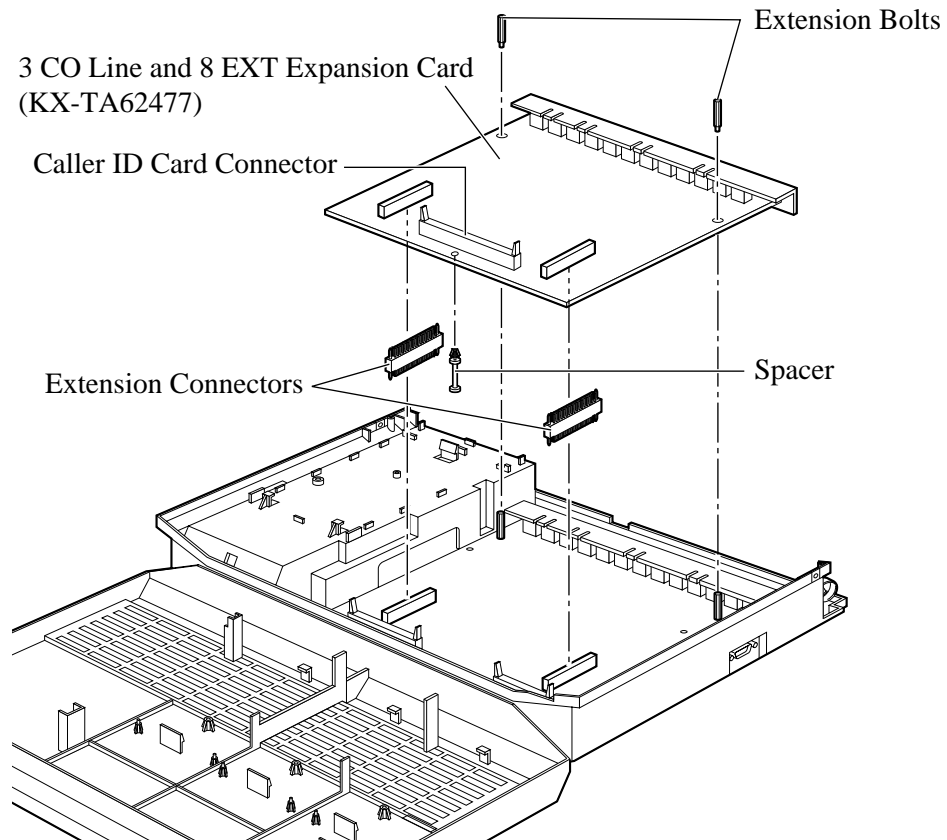
6. Insert the modular plugs of the telephone line cords (2-conductor wiring) into the modular jacks (CO 4 through 6) on the card. Refer to 2.3.3, Outside (CO) Line Connection.

7. Connect the line cords to the terminal board or the modular jacks from the Central Office.

8. Insert the modular plugs of the telephone line cords (2 or 4-conductor wiring) into the modular jacks (JACK 09 through 16) on the card. Refer to 2.3.4, Extension Connection.

9. Attach the optional Caller ID card (KX-TA62493) to the Caller ID Card connector, if desired.
Refer to 2.4.2, Caller ID and OGM/FAX Detection Card Installation.

2.4.4 Installing a 3 CO Line and 8 EXT Expansion Card (KX-TA62477) and 8 Extension Expansion Card (KX-TA62470)

Installing the KX-TA62470

1. Power off the system, and unplug the AC cord.

2. Loosen the screws and open the top and bottom front covers.

3. Remove the lower front panel. If you install the KX-TA62470 to a KX-TA62477, remove the top front panel in the same way as described in " Installing the KX-TA62477".

Top front panel
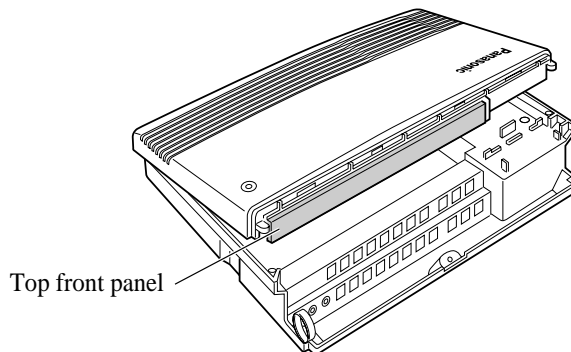
4. Attach the extension connectors to the system first, install the KX-TA62470 and secure the two screws.

Screws

8 Extension Expansion Card
(KX-TA62470)

Extension Connectors
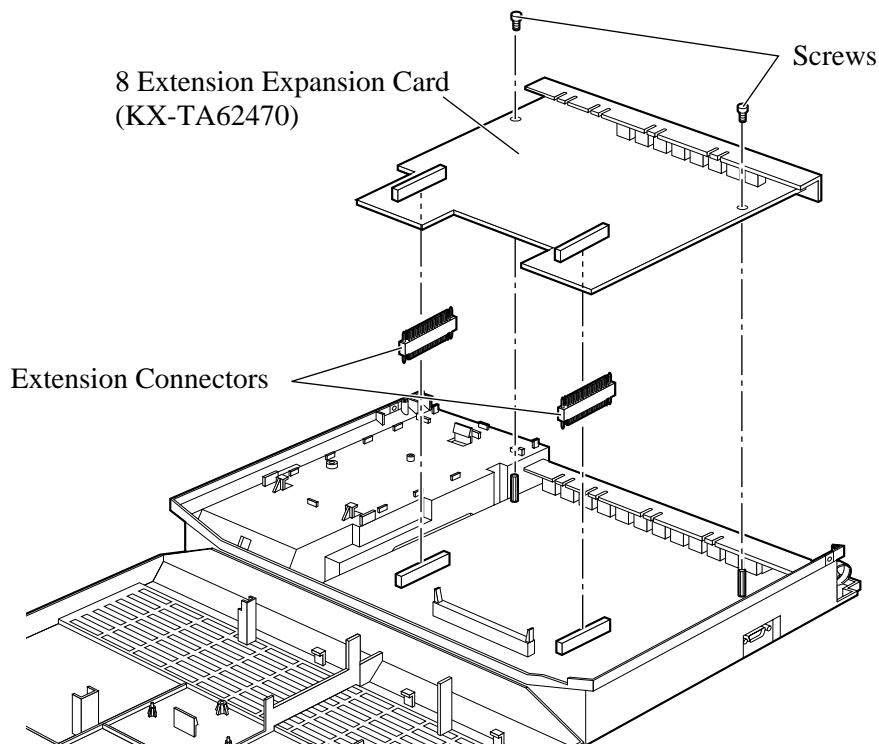
5. Insert the modular plugs of the telephone line cords (2 or 4-conductor wiring) into the modular jacks (JACK 17 through 24) on the card. Refer to 2.3.4, Extension Connection.

2.4.4 Installing a 3 CO Line and 8 EXT Expansion Card (KX-TA62477) and 8 Extension Expansion Card (KX-TA62470)

When you install the KX-TA62470 to the KX-TA62477, install the KX-TA62477 first and then the KX-TA62470.
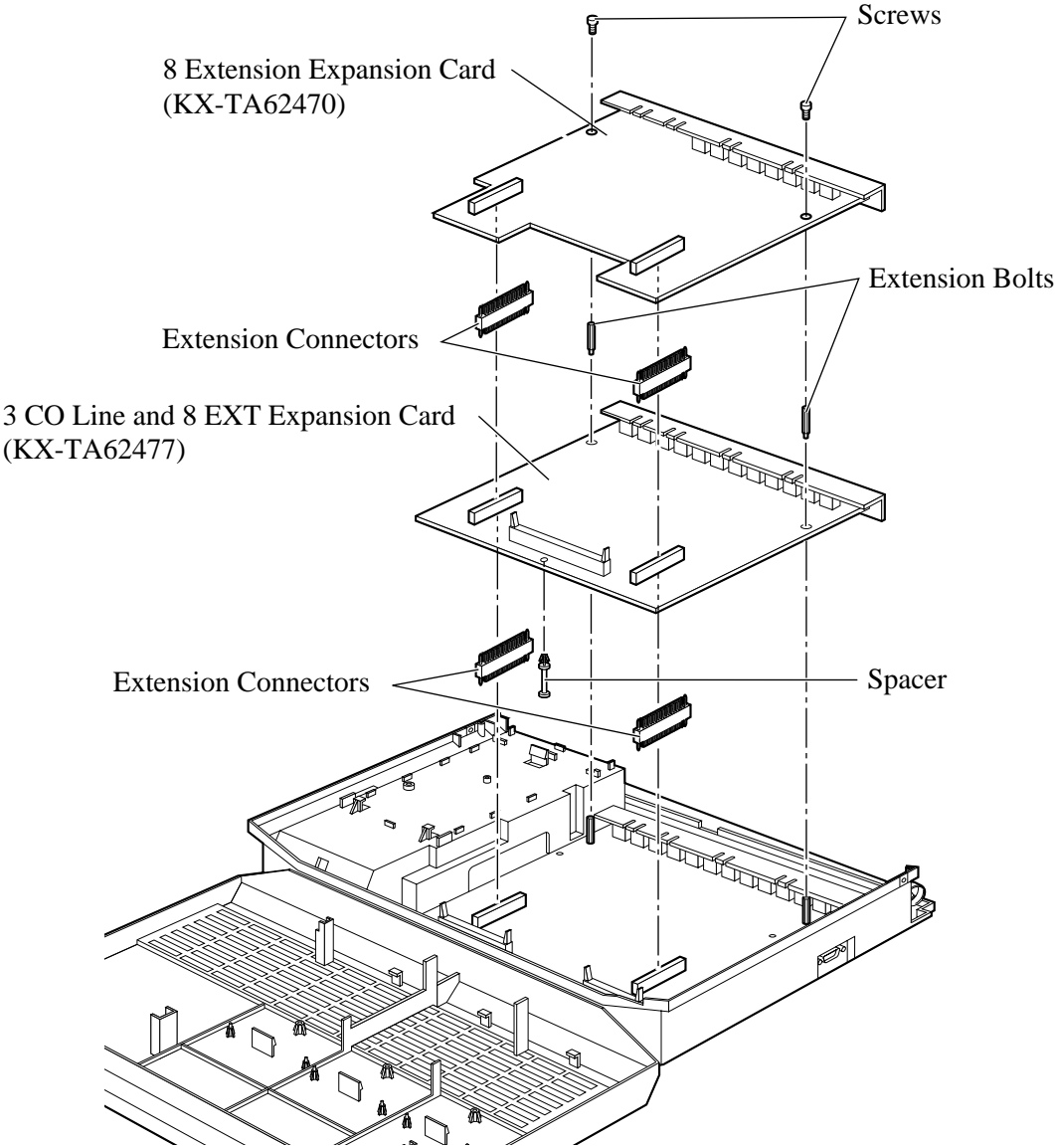
2.4.5   Securing the cords

1. Wrap the strap around all of the cords.
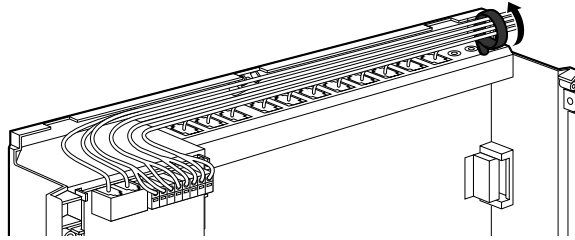
2. Close the covers and secure the screws.

Note   • To remove the strap, loosen the rivet with a driver.

Rivet
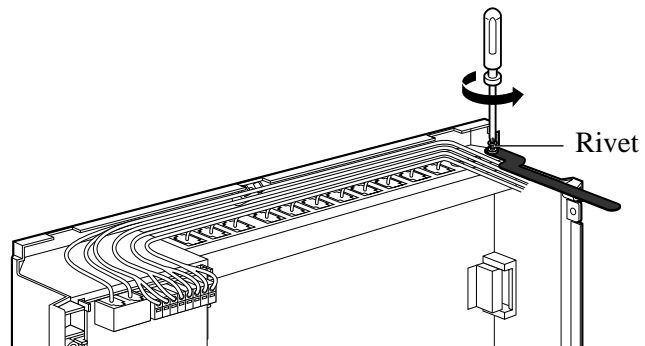
2.5   Auxiliary Connection for Power Failure Transfer

Power failure transfer connects a specific single line telephone to selected outside (CO) lines in the event of system power failure, as follows.

Outside (CO) Line 1 – Extension (T, R) Jack 01
Outside (CO) Line 4 – Extension (T, R) Jack 09
Connection of outside (CO) lines 1 and 4, and the respective extensions require no auxiliary connection.

Note
- In the event of a power failure, system memory is protected by a factory-provided lithium battery. There is no memory loss except the Camp-on, Saved Number Redial, Last Number Redial, Call Park and Message Waiting memories.
- The system automatically changes the current connection to the above connection when the power supply stops.
- Proprietary telephones cannot be used during a system power failure. Therefore, we recommend connecting single line telephones in parallel with the proprietary telephones connected to JACK 01 and 09.

Feature References

Section 3, Features
Paralleled Telephone
Power Failure Transfer

2.6 Closing the Front Cover

1. Replace the covers and tighten the screws.

2. Tie together all of the connected cords and attach them to the wall so that the cords cannot be pulled out of the system.
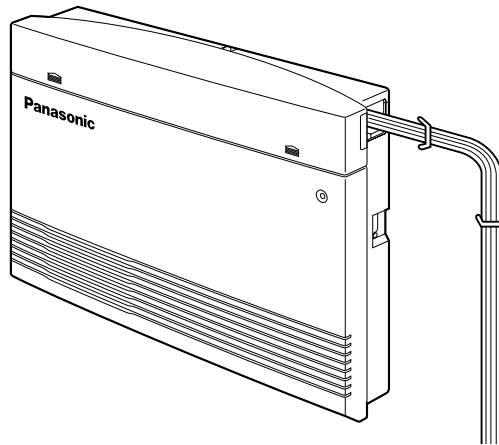
2.7   Starting the System for the First Time

1. Plug the AC power cord into the system and an AC outlet.

2. Turn the Power Switch on. (The power indicator will light.)

3. Perform the following operation with a proprietary telephone connected to JACK 01.

   a) Set the MEMORY switch on the telephone to "PROGRAM".
   b) Dial ✳#.
   c) Enter the system password, 1234.
   d) Enter 999.
   e) Press NEXT (SP-PHONE button).
   f) Keep pressing SELECT (AUTO ANSWER/MUTE button) until "All Para" is displayed.
   g) Press STORE (AUTO DIAL/STORE button).
   h) Press END (HOLD button).
   i) Set the MEMORY switch to "SET".

The system will be initialized with the default values. If the system does not work properly, see "2.9, System Data Clear".

CAUTION
- The system will continue to be powered even if the Power Switch is turned "OFF".
- The power supply cord is used as the main disconnect device. Ensure that the outlet is located/installed near the equipment and is easily accessible.

AC Surge Protector

134 cm (52 1/16 inches)
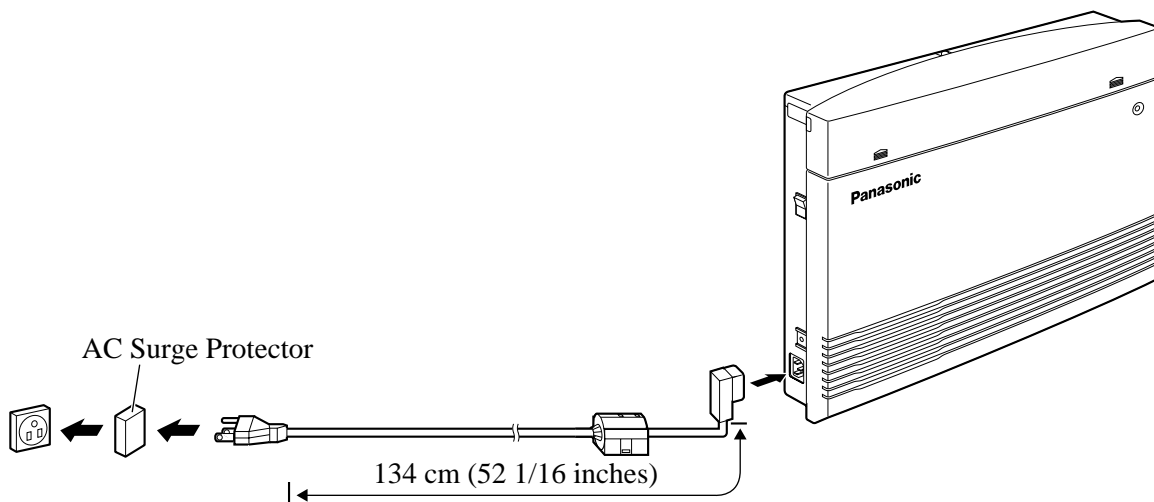
2.8   System Restart

After starting the system, if the system does not operate properly, restart the system.

Before restarting the system, try the system feature again to confirm whether there definitely is a problem or not.

System Restart 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.
6. Last Number Redial is cleared.
7. Saved Number Redial is cleared.
8. Message Waiting is cleared.

Other data is not cleared by System Restart.

1. Turn the Power switch off and then on.

Notice   If the system still does not operate properly, please see Section 2.9, "System Data Clear".

2.9 System Data Clear

When the system does not operate properly after restarting, you can clear the programming data stored in the system. The system will restart with the default settings. First, try system program [999]. If the system still does not operate properly, please follow the procedure below.

1. Loosen the screws and open the top and bottom front covers.

2. Slide the System Clear Switch to the "CLEAR" position.

3. Press the Reset Button.

4. Return the System Clear Switch to the "NORMAL" position before the power indicator stops flashing.
   (The power indicator will flash for about 10 seconds.)
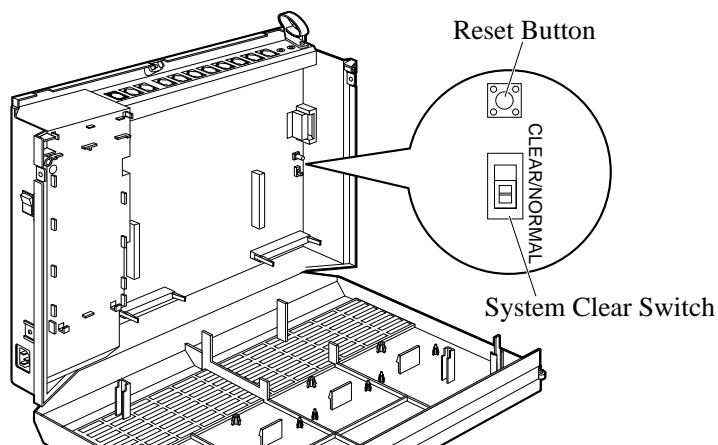
CAUTION Before touching the System Clear Switch and Reset Button, put on a grounding strap.

Notice After pressing the Reset Button, return the System Clear Switch to the "NORMAL" position in step 4 before the power indicator stops flashing. Otherwise, the system will not clear.

Programming Reference

Section 4, System Programming
[999] System Data Clear

Section 3
Features

This section describes every basic, optional, and programmable feature 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

Allows an extension user to set a message which will be displayed at the calling extension to show the reason for the called extension's absence. Six messages can be programmed as desired, which are available for every extension user. Setting or canceling a message can be done by individual extension users but only callers with a display telephone can view the message.

Conditions

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

Programming References

No programming required.

Feature References

None

**Operation Reference
— User Manual**

Telephone Features
Absent Message Capability

3   Features

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 four modes available to enter an account code: Verify-All mode, Verify-Toll mode, Forced mode, and Option mode. One mode is selected for each extension.

In Verify-All 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 Outside (CO) Line
• Last Number Redial
• Line Access
• One-Touch Dialing
• Personal Speed Dialing
• Pickup Dialing
• Saved Number Redial
• System Speed Dialing

In Verify-Toll mode, the user can enter a pre-assigned account code only when the user needs to override toll restriction. Calls with COS numbers 3 through 5 will be treated as calls with COS number 2. Calls with COS numbers 1 and 2 will not be affected.

In Forced mode, the user must always enter an account code. The code can be any number.

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

Conditions

• An account code can be stored into Memory Dialing (System/Personal Speed Dialing, One-Touch Dialing, Pickup Dialing, Call Forwarding – to Outside (CO) Line).
• Account code entry after CPC detection must be done within 30 seconds. Otherwise, the SMDR call record is activated and the code cannot be entered.
• In any mode, emergency dial numbers stored in program [309] "Emergency Dial Number Set" can be dialed out without an account code entry.

Programming References

Section 4, System Programming
[310] Account Codes
[601]–[603] TRS – Class of Service (COS) Assignment
            — Day/Night /Lunch
[605] Account Code Entry Mode
[805] SMDR Account Code Selection

Feature Reference

Section 3, Features
Toll Restriction Override by Account Codes

Operation Reference
— User Manual

Telephone Features
Account Code Entry

Answering, Direct Outside (CO) Line

Description   Allows a proprietary telephone user to answer an incoming call by simply pressing the appropriate CO button without lifting the handset or pressing the SP-PHONE/MONITOR button.

Condition   • This feature allows the user to specify which line will be answered when multiple incoming lines are ringing.

Programming References

No programming required.

Feature Reference   **Section 3, Features**
Outside (CO) Line Connection Assignment

Operation Reference   **Telephone Features**
— User Manual   Answering, Direct Outside (CO) Line

3   Features A

Automatic Callback Busy (Camp-On)

Description

Allows the caller to be notified when the called party or selected outside (CO) line becomes free.

Automatic Callback – Extension

If the caller answers the callback ringing (Camp-On Recall), the called extension will automatically start ringing.

Automatic Callback – Outside (CO) Line

If the caller answers the callback ringing (Camp-On Recall), the line will be automatically selected to allow the user to make an outside call.

Conditions

• If the callback ringing (Camp-On Recall) is not answered in four rings (within 10 seconds), the callback will be canceled.
• More than one extension user can set this function to one extension or outside (CO) line at the same time.

Programming References

No programming required.

Feature References   None

Operation Reference   **Telephone Features**
— User Manual   Automatic Callback Busy (Camp-On)

Background Music (BGM)

Description

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

Conditions

- A user-supplied external music source, such as a radio, must be connected. One external music source can be connected to the system.
- The music source is used for BGM and/or Music on Hold.
- The music is interrupted when you go off-hook.

Connection Reference

Section 2, Installation
2.3.6   External Music Source Connection

Programming References

No programming required.

Feature Reference

Section 3, Features
Music on Hold

Operation Reference
— User Manual

Telephone Features
Background Music (BGM)

3   Features   *B*

Busy Lamp Field

Description   The LED (Light Emitting Diode) indicators of the DSS (Direct
                         Station Selection) buttons, corresponding to selected extensions,
                         show whether the extensions are idle or busy.

Conditions   • This function is available for flexible CO buttons assigned as DSS
                           buttons on proprietary telephones and DSS buttons on DSS Consoles.
                         • A DSS button indicator lights red if the corresponding extension is busy.

Programming Reference
                         Station Programming . . . . **User Manual**
                         Flexible Button Assignment – Direct Station Selection (DSS) Button

Feature Reference   **Section 3, Features**
                         Button, Direct Station Selection (DSS)

Operation References Not applicable.

Busy Station Signaling (BSS)

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

Condition   • This feature only works if the called extension has activated Call
                           Waiting. If Call Waiting is activated, the caller will hear a ringback tone.
                           If not, the caller will hear a reorder tone.

Programming References
                         No programming required.

Feature Reference   **Section 3, Features**
                         Call Waiting

Operation Reference **Telephone Features**
— User Manual   Busy Station Signaling (BSS)

Button, Direct Station Selection (DSS)

Description	A DSS button allows a proprietary telephone user one-touch access to other extension users.

Conditions

- A flexible CO button and MESSAGE button on a proprietary telephone can be assigned as a DSS button using station programming.
- DSS buttons are provided on DSS Consoles with a default setting. Changing the setting is possible from a paired telephone using station programming. Day, Night, Lunch and Station Lock buttons can be assigned to DSS buttons on DSS Consoles.
- Once a button is assigned as a DSS button, the Busy Lamp Field (BLF) status is available.
- The mode of a DSS button can be programmed to disconnect the outside (CO) line and call the extension, or hold and transfer the call to the extension (One-Touch Transfer Using a DSS Button).

Programming References

Section 4, System Programming
[005] One-Touch Transfer Using a DSS Button
Station Programming . . . . **User Manual**
Flexible Button Assignment – Direct Station Selection (DSS) Button
DSS Console Features   . . . . **User Manual**
Station Programming

Feature References

Section 3, Features

Busy Lamp Field	Remote Station Lock Control
DSS Console (KX-T7040)	Time (Day/Night/Lunch) Service
One-Touch Transfer Using a DSS Button	

Operation References
  — User Manual

Basic Operations
Making Calls
Telephone Features
Call Transfer – to Extension
Operator/Manager Service Features
Time (Day/Night/Lunch) Service Setting
Remote Station Lock Control
DSS Console Features

3　Features

Button, Flexible

Description

The use of Flexible Buttons is determined by station programming. The following four types of Flexible Buttons are provided on proprietary telephones (PT) and DSS Consoles:
• Flexible CO buttons (provided on a PT only)
• Flexible Direct Station Selection (DSS) buttons (provided on a DSS Console only)
• MESSAGE button (provided on a PT except for the KX-T7055)
• Programmable Feature (PF) buttons
The table below shows all of the features which can be assigned to Flexible Buttons.

Features to be assigned / Button	CO (PT)	DSS (DSS)	PF (PT/DSS)	MESSAGE
Single-CO	✔			
Group-CO	✔			
Caller ID Indication	✔			
Caller ID Selection	✔			
Conference	✔			
FWD/DND	✔			
Log-In/Log-Out	✔			
Other-CO	✔			
Saved Number Redial	✔			
Day		✔		
Lunch		✔		
Night		✔		
Station Lock		✔		
Message Waiting				✔
Live Call Screening (LCS)†	✔	✔		
LCS Cancel†	✔	✔		
Voice Mail Transfer†	✔	✔		
Direct Station Selection (DSS)	✔	✔		✔
One-Touch Dialing	✔	✔	✔	✔

"✔" indicates that the feature is available.

† Available when the KX-TA624 is connected to a Proprietary Telephone capable Panasonic Voice Processing System (one that supports APT Integration; KX-TVS50).

Condition   • Incoming and outgoing calls on a line are shown in the following
priority.
Single-CO > Group-CO

Programming References

Station Programming . . . . **User Manual**
Flexible Button Assignment
DSS Console Features (KX-T7040) . . . . **User Manual**

Feature References

Section 3, Features
Buttons on Proprietary Telephones
DSS Console (KX-T7040)

Operation References   Not applicable.

3 Features

B

Button, Group-CO (G-CO)

Description

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

Conditions

- A G-CO button is not originally provided on a proprietary telephone (PT). It can be programmed on a CO button by station programming.
- The extension for receiving and/or originating calls on outside (CO) lines must be programmed.
- The same outside (CO) line group can be assigned to more than one G-CO button on the same PT.
- The same line can be assigned to a Single-CO (S-CO) button and a G-CO button.
- Immediate, delayed, no ringing or no incoming call (disable) can be selected on an extension-outside (CO) line basis.
- Users can choose a desired ringing pattern for each outside (CO) line by system programming.

Programming References

Section 4, System Programming
[400] Outside (CO) Line Connection Assignment
[404] Outside (CO) Line Group Assignment
[405]–[407] Flexible Outward Dialing Assignment — Day/Night/Lunch
[408]–[410] Flexible Ringing Assignment — Day/Night/Lunch
[411]–[413] Delayed Ringing Assignment — Day/Night/Lunch
[423] Outside (CO) Line Ringing Pattern Selection
Station Programming . . . . **User Manual**
Flexible Button Assignment – Group-CO (G-CO) Button

Feature References

Section 3, Features
Answering, Direct Outside (CO) Line   Ringing, Delayed
LED Indication, Outside (CO) Line   Ringing Pattern Selection for
Line Access, Outside (CO) Line Group   Intercom Calls and Outside
Outside (CO) Line Group   (CO) Lines

Operation References
— User Manual

Basic Operations
Making Calls
Receiving Calls
Telephone Features
Answering, Direct Outside (CO) Line
Outward Dialing – Line Access, Automatic, Outside (CO) Line Group

Button, Other-CO (O-CO)

Description	Outside (CO) lines, which are not assigned to a S-CO or G-CO button, can be assigned to a flexible CO button on a proprietary telephone (PT). The assigned button serves as the Other-CO (O-CO) button. An incoming call on an outside (CO) line arrives at the O-CO. To make an outside call, the PT user simply presses the assigned O-CO button.

Conditions
- An O-CO button is not originally provided on a PT. A flexible CO button can be assigned as an O-CO button by station programming.
- Immediate, delayed, no ringing or no incoming call (disable) can be selected on an extension – outside (CO) line basis.
- Users can choose a desired ringing pattern for each outside (CO) line by system programming.

Programming References

Section 4, System Programming
[400] Outside (CO) Line Connection Assignment
[404] Outside (CO) Line Group Assignment
[405]–[407] Flexible Outward Dialing Assignment — Day/Night/Lunch
[408]–[410] Flexible Ringing Assignment — Day/Night/Lunch
[411]–[413] Delayed Ringing Assignment — Day/Night/Lunch
[423] Outside (CO) Line Ringing Pattern Selection
Station Programming . . . . **User Manual**
Flexible Button Assignment – Other-CO (O-CO) Button

Feature References

Section 3, Features

Answering, Direct Outside (CO) Line	Line Access, Direct
LED Indication, Outside (CO) Line	Ringing, Delayed
Line Access, Automatic	Ringing Pattern Selection for Intercom Calls and Outside (CO) Lines

Operation References
— User Manual

Basic Operations
Making Calls
Receiving Calls
Telephone Features
Outward Dialing – Line Access, Automatic

3   Features   *B*

Button, Single-CO (S-CO)

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

Conditions   • The default setting for CO buttons is changeable. (Flexible CO Button)
                         • A S-CO button provides outside (CO) line status.
                         • One outside (CO) line can be assigned to both a S-CO and a Group-CO
                           (G-CO) button.
                         • Incoming calls are indicated on a proprietary telephone, when an
                           extension is assigned as the incoming call destination and a S-CO,
                           G-CO and/or O-CO button is assigned.
                         • Immediate, delayed, no ringing or no incoming call (disable) can be
                           selected on an extension–outside (CO) line basis.
                         • Users can choose a desired ringing pattern for each outside (CO) line by
                           system programming.

Programming References

Section 4, System Programming
[400] Outside (CO) Line Connection Assignment
[404] Outside (CO) Line Group Assignment
[405]–[407] Flexible Outward Dialing Assignment — Day/Night/Lunch
[408]–[410] Flexible Ringing Assignment — Day/Night/Lunch
[411]–[413] Delayed Ringing Assignment — Day/Night/Lunch
[423] Outside (CO) Line Ringing Pattern Selection
Station Programming . . . . **User Manual**
Flexible Button Assignment – Single-CO (S-CO) Button

Feature References   **Section 3, Features**
                         Answering, Direct Outside (CO) Line   Line Access, Individual
                         LED Indication, Outside (CO) Line   Ringing, Delayed
                         Line Access, Direct   Ringing Pattern Selection for
                                                                     Intercom Calls and Outside
                                                                     (CO) Lines

Operation References   **Basic Operations**
  — User Manual   Making Calls
                           Receiving Calls
                           Telephone Features
                           Outward Dialing – Line Access, Individual

B   3   Features

Buttons on Proprietary Telephones

Description   Proprietary telephones are provided with the feature/line access
                             buttons listed below.

KX-T Proprietary Telephones

Buttons	7020	7030	7050	7055	7130
AUTO ANSWER/MUTE❖	✔	✔			✔
AUTO DIAL/STORE❖	✔	✔	✔	✔!	✔
CO❖*	✔(12)	✔(12)	✔(12)	✔(3)	✔(12)
CONF❖	✔	✔	✔!	✔!	✔
FLASH	✔	✔	✔	✔	✔
FWD/DND❖	✔	✔			✔
HOLD	✔	✔	✔	✔	✔
INTERCOM❖	✔	✔	✔	✔	✔
MESSAGE❖*	✔	✔	✔		✔
MONITOR❖			✔	✔!	
PAUSE	✔	✔	✔	✔	✔
PF (Programmable Feature)	✔(4)	✔(4)	✔(4)	✔(3)	✔(12)
REDIAL	✔	✔	✔	✔	✔
SAVE					✔
SP-PHONE❖	✔	✔			✔
TRANSFER	✔	✔	✔	✔	✔

✔: The button is provided on the designated telephone.
❖: The button has a LED (Light Emitting Diode).
* : Buttons which can be changed to function as a feature button are called
      flexible buttons.
!: The button does not have a LED.
(x): Shows the number of buttons only if more than one button is provided.

3   Features   *B*

The functions of the listed buttons are described below.

AUTO ANSWER/MUTE: Used for answering an extension automatically, or turns the microphone off during a conversation.

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

CO (Central Office line): Can make or receive an outside call or can be re-assigned to a different CO or various feature buttons.

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

FLASH: Allows you to disconnect the current call and originate another call without hanging up (Flash). Sends a flash signal to the Central Office or host PBX to access their features (External Feature Access).

FWD/DND (Call Forwarding/Do Not Disturb): Used to program Call Forwarding, and 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, display the current message, call back the message sender, or can be assigned as another feature button.

MONITOR: Used for a hands-free operation.

PAUSE: Inserts a pause in a speed dial number.

PF (Programmable Feature): This flexible button can be programmed as a One-Touch Dialing button, if desired.

REDIAL: Used for Last Number or Automatic Redialing.

SAVE: Used to store a dialed telephone number for Saved Number Redial.

SP-PHONE (Speakerphone): Used for a hands-free speakerphone operation. Pressing the button causes the telephone to switch between the handset and hands-free operation.

TRANSFER: Transfers a call to another extension or external destination.

Conditions

- Certain buttons are equipped with light indicators (LED's) to show the 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 / Other-CO (O- CO) button

Programming Reference

Station Programming . . . . **User Manual**
Flexible Button Assignment

Feature References   None

Operation References   Refer to the appropriate operating instructions.
— User Manual

Caller ID

Description	Provides a display proprietary telephone user with the caller's information, such as their name and telephone number, on the outside (CO) line assigned to receive Caller ID service calls.

Conditions
- The outside (CO) lines where the Caller ID service is offered by a Central Office must be assigned.
- A display PT (KX-T7030 or KX-T7130) user can record the caller information received by Caller ID (Call Log, Incoming feature).
- If the Caller ID service provides both the number and name, the user can select the initial display, number or name, by system programming.
- An optional Caller ID Card must be installed to the system.

Connection Reference

Section 2, Installation
2.4.2 Caller ID and OGM/FAX Detection Card Installation

Programming References

Section 4, System Programming
[900] Caller ID Assignment
[901] Caller ID Area Code Assignment
[902] Caller ID Modification for Local Calls
[903] Caller ID Modification for Long Distance Calls
[904] Caller ID Log Priority Selection
[906] Caller ID SMDR Format

Feature Reference

Section 3, Features
Call Log, Incoming

Operation References
— User Manual

Telephone Features
Call Information/Log, Incoming
Call Log, Incoming

3   Features   *C*

CALL FORWARDING FEATURES – SUMMARY

Description   Call Forwarding features enable an extension user to have their
                         calls forwarded to a specified destination. The user may determine
                         the conditions of how their calls will be forwarded. The following
                         Call Forwarding features are available:

       Call Forwarding – All Calls
       Call Forwarding – Busy/No Answer
       Call Forwarding – Follow Me
       Call Forwarding – to an Outside (CO) Line

Call Forwarding – All Calls

Description   This feature is used when a user wants all their calls to be
                         automatically re-directed to another extension.

Conditions   • The types of calls which are forwarded by this feature are:
                             Outside calls – DIL; DISA; Normal
                             Intercom calls – Extension; Transfer
                         • The extensions which have already been assigned as a forwarded
                           destination cannot set the Call Forwarding feature.
                         • Although calls can be forwarded, Message Waiting cannot. The
                           MESSAGE button indicator will light on the original called extension.
                         • If the Do Not Disturb (DND) feature has already been set, setting the
                           Call Forwarding feature will cancel DND.

Programming Reference
       Station Programming . . . . **User Manual**
       Flexible Button Assignment – FWD/DND Button

Feature References   None

Operation Reference **Telephone Features**
  — User Manual   Call Forwarding — All Calls

*C*all Forwarding – Busy/No Answer

Description

A user's calls are forwarded to another extension if their extension is busy or they do not answer the call within a pre-determined time.

Conditions

- The types of calls which are forwarded by this feature are:
  - Outside calls – DIL; DISA; Normal
  - Intercom calls – Extension; Transfer
- The extensions which have been already assigned as the forwarded destination cannot set the Call Forwarding feature.
- Although calls can be forwarded, Message Waiting cannot. The MESSAGE button indicator will light on the original called extension.
- If the Do Not Disturb (DND) feature has already been set, setting the Call Forwarding feature will cancel DND.

Programming References

Section 4, System Programming
[202] Call Forwarding Start Time
Station Programming . . . . **User Manual**
Flexible Button Assignment – FWD/DND Button

Feature References

None

Operation Reference
— User Manual

Telephone Features
Call Forwarding — Busy/No Answer

3 Features

Call Forwarding – Follow Me

Description

If a user forgets to set Call Forwarding – All Calls before they leave their desk, this allows them to set the same feature from the destination extension.

Condition

• Same as the conditions for Call Forwarding – All Calls.

Programming Reference

Station Programming . . . . **User Manual**
Flexible Button Assignment – FWD/DND Button

Feature Reference

Section 3, Features
Call Forwarding – All Calls

**Operation Reference
— User Manual**

Telephone Features
Call Forwarding — Follow Me

Call Forwarding – to an Outside (CO) Line

Description

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

Conditions

• The types of calls which are forwarded by this feature are:
  Outside calls – DIL; DISA
  Intercom calls – Extension; Transfer
• The forwarding extension's Toll Restriction and Account Code Entry requirements still apply.
• If the Do Not Disturb (DND) feature has already been set, setting the Call Forwarding feature will cancel DND.
• System programming determines which extensions are able to perform this feature.
• If a call between two outside parties is established by this feature, the duration of the call is determined by the system timer. An alarm tone is generated to both outside parties 15 seconds before the time-out. The call is disconnected at the time-out.

Programming References

Section 4, System Programming
[205] Outside-to-Outside (CO-to-CO) Line Duration Time Limit
[607] Call Forwarding to an Outside (CO) Line
Station Programming . . . . **User Manual**
Flexible Button Assignment – FWD/DND Button

Feature Reference

Section 3, Features
Limited Call Duration

Operation Reference
— User Manual

Telephone Features
Call Forwarding — to an Outside (CO) Line

3   Features

Call Hold – Intercom

Description   This is used to place an intercom call on hold. The held call can be retrieved by the user who held it or by any other extension.

Conditions   • Only one intercom call can be placed on hold (up to ten calls in the system – Call Park). With a proprietary telephone, outside calls and one intercom call can be placed on hold at the same time. With a single line telephone, either one outside or intercom call can be held.
• If a call on hold is not retrieved within a pre-assigned period of time, Hold Alarm/Hold Recall occurs.

Programming References

Section 4, System Programming
[104] Hold Mode Selection
[200] Hold Recall Time

Feature References   **Section 3, Features**
Call Park
Hold Alarm/Hold Recall

Operation Reference   **Telephone Features**
   — User Manual   Call Hold

Call Hold – Outside (CO) Line

Description

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

Conditions

- With a single line telephone, the user can hold only one call, either 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 within a specific period of time, Hold Alarm/Hold Recall occurs.
- If an external party is placed on hold and not retrieved within 30 minutes, it will be automatically disconnected.

Programming References

Section 4, System Programming
[104] Hold Mode Selection
[200] Hold Recall Time

Feature References

Section 3, Features
Hold Alarm/Hold Recall
Music on Hold

Operation Reference
— User Manual

Telephone Features
Call Hold

3　Features

Call Hold, Exclusive – Intercom

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

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 within a pre-assigned period of time, Hold Alarm/Hold Recall occurs.
　　• This feature is not available for single line telephones.

Programming Reference

　　Section 4, System Programming
　　[200]　Hold Recall Time

Feature Reference　　**Section 3, Features**
　　Hold Alarm/Hold Recall

Operation Reference　　**Telephone Features**
　　— User Manual　　Call Hold, Exclusive

Call Hold, Exclusive – Outside (CO) Line

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

Conditions　　• If a call on hold is not retrieved within a pre-assigned period of time, Hold Alarm/Hold Recall occurs.
　　• If an external party is placed on hold and not retrieved in 30 minutes, it will be automatically disconnected.
　　• Music is sent to the party on hold, if available (Music on Hold).

Programming Reference

　　Section 4, System Programming
　　[200]　Hold Recall Time

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

Operation Reference　　**Telephone Features**
　　— User Manual　　Call Hold, Exclusive

Call Hold Retrieve – Intercom

Description	Allows an extension user to retrieve a call that has been placed on hold by another extension.
Condition	A confirmation tone is sent to the user when the hold is retrieved by entering the feature number.

Programming References

No programming required.

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

Operation Reference   **Telephone Features**
— User Manual   Call Hold Retrieve

Call Hold Retrieve – Outside (CO) Line

Description	Allows an extension user to retrieve a specific outside call that has been placed on hold by another extension.
Condition	A confirmation tone is sent to the user when the hold is retrieved by entering the feature number.

Programming References

No programming required.

Feature Reference   **Section 3, Features**
Call Hold – Outside (CO) Line

Operation Reference   **Telephone Features**
— User Manual   Call Hold Retrieve

3   Features   *C*

Calling Party Control (CPC) Signal Detection

Description

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

Conditions

- CPC Signal Detection is enabled or disabled for incoming and outgoing outside calls by system programming.
- Generally, CPC for Signal Detection works for incoming outside calls, and does not work for outgoing outside calls (except after they are placed on Call Hold or Exclusive Call Hold). In this case, if an extension user remains off-hook after an outgoing outside call is completed, the system will not release all the switches used to establish the connection. The connected outside (CO) line will continue to be in use. To prevent this, CPC Signal Detection can be programmed to work for outgoing outside calls.
- If a CPC Signal is detected during a Conference call, the line will be disconnected and the remaining two parties can resume their call.
- If a CPC Signal is detected during a call between a DISA caller and an extension or external party, the line will be disconnected.

Programming References

Section 4, System Programming
[420] Calling Party Control (CPC) Signal
[421] CPC Detection for Outgoing Calls

Feature References   None

Operation References   Not applicable.

Call Log, Incoming

Description   If a display proprietary telephone (KX-T7030 or KX-T7130) user
cannot answer a call, the telephone will automatically record the
caller's information. Moreover, the user can call back the caller by
checking the call log. This is available if a telephone receives
incoming outside calls using a Caller ID service. A maximum of 20
calls per telephone can be logged.
The displayed information is as follows:
  • The received outside (CO) line number and name
  • The date and time the call was received.

Conditions   • The user's area code must be assigned before they use the Caller ID
    feature.
  • The call is registered when the PT finishes ringing. If a call is directed to
    multiple PTs, the call will be registered at the PT that is connected to the
    lowest jack number.
  • Information is also recorded even if a transferred call (unscreened) is not
    answered.
  • When the call log is full (i.e. 20 calls are stored), the user can overwrite
    the data, replacing the oldest call with the newest one at their extension
    (Call Log, Incoming).
  • A telephone user can lock their display so that the incoming call
    information is not shown on the display. The operator or manager can
    cancel the lock.
  • The system automatically modifies the incoming caller's number,
    depending on programming, for local or long distance calls. The
    modified number will be recorded so it can be called back. Users can
    also modify the number manually.
  <Example>
      [901] "Caller ID Area Code Assignment" : 201
      [902] "Caller ID Modification for Local Calls" :
              delete – 3 digits, add – blank
      [903] "Caller ID Modification for Long Distance Calls" :
              delete – 0 digit, add – 1

	Caller's number provided by CO	**Recorded caller's number**
Local call:	2011234567	1234567 (modified by [902])
Long distance call:	7149876543	17149876543 (modified by [903])

Connection Reference

Section 2, Installation
2.4.2 Caller ID and OGM/FAX Detection Card Installation

3 Features

Programming References

Section 4, System Programming
[900] Caller ID Assignment
[901] Caller ID Area Code Assignment
[902] Caller ID Modification for Local Calls
[903] Caller ID Modification for Long Distance Calls
[904] Caller ID Log Priority Selection

Feature Reference

Section 3, Features
Caller ID

Operation References
— User Manual

Telephone Features
Call Log, Incoming
Call Log Lock, Incoming
Operator/Manager Service Features
Remote Station Lock Control

Call Park

Description

Allows an 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 by any extension user.

Conditions

• The system contains ten parking areas, each of which has its own call park number. Up to ten calls can be parked at the same time in the system.
• If a parked call is not retrieved within a pre-assigned period of time, Hold Alarm/Hold Recall occurs.
• If a parked call is not retrieved in 30 minutes, it will be automatically disconnected.

Programming Reference

Section 4, System Programming
[200] Hold Recall Time

Feature Reference

Section 3, Features
Hold Alarm/Hold Recall

Operation Reference
— User Manual

Telephone Features
Call Park

Call Pickup, Directed

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

Conditions   • The user can pick up an incoming outside, intercom, or doorphone call.
                        • A confirmation tone is sent to the user when the call is picked up. The tone can be disabled.
                        • Hold recalls and camp on recalls cannot be picked up.

Programming Reference

Section 4, System Programming
[117] Call Pickup Tone

Feature References   None

Operation Reference **Telephone Features**
— User Manual   Call Pickup, Directed

Call Pickup, Group

Description   Allows an 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.
                        • A confirmation tone is sent to the user when the call is picked up. The tone can be disabled.

Programming References

Section 4, System Programming
[117] Call Pickup Tone
[600] Extension Group Assignment

Feature References   None

Operation Reference **Telephone Features**
— User Manual   Call Pickup, Group

3   Features   *C*

Call Pickup Deny

Description   Allows a user to prevent other extensions from picking up calls
                           ringing at their extension by using the call pickup feature.

Condition   A Distinctive Dial Tone is sent to the extension user by this feature when
                           the user goes off-hook.

Programming References
                           No programming required.

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

Operation Reference   **Telephone Features**
— User Manual   Call Pickup Deny

Call Retrieving from a TAM (Telephone Answering Machine)

Description   Allows an extension user to answer an incoming call received by
                           TAM.

Conditions   None

Programming Reference
                           Section 4, System Programming
                           [611] TAM (Telephone Answering Machine) Extension

Feature References   None

Operation Reference   **Telephone Features**
— User Manual   Call Retrieving from a TAM (Telephone Answering Machine)

Call Splitting

Description

Allows an 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.

Condition

• Call Splitting is not possible during a Doorphone Call or Paging.

Programming References

No programming required.

Feature References

None

Operation Reference
— User Manual

Telephone Features
Call Splitting

3   Features

<div align="right">*C*</div>

CALL TRANSFER FEATURES – SUMMARY

Description
Call Transfer features allow a user to transfer a call to another party. This operation can be screened or unscreened. Screened call transfer is used when the user wants 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 external party by the following.

Call Transfer, Screened – to Extension
Call Transfer, Screened – to an Outside (CO) Line
Call Transfer, Unscreened – to Extension

Call Transfer, Screened – to Extension

Description
Allows an extension user to voice-announce to the extension and transfer the call.

Condition
• If music on hold is enabled, music is sent to the caller while being transferred. Sending a cyclic tone or music on hold to the caller can be programmed by program [111].

Programming References
Section 4, System Programming
[005] One-Touch Transfer Using a DSS Button
[111] Hold Music Selection
[201] Transfer Recall Time

Feature Reference
Section 3, Features
One-Touch Transfer Using a DSS Button

Operation Reference
— User Manual
Telephone Features
Call Transfer — to Extension

Call Transfer, Screened – to an Outside (CO) Line

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

Conditions
• System programming determines which extensions are able to perform this feature.
• A single line telephone user cannot transfer a received call to an external party.
• If a call between two external parties is established using this feature, the duration of the call is restricted by a system timer. Hold Alarm/Hold Recall is generated to the extension who transferred the call 50 seconds before the time-out. Also, an 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 rejoins the conversation.
• If music on hold is enabled, music is sent to the caller while being transferred. Sending a cyclic tone or music on hold to the caller can be programmed by program [111].

Programming References

Section 4, System Programming
[111] Hold Music Selection
[205] Outside-to-Outside (CO-to-CO) Line Duration Time Limit
[606] Call Transfer to an Outside (CO) Line

Feature Reference
Section 3, Features
Hold Alarm/Hold Recall

Operation Reference
— User Manual
Telephone Features
Call Transfer — to an Outside (CO) Line

3   Features

Call Transfer, Unscreened – to Extension

Description

Allows a user to transfer an intercom or outside call directly to an extension party. After dialing the destination extension, the user waits for the ringback tone and replaces the handset.

Conditions

• If the destination party does not answer within the pre-determined time, the call will return to the user (Transfer Recall).
• This feature is possible when the destination is sending a ringback or busy tone. If the destination is busy, Camp-On Transfer occurs.
• The ringing signal pattern depends on the party being transferred: outside or extension call ringing.
• If music on hold is enabled, music is sent to the caller while being transferred. Sending a cyclic tone or music on hold to the caller is programmable by program [111].

Programming References

Section 4, System Programming
[005] One-Touch Transfer Using a DSS Button
[111] Hold Music Selection
[201] Transfer Recall Time

Feature Reference

Section 3, Features
One-Touch Transfer Using a DSS Button

Operation Reference
— User Manual

Telephone Features
Call Transfer — to Extension

C   3   **Features**

Call Waiting

Description

During a conversation, a call waiting tone notifies the user that another incoming call is waiting. They can answer the second call by disconnecting or placing the current call on hold. The call waiting tone can be activated or deactivated by dialing the appropriate feature number.

Conditions

- A call waiting tone is generated when an outside call (except a doorphone call) is received, or when an extension caller executes Busy Station Signaling, if Call Waiting is enabled.
- 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 tones are provided.
  A proprietary telephone user can select the desired type by station programming.
- Tone 2 depends on the assignment in program [423] "Outside (CO) Line Ringing Pattern Selection" for outside (CO) lines and program [115] "Extension Ringing Pattern Selection" for intercom calls.
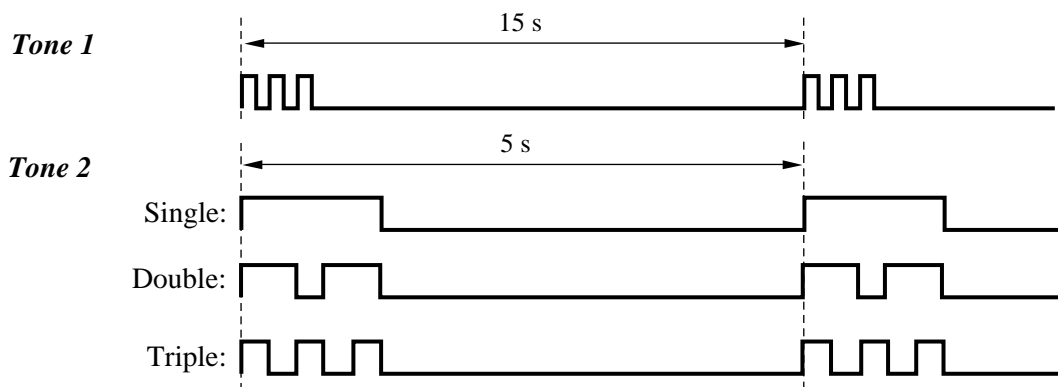
Tone 1

15 s

Tone 2

5 s

Single:

Double:

Triple:

Programming References

Section 4, System Programming
[115] Extension Ringing Pattern Selection
[423] Outside (CO) Line Ringing Pattern Selection
Station Programming . . . . **User Manual**
Call Waiting Tone Type Assignment

Feature References

Section 3, Features
Busy Station Signaling (BSS)
Data Line Security

Operation Reference
— User Manual

Telephone Features
Call Waiting

3   Features

Call Waiting from a Central Office

Description   During a conversation, a call waiting tone offered by the Central
                              Office notifies the user that another incoming call is waiting. They
                              can answer the second call by placing the current call on hold.

Conditions   None

Programming References

Section 4, Features
[110] Flash Key Mode
[418] Flash Time

Feature Reference   **Section 3, Features**
                              Call Waiting

Operation Reference   **Telephone Features**
   — User Manual   Call Waiting from a Central Office

Conference

Description

The system supports three-party conference calls, including external or internal 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-intercom and 2-outside calls; 2-intercom and 1-outside calls; and 3-intercom calls.
- A three-party call can also be established by Executive Busy Override.
- When a two-party call is changed to a three-party call or vice versa, a confirmation tone is sent to all three parties. The tone can be disabled.

Programming References

Section 4, System Programming
[105] Conference Tone
Station Programming . . . . **User Manual**
Flexible Button Assignment – Conference (CONF) Button

Feature Reference

Section 3, Features
Conference, Unattended

Operation Reference
— User Manual

Telephone Features
Conference

3   Features   *C*

Conference, Unattended

Description

When a proprietary telephone user is in a conference with two external parties, the user can leave the conference to allow the other two parties to continue the 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 an outside (CO) line.
• The duration of an unattended conference is restricted by a system timer. Hold Alarm/Hold Recall is enabled at the extension who left the conference 50 seconds before the time-out. An 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 rejoins the conversation.

Programming References

Section 4, System Programming
[205] Outside-to-Outside (CO-to-CO) Line Duration Time Limit
[606] Call Transfer to an Outside (CO) Line

Feature References

Section 3, Features
Conference
Hold Alarm/Hold Recall
Limited Call Duration

Operation Reference
— User Manual

Telephone Features
Conference, Unattended

Confirmation Tones

Description

When various features are completed, 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 is different from the previous setting.
(b) Sets or cancels Electronic Station Lockout.

Confirmation tone 2:
(a) Indicates that the new setting is the same as the previous setting.
(b) Also, sent when various features are successfully performed or accessed. (e.g. Call Hold, Automatic Callback Busy)
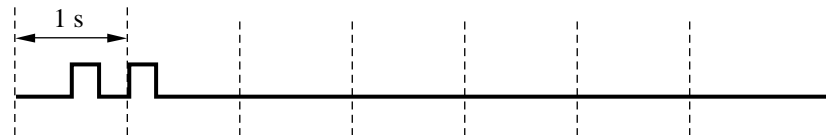
Confirmation tone 3:
Sent when a conversation is established just after dialing.
For example, when accessing the following features by their feature numbers:
  • Conference
  • Call Pickup
  • Paging – External
  • Paging Answer
This tone can be disabled by system programming so that the user can start talking immediately.
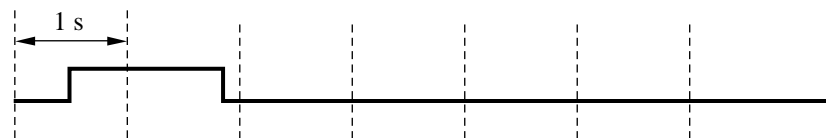
Confirmation tone 4:

Sent when changing a three-party call (created by Executive Busy Override or Conference) to a two-party call. This tone can be disabled by system programming.
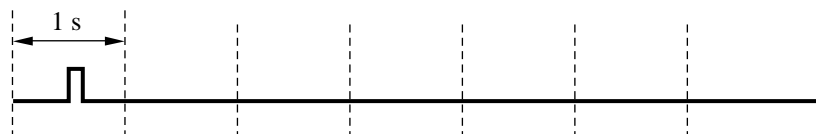
Condition
• Confirmation Tones 1 and 2 are provided to reconfirm assigned features.

Programming References

Section 4, System Programming
[105] Conference Tone
[106] External Paging Access Tone
[117] Call Pickup Tone

Feature References   None

Operation References   Not applicable.

D   3   Features

Data Line Security

Description

Data Line Security is a feature that can be set at individual extensions. Once set, communication between the extension and the other party is protected from signals such as Call Waiting, Hold Alarm/Hold Recall and Executive Busy Override. Data equipment or a facsimile may be connected to an extension jack so that the user can perform data communications. During communication, Data Line Security maintains secure data transmission against tones or interruptions from other extensions.

Conditions

None

Programming References

No programming required.

Feature References

Section 3, Features
Call Waiting
Executive Busy Override
Hold Alarm/Hold Recall

Operation Reference
— User Manual

Telephone Features
Data Line Security

3   Features   *D*

Dial Tones, Distinctive

Description   Three types of dial tone patterns are available to give information about features activated on the telephone.
Dial tone 1: This is a normal dial tone. None of the features listed below are activated.
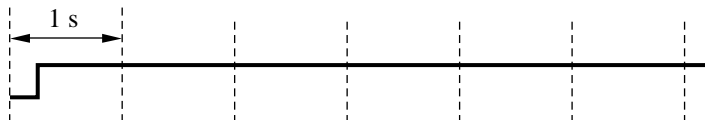
Dial tone 2: Sent when any one of the features below are set.
   Absent Message Capability
   Background Music (BGM) (for proprietary telephones only)
   Call Forwarding
   Call Pickup Deny
   Data Line Security
   Do Not Disturb (DND)
   Electronic Station Lockout
   Message Waiting (for proprietary telephones only)
   Pickup Dialing (for single line telephones only)
   Remote Station Lock Control
   Timed Reminder
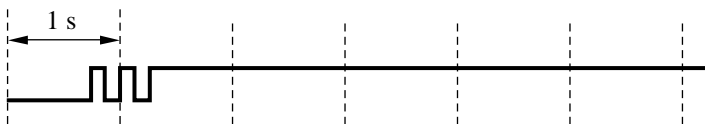
Dial tone 3: Sent when performing Account Code Entry and sent when answering a Timed Reminder call.
Also sent when going off-hook with a single line telephone which has messages left in a Voice Processing System.
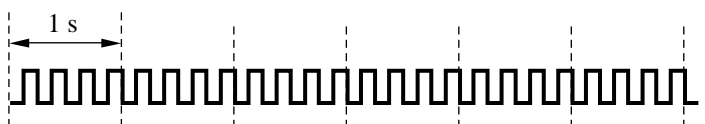
Conditions   None

Programming References

No programming required.

Feature References   None

Operation References   Not applicable.

Dial Type Selection

Description	Allows an extension user to select the desired dialing mode for each outside (CO) line regardless of the originating extension (rotary or tone). There are three dialing modes available.

> **DTMF (Dual Tone Multi-Frequency) Mode**
> The dialing signal from an extension, either tone or rotary, is converted to tone dialing. DTMF signals are transmitted to the outside (CO) line.
>
> **Pulse Dial (Rotary) Mode**
> The dialing signal from an extension, either tone or rotary, is converted to rotary dialing. Rotary pulses are transmitted to the outside (CO) line.
>
> **Call Blocking Mode**
> Set this mode for outside (CO) lines that can receive both tone and rotary dialing, but are under contract with the Central Office for rotary dialing only. When dialing to a line using a touch-tone telephone, only rotary dialing is sent to the Central Office.

Conditions

- Extension users can temporarily convert the pre-assigned rotary dialing mode to DTMF mode (Pulse to Tone Conversion). DTMF mode cannot be changed to rotary.
- Either DTMF or rotary dialing can be assigned for the DISA (Direct Inward System Access) outgoing line. With DISA, pulse to tone conversion is not possible.
- If an outside (CO) line can receive both DTMF and pulse signals and is contracted for DTMF with a Central Office, the DTMF mode should be selected for the line. If it is contracted for rotary mode, the Call Blocking mode should be selected for the line.
- If a line is assigned to the Pulse Dial mode, select an appropriate pulse speed, if necessary.
- After a held call is retrieved, the dial mode returns to the one originally programmed for the outside (CO) line.

Programming References

Section 4, System Programming
[401] Dial Mode
[402] Pulse Speed Selection

Feature References

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

Operation References   Not applicable.

3   Features

Direct In Lines (DIL)

Description

Enables an incoming outside call to go directly to one extension.
DIL places an incoming outside call to only one extension. This
outside (CO) line can be used by multiple extension users to make
calls, but can only be used by one extension to receive calls.
DIL can have different destinations for the day, night and lunch
modes (Time Service).

Condition

• If the Station Hunting feature is assigned to the destination extension,
  the call will be hunted.

Programming References

Section 4, System Programming
[414]–[416] Outside (CO) Line Mode — Day/Night/Lunch

Feature Reference

Section 3, Features
Station Hunting

Operation References

Not applicable.

Direct Inward System Access (DISA)

Description

Allows an outside caller to access specific system features as if the caller is an extension in the system. The caller can have direct access to features such as:

- Placing an incoming call to an extension, operator or ring group. The caller also has the option of dialing the route for an extension using a one digit number (DISA built-in auto attendant number) via DISA calls.
- Calling an external party.

One of the following must be selected to have direct access to these features: (1) None Security, (2) Trunk (Outside (CO) Line) Security, or (3) All Security. In None Security mode, any caller can make outside or intercom calls. In Trunk (Outside (CO) Line) Security mode, a pre-assigned DISA security code must be entered to make outside calls. In All Security mode, a pre-assigned DISA security code must be entered to make both outside and intercom calls. This prevents callers from making unauthorized calls. However, when making an outside call by Call Forwarding – to Outside (CO) Line, the call is allowed (exception).

An Outgoing Message can be programmed for the DISA feature. When a caller reaches a DISA line, a message will greet the caller. Two different DISA messages can be recorded by the operator or manager. For example, one message can be used in the day mode and the other in night mode, or they can be used for different outside (CO) lines. If an optional OGM/FAX Detection card is not installed, the caller will hear a beep instead of the outgoing message (the internal DISA).

Conditions

- The following items are required for the DISA feature.
    (1) "DISA1" or "DISA2" must be assigned to outside (CO) line(s) as the outside (CO) line mode.
    (2) An optional OGM/FAX Detection Card must be installed for outgoing messages.
    (3) The DISA message(s) should be recorded by the operator or manager.
  (2) and (3) are required for outgoing messages and fax detection.
- After the DISA Delayed Answer Time expires and a ringback tone is returned to the caller, a DISA call will be answered. The caller can dial during the message or after the tone.
- This system can store up to ten programmable DISA built-in auto attendant numbers. Each number is one digit.

- The DISA built-in auto attendant number may be the same as the first digit of other numbers (extension number, etc.). To avoid confusion, the system waits for the second digit for a preprogrammed amount of time (default: 2 seconds). If the timer expires, the system will assume that the first digit is a DISA built-in auto attendant number.
- Only one OGM/FAX Detection card can be installed.
- The DISA line can be used to originate outside calls if a security code (if required) has been dialed.
- This system can store up to four programmable DISA security codes. Each code should be different.
- The duration of outside-to-outside (CO-to-CO) line calls can be limited. When the specified time expires, both lines are disconnected. A warning tone is sent to both parties 15 seconds before the time-limit.
- To detect the end of an outside-to-outside (CO-to-CO) line call, CPC Signal Detection can be assigned.
- If a wrong DISA security code is entered, three beeps will be heard. The call will be disconnected after three failed attempts.

Connection Reference

Section 2, Installation
2.4.2   Caller ID and OGM/FAX Detection Card Installation

Programming References

Section 4, System Programming
To enable the DISA feature
[414]–[416]   Outside (CO) Line Mode — Day/Night/Lunch
[420]   Calling Party Control (CPC Signal)
[421]   CPC Detection for Outgoing Calls
[500]   DISA Incoming Dialing Mode Selection
[501]   DISA Built-in Auto Attendant
[502]   OGM Mode Selection
[503]   FAX Connection
[506]   DISA Busy Mode
[510]   DISA No Dial Mode
[511]   DISA Security Type
[512]   DISA Security Codes
[513]   Cyclic Tone Detection
[514]   FAX Tone Detection
[516]   DISA Incoming Assignment
[518]   DISA Tone Selection after the Security Code
To set DISA timer values
[205]   Outside-to-Outside (CO-to-CO) Line Duration Time limit
[504]   DISA Delayed Answer Time
[505]   DISA Waiting Time After OGM
[517]   DISA AA Wait Time

To enable the Intercept Routing feature

[408]–[410] Flexible Ringing Assignment — Day/Night/Lunch
[507] DISA Intercept Mode
[508] DISA Ringing Time before Intercept
[509] DISA Ringing Time after Intercept
[515] Intercept Time For Internal DISA

Feature References   **Section 3, Features**
Intercept Routing
Outgoing Message (OGM)

Operation Reference   **Telephone Features**
— User Manual   Direct Inward System Access (DISA)

Flow chart of possible cases and results for DISA calls

An outside line call is made.
*1

The caller reaches the DISA line.

Without optional OGM/FAX Detection Card (Internal DISA)

With optional OGM/FAX Detection Card

One short beep *2
*3

OGM *13
C
*14

Cyclic tone or CPC signal

CNG tone *18

A number is dialed. *4

Nothing is dialed. *15

The call is sent to the fax extension.

Is a security code required? *5

Yes

No

The security code is entered.

What is the security type? **All** Disconnect.

Trunk or **None**

Is Intercept Routing employed? *16

Yes

No

Busy tone

One short beep ← The code is correct.

Make an outside call. *6

The code is incorrect.

The call is sent to another extension.

Disconnect.

The call reaches the destination.

Reorder tone

*17

A

Answered.

The call is not answered for 40 seconds.

*7

Disconnect.

Answered.

Answered.

The call is not answered.

Disconnect.

Disconnect.

The call is not answered.

B

The destination extension(s) is(are) busy. *9

Is Intercept Routing employed? *8

Yes

No

What is the DISA Busy Mode? *10

The call is sent to another extension.

Disconnect

Call Waiting

DISA2

Busy tone

The other OGM is heard.

Goes to A

Disconnect.

*11

Goes to C *12

Answered.

The call is not answered.

Goes to B

*1: The DISA Delayed Timer starts. This is the time between a call reaching the system and being received. The time is assigned in program [504] "DISA Delayed Answer Time".

*2: When a call is received and the system answers, the system sends a short beep to the caller.

*3: The Intercept Timer for Internal DISA starts. This is the time the system waits for the number sent by the caller. If nothing is entered by the caller during this time, the system will regard it as "Nothing is dialed." The time is assigned in program [515] "Intercept Time for Internal DISA".

*4: The system can accept the following numbers:
   • **100 through 199** as an extension number.
   • **81 through 86** as an outside (CO) line group line access number.
   • **9** as an automatic line access number when "Without AA" is assigned in program [500] "DISA Incoming Dialing Mode Selection". Even if "With AA" is assigned, 9 is regarded as the automatic line access number if nothing is assigned to "9" in program [501] "DISA Built-in Auto Attendant".
   • **0** as the operator call number when the operator is assigned in program [008] "Operator Assignment" and "Without AA" is assigned in program [500] "DISA Incoming Dialing Mode Selection". Even if "With AA" is assigned, 0 is regarded as the operator call number if nothing is assigned to "0" in program [501] "DISA Built-in Auto Attendant".
   • **0 through 9** as a built-in auto attendant number when "With AA" is assigned in program [500] "DISA Incoming Dialing Mode Selection". The DISA AA Wait timer starts after receiving the first 1-digit number. If the timer expires, the system will assume that the first digit is an AA number. The time is assigned in program [517] "DISA AA Wait Time".

*5: A security code is necessary when program [511] "DISA Security Type" is assigned as follows.
   • **All Security** – the system waits for a security code dialed after " ✶ ". When the security code matches a code programmed in program [512] "DISA Security Codes", the system accepts the numbers after the code.
   • **Trunk Security** – the caller can access an outside (CO) line if the security code matches a code programmed in program [512] "DISA Security Codes". The caller can access other destinations without the security code.
   If the entered number is the same as one of the security codes, a short beep is heard. The beep can be disabled in program [518] "DISA Tone Selection after the Security Code". If the number is wrong, three beeps will be heard. The call will be disconnected after three failed attempts.

*6: The caller must enter the desired phone number after hearing a dial tone from the Central Office.

*7: The DISA Ring Timer Before Intercept starts. The destination telephone(s) will ring for the time programmed in program [508] "DISA Ringing Time before Intercept".

*8: The system treats the call according to program [507] "DISA Intercept Mode" as follows.
   • **Disconnect** – the call is disconnected.
   • **Intercept** – the call is sent to the extensions programmed in programs [408]–[410] "Flexible Ringing Assignment — Day/Night/Lunch".
   If the call is still not answered within the time programmed in program [509] "DISA Ringing Time after Intercept", it will be disconnected.

*9: If the destination extension belongs to a hunting group and all extensions in the group are busy, the system checks the DISA Busy Mode. If the destination is the Ring group, the DISA Busy Mode will not work for the call. The system regards the call as unanswered.

*10: The DISA Busy Mode is selected in program [506] "DISA Busy Mode". There are three modes as follows:
  • **Disconnect** – the caller hears a busy tone and the call is disconnected.
  • **Call Waiting** – the destination extension hears the call waiting tone if they have enabled Call Waiting.
  • **DISA2** – if "MODE2" is assigned in program [502] "OGM Mode Selection" and a message is recorded in OGM2, the caller hears the message and the system waits for the new destination.

*11: The DISA Ring Timer Before Intercept starts. The destination telephone(s) will ring for the time programmed in program [508] "DISA Ringing Time before Intercept".

*12: In this case, the system disregards the security type and does not accept the line access code. If nothing is recorded in OGM2, the caller will hear a busy tone and the call is disconnected.

*13: The OGM is sent to the caller according to programs [414]–[416] "Outside (CO) Line Mode – Day/Night/Lunch" and [502] "OGM Mode Selection". If an OGM is not recorded, the DISA Wait Timer After OGM programmed in program [505] "DISA Waiting Time after OGM" will start immediately.
When the system detects a CNG tone while the OGM is being sent, the call is sent to the FAX extension. When the system detects a cyclic tone or a CPC signal while the OGM is being sent, the call is disconnected.

*14: The DISA Wait Timer After OGM starts. The system waits for a number from the caller during the time programmed in program [505] "DISA Waiting Time after OGM". When the system detects a CNG tone during the programmed time, the call is sent to the FAX extension. When the system detects a cyclic tone or a CPC signal during the programmed time, the call is disconnected.

*15: After the DISA Wait Timer After OGM or the Intercept Timer for Internal DISA expires, the system regards that nothing was dialed .

*16: The system treats the call according to program [510] "DISA No Dial Mode" as follows.
  • **Disconnect** – the call is disconnected.
  • **Intercept** – the call is sent to the extensions programmed in programs [408]–[410] "Flexible Ringing Assignment — Day/Night/Lunch". If all of the extensions are assigned to "Disable", the call will be disconnected.

*17: The DISA Ring Timer After Intercept starts. The destination telephone(s) will ring for the time programmed in program [509] "DISA Ringing Time after Intercept". If the call is not answered during the programmed time, the call will be disconnected.

*18: The FAX extension assigned in program [503] "FAX Connection" receives the call. When the extension is busy, the system sends a busy tone to the Fax. If the call is not answered after 40 seconds, the call will be disconnected.
Program [514] "Fax Tone Detection" sets how many times the CNG tone must be detected before the system recognizes the incoming signal as facsimile data.

<u>**D**isplay, Call Information</u>

Description

A 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, during an established intercom call, and while on-hook.
> Display example: **102: Smith**

Dialed telephone number
> This is shown when dialing the telephone number.
> Display example: **91234567890**

Number or name of the caller
> These are shown if the Caller ID feature is available.
> Display examples: **1234567890**
> **Panasonic**

Call duration
> This is shown during an established outside call. The display remains for five seconds after the call is finished.
> Display example: **CO 2 0:02'28**

Conditions

- Extension numbers and names are programmable. If an extension name is not stored, only the extension number will be displayed.
- The display does not show the intercom call duration.
- The outgoing outside call duration starts when the programmable timer expires.

Programming References

Section 4, System Programming
[009] Extension Number Assignment
[204] Call Duration Count Start Time
[604] Extension Name Setting

Feature Reference

Section 3, Features
Caller ID

Operation References

Not applicable.

3   Features

Display, in Idle

Description

Offers a display proprietary telephone user to display the current time and date, or the extension number and name. One of the following displays is displayed while on-hook. The user can change the display by pressing the ✳ key.

Conditions

• Display example (12 H): Month, Day, Time (AM/PM)

```
Jan 1 11:20PM
```

Display example (24 H): Day, Month, Time

```
Jan 1 23:20
```

Display example: Month, Day, Year, Day of the week

```
Jan  1,1998  Thu
```

Display example: Extension number and name

```
123:Tony Viola
```

• The current date and time are set by system programming or the operator/manager service features.
• The user can select how to show the present time, 12 hours or 24 hours by system programming.

Programming References

Section 4, System Programming
[000] Date and Time Setting
[010] LCD Time Display Selection

Feature References   None

Operation References
— User Manual

Operator / Manager Service Features
Date and Time Setting
Appendix
Display Examples

D 3 Features

Display, Self-Extension Number

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

Condition • Display example
If the jack number is 02 and the extension number is 102:

```
Jack02<=>EXT102
```

Programming Reference

Station Programming . . . . **User Manual**
Self-Extension Number Confirmation (KX-T7030 and KX-T7130 only)

Feature References None

Operation References Not applicable.

Display Contrast Adjustment

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

Condition • A lever on the telephone (CONTRAST selector) is used to select one of three available levels.

Programming Reference

Configuration . . . . **User Manual**
Initial Settings — Display Contrast Adjustment (KX-T7030 and
KX-T7130 only)

Feature References None

Operation References Not applicable.

3   Features

D

Do Not Disturb (DND)

Description

Allows an extension user to appear busy to incoming outside or intercom calls. This can be set or canceled by the extension user.

Conditions

- If a proprietary telephone (PT) is not supplied with the FWD/DND button, it can be assigned to a flexible CO button.
- DND does not work for the following calls: hold recalls or the Timed Reminder alarm.
- A PT user in DND mode can answer a call by pressing the corresponding flashing button.
- An extension in DND mode can be called by other extension users who are allowed to override DND in program [609] "Do Not Disturb Override".
- If the Call Forwarding feature has already been set, setting the DND feature will cancel Call Forwarding.

Programming Reference

Station Programming . . . . **User Manual**
Flexible Button Assignment – FWD/DND Button

Feature Reference

Section 3, Features
Do Not Disturb (DND) Override

Operation Reference
— User Manual

Telephone Features
Do Not Disturb (DND)

Do Not Disturb (DND) Override

Description

Allows a pre-assigned extension user to call another user who has set the Do Not Disturb feature. Dialing "2" enables the caller to override DND programmed on the called extension's telephone and forces the telephone to ring.

Condition

- System programming determines which extension users can perform DND Override.

Programming Reference

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

Feature Reference

Section 3, Features
Do Not Disturb (DND)

Operation Reference
— User Manual

Telephone Features
Do Not Disturb (DND) Override

D   **3   Features**

<u>**D**oor Opener</u>

Description   Allows extension users to unlock the door for a visitor from their
                                 telephone. The door can be unlocked by extension users who have
                                 been programmed to enable this feature.

Conditions   • An optional Doorphone/Door Opener card must be installed.
                                 • A user-supplied door opener must be installed to the door to be opened.
                                   Four door openers can be installed.
                                 • The door opener will open the door even if a doorphone is not installed.
                                 • The user can modify the door opener timer through system
                                   programming.

Connection Reference

Section 2, Installation
2.4.3   Doorphone and Door Opener Connection

Programming References

Section 4, System Programming
[703]–[705] Door Opener Assignment — Day/Night/Lunch
[709] Door Opener time

Feature Reference   **Section 3, Features**
                                 Doorphone Call

Operation Reference   **Telephone Features**
    — User Manual   Door Opener

3   Features

D

Doorphone Call

Description

If a visitor presses the doorphone button, pre-assigned extensions will be called. The extension who answers the call can talk to the visitor. Any extension user can call a doorphone. The doorphones are also used for the Room Monitor feature.

Conditions

• An optional Doorphone/Door Opener card must be installed.
• Four doorphones can be installed.
• The extensions which can receive calls from each doorphone during the day, night and lunch modes must be programmed.
• If an extension user does not answer an incoming doorphone call within a programmed period of time, the ringing will stop and be canceled.
• A programmed extension user can open the door from the telephone to let the visitor in (Door Opener). This requires a user-supplied door opener.
• An access tone can be programmed to be sent to the monitored doorphone before monitoring starts.
• The ringing tone from the doorphone call is programmable.
• Doorphone 1 and Doorphone 2 cannot receive calls simultaneously. When one is in use, an extension user cannot have a conversation with the other. This is the same for Doorphone 3 and Doorphone 4.

Connection Reference

Section 2, Installation
2.4.3   Doorphone and Door Opener Connection

Programming References

Section 4, System Programming
[700]–[702]   Doorphone Ringing Assignment — Day/Night/Lunch
[706]   Door Ringing/Tone Pattern Selection
[707]   Doorphone Access Tone Selection
[708]   Doorphone Ringing Time

Feature References

Section 3, Features
Door Opener
Room Monitor

**Operation References
— User Manual**

Telephone Features
Doorphone Call
Room Monitor

DSS Console (KX-T7040)

Description

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

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 two consoles can be installed per system. A PT can be paired with up to two 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 external party (One-Touch Dialing)
- Easy transfer of an outside call to an extension (The programmable One-Touch Transfer feature provides this simple operation.)
- Quick access to a system feature
- Changing the time (Day/Night/Lunch) service easily (Day/Night/Lunch Button Assignment) — only for an Operator and Manager
- Set and cancel the remote station lock control feature (Station Lock Button Assignment) — only for an Operator and Manager

The above features are activated simply by pressing the buttons on the console which were pre-programmed as feature buttons.

A DSS Console has two types of buttons as shown below.

DSS Console KX-T7040

DSS buttons

PF buttons

3   Features

<div align="right">D</div>

DSS (Direct Station Selection) buttons: Used to access extensions, change the time (day/night/lunch) service, and set and cancel the Remote Station Lock Control feature. Each button is programmed to correspond to an extension. Pressing a button allows the user to call the corresponding extension. Each button also has 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
Flashing*	FWD/DND is enabled.

Busy Lamp Field Table

*: When program [112] is assigned to "Enable", the indicator will flash.

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

PF (Programmable Feature) buttons marked as F1 through F16: These buttons have no default settings. The paired telephone user can program the buttons for other feature buttons.

Conditions

• Programming the DSS and PF buttons can be done only from the paired telephone using station programming.
• If the extension number assigned to a DSS button is changed to another number, the DSS button automatically changes to the new number. (Reprogramming is not necessary.)
• Indicating the FWD/DND status of corresponding extensions using a DSS button indication is programmable.

Connection Reference

Section 2, Installation
2.3.4   Extension Connection

Programming References

Section 4, System Programming
[003]   DSS Console Port Assignment
[004]   Paired Telephone Assignment for DSS Console
[112]   DSS Console Indication Mode
Station Programming . . . . **User Manual**
Flexible Button Assignment
DSS Console Features . . . . **User Manual**
Station Programming

Feature References

Section 3, Features
Button, Flexible   Remote Station Lock Control
One-Touch Transfer Using   Time (Day/Night/Lunch) Service
  a DSS Button

Operation Reference   **DSS Console Features**
  — User Manual

Electronic Station Lockout

Description	Allows an extension user to lock their station so that other users cannot make outgoing outside calls. Any 4-digit code can be used to lock the station. The same code is used to unlock it. The manager or operator can cancel this feature for all extensions.
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 or manager sets Remote Station Lock on a station that has already been locked by the station user, the user cannot unlock it. • A toll restriction class can be assigned for this feature. Certain types of outgoing outside calls are permitted depending on the assigned toll restriction class.

Programming References

Section 4, System Programming
[108] Flash Mode for a Station Locked Extension
[312] Toll Restriction — Station Lock Boundary Class

Feature References   **Section 3, Features**
Remote Station Lock Control
Toll Restriction — Station Lock Boundary Class

Operation References   **Telephone Features**
— User Manual   Electronic Station Lockout
Operator/Manager Features
Electronic Station Lockout — CANCEL ALL

3   Features   *E*

Emergency Call

Description   Allows the extension user to call a pre-assigned emergency number regardless of any restrictions.

Conditions
- Up to five emergency numbers can be stored. "911" is already stored by the default setting.
- An emergency number can be dialed even in the following cases:
  — in Account Code – Verify – All and Forced modes,
  — in any toll restriction COS number, and
  — in Electronic Station Lockout.

Programming Reference

Section 4, System Programming
[309] Emergency Dial Number Set

Feature References   None

Operation Reference   **Telephone Features**
— User Manual   Emergency Call

End-to-End DTMF Signaling (Tone Through)

Description   DTMF signaling is required for access to special network services offered by some telephone companies. This system allows a proprietary telephone user to send DTMF signals to the line during a call in progress.

Conditions
- If the line dial type is assigned to DTMF, the Tone Through mode is established automatically after the dialing sequence is finished and the call is established.
- If the line dial type is assigned to pulse, the Tone Through mode is established after the dialing sequence is finished and the " ✶ #" buttons are pressed (Pulse to Tone Conversion).

Programming Reference
[118] Pulse Restriction

Feature References   **Section 3, Features**
Dial Type Selection
Pulse to Tone Conversion

Operation References   Not applicable.

Executive Busy Override – Extension

Description	Allows a pre-assigned extension user to interrupt an existing extension call, either between two inside parties or an external and inside party, to establish a three-party conference call. Extension users can prevent this feature from being executed by another extension user (Executive Busy Override Deny).

Conditions

- System programming determines which extension users can perform Executive Busy Override.
- This feature will not work if the extension has set Executive Busy Override Deny or Data Line Security.
- When a three-party call is changed to a two-party call or vice versa, a confirmation tone is sent to all three parties. This tone can be disabled by system programming.

Programming References

Section 4, System Programming
[105] Conference Tone
[608] Executive Busy Override

Feature References
Section 3, Features
Conference
Data Line Security

Operation Reference — User Manual
Telephone Features
Executive Busy Override — Extension

3 Features

Executive Busy Override – Outside (CO) Line

Description   Allows a proprietary telephone user to interrupt an existing outside call, either between two external parties or an external and inside party, to establish a three-party conference call. Extension users can prevent this feature from being executed by another extension user (Executive Busy Override Deny).

Conditions   • System programming determines which extension users can perform Executive Busy Override.
• This feature will not work if the extension has set Executive Busy Override Deny or Data Line Security.
• When a three-party call is changed to a two-party call or vice versa, a confirmation tone is sent to all three parties. This tone can be disabled by system programming.

Programming References

Section 4, System Programming
[105] Conference Tone
[608] Executive Busy Override

Feature References   **Section 3, Features**
Conference
Data Line Security

Operation Reference   **Telephone Features**
— User Manual   Executive Busy Override — Outside (CO) Line

Extension Group

Description

The system supports eight extension groups. Any member of an extension group can pick up a call directed to another group member (Group Call Pickup) or can make a voice announcement to another group member (Paging – Group). In addition, the Station Hunting feature can be enabled for each extension group. A DISA ring group is a specific extension group.

Condition

• Each extension should belong to an extension group, but cannot belong to more than one group.

Programming Reference

Section 4, System Programming
[600] Extension Group Assignment

Feature References

Section 3, Features

Call Pickup, Group	Paging – Group
Direct Inward System Access (DISA)	Station Hunting

Operation References   Not applicable.

3   Features   *E*

External Feature Access

Description

Allows an extension user to access the features of a host PBX or Central Office, such as Call Waiting, etc. This is performed by putting the current party on hold and sending a flash signal.

Conditions

- This feature is effective only during an outside call. However, if the FLASH feature (Disconnection signal) is activated by the user, this feature will not work.
- The flash time must be assigned as required by the host PBX or outside (CO) line.
- With a proprietary telephone, the FLASH button is used to perform this feature . With a single line telephone, flashing the hookswitch and entering the feature number are used to perform this feature .
- During outside calls, a FLASH stored in System Speed Dialing, Personal Speed Dialing or One-Touch Dialing features as External Feature Access, not as a Flash.

Programming References

Section 4, System Programming
[110] Flash Key Mode
[418] Flash Time

Feature References

Section 3, Features
Flash
Host PBX Access

Operation Reference
— User Manual

Telephone Features
External Feature Access

F 3 Features

Facsimile Detection

Description

When the system receives a facsimile transmission signal by Direct Inward System Access (DISA), it automatically connects the specified facsimile extension.

Conditions

- The extension which can receive facsimile data must be assigned by system programming.
- An optional OGM/FAX Detection Card must be installed.

Connection Reference

Section 2, Installation
2.4.2   Caller ID and OGM/FAX Detection Card Installation

Programming References

Section 4, System Programming
[503]   FAX Connection
[514]   FAX Tone Detection

Feature Reference

Section 3, Features
Direct Inward System Access (DISA)

Operation References   None

Flash

Description

Allows a proprietary telephone user to disconnect the current call and originate another call without hanging up by using the FLASH button.

Conditions

- System programming may be required to perform this feature properly.
- Pressing the FLASH button re-starts the conversation duration, outputs an SMDR record and checks the toll restriction COS number again.

Programming References

Section 4, System Programming
[110]   Flash Key Mode
[418]   Flash Time

Feature Reference

Section 3, Features
External Feature Access

Operation Reference
— User Manual

Telephone Features
Flash

3   Features   *H*

Handset/Headset Selection

Description   The system supports the use of headsets on proprietary telephones
                               (KX-T7030 and KX-T7130 only).

Conditions   • The headset is an user supplied item.
                               • To set the headset mode on a PT, use the handset/headset selector
                                 provided on the set and/or the headset.

Programming References
                               No programming required.

Feature References   None

Operation Reference   **Configuration**
—User Manual   Initial Settings

Hands-free Answerback

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

Conditions   • The hands-free answerback mode is set or canceled by pressing the
                                 AUTO ANSWER button.
                               • This feature does not work for calls from outside parties or doorphone
                                 calls.

Programming References
                               No programming required.

Feature References   None

Operation Reference   **Telephone Features**
—User Manual   Hands-free Answerback

Hands-free Operation

Description   Allows a proprietary telephone user to dial and talk to the other party without lifting the handset. Pressing the appropriate button provides the hands-free mode.

Conditions   • This feature can be utilized by pressing one of the following buttons when the SP-PHONE/MONITOR button indicator is off: SP-PHONE button, MONITOR button, INTERCOM button, or CO button.
                        • The KX-T7050 and the KX-T7055 can be used for hands-free dialing operations, etc., but cannot be used for a hands-free conversation.

Programming References
                        No programming required.

Feature References   None

Operation Reference   **Telephone Features**
    —User Manual   Hands-free Operation

Hold Alarm/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 their SP-PHONE/MONITOR button is off, the
phone will ring. If the user is off-hook or in the hands-free mode
when the timer expires, an alarm tone will be sent to the built-in
speaker of a proprietary telephone (PT) or the handset receiver of a
single line telephone at 15-second intervals.

Conditions   • Hold Recall and Hold Alarm can be disabled by programming.
• During hold recall, a display PT indicates the held party.
• An Alarm tone is sent as follows.
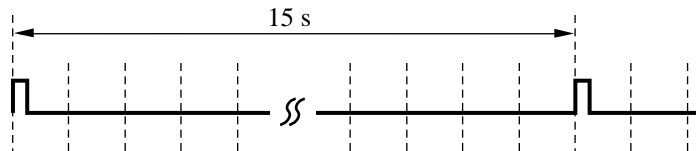
• While the Alarm tone is being sent, a display PT flashes the indication
of the held party for five seconds at 15-second intervals in synch with
the tone.
• This feature will not work if the extension has set Data Line Security.

Programming Reference

Section 4, System Programming
[200] Hold Recall Time

Feature References   **Section 3, Features**
Call Hold – Intercom   Call Hold, Exclusive – Intercom
Call Hold – Outside (CO) Line   Call Hold, Exclusive – Outside (CO)
Data Line Security   Line

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 an outside (CO) line in the Advanced Hybrid System.

Conditions

- A Host PBX Access Code is required to access outside (CO) lines of the host PBX.
- A pause, if programmed, can be inserted between the user-dialed Host PBX Access Code and the digits which follow (Automatic Pause Insertion). Program the pause time required by the Host PBX for that outside (CO) line group.
- Access to the host PBX during a conversation is also possible (External Feature Access).

Programming References

Section 4, System Programming
[403] Host PBX Access Codes
[417] Pause Time

Feature References

Section 3, Features
External Feature Access
Pause Insertion, Automatic

Operation References

Not applicable.

3   Features

I

Intercept Routing

Description

Provides automatic redirection of incoming outside calls via DISA. There are two types of Intercept Routing.

Condition

• The Intercept Routing feature works in the following cases.
  (1) When nothing is dialed after the dial tone or OGM is sent to the caller.
  (2) When the call is not answered within a programmed time. This is called Intercept Routing — No Answer (IRNA).

Programming References

Section 4, System Programming
[408]–[410] Flexible Ringing Assignment — Day/Night/Lunch
[507] DISA Intercept Mode
[508] DISA Ringing Time before Intercept
[509] DISA Ringing Time after Intercept
[510] DISA No Dial Mode

Feature References

None

Operation References

Not applicable.

Intercom Calling

Description

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

Conditions

- Extension numbers are assigned to all extensions by system programming.
- Names can be given to extension numbers by system programming. An extension number and a name, if programmed, will be shown on the display PT during an intercom call.
- DSS buttons permit one-touch access to an extension and provide the Busy Lamp Field.
- After dialing an extension number, the user will hear one of the following.
    Ringback tone: indicates the other extension is being called.
    Busy tone: indicates the other extension is busy.
    Do Not Disturb tone: indicates the other extension has assigned DND.
- A proprietary telephone user can select one of the Intercom Alert modes, Voice Call or Tone Call. Voice Call informs the called party of an incoming call with the calling party's voice, while Tone Call uses a ring tone. The calling party can only switch the pre-set mode at the called extension, from Voice Call to Tone Call.

Programming References

Section 4, System Programming
[009] Extension Number Assignment
[604] Extension Name Setting
Station Programming . . . . **User Manual**
Flexible Button Assignment – Direct Station Selection (DSS) Button
Intercom Alert Assignment

Feature References

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

Operation References
 —User Manual

Telephone Features
Intercom Calling
Switching to Tone Alert

3   Features   *L*

LED Indication, Intercom

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

INTERCOM Button	INTERCOM Status
Off	Idle
Green On	Intercom call / Conference established
Flashing green slowly	Intercom call on hold
Flashing green moderately	Intercom call exclusive hold
Flashing green rapidly	Incoming intercom / Doorphone call

Conditions   None

Programming References
                                 No programming required.

Feature Reference   **Section 3, Features**
                                 Busy Lamp Field

Operation References   Not applicable.

LED Indication, Outside (CO) Line

Description

The LED (Light Emitting Diode) indicators of the buttons associated with outside (CO) lines show the line conditions using a variety of lighting patterns. This allows the user to see which lines are idle and which lines are in use. The table below shows the lighting patterns for different line conditions.

LED Indicator	Outside (CO) Line Status
Off	Idle
Green On	I-use
Flashing green slowly	I-hold
Flashing green moderately	I-Exclusive Hold / Outside-to-Outside (CO-to-CO) Line call / Unattended Conference
Flashing red rapidly	Incoming call
Red On	Other-use
Flashing red slowly	Other-hold

Flashing light patterns
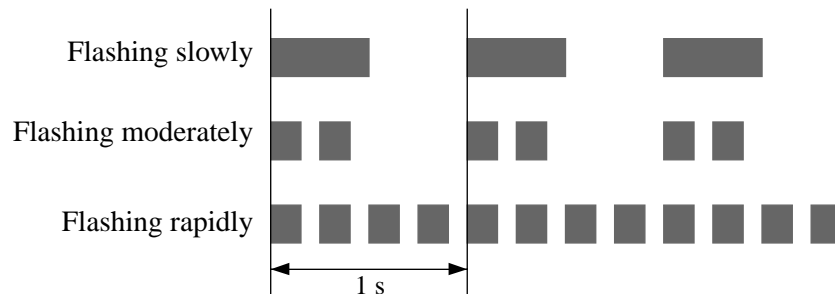
Condition

• A slow flashing red indication only appears on a S-CO button.

Programming References

Station Programming . . . . **User Manual**
Flexible Button Assignment – Group-CO (G-CO) Button,
                                   Other-CO (O-CO) Button,
                                   Single-CO (S-CO) Button

Feature References

Section 3, Features
Button, Group-CO (G-CO)
Button, Other-CO (O-CO)
Button, Single-CO (S-CO)

Operation References Not applicable.

3   Features

Limited Call Duration

Description   Limited Call Duration is a system programmable feature that
disconnects an outside-to-outside (CO-to-CO) line call when a
specific timer expires. A warning tone is sent to the caller
15 seconds before the time-limit.

Conditions   None

Programming Reference

Section 4, System Programming
[205] Outside-to-Outside (CO-to-CO) Line Duration Time Limit

Feature References   **Section 3, Features**
Call Forwarding – to an Outside (CO) Line
Call Transfer, Screened – to an Outside (CO) Line
Conference, Unattended
Direct Inward System Access (DISA)

Operation References   Not applicable.

Line Access, Automatic

Description   Allows an extension user to dial the automatic line access
number (9) and access an idle line from the assigned outside (CO)
lines.

Conditions   • Each extension is subject to system programming items to access
outside (CO) lines.
• This feature requires a CO button (G-CO, O-CO or S-CO) assignment
on a proprietary telephone (PT). Dialing the line access code selects a
CO button on a PT according to the priority.
   S-CO > G-CO (on a hunted outside (CO) line)
• If Idle Line Preference – Outgoing is set on the telephone, the user can
access an idle line only by going off-hook.
• After an outside (CO) line is seized, the system waits for a programmed
time before dialing.

Programming References
Section 4, System Programming
[206] Dialing Start Time
[400] Outside (CO) Line Connection Assignment
[405]–[407] Flexible Outward Dialing Assignment — Day/Night/Lunch
[419] Automatic Designated Outside (CO) Line Access

Feature Reference   **Section 3, Features**
Outside (CO) Line Connection Assignment – Outgoing

Operation Reference   **Telephone Features**
— User Manual   Outward Dialing – Line Access, Automatic

Line Access, Direct

Description

Allows a proprietary telephone user to select an outside (CO) line by pressing an idle CO button, which automatically establishes the hands-free operation mode and allows the user to perform On-Hook Dialing. The user does not need to press the SP-PHONE button, MONITOR button, or lift the handset.

Conditions

- There are three types of CO buttons which can be programmed at an extension: Single-CO button, Group-CO button and Other-CO button.
- Each extension is subject to system programming items to access outside (CO) lines.
- After an outside (CO) line is seized, the system waits for a programmed time before dialing.

Programming References

Section 4, System Programming
[206] Dialing Start Time
[400] Outside (CO) Line Connection Assignment
[405]–[407] Flexible Outward Dialing Assignment — Day/Night/Lunch
Station Programming . . . . **User Manual**
Flexible Button Assignment – Group-CO (G-CO) Button,
                                    Other-CO (O-CO) Button,
                                    Single-CO (S-CO) Button

Feature References

Section 3, Features
Button, Group-CO (G-CO)
Button, Other-CO (O-CO)
Button, Single-CO (S-CO)
Outside (CO) Line Connection Assignment – Outgoing

Operation Reference
— User Manual

Telephone Features
Outward Dialing – Line Access, Automatic,
                        Line Access, Individual,
                        Line Access, Outside (CO) Line Group

Line Access, Individual

Description
Allows a proprietary telephone user one-button access to an outside (CO) line without having to dial a line access code.

Conditions
• Each extension is subject to system programming items to access outside (CO) lines.
• This feature requires a Single-CO (S-CO) button assigned to a proprietary telephone.
• After an outside (CO) line is seized, the system waits for a programmed time before dialing.

Programming References

Section 4, System Programming
[206] Dialing Start Time
[400] Outside (CO) Line Connection Assignment
[405]–[407] Flexible Outward Dialing Assignment — Day/Night/Lunch
Station Programming . . . . **User Manual**
Flexible Button Assignment – Single-CO (S-CO) Button

Feature References
Section 3, Features
Button, Single-CO (S-CO)
Outside (CO) Line Connection Assignment – Outgoing

**Operation Reference
 —User Manual**
Telephone Features
Outward Dialing – Line Access, Individual

3   Features   *L*

Line Access, Outside (CO) Line Group

Description   Allows an extension user to access an outside (CO) line group. An
                           idle line is selected from the outside (CO) line group. To specify an
                           outside (CO) line group, dial the feature number (8) and the desired
                           outside (CO) line group number (1 through 6). A proprietary
                           telephone user can also specify an outside (CO) line group by
                           pressing a Group-CO button.

Conditions   • An idle line is selected in sequence from the lines in the specified
                             outside (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.
                           • Each extension is subject to system programming items to access
                             outside (CO) lines.
                           • After an outside (CO) line is seized, the system waits for a programmed
                             time before dialing.

Programming References
                           Section 4, System Programming
                           [206] Dialing Start Time
                           [400] Outside (CO) Line Connection Assignment
                           [404] Outside (CO) Line Group Assignment
                           [405]–[407] Flexible Outward Dialing Assignment — Day/Night/Lunch
                           Station Programming . . . . **User Manual**
                           Flexible Button Assignment – Single-CO (S-CO) Button

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

Operation Reference   **Telephone Features**
— User Manual   Outward Dialing – Line Access, Outside (CO) Line Group

Line Preference – Incoming (No Line/Prime Line/Ringing Line)

Description   A proprietary telephone user can select the method used to answer incoming calls from the following three line preferences.

     (1) No Line Preference
       No line is selected when the user goes off-hook. They must select a line to answer an incoming call.

     (2) Prime Line Preference
       The user can assign a prime line beforehand and answer a call on that line, when multiple calls are received simultaneously.

     (3) Ringing Line Preference
       When the user goes off-hook, they can answer a call ringing at their telephone.

Conditions   • Setting a new line preference feature will cancel the previous setting.
• If Prime Line Preference is selected and an incoming call arrives from a line other than the prime line, it cannot be answered just by going off-hook. The Prime Line should be assigned to a Single-CO button.
• If Ringing Line Preference is selected, going off-hook during the delay time will not answer a line programmed for "delayed ringing".
• A single line telephone is always set to Ringing Line Preference and cannot be changed.

Programming References

     Section 4, System Programming
     [408]–[410] Flexible Ringing Assignment — Day/Night/Lunch
     [411]–[413] Delayed Ringing Assignment — Day/Night/Lunch
     Station Programming . . . . **User Manual**
     Flexible Button Assignment – Group-CO (G-CO) Button,
                           Other-CO (O-CO) Button,
                           Single-CO (S-CO) Button
     Preferred Line Assignment – Incoming

Feature References   None

Operation Reference   **Basic Operation**
  —User Manual   Receiving Calls

3 Features

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

Description

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

(1) Idle Line Preference:

When the user goes off-hook, they 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 the user goes off-hook. They must select a line to make a call.

(3) Prime Line Preference:

When the user goes off-hook, they are connected to the pre-assigned line. Assign a prime line beforehand.

Conditions

• Setting a new line preference feature will cancel the previous setting.
• To set Prime Line Preference, select one prime line from the outside (CO) lines.
• The outside (CO) lines to be used must be programmed.
• To select Idle Line Preference, the outside (CO) lines available should be programmed. Also, the outside (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.

Programming References

Section 4, System Programming
[400] Outside (CO) Line Connection Assignment
[405]–[407] Flexible Outward Dialing Assignment — Day/Night/Lunch
[419] Automatic Designated Outside (CO) Line Access
Station Programming . . . . **User Manual**
Flexible Button Assignment – Group-CO (G-CO) Button,
                                Other-CO (O-CO) Button,
                                Single-CO (S-CO) Button
Preferred Line Assignment – Outgoing

Feature Reference

Section 3, Features
Outside (CO) Line Connection Assignment – Outgoing

Operation Reference
— User Manual

Basic Operation
Making Calls

Live Call Screening (LCS) †

Description	Allows a proprietary telephone user to monitor their voice mailbox while an incoming caller is leaving a message and, if desired, intercept the call. The voice mailbox can be monitored in one of two ways — Hands-free Mode or Private Mode.

Hands-free Mode
> The voice mailbox is monitored through the built-in speaker of the proprietary telephone.

Private Mode
> The proprietary telephone emits an alert tone when callers are connected to the voice mailbox. To monitor the call, the user presses the SP-PHONE/MONITOR button or the LCS button.

Alert tone
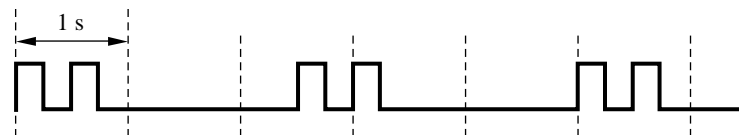
To intercept the call in either Hands-free or Private mode, press the SP-PHONE button or the LCS button.

Conditions
- When the extension user is having a conversation, a Call Waiting tone will be heard if Call Waiting has been enabled. The user can put the existing call on hold before accessing LCS.
- A flexible CO and DSS (Direct Station Selection) 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 or manager.

Programming References

Station Programming . . . . **User Manual**
Flexible Button Assignment – Live Call Screening (LCS) Button,
> Live Call Screening (LCS) Cancel Button

Live Call Screening Mode Set
DSS Console Features   . . . . **User Manual**
Station Programming

Feature References   None

Operation Reference
— User Manual

Telephone Features
Live Call Screening (LCS)

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† Available when the KX-TA624 is connected to a Proprietary Telephone capable Panasonic Voice Processing System (one that supports APT Integration; KX-TVS50).

3 Features

Lockout

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

Condition   • For a single line telephone, if nothing is dialed within a certain period of time after the other party goes on-hook, a reorder tone will be sent to the single line telephone and then it will be disconnected from the speech path.

Programming References
No programming required.

Feature References   None

Operation Reference   **Telephone Features**
— User Manual   Lockout

Log-In/Log-Out

Description	Assigns an extension to join (log-in) or leave (log-out) a hunting or ring group. Extensions in log-out status will not receive calls by Station Hunting or DISA but will receive other calls, unlike the DND feature.

Conditions

- There should be at least one extension that is in log-in status.
- The lighting patterns and status of the Log-In/Log-Out button are shown below.

lighting pattern	Log-In/Log-Out button Status
Red On	Log-Out
Off	Log-In

Programming Reference

> **Station Programming** . . . . **User Manual**
> Flexible Button Assignment – Log-In/Log-Out Button

Feature References

Section 3, Features
Direct Inward System Access (DISA)
Ring Group
Station Hunting

Operation Reference
— User Manual

Telephone Features
Log-In/Log-Out

3   Features

Manager Extension

Description

The extension connected to Jack 01 becomes the system manager. This extension can perform system programming and the following manager services.
- Canceling the Call Log Lock and Electronic Station Lockout
- Changing the Day/Night/Lunch mode manually
- Recording and playing the outgoing message
- Setting/Canceling/Confirming the Timed Reminder (Wake-up Call) remotely
- Setting/Clearing the Remote Station Lock Control
- Setting the Date and Time
- Setting the extension passwords

Conditions

None

Programming References

No programming required.

Feature References

None

**Operation Reference
— User Manual**

Operator/Manager Service Features

Message Waiting

Description

The system supports the feature to notify the called party of a message waiting. A proprietary telephone user with a MESSAGE button, knows there is a message if the LED on the MESSAGE button lights red. Pressing the lit MESSAGE button can call back the called party or listen to the messages which are stored in the mailbox of the Voice Processing System.

Conditions

- For a proprietary telephone which does not have a MESSAGE button, such as the KX-T7055, this feature is not available.
- Canceling the message can be performed from the extension sending it or from the extension receiving it.
- Each extension can have a maximum of 8 simultaneous messages.
- Messages are always left at the original extension. They cannot be sent to a Call Forwarding or Station Hunting destination.

Programming Reference

Station Programming . . . . **User Manual**
Flexible Button Assignment – Return to Message Waiting (MESSAGE)
Button

Feature References

Section 3, Features
Call Forwarding
Station Hunting
Voice Mail Integration for KX-TVS50
Voice Mail Integration for KX-TVS75/KX-TVS100

Operation References
  —User Manual

Telephone Features
Message Waiting
Voice Mail Integration for KX-TVS50/KX-TVS75/KX-TVS100

3   Features

Microphone Mute

Description   Allows a proprietary telephone user to turn off the microphone for privacy.

Conditions   • The user's voice will only be muted during a hands-free conversation.
• The user can hear the other party's voice during Microphone Mute.

Programming References
No programming required.

Feature References   None

Operation Reference   **Telephone Features**
— User Manual   Microphone Mute (— for KX-T7020/KX-T7030/KX-T7130 only)

Mixed Station Capacities

Description   This system supports a wide range of telephone sets, not only Proprietary Telephones (PT) in the Advanced Hybrid System, but also single line rotary telephones (10 pps/20 pps, using dial pulse signals) and single line push-button dialing telephones (touch tone). The hybrid method used in this system allows any telephone to be connected to an extension modular jack without an adaptor.

Condition   • If a telephone is replaced with another one, the previous stored data (such as button features) remains.

Connection Reference
Section 2, Installation
2.3.4   Extension Connection

Programming References
No programming required.

Feature References   None

Operation References   Not applicable.

Module Expansion

Description

The KX-TA624 starts with 3 outside (CO) line jacks and 8 extension jacks.
They can be expanded by installing expansion cards.
   • A 3 CO Line and 8 EXT Expansion Card adds 3 outside (CO) line jacks and 8 extension jacks.
   • An 8 Extension Expansion Card adds 8 extension jacks.
The KX-TA624 can have one 3 CO Line and 8 EXT Expansion Card and one 8 Extension Expansion Card. Thus, the KX-TA624 can have 3 or 6 outside (CO) line jacks and 8, 16 or 24 extension jacks.

Conditions

None

Connection Reference

Station 2, Installation
2.4.4   Installing a 3 CO Line and 8 EXT Expansion Card (KX-TA62477) and 8 Extension Expansion Card (KX-TA62470)

Programming References

No programming required.

Feature Reference

Section 3, Features
Paralleled Telephone

Operation References

Not applicable.

3 Features

Music on Hold

Description   While an external party is on hold, music is automatically activated.

Conditions   • Operations such as Call Hold, Exclusive Call Hold or Call Transfer
                                   activate Music on Hold.
                                   • A user-supplied external music source, such as a radio, must be
                                   connected to the system. One external music source can be connected to
                                   the system.
                                   • A music source is used for Music on Hold and/or BGM. System
                                   programming may require enabling Music On Hold.

Connection Reference

Section 2, Installation
2.3.6   External Music Source Connection

Programming Reference

Section 4, System Programming
[111]   Hold Music Selection

Feature Reference   **Section 3, Features**
                                   Background Music (BGM)

Operation References   Not applicable.

One-Touch Dialing

Description	One-Touch Dialing offers a proprietary telephone (PT) user one-touch access to a desired party or system feature. This is activated by storing an extension number, telephone number or a feature number (up to 24-digits) in an One-Touch Dialing button. The number of buttons available depends on the type of PT. One-Touch Dialing buttons can be programmed to flexible buttons.
Conditions	• An account code can be stored into an One-Touch Dialing button. • Speed Dialing, One-Touch Dialing and manual dialing can be used at the same time. • The user can store a number consisting of 25 digits or more by dividing it and storing it in two One-Touch Dialing buttons. In this case, the line access code should be stored in the first button.

Programming References

Station Programming . . . . **User Manual**
Flexible Button Assignment – One-Touch Dialing Button
DSS Console Features . . . . **User Manual**
Station Programming

Feature References   None

Operation References   **Telephone Features**
— User Manual   One-Touch Dialing
DSS Console Features
One-Touch Dialing
One-Touch Access for System Features

3   Features   *O*

One-Touch Transfer Using a DSS Button

Description

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

Condition

• If "With Transfer" is assigned, the user transfers an outside call by pressing the TRANSFER button followed by the DSS button.

Programming Reference

Section 4, System Programming
[005] One-Touch Transfer Using a DSS Button

Feature Reference

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

Operation References
— User Manual

Telephone Features
Call Transfer — to Extension
DSS Console Features
Call Transfer

O 3 Features

*O*perator

Description
The system supports one operator. Any extension can be designated as an operator.
The extension assigned as the operator has the ability to perform the following operations.
- Setting the Date and Time
- Clearing the Call Log Lock and Electronic Station Lockout
- Recording and playing the outgoing message
- Setting/Clearing the Remote Station Lock Control
- Changing the Day/Night/Lunch mode manually
- Setting/Canceling/Confirming the Timed Reminder (Wake-up Call) remotely

Conditions
None

Programming Reference
Section 4, System Programming
[008] Operator Assignment

Feature References
None

Operation Reference
— User Manual
Operator/Manager Service Features

*O*perator Call

Description
Allows an extension user to call an extension operator by dialing the feature number. One extension can be assigned as the operator.

Condition
• If an operator is not assigned, this feature is not available and the user will hear a reorder tone.

Programming Reference
Section 4, System Programming
[008] Operator Assignment

Feature References
None

Operation Reference
— User Manual
Telephone Features
Operator Call

3 Features

Outgoing Message (OGM)

Description

Allows the extension assigned as the operator or manager to record an outgoing voice message. This message is played when a caller accesses the DISA feature.

After recording the message, the operator or manager can also play it back for confirmation.

The following are some examples of OGM and flow chart.

Case 1: Receives 2 calls at a time – OGM for DISA.
(Do not want customers to be kept waiting.)
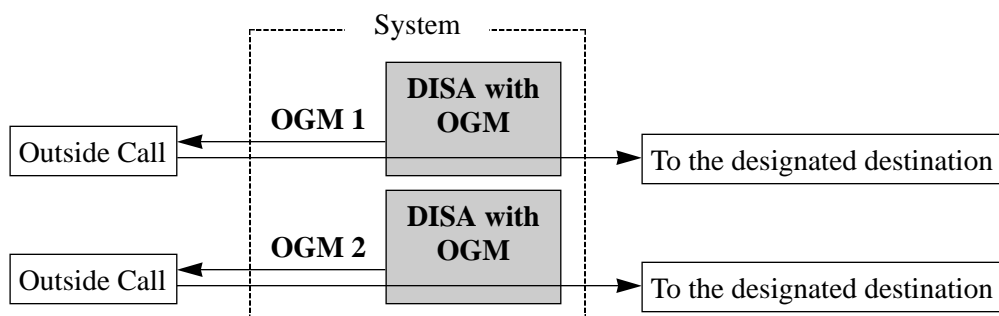
OGM1: "This is A company. For the sales division, press 1. For the service division, press 2. To call the operator, press 0."
OGM2: Same as OGM 1
Required Settings: [502] "MODE1"
    [414]-[416] "DISA1"

Case 2: Uses the OGM in the day, night and lunch modes
– OGM for DISA.
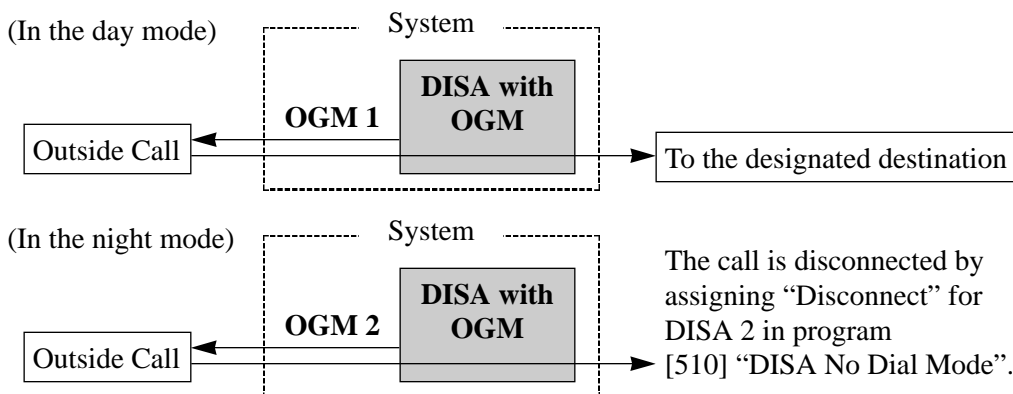
OGM1: "This is A company. For the sales division, press 1. For the service division, press 2. To call the operator, press 0."
OGM2: "We are sorry but our office is closed for the day."
Required Settings: [502] "MODE2"
    [414]-[416] "DISA1" for OGM1, "DISA2" for OGM2

**Case 3: Uses a different OGM for outside (CO) lines
– OGM for DISA.**
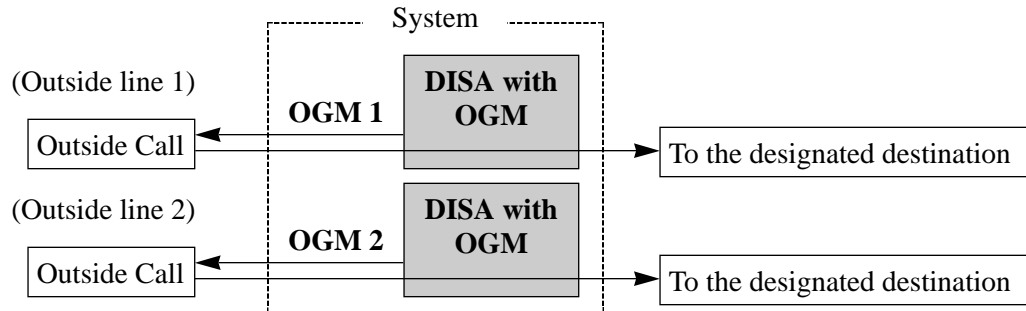
OGM1: "This is A company. For the sales division, press 1. For the
   service division, press 2. To call the operator, press 0."
OGM2: "This is B company. To contact Mr. A, press 101. To contact Mr.
   B, press 102."
Required Settings: [502] "MODE2"
         [414]-[416] "DISA1" for the A company outside (CO)
               line(s).
               "DISA2" for the B company outside (CO)
               line(s).

**Case 4: Uses a different OGM when the line is busy
– OGM for DISA.**
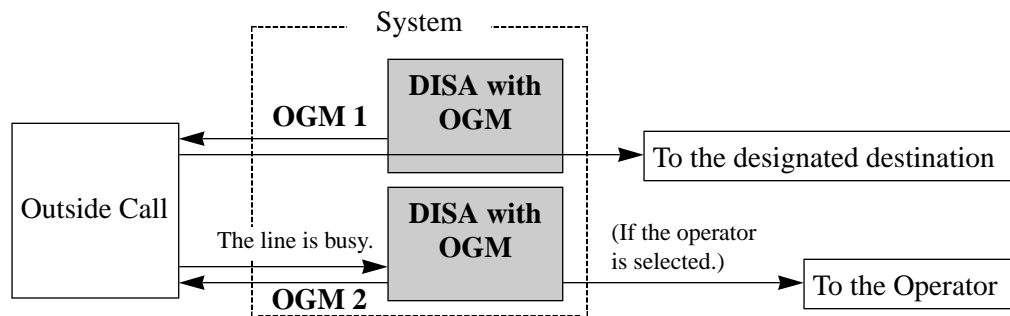
OGM1: "This is A company. For the sales division, press 1. For the
   service division, press 2. To call the operator, press 0."
OGM2: "We are sorry. The line is currently busy. If you want to call the
   operator, press 0."
Required Settings: [502] "MODE2"
         [414]-[416] "DISA1"
         [506] "DISA2"

3   Features *O*

Conditions

- An optional OGM/FAX Detection Card is required to program the OGM.
- The maximum recording time for the OGM is 30 seconds.
- Up to two outgoing messages are available.

Connection Reference

Section 2, Installation
2.4.2   Caller ID and OGM/FAX Detection Card Installation

Programming References

[414]–[416]   Outside (CO) Line Mode — Day/Night/Lunch
[502]   OGM Mode Selection
[506]   DISA Busy Mode

Feature Reference

Section 3, Features
Direct Inward System Access (DISA)

Operation Reference — User Manual

Operator/Manager Service Features
Outgoing Message (OGM)

O   3   Features

Outside (CO) Line Connection Assignment

Description   This allows a user to specify which outside (CO) lines are
                                connected to their system. This prevents the user from calling a line
                                which is not connected. When the user uses Automatic Line
                                Access, an idle line is selected from the ones connected.

Conditions   • If the user tries to make a call with a disconnected line, a reorder tone
                                  will sound to indicate that the line is out of use.
                                • This is effective for all outgoing calls including DISA.

Programming Reference
                                Section 4, System Programming
                                [400] Outside (CO) Line Connection Assignment

Feature References   None

Operation References   Not applicable.

Outside (CO) Line Connection Assignment – Outgoing

Description   Allows a user to assign an outside (CO) line used for outgoing
                                calls. This feature is useful in preventing unauthorized toll calls.

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

Programming References
                                Section 4, System Programming
                                [405]–[407] Flexible Outward Dialing Assignment — Day/Night/Lunch

Feature References   None

Operation References   Not applicable.

3   Features   *O*

Outside (CO) Line Group

Description   Outside (CO) lines can be grouped into up to six outside (CO) line groups. This allows extensions to call outside parties without designating a specific outside (CO) line, since an outside (CO) line is automatically selected from the designated outside (CO) line group. All outside (CO) lines belong to an outside (CO) line group.

Condition   • Each outside (CO) line can only belong to one outside (CO) line group.

Programming Reference

> **Section 4, System Programming**
> [404] Outside (CO) Line Group Assignment

Feature References   None

Operation References   Not applicable.

P   3   Features

PAGING FEATURES – SUMMARY

Description

Paging allows a user to make a voice announcement to many people at the same time. Their message is announced over the built-in speakers of proprietary telephones and/or an external speaker (external pager). The paged person can answer the page from a nearby telephone. Making and answering a page is possible from either a proprietary or single line telephone. The user can page with a call on hold in order to transfer the call (Paging and Transfer). It is also possible to deny a page.

The paging features are classified as follows.

      Paging – All
      Paging – External
      Paging – Group

Paging – All

Description

Allows the user to make a voice announcement from the speakers of proprietary telephones and external paging device (external pager).

Conditions

• A confirmation tone is sent to the extensions, when a page is sent or answered.
• A confirmation tone is sent to the external pager, before the voice announcement. The tone can be disabled.
• A ringing or busy extension cannot receive a page.

Connection Reference

    Section 2, Installation
    2.3.5 External Pager (Paging Equipment) Connection

Programming Reference

    Section 4, System Programming
    [106] External Paging Access Tone

Feature References   None

Operation References
  — User Manual

    Telephone Features
    Paging — All
    Paging and Transfer
    Paging — ANSWER
    Paging — DENY

3   Features   *P*

Paging – External

Description   Allows the user to make a voice announcement using an external
                           paging device (external pager). One pager can be connected. Any
                           telephone user can answer the Paging – External.

Conditions   • An external pager must be connected beforehand.
                           • A confirmation tone is sent to the extensions and external pager, when a
                             page is sent. The tone to the external pager can be disabled.

Connection Reference
                           Section 2, Installation
                           2.3.5   External Pager (Paging Equipment) Connection

Programming Reference
                           Section 4, System Programming
                           [106]   External Paging Access Tone

Feature References   None

Operation References   **Telephone Features**
— User Manual   Paging — External   Paging and Transfer
                           Paging — ANSWER   Paging — DENY

Paging – Group

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

Conditions   • To select all groups, page all of the extensions.
                           • A confirmation tone is sent when a page is sent or answered.

Programming References
                           No programming required.

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

Operation References   **Telephone Features**
— User Manual   Paging — External   Paging and Transfer
                           Paging — ANSWER   Paging — DENY

P **3   Features**

<u>**P**aralleled Telephone</u>

Description

Any analog proprietary telephone can be connected in parallel with single line devices, such as a single line telephone, facsimile and data terminal.

When a parallel connection is made, an extension user can make and answer a call using either telephone.

Conditions

- A proprietary telephone (PT) can perform normal operations even if program [610] is assigned to "Disable".
- If one telephone goes off-hook while the other telephone is having a call, a three-party call will be established. If one user goes on-hook, the other user will continue with the call.
- When receiving a call, both the PT and the single line telephone will ring except when the PT is in the Hands-free Answerback mode.
- When the single line telephone is operating, the display and LED indicator on the paired PT will work as if the PT is in operation.
- The extension user cannot originate a call from the single line telephone if the PT is:
  - playing BGM,
  - in programming mode, or
  - receiving a page announcement over the built-in speaker.
- The Call Waiting tone can only be heard by a PT.
- The paired single line telephone will not ring in the following cases.
  - When the PT user sets the Hands-free Answerback feature.
  - When the voice alerting mode is set on the PT.
- The paired single line telephone cannot use the following features.
  - Call Splitting
  - Conference
  - External Feature Access
  - Door Opener while talking to the doorphone
  - Pickup Dialing
- The paired single line telephone user should not enter "49" or "✳✳" before the account code. They cannot enter the account code during or after a call.

Connection Reference

Section 2, Installation
2.3.7   Paralleled Telephone Connection (for a Proprietary Telephone and a Single Line Telephone)

Programming Reference

Section 4, System Programming
[610] Paralleled Telephone Connection

Feature References   None

Operation Reference   **Telephone Features**
— User Manual   Paralleled Telephone Connection

---

3 Features

Pause Insertion, Automatic

Description

This feature is used to insert a pre-assigned pause between the outside (CO) line access number, the host PBX code, carrier code or code assigned in program [311] and the dialed number.

Conditions

- This feature requires programming the host PBX codes, carrier codes and automatic pause insertion codes as well as the pause duration beforehand.
- This feature works for Speed Dialing, One-Touch Dialing, Last Number Redial, Saved Number Redial, Pickup Dialing, Call Forwarding – to Outside (CO) Line as well as for normal calls.
- Pressing the PAUSE button in a dialing number inserts a pause for a pre-assigned time.

Programming References

Section 4, System Programming
[300] Carrier Code Assignment
[311] Automatic Pause Insertion Codes
[403] Host PBX Access Codes
[417] Pause Time

Feature References

Section 3, Features
Host PBX Access
Toll Restriction

Operation References

Not applicable.

P 3   **Features**

<u>**P**ersonal Speed Dialing</u>

Description

Allows an extension user to store frequently dialed numbers in order to place a call quickly. This is done by dialing the feature number and a speed dial number, from 0 to 9. Up to 10 numbers with a maximum of 24 digits per number can be stored in each telephone.

Conditions

• For PT users, it is impossible to use this feature if One-Touch Dialing buttons are assigned to PF buttons. If the user assigns, a personal speed dialing number, the number stored in the One-Touch Dialing button will be overwritten. PF Buttons F1 through F10 correspond to speed dialing numbers as follows.

F1 — 0	F6 — 5
F2 — 1	F7 — 6
F3 — 2	F8 — 7
F4 — 3	F9 — 8
F5 — 4	F10 — 9

• If a single line telephone user wants to check the stored number, exchange the telephone with a proprietary telephone. PF buttons F1 through F10 correspond to speed dialing numbers 0 through 9. Press the desired PF button to check the number.
• A rotary telephone user cannot use this feature.

Programming References

No programming required.

Feature Reference

Section 3, Features
One-Touch Dialing

Operation Reference
— User Manual

Telephone Features
Personal Speed Dialing

---

3   Features   *P*

Pickup Dialing

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

Conditions   • A proprietary telephone and rotary telephone cannot program this
                           feature.
                         • The user uses a feature number to activate or deactivate pickup dialing.
                         • If the feature is activated and the user goes off-hook, a dial tone will be
                           generated for the delay time and then dialing will start. During the delay
                           time, the user can dial another party overriding the Pickup Dialing
                           feature.

Programming Reference
                         Section 4, System Programming
                         [203] Pickup Dial Delay Time

Feature References   None

Operation Reference **Telephone Features**
— User Manual   Pickup Dialing (Hot Line) (— Single Line Telephone only)

P 3 Features

Power Failure Transfer

Description

If a power failure occurs, or the system is off-line, specific extension telephones are automatically connected to specific outside (CO) lines. This provides an outside (CO) line call between the following extensions and outside (CO) lines.

Outside (CO) line 1 is connected to extension jack number 01.
Outside (CO) line 4 is connected to extension jack number 09.

A single line telephone can work during a power failure. Connect a single line telephone to the above extension jack.

Conditions

• All other conversations, except the above combinations, are disconnected during a power failure.
• Only an outside (CO) line can have a conversation. All other features do not work.

Connection References

Section 2, Installation
2.3.3 Outside (CO) Line Connection
2.3.4 Extension Connection
2.5   Auxiliary Connection for Power Failure Transfer

Programming References

No programming required.

Feature References   None

Operation Reference   **Telephone Features**
— User Manual   Power Failure Transfer

3   Features

Pulse to Tone Conversion

Description

This feature allows the extension user to change from pulse dialing to tone (DTMF) dialing so that the user can access special services, such as computer-accessed long distance calls or voice mail services.

Conditions

- This feature only works for outside (CO) lines which have set the Pulse Dialing mode or Call Blocking mode.
- The user can select the dial mode for each outside (CO) line using the Dial Type Selection feature.
- Changing from tone to pulse is not possible.

Programming References

Section 4, System Programming
[119] Redialing After Pulse to Tone Conversion
[401] Dial Mode

Feature Reference

Section 3, Features
Dial Type Selection

Operation Reference
— User Manual

Telephone Features
Pulse to Tone Conversion

R 3 Features

Redial, Last Number

Description
Every telephone in the system automatically saves the last telephone number dialed to an outside (CO) line and allows the extension user to dial the same number again.

Conditions
• With a proprietary telephone, the REDIAL button is used to carry out Last Number Redial. With a single line telephone, the feature number is used.

Programming References
No programming required.

Operation Reference
— User Manual
Telephone Features
Redial, Last Number

Redial, Saved Number

Description
Allows a proprietary telephone user to save a telephone number and redial the number afterwards. The user can store it during a conversation with an outside (CO) line. The saved number can be redialed until another number is stored.

Conditions
• As the SAVE button is not provided on a PT, except for the KX-T7130, a flexible button can be assigned as the SAVE button.

Programming Reference
Station Programming . . . . **User Manual**
Flexible Button Assignment – SAVE Button

Feature References
Section 3, Features
Button, Flexible

Operation Reference
— User Manual
Telephone Features
Redial, Saved Number

3 Features

Remote Station Lock Control

Description
The operator and manager are given the privilege of controling Electronic Station Lockout and Call Log Lock at any station.

Conditions
• Remote Station Lock Control has higher priority over Electronic Station Lockout and Call Log Lock. If Electronic Station Lockout or Call Log Lock has already been set by the extension user and Remote Station Lock is set by the operator or manager, canceling the lock is only possible by the operator or manager.
• Extension passwords must be assigned to the operator and manager extensions beforehand.
• The Electronic Station Lockout — CANCEL ALL feature can cancel this feature.
• When the same extension number Station Lock button is assigned on the operator and manager DSS Consoles, one can set and the other can cancel the feature, and vice versa.
• A toll restriction COS number can be assigned for this feature. Certain types of outgoing outside calls are permitted depending on the assigned toll restriction COS number.

Programming References

Section 4, System Programming
[108] Flash Mode for a Station Locked Extension
[312] Toll Restriction — Station Lock Boundary Class
DSS Console Features . . . . **User Manual**
Station Programming — Station Lock Button Assignment (Operator and
                                    Manager only)

Feature References
Section 3, Features
Call Log, Incoming
Electronic Station Lockout
Toll Restriction — Station Lock Boundary Class

Operation References
— User Manual
Operator/Manager Service Features
Electronic Station Lockout — CANCEL ALL
Extension Password Set (Manager only)
Remote Station Lock Control

*R*ing Group

Description

All extensions in a ring group ring simultaneously if the ring group is assigned as the destination of AA (DISA built-in auto attendant) number. A ring group is a specific extension group.

Conditions

None

Programming References

Section 4, System Programming
[501] DISA Built-in Auto Attendant
[600] Extension Group Assignment

Feature Reference

Section 3, Features
Direct Inward System Access (DISA)

Operation References

Not applicable.

*R*inging, Delayed

Description

A telephone is originally set to ring immediately. This feature can be changed to delayed ringing or no ringing (disable) on an outside (CO) line number basis.

Conditions

• This feature does not apply to DISA or DIL calls. If the destination is a ring group, the delayed ringing feature will work.
• 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
[408]–[410] Flexible Ringing Assignment — Day/Night/Lunch
[411]–[413] Delayed Ringing Assignment — Day/Night/Lunch

Feature References

Section 3, Features
Direct In Lines (DIL)
Direct Inward System Access (DISA)
Ring Group

Operation References

Not applicable.

3   Features

Ringing, Discriminating

Description

Allows the extension user to identify an incoming call by its ringing pattern. (See section 5.1, "Tone/Ring Tone".)

Conditions

• If multiple incoming calls arrive at an on-hook extension simultaneously, priority is generally on a "first-come, first-serve" basis. For proprietary telephones (PT), when the Prime Line Preference – Incoming feature has been set, this line has priority.

• A PT user can select a desired ringing pattern for each outside (CO) line, intercom, and the doorphone ringing tone for each doorphone.

Programming References

Section 4, System Programming
[115] Extension Ringing Pattern Selection
[423] Outside (CO) Line Ringing Pattern Selection
[706] Doorphone Ringing/Tone Pattern Selection

Feature References

Section 3, Features
Ringing Pattern Selection for Intercom Calls and Outside (CO) Lines
Ringing Tone Selection for Doorphones

Operation References

Not applicable.

Ringing Pattern Selection for Intercom Calls and Outside (CO) Lines

Description
Allows an extension user to select the desired ringing pattern for an intercom call and each outside (CO) line. This distinguishes incoming outside calls from intercom calls.

Conditions
• There are three ringing patterns available. One of them can be assigned to an intercom call and an outside (CO) line. Available ringing patterns are as follows.
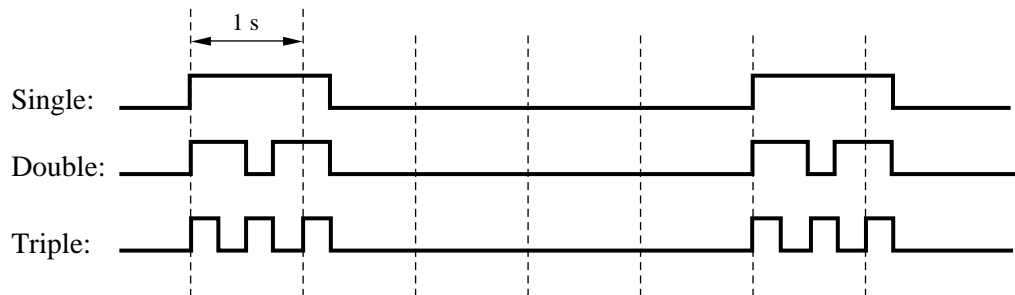
• Each extension user can disable the outside (CO) line ringing tone by station programming.

Programming References

Section 4, System Programming
[115] Extension Ringing Pattern Selection
[423] Outside (CO) Line Ringing Pattern Selection
Station Programming . . . . **User Manual**
Outside (CO) Line Ringing Selection

Feature References   None

Operation References   Not applicable.

3 Features

Ringing Tone Selection for Doorphones

Description

Allows an extension user to select the desired ringing or tone pattern for each doorphone. This distinguishes incoming doorphone calls.
A PT user will hear a tone with the assigned pattern and a single line telephone user will hear a ringing tone with the assigned pattern.

Condition

• There are four types of ringing tones as follows.
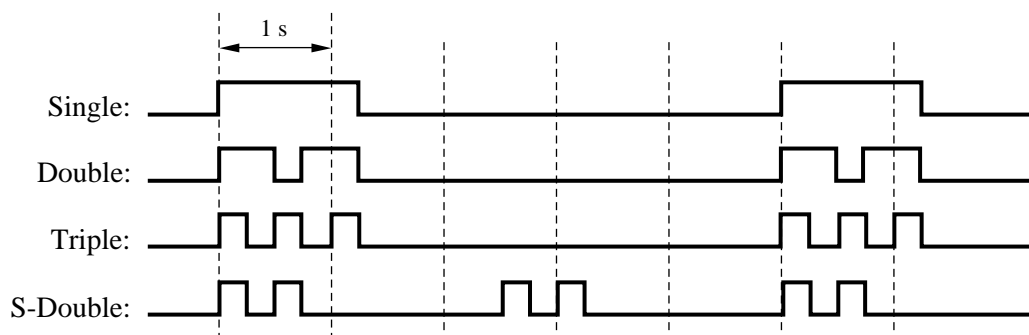
Programming Reference

Section 4, System Programming
[706] Doorphone Ringing/Tone Pattern Selection

Feature References

None

Operation References

Not applicable.

R 3 Features

Room Monitor

Description	Allows a user to monitor another room or the front door through a proprietary telephone or doorphone without them knowing.
Conditions	• The extensions which can be monitored must be programmed. • An access tone will not be sent to the monitored proprietary telephone when monitoring starts. • If a doorphone is used as the room monitor, a doorphone access tone will be heard when monitoring starts. The tone can be disabled. • This feature is not available for the KX-T7050 and KX-T7055. • A single line telephone with a MUTE button can be used for monitoring.

Programming References

Section 4, System Programming
[612] Room Monitor Assignment
[707] Doorphone Access Tone Selection

Feature Reference	**Section 3, Features** Doorphone Call
Operation Reference — User Manual	**Telephone Features** Room Monitor

3   Features

Secret Dialing

Description

Allows an extension user to conceal all or part of a registered telephone number that normally appears on the display. The user can hide System Speed Dialing or One-Touch Dialing numbers assigned to flexible buttons on proprietary telephones and DSS Consoles. When a display telephone user calls a Secret Dialing number, all or part of the number will not appear on the display.

Conditions

- When storing a number, press the INTERCOM button at the beginning and the end of the number to be concealed.
- The user can conceal one or more parts of a telephone number.
- Printing out the concealed parts on a SMDR can be assigned by system programming.

Programming References

Section 4, System Programming
[001] System Speed Dialing Entry
[803] Secret Speed Dialing/One-Touch Dialing Printing
Station Programming . . . . **User Manual**
Flexible Button Assignment – One-Touch Dialing Button

Feature References

Section 3, Features
One-Touch Dialing
Station Message Detail Recording (SMDR)
System Speed Dialing

Operation Reference
— User Manual

Telephone Features
Secret Dialing

Station Feature Clear

Description   Allows an extension user to cancel the features set on the user's own telephone. The following features will be canceled 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 Log, Incoming – Over-stored mode
    Call Pickup Deny
    Call Waiting disabled
    Data Line Security
    Do Not Disturb (DND)
    Executive Busy Override Deny
    Log-In/Log-Out
    Message Waiting – All the messages that have been left by
                  other extension users
    Pickup Dialing – The stored telephone number
    Paging – Deny
    Room Monitor
    Timed Reminder
    Voice Mail Integration

Conditions   None

Programming References
    No programming required.

Feature References   None

Operation Reference   **Telephone Features**
  — User Manual   Station Feature Clear

3   Features

Station Hunting

Description

If a called extension is busy, Station Hunting redirects the incoming call to an idle extension in the extension group. Idle extensions are automatically searched according to programming. Two hunting types are available as follows.

> **Circular hunting:** The extensions are searched one time in numerical order until an idle one is found. If all extensions are busy, a busy tone will be heard.
> **Terminate hunting:** The extensions are searched from the destination jack until the call reaches the highest jack number in the group. If all higher number jacks are busy, the search will end and a busy tone will be heard.

One hunting type can be selected for each extension group.
To leave the hunting group temporarily, use the Log-Out function.
To rejoin, use the Log-In feature.

Condition

• If the called extension has set Do Not Disturb, Call Forwarding or Log-Out, Station Hunting will skip the extension. However, Station Hunting will not skip the extension which receives the call first, even if it has set Do Not Disturb or Call Forwarding.

Programming References

Section 4, System Programming
[100] Hunting Group Set
[101] Station Hunting Type
[600] Extension Group Assignment

Feature References

Section 3, Features
Call Forwarding
Do Not Disturb
Extension Group
Log-In/Log-Out

Operation References   Not applicable.

Station Message Detail Recording (SMDR)

Description   Station Message Detail Recording (SMDR) automatically prints out detailed call information of outside calls. A printer connected to the Serial Interface (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 out the record of system programming items that have been assigned, use program [804] "System Data Dump". To print the call records, use program [802] "Incoming/Outgoing Call Selection for Printing", which allows a user to print out the following records.
  • A record of all outgoing outside calls or outgoing toll calls
  • A record of all incoming outside calls

An example of a printed call record:

```
Date        Time      Ext.    CO        Dial number                    Duration   Code
--------------------------------------------------------------------------------------------
12/31/98   12:52PM    103     05      123456789012345678901234456789012   00:00'16   ....
12/31/98   12:53PM    103     02      <      incoming      >2013570846    00:01'43   ....
12/31/98  *12:54PM    101     02      <      incoming      >1234567890123456  00:07'48   ....
12/31/98    1:04PM    103     06      092...1438                          00:00'06   4536
12/31/98    1:04PM    102     05      <  DISA incoming   >2013570846      00:00'09   ....  0
12/31/98    1:05PM    103     01      <  DISA incoming   >                00:00'08   ....  0
12/31/98    1:06PM    103     01      092123456789                        00:00'08   ....
12/31/98    1:06PM    C-05    02      0921234567                          00:00'17   ....  2
12/31/98    1:07PM    103     01      0921234567                          00:11'00   ..13
12/31/98    2:15PM    103     01      0921234567                          00:11'00   .101
12/31/98    2:26PM    103     01      F/0927654321                        00:03'00   ....
12/31/98    2:27PM    116     05      9=0924567123                        00:13'55   ....
            •         •        •               •                            •         •
            •         •        •               •                            •         •
            •         •        •               •                            •         •
   (1)      (2)      (3)      (4)             (5)                          (6)       (7)
```

Example of the SMDR printout format:
Explanation
(1) Date: shows the date of the call as month/day/year.
(2) Time: shows the time the call was started as Hour: Minute/AM or PM. "*" indicates a transferred call.
(3) Ext.: shows the extension number, etc. that engaged in the call. "C-xx" indicates an outside-to-outside (CO-to-CO) call via DISA. The outside (CO) line which receives an incoming call is shown as xx.
(4) CO: shows the outside (CO) line number used for the call.

(5) Dial number
    Outgoing call: shows the called party's telephone number (maximum 32 digits). Valid digits are 0 through 9, ✳, # or P (if the PAUSE button was pressed).
    Received call: shows <incoming>. If a Caller ID is assigned to the other party, it will show <incoming> and the number. An incoming call via DISA is shown as <DISA incoming>. An incoming call via DIL is shown as <DIL incoming>.

(6) Duration: shows the duration of the call in hours/minutes/seconds.

(7) Code: shows the account code appended to the call, account code index number, the extension number which overrides toll restriction or the DISA security code status. Code "0" indicates a DISA incoming call without a DISA security code. Codes "1 to 4" indicate a DISA incoming call with DISA security code 01 to 04 respectively. DISA security codes are never printed out by SMDR.

Conditions

- This system can store information of up to 64 calls.
- This data is not deleted when the user resets the system.
- If FLASH is manually sent during a conversation to make another call without hanging up, etc., the call record will be printed out and a new record is started. "F/" will be printed at the top of the dial number on the new record.
- When a host PBX code is entered, "=" will be printed between the code and dialed number.

Connection Reference

Section 2, Installation
2.3.9   Printer and PC Connection

Programming References

Section 4, System Programming
[000]   Date and Time Setting
[204]   Call Duration Count Start Time
[800]   SMDR RS-232C Communication Parameters
[801]   SMDR Parameter
[802]   Incoming/Outgoing Call Selection for Printing
[803]   Secret Speed Dialing/One-Touch Dialing Printing
[804]   System Data Dump
[805]   SMDR Account Code Selection
[906]   Caller ID SMDR Format

Feature References

None

Operation References

Not applicable.

Station Programming

Description   Allows a proprietary telephone (PT) user to customize their
extension according to their needs. The following programming
items are available.

For a PT (KX-T7130; KX-T7020; KX-T7030; KX-T7050;
KX-T7055)

Call Waiting Tone Type Assignment
Flexible Button Assignment
Intercom Alert Assignment
Outside (CO) Line Ringing Selection
Preferred Line Assignment – Incoming/Outgoing
Station Programming Data Default Set

For a display PT (KX-T7130; KX-T7030) only,
Self-Extension Number Confirmation

For an operator and manager's extension PT only,
Date and Time Setting
Electronic Station Lockout — CANCEL ALL
Outgoing Message Recording/Playback

For the manager's extension PT only,
Extension Password

Detailed information and programming instructions are described in
the User Manual, Station Programming and Operator/Manager
Service Features.

Condition   • During station programming, a PT is regarded as busy.

Programming References

Station Programming . . . . **User Manual**
Operator/Manager Service Features . . . . . . **User Manual**
Date and Time Setting
Electronic Station Lockout — CANCEL ALL
Extension Password Set (Manager only)
Outgoing Message (OGM)

Feature References   None

Operation References   Not applicable.

3 Features

Station Programming Data Default Set

Description
Allows a proprietary telephone user to return all the following items programmed on the telephone to the default settings.

Programming Items	Default
Call Waiting Tone Type Assignment	Tone 1
Intercom Alert Assignment	Tone Call
Outside (CO) Line Ringing Selection	Ring-all outside (CO) lines
Preferred Line Assignment – Incoming	Ringing Line
Preferred Line Assignment – Outgoing	No Line

Station programming is used to set or cancel these items at individual telephones.

Condition
• This feature also cancels the Hands-free Answerback feature and pressing the AUTO ANSWER/MUTE button in the Room Monitor feature.

Programming Reference
Station Programming . . . . **User Manual**
Station Programming Data Default Set

Feature References
Section 3, Features
Hands-free Answerback
Room Monitor
Station Programming

Operation References
Not applicable.

System Data Default Set

Description This system can re-initialize the system-programmed data. If all the programmed data is cleared, the system will restart using the default settings.

Condition • The default setting for each programming item is listed in Section 5.2, "Default Values".

Programming Reference

Section 4, System Programming
[999] System Data Clear

Feature References None

Operation Reference **Section 2, Installation**
2.9   System Data Clear

System Programming with a Proprietary Telephone

Description This system can be programmed with a proprietary telephone (PT). Proprietary telephones available for system programming are: KX-T7130, and KX-T7030 (Display Proprietary Telephones). An extension connected to JACK 01 is allowed to perform system programming.
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 regarded as busy.
• To access system administration, a valid password must be entered. The password is factory-programmed and can be changed.

Programming Reference

Section 4, System Programming
[002] System Password

Feature References None

Operation References Not applicable.

3   Features

S

System Speed Dialing

Description

This feature supports 100 abbreviated dial numbers that are available to all users. A system speed dial number is dialed out by pressing the AUTO DIAL/STORE button for a proprietary telephone and pressing "✳" for a single line telephone, and a 2-digit code (00 through 99). Up to one hundred telephone numbers (32-digit) can be stored per system.

Conditions

• Toll Restriction for System Speed Dialing can be assigned by system programming.
• Rotary single line telephones cannot use the feature.
[For proprietary telephone users only]
• Speed Dialing, One-Touch Dialing and manual dialing can be used together.

Programming References

Section 4, System Programming
[001] System Speed Dialing Entry
[301] Toll Restriction – System Speed Dialing Boundary Class

Feature Reference

Section 3, Features
Toll Restriction for System Speed Dialing

Operation Reference
— User Manual

Telephone Features
System Speed Dialing

Time (Day/Night/Lunch) Service

Description

The system supports the day, night and lunch operation modes. The system operation for originating and receiving calls can be different for the day, night and lunch modes. The system operation for restricting toll calls can be programmed to prevent unauthorized toll calls in each mode.

Changing the Day/Night/Lunch Modes

The day/night/lunch modes can be changed either automatically at a pre-assigned time or manually by the operator or manager at any desired time.

>   **Automatic Time Service:** If a user selects the automatic changing mode, the system will change the day/night/lunch modes at the programmed time each day. The starting time of the day/night/lunch modes can be set for each day of the week.
>   **Manual Time Service:** If a user selects the manual changing mode, the operator or manager can change the day/night/lunch modes by dialing the feature number or pressing the day, night or lunch button.

Conditions

• The following programming items may be assigned differently for the day mode, night mode and lunch mode.

[405]–[407] Flexible Outward Dialing Assignment — Day/Night/Lunch
[408]–[410] Flexible Ringing Assignment — Day/Night/Lunch
[411]–[413] Delayed Ringing Assignment — Day/Night/Lunch
[414]–[416] Outside (CO) Line Mode — Day/Night/Lunch
[601]–[603] TRS – Class of Service (COS) Assignment
　　　　　　　　— Day/Night/Lunch
[700]–[702] Doorphone Ringing Assignment — Day/Night/Lunch
[703]–[705] Door Opener Assignment — Day/Night/Lunch

• The operator or manager can change the day, night or lunch mode even if the automatic changing mode is selected.

Programming References

Section 4, System Programming
[006] Time (Day/Night/Lunch) Service Changing Mode
[007] Time (Day/Night/Lunch) Service Start Time
DSS Console Features . . . . **User Manual**
Station Programming — Day Button Assignment (Operator and Manager only)
Night Button Assignment (Operator and Manager only)
Lunch Button Assignment (Operator and Manager only)

3   Features

T

Feature References   None

Operation References   **Telephone Features**
    — User Manual   Time (Day/Night/Lunch) Service
    Operator/Manager Service Features
    Time (Day/Night/Lunch) Service Setting

Time-Out, Variable

Description

Provides timers to control various features.
The following timers are programmable.

System Timer Items	Range
Call Duration Count Start Time	5 / 10 / 15 / 20 / 25 / 30 / 35 / 40 / 45 / 50 s / Instantly (after dial)
Call Forwarding Start Time	5 / 10 / 15 / 20 s (delay)
Dialing Start Time	0 / 250 / 500 / 750 / 1000 / 1250 / 1500 ms
Door Opener Time	1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 s
Doorphone Ringing Time	15 / 30 s
Hold Recall Time	30 s / 1 min / 1.5 min / 2 min / 3 min / 4 min / 5 min / 6 min / Disable
Interdigit Time	5 / 10 / 15 s
Outside-to-Outside (CO-to-CO) Line Duration Time Limit	1 – 32 min
Pickup Dial Delay Time	1 / 2 / 3 / 4 s
Transfer Recall Time	15 s / 30 s / 1 min / 2 min

Outside (CO) Line Timer Items	
Calling Party Control (CPC) Signal	Disable / 62 / 70 / 78 / ··· / 606 / 614 ms (8 ms increments)
Disconnect Time	0.5 / 1.5 / 4.0 s
Flash Time	80 / 100 / 160 / 300 / 600 / 900 / 1200 ms
Pause Time	1.5 / 2.5 / 3.5 / 4.5 s

Extension Timer Items	
Delayed Ringing Assignment	Immediate / 5 s / 10 s / 15 s

DISA Timer Items	
DISA AA Wait Time	1 / 2 / 3 / 4 / 5 s
DISA Delayed Answer Time	0 / 3 / 6 / 12 s
DISA Ringing Time After Intercept	10 / 20 / 30 / 40 / 60 / 120 s
DISA Ringing Time Before Intercept	10 / 20 / 30 / 40 / 60 / 120 s
DISA Waiting Time After OGM	0 / 5 / 10 / 15 s
Intercept Time for Internal DISA	3 / 6 / 9 s

Programming References

Section 4, System Programming
[200] Hold Recall Time
[201] Transfer Recall Time
[202] Call Forwarding Start Time
[203] Pickup Dial Delay Time
[204] Call Duration Count Start Time
[205] Outside-to-Outside (CO-to-CO) Line Duration Time Limit
[206] Dialing Start Time
[208] Interdigit Time
[411]–[413] Delayed Ringing Assignment — Day/Night/Lunch
[417] Pause Time
[418] Flash Time
[420] Calling Party Control (CPC) Signal
[422] Disconnect Time
[504] DISA Delayed Answer Time
[505] DISA Waiting Time after OGM
[508] DISA Ringing Time before Intercept
[509] DISA Ringing Time after Intercept
[515] Intercept Time For Internal DISA
[517] DISA AA Wait Time
[708] Doorphone Ringing Time
[709] Door Opener Time

Feature References   None

Operation References   Not applicable.

Timed Reminder

Description	Each telephone can generate an alarm tone at a preset time as a wake-up tone or reminder. The alarm can be set to occur daily or just once.
Conditions	• Be sure that the system clock is working. • Setting a new time clears the preset time. • The alarm sounds for 30 seconds. To stop it, lift the handset or, with a proprietary telephone, press any button. • There is no limit for the number of the extensions who can set Timed Reminder at the same time.

Programming References

No programming required.

Feature Reference	**Section 3, Features** Timed Reminder, Remote (Wake-Up Call)
Operation Reference — User Manual	**Telephone Features** Timed Reminder

Timed Reminder, Remote (Wake-Up Call)

Description	Allows the operator and manager to remotely set, cancel and confirm a wake-up call for an extension.
Conditions	• When either an operator/manager or extension sets a new time, the pre-set time is cleared. • There is no limit for the number of the extensions that can set Timed Reminder at the same time. • Each extension user can cancel this feature.

Programming References

No programming required.

Feature Reference	**Section 3, Features** Timed Reminder
Operation Reference — User Manual	**Operator/Manager Service Features** Timed Reminder, Remote (Wake-Up Call)

Toll Restriction

Description

Toll Restriction is a system programmable feature that can prohibit certain extension users from placing unauthorized toll calls.

Every extension is programmed to belong to one of five TRS – Classes of Service (COS). Each Class of Service is programmed to have a toll restriction class for the day mode, night mode and lunch mode.

There are five toll restriction COS numbers available. Toll restriction COS number 1 is the highest class and COS number 5 is the lowest. COS number 1 allows all toll calls. COS numbers 2 through 5 are used to restrict calls by combining pre-programmed deny and excepted codes.

Denied Code Classes
An outgoing outside call made by an extension with a toll restriction COS number between 2 and 5 is first checked against the assigned Denied Code Classes. If the first digits of the dialed number (not including the line access code) are not found in the class, the call can be made. There are five system programs for Denied Code Classes: **[302]–[305] Toll Restriction — Class 2 – 5 Denied Codes**. Each program is used to assign denied codes for Classes 2 through 5 respectively.
Each class can store up to 20 denied codes, each consisting of eleven digits.

Excepted Codes
These codes are used to override a programmed denied code. A call denied by the Denied Codes is checked against the selected Excepted Codes. If a match is found, the call can be made.
There is one system program for excepted codes: **[306] Toll Restriction — Exception Codes**. Up to eighty excepted codes, each consisting of eleven digits, can be stored. The number of codes available depends on the COS number.

Applicable Denied Code Classes and Excepted Codes depend on the assigned toll restriction COS number of an extension as follows.

COS Number	Denied Codes	Excepted Codes
1	None	None
2	Codes for Class 2	All codes from Code number 01 to 80
3	Codes for Classes 2 and 3	15 codes from Code number 01 to 60
4	Codes for Classes 2 to 4	10 codes from Code number 01 to 40
5	Codes for Classes 2 to 5	5 codes from Code number 01 to 20

[Explanation]
COS 1: allows all calls.
COS 2: denies the 20 codes stored in Denied Code Class 2 assigned in program [302], except all codes stored in Code numbers 01 through 80 assigned in program [306].
COS 3: denies the 40 codes stored in Denied Code Classes 2 and 3 assigned in programs [302] and [303], except the 60 codes stored in Code numbers 01 through 60 assigned in program [306].
COS 4: denies the 60 codes stored in Denied Code Classes 2 through 4 assigned in programs [302] through [304], except the 40 codes stored in Code numbers 01 through 40 assigned in program [306].
COS 5: denies the 80 codes stored in Denied Code Classes 2 through 5 assigned in programs [302] through [305], except the 20 codes stored in Code numbers 01 through 20 assigned in program [306].

Example of Toll Restriction programming

Here is an example to explain the procedure for Toll Restriction programming.

1. Determining the application

Determine the dialing numbers that should be denied for COS numbers 2 through 5. (1 is fixed and does not require programming.)

[Entry Example]

COS number	Denied Codes		Excepted Codes
2	Class 2	011xxxxxxxx 976xxxxxxxx 1xxx976xxxx	0112xxxxxxx 9762xxxxxxx 1xx8976xxxx 9824xxxxxxx 123x975xxxx 092xxxxxxxx x01xxxxxxxx x12xxxxxxxx x123xxxxxxx 4112xxxxxxx 12xx555xxxx
3	Class 2	011xxxxxxxx 976xxxxxxxx 1xxx976xxxx	0112xxxxxxx 9762xxxxxxx 1xx8976xxxx 9824xxxxxxx 123x975xxxx 092xxxxxxxx x01xxxxxxxx x12xxxxxxxx x123xxxxxxx 4112xxxxxxx 12xx555xxxx
	Class 3	982xxxxxxxx 12xx975xxxx	
4	Class 2	011xxxxxxxx 976xxxxxxxx 1xxx976xxxx	0112xxxxxxx 9762xxxxxxx 1xx8976xxxx 9824xxxxxxx 123x975xxxx 092xxxxxxxx x01xxxxxxxx x12xxxxxxxx x123xxxxxxx 4112xxxxxxx
	Class 3	982xxxxxxxx 12xx975xxxx	
	Class 4	0xxxxxxxxxx x0xxxxxxxxx x1xxxxxxxxx	
5	Class 2	011xxxxxxxx 976xxxxxxxx 1xxx976xxxx	0112xxxxxxx 9762xxxxxxx 1xx8976xxxx 9824xxxxxxx 123x975xxxx
	Class 3	982xxxxxxxx 12xx975xxxx	
	Class 4	0xxxxxxxxxx x0xxxxxxxxx x1xxxxxxxxx	
	Class 5	411xxxxxxxx 1xxx555xxxx	

Note: "x" means a digit.

2. Programming

[601]–[603] TRS – Class of Service (COS) Assignment
— Day/Night/Lunch

Assign a Class of Service (COS) to each extension.

[Example]

Jack	COS (Day)	COS (Night)	COS (Lunch)
01	1	1	1
02	1	5	1
03	2	4	5
:	:	:	:
08	5	5	5
:	:	:	:
24	5	1	5

[Explanation]

If your extension is jack 03;

a) You cannot make a call whose toll call number is "011", because the number "011" is one of the Denied Codes for Class 2.

b) However, you can make a call whose toll call number is "0112". The number, whose first 3 digits are "011", is one of the Denied Codes for Class 2, but the number "0112" is one of the Excepted Codes. The Excepted Codes override the Denied Codes.

If your extension is jack 08;

a) You cannot make a call whose toll call number is "123", because the number "1xxx976xxx" is one of the Denied Codes for Class 2.

b) However, you can make a call whose toll call number is "1234975680". The number, whose first 3 digits are "123", is one of the Denied Codes for Class 2, but the number "123x975xxx" is one of the Excepted Codes. The Excepted Codes override the Denied Codes.

Flow Chart of Toll Restriction

```
                    ┌─────────────────────────────┐
                    │  The user makes a toll call. │
                    └─────────────────────────────┘
                                   │
                                   ▼
   ┌────────────────────────────────┐    Yes    ┌──────────────────────────┐
   │ Is the call made by System Speed│──────────▶│ Is the COS number higher │
   │ Dialing? *¹                     │           │ than the System Speed    │
   └────────────────────────────────┘   Yes     │ Dialing Boundary Class?*²│
              │ No         ◀──────────────────── └──────────────────────────┘
              ▼                                        No or Equal
   ┌────────────────────────────────┐   COS 1
   │ What is the extension – COS     │──────────────────────┐
   │ number?                         │                      │
   └────────────────────────────────┘                      │
              │ COS 2, 3, 4, 5                              │
              ▼                                             │
   ┌────────────────────────────────┐    No                │
   │ Is the dialed number found in the│────────────────────┤
   │ applicable Denied Codes?        │                      │
   └────────────────────────────────┘                      │
              │ Yes                                         │
              ▼                                             │
   ┌────────────────────────────────┐    Yes               │
   │ Is the dialed number found in the│────────────────────┤
   │ applicable Excepted Codes?      │                      │
   └────────────────────────────────┘                      │
              │ No                                          │
              ▼                                             ▼
   ┌────────────────────────────────┐      ┌──────────────────────────┐
   │ The call is denied. A reorder tone│    │ The call is allowed.     │
   │ is sent to the user.            │      └──────────────────────────┘
   └────────────────────────────────┘
```

*¹ System Speed Dial numbers are assigned in program [001] "System Speed Dialing Entry".
*² The System Speed Dialing Boundary Class is assigned in program [301] "Toll Restriction – System Speed Dialing Boundary Class".

Conditions

- Toll restriction checks are applied to the following features.
    (1) Account Code Entry
    (2) Dial Access, Automatic
    (3) Dial Access, Outside (CO) Line Group
    (4) Line Access, Individual
    (5) Carrier Code Entry
    (6) System Speed Dialing
- Emergency numbers, the Police or Fire Department, should be stored in program [309] "Emergency Dial Number Set" so that they are excepted from toll restriction.
- If a stored Host PBX access code or a stored carrier code is found in the dialed number, the subsequent telephone numbers will be checked for toll restriction.
- It is programmable whether the " $\times$ " 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 Office exchange systems.

Programming References

Section 4, System Programming
[125] Toll Restriction Check for $\times$ and #
[208] Interdigit Time
[211] No Dial Disconnection
[300] Carrier Code Assignment
[301] Toll Restriction — System Speed Dialing Boundary Class
[302]–[305] Toll Restriction — Class 2 – 5 Denied Codes
[306] Toll Restriction — Exception Codes
[601]–[603] TRS – Class of Service (COS) Assignment
               — Day/Night/Lunch

Feature References

Section 3, Features
Toll Restriction for Special Carrier Access
Toll Restriction for System Speed Dialing
Toll Restriction Override by Account Codes
Toll Restriction — Station Lock Boundary Class

Operation References   Not applicable.

3   Features   *T*

Toll Restriction for Special Carrier Access

Description   If the system has access to multiple telephone companies, access to
                           a specific company requires a carrier code before the telephone
                           number. Toll Restriction for these calls is activated by storing the
                           carrier codes (maximum 20). If a stored carrier code is found in the
                           dialed number, a toll restriction check starts with the subsequent
                           telephone numbers.

Conditions   None

Programming Reference

Section 4, System Programming
[300] Carrier Code Assignment

Feature Reference   **Section 3, Features**
                           Toll Restriction

Operation References   Not applicable.

Toll Restriction for System Speed Dialing

Description

Toll Restriction for System Speed Dialing is assigned separately from the extensions. There are five boundary classes available.

Extension COS number	System Speed Dialing Boundary Class				
	1	**2**	**3**	**4**	**5**
1	N	N	N	N	N
2	C	N	N	N	N
3	C	C	N	N	N
4	C	C	C	N	N
5	C	C	C	C	N

N = No restriction   C = Checked

[Explanation]
The System Speed Dialing Boundary Class works with the COS number assigned to each extension.
(1) Boundary Class 5: all extension users can make system speed dialing calls without checking any COS number.
(2) Boundary Class 4: extensions with COS number 5 are checked. When the users make system speed dialing calls, toll restriction COS number 5 is applied to the numbers.
(3) Boundary Class 3: extensions with COS numbers 4 and 5 are checked. When the users make system speed dialing calls, toll restriction COS numbers 4 and 5 are applied to the numbers.
(4) Boundary Class 2: extensions with COS numbers 3 through 5 are checked. When the users make system speed dialing calls, toll restriction COS numbers 3 through 5 are applied to the numbers.
(5) Boundary Class 1: extensions with COS numbers 2 through 5 are checked. When the users make system speed dialing calls, toll restriction COS numbers 2 through 5 are applied to the numbers.

Conditions

None

Programming Reference

Section 4, System Programming
[301] Toll Restriction — System Speed Dialing Boundary Class

Feature References

Section 3, Features
System Speed Dialing   Walking COS
Toll Restriction

Operation Reference
— User Manual

Telephone Features
Toll Restriction Override – Toll Restriction for System Speed Dialing

3   Features

Toll Restriction Override by Account Codes

Description

Allows an extension user to override toll restriction temporarily to make a toll call from a toll-restricted extension. The user can carry out this feature by entering a pre-assigned account code before dialing the telephone number. The user can make a toll call with the COS number 2.

Conditions

• The account code "Verify - Toll" mode at an extension permits users to override their toll restrictions.
• This feature can be used on extensions assigned to toll restriction COS numbers 3 through 5. The COS numbers 1 and 2 will not be changed.
• If the user does not enter an account code or enters an invalid one, a regular toll restriction check is done.
• When a user makes a call using this feature, it will appear on the SMDR printout with either the entered 4-digit account code or the 2-digit index of the entered account code. This selection is set in program [805] "SMDR Account Code Selection".
• Users can also override toll restriction of another extension by using the Walking COS feature.

Flow Chart of TRS Override

```
                   ┌──────────────────────────────────────────┐
                   │  TRS Override by Account Codes is attempted. │
                   └──────────────────────────────────────────┘
                                       │
                                       ▼
  Option/Forced        ┌──────────────────────────────┐        Verify - All
  ◄─────────────────── │  What is the account code mode? │ ───────────────────┐
                       └──────────────────────────────┘                        │
                                    │ Verify - Toll                            │
                                    ▼                                          ▼
          No      ┌──────────────────────────────┐         ┌──────────────────────────────┐
  ◄────────────── │  Does the entered code match a │         │  Does the entered code match a │
                  │  stored account code?          │         │  stored account code?          │
                  └──────────────────────────────┘         └──────────────────────────────┘
                                 │ Yes                              │           │
                                 ▼                               Yes│           │No
          Yes     ┌──────────────────────────────┐                │           │
  ◄────────────── │  Is the COS number 1?          │                │           │
                  └──────────────────────────────┘                │           │
                                 │ No                              │           │
                                 ▼                                 │           │
          ┌──────────────────────────────────────────┐            │           │
          │  The call is made with the COS number 2.   │            │           │
          └──────────────────────────────────────────┘            │           │
                                                                   │           ▼
  ┌──────────────────────────────────┐                            │  ┌──────────────────────────┐
  │  The Toll Restriction COS number   │ ◄──────────────────────────┘  │  The call is not allowed.  │
  │  remains the same as the extension │                               │  A reorder tone is returned │
  │  being used.                       │                               │  to the user.              │
  └──────────────────────────────────┘                               └──────────────────────────┘
```

_T_   3   Features

Programming References

        Section 4, System Programming
        [605] Account Code Entry Mode
        Operator/Manager Service Features . . . . **User Manual**
        Extension Password Set (Manager only)

Feature References   **Section 3, Features**
        Account Code Entry
        Station Message Detail Recording (SMDR)
        Toll Restriction
        Walking COS

Operation Reference   **Telephone Features**
    — User Manual   Toll Restriction Override — Toll Restriction Override by Account Codes

Toll Restriction — Station Lock Boundary Class

Description

Allows assigning a toll restriction class when the Electronic Station Lockout or Remote Station Lock feature is set.

An extension user usually cannot make an outside call at a locked extension, however if a toll restriction class is assigned in program [312], the user can make an outside call at the locked extension.

Condition

• The higher toll restriction COS number will take precedence. For example, if toll restriction COS number 4 is assigned to an extension and the station lock boundary class is 3, the extension user is allowed to make a call with toll restriction COS 4.

Programming Reference

Section 4, System Programming
[312] Toll Restriction — Station Lock Boundary Class

Feature References

Section 3, Features
Electronic Station Lockout
Remote Station Lock Control
Toll Restriction

Operation References

Not applicable.

Voice Mail Integration for KX-TVS50

Description

When a Panasonic Voice Processing System (KX-TVS50) is connected to the system, they communicate in a tightly integrated fashion (APT Integration). For example, the system sends the Voice Processing System (VPS) data which contains extension number configuration information and then the VPS automatically creates mailboxes with this data (Auto Configuration — Quick setup).

The system informs a VPS of the state of a call (busy, answered, ringing, disconnected, etc.) through APT Integration. The System also informs a VPS through APT Integration of the destination of a call transferred to the VPS by the Call Forwarding or DISA Intercept Routing — No Answer feature. This APT Integration is established automatically when a VPS is connected to 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 will be forwarded to the VPS. The system will send the VPS the extension mailbox number at that time. Therefore, the calling party can leave his/her message in the mailbox of the desired extension without having to know the mailbox number.

1.2 DISA Intercept to VM

If the VPS is set as the Intercept destination of an outside (CO) line, an outside call will be forwarded to the VPS. The system will send the VPS the extension mailbox number at that time. Therefore, the calling party can leave their message in the mailbox of the desired extension without knowing the mailbox number. Delayed Ringing must be assigned to voice mail extensions.

```
        ┌──────────────┐
        │ Outside Call │
        └──────────────┘
               │
             DISA
┌──────────────────────────┐
│                 System   │
│                          │
└──────────────────────────┘
               │
               ▼                              ┌─────────────────────────┐
        ┌──────────────┐   Intercept         │      KX-TVS50           │
        │  Extension   │────────────┐        │   ┌──────────────┐      │
        └──────────────┘            │        │   │    Port 1    │◄──   │
                                    │        │   └──────────────┘      │
                                    │        │   ┌──────────────┐      │
                                    └────────┼──►│    Port 2    │      │
                                             │   └──────────────┘      │
                                             └─────────────────────────┘
```

1.3 Special Features for a Proprietary Telephone through APT Integration

The following features are available only with a proprietary telephone in APT Integration.

    Live Call Screening (LCS)
    Voice Mail Transfer

With these features, a proprietary telephone user can monitor incoming messages being recorded into his/her mailbox or easily transfer an outside calls to a desired extension mailbox.

1.4 Listening to a Recorded Message

If the VPS receives a message or records a conversation, the VPS can turn on the MESSAGE button indicator on the corresponding proprietary telephone to notify the user. The VPS notifies the extension user that there is a message waiting in their mailbox. When the MESSAGE button indicator is lit, pressing the button allows the extension user to play back the stored message. A single line telephone user hears dial tone 3 when going off-hook if there are messages in their mailbox. They can call the voice mail extension to listen to their messages. In this case, they must listen to all of the messages. Once they access voice mail, dial tone 3 will be eliminated and not be heard next time they go off-hook. Therefore, they will not know even if there are messages left.

2. Automated Attendant (AA) Service

2.1 AA to Extension

AA receives and answers outside calls and offers services such as transferring to an extension or mailbox using DTMF signaling, which is sent from the calling party.

```
                    ┌──────────────┐
                    │ Outside Call │
                    └──────┬───────┘
                           │ DIL
              ┌────────────┴────────┐
              │            System   │
              └────────────┬────────┘
                           │
    ┌──────────┐  Transfer │  ┌──────────────────────────────────┐
    │Extension │◄──────────┼──│          KX-TVS50                │
    └──────────┘           ▼  │  ┌──────┐ ◄─ ─ ─ ─ ─ ─ ┌──────┐ │
                              │  │ AA 1 │ - - - - - - ► │ AA 2 │ │
                              │  └──────┘               └──────┘ │
                              │       AA Hunting Chain           │
                              └──────────────────────────────────┘
```
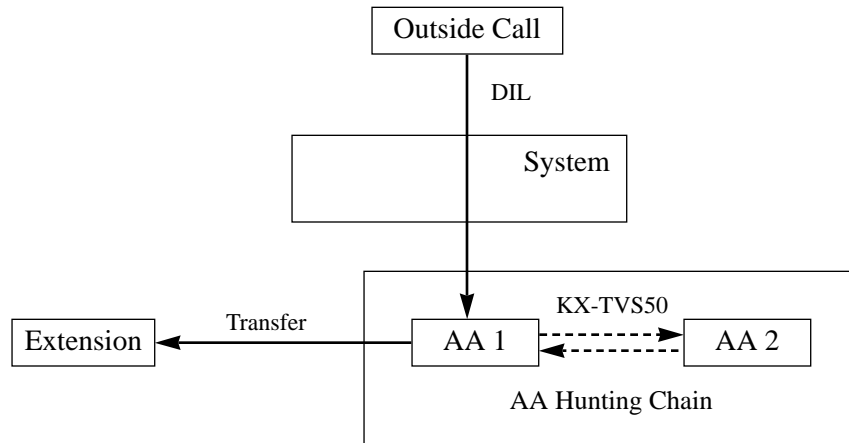
2.2 Extension Backup

If the voice mail extensions are assigned to ring with other extensions, for example the operator extension, for the same outside (CO) line, voice mail extensions can be used as backup for the operator when the operator cannot answer an incoming outside call. Delayed Ringing must be assigned to voice mail extensions.

```
   ┌──────────────┐
   │ Outside Call │
   └──────┬───────┘
          │ Normal
   ┌──────┴─────────┐
   │        System  │
   └──────┬─────────┘
          │
          ├──────────────────► ┌───────────┐
          │   Immediately      │ Extension │
          │                    └───────────┘
          │            ┌──────────────────────┐
          │            │       KX-TVS50        │
          ├──────────► │    ┌──────┐           │
          │  10 s delay│    │ AA 1 │           │
          │            │    └──────┘           │
          ├──────────► │    ┌──────┐           │
          │  15 s delay│    │ AA 2 │           │
                       └──────────────────────┘
```
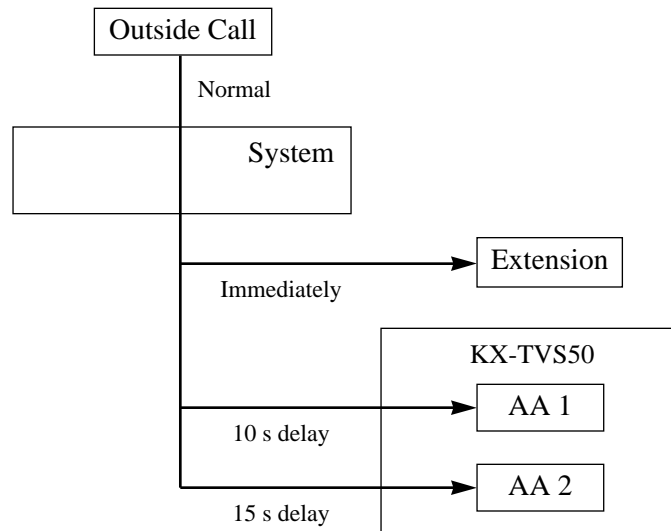
Conditions

- A maximum of two VPSs can be connected to the system.
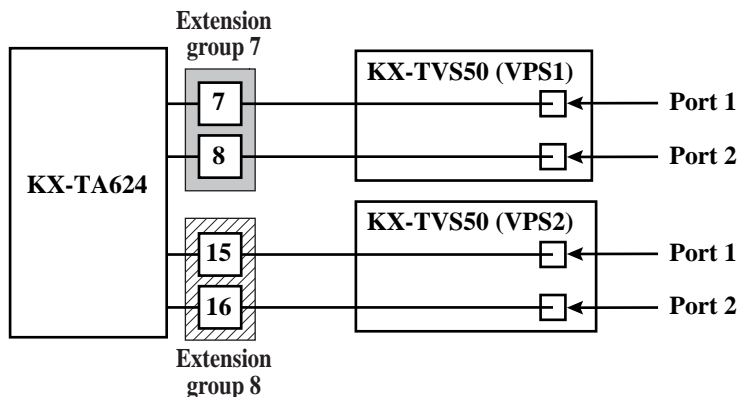
- A maximum of four extension jacks (07, 08, 15 and 16) of the system can be connected to VPSs with four-conductor wire. Extension jack number 07, or jack numbers 07 and 08 can be the voice mail APT ports for VPS1 in program [130]. Extension jack number 15, or jack numbers 15 and 16 can be for VPS2 in program [131].
- When "Port 7 & 8" is selected in program [130], extension jack numbers 07 and 08 will be in extension group 7 automatically. Likewise, when "Port 15 & 16" is selected in program [131], extension jack numbers 15 and 16 will be in extension group 8 automatically. Also the Station Hunting type is set as "Circular", and the VM Hunting Chain and AA Hunting Chain are enabled automatically in each of these two extension groups.
- The lowest jack number (07 or 15) of each extension group must be connected to the Port 1 of a VPS. The VPS data is transmitted to the VPS via the Port 1.
- One connection between the system and a VPS, for example extension jack number 07 of the system and Port 1 of the VPS, creates one Voice Mail extension and can only answer one call. Therefore, if one VPS is connected to the system, maximum of two calls can be answered simultaneously.
- A VPS can be assigned as the destination for the following features.
  Call Forwarding – All Calls
  Call Forwarding – Busy/No Answer
  DISA Intercept Routing – No Answer
  For these features, the caller does not need to know the mailbox number of the called extension because the code is automatically transmitted to the VPS (Follow On ID feature). If a DISA call is transferred to the VPS by Intercept Routing from a ring group, the system will transmit the mailbox number of the lowest jack number of the receiving extensions.
- The mailbox number is the same as its extension number.
- Data Line Security is set automatically on the Voice Mail extension.

V   **3   Features**

Connection Reference

Section 2, Installation
2.3.4   Extension Connection

Programming References

Section 4, System Programming
[009]   Extension Number Assignment
[100]   Hunting Group Set
[101]   Station Hunting Type
[130]   Voice Mail 1 APT Port for KX-TVS50
[131]   Voice Mail 2 APT Port for KX-TVS50
[408]–[410]   Flexible Ringing Assignment — Day/Night/Lunch
[411]–[413]   Delayed Ringing Assignment — Day/Night/Lunch
[414]–[416]   Outside (CO) Line Mode — Day/Night/Lunch
[507]   DISA Intercept Mode
[600]   Extension Group Assignment
Station Programming . . . . **User Manual**
Flexible Button Assignment – Return to Message Waiting (MESSAGE)
                                                  Button

Feature References

Section 3, Features

Call Forwarding – All Calls	Intercept Routing
Call Forwarding – Busy/No Answer	Live Call Screening (LCS)
Direct Inward System Access (DISA)	Station Hunting

Operation Reference
— User Manual

Telephone Features
Live Call Screening (LCS)
Voice Mail Integration for KX-TVS50/KX-TVS75/KX-TVS100
Voice Mail Transfer

3   Features

Voice Mail Integration for KX-TVS75/KX-TVS100

Description

This system supports Voice Processing System (VPS) equipment (Panasonic KX-TVS75/KX-TVS100) by sending DTMF tones described in program [103]. The DTMF tones sent to a VPS indicate the state of a call (busy, answered, ringing, disconnected, etc.). The DTMF tones also inform a VPS of the destination of a call transferred to the VPS by the Call Forwarding or DISA Intercept Routing — No Answer feature. Up to four VPSs can be connected to the extension jacks 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 will be forwarded to the VPS. The system will send the VPS the extension mailbox number at that time. Therefore, the calling party can leave his/her message in the mailbox of the desired extension without having to know the mailbox number.

1.2 DISA Intercept to VM
If the VPS is set as the Intercept destination of an outside (CO) line, an outside call will be forwarded to the VPS. The system will send the VPS the extension mailbox number at that time. Therefore, the calling party can leave their message in the mailbox of the desired extension without knowing the mailbox number. Delayed Ringing must be assigned to voice mail extensions.

```
┌──────────────┐
│ Outside Call │
└──────┬───────┘
       │ DISA
┌──────┼────────────────┐
│      │     System     │
│      │                │
└──────┼────────────────┘
       │
       ▼                        KX-TVS75/KX-TVS100
┌───────────┐  Intercept       ┌──────────────────────────┐
│ Extension │─────────────────▶│      ┌──────────┐        │
└───────────┘                  │  ───▶│  Port 1  │        │
                               │      └──────────┘        │
                               │      ┌──────────┐        │
                               │  ───▶│  Port 2  │        │
                               │      └──────────┘        │
                               │      ┌──────────┐        │
                               │  ───▶│  Port 3  │        │
                               │      └──────────┘        │
                               │      ┌──────────┐        │
                               │  ───▶│  Port 4  │        │
                               │      └──────────┘        │
                               └──────────────────────────┘
```

1.3 Listening to a Recorded Message
If the VPS receives a message, the VPS can turn on the MESSAGE button indicator on the corresponding proprietary telephone to notify the user. The VPS notifies the extension user that there is a message waiting in their mailbox. When the MESSAGE button indicator is lit, pressing the button allows the extension user to play back the stored message. A single line telephone user hears dial tone 3 when going off-hook if there are messages in their mailbox. They can call the voice mail extension to listen to their messages. In this case, they must listen to all of the messages. Once they access voice mail, dial tone 3 will be eliminated and not be heard next time they go off-hook. Therefore, they will not know even if there are messages left.

3　Features

2. Automated Attendant (AA) Service

2.1 AA to Extension

AA receives and answers outside calls and offers services such as transferring to an extension or mailbox using DTMF signaling, which is sent from the calling party.

```
                    ┌──────────────┐
                    │ Outside Call │
                    └──────────────┘
                           │ DIL
              ┌────────────┴────────┐
              │            System   │
              └─────────────────────┘
                           │
        ┌──────────────────┼──────────────────────────┐
        │                  │  KX-TVS75/KX-TVS100       │
┌───────────┐  Transfer  ┌──────┐         ┌──────┐    │
│ Extension │◀───────────│ AA 1 │- - - - ▶│ AA 2 │    │
└───────────┘            └──────┘         └──────┘    │
        │                  ▲    AA Hunting     │       │
        │                  │      Chain        ▼       │
        │                ┌──────┐         ┌──────┐    │
        │                │ AA 4 │◀- - - - │ AA 3 │    │
        │                └──────┘         └──────┘    │
        └──────────────────────────────────────────── ┘
```

2.2 Extension Backup

If the voice mail extensions are assigned to ring with other extensions, for example the operator extension, for the same outside (CO) line, voice mail extensions can be used as backup for the operator when the operator cannot answer an incoming outside call. Up to two voice mail extensions are available as backup. Delayed Ringing must be assigned to voice mail extensions.

```
┌──────────────┐
│ Outside Call │
└──────────────┘
        │ Normal
┌───────┴──────────────┐
│            System     │
└──────────────────────┘
        │
        │  Immediately     ┌───────────┐
        ├─────────────────▶│ Extension │
        │                  └───────────┘
        │          ┌──────────────────────────┐
        │          │   KX-TVS75/100           │
        │  10 s delay  ┌──────┐               │
        ├─────────────▶│ AA 1 │               │
        │          │   └──────┘               │
        │  15 s delay  ┌──────┐               │
        └─────────────▶│ AA 2 │               │
                   │   └──────┘               │
                   └──────────────────────────┘
```

Conditions

- A VPS can be assigned as the destination for the following features.
  - Call Forwarding – All Calls
  - Call Forwarding – Busy/No Answer
  - DISA Intercept Routing – No Answer

  For these features, the caller does not need to know the mailbox number of the called extension because the code is automatically transmitted to the VPS (Follow On ID feature). If a DISA call is transferred to the VPS by Intercept Routing from a ring group, the system will transmit the mailbox number of the lowest jack number of the receiving extensions.
- The mailbox number is the same as its extension number.
- The Voice Mail extension should set Data Line Security to achieve proper recording.
- If KX-TA624 cannot be selected with the PBX type setup menu of the KX-TVS75/KX-TVS100, select "KX-T1232". Follow the steps for a KX-T1232.
- Enable the VM Hunting Chain and AA Hunting Chain as follows.
  1) Assign all Voice Mail extensions to one extension group in program [600].
  2) Assign "Enable" to the group in program [100].
  3) Assign the hunting type to the group in program [101].

Connection Reference

Section 2, Installation

2.3.4 Extension Connection

Programming References

Section 4, System Programming

[009] Extension Number Assignment
[100] Hunting Group Set
[101] Station Hunting Type
[102] Voice Mail Port for KX-TVS75/KX-TVS100
[103] DTMF Integration for KX-TVS75/KX-TVS100
[408]–[410] Flexible Ringing Assignment — Day/Night/Lunch
[411]–[413] Delayed Ringing Assignment — Day/Night/Lunch
[414]–[416] Outside (CO) Line Mode — Day/Night/Lunch
[507] DISA Intercept Mode
[600] Extension Group Assignment
Station Programming . . . . **User Manual**
Flexible Button Assignment – Return to Message Waiting (MESSAGE)
Button

Feature References

Section 3, Features

Call Forwarding – All Calls   Intercept Routing
Call Forwarding – Busy/No Answer   Station Hunting
Direct Inward System Access (DISA)

Operation Reference — User Manual

Telephone Features

Voice Mail Integration for KX-TVS50/KX-TVS75/KX-TVS100

3　Features

Volume Control – Handset Receiver/Headset/Ringer/Speaker

Description　　　Allows a proprietary telephone user to change the following as desired.

> Handset receiver volume
> Headset volume
> Ringer volume
> Speaker volume

Condition　　　• The procedure is as follows.

> Slide the following levers located on the left side of the telephone.
>
> | | |
> |---|---|
> | Volume Control | (MIN – MAX) |
> | Handset (Headset) Volume Selector | (NORMAL – HIGH) |
> | Ringer Volume Selector | (OFF / LOW / HIGH) |

Programming References

> No programming required.

Feature References　　　None

**Operation Reference
— User Manual**

Configuration

Initial Settings — Volume Control – Handset Receiver/Headset/
Ringer/Speaker

Walking COS

Description	Allows a user who is not at their own telephone to override the toll restriction COS number of another extension. At the other extension, the user dials their extension password. For the duration of the call, the COS of the extension is changed to the COS of their own extension.

Conditions

• When a user makes a call using this feature, the user's extension number will be displayed on the SMDR, not the extension where the user made the call.

• If the extension overriding toll restriction is assigned to the Account Code — Forced or Verify - All mode, the user must enter the account code before the line access code.

Programming Reference

Operator/Manager Service Features . . . . . . **User Manual**
Extension Password Set (Manager only)

Feature Reference

Section 3, Features
Toll Restriction Override by Account Codes

Operation Reference
— User Manual

Telephone Features
Walking COS

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 factory default settings. If any of the programming needs to be changed, the necessary information will be found 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 in the "Programming Tables".

Required Telephone Set

One of the following telephone sets is required for system programming.
• Proprietary Telephone (PT): KX-T7130, KX-T7030

Extensions Used for Programming

Only the manager extension can perform system programming. The extension user connected to Jack number 01 is the manager extension.
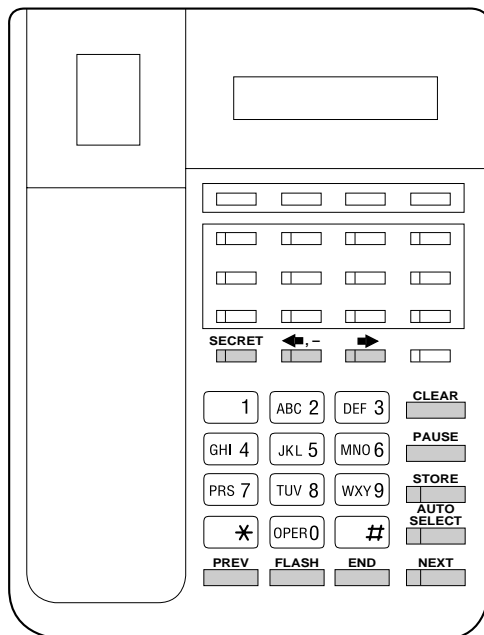
4.1.1   Using Proprietary Telephones

Using the Overlay

A programming overlay is packed with the telephone at the factory. This overlay should be used at all times during programming. The features of the telephone keys change during programming as follows. (The original features are in parentheses.)

During Normal Operation	During Programming
(PAUSE)	**PAUSE**
(SP-PHONE)	**NEXT**
(REDIAL)	**PREV** (PREVIOUS)
(AUTO ANSWER/MUTE)	**SELECT**
(FLASH)	**FLASH**
(TRANSFER)	**CLEAR**
(FWD/DND)	➡
(CONF)	⬅ , – (KX-T7030) / ⬅ (KX-T7130)
(INTERCOM)	**SECRET**
(AUTO DIAL/STORE)	**STORE**
(HOLD)	**END**
(SAVE)	, – (KX-T7130 only)

Location of Controls with the Overlay

The pictures below show the features of the buttons of the KX-T7030 and KX-T7130 during programming.
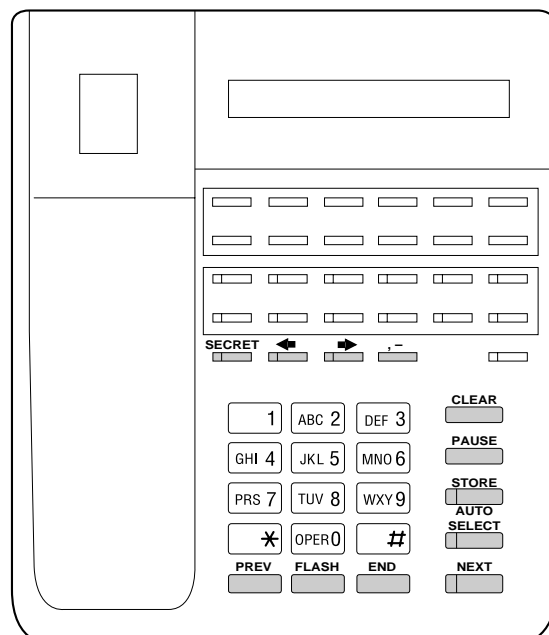
KX-T7030   **KX-T7130**

4.1.1 Using Proprietary Telephones

Viewing the Display

The display gives the user helpful information, such as the next step, previous entries, etc.
The KX-T7130 and the KX-T7030 both utilize one information line for programming.
The display capacity is 16 digits. If the entry is longer than 16 digits, the user can shift the display by pressing the ➡ or ⬅ button.

Before entering the programming mode

Before entering the programming mode, confirm that:
- The telephone is on-hook.
- No calls are on hold at your telephone.

Entering the programming mode

1. Set the MEMORY switch on the telephone to **"PROGRAM"**.
   The display shows: PITS-PGM NO? →

2. Dial ✶ #.
   The display shows: Password :

3. Enter the **system password** (default 1234).
   The display shows the initial system programming message: SYS-PGM NO? →

Note
- The entered system password is not shown on the display. The system password can be changed by system programming. Refer to Section 4.2 [002] "System Password".
- During the programming mode, the extension is treated as a busy extension.

4.1.2   Programming Methods

Advancing to the next stage

When "SYS-PGM NO? →" is displayed, the user can go to the
desired program by entering the 3-digit program address.

Storing your data

Press **STORE** to store the data.
  • The STORE indicator lights red and a confirmation tone is
    heard.

* **Confirmation tone (one beep)**

After pressing **STORE**, a beep will be heard. This informs the user
that storing is completed.

* **Confirmation tone (two beeps)**

This informs the user that the same parameter has already been
stored.

* **Alarm tone (three beeps)**

If this alarm is heard, the user's entry is not valid.

Making another selection within the same program address

  • To make the next selection, press **NEXT**.
  • To make the previous selection, press **PREV**.
  • To make a specific selection, press **SELECT** and then enter the
    number.

Confirming the entries

The user may review the stored programming without making any
changes.

Going to another program address

Press **END** and the initial system programming message will be
displayed.
The display shows: PITS-PGM NO? →
Then enter a program address.
You can go to the higher number program address by pressing the
➡ button and the lower number by pressing the ⬅ button while
the program title is displayed.
Display example: <u>Date/Time Set</u>
                                 └──────── program title

Returning to the operation mode

Set the MEMORY switch to **"SET"**.

4.1.3   Entering Characters

The user can enter characters to store names for extension numbers by using the dialing key pad and the buttons.
Each of the twelve dialing keys on the dialing key pad has seven characters assigned. See the Combination Table below.

Press SELECT (Number of 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

Note   The alphabetical characters correspond to the letters shown on the twelve dialing keys on a proprietary telephone (except for Q, q, Z, z and all other symbols).

The following example shows how to select a desired character. For example, to select the letter "M":

1. Press **6**. ("M" is stored in key "6".)
2. Press the **SELECT** button once.
    • Pressing the **SELECT** button an appropriate number of times enters the desired letter. Pressing **SELECT** twice enters the letter "m", pressing three times enters "N", and so on.

4.1.3   Entering Characters

Example of entering characters: to enter "Mike":

		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

Note   • To erase all the letters, press **CLEAR**.
• To erase the last letter, press ◀.

4.1.4   Programming Example

The following programming instructions assume that the user has already entered the programming mode.

Example: Program [001] "System Speed Dialing Entry"

Sample of Description	Explanation

001 [1]   **4.2   System Programming** [2]
 	
System Speed Dialing Entry [3]
 	
Description [4] Used to program the System Speed Dialing numbers. These numbers are available to all extension users. There are 100 numbers available from 00 to 99.
 	
Selection [5] • Speed dialing number: **00 – 99**
• Telephone number: **32 digits (max.)**
 	
Default [6] All speed dialing numbers – Not stored
 	
Programming [7] 1. Enter **001**. [8]
    `Display: Speed Dialing` [9]
 	
  2. Press **NEXT**. [10]
    `Display: Speed NO? →` [11]
 	
  3. Enter a **speed dialing number**.
    Pressing NEXT also can enter speed dialing number 00.
    `Display example:`
    `  00:Not Stored` [12]
 	
  4. Enter a **telephone number**. [13]
    To delete the current entry, press **CLEAR**. [14]
    To change the current entry, press **CLEAR** and enter the new number.
 	
  5. Press **STORE**. [15]
 	
  6. To program another speed dialing number, press **NEXT** or **PREV**, or **SELECT** and enter the desired speed dialing number. [16]
 	
  7. Repeat steps 4 through 6. [17]
 	
  8. Press **END**. [18]
 	
Conditions [19] • Each speed dialing number has a maximum of 32 digits. The valid characters are **0 – 9, ✱ , and # keys,** and the **FLASH, PAUSE, SECRET and – (hyphen) buttons.**
    •
    •
    •
    •
 	
Feature Reference [20] **Section 3, Features**
    System Speed Dialing
	(1) Program address: This address is printed at the top of every page to quickly find the desired program.
	(2) Mode title.
	(3) Program title.
	(4) Provides a more detailed description of the program.
	(5) Shows the user the assignable choices.
	(6) Shows the user the factory default setting.
	(7) Shows the user programming procedures step by step.
	  • During programming, use the overlay.
	  • Before starting to program, enter the programming mode. (See "Entering the programming mode" on page 4-4.)
	(8) Enter the program address.
	(9) The display shows the program title.
	(10) Press **NEXT** shown on the overlay.
	(11) The display asks the user to enter a speed dialing number.
	(12) If the telephone number has already been stored, the number is displayed.
	(13) Enter the telephone number that the user wants to store. The entry will be displayed as the user enters the digits.
	(14) Pressing **CLEAR** erases the whole entry.
	(15) The entry is now stored.
	  The indicator lights red and a confirmation tone lets the user know that storing is completed.
	(16) Select the best way for the user to store another speed dialing number. Pressing **NEXT/PREV** allows the user to select the next higher/lower speed dialing number. The user can also continue pressing a button until the desired entry is displayed. If the user presses **SELECT** and the desired speed dialing number, the selected code will be displayed.
	(17) The user can continue programming another entry.
	(18) After all the entries have been stored, complete this program by pressing **END**. After pressing **END,** the user can go to any desired program address. The user can return to the initial system programming message mode at any time by pressing **END**.
	(19) Tells the user what should be noted or considered when doing the program.
	(20) Lists all of the features related to the program. These features are described in Section 3.

Date and Time Setting

Description   Sets the current date and time.

Selection
• Year: **00 – 99**
• Month: **Jan. – Dec.**
• Day: **1 – 31**
• Day of the week: **Sun / Mon / Tue / Wed / Thu / Fri / Sat**
• Hour: **1 – 12**
• Minute: **00 – 59**
• **AM / PM**

Default   98 Jan. 1 Thu 12:00 AM

Programming
1. Enter **000**.

    ```
    Display: Date/Time Set
    ```

2. Press **NEXT**.

    ```
    Display example: '98 Jan.  1 Thu
    ```

3. Enter the **year**.

    To change the current entry, press **CLEAR** and enter the new year.

4. Press ➡ .

5. Keep pressing **SELECT** until the desired month is displayed.

6. Press ➡ .

7. Enter the **day**.

    To change the current entry, press **CLEAR** and enter the new day.

8. Press ➡ .

9. Keep pressing **SELECT** until the desired day of the week is displayed.

10. Press ➡ .

    ```
    Display example: 12:00    AM
    ```

11. Enter the **hour**.

    To change the current entry, press **CLEAR** and enter the new hour.

12. Press ➡ .

13.   Enter the **minute**.

           To change the current entry, press **CLEAR** and enter the new minute.

14.   Press ➡ .

15.   Press **SELECT** for AM or PM.

16.   Press ➡ .

17.   Press **STORE**.

18.   Press **END**.

Conditions

- After changing an entry, the user can press **STORE**. It is not necessary to perform the rest of the steps.
- To return to a previous field, press ⬅ in steps 4 through 16.
- If an alarm is heard after pressing **STORE**, check if the date is valid or not.
- The clock starts immediately after the **STORE** button is pressed.
- The operator and manager can set the date and time in the station programming mode.
- The system supports the years from 1998 to 2097. Setting 2098 and 2099 are not available.

Feature Reference

Section 3, Features
Display, in Idle

4.2   System Programming   *001*

System Speed Dialing Entry

Description   Used to program the System Speed Dialing numbers. These numbers are available to all extension users. There are 100 numbers available from 00 to 99.

Selection   • Speed dialing number: **00 – 99**
• Telephone number: **32 digits (max.)**

Default   All speed dialing numbers – Not stored

Programming
1.   Enter **001**.

> Display: Speed Dialing

2.   Press **NEXT**.

> Display: Speed NO? →

3.   Enter a **speed dialing number**.

> Pressing **NEXT** also can enter speed dialing number 00.
>
> Display example: 00:Not Stored

4.   Enter a **telephone 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 speed dialing number, press **NEXT** or **PREV**, or **SELECT** and enter the desired speed dialing number.

7.   Repeat steps 4 through 6.

8.   Press **END**.

Conditions

- Each speed dialing number has a maximum of 32 digits. The valid characters are **0 – 9, ✳ , and # keys**, and the **FLASH, PAUSE, SECRET and – (hyphen) buttons**.
  - To store a flash signal, press **FLASH**.
    - **Note:** The stored flash will only be effective during a call in progress. (Refer to Section 3 "External Feature Access".)
  - To store a hyphen, press the **"–"** button.
  - To store a pause, press **PAUSE**.
    (Refer to Section 3 "Pause Insertion, Automatic".)
  - To store a feature number to convert pulse signals to DTMF signals, press the ✳ and # keys.
    (Refer to Section 3 "Pulse to Tone Conversion".)
  - To prevent displaying all or part of a number, press **INTERCOM** before and after the confidential parts of the number. (Refer to Section 3 "Secret Dialing".)
- When storing an external number, include a line access code (9, 81 – 86) before the number. When dialing, a pause will automatically be inserted after the code.
- When storing an account code, enter the account code after the line access code. Press ✳ ✳ and then enter the account code.
  (Refer to Section 3 "Account Code Entry".)
- It is possible to store a number consisting of 33 digits or more by storing it in two speed dialing numbers. The line access code should be stored in the first speed dialing number.
- To access another speed dialing number in 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 ⬅.

Feature Reference

Section 3, Features
System Speed Dialing

4.2   System Programming   *002*

System Password

Description

Assigns the password required for entering the system programming mode or assigning extension passwords.

Selection

Password: **0000 – 9999**

Default

1234

Programming

1.   Enter **002**.

   ```
   Display: System Password
   ```

2.   Press **NEXT**.

   ```
   Display: Password  : 1234
   ```

3.   Enter a **password**.

   To change the current entry, press **CLEAR** and enter the new password.

4.   Press **STORE**.

5.   Press **END**.

Conditions

None

Feature Reference

Section 3, Features
System Programming with a Proprietary Telephone

DSS Console Port Assignment

Description   Assigns the jack numbers for the DSS Consoles.

Selection   • DSS Console number: **1 or 2**
                           • Jack number: **02 – 24 / Disable**

Default   All DSS Consoles — Disable

Programming   1.   Enter **003**.

                                 Display: DSS Jack Assign

                           2.   Press **NEXT**.

                                 Display: DSS NO? →

                           3.   Enter a **DSS Console number (1 or 2)**.

                                 Pressing **NEXT** also can enter DSS Console number 1.

                                 Display example: DSS1:Disable

                           4.   Enter a **jack number**.

                                 To assign no DSS Console jack, press **CLEAR**.
                                 To delete the current entry, press **CLEAR**.
                                 To change the current entry, press **CLEAR** and enter the new jack
                                 number.

                           5.   Press **STORE**.

                           6.   To program the other DSS Console, press **NEXT** or **PREV**.

                           7.   Repeat steps 4 and 5.

                           8.   Press **END**.

Conditions   • Both DSS Consoles cannot be assigned to the same DSS Console jack.
                           • If a single line telephone is assigned as the paired extension, the paired
                             DSS Console will not function.
                           • Jack 01 is the manager extension, so the jack 01 cannot be assigned as
                             the DSS Console jack.
                           • Jack numbers assigned as the DSS Console jacks in this program cannot
                             be assigned in program [004] "Paired Telephone Assignment for DSS
                             Console".

Feature Reference   **Section 3, Features**
                           DSS Console (KX-T7040)

Description   Assigns the jack numbers for the paired extensions with DSS
                     Consoles.

Selection   • DSS Console number: **1 or 2**
                     • Jack number: **01 – 24 / Disable**

Default   DSS1 – Disable, DSS2 – Disable

Programming

1. Enter **004**.

   ```
   Display: DSS Pair Assign
   ```

2. Press **NEXT**.

   ```
   Display: DSS NO? →
   ```

3. Enter a **DSS Console number (1 or 2)**.

   Pressing **NEXT** also can enter DSS Console number 1.

   ```
   Display example: DSS1:Disable
   ```

4. Enter a **jack number**.

   To assign no DSS Console jack, press **CLEAR**.
   To delete the current entry, press **CLEAR**.
   To change the current entry, press **CLEAR** and enter the new jack
   number.

5. Press **STORE**.

6. To program the other DSS Console, press **NEXT** or **PREV**.

7. Repeat steps 4 and 5.

8. Press **END**.

Conditions   • Both telephones cannot be assigned to the same jack.
                     • If a single line telephone is assigned as the paired extension, the paired
                       DSS Console will not function.
                     • Jack numbers assigned as the paired extensions in this program cannot
                       be assigned in program [003] "DSS Console Port Assignment".

Feature Reference **Section 3, Features**
                       DSS Console (KX-T7040)

One-Touch Transfer Using a DSS Button

Description   Enables or disables automatically holding an outside call when a
                           DSS button on a DSS Console or proprietary telephone is pressed.
                           Through this assignment, the button can perform the following.
                           • With Transfer — Pressing a DSS button holds an outside call and
                                          quickly transfers it to an extension without
                                          pressing the TRANSFER button.
                           • Without Transfer — Pressing the TRANSFER button and then a
                                          DSS button will transfer an outside call.

Selection   **With Transfer / Without Transfer**

Default   With Transfer

Programming   1.   Enter **005**.

                                     Display: DSS Mode

                           2.   Press **NEXT**.

                                     Display example: With Transfer

                           3.   Keep pressing **SELECT** until the desired selection is
                                displayed.

                           4.   Press **STORE**.

                           5.   Press **END**.

Condition   • This assignment applies to all DSS buttons on all DSS Consoles and
                             proprietary telephones in the system.

Feature Reference   **Section 3, Features**
                           One-Touch Transfer Using a DSS Button

4.2 System Programming

Time (Day/Night/Lunch) Service Changing Mode

Description

This program is used to determine if the day/night/lunch mode is set automatically or manually.

Selection

Man (manual) **/ Auto** (automatic)

Default

Manual

Programming

1. Enter **006**.

    ```
    Display: Day/Night Mode
    ```

2. Press **NEXT**.

    ```
    Display example: Mode Change:Man
    ```

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Conditions

• If automatic is assigned, the day/night/lunch mode is changed at the time programmed in [007] "Time (Day/Night/Lunch) Service Start Time". However, if feature number "783#" is entered and the mode is changed to "lunch", the mode will not be changed at the programmed time until feature number "780#" is entered.

• The operator and manager can change the day/night/lunch mode at any time.

Feature Reference

Section 3, Features
Time (Day/Night/Lunch) Service

4.2 System Programming

Time (Day/Night/Lunch) Service Start Time

Description
When automatic is programmed in program [006] "Time (Day/Night/Lunch) Service Changing Mode", this program sets the starting time on a day of the week basis.

Selection
• Day of the week selection:
    Sunday / Monday / Tuesday / Wednesday / Thursday / Friday / Saturday / ✷ (every day of the week)
• Mode: **Day / Night / Lunch-S** (lunch starting time) **/ Lunch-E** (lunch ending time)
• Hour: **1 – 12 / None** (no change)
• Minute: **0 – 59**
• **AM / PM**

Default
Every day of the week — Day – 9:00 AM / Night – 5:00 PM / Lunch-S – None / Lunch-E – None

Programming

1. Enter **007**.

   ```
   Display: Day/Night Time
   ```

2. Press **NEXT**.

   ```
   Display: Day of The Week
   ```

3. Press **NEXT** or **PREV** until the desired day of the week is displayed.

   To assign every day of the week, press ✷ instead of NEXT or PREV.

   ```
   Display example: Sunday
   ```

4. Press **SELECT**.

   ```
   Display example: Day   :  9:00AM
   ```

   To select another mode, keep pressing **SELECT** until the desired selection is displayed.

5. Press ➡.

6. Enter the **hour**.

   To set no change, keep pressing **SELECT** until "None" is displayed and go to step 11.
   If SELECT is pressed, the display shows the previous entry. If the previous setting was "None", press **SELECT** to enter the starting time.
   To change the current entry, press **CLEAR** and enter the new time.

7. Press ➡.

8. Enter the **minute**.

    To change the current entry, press **CLEAR** and enter the new minutes.

9. Press ➡.

10. Press **SELECT** for AM or PM.

11. Press **STORE**.

12. To program another time service mode, press **SELECT**.

13. Repeat steps 6 through 11.

14. To program another day of the week, press **NEXT** or **PREV**.

15. Repeat steps 4 through 14.

16. Press **END**.

Conditions

• If it is not necessary to change the time service, select "None" in step 6.
• To select the desired day, the user can also keep pressing **NEXT** in step 3. To assign every day of the week to the same selection, press the ✳ key in step 3. In this case, the display will show: `Every day.`
• The day or night mode is interrupted during the lunch mode. After the lunch mode is finished, the day or night mode will start again.

Feature Reference

Section 3, Features
Time (Day/Night/Lunch) Service

Operator Assignment

Description	Assigns the jack number for the operator. The operator has the ability to perform operator services.
Selection	Jack number: **01 – 24 / Disable** (no operator)
Default	Jack-01

Programming

1. Enter **008**.

    ```
    Display: Operator Ext
    ```

2. Press **NEXT**.

    ```
    Display example: OPT :Jack-01
    ```

3. Enter a **jack number**.

    To assign no operator, press **CLEAR**.
    To change the current entry, press **CLEAR** and enter the new jack number.

4. Press **STORE**.

5. Press **END**.

Conditions	None
Feature Reference	**Section 3, Features** Operator

Description   Assigns an extension number to each extension.

Selection   • Jack number: **01 – 24**
                            • Extension Number: **100 – 199**

Default   Jack 01 – 24 = Ext 101 – 124

Programming   1.   Enter **009**.

                                       Display: Extension No Set

                            2.   Press **NEXT**.

                                       Display: Jack NO? →

                            3.   Enter a **jack number**.

                                       Pressing **NEXT** also can enter jack number 01.

                                       Display: Jack01:Ext101

                            4.   Enter an **extension 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 enter the desired **jack number**.

                            7.   Repeat steps 4 through 6.

                            8.   Press **END**.

Conditions   • Program [604] "Extension Name Setting" is used to name the
                              extensions.
                            • An extension number which has been assigned to one jack cannot be
                              used for another jack. If an assigned number is entered, an alarm tone
                              will be heard and the entry is invalid.

Feature References   **Section 3, Features**
                            Display, Call Information
                            Intercom Calling

Description	Selects how the current time and date will be displayed on a proprietary telephone while it is idle. Either 12 hour or 24 hour (military time) is available.
Selection	**12 HOUR / 24 HOUR**
Default	12 HOUR

Programming

1. Enter **010**.

    ```
    Display: Time Display
    ```

2. Press **NEXT**.

    ```
    Display example: 12 HOUR
    ```

3. Press **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Condition

• Programs [000] "Date and Time Setting" and [007] "Time (Day/Night/ Lunch) Service Start Time", and the Timed Reminder feature are assigned using 12-hour time regardless of this program. The SMDR printout is also printed using 12-hour time.

Feature Reference

Section 3, Features
Display, in Idle

Description

Assigns to enable or disable the station hunting feature for each extension group.

Selection

• Extension group number: **1 – 8, ✳** (✳ = all extension groups)
• **Disable / Enable**

Default

All extension groups — Disable

Programming

1. Enter **100**.

   ```
   Display: Hunting Group
   ```

2. Press **NEXT**.

   ```
   Display: Group NO? →
   ```

3. Enter an **extension group number**.

   Pressing **NEXT** also can enter extension group number 1.

   ```
   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 enter the desired **extension group number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Conditions

• Program [600] "Extension Group Assignment" is used to assign the extension group members.
• To assign all extension groups, press the ✳ key in step 3. In this case, the display will show: `Group ✳: Mixed`.

Feature Reference

Section 3, Features
Station Hunting

Description

Used to set the Station Hunting type for each extension group. There are two Station Hunting types available: Circular and Terminating. If circular is assigned for a group, all of the extensions in the group are searched one time until an idle one is found. If terminating is assigned, searching stops at the extension which has the highest jack number in the group.

Selection

• Extension group number: **1 – 8**, ✶ (✶ = all extension groups)
• **Terminate** (terminating) / **Circular**

Default

All extension groups – Terminate

Programming

1. Enter **101**.

    ```
    Display: Hunting Type
    ```

2. Press **NEXT**.

    ```
    Display: Group NO? →
    ```

3. Enter an **extension group number**.

    Pressing **NEXT** also can enter extension group number 1.

    ```
    Display example: Group1:Terminate
    ```

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 enter the desired **extension group number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Conditions

• Program [600] "Extension Group Assignment" is used to assign the extension group members.
• If all extensions are busy, a busy tone will be heard.

Feature Reference

Section 3, Features
Station Hunting

Description Enables or disables the jacks which work as the voice mail ports for DTMF transmission to the Panasonic Voice Processing System (KX-TVS75/KX-TVS100).

Selection
• Jack number: **07 / 08 / 15 / 16**, ✴ (✴ = all jacks)
• **Enable / Disable**

Default All jacks — Disable

Programming

1. Enter **102**.

    ```
    Display: VM Port
    ```

2. Press **NEXT**.

    ```
    Display: Jack NO? →
    ```

3. Enter a **jack number**.

    Pressing **NEXT** also can enter jack number 07.

    ```
    Display example: #07:Disable
    ```

4. 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 enter the desired **jack number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Condition
• To assign all jacks to the same selection, press the ✴ key in step 3. In this case, the display will show: # ✴:Mixed.

Feature Reference **Section 3, Features**
Voice Mail Integration for KX-TVS75/KX-TVS100

Description

Enables or disables the system to send codes (DTMF tones) to indicate the status of a call (busy, answered, ringing, disconnected, etc.) in addition to the normal call progress tones. These codes enable the Panasonic Voice Processing System (KX-TVS75/KX-TVS100) to immediately recognize the current status of the call and speed up the call handling.

Selection

Enable / Disable

Default

Disable

Programming

1.   Enter **103**.

        `Display example: DTMF Integration`

2.   Press **NEXT**.

        `Display example: Disable`

3.   Keep pressing **SELECT** until the desired selection is displayed.

4.   Press **STORE**.

5.   Press **END**.

Conditions

- The table on the next page describes the codes (DTMF tones), call state and conditions for the DTMF integration operation.
- Extensions which are not assigned as the voice mail ports will not receive the DTMF tones.
- In order to select "Enable" in this program, programs [130] "Voice Mail 1 APT Port for KX-TVS50" and [131] "Voice Mail 2 APT Port for KX-TVS50" should first be set to "Disable".
- This feature improves the performance of the Panasonic KX-TVS75/ KX-TVS100 which have been programmed for Inband Signaling. Please refer to the Voice Processing System manual for details on programming Inband Signaling.

Feature Reference

Section 3, Features
Voice Mail Integration for KX-TVS75/KX-TVS100

Code	Call State	Conditions
1	Ringback Tone	When an extension the Voice Processing System has dialed is ringing.
2	Busy Tone	When an extension the Voice Processing System has dialed is busy.
3	Reorder Tone	When the Voice Processing System has dialed an invalid extension number or the Voice Processing System is inadvertently connected to another Voice Mail Port.
4	DND	When an extension the Voice Processing System has dialed sets the DND (Do Not Disturb) feature.
5	Answer	When an extension the Voice Processing System has dialed answers the call.
6	Forwarded to Voice Processing System (Ringing)	When a called extension is forwarded to a Voice Processing System, the call can be forwarded to another available Voice Processing System. In this way, the first Voice Processing System, typically an Auto-Attendant, can release the call to the other Voice Processing System and receive another incoming call.
7	Forwarded to Voice Mail (Busy)	When a called extension is forwarded to a Voice Processing System, a Voice Processing System is not available to receive the call.
8	Forwarded to Extension	When a called extension is forwarded to another, non-Voice Processing System extension.
9	Confirmation Tone	When a Voice Processing System has successfully turned a message waiting lamp on or off.
#9	Disconnect	When the calling party is disconnected.

Description

Assigns the call hold mode for single line telephones.
Each mode is explained as follows.

	Operation	
Hold Mode	**To hold**	**To transfer**
Hold-1	Flash the hookswitch + on-hook	Flash the hookswitch + extension number or line access code
Hold-2	Flash the hookswitch + feature number (20) + on-hook	Flash the hookswitch + extension number or line access code
Hold-3	Flash the hookswitch + feature number (20) + on-hook	Flash the hookswitch + feature number (20) + extension number or line access code

Selection

Hold-1 / Hold-2 / Hold-3

Default

Hold-1

Programming

1. Enter **104**.

   ```
   Display: Hold Mode
   ```

2. Press **NEXT**.

   ```
   Display example: Hold-1
   ```

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Conditions

None

Feature References

Section 3, Features
Call Hold – Intercom
Call Hold – Outside (CO) Line

Conference Tone

Description   Assigns whether or not a confirmation tone is sent before starting and ending a conference call. This assignment also works for the Executive Busy Override feature.

Selection   **Enable / Disable**

Default   Enable

Programming   1.   Enter **105**.

                                   `Display: Conference Tone`

                    2.   Press **NEXT**.

                                   `Display example: Enable`

                    3.   Keep pressing **SELECT** until the desired selection is displayed.

                    4.   Press **STORE**.

                    5.   Press **END**.

Conditions   None

Feature Reference   **Section 3, Features**
Conference

Description   Used to remove the confirmation tone for the external pager. The default setting sends confirmation tone to the external pager before paging is sent.

Selection   **Enable / Disable**

Default   Enable

Programming   1.   Enter **106**.

```
Display: Ext-Pag Ack-Tone
```

2.   Press **NEXT**.

```
Display example: Page:Enable
```

3.   Keep pressing **SELECT** until the desired selection is displayed.

4.   Press **STORE**.

5.   Press **END**.

Condition   • The external pager is a user-supplied item. One external pager can be installed to the system.

Feature References   **Section 3, Features**
Confirmation Tones
Paging — All
Paging — External

Description
Enables or disables the DTMF receiver to check whether the DTMF receivers are activated normally or not.
Six DTMF receivers work with the following cards.
DTMF-R 1 and 2 — basic extension card (jacks 01 – 08)
DTMF-R 3 and 4 — extension expansion card 1
(jacks 09 – 16)
DTMF-R 5 and 6 — extension expansion card 2 (jacks 17 – 24)

Selection
• DTMF Receiver number: **1 – 6**
• **Enable / Disable**

Default
All DTMF receivers — Enable

Programming

1. Enter **107**.

    ```
    Display: DTMF-R Selection
    ```

2. Press **NEXT**.

    ```
    Display:DTMF-R NO? →
    ```

3. Enter the **DTMF receiver number**.

    Pressing **NEXT** also can enter DTMF receiver number 1.

    ```
    Display example:DTMF-R1:Enable
    ```

4. Keep pressing **SELECT** until the desired selection is displayed.

5. Press **STORE**.

6. To program another DTMF receiver, press **NEXT** or **PREV**, or **SELECT** and enter the desired **DTMF receiver number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Conditions
None

Feature References
None

Flash Mode for a Station Locked Extension

Description

Assigns whether or not an extension where the electronic station lockout or remote station lock control feature has been set, can send a flash signal during a conversation with an external party.

Selection

Enable / Disable

Default

Disable

Programming

1. Enter **108**.

   ```
   Display: Locked Ext Flash
   ```

2. Press **NEXT**.

   ```
   Display example: FLASH:Disable
   ```

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Conditions

None

Feature References

Section 3, Features
Electronic Station Lockout
Remote Station Lock Control

CO Indicator Assignment

Description

Assigns whether or not an extension user can answer an incoming outside call when they were was not assigned to receive calls in programs "[408]–[410] Flexible Ringing Assignment — Day/Night/Lunch".

Selection

Enable (A CO button indicator will flash when a call is received. An extension user can answer the call by pressing the flashing button.)

Disable (A CO button indicator lights when a call is received, but an extension user cannot answer the call.)

Default

Enable

Programming

1. Enter **109**.

   ```
   Display: CO Indicator
   ```

2. Press **NEXT**.

   ```
   Display example:Enable
   ```

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Conditions

None

Feature References

None

Description   Assigns sending a flash signal when the FLASH button on a
                           proprietary telephone is pressed.

Selection   **MODE 1** (A flash signal is sent during the time programmed in
                                    program "[418] Flash Time")
                           MODE 2 (A flash signal is sent while the FLASH button is
                                    pressed.)

Default   MODE 2

Programming   1.   Enter **110**.

                                    Display: Flash Key

                           2.   Press **NEXT**.

                                    Display example:MODE 1

                           3.   Keep pressing **SELECT** until the desired selection is
                                 displayed.

                           4.   Press **STORE**.

                           5.   Press **END**.

Condition   • For MODE 2, a flash signal will be sent for the programmed time in
                             program [418] if the FLASH button is pressed for less than the
                             programmed time.

Feature References   **Section 3, Features**
                           External Feature Access
                           Flash

Description

Used to determine the music source use for Music on Hold for outside calls.

Selection

External / Tone

Default

External

Programming

1.   Enter **111**.

```
Display: Hold Music
```

2.   Press **NEXT**.

```
Display example:External
```

3.   Keep pressing **SELECT** until the desired selection is displayed.

4.   Press **STORE**.

5.   Press **END**.

Conditions

• The external music source is a user-supplied item. One music source can be installed.
• If "Tone" is assigned, the following cyclic tone is sent to the held outside (CO) line.

Feature Reference

Section 3, Features
Music on Hold

Description   Enables or disables the Busy Lamp Field (BLF) on DSS buttons to indicate the Forward (FWD) or Do Not Disturb (DND) status of corresponding extensions.

Selection   **Enable** (FWD/DND — flashing) **/ Disable** (FWD/DND — off)

Default   Enable

Programming

1.   Enter **112**.

> Display: DSS Indication

2.   Press **NEXT**.

> Display example:Enable

3.   Keep pressing **SELECT** until the desired selection is displayed.

4.   Press **STORE**.

5.   Press **END**.

Conditions   None

Feature Reference   **Section 3, Features**
DSS Console (KX-T7040)

Description   Selects the extension ringing pattern when an intercom call is received.
The ringing patterns are shown below.
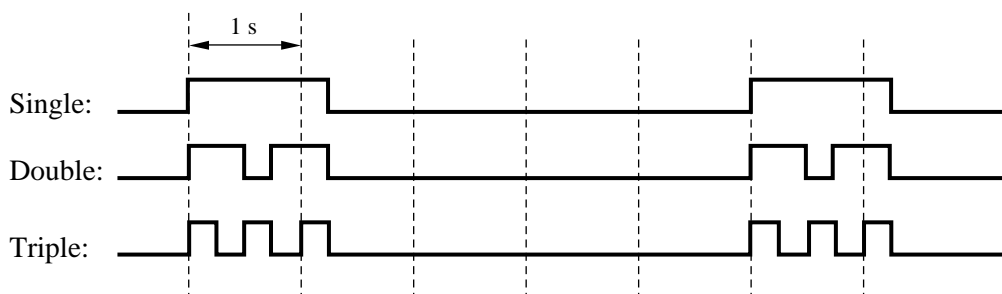
Selection   **Single / Double / Triple**

Default   Double

Programming

1.   Enter **115**.

> Display: Ext Ring pattern

2.   Press **NEXT**.

> Display example: Double

3.   Keep pressing **SELECT** until the desired selection is displayed.

4.   Press **STORE**.

5.   Press **END**.

Conditions   • The extension ringback tone is the same as the pattern assigned in this program.
• The programs [423] "Outside (CO) Line Ringing Pattern Selection" and [706] "Doorphone Ringing/Tone Pattern Selection" should be considered when assigning this program.

Feature Reference   **Section 3, Features**
Ringing Pattern Selection for Intercom Calls and Outside (CO) Lines

Description

Enables or disables the confirmation tone sent when the Call pickup feature is activated.

Selection

Enable / Disable

Default

Enable

Programming

1. Enter **117**.

   ```
   Display: Call Pickup Tone
   ```

2. Press **NEXT**.

   ```
   Display example: Enable
   ```

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Conditions

None

Feature References

Section 3, Features
Call Pickup, Directed
Call Pickup, Group

Description	Enables or disables sending pulse dialing to the Central Office during a conversation with an external party, when Pulse or Call block is selected in program [401] "Dial Mode".
Selection	**Enable / Disable**
Default	Enable
Programming	1. Enter **118**.

            `Display: Pulse Restrict`

            2.   Press **NEXT**.

            `Display example: Enable`

            3.   Keep pressing **SELECT** until the desired selection is displayed.

            4.   Press **STORE**.

            5.   Press **END**.

Conditions	None
Feature References	None

Redialing After Pulse to Tone Conversion

Description
Enables or disables sending tone dialing to the Central Office when an extension user redials after changing from pulse to tone mode by pressing ✳ and #.

Selection
Enable / Disable

Default
Disable

Programming

1. Enter **119**.

   ```
   Display: Redial After ✳#
   ```

2. Press **NEXT**.

   ```
   Display example: Disable
   ```

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Conditions
None

Feature Reference
Section 3, Features
Pulse to Tone Conversion

Description

Assigns whether the entered "✶" and "#" are checked by toll restriction or not. This assignment is required for certain Central Offices to prevent toll fraud. Some Central Offices ignore the user-dialed "✶" and "#". If the user's Central Office ignores these symbols, select "Disable".

Selection

Enable (check) **/ Disable** (does not check)

Default

Enable

Programming

1. Enter **125**.

   ```
   Display: TRS Check for ✶ #
   ```

2. Press **NEXT**.

   ```
   Display example: Enable
   ```

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Conditions

None

Feature Reference

Section 3, Features
Toll Restriction

Description   Enables or disables the extension jack numbers 07, or 07 and 08 corresponding to the voice mail APT ports for data transmission to the Panasonic Voice Processing System (KX-TVS50).

Selection   • **Port 7 / Port 7 & 8 / Disable**

Default   All jacks — Disable

Programming   1.   Enter **130**.

    Display: VM1(APT)Port

          2.   Press **NEXT**.

    Display example: Port:Disable

          3.   Keep pressing **SELECT** until the desired selection is displayed.

          4.   Press **STORE**.

          5.   Press **END**.

Condition   • To change the current assignment from "Port 7" to "Port 7 & 8", first it must be changed to "Disable". Likewise, to change it from "Port 7 & 8" to "Port 7", first it must be changed to "Disable". If the current assignment is already "Disable", making a change can be done in one step.
          • When "Port 7 & 8" is selected in this program, following programs are automatically set as described below.
                [600] Extension Group Assignment:
                        extension jack number 07 — extension group 7
                        extension jack number 08 — extension group 7
                [100] Hunting Group Set: extension group 7 — Enable
                [101] Station Hunting Type: extension group 7 — Circular
                [102] Voice Mail Port for KX-TVS75/KX-TVS100:
                        extension jack number 07 — Enable
                        extension jack number 08 — Enable
          • If "Enable" is assigned in program [103] "DTMF Integration for KX-TVS75/TVS100", "Port 7" or "Port 7 & 8" cannot be selected.
          • The extension jacks assigned as the voice mail APT ports in this program are automatically set the Data Line Security.

Feature Reference   **Section 3, Features**
Voice Mail Integration for KX-TVS50

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† Available when the KX-TA624 is connected to a Proprietary Telephone capable Panasonic Voice Processing System (one that supports APT Integration; KX-TVS50).

Description

Enables or disables the extension jack numbers 15, or 15 and 16 corresponding to the voice mail APT ports for data transmission to the Panasonic Voice Processing System (KX-TVS50).

Selection

• **Port 15 / Port 15 & 16 / Disable**

Default

All jacks — Disable

Programming

1. Enter **131**.

   ```
   Display: VM2(APT)Port
   ```

2. Press **NEXT**.

   ```
   Display example: Port:Disable
   ```

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Condition

• To change the current assignment from "Port 15" to "Port 15 & 16", first it must be changed to "Disable". Likewise, to change it from "Port 15 & 16" to "Port 15", first it must be changed to "Disable". If the current assignment is already "Disable", making a change can be done in one step.
• When "Port 15 & 16" is selected in this program, following programs are automatically set as described below.
    [600] Extension Group Assignment:
        extension jack number 15 — extension group 8
        extension jack number 16 — extension group 8
    [100] Hunting Group Set: extension group 8 — Enable
    [101] Station Hunting Type: extension group 8 — Circular
    [102] Voice Mail Port for KX-TVS75/KX-TVS100:
        extension jack number 15 — Enable
        extension jack number 16 — Enable
• If "Enable" is assigned in program [103] "DTMF Integration for KX-TVS75/TVS100", "Port 15" or "Port 15 & 16" cannot be selected.
• The extension jacks assigned as the voice mail APT ports in this program are automatically set the Data Line Security.

Feature Reference

Section 3, Features
Voice Mail Integration for KX-TVS50

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† Available when the KX-TA624 is connected to a Proprietary Telephone capable Panasonic Voice Processing System (one that supports APT Integration; KX-TVS50).

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: **30 sec / 1 min / 1.5 min / 2 min / 3 min / 4 min / 5 min / 6 min / Disable** (= Hold Recall disabled) (seconds/minutes)

Default

30 sec

Programming

1. Enter **200**.

   ```
   Display: Hold Recall Time
   ```

2. Press **NEXT**.

   ```
   Display example: Time:30 sec
   ```

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Condition

• When "Disable" is selected, the hold alarm is also disabled.

Feature Reference

Section 3, Features
Hold Alarm/Hold Recall

Transfer Recall Time

Description

Assigns the length of the transfer recall timer. If a transferred call is not answered within the programmed time, the call will be returned to the original caller.

Selection

Time: **15 sec / 30 sec / 1 min / 2 min** (seconds/minutes)

Default

30 sec

Programming

1. Enter **201**.

   ```
   Display: Transfer Recall
   ```

2. Press **NEXT**.

   ```
   Display example: Time:30 sec
   ```

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Conditions

None

Feature Reference

Section 3, Features
Call Transfer, Unscreened — to Extension

Description   Sets the time for the Call Forwarding – No Answer feature. If a call is not answered within the programmed time, the call will be forwarded to the destination.

Selection   **5 sec delay / 10 sec delay / 15 sec delay / 20 sec delay** (seconds)

Default   15 sec delay

Programming   1.   Enter **202**.

```
Display: Call FWD Delay
```

2.   Press **NEXT**.

```
Display example: 15sec delay
```

3.   Keep pressing **SELECT** until the desired selection is displayed.

4.   Press **STORE**.

5.   Press **END**.

Conditions   None

Feature Reference   **Section 3, Features**
Call Forwarding – Busy/No Answer

Pickup Dial Delay Time

Description	Sets the length of time for the Pickup Dialing feature. If the telephone user lifts the handset, the programmed party will be called when the time expires. This delay gives the user an opportunity to enter numbers before automatic dialing occurs.
Selection	**1 sec / 2 sec / 3 sec / 4 sec** (seconds)
Default	3 sec

Programming

1. Enter **203**.

    ```
    Display: Pickup Dial Time
    ```

2. Press **NEXT**.

    ```
    Display example: PUD Time:3sec
    ```

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Conditions	None
Feature Reference	**Section 3, Features** Pickup Dialing

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 all the digits to the central office and this
                         timer expires, the system will start 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   **Instantly / 5 s / 10 s / 15 s / 20 s / 25 s / 30 s / 35 s / 40 s / 45 s /
                         50 s after dial** (seconds)

Default   10 s after dial

Programming   1.   Enter **204**.

                              ```
                              Display: Durat-Time Count
                              ```

                         2.   Press **NEXT**.

                              ```
                              Display example: 5s after dial
                              ```

                         3.   Keep pressing **SELECT** until the desired selection is
                              displayed.

                         4.   Press **STORE**.

                         5.   Press **END**.

Condition   • The timer starts counting after all the digits are dialed. This timer does
                           not apply to incoming calls. The timer for incoming calls starts
                           immediately.

Feature References   **Section 3, Features**
                         Display, Call Information
                         Station Message Detail Recording (SMDR)

Outside-to-Outside (CO-to-CO) Line Duration Time Limit

Description

Sets the maximum time allowed for a conversation between two external parties. When the timer expires, the Outside-to-Outside (CO-to-CO) Line call is disconnected.

Selection

Time (minutes): **1 – 32**

Default

10 min

Programming

1. Enter **205**.

    ```
    Display: CO-CO Dur. Limit
    ```

2. Press **NEXT**.

    ```
    Display example: Time:10min
    ```

3. Enter the **time**.

    To change the current entry, press **CLEAR** and enter the new time.

4. Press **STORE**.

5. Press **END**.

Conditions

None

Feature References

Section 3, Features
Call Forwarding – to an Outside (CO) Line
Call Transfer, Screened – to an Outside (CO) Line
Conference, Unattended
Direct Inward System Access (DISA)

Description

Sets the number of milliseconds the system waits before dialing after an outside (CO) line is seized.

Selection

0 msec / 250 msec / 500 msec / 750 msec / 1000 msec / 1250 msec / 1500 msec (milliseconds)

Default

0 msec

Programming

1. Enter **206**.

   ```
   Display: Dial Start Time
   ```

2. Press **NEXT**.

   ```
   Display example: Time:   0 msec
   ```

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Conditions

None

Feature References

Section 3, Features
Line Access, Automatic
Line Access, Direct
Line Access, Individual

Description
Assigns the maximum time allowed between digits for an outgoing outside call.

Selection
5 sec / 10 sec / 15 sec (seconds)

Default
10 sec

Programming

1. Enter **208**.

   ```
   Display: Interdigit Time
   ```

2. Press **NEXT**.

   ```
   Display example: Time:10 sec
   ```

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Conditions
• The interdigit timer applies until the toll restriction check is completed. When the timer expires, an outgoing outside call will be disconnected while dialing, if "Enable" was selected in program [211] "No Dial Disconnection".
• For a single line telephone, an outgoing outside call will be released from a DTMF receiver when the interdigit timer expires.

Feature Reference
Section 3, Features
Toll Restriction

Description

Enables or disables disconnecting an outside (CO) line if an extension user does not dial anything within 10 seconds after an outside (CO) line is seized.

Selection

Enable (disconnect) **/ Disable** (does not disconnect)

Default

Disable

Programming

1. Enter **211**.

    ```
    Display: No Dial Mode
    ```

2. Press **NEXT**.

    ```
    Display example: Disable
    ```

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Condition

• The interdigit timer assigned in program [208] "Interdigit Time" applies until the toll restriction check is completed. When the timer expires, an outgoing outside call will be disconnected while dialing, if "Enable" was selected in this program.

Feature References

None

Carrier Code Assignment

Description	Assigns carrier codes. This allows the system to recognize a special user-dialed carrier code in order to apply toll restriction. The system disregards the assigned code and toll restriction is applied to the numbers after the code.
Selection	• Code number: **01 – 20** • Carrier code number: **10 digits (max.)**
Default	All codes – Not stored

Programming

1. Enter **300**.

   ```
   Display: Carrier Excepted
   ```

2. Press **NEXT**.

   ```
   Display: CODE NO? →
   ```

3. Enter a **code number**.

   Pressing **NEXT** also can enter code number 01.

   ```
   Display example: 01:Not Stored
   ```

4. Enter a **carrier code 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 code, press **NEXT** or **PREV**, or **SELECT** and enter the desired **code number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Condition

• Each carrier code number has a maximum of ten digits, consisting of **0 – 9**, ✳, **#** and **x** (PAUSE button). The character "x" can be used as a wild card character and is entered by pressing the PAUSE button.

Feature References

Section 3, Features
Pause Insertion, Automatic
Toll Restriction for Special Carrier Access

Description

Assigns the Toll Restriction class for System Speed Dialing numbers.

Selection

Boundary Class-1 / Boundary Class-2 / Boundary Class-3 / Boundary Class-4 / Boundary Class-5

Default

Boundary Class-1

Programming

1. Enter **301**.

    ```
    Display: SSD Boundary
    ```

2. Press **NEXT**.

    ```
    Display example: Boundary Class-1
    ```

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Conditions

None

Feature Reference

Section 3, Features
Toll Restriction for System Speed Dialing

Description

These allow the user to specify which numbers are toll-restricted for each toll restriction class as follows.

Program [302]: restricts COS number 2.
Program [303]: restricts COS numbers 2 and 3.
Program [304]: restricts COS numbers 2 – 4.
Program [305]: restricts COS numbers 2 – 5.

Selection

• Code number: **01 – 20**
• Toll restriction number: **11 digits**

Default

All codes – Not stored

Programming

1. Enter a **program address (302 to 305)**.

   ```
   Display example: Class-2 Table
   ```

2. Press **NEXT**.

   ```
   Display: CODE NO? →
   ```

3. Enter a **code number**.

   Pressing **NEXT** also can enter code number 01.

   ```
   Display example: 01: ...........
   ```

4. Enter a **toll call 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 code, press **NEXT** or **PREV**, or **SELECT** and enter the desired **code number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Conditions

• There is a maximum of 20 numbers which can be restricted for each program. Each number must have eleven digits, consisting of **0 – 9, ✱, # and x** (PAUSE button). The character "x" can be used as a wild card character and is entered by pressing the PAUSE button.
• Program [306] "Toll Restriction — Exception Codes" is used to assign exceptions to these numbers. Programs [601]–[603] "TRS – Class of Service (COS) Assignment — Day/Night/Lunch" are used to set the toll restriction value for each extension.

Feature Reference

Section 3, Features
Toll Restriction

Description   This allows the user to assign numbers which are exceptions to toll restriction specified in programs [302] – [305].

Selection   • Code number: **01 – 80**
                         • Exception number: **11 digits**

Default   All codes – Not stored

Programming   1.   Enter **306**.

                              Display example: Excepted Table

                         2.   Press **NEXT**.

                              Display: CODE NO?→

                         3.   Enter a **code number**.

                              Pressing **NEXT** also can enter code number 01.

                              Display example: 01: ....

                         4.   Enter an **exception 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 code, press **NEXT** or **PREV**, or **SELECT** and enter the desired **code number**.

                         7.   Repeat steps 4 through 6.

                         8.   Press **END**.

Conditions   • There is a maximum of eighty numbers. Each number must have eleven digits, consisting of **0 – 9, ✻, #** and **x** (PAUSE button). The character "x" can be used as a wild card character and is entered by pressing the PAUSE button.
                         • Code numbers 01 – 80 apply to COS number 2, 01 – 60 apply to COS number 3, 01 – 40 apply to COS number 4, and 01 – 20 apply to COS number 5.

Feature Reference   **Section 3, Features**
                         Toll Restriction

Emergency Dial Number Set

Description
Stores up to five emergency numbers.
Emergency numbers are not subject to toll restriction, Account Code – Forced/Verify - All modes, Electronic Station Lockout or Remote Station Lock Control.

Selection
• Code number: **1 – 5**
• Emergency number: **11 digits (max.)**

Default
Code-01 = 911, Other Codes = Not stored

Programming

1. Enter **309**.

   ```
   Display: Emergency Code
   ```

2. Press **NEXT**.

   ```
   Display: CODE NO? →
   ```

3. Enter a **code number**.

   Pressing **NEXT** also can enter code number 1.

   ```
   Display example: CODE-01:
   ```

4. Enter an **emergency 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 code, press **NEXT** or **PREV**, or **SELECT** and enter the desired **code number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Condition
• Each emergency number has a maximum of eleven digits, consisting of **0 – 9**.

Feature References
Section 3, Features
Account Code Entry
Electronic Station Lockout
Emergency Call
Remote Station Lock Control
Toll Restriction

Description   Assigns the account codes for Account Code Entry, Verify – All and Verify – Toll modes. If Verify – All is assigned in program [605] "Account Code Entry Mode", an account code is required to make an outside call. If Verify – Toll is assigned, an account code is only required to override toll restriction.

Selection   • Code number: **01 – 24**
• Account code: **4 digits**

Default   All codes – Not stored

Programming

1.   Enter **310**.

> ```
> Display: Account Code
> ```

2.   Press **NEXT**.

> ```
> Display: CODE NO? →
> ```

3.   Enter a **code number**.

> Pressing **NEXT** also can enter code number 01.

> ```
> Display example: CODE-01:....
> ```

4.   Enter an **account code**.

> To delete the current entry, press **CLEAR**.
> To change the current entry, press **CLEAR** and enter the new account code.

5.   Press **STORE**.

6.   To program another code number, press **NEXT** or **PREV**, or **SELECT** and enter the desired **code number**.

7.   Repeat steps 4 through 6.

8.   Press **END**.

Conditions   • Each verifiable account code has 4 digits, consisting of **0 – 9**.
• Program [605] "Account Code Entry Mode" is used to select the Account Code Entry mode.

Feature References   **Section 3, Features**
Account Code Entry
Toll Restriction Override by Account Codes

Description

Assigns up to 40 automatic pause insertion codes which are checked with the outside outgoing call number. When one of the codes is the same as the call number, the pause time assigned in program [417] "Pause Time" is automatically inserted after the code. If a second dial tone is sent from the Central Office, it is convenient to assign the area code as the pause code.

Selection

• Code number: **01 – 40**
• Pause code number: **7 digits (max.)**

Default

All codes – Not stored

Programming

1.   Enter **311**.

> Display: Auto Pause Code

2.   Press **NEXT**.

> Display: CODE NO? →

3.   Enter a **code number**.

> Pressing **NEXT** also can enter code number 01.
>
> Display example: CODE-01:.......

4.   Enter a **pause code**.

> 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 code number, press **NEXT** or **PREV**, or **SELECT** and enter the desired **code number**.

7.   Repeat steps 4 through 6.

8.   Press **END**.

Condition

• Each pause code number has a maximum of seven digits, consisting of **0 – 9, ✳ and #**.

Feature Reference

Section 3, Features
Pause Insertion, Automatic

Description Assigns the Toll Restriction COS number when the Electronic Station Lockout or Remote Station Lock Control is set.

Selection **COS-2 / COS-3 / COS-4 / COS-5 / Disable**

Default Disable

Programming
1. Enter **312**.

    ```
    Display: LOCK Boundary
    ```

2. Press **NEXT**.

    ```
    Display example: Boundary Disable
    ```

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Conditions None

Feature References **Section 3, Features**
Electronic Station Lockout
Remote Staiton Lock Control
Toll Restriction — Station Lock Boundary Class

Description

Used to identify which outside (CO) lines are connected to the system. This prevents users from calling a line which is not connected.

Selection

• Outside (CO) line number: **1 – 6**, ✶ (✶ = all outside (CO) lines)
• **Connect / Not Connect**

Default

All outside (CO) lines – Connect

Programming

1.   Enter **400**.

>   Display: CO Connection

2.   Press **NEXT**.

>   Display: CO NO? →

3.   Enter an **outside (CO) line number**.

>   Pressing **NEXT** also can enter outside (CO) line number 1.
>
>   Display example: CO 1:Connect

4.   Keep pressing **SELECT** until the desired selection is displayed.

5.   Press **STORE**.

6.   To program another outside (CO) line, press **NEXT** or **PREV**, or **SELECT** and enter the desired **outside (CO) line number**.

7.   Repeat steps 4 through 6.

8.   Press **END**.

Condition

• To assign all outside (CO) lines to the same selection, press the ✶ key in step 3. In this case, the display will show: CO ✶ :Mixed.

Feature Reference

Section 3, Features
Outside (CO) Line Connection Assignment

Dial Mode

Description   Each outside (CO) line can be programmed for DTMF, pulse or call blocking. This program assigns the selection to each line.

DTMF: The dialing signals from an extension, either tone or pulse, are converted to tone signals and transmitted to an outside (CO) line.

Pulse: The dialing signals from an extension, either tone or pulse, are converted to pulse signals and transmitted to an outside (CO) line.

Call Blocking: If the Central Office can receive both DTMF and pulse signals but the user is contracted for pulse, select this mode. When dialing with a touch tone telephone, only the pulse signals are sent to an outside (CO) line.

Selection   • Outside (CO) line number: **1 – 6**, ✻ (✻ = all outside (CO) lines)
                        • **DTMF Mode / Pulse Mode / C.BLK Mode (Call Blocking)**

Default   All outside (CO) lines — DTMF Mode

Programming

1.   Enter **401**.

     Display: CO Dial Mode

2.   Press **NEXT**.

     Display: CO NO? →

3.   Enter an **outside (CO) line number**.

     Pressing **NEXT** also can enter outside (CO) line number 1.

     Display example: CO 1:DTMF Mode

4.   Keep pressing **SELECT** until the desired selection is displayed.

5.   Press **STORE**.

6.   To program another outside (CO) line, press **NEXT** or **PREV**, or **SELECT** and enter the desired **outside (CO) line number**.

7.   Repeat steps 4 through 6.

8.   Press **END**.

Conditions   • To assign all outside (CO) lines to the same selection, press the ✻ key in step 3. In this case, the display will show: CO ✻ :Mixed.
                        • If pulse or call blocking is assigned, set the line pulse speed in program [402] "Pulse Speed Selection".

Feature Reference   **Section 3, Features**
                               Dial Type Selection

Pulse Speed Selection

Description

An outside (CO) line set for pulse or call blocking mode in program [401] "Dial Mode" can have two pulse rates, 10 pps (low) and 20 pps (high). This program sets the pulse speed for each outside (CO) line which has set the pulse or call blocking mode.

Selection

• Outside (CO) line number: **1 – 6**, ✳ (✳ = all outside (CO) lines)
• **Low Speed** (10 pps) / **High Speed** (20 pps)

Default

All outside (CO) lines – Low Speed

Programming

1. Enter **402**.

    ```
    Display: Pulse Speed
    ```

2. Press **NEXT**.

    ```
    Display: CO NO? →
    ```

3. Enter an **outside (CO) line number**.

    Pressing **NEXT** also can enter outside (CO) line number 1.

    ```
    Display example: CO 1:Low Speed
    ```

4. Keep pressing **SELECT** until the desired selection is displayed.

5. Press **STORE**.

6. To program another outside (CO) line, press **NEXT** or **PREV**, or **SELECT** and enter the desired **outside (CO) line number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Conditions

• To assign all outside (CO) lines to the same selection, press the ✳ key in step 3. In this case, the display will show: `CO ✳ :Mixed`.
• The required pulse speed is determined by the outside (CO) or Host PBX line.

Feature Reference

Section 3, Features
Dial Type Selection

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 eight codes can be stored for an outside (CO) line connected to the host PBX.
Selection	• Outside (CO) line number: **1 – 6**, ✶ (✶ = all outside (CO) lines) • Access code: **1 or 2 digits, eight different entries (max.)**
Default	All outside (CO) lines – Not stored

Programming

1. Enter **403**.

    ```
    Display: Host PBX Access
    ```

2. Press **NEXT**.

    ```
    Display: CO NO? →
    ```

3. Enter an **outside (CO) line number**.

    Pressing **NEXT** also can enter outside (CO) line number 1.

    ```
    Display example: CO 1:Not Stored
    ```

4. Enter an **access code**.

    To delete the current entry, press **CLEAR**.
    To change the current entry, press **CLEAR** and enter the new access code.

    ```
    Display example: CO 1:01
    ```

5. To enter more access codes for the same outside (CO) line, press "," (CONF/SAVE button) and enter the **access codes** until all of the required entries are completed.

    ```
    Display example: CO 1:01,08,10,22
    ```

6. Press **STORE**.

7. To program another outside (CO) line, press **NEXT** or **PREV**, or **SELECT** and enter the desired **outside (CO) line number**.

8. Repeat steps 4 through 7.

9. Press **END**.

Conditions

- This program is only required if a host PBX is connected to the system.
- There is a maximum of eight access codes per outside (CO) line. Each code has one or two digits, consisting of **0 – 9**.
- When the programmed codes are dialed, Automatic Pause Insertion and Toll Restriction are applied to all calls. The programmed pause time (in program [417] "Pause Time") is automatically inserted after the access code.
- To assign all outside (CO) lines to the same selection, press the ✱ key in step 3. In this case, the display will show: `CO ✱:Mixed`.

Feature References

Section 3, Features

External Feature Access   Pause Insertion, Automatic
Host PBX Access

Outside (CO) Line Group Assignment

Description   Each outside (CO) line must be assigned to an outside (CO) line group (trunk group). This program defines the outside (CO) line group assignment for each outside (CO) line. For example, if there are multiple telephone service companies available, the outside (CO) lines can be grouped by company.

Selection
- Outside (CO) line number: **1 – 6**, ✳ (✳ = all outside (CO) lines)
- Outside (CO) line group (Trunk) number: **1 – 6**

Default
CO1 — TRK GRP-1;   CO5 — TRK GRP-5;
CO2 — TRK GRP-2;   CO6 — TRK GRP-6
CO3 — TRK GRP-3;
CO4 — TRK GRP-4;

Programming

1.   Enter **404**.

      Display: Trunk Group

2.   Press **NEXT**.

      Display: CO NO? →

3.   Enter an **outside (CO) line number**.

      Pressing **NEXT** also can enter outside (CO) line number 1.

      Display example: CO 1:TRK GRP-1

4.   Enter the **outside (CO) line group number**.

      To change the current entry, enter the new outside (CO) line group number.

5.   Press **STORE**.

6.   To program another outside (CO) line, press **NEXT** or **PREV**, or **SELECT** and enter the desired **outside (CO) line number**.

7.   Repeat steps 4 through 6.

8.   Press **END**.

Condition
- To assign all outside (CO) lines to the same outside (CO) line group, press the ✳ key in step 3. In this case, the display will show:
CO ✳ :Mixed.

Feature Reference   **Section 3, Features**
Outside (CO) Line Group

Description

Determines which outside (CO) lines can be accessed by an extension in the day, night and lunch modes. The extension users can make outgoing outside calls using the assigned outside (CO) lines.

Selection

• Outside (CO) line number: **1 – 6, ✶** (✶ = all outside (CO) lines)
• Jack number: **01 – 24, ✶** (✶ = all jacks)
• **Enable / Disable**

Default

All outside (CO) lines – Enable — Day/Night/Lunch

Programming

1. Enter a **program address (405 for day, 406 for night or 407 for lunch)**.

    ```
    Display example: Day Out CO
    ```

2. Press **NEXT**.

    ```
    Display: CO NO? →
    ```

3. Enter an **outside (CO) line number**.

    Pressing **NEXT** also can enter outside (CO) line number 1.

    ```
    Display example: CO 1:#01:Enable
    ```

4. Enter the desired **jack number** after pressing the **#** key.

    The user can also keep pressing ➡ or ◀ until the desired jack number is displayed.

5. Keep pressing **SELECT** until the desired selection is displayed.

6. Press **STORE**.

7. To program another jack, press ➡ or ◀, or **#** and enter the desired **jack number**.

8. Repeat steps 5 through 7.

9. To program another outside (CO) line, press **NEXT** or **PREV**, or **SELECT** and the desired **outside (CO) line number**.

10. Repeat steps 4 through 9.

11. Press **END**.

Condition

• To assign all jacks or outside (CO) lines to the same selection, press the ✶ key in step 3 or 4. In these cases, the display will show:
  ```
  CO ✶:#  ✶:Mixed.
  ```

Feature References

Section 3, Features
Outside (CO) Line Connection Assignment – Outgoing
Time (Day/Night/Lunch) Service

Description   Allows more than one extension to ring in the day, night and lunch modes. All incoming calls from the programmed outside (CO) lines are directed to the specified extensions.

Selection
• Outside (CO) line number: **1 – 6, ✳** (✳ = all outside (CO) lines)
• Jack number: **01 – 24, ✳** (✳ = all jacks)
• **Disable / Enable**

Default   All outside (CO) lines – all jacks – Enable — Day/Night/Lunch

Programming

1. Enter a **program address (408 for day, 409 for night or 410 for lunch)**.

    ```
    Display example: Day In CO
    ```

2. Press **NEXT**.

    ```
    Display: CO NO? →
    ```

3. Enter an **outside (CO) line number**.

    Pressing **NEXT** also can enter outside (CO) line number 1.

    ```
    Display example: CO 1:#01:Enable
    ```

4. Enter the **jack number** after pressing the **#** key.

    The user can also keep pressing ➡ or ⬅ until the desired jack number is displayed.

5. Keep pressing **SELECT** until the desired selection is displayed.

6. Press **STORE**.

7. To program another jack, press ➡ or ⬅, or **#** and enter the desired **jack number**.

8. Repeat steps 5 through 7.

9. To program another outside (CO) line, press **NEXT** or **PREV**, or **SELECT** and the desired **outside (CO) line number**.

10. Repeat steps 4 through 9.

11. Press **END**.

Conditions

- An extension can be assigned as the destination for as many outside (CO) lines required.
- To assign all jacks or all outside (CO) lines to the same selection, press the ✳ key in step 3 or step 4. In these cases, the display will show: `CO ✳:# ✳:Mixed`.

Feature References

Section 3, Features
Ringing, Delayed
Time (Day/Night/Lunch) Service

Description	Assigns the ringing start time for each jack in the day, night and lunch modes.
Selection	• Outside (CO) line number: **1 – 6,** ✶ (✶ = all outside (CO) lines) • Jack number: **01 – 24,** ✶ (✶ = all jacks) • **Immdtly** (immediate ringing) **/ 5 sec / 10 sec / 15 sec**
Default	All outside (CO) lines – all jacks – Immdtly — Day/Night/Lunch

Programming

1. Enter a **program address (411 for day, 412 for night or 413 for lunch)**.

   ```
   Display example: Day Delayed CO
   ```

2. Press **NEXT**.

   ```
   Display: CO NO? →
   ```

3. Enter an **outside (CO) line number**.

   Pressing **NEXT** also can enter outside (CO) line number 1.

   ```
   Display example: CO 1:#01:Immdtly
   ```

4. Enter a **jack number** after pressing the **#** key.

   The user can also keep pressing ➡ or ⬅ until the desired outside (CO) line number is displayed.

5. Keep pressing **SELECT** until the desired selection is displayed.

6. Press **STORE**.

7. To program another jack, press ➡ or ⬅, or **#** and enter the desired **jack number**.

8. Repeat steps 5 through 7.

9. To program another outside (CO) line, press **NEXT** or **PREV**, or **SELECT** and the desired **outside (CO) line number**.

10. Repeat steps 4 through 9.

11. Press **END**.

Conditions

- To assign all jacks or outside (CO) lines to the same selection, press the ✶ key in step 3 or step 4. In these cases, the display will show:
  `CO ✶:# ✶:Mixed.`
- There are four notification methods.
  (1) Immediate ringing: rings immediately
  (2) 5 second delay
  (3) 10 second delay
  (4) 15 second delay

Feature References

Section 3, Features
Ringing, Delayed
Time (Day/Night/Lunch) Service

Description

Selects the mode of an incoming outside call on each outside (CO) line in the day, night and lunch modes. There are the following four modes.

Normal: an incoming outside call will be received at the extension(s) assigned in programs [408]–[410].

DIL: an incoming outside call will be received at the assigned extension.

DISA1:   an incoming outside call will be received at an extension through the DISA feature. A caller will hear a tone or an outgoing message.

DISA2:   an incoming outside call will be received at an extension through the DISA feature. A caller might hear OGM 2; for various configurations please see Cases 2, 3 and 4 in Section 3, Features "Outgoing Message (OGM)".

Selection

• Outside (CO) line number: **1 – 6, ✶** (✶ = all outside (CO) lines)
• **Normal / DIL + extension jack number / DISA1 / DISA2**

Default

Normal

Programming

1. Enter a **program address (414 for day, 415 for night or 416 for lunch)**.

   `Display example: CO Day/Mode`

2. Press **NEXT**.

   `Display: CO NO? →`

3. Enter an **outside (CO) line number**.

   Pressing **NEXT** also can enter outside (CO) line number 1.

   `Display example: CO 1:Normal`

4. Keep pressing **SELECT** until the desired selection is displayed and if "DIL" is selected, enter the **extension jack number**.

5. Press **STORE**.

6. To program another outside (CO) line, press **NEXT** or **PREV**, or **SELECT** and enter the desired **outside (CO) line number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Conditions

- "DISA1" must be selected when an optional OGM/FAX Detection card is **not** installed and if the user wants to use Internal DISA.
- There are two outgoing messages. Program [502] determines how each message is used.
- To assign all the outside (CO) lines to the same selection, press the ✶ key in step 3. In this case, the display will show: `CO ✶:Mixed`.

Feature References

Section 3, Features
Direct Inward System Access (DISA)
Outgoing Message (OGM)

Description

Assigns the length of the pause time. The programmed pause time is automatically inserted after a line access code or host PBX access code programmed in [403] "Host PBX Access Codes", or can be manually inserted by the user with the **PAUSE** button.

Selection

• Outside (CO) line number: **1 – 6,** ✳ (✳ = all outside (CO) lines)
• Time (seconds): **1.5 sec / 2.5 sec / 3.5 sec / 4.5 sec**

Default

All outside (CO) lines — 1.5 sec

Programming

1. Enter **417**.

   ```
   Display: Pause Time
   ```

2. Press **NEXT**.

   ```
   Display: CO NO? →
   ```

3. Enter an **outside (CO) line number**.

   Pressing **NEXT** also can enter outside (CO) line number 1.

   ```
   Display example: CO 1:1.5sec
   ```

4. Keep pressing **SELECT** until the desired time is displayed.

5. Press **STORE**.

6. To program another outside (CO) line, press **NEXT** or **PREV**, or **SELECT** and enter the desired **outside (CO) line number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Condition

• To assign all outside (CO) lines to the same selection, press the ✳ key in step 3. In this case, the display will show: `CO  ✳:Mixed`.

Feature References

Section 3, Features
Host PBX Access
Pause Insertion, Automatic

4.2   System Programming   *418*

Flash Time

Description

Assigns the length of the flash time. If the system is installed behind a host PBX, External Feature Access (EFA) is necessary to obtain its services. To enable this feature, select the required hooking signal sending time for an outside (CO) line.

Selection

- Outside (CO) line number: **1 – 6,** ✶ (✶ = all outside (CO) lines)
- Time (milliseconds): **80 ms / 100 ms / 160 ms / 300 ms / 600 ms / 900 ms / 1200 ms**

Default

All outside (CO) lines – 600 ms

Programming

1. Enter **418**.

    ```
    Display: Flash Time Set
    ```

2. Press **NEXT**.

    ```
    Display: CO NO? →
    ```

3. Enter an **outside (CO) line number**.

    Pressing **NEXT** also can enter outside (CO) line number 1.

    ```
    Display example: CO 1: 600ms
    ```

4. Keep pressing **SELECT** until the desired time is displayed.

5. Press **STORE**.

6. To program another outside (CO) line, press **NEXT** or **PREV**, or **SELECT** and enter the desired **outside (CO) line number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Conditions

- The required flash time is determined by the central office or host PBX lines.
- To assign all outside (CO) lines to the same selection, press the ✶ key in step 3. In this case, the display will show: `CO ✶ :Mixed`.

Feature References

Section 3, Features
External Feature Access
Flash

Description

Assigns the sequence in which outside (CO) lines will be accessed during the Automatic Line Access mode. When a user dials the feature number for automatic line access (9), an idle line is searched for in the programmed outside (CO) lines.

Selection

• Outside (CO) line number: **1 – 6, ✳** (✳ = all outside (CO) lines)
• **Enable / Disable**

Default

All outside (CO) lines — Enable

Programming

1.   Enter **419**.

> Display: Auto Line Access

2.   Press **NEXT**.

> Display: CO NO? →

3.   Enter an **outside (CO) line number**.

> Pressing **NEXT** also can enter outside (CO) line number 1.
>
> Display example: CO 1:Enable

4.   Keep pressing **SELECT** until the desired selection is displayed.

5.   Press **STORE**.

6.   To program another outside (CO) line, press **NEXT** or **PREV**, or **SELECT** and enter the desired **outside (CO) line number**.

7.   Repeat steps 4 and 6.

8.   Press **END**.

Condition

• To assign all outside (CO) lines to the same selection, press the ✳ key in step 3. In this case, the display will show: CO ✳ :Mixed.

Feature References

Section 3, Features
Line Access, Automatic
Line Preference – Outgoing

Description

Assigns the required minimum duration of the CPC Signal for incoming outside calls. If programmed, the system disconnects the line when the CPC signal is detected.

Selection

• Outside (CO) line number: **1 – 6,** ✻ (✻ = all outside (CO) lines)
• Time number (milliseconds): **00** (Disable) / **01** (22 msec) /
  02 (30 msec) / **03** (38 msec) / **04** (46 msec) / **05** (54 msec) /
  06 (62 msec) / **07** (70 msec) / **08** (78 msec) / **09** (86 msec) /
  10 (94 msec) / **11** (102 msec) / **12** (110 msec) / **13** (118 msec) /
  14 (126 msec) / **15** (134 msec) / **16** (142 msec) / **17** (150 msec) /
  18 (158 msec) / **19** (166 msec) / **20** (174 msec) / **21** (182 msec) /
  22 (190 msec) / **23** (198 msec) / **24** (206 msec) / **25** (214 msec) /
  26 (222 msec) / **27** (230 msec) / **28** (238 msec) / **29** (246 msec) /
  30 (254 msec) / **31** (262 msec) / **32** (270 msec) / **33** (278 msec) /
  34 (286 msec) / **35** (294 msec) / **36** (302 msec) / **37** (310 msec) /
  38 (318 msec) / **39** (326 msec) / **40** (334 msec) / **41** (342 msec) /
  42 (350 msec) / **43** (358 msec) / **44** (366 msec) / **45** (374 msec) /
  46 (382 msec) / **47** (390 msec) / **48** (398 msec) / **49** (406 msec) /
  50 (414 msec) / **51** (422 msec) / **52** (430 msec) / **53** (438 msec) /
  54 (446 msec) / **55** (454 msec) / **56** (462 msec) / **57** (470 msec) /
  58 (478 msec) / **59** (486 msec) / **60** (494 msec) / **61** (502 msec) /
  62 (510 msec) / **63** (518 msec) / **64** (526 msec) / **65** (534 msec) /
  66 (542 msec) / **67** (550 msec) / **68** (558 msec) / **69** (566 msec) /
  70 (574 msec) / **71** (582 msec) / **72** (590 msec) / **73** (598 msec) /
  74 (606 msec) / **75** (614 msec)

Default

All outside (CO) lines – 42 (350 msec)

Programming

1. Enter **420**.

   ```
   Display: CPC Detection
   ```

2. Press **NEXT**.

   ```
   Display: CO NO? →
   ```

3. Enter an **outside (CO) line number**.

   Pressing **NEXT** also can enter outside (CO) line number 1.

   ```
   Display example: CO 1: N= 42
   ```

4. Enter a **time number**.

5. Press **STORE**.

6. To program another outside (CO) line, press **NEXT** or **PREV**, or **SELECT** and enter the desired **outside (CO) line number**.

7. Repeat steps 4 and 6.

8. Press **END**.

Conditions

• To assign all outside (CO) lines to the same selection, press the ✳ key in step 3. In this case, the display will show: `CO ✳: N= Mixed`.
• Program [421] "CPC Detection for Outgoing Calls" is used to program CPC Signal Detection for outgoing outside calls.

Feature Reference

Section 3, Features
Calling Party Control (CPC) Signal Detection

Description

Enables or disables CPC Signal Detection during an outside call in progress. If enabled, the system disconnects the line at the time set in program [420] "Calling Party Control (CPC) Signal" when the CPC signal is detected.

Selection

• Outside (CO) line number: **1 – 6, *** (* = all outside (CO) lines)
• **Enable** (detect) **/ Disable** (will not detect)

Default

Disable

Programming

1. Enter **421**.

    > Display: CPC Out Detect

2. Press **NEXT**.

    > Display: CO NO? →

3. Enter an **outside (CO) line number**.

    Pressing **NEXT** also can enter outside (CO) line number 1.

    > Display example: CO 1:Disable

4. Keep pressing **SELECT** until the desired selection is displayed.

5. Press **STORE**.

6. To program another outside (CO) line, press **NEXT** or **PREV**, or **SELECT** and enter the desired **outside (CO) line number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Condition

• To assign all outside (CO) lines to the same selection, press the * key in step 3. In this case, the display will show: CO * : Mixed.

Feature Reference

Section 3, Features
Calling Party Control (CPC) Signal Detection

Description	Determines the amount of time to send the disconnect signal from the system to the Central Office or host PBX.
Selection	• Outside (CO) line number: **1 – 6**, **✱** (✱ = all outside (CO) lines) • Time (seconds): **0.5 sec / 1.5 sec / 4.0 sec**
Default	All outside (CO) lines – 1.5 sec

Programming

1. Enter **422**.

   ```
   Display: Disconnect Time
   ```

2. Press **NEXT**.

   ```
   Display: CO NO? →
   ```

3. Enter an **outside (CO) line number**.

   Pressing **NEXT** also can enter outside (CO) line number 1.

   ```
   Display example: CO 1:1.5sec
   ```

4. Keep pressing **SELECT** until the desired time is displayed.

5. Press **STORE**.

6. To program another outside (CO) line, press **NEXT** or **PREV**, or **SELECT** and enter the desired **outside (CO) line number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Conditions

• The disconnect time must be longer than the requirement of the Central Office or host PBX.
• To assign all outside (CO) lines to the same selection, press the ✱ key in step 3. In this case, the display will show: `CO ✱:Mixed`.

Feature Reference

Section 3, Features
Flash

Description

Assigns an incoming outside call ringing pattern for each outside (CO) line. There are three types of patterns as follows.
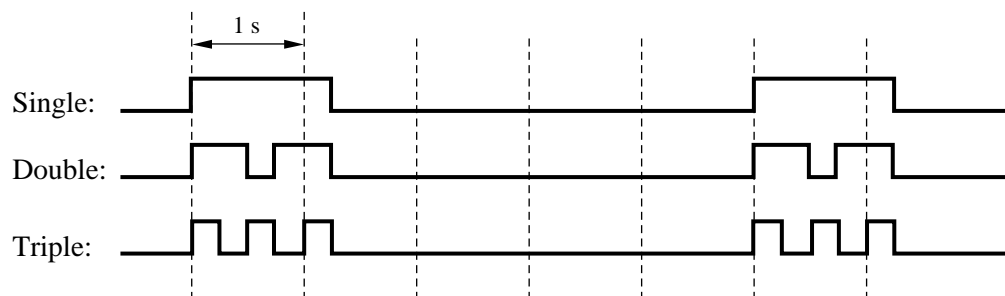
Selection

• Outside (CO) line number: **1 – 6**, ✻ (✻ = all outside (CO) lines)
• **Single / Double / Triple**

Default

Single

Programming

1. Enter **423**.

    ```
    Display: CO Ring Pattern
    ```

2. Press **NEXT**.

    ```
    Display: CO NO? →
    ```

3. Enter an **outside (CO) line number**.

    Pressing **NEXT** also can enter outside (CO) line number 1.

    ```
    Display example: CO 1:Single
    ```

4. Keep pressing **SELECT** until the desired time is displayed.

5. Press **STORE**.

6. To program another outside (CO) line, press **NEXT** or **PREV**, or **SELECT** and enter the desired **outside (CO) line number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Conditions

• To assign all outside (CO) lines to the same selection, press the ✻ key in step 3. In this case, the display will show: CO ✻ :Mixed.
• The programs [115] "Extension Ringing Pattern Selection" and [706] "Doorphone Ringing/Tone Pattern Selection" should be considered when assigning this program.

Feature Reference

Section 3, Features
Ringing Pattern Selection for Intercom Calls and Outside (CO) Lines

---

Description

Selects the mode of an incoming DISA call. There are two modes as follows.

Without AA: the system can receive an extension number, line access number and operator call number, and send the call to the designated destination.

With AA: the system can receive an extension number, line access number, operator call number and auto attendant (AA) number, and send the call to the designated destination.

Selection

Without AA / With AA

Default

Without AA

Programming

1. Enter **500**.

   ```
   Display: DISA Dial Mode
   ```

2. Press **NEXT**.

   ```
   Display example: Without AA
   ```

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Condition

• The program [501] "DISA Built-in Auto Attendant" is used to assign the destination of each AA number.

Feature Reference

Section 3, Features
Direct Inward System Access (DISA)

Description

Assigns the DISA built-in auto attendant number. The extension number can be assigned as a one digit number and used as a DISA built-in auto attendant number.

Selection

• DISA built-in auto attendant (AA) number: **0 – 9**
• Jack number: **01 – 24 /** Ring Group number: **1 – 8**

Default

All numbers — Not stored

Programming

1.   Enter **501**.

       ```Display: DISA Built-In```

2.   Press **NEXT**.

       ```Display example: AA NO? →```

3.   Enter a **DISA built-in auto attendant number**.

       Pressing **NEXT** also can enter DISA AA number 0.

       ```Display example: 0: Not Stored```

4.   Press **SELECT** until the desired selection is displayed and enter an **extension or ring group number**.

       To change the current entry, press **CLEAR** and enter the new number.

       ```Display example: 0: Jack-01```

5.   Press **STORE**.

6.   To program another DISA AA number, press **NEXT** or **PREV**, or **SELECT** and enter the desired **DISA AA number**.

7.   Repeat steps 4 through 6.

8.   Press **END**.

Conditions

• To enable this feature, the user must select "With AA" in program [500] "DISA Incoming Dialing Mode Selection".
• This system can store up to ten programmable DISA built-in auto attendant numbers.
• If the user would like to use a line access number "9" and/or operator number "0" in the "With AA" mode, do not assign auto attendant number(s) which correspond to the line access number and/or operator number (0 and/or 9).

Feature Reference

Section 3, Features
Direct Inward System Access (DISA)

OGM Mode Selection

Description

Selects how the two outgoing messages (OGM) are used. There are two modes as follows.

MODE 1: both OGM1 and OGM2 are used for DISA1 so that the system can receive two incoming calls via DISA at the same time.

MODE 2: OGM1 is used for DISA1 and OGM2 is used for DISA2.

Selection

MODE 1 / MODE 2

Default

MODE 1

Programming

1. Enter **502**.

    Display: OGM Selection

2. Press **NEXT**.

    Display example: MODE 1

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Conditions

• Program [414]–[416] "Outside (CO) Line Mode — Day/Night/Lunch" are used to assign DISA1 or DISA2 to each outside (CO) line according to this assignment.

• If an optional OGM/FAX Detection card is not installed, this assignment should be "MODE 1".

Feature References

Section 3, Features
Direct Inward System Access (DISA)
Data Line Security
Outgoing Message (OGM)

Description

Assigns which jack can receive facsimile data when the system receives a facsimile transmission signal via the Direct Inward System Access (DISA) feature.

Selection

Jack number: **01 – 24 / Disable** (Facsimile data cannot be received.)

Default

Disable

Programming

1. Enter **503**.

   ```
   Display: Fax Connection
   ```

2. Press **NEXT**.

   ```
   Display example: FAX :Disable
   ```

3. Enter a **jack number**.

   To assign no FAX jack, press **CLEAR**.
   To delete the jack number, press **CLEAR**.
   To change the current entry, press **CLEAR** and enter the new number.

4. Press **STORE**.

5. Press **END**.

Conditions

• The extension assigned as the fax extension will automatically have the Data Line Security feature set.
• An optional OGM/FAX Detection card is necessary.

Feature References

Section 3, Features
Direct Inward System Access (DISA)
Data Line Security
Facsimile Detection

DISA Delayed Answer Time

Description   Assigns the time from a call being received and answered using the DISA feature.

Selection   **0 sec / 3 sec / 6 sec / 12 sec** (seconds)

Default   3 sec

Programming   1.   Enter **504**.

```
Display: Ans Delay Time
```

2.   Press **NEXT**.

```
Display example: Time: 3sec
```

3.   Keep pressing **SELECT** until the desired selection is displayed.

4.   Press **STORE**.

5.   Press **END**.

Condition   • The outside (CO) lines which are assigned as "Enable" in program [900] "Caller ID Assignment" are always set to 6 seconds even if "0 sec" or "3 sec" is selected in this program.

Feature References   **Section 3, Features**
Caller ID
Direct Inward System Access (DISA)

4.2　System Programming　*505*

DISA Waiting Time after OGM

Description　　　　Selects the time that the system waits for the DTMF signals or CNG tone after the outgoing message.

Selection　　　　**0 sec / 5 sec / 10 sec / 15 sec** (seconds)

Default　　　　5 sec

Programming
1. Enter **505**.

   ```
   Display: DISA Wait Time
   ```

2. Press **NEXT**.

   ```
   Display example: Time :5sec
   ```

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Condition　　　　• An optional OGM/FAX Detection card is necessary.

Feature Reference　　**Section 3, Features**
Direct Inward System Access (DISA)

Description	Selects the mode when destination extension of the call via DISA is busy. There are three modes as follows.

Call Waiting: a call waiting tone is sent and then the call is held until the called party responds.

Disconnect: the call is disconnected after the busy tone.

DISA2: OGM2 is sent to the caller and the system waits for another destination when the first destination is busy.

Selection   **Call Waiting / Disconnect / DISA2**

Default   Disconnect

Programming

1. Enter **506**.

    Display: DISA Busy Mode

2. Press **NEXT**.

    Display example: Disconnect

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Condition

• In program [502] "OGM Mode Selection", "MODE2" should be selected if "DISA2" is selected in this program.

Feature References   **Section 3, Features**

Direct Inward System Access (DISA)

Outgoing Message (OGM)

Description   Intercept Routing provides an automatic re-direction of DISA calls which cannot or have not been answered within the programmed time. This program is used to select whether the call is disconnected or re-directed.

Intercept: the call is directed to the extensions assigned in programs [408]–[410].

Disconnect: the call is disconnected.

Selection   **Disconnect / Intercept**

Default   Intercept

Programming   1.   Enter **507**.

```
Display: DISA IRNA Mode
```

2.   Press **NEXT**.

```
Display example: Intercept
```

3.   Keep pressing **SELECT** until the desired selection is displayed.

4.   Press **STORE**.

5.   Press **END**.

Conditions   None

Feature References **Section 3, Features**
Direct Inward System Access (DISA)
Intercept Routing
Voice Mail Integration for KX-TVS50
Voice Mail Integration for KX-TVS75/KX-TVS100

Description
Selects the time for the Intercept Routing — No Answer (IRNA) feature. If a DISA call is not answered within the programmed time, the call will be redirected to the programmed extension.

Selection
10 sec / 20 sec / 30 sec / 40 sec / 60 sec / 120 sec (seconds)

Default
20 sec

Programming

1. Enter **508**.

   ```
   Display: DISA Befor IRNA
   ```

2. Press **NEXT**.

   ```
   Display example: Time: 20sec
   ```

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Condition
• Programs [408]–[410] "Flexible Ringing Assignment — Day/Night/Lunch" are used to program the destination of Intercept Routing in the day, night and lunch modes.

Feature References
Section 3, Features
Direct Inward System Access (DISA)
Intercept Routing

Description

Selects the time that the extension will ring for after being re-directed by the Intercept Routing — No Answer (IRNA) feature. If a call is not answered within the programmed time, the call will be disconnected.

Selection

10 sec / 20 sec / 30 sec / 40 sec / 60 sec / 120 sec (seconds)

Default

20 sec

Programming

1.   Enter **509**.

   ```
   Display: DISA After IRNA
   ```

2.   Press **NEXT**.

   ```
   Display example: Time: 20sec
   ```

3.   Keep pressing **SELECT** until the desired selection is displayed.

4.   Press **STORE**.

5.   Press **END**.

Conditions

None

Feature References

Section 3, Features
Direct Inward System Access (DISA)
Intercept Routing

Description

Selects the mode when nothing is dialed after the OGM or a beep after a programmed length of time for the DISA1 and DISA2 modes. There are two modes as follows.

Intercept: the call is directed to the extensions assigned in programs [408]–[410] for the time programmed in [509] "DISA Ringing Time After Intercept".

Disconnect: the call is disconnected.

Selection

• **DISA1 / DISA2**
• **Intercept / Disconnect**

Default

DISA1 and DISA2 — Intercept

Programming

1. Enter **510**.

   ```
   Display: No Dial Mode
   ```

2. Press **NEXT**.

   ```
   Display example: DISA1:Disconnect
   ```

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **NEXT** or **PREV** to program the other parameter.

6. Repeat steps 3 through 5.

7. Press **END**.

Conditions

None

Feature References

Section 3, Features
Direct Inward System Access (DISA)
Intercept Routing

Description	Assigns the security mode for outside calls from a DISA (Direct Inward System Access) caller. There are three modes: None Security, Trunk Security (outside (CO) line security), and All Security. None Security mode allows the caller to access an outside (CO) line without dialing a DISA security code. Trunk Security mode requires the caller to enter a DISA security code before making an outside call. All Security mode requires the caller to enter a DISA security code before making either an outside call or an intercom call.
Selection	**None Security / Trunk Security / All Security**
Default	Trunk Security

Programming

1.   Enter **511**.

> Display: Security Type

2.   Press **NEXT**.

> Display example: Trunk Security

3.   Keep pressing **SELECT** until the desired selection is displayed.

4.   Press **STORE**.

5.   Press **END**.

Condition

• Program [512] "DISA Security Codes" is used to program the DISA Security Codes.

Feature Reference

Section 3, Features
Direct Inward System Access (DISA)

Description

Assigns the DISA (Direct Inward System Access) Security Codes.

Selection

• **Code number : 1 – 4**
• DISA security code: 4 digits

Default

All codes — Not stored

Programming

1. Enter **512**.

    ```
    Display: Security Code
    ```

2. Press **NEXT**.

    ```
    Display: CODE-01:Not Stored
    ```

3. Enter a **code number**.

    ```
    Display example: CODE-01:＊1234
    ```

4. Enter a **DISA security code**.

    To change the current entry, press **CLEAR** and enter the new code.

5. Press **STORE**.

6. To program another code, press **NEXT** or **PREV**, or
    SELECT and enter the desired **code number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Conditions

• This setting is required if All Security mode or Trunk (outside (CO)
  line) Security mode is selected in program [511] "DISA Security Type".
• There are four programmable security codes. Each code should be
  different and composed of four numerical digits, **0 – 9**.
• The used security code numbers (not security codes) are printed on the
  SMDR.

Feature Reference

Section 3, Features
Direct Inward System Access (DISA)

Description

Selects the number of times that the system detects the cyclic tone. The system regards a call as completed after detecting the cyclic tone the programmed number of times.

Selection

Disable (will not detect) **/ 2 Times / 3 Times / 4 Times**

Default

4 Times

Programming

1.   Enter **513**.

>   Display: Tone Detection

2.   Press **NEXT**.

>   Display example: 4 Times

3.   Keep pressing **SELECT** until the desired selection is displayed.

4.   Press **STORE**.

5.   Press **END**.

Condition

• An optional OGM/FAX Detection card is necessary.

Feature Reference

Section 3, Features
Direct Inward System Access (DISA)

Description

Selects the number of times the CNG tone (FAX tone) is detected. An incoming fax call via the Direct Inward System Access (DISA) feature is detected by the system after receiving the CNG tone the assigned number of times.

Selection

1 Time / 2 Times

Default

1 Time

Programming

1.   Enter **514**.

        `Display: FAX Detection`

2.   Press **NEXT**.

        `Display example: 1 Time`

3.   Keep pressing **SELECT** until the desired selection is displayed.

4.   Press **STORE**.

5.   Press **END**.

Condition

• An optional OGM/FAX Detection card is necessary.

Feature References

Section 3, Features
Direct Inward System Access (DISA)
Facsimile Detection

4.2   System Programming   *515*

Intercept Time for Internal DISA

Description   Selects the time that the system waits for DTMF signals when a call
                       is received via the internal DISA. If the system does not receive the
                       DTMF signals within the assigned period of time, the call will be
                       disconnected or sent to extensions programmed in [408]–[410]
                       according to program [510].

Selection   **3 sec / 6 sec / 9 sec** (seconds)

Default   3 sec

Programming   1.   Enter **515**.

                             ```
                             Display: Internal DISA
                             ```

                       2.   Press **NEXT**.

                             ```
                             Display example: Time: 3 sec
                             ```

                       3.   Keep pressing **SELECT** until the desired selection is
                             displayed.

                       4.   Press **STORE**.

                       5.   Press **END**.

Conditions   None

Feature Reference **Section 3, Features**
                       Direct Inward System Access (DISA)

Description

Assigns the extensions which can receive calls via DISA.

Selection

• Jack number: **01 – 24, ✳** (✳ =all jacks)
• **Enable / Disable**

Default

All jacks — Enable

Programming

1. Enter **516**.

   ```
   Display: DISA Assign
   ```

2. Press **NEXT**.

   ```
   Display example: Jack NO? →
   ```

3. Enter a **jack number**.

   Pressing **NEXT** also can enter jack number 01.

   ```
   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 enter the desired **jack number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Conditions

• If a caller attempts to access an assigned extension, the caller will hear a reorder tone and the call will be disconnected.
• If a call via DISA is received by a ring group, this program will not work for extensions in that ring group. In this case, disabled extensions will still ring.
• To assign all jacks to the same selection, press the ✳ key in step 3. In this case, the display will show: # ✳:Mixed.

Feature Reference

Section 3, Features
Direct Inward System Access (DISA)

Description

Selects the time that the system waits for a second digit entry. If the timer expires, the system will assume that the first digit is a DISA built-in auto attendant number (AA number) if an AA number is assigned in program [501] "DISA Built-in Auto Attendant".
For example, if a number is not dialed within the programmed time after dialing 1, the system will assume that "1" is an AA number.

Selection

1 sec / 2 sec / 3 sec / 4 sec / 5 sec (seconds)

Default

2 sec

Programming

1. Enter **517**.

    ```
    Display: DISA AA Time
    ```

2. Press **NEXT**.

    ```
    Display example: Time: 2 sec
    ```

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Condition

• The AA wait timer will only work when "1" or "8" is dialed.

Feature Reference

Section 3, Features
Direct Inward System Access (DISA)

Description   Enables or disables sending a beep to a caller after the Security
                       Code is entered. If enabled, a beep is sent to the caller when the
                       code entered is the same as one of the security codes assigned in
                       program [512] "DISA Security Codes".

Selection   **Enable / Disable**

Default   Enable

Programming   1.   Enter **518**.

                                   Display: DISA Dial Tone

                       2.   Press **NEXT**.

                                   Display: Enable

                       3.   Keep pressing **SELECT** until the desired selection is
                             displayed.

                       4.   Press **STORE**.

                       5.   Press **END**.

Conditions   None

Feature Reference **Section 3, Features**
                       Direct Inward System Access (DISA)

Description

Assigns an extension group for each extension. Extension groups are used for Group Call Pickup, Station Hunting, Paging – Group and Ring Group.

Selection

• Jack number: **01 – 24, ✳** (✳ = all jacks)
• Extension group number (EXT GRP): **1 – 8**

Default

All jacks — EXT GRP-1

Programming

1.   Enter **600**.

      ```
      Display: Extension Group
      ```

2.   Press **NEXT**.

      ```
      Display: Jack NO? →
      ```

3.   Enter a **jack number**.

      Pressing **NEXT** also can enter jack number 01.

      ```
      Display example: #01:EXT GRP-1
      ```

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 enter the desired **jack number**.

7.   Repeat steps 4 through 6.

8.   Press **END**.

Conditions

• There is a maximum of eight extension groups. Each extension can only belong to one group.
• To assign all jacks to the same extension group, press the ✳ key in step 3. In this case, the display will show: # ✳:Mixed.

Feature References

Section 3, Features

Call Pickup, Group	Paging – Group
Extension Group	Ring Group
Station Hunting	

Description

Programs Toll Restriction (TRS) – Class of Service (COS) for each extension.

Selection

- Jack number: **01 – 24, ✳** (✳ = all jacks)
- **COS-1 / COS-2 / COS-3 / COS-4 / COS-5**

Default

All jacks — COS-1

Programming

1. Enter a **program address (601 for day, 602 for night, or 603 for lunch)**.

    ```
    Display example: Day  Toll Restr
    ```

2. Press **NEXT**.

    ```
    Display: Jack NO? →
    ```

3. Enter a **jack number**.

    Pressing **NEXT** also can enter jack number 01.

    ```
    Display example: #01:  COS-1
    ```

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 enter the desired **jack number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Condition

- To assign all jacks to the same COS, press the ✳ key in step 3. In this case, the display will show: `# ✳ :Mixed`.

Feature Reference

Section 3, Features
Toll Restriction

Description   Assigns names to the extensions.

Selection   • Jack number: **01 – 24**
                         • Name: **10 characters (max.)**

Default   All jacks – Not stored

Programming   1.   Enter **604**.

                              Display: Extension Name

                         2.   Press **NEXT**.

                              Display: Jack NO? →

                         3.   Enter a **jack number**.

                              Pressing **NEXT** also can enter jack number 01.

                              Display: #01:

                         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 enter the new name.

                         5.   Press **STORE**.

                         6.   To program another jack, press **NEXT** or **PREV**, or
                              SELECT and enter the desired **jack number**.

                         7.   Repeat steps 4 through 6.

                         8.   Press **END**.

Conditions   • There is a maximum of 24 names. Each name has a maximum of
                           10 characters.
                         • Program [009] "Extension Number Assignment" is used to assign the
                           extension numbers.

Feature References   **Section 3, Features**
                         Display, Call Information
                         Display, in Idle
                         Intercom Calling

Description

Selects the account code input mode for each extension jack. There are four account code modes: Option, Forced, Verify-All and Verify-Toll.

Option mode: The user can enter any account code, if needed.

Forced mode: The user must always enter an account code. The code can be any number.

Verify – All mode: The user must always enter a pre-assigned account code to make an outside call.

Verify – Toll mode: The user can enter an assigned account code to override toll restriction. The toll restriction COS numbers 3 through 5 will be changed temporarily to the COS number 2. (The COS numbers 1 and 2 will not be changed.)

Selection

• Jack number: **01 – 24, ✶** (✶ = all jacks)
• **Option / Forced / Verify – All / Verify – Toll**

Default

All jacks – Option

Programming

1. Enter **605**.

    Display: Call Accounting

2. Press **NEXT**.

    Display: Jack NO? →

3. Enter a **jack number**.

    Pressing **NEXT** also can enter jack number 01.

    Display: #01:Option

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 enter the desired **jack number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Conditions

- To assign all jacks to the same selection, press the ✱ key in step 3. In this case, the display will show: `# ✳:Mixed`.
- Program [310] "Account Codes" is used to define the Account Codes for the Verify modes.
- Programs [601]–[603] "TRS – Class of Service (COS) Assignment — Day/Night/Lunch" is used to assign a Class of Service to each extension.

Feature References

Section 3, Features
Account Code Entry
Toll Restriction Override by Account Codes

Description

Enables or disables performing the Call Transfer to an Outside (CO) Line feature.

Selection

• Jack number: **01 – 24, $*$** ($*$ = all jacks)
• **Enable / Disable**

Default

Disable

Programming

1. Enter **606**.

    ```
    Display: Transfer to CO
    ```

2. Press **NEXT**.

    ```
    Display: Jack NO? →
    ```

3. Enter a **jack number**.

    Pressing **NEXT** also can enter jack number 01.

    ```
    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 enter the desired **jack number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Condition

• To assign all jacks to the same selection, press the $*$ key in step 3. In this case, the display will show: `# *:Mixed`.

Feature Reference

Section 3, Features
Call Transfer, Screened – to an Outside (CO) Line

Description

Enables or disables performing the Call Forwarding to an Outside (CO) Line feature.

Selection

• Jack number: **01 – 24, ✳** (✳ = all jacks)
• **Disable / Enable**

Default

All jacks – Disable

Programming

1.   Enter **607**.

> Display: CO Forward

2.   Press **NEXT**.

> Display: Jack NO? →

3.   Enter a **jack number**.

> Pressing **NEXT** also can enter jack number 01.
>
> 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 enter the desired **jack number**.

7.   Repeat steps 4 through 6.

8.   Press **END**.

Condition

• To assign all jacks to the same selection, press the ✳ key in step 3. In this case, the display will show: # ✳:Mixed.

Feature Reference

Section 3, Features
Call Forwarding – to an Outside (CO) Line

Description

Enables or disables performing Executive Busy Override – Extension/Outside (CO) Line. Executive Busy Override allows a user to interrupt an established call.

Selection

• Jack number: **01 – 24, ✶** (✶ = all jacks)
• **Disable / Enable**

Default

All jacks – Disable

Programming

1. Enter **608**.

    ```
    Display: Busy Override
    ```

2. Press **NEXT**.

    ```
    Display: Jack NO? →
    ```

3. Enter a **jack number**.

    Pressing **NEXT** also can enter jack number 01.

    ```
    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 enter the desired **jack number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Condition

• To assign all jacks to the same selection, press the ✶ key in step 3. In this case, the display will show: `# ✶:Mixed`.

Feature References

Section 3, Features
Executive Busy Override – Extension
Executive Busy Override – Outside (CO) Line

4.2 System Programming *609*

Do Not Disturb Override

Description   Enables or disables performing the Do Not Disturb (DND)
Override feature.

Selection   • Jack number: **01 – 24, ✶** (✶ = all jacks)
• **Disable / Enable**

Default   All jacks – Disable

Programming

1. Enter **609**.

   ```
   Display: DND Override
   ```

2. Press **NEXT**.

   ```
   Display: Jack NO? →
   ```

3. Enter a **jack number**.

   Pressing **NEXT** also can enter jack number 01.

   ```
   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 enter the desired **jack number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Condition   • To assign all jacks to the same selection, press the ✶ key in step 3. In this case, the display will show: # ✶:Mixed.

Feature Reference   **Section 3, Features**
Do Not Disturb (DND) Override

Description

A Paralleled Telephone Connection allows a single line telephone to be connected to the same jack as a proprietary telephone. This program assigns which jacks can perform the paralleled telephone connection feature.

Selection

• Jack number: **01 – 24, ✳** (✳ = all jacks)
• **Disable / Enable**

Default

All jacks – Disable

Programming

1. Enter **610**.

    ```
    Display: Parallel Connect
    ```

2. Press **NEXT**.

    ```
    Display: Jack NO? →
    ```

3. Enter a **jack number**.

    Pressing **NEXT** also can enter jack number 01.

    ```
    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 enter the desired **jack number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Condition

• To assign all jacks to the same selection, press the ✳ key in step 3. In this case, the display will show: `# ✳:Mixed`.

Feature Reference

Section 3, Features
Paralleled Telephone

TAM (Telephone Answering Machine) Extension

Description

Assigns the jacks that can accept a TAM connection. When a jack is TAM-enabled, the "Call Retrieving from a TAM" feature becomes available.

Selection

• Jack number: **01 – 24, ✳** (✳ = all jacks)
• **Disable / Enable**

Default

All jacks – Disable

Programming

1. Enter **611**.

    Display: TAM Extension

2. Press **NEXT**.

    Display: Jack NO? →

3. Enter a **jack number**.

    Pressing **NEXT** also can enter jack number 01.

    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 enter the desired **jack number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Condition

• To assign all jacks to the same selection, press the ✳ key in step 3. In this case, the display will show: # ✳:Mixed.

Feature Reference

Section 3, Features
Call Retrieving from a TAM (Telephone Answering Machine)

Room Monitor Assignment

Description   Assigns which extensions can be monitored by another telephone.

Selection   • Jack number: **01 – 24, ✶** (✶ = all jacks)
                         • **Disable / Enable**

Default   All jacks – Disable

Programming   1.   Enter **612**.

                                   Display: Room Monitor

                         2.   Press **NEXT**.

                                   Display: Jack NO? →

                         3.   Enter a **jack number**.

                                   Pressing **NEXT** also can enter jack number 01.

                                   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 enter the desired **jack number**.

                         7.   Repeat steps 4 through 6.

                         8.   Press **END**.

Conditions   • To assign all jacks to the same selection, press the ✶ key in step 3. In
                           this case, the display will show: # ✶ :Mixed.
                         • The jacks which are assigned to "DISABLE" cannot accept feature
                           number "7351#" for the room monitor feature.

Feature Reference   **Section 3, Features**
                         Room Monitor

4.2   System Programming   *617*

Wireless PT Port Assignment

Description   Used to identify whether the Panasonic Wireless Phone (e.g.
                       KX-T7880 or KX-T7885) is connected to an extension jack or not.

Selection   • Jack number: **01 – 24, ✷** (✷ = all jacks)
                       • **Not Connect / Connect**

Default   All jacks – Not Connect

Programming   1.   Enter **617**.

                             ```
                             Display: Wireless PT Port
                             ```

                       2.   Press **NEXT**.

                             ```
                             Display: Jack NO? →
                             ```

                       3.   Enter a **jack number**.

                             Pressing **NEXT** also can enter jack number 01.

                             ```
                             Display example: #01:Not Connect
                             ```

                       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 enter the desired **jack number**.

                       7.   Repeat steps 4 through 6.

                       8.   Press **END**.

Conditions   • To assign all jacks to the same selection, press the ✷ key in step 3.
                         In this case, the display will show: # ✷:Mixed.
                       • If "Connect" is not assigned for the jack which is connected the
                         Panasonic Wireless Phone, the wireless phone may work incorrectly.

Description

These programs assign which extensions will ring when a doorphone call is received in the day, night and lunch modes.

Selection

• Doorphone number: **1 – 4, ✻** (✻ = all doorphones)
• Jack number: **01 – 24, ✻** (✻ = all jacks)
• **Enable / Disable**

Default

All doorphones – all jacks – Enable — Day/Night/Lunch

Programming

1. Enter a **program address (700 for day, 701 for night or 702 for lunch)**.

   ```
   Display example: Day Door Phone
   ```

2. Press **NEXT**.

   ```
   Display: Door NO? →
   ```

3. Enter a **doorphone number**.

   Pressing **NEXT** also can enter doorphone number 1.

   ```
   Display example: DP-1:#01:Enable
   ```

4. Keep pressing ➡ until the desired jack number is displayed or enter a **jack number** after pressing the **#** key.

5. Keep pressing **SELECT** until the desired selection is displayed.

6. Press **STORE**.

7. To program another jack, press ➡ or ⬅, or **#** and the desired **jack number**.

8. Repeat steps 5 through 7.

9. To program another doorphone, press **NEXT** or **PREV**, or **SELECT** and enter the desired **doorphone number**.

10. Repeat steps 4 through 9.

11. Press **END**.

Conditions

• To assign all doorphones and all jacks to the same selection, press the ✻ key in steps 3 and 4.
  In this case, the display will show: `DP-✻:# ✻:Mixed`.
• Four doorphones can be installed to the system.

Feature References

Section 3, Features
Doorphone Call
Time (Day/Night/Lunch) Service

Description	These programs assign which extensions can open a door in the day, night and lunch modes.
Selection	• Door opener number: **1 – 4, ✶** (✶ = all door openers) • Jack number: **01 – 24, ✶** (✶ = all jacks) • **Enable / Disable**
Default	All door openers – all jacks – Enable

Programming

1. Enter a **program address (703 for day, 704 for night or 705 for lunch)**.

    ```
    Display example: Day Door-Open
    ```

2. Press **NEXT**.

    ```
    Display: Door NO? →
    ```

3. Enter a **door opener number**.

    Pressing **NEXT** also can enter doorphone number 1.

    ```
    Display example: DP-1:#01:Enable
    ```

4. Keep pressing ➡ until the desired jack number is displayed or enter a **jack number** after pressing the **#** key.

5. Keep pressing **SELECT** until the desired selection is displayed.

6. Press **STORE**.

7. To program another jack number, press ➡ or ◀, or # and the desired **jack number**.

8. Repeat steps 5 through 7.

9. To program another door opener, press **NEXT** or **PREV**, or **SELECT** and enter the desired **door opener number**.

10. Repeat steps 4 through 9.

11. Press **END**.

Conditions

• To assign all door openers and all jacks to the same selection, press the ✶ key in steps 3 and 4.
  In this case, the display will show: `DP-✶:# ✶:Mixed`.
• Four door openers can be installed per system.

Feature References

Section 3, Features
Door Opener
Time (Day/Night/Lunch) Service

Description

Assigns an incoming doorphone call ringing pattern for each doorphone. There are four types of patterns as follows.
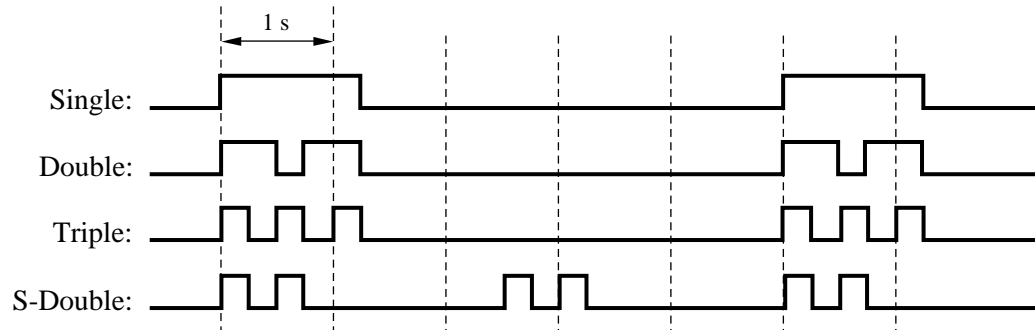
Selection

• Doorphone number: **1 – 4, ✳** (✳ = all doorphones)
• **Single / Double / Triple / S-Double**

Default

All doorphones — Triple

Programming

1.   Enter **706**.

> Display: Door Ring Tone

2.   Press **NEXT**.

> Display: Door NO? →

3.   Enter a **doorphone number**.

> Pressing **NEXT** also can enter doorphone number 1.
>
> Display example: DP-1:Triple

4.   Keep pressing **SELECT** until the desired selection is displayed.

5.   Press **STORE**.

6.   To program another doorphone, press **NEXT** or **PREV**, or **SELECT** and enter the desired **doorphone number**.

7.   Repeat steps 4 through 6.

8.   Press **END**.

Conditions

• To assign all doorphones to the same selection, press the ✳ key in step 3. In this case, the display will show: DP-✳:Mixed.
• PT users will hear the assigned pattern tone instead of ringing.
• The programs [115] "Extension Ringing Pattern Selection" and [423] "Outside (CO) Line Ringing Pattern Selection" should be considered when assigning this program.

Feature Reference

Section 3, Features
Doorphone Call

4.2 System Programming *707*

Doorphone Access Tone Selection

Description   Enables or disables sending a doorphone access tone to a monitored doorphone. If enabled, the access tone is heard from the doorphone when monitoring starts.

Selection
- Doorphone number: **1 – 4, ✳** (✳ = all doorphones)
- **Enable / Disable**

Default   All doorphones — Enable

Programming

1. Enter **707**.

    Display: Door Ack-Tone

2. Press **NEXT**.

    Display: Door NO? →

3. Enter a **doorphone number**.

    Pressing **NEXT** also can enter doorphone number 1.

    Display example: DP-1:Enable

4. Keep pressing **SELECT** until the desired selection is displayed.

5. Press **STORE**.

6. To program another doorphone, press **NEXT** or **PREV**, or **SELECT** and enter the desired **doorphone number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Condition
- To assign all doorphones to the same selection, press the ✳ key in step 3. In this case, the display will show: DP-✳:Mixed.

Feature References   **Section 3, Features**
Doorphone Call
Room Monitor

Description   Selects the doorphone ringing time.

Selection   • Doorphone number: **1 – 4, ✳** (✳ = all doorphones)
• **15 sec / 30 sec** (seconds)

Default   All doorphones — 15 sec

Programming

1. Enter **708**.

    ```
    Display: Doorphone R-Time
    ```

2. Press **NEXT**.

    ```
    Display: Door NO? →
    ```

3. Enter a **doorphone number**.

    Pressing **NEXT** also can enter doorphone number 1.

    ```
    Display example: DP-1:15 sec
    ```

4. Keep pressing **SELECT** until the desired selection is displayed.

5. Press **STORE**.

6. To program another doorphone, press **NEXT** or **PREV**, or **SELECT** and enter the desired **doorphone number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Condition   • To assign all doorphones to the same selection, press the ✳ key in step 3. In this case, the display will show: `DP-✳:Mixed`.

Feature Reference   **Section 3, Features**
Doorphone Call

Description　　　　Selects the door opener time. The door is unlocked for the assigned period of time.

Selection　　　　• Door Opener number: **1 – 4, ✳** (✳ = all door openers)
　　　　　　　　　• **1 sec / 2 sec / 3 sec / 4 sec / 5 sec / 6 sec / 7 sec / 8 sec** (seconds)

Default　　　　All door openers — 5 sec

Programming

1. Enter **709**.

   ```
   Display: Door-Opner Time
   ```

2. Press **NEXT**.

   ```
   Display: Door NO? →
   ```

3. Enter a **door opener number**.

   Pressing **NEXT** also can enter doorphone number 1.

   ```
   Display example: DP-1: 5 sec
   ```

4. Keep pressing **SELECT** until the desired selection is displayed.

5. Press **STORE**.

6. To program another door opener, press **NEXT** or **PREV**, or **SELECT** and enter the desired **door opener number**.

7. Repeat steps 4 through 6.

8. Press **END**.

Condition　　　　• To assign all door openers to the same selection, press the ✳ key in step 3. In this case, the display will show: `DP-✳:Mixed`.

Feature Reference　　**Section 3, Features**
Door Opener

SMDR RS-232C Communication Parameters

Description   Assigns the communication parameters for the Serial Interface
                          (RS-232C).

New line code: Selects the code for the printer or personal computer. If the printer
                   or personal computer automatically feeds lines with a carriage
                   return, select "CR". If not, select "CR+LF".

Baud rate: The baud rate code indicates the data transmission speed from the
               system to the printer or personal computer.

Word length: The word length code indicates how many bits compose a character.

Parity: The parity code indicates what type of parity is used to detect an
            error in the string of bits composing a character. Make the selection
            depending on the requirements of the printer or personal computer.

Stop bit: The stop bit code indicates the end of a bit string which composes a
              character. Select a value depending on the requirements of the
              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

Programming   1. Enter **800**.

                             ```
                             Display example: RS232C Parameter
                             ```

                         2. Press **NEXT** to program the 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 the baud rate.

                             ```
                             Display example: Baud Rate:9600B
                             ```

6. Keep pressing **SELECT** until the desired selection is displayed.

7. Press **STORE**.

8. Press **NEXT** to program the word length.

   ```
   Display example: Word Length:8bit
   ```

9. Keep pressing **SELECT** until the desired selection is displayed.

10. Press **STORE**.

11. Press **NEXT** to program the parity bit.

    ```
    Display example: Parity:Mark
    ```

12. Keep pressing **SELECT** until the desired selection is displayed.

13. Press **STORE**.

14. Press **NEXT** to program the stop bit.

    ```
    Display example: Stop Bit:1bit
    ```

15. Keep pressing **SELECT** until the desired selection is displayed.

16. Press **STORE**.

17. Press **END**.

Condition

• The following combinations are invalid.

Parity	Word Length	Stop Bit
Mark	8	2
Space	8	1
Space	8	2

Feature Reference

Section 3, Features
Station Message Detail Recording (SMDR)

SMDR Parameter

Description

Used to match the SMDR output to the paper size being used in the printer. The page length determines the number of lines per page. The skip perforation determines the number of lines to be skipped at the end of every page.

Selection

• Page length (lines): **4 – 99**
• Skip perforation (lines): **0 – 95**

Default

Page length – 66; Skip perforation – 0

Programming

1. Enter **801**.

    ```
    Display: SMDR Parameter
    ```

2. Press **NEXT** to program the page length.

    ```
    Display example: Page Length:66
    ```

3. Enter the **page length**.

    To change the current entry, press **CLEAR** and enter the new page length.

4. Press **STORE**.

5. Press **NEXT** to program the skip perforation.

    ```
    Display example: Skip Perf: 0
    ```

6. Enter the **skip perforation**.

    To change the current entry, press **CLEAR** and enter the new skip perforation.

7. Press **STORE**.

8. Press **END**.

Conditions

• The page length should be at least four lines longer than the skip perforation length.
• The title is placed on the first three lines of 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 previous format will be used.

Feature Reference

Section 3, Features
Station Message Detail Recording (SMDR)

Description Used to determine which calls will produce an SMDR printout.

Selection

• Outgoing calls: **On** (all calls) **/ Off** (no printing) **/ Toll** (printing toll calls only)
• Incoming calls: **On** (all calls) **/ Off** (no printing)

Default

Outgoing calls – On;
Incoming calls – On

Programming

1. Enter **802**.

   ```
   Display: Call Printing
   ```

2. Press **NEXT** to program outgoing calls.

   ```
   Display: Outgoing:On
   ```

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

• A printer must be connected to the Serial Interface (RS-232C) port provided on the system.
• When "Toll" is selected, only calls which are checked in programs [302]–[305] "Toll Restriction — Class 2 – 5 Denied Codes" and are allowed, are printed out.

Feature Reference

Section 3, Features
Station Message Detail Recording (SMDR)

Description   Enables or disables printing out the secret dial numbers stored in speed dialing and one-touch dialing on the SMDR.

Selection   • **No printing / Printing**

Default   No printing

Programming   1.   Enter **803**.

                          Display: Secret Printing

                     2.   Press **NEXT**.

                          Display example: No Printing

                     3.   Keep pressing **SELECT** until the desired selection is displayed.

                     4.   Press **STORE**.

                     5.   Press **END**.

Conditions   None

Feature References **Section 3, Features**
                       Secret Dialing
                       Station Message Detail Recording (SMDR)

Description

Starts or stops printing the assigned data. All or a specific area of current programmed data is printed out. The areas are as follows.

All Para: All data

System Para: All data except the following programs.

CO Para: Programmed data of [400]–[403], [405]–[423] and [900].

Ext Para: Programmed data of [102], [516], [600]–[620], and [904] and [905] if a proprietary telephone is connected. The assigned data on the PF (Programmable Feature) buttons and CO buttons are also printed out.

Programmed data of [102], [516] and [600]–[612] if a single line telephone is connected. The stored Personal Speed Dialing numbers are also printed out.

DSS Para: Data assigned to DSS buttons and PF buttons on the DSS Consoles.

Speed Dial: Programmed data of [001]

Stop Output: Stops printing.

Selection

All Para / System Para / CO Para + outside (CO) line number: 1 – 6, ✳ (✳ = all outside (CO) lines) **/**
Ext Para + jack number: 01 – 24, ✳ (✳ = all jacks) **/**
DSS Para + DSS Console number: 1 or 2, ✳ (✳ = all DSS Consoles) **/ Speed Dial / Stop Output**

Default

Not applicable.

Programming

1. Enter **804**.

    ```
    Display: System Data Dump
    ```

2. Press **NEXT**.

    ```
    Display: Menu:All Para
    ```

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. If CO Para, Ext Para or DSS Para is selected, enter an **outside (CO) line, jack or DSS Console number**.

6. Press **STORE**.

7. Press **END**.

Condition
- A printer must be connected to the Serial Interface (RS-232C) port provided on the system.

Feature Reference   **Section 3, Features**
Station Message Detail Recording (SMDR)

SMDR Account Code Selection

Description

Selects the account code type printed on the SMDR.
There are the following two types.
CODE: the 4-digit account code number programmed in
[310] "Account Codes".
INDEX: a 2-digit code number (01 – 24).

Selection

CODE / INDEX

Default

CODE

Programming

1.   Enter **805**.

> Display: Account Select

2.   Press **NEXT**.

> Display example: CODE

3.   Keep pressing **SELECT** until the desired selection is
displayed.

4.   Press **STORE**.

5.   Press **END**.

Condition

• The printing of the index of the account code only occurs if the
extension user entered their account code in the "Verify – All" or
"Verify – Toll" input mode as programmed in [605] "Account Code
Entry Mode".

Feature References

Section 3, Features
Account Code Entry
Station Message Detail Recording (SMDR)

Description   Enables or disables the Caller ID feature for outside (CO) lines which have contracted the Caller ID Service by a Central Office.

Selection   • Outside (CO) line number: **1 – 6, ✳** (✳ = all outside (CO) lines)
• **Enable / Disable**

Default   All outside (CO) lines – Disable

Programming

1.   Enter **900**.

   ```
   Display: CID Assign
   ```

2.   Press **NEXT**.

   ```
   Display: CO NO? →
   ```

3.   Enter an **outside (CO) line number**.

   Pressing **NEXT** also can enter outside (CO) line number 1.

   ```
   Display example: CO 1:Disable
   ```

4.   Keep pressing **SELECT** until the desired selection is displayed.

5.   Press **STORE**.

6.   To program another outside (CO) line, press **NEXT** or **PREV**, or **SELECT** and enter the desired **outside (CO) line number**.

7.   Repeat steps 4 through 6.

8.   Press **END**.

Conditions   • To assign all outside (CO) lines to the same selection, press the ✳ key in step 3. In this case, the display will show: `CO ✳:Mixed`.
• An optional Caller ID card is required.

Feature Reference   **Section 3, Features**
Caller ID

4.2   System Programming   *901*

Caller ID Area Code Assignment

Description   Assigns the required area code when using the Caller ID feature. By assigning the area code, the system records the caller's phone number modified by programs [902] "Caller ID Modification for Local Calls" and [903] "Caller ID Modification for Long Distance Calls".

Selection   • Code number: **1 – 5**
                     • Area code: **6 digits max.**

Default   All codes – Not stored

Programming   1.   Enter **901**.

                           Display: CID Area Code

                     2.   Press **NEXT**.

                           Display: CODE NO? →

                     3.   Enter a **code number**.

                           Pressing **NEXT** also can enter code number 1.

                           Display example: CODE-01:......

                     4.   Enter an **area code**.

                           To delete the current entry, press **CLEAR**.
                           To change the current entry, press **CLEAR** and enter the new area code.

                     5.   Press **STORE**.

                     6.   To program another code number, press **NEXT** or **PREV**, or **SELECT** and enter the desired **code number**.

                     7.   Repeat steps 4 through 6.

                     8.   Press **END**.

Conditions   • The area code can be six digits long. Valid numbers are from **0 to 9**.
                     • An optional Caller ID card is required.

Feature References   **Section 3, Features**
                         Call Log, Incoming
                         Caller ID

Caller ID Modification for Local Calls

Description

Assigns the removed digits from a received local caller's number, and adds a number to make the final number which serves as the Caller ID number. The system records the modified caller's number in the incoming call log list so that the extension user can call back the caller.

Digits are removed from or added to the beginning of the received number.

Selection

• Number of digits to be deleted: **0 – 9** (0 = no deletion)
• Number to be added: **4 digits (max.)**

Default

Deleted digits – 3; Added number – blank

Programming

1. Enter **902**.

    ```
    Display: CID Local Call
    ```

2. Press **NEXT**.

    ```
    Display example: Del:3 Add:
    ```

3. Enter the **number of digits to be deleted**.

    To change the current entry, press **CLEAR** and enter the new number.

4. Press ➡ to program the number to be added, if required.

5. Enter the **number to be added**.

    To change the current entry, press **CLEAR** and enter the new number.

6. Press **STORE**.

7. Press **END**.

Conditions

• The added number has a maximum of 4 digits, consisting of **0 – 9,** ✱ and **#**.
• An optional Caller ID card is required.

Feature References

Section 3, Features
Call Log, Incoming
Caller ID

Description

Assigns the removed digits from a received long distance caller's number, and adds a number to make the final number which serves as the Caller ID number. The system records the modified caller's number in the incoming call log list so that the extension user can call back the caller.

Digits are removed from or added to the beginning of the received number.

Selection

• Number of digits to be deleted: **0 – 9** (0 = no deletion)
• Number to be added: **4 digits (max.)**

Default

Deleted digits – 0; Added number – 1

Programming

1.   Enter **903**.

   Display: CID LD Call

2.   Press **NEXT**.

   Display example: Del:0 Add:1

3.   Enter the **number of digits to be deleted**.

   To change the current entry, press **CLEAR** and enter the new number.

4.   Press ➡ to program the number to be added, if required.

5.   Enter the **number to be added**.

   To change the current entry, press **CLEAR** and enter the new number.

6.   Press **STORE**.

7.   Press **END**.

Conditions

• The added number has a maximum of 4 digits, consisting of **0 – 9**, ✳ and #.
• An optional Caller ID card is required.

Feature References

Section 3, Features
Call Log, Incoming
Caller ID

Description   Selects the first display of an incoming outside call by the Caller ID service.

Selection   • Jack number: **01 – 24, ✳** (✳ = all jacks)
• **Number / Name**

Default   All jacks – Name

Programming

1.   Enter **904**.

        Display: CID Priority

2.   Press **NEXT**.

        Display: Jack NO? →

3.   Enter a **jack number**.

        Pressing **NEXT** also can enter jack number 01.

        Display example: #01:Name

4.   Keep pressing **SELECT** until the desired selection is displayed.

5.   Press **STORE**.

6.   Press **END**.

Conditions   • This program is available when the Caller ID service provides both the name and number. If only the number is provided, this program is not necessary.
• To assign all jacks to the same selection, press the ✳ key in step 3. In this case, the display will show: CO ✳:Mixed.
• An optional Caller ID card is required.

Feature Reference   **Section 3, Features**
Caller ID

Description	Selects whether a Caller ID number is printed out or not on the SMDR.
Selection	**Without CID** (not printed) **/ With CID** (printed)
Default	With CID

Programming

1. Enter **906**.

   ```
   Display: CID SMDR Format
   ```

2. Press **NEXT**.

   ```
   Display example: With CID
   ```

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. Press **END**.

Conditions

- Even if a name is also sent by the Caller ID service, only the number is printed.
- An optional Caller ID card is required.

Feature References

Section 3, Features
Caller ID
Station Message Detail Recording (SMDR)

Description   Confirms the System ROM version.

Display example: <u>Y501B</u> <u>980430(M)</u>

                    Version   Date

Programming   1.   Enter **998**.

```
Display: ROM Version
```

2.   Press **NEXT**.

The display shows the system ROM version.

3.   Press **END**.

Conditions   None

Feature References   None

Description	Clears the system data which have been programmed. The system will re-start with the default settings.

Selection

All Para / System Para / CO Para + outside (CO) line number: 1 – 6, ✶ (✶ = all outside (CO) lines) **/**
Ext Para + jack number: 01 – 24, ✶ (✶ = all jacks) **/**
DSS Para + DSS Console number: 1 or 2, ✶ (✶ = all DSS Consoles) **/ Speed Dial**

Programming

1. Enter **999**.

   Display: System Clear

2. Press **NEXT**.

   Display: Menu:All Para

3. Keep pressing **SELECT** until the desired selection is displayed.

4. Press **STORE**.

5. If CO Para, Ext Para or DSS Para is selected, enter an **outside (CO) line, jack or DSS Console number**.

6. Press **STORE**.

7. Press **END**.

Condition

• Please refer to program [804] for each parameter.

Feature Reference

Section 3, Features
System Data Default Set

Section 5
List

This section lists the tone, ring and default values of system programming.

5.1 Tone/Ring Tone

< TONE >

Confirmation Tone 1	
Confirmation Tone 2	
Confirmation Tone 3	
Dial Tone 1	
Dial Tone 2	
Dial Tone 3	
Busy Tone	
Reorder Tone	
Ringback Tone	
Do Not Disturb (DND) Tone	
Outside-to-Outside (CO-to-CO) Line Call Limit Warning Tone	
Call Waiting Tone 1	
Call Waiting Tone 2 (Single)	
Call Waiting Tone 2 (Double)	
Call Waiting Tone 2 (Triple)	
Hold Alarm	
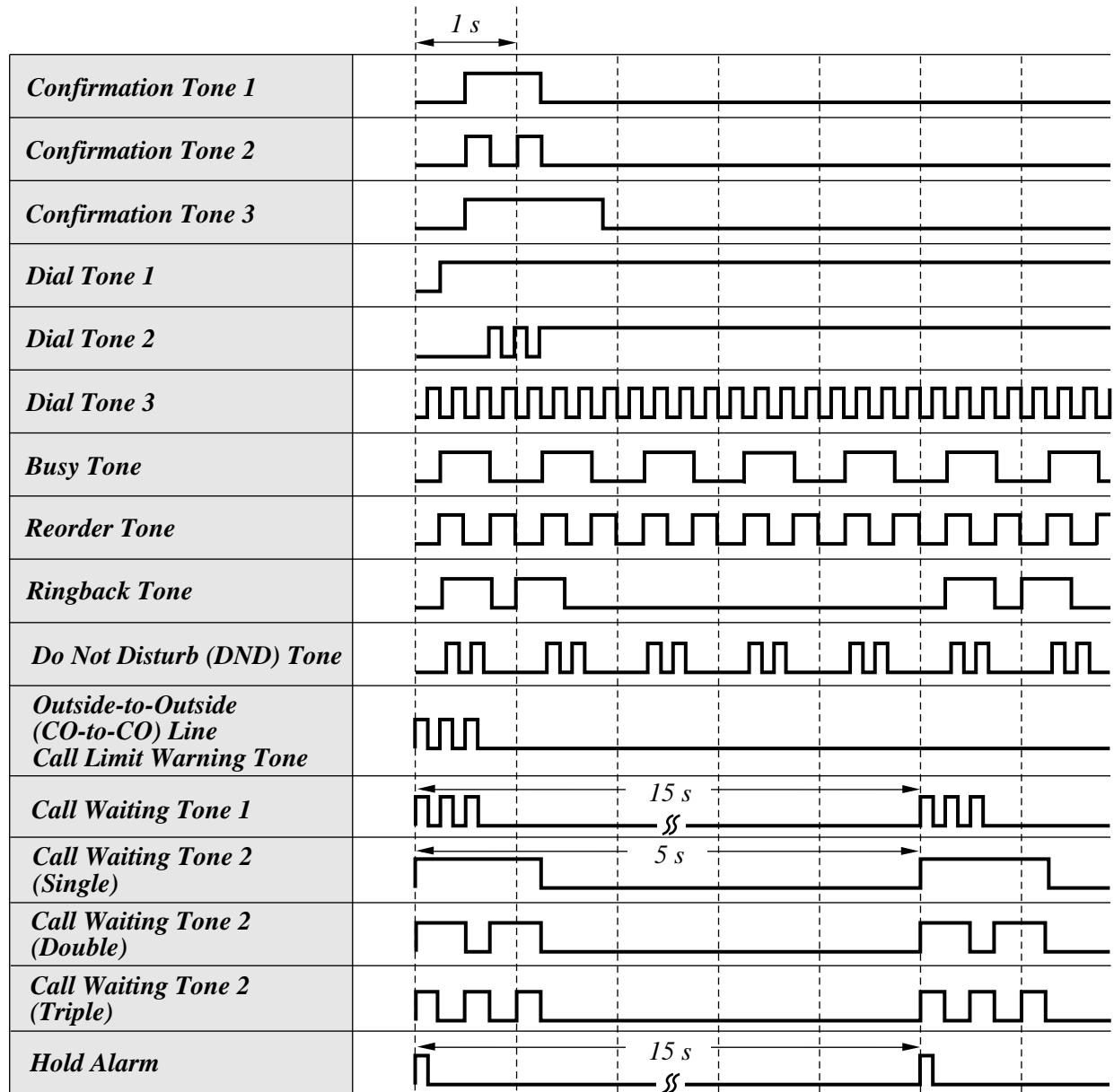
5.1　Tone/Ring Tone

< RING TONE >

Incoming Calls (Single) / Hold Recall (Outside calls)	
Incoming Calls (Double) / Hold Recall (Intercom calls)	
Incoming Calls (Triple) / Timed Reminder	
Callback Ringing (Camp-on Recall) / Doorphone Ringing (S-Double)	
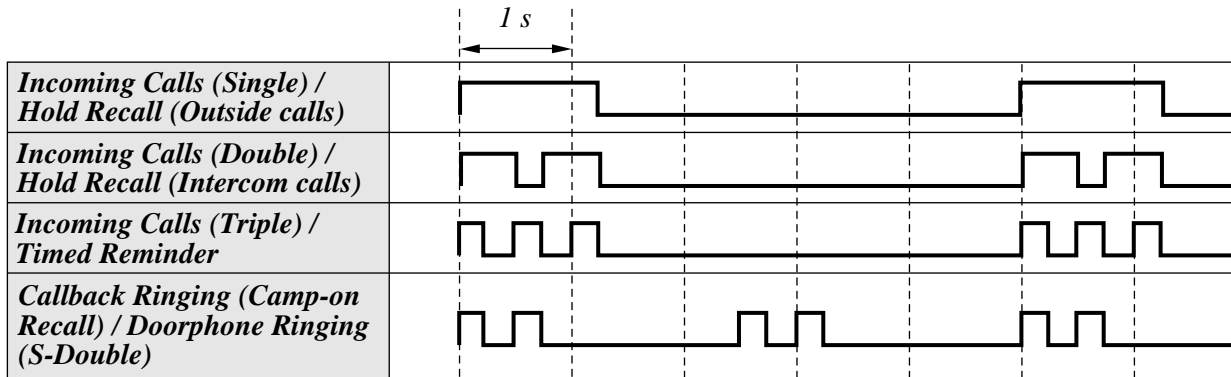
5.2 Default Values

Address Program	Default
[000] Date and Time Setting	98 Jan. 1 Thu 12:00 AM
[001] System Speed Dialing Entry	All speed dial numbers – Not stored
[002] System Password	1234
[003] DSS Console Port Assignment	All DSS Consoles — Disable
[004] Paired Telephone Assignment for DSS Console	DSS1 – Disable, DSS2 – Disable
[005] One-Touch Transfer Using a DSS Button	With Transfer
[006] Time (Day/Night/Lunch) Service Changing Mode	Manual
[007] Time (Day/Night/Lunch) Service Start Time	Every day of the week — Day – 9:00 AM / Night – 5:00 PM / Lunch-S – None / Lunch-E – None
[008] Operator Assignment	Jack-01
[009] Extension Number Assignment	Jack 01 – 24 = Ext 101 – 124
[010] LCD Time Display Selection	12 HOUR
[100] Hunting Group Set	All extension groups — Disable
[101] Station Hunting Type	All extension groups – Terminate
[102] Voice Mail Port for KX-TVS75/ KX-TVS100	All jacks — Disable
[103] DTMF Integration for KX-TVS75/ KX-TVS100	Disable
[104] Hold Mode Selection	Hold-1
[105] Conference Tone	Enable
[106] External Paging Access Tone	Enable
[107] DTMF Receiver Check	All DTMF receivers — Enable
[108] Flash Mode for a Station Locked Extension	Disable
[109] CO Indicator Assignment	Enable
[110] Flash Key Mode	MODE 2
[111] Hold Music Selection	External
[112] DSS Console Indication Mode	Enable

5.2   Default Values

Address Program	Default
[115] Extension Ringing Pattern Selection	Double
[117] Call Pickup Tone	Enable
[118] Pulse Restriction	Enable
[119] Redialing After Pulse to Tone Conversion	Disable
[125] Toll Restriction Check for ✳ and #	Enable
[130] Voice Mail 1 APT Port for KX-TVS50	Disable
[131] Voice Mail 2 APT Port for KX-TVS50	Disable
[200] Hold Recall Time	30 sec
[201] Transfer Recall Time	30 sec
[202] Call Forwarding Start Time	15 sec delay
[203] Pickup Dial Delay Time	3 sec
[204] Call Duration Count Start Time	10 s after dial
[205] Outside-to-Outside (CO-to-CO) Line Duration Time Limit	10 min
[206] Dialing Start Time	0 msec
[208] Interdigit Time	10 sec
[211] No Dial Disconnection	Disable
[300] Carrier Code Assignment	All codes – Not stored
[301] Toll Restriction — System Speed Dialing Boundary Class	Boundary Class-1
[302]–[305] Toll Restriction — Class 2 – 5 Denied Codes	All codes – Not stored
[306] Toll Restriction — Exception Codes	All codes – Not stored
[309] Emergency Dial Number Set	Code-01 = 911, Other Codes = Not stored
[310] Account Codes	All codes – Not stored
[311] Automatic Pause Insertion Codes	All codes – Not stored
[312] Toll Restriction — Station Lock Boundary Class	Disable

5.2 Default Values

Address Program	Default
[400] Outside (CO) Line Connection Assignment	All outside (CO) lines – Connect
[401] Dial Mode	All outside (CO) lines — DTMF Mode
[402] Pulse Speed Selection	All outside (CO) lines – Low Speed
[403] Host PBX Access Codes	All outside (CO) lines – Not stored
[404] Outside (CO) Line Group Assignment	CO1 — TRK GRP-1; CO2 — TRK GRP-2; CO3 — TRK GRP-3; CO4 — TRK GRP-4; CO5 — TRK GRP-5; CO6 — TRK GRP-6
[405]–[407] Flexible Outward Dialing Assignment — Day/Night/Lunch	All outside (CO) lines – all jacks – Enable — Day/Night/Lunch
[408]–[410] Flexible Ringing Assignment — Day/Night/Lunch	All outside (CO) lines – all jacks – Enable — Day/Night/Lunch
[411]–[413] Delayed Ringing Assignment — Day/Night/Lunch	All outside (CO) lines – all jacks – Immdtly — Day/Night/Lunch
[414]–[416] Outside (CO) Line Mode — Day/Night/Lunch	All outside (CO) lines – Normal
[417] Pause Time	All outside (CO) lines — 1.5 sec
[418] Flash Time	All outside (CO) lines – 600 ms
[419] Automatic Designated Outside (CO) Line Access	All outside (CO) lines — Enable
[420] Calling Party Control (CPC) Signal	All outside (CO) lines – 42 (350 msec)
[421] CPC Detection for Outgoing Calls	Disable
[422] Disconnect Time	All outside (CO) lines – 1.5 sec
[423] Outside (CO) Line Ringing Pattern Selection	Single
[500] DISA Incoming Dialing Mode Selection	Without AA
[501] DISA Built-in Auto Attendant	All numbers — Not stored
[502] OGM Mode Selection	MODE 1
[503] FAX Connection	Disable
[504] DISA Delayed Answer Time	3 sec
[505] DISA Waiting Time After OGM	5 sec

5.2 Default Values

Address Program	Default
[506] DISA Busy Mode	Disconnect
[507] DISA Intercept Mode	Intercept
[508] DISA Ringing Time before Intercept	20 sec
[509] DISA Ringing Time after Intercept	20 sec
[510] DISA No Dial Mode	DISA1 and DISA2 — Intercept
[511] DISA Security Type	Trunk Security
[512] DISA Security Codes	All codes – Not stored
[513] Cyclic Tone Detection	4 Times
[514] FAX Tone Detection	1 Time
[515] Intercept Time for Internal DISA	3 sec
[516] DISA Incoming Assignment	All jacks — Enable
[517] DISA AA Wait Time	2 sec
[518] DISA Tone Selection after the Security Code	Enable
[600] Extension Group Assignment	All jacks — EXT GRP-1
[601]–[603] TRS – Class of Service (COS) Assignment — Day/Night/Lunch	All jacks — COS-1 — Day/Night/Lunch
[604] Extension Name Setting	All jacks – Not stored
[605] Account Code Entry Mode	All jacks – Option
[606] Call Transfer to an Outside (CO) Line	All jacks – Disable
[607] Call Forwarding to an Outside (CO) Line	All jacks – Disable
[608] Executive Busy Override	All jacks – Disable
[609] Do Not Disturb Override	All jacks – Disable
[610] Paralleled Telephone Connection	All jacks – Disable
[611] TAM (Telephone Answering Machine) Extension	All jacks – Disable
[612] Room Monitor Assignment	All jacks – Disable
[617] Wireless PT Port Assignment	All jacks – Not Connect

5.2   Default Values

Address	Program	Default
[700]–[702]	Doorphone Ringing Assignment — Day/Night/Lunch	All doorphones – all jacks – Enable — Day/Night/Lunch
[703]–[705]	Door Opener Assignment — Day/Night/Lunch	All door openers – all jacks – Enable — Day/Night/Lunch
[706]	Doorphone Ringing/Tone Pattern Selection	All doorphones — Triple
[707]	Doorphone Access Tone Selection	All doorphones — Enable
[708]	Doorphone Ringing Time	All doorphones — 15 sec
[709]	Door Opener Time	All door openers — 5 sec
[800]	SMDR RS-232C Communication Parameters	New line code = CR+LF; Baud rate = 9600; Word length = 8; Parity bit = Mark; Stop bit = 1
[801]	SMDR Parameter	Page length – 66; Skip perforation – 0
[802]	Incoming/Outgoing Call Selection for Printing	Outgoing calls – On; Incoming calls – On
[803]	Secret Speed Dialing/One-Touch Dialing Printing	No printing
[804]	System Data Dump	Not applicable.
[805]	SMDR Account Code Selection	CODE
[900]	Caller ID Assignment	All outside (CO) lines – Disable
[901]	Caller ID Area Code Assignment	All codes – Not stored
[902]	Caller ID Modification for Local Calls	Deleted digits – 3; Added number – blank
[903]	Caller ID Modification for Long Distance Calls	Deleted digits – 0; Added number – 1
[904]	Caller ID Log Priority Selection	All jacks – Name
[906]	Caller ID SMDR Format	With CID
[998]	ROM Version	Not applicable.
[999]	System Data Clear	Not applicable.

Section 6
Troubleshooting
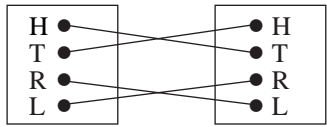
This section provides information for system and telephone troubleshooting.

6.1 Installation
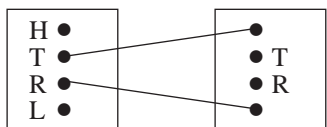
PROBLEM	PROBABLE CAUSE	POSSIBLE SOLUTION
Extension does not operate.	Something is wrong with the printed circuit board (Extension Card).	Exchange the printed circuit board with another printed circuit board.
	Something is wrong with the connection between the system and extension.	Take the extension and plug it into the same extension port using a short telephone cord. If the telephone works correctly, the connection between the system and the extension must be repaired.
	A telephone with an A-A1 relay is connected.	Use a 2 wire cord. Set the A-A1 relay switch on the telephone to the "OUT" or "OFF" position.
	Something is wrong with the extension.	Take the extension and plug it into another extension port that is working. If the telephone does not work, replace the phone.
Improper reset operation.		Turn the Power Switch off and on.
Noise during 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.	Wrong programming.	Enter an outside (CO) line access number (9, 81 through 86) in programming.
A proprietary telephone connected to extension jacks 01 through 08, 09 through 16, or 17 through 24 does not operate, but a single line telephone operates.	An extension (H, L) jack 01 through 08, 09 through 16, or 17 through 24 may have been shorted.	Turn the Power Switch off and fix the shorted part, then turn the Power Switch on.

6.2 Connection
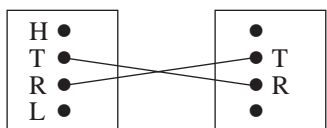
Connection between the system and a proprietary telephone:

CAUSE	SOLUTION
T/R is connected to H/L. H T R L (KX-TA624) crossed to H T R L (extension)	Use the correct cord (the inner 2 wires are for T/R and the outer 2 wires are for H/L).
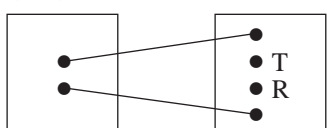
Connection between the system and a single line telephone:

CAUSE	SOLUTION
T/R is connected to H/L. H T R L (KX-TA624) to T R (extension)	Use the correct cord (the inner 2 wires are for T/R).

Connection between the system and a single line telephone that is polarity-sensitive:

CAUSE	SOLUTION
"T" is connected to "R". H T R L (KX-TA624) crossed to T R (extension)	Reverse the connections of T/R.

Connection between the central office and the system:

CAUSE	SOLUTION
Outside (CO) lines are connected to H/L. Outside (CO) line to T R (KX-TA624)	Reconnect the outside (CO) lines to T/R using 2-conductor wiring.

Flowchart:

Can you dial an extension? — No → (proprietary telephone / single line telephone tables)
Can you dial an extension? — Yes ↓
Can you dial out using an outside (CO) line? — No → (central office table)
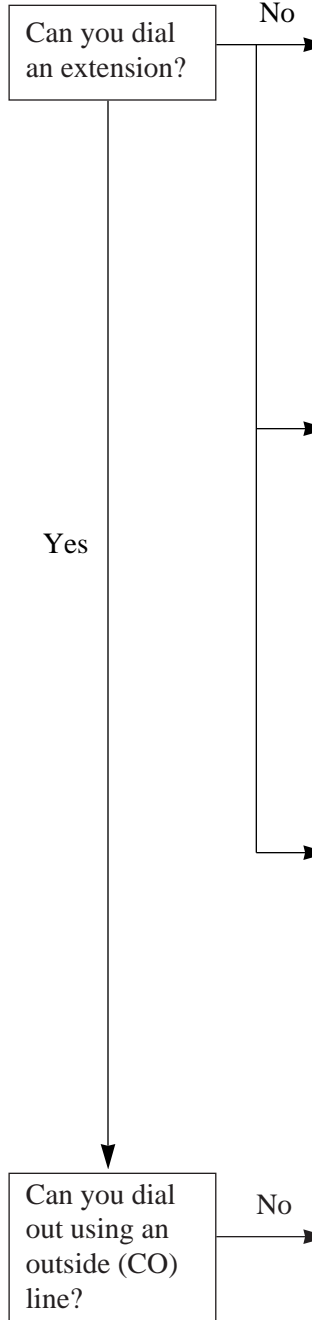
6.3   Operation

PROBLEM	PROBABLE CAUSE	POSSIBLE SOLUTION
When using the speaker-phone with a proprietary telephone, KX-T7130 or KX-T7030, nothing is heard.	The HANDSET/HEADSET selector on the KX-T7130 or KX-T7030 is set to the "HEADSET" position.	When the headset is not used, set the HANDSET/HEADSET selector to the "HANDSET" position.
The unit does not ring.	The Ringer Volume Selector is set to "OFF".	Set to "HIGH" or "LOW".
During a power failure, the extension connected to JACK 01 or 09 does not operate.	A PT is connected to the jack.	Disconnect the PT and connect a single line telephone.
Originating an outside call cannot be performed.	The corresponding CO button does not exist on the proprietary telephone.	Program the CO button. See the Flexible Button Assignment in the User Manual.
A tone type single line telephone (SLT) user cannot make a call.	There may be something wrong with a DTMF receiver.	1. Select "Enable" for DTMF receiver 1 and "Disable" for DTMF receiver 2 in program [107]. 2. Make a call using a tone type SLT connected to one of extension jacks 01 – 08. 3. If you cannot make the call, the problem may have been caused by DTMF receiver 1. If the call can be made, go to step 4. 4. Try DTMF receiver 2. Select "Disable" for DTMF receiver 1 and "Enable" for DTMF receiver 2 in program [107], and make another call. If you cannot make the call, the problem may have been caused by DTMF receiver 2. If the call can be made, go to step 5. 5. Check the other four DTMF receivers in the same way. Refer to program [107].

Section 7
Programming Tables

This section provides a hard copy reference
for entering user-programmed data.

7 Programming Tables

[000] Date and Time Setting							
	Year (00 – 99)	Month (Jan. – Dec.)	Day (1 – 31)	Day of the week (Sun – Sat)	Hour (1 – 12)	Minute (00 – 59)	AM / PM
Default	'98	Jan.	1	Thu	12	00	AM
Change							

[002] System Password	
Default	Parameter: 4 digits, 0 – 9
1 ┆ 2 ┆ 3 ┆ 4	

	[003] DSS Console Port Assignment	[004] Paired Telephone Assignment for DSS Console
Selection	DSS console jack no. (02···24) / Disable	Paired telephone jack no. (01···24) / Disable
Default	All: Disable	DSS 1 – Disable / DSS 2 – Disable
DSS 1		
DSS 2		

[005] One-Touch Transfer Using a DSS Button		
	Default	Selection
With Transfer	✓	
Without Transfer		

[006] Time (Day/Night/Lunch) Service Changing Mode		
	Default	Selection
Manually	✓	
Automatically		

[007] Time (Day/Night/Lunch) Service Start Time								
	Default	Change						
	Every day	Every day	Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.
Day	9:00 AM							
Night	5:00 PM							
Lunch-S	None							
Lunch-E	None							

[008] Operator Assignment		
	Default	Jack no.
Operator	Jack-01	

[010] LCD Time Display Selection		
	Default	Selection
12 HOUR	✓	
24 HOUR		

7   Programming Tables

SPD no.	Telephone number (32 digits max.)	SPD no.	Telephone number (32 digits max.)
Default	All: Not stored		
00		40	
01		41	
02		42	
03		43	
04		44	
05		45	
06		46	
07		47	
08		48	
09		49	
10		50	
11		51	
12		52	
13		53	
14		54	
15		55	
16		56	
17		57	
18		58	
19		59	
20		60	
21		61	
22		62	
23		63	
24		64	
25		65	
26		66	
27		67	
28		68	
29		69	
30		70	
31		71	
32		72	
33		73	
34		74	
35		75	
36		76	
37		77	
38		78	
39		79	

[001] System Speed Dialing Entry

7   Programming Tables

	(Continued)			
SPD no.	Telephone number (32 digits max.)		SPD no.	Telephone number (32 digits max.)
Default	All: Not stored			
80			90	
81			91	
82			92	
83			93	
84			94	
85			95	
86			96	
87			97	
88			98	
89			99	

Extension jack no.	[009] Extension Number Assignment		[600] Extension Group Assignment									[604] Extension Name Setting
	Extension no. (100···199)		Extension group no. (1···8)									Extension name (10 character max.)
			Default: All – Group 1									Default: All – Not stored
	Default	Change	1	2	3	4	5	6	7	8		
01	101											
02	102											
03	103											
04	104											
05	105											
06	106											
07	107											
08	108											
09	109											
10	110											
11	111											
12	112											
13	113											
14	114											
15	115											
16	116											
17	117											
18	118											
19	119											
20	120											
21	121											
22	122											
23	123											
24	124											
✳												

7 Programming Tables

[100] Hunting Group Set											
Selection	Default	Extension group no. (1···8, ✶: all)									
	All	1	2	3	4	5	6	7	8	✶	
Disable	✓										
Enable											

[101] Station Hunting Type											
Selection	Default	Extension group no. (1···8, ✶: all)									
	All	1	2	3	4	5	6	7	8	✶	
Terminate	✓										
Circular											

	[102] Voice Mail Port for KX-TVS75/KX-TVS100						[107] DTMF Receiver Check						
Selection	Default	Extn. jack no. (07, 08, 15, 16, ✶: all)					Default	DTMF receiver no. (1···6)					
	All	07	08	15	16	✶	All	1	2	3	4	5	6
Disable	✓												
Enable							✓						

	[103] DTMF Integration for KX-TVS75/KX-TVS100		[104] Hold Mode Selection			[105] Conference Tone		[106] External Paging Access Tone	
Selection	Enable	Disable	Hold-1	Hold-2	Hold-3	Enable	Disable	Enable	Disable
Default		✓	✓			✓		✓	
Change									

	[108] Flash Mode for a Station Locked Extension		[109] CO Indicator Assignment		[110] Flash Key Mode		[111] Hold Music Selection	
Selection	Enable	Disable	Enable	Disable	MODE 1	MODE 2	External	Tone
Default		✓	✓			✓	✓	
Change								

	[112] DSS Console Indication Mode	
Selection	Enable	Disable
Default	✓	
Change		

7 Programming Tables

	[115] Extension Ringing Pattern Selection			[117] Call Pickup Tone		[118] Pulse Restriction	
Selection	Single	Double	Triple	Enable	Disable	Enable	Disable
Default		✓		✓		✓	
Change							

	[119] Redialing after Pulse to Tone Conversion		[125] Toll Restriction Check for ✶ and #	
Selection	Enable	Disable	Enable	Disable
Default		✓	✓	
Change				

	[130] Voice Mail 1 APT Port for KX-TVS50			[131] Voice Mail 2 APT Port for KX-TVS50		
Selection	Port 7	Port 7 & 8	Disable	Port 15	Port 15 & 16	Disable
Default			✓			✓
Change						

[200] Hold Recall Time									
Selection	30 sec	1 min	1.5 min	2 min	3 min	4 min	5 min	6 min	Disable
Default	✓								
Change									

	[201] Transfer Recall Time				[202] Call Forwarding Start Time				[203] Pickup Dial Delay Time			
Selection	15 sec	30 sec	1 min	2 min	5 sec	10 sec	15 sec	20 sec	1 sec	2 sec	3 sec	4 sec
Default		✓					✓				✓	
Change												

[204] Call Duration Count Start Time										
Selection	5 sec	10 sec	15 sec	20 sec	25 sec	30 sec	35 sec	40 sec	45 sec	50 sec	Instantly
Default		✓									
Change											

7   Programming Tables

	[205] Outside-to-Outside (CO-to-CO) Line Duration Time Limit
Selection	1···32 minutes
Default	10 minutes
Change	

	[206] Dialing Start Time						
Selection	0 ms	250 ms	500 ms	750 ms	1000 ms	1250 ms	1500 ms
Default	✓						
Change							

	[208] Interdigit Time			[211] No Dial Disconnection	
Selection	5 sec	10 sec	15 sec	Enable	Disable
Default		✓			✓
Change					

[300] Carrier Code Assignment			
CODE no.	Carrier code (10 digits max.)	CODE no.	Carrier code (10 digits max.)
Default: All	Not stored		
01		11	
02		12	
03		13	
04		14	
05		15	
06		16	
07		17	
08		18	
09		19	
10		20	

[301] Toll Restriction — System Speed Dialing Boundary Class					
Selection	Class-1	Class-2	Class-3	Class-4	Class-5
Default	✓				
Change					

7   Programming Tables

	[302] Toll Restriction – Class 2 Denied Codes	[303] Toll Restriction – Class 3 Denied Codes	[304] Toll Restriction – Class 4 Denied Codes	[305] Toll Restriction – Class 5 Denied Codes
CODE no.	Telephone no. (11 digits)			
Default	All: Not stored			
01				
02				
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

7 Programming Tables

[306] Toll Restriction – Exception Codes			
CODE no.	Telephone no. (11 digits)	CODE no.	Telephone no. (11 digits)
Default	All: Not stored		
01		41	
02		42	
03		43	
04		44	
05		45	
06		46	
07		47	
08		48	
09		49	
10		50	
11		51	
12		52	
13		53	
14		54	
15		55	
16		56	
17		57	
18		58	
19		59	
20		60	
21		61	
22		62	
23		63	
24		64	
25		65	
26		66	
27		67	
28		68	
29		69	
30		70	
31		71	
32		72	
33		73	
34		74	
35		75	
36		76	
37		77	
38		78	
39		79	
40		80	

7   Programming Tables

[309] Emergency Dial Number Set	
CODE no.	Emergency no. (11 digits max.)
Default	Code-01 = 911, Other codes = Not stored
1	
2	
3	
4	
5	

[310] Account Codes			
CODE no.	Account code (4 digits)	CODE no.	Account code (4 digits)
Default	All: Not stored		
01		13	
02		14	
03		15	
04		16	
05		17	
06		18	
07		19	
08		20	
09		21	
10		22	
11		23	
12		24	

7 Programming Tables

[311] Automatic Pause Insertion Codes			
CODE no.	Pause code (7 digits max.)	CODE no.	Pause code (7 digits max.)
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	

[312] Toll Restriction – Station Lock Boundary Class		
	Default	Change
Disable	✓	
COS-2		
COS-3		
COS-4		
COS-5		

7   Programming Tables

	[400] Outside (CO) Line Connection Assignment		[401] Dial Mode			[402] Pulse Speed Selection	
Outside line no.	Selection		Selection			Selection	
	Connect	No Connect	DTMF	Pulse	Call Blocking	Low Speed	High Speed
Default: All	✓		✓			✓	
1							
2							
3							
4							
5							
6							
✳							

	[403] Host PBX Access Codes	[404] Outside (CO) Line Group Assignment	
Outside line no.	Access codes (1 or 2 digits, 8 different codes max.)	Outside line group no. (1···6)	
Default	All: Not stored	Default	Change
1		1	
2		2	
3		3	
4		4	
5		5	
6		6	
✳		—	

7 Programming Tables

Extension jack no.	Outside line 1 Enable	Outside line 1 Disable	Outside line 2 Enable	Outside line 2 Disable	Outside line 3 Enable	Outside line 3 Disable	Outside line 4 Enable	Outside line 4 Disable	Outside line 5 Enable	Outside line 5 Disable	Outside line 6 Enable	Outside line 6 Disable	✶ (All) Enable	✶ (All) Disable
Default: All	✓		✓		✓		✓		✓		✓		✓	
01														
02														
03														
04														
05														
06														
07														
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21														
22														
23														
24														
✶														

Table header: [405] Flexible Outward Dialing Assignment — Day; sub-header "Selection" spans the Outside line columns.

7 Programming Tables

[406] Flexible Outward Dialing Assignment — Night													
Extension jack no.	Outside line 1		Outside line 2		Outside line 3		Outside line 4		Outside line 5		Outside line 6		✶ (All)	
	Selection													
	Enable	Disable	Enable	Disable	Enable	Disable	Enable	Disable	Enable	Disable	Enable	Disable	Enable	Disable
Default: All	✓		✓		✓		✓		✓		✓		✓	
01														
02														
03														
04														
05														
06														
07														
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21														
22														
23														
24														
✶														

7 Programming Tables

Extension jack no.	Outside line 1		Outside line 2		Outside line 3		Outside line 4		Outside line 5		Outside line 6		✷ (All)	
	[407] Flexible Outward Dialing Assignment — Lunch													
	Selection													
	Enable	Disable	Enable	Disable	Enable	Disable	Enable	Disable	Enable	Disable	Enable	Disable	Enable	Disable
Default: All	✓		✓		✓		✓		✓		✓		✓	
01														
02														
03														
04														
05														
06														
07														
08														
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18														
19														
20														
21														
22														
23														
24														
✷														

7 Programming Tables

Extension jack no.	\[408] Flexible Ringing Assignment — Day													
	Outside line 1		Outside line 2		Outside line 3		Outside line 4		Outside line 5		Outside line 6		✳ (All)	
	Selection													
	Enable	Disable	Enable	Disable	Enable	Disable	Enable	Disable	Enable	Disable	Enable	Disable	Enable	Disable
Default: All	✓		✓		✓		✓		✓		✓		✓	
01														
02														
03														
04														
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06														
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21														
22														
23														
24														
✳														

7　Programming Tables

Extension jack no.	\[409\] Flexible Ringing Assignment — Night													
	Outside line 1		Outside line 2		Outside line 3		Outside line 4		Outside line 5		Outside line 6		✷ (All)	
	Selection													
	Enable	Disable	Enable	Disable	Enable	Disable	Enable	Disable	Enable	Disable	Enable	Disable	Enable	Disable
Default: All	✓		✓		✓		✓		✓		✓		✓	
01														
02														
03														
04														
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22														
23														
24														
✷														

7   Programming Tables

Extension jack no.	Outside line 1		Outside line 2		Outside line 3		Outside line 4		Outside line 5		Outside line 6		✷ (All)	
	Selection													
	Enable	Disable	Enable	Disable	Enable	Disable	Enable	Disable	Enable	Disable	Enable	Disable	Enable	Disable
Default: All	✓		✓		✓		✓		✓		✓		✓	
01														
02														
03														
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24														
✷														

[410] Flexible Ringing Assignment — Lunch

7   Programming Tables

Extension jack no.	\[411\] Delayed Ringing Assignment — Day																											
	Outside line 1				Outside line 2				Outside line 3				Outside line 4				Outside line 5				Outside line 6				✳ (All)			
	Selection (I: Immediately, 5: 5 seconds delay, 10: 10 seconds delay, 15: 15 seconds delay)																												
	I	5	10	15	I	5	10	15	I	5	10	15	I	5	10	15	I	5	10	15	I	5	10	15	I	5	10	15
Default: All	✓				✓				✓				✓				✓				✓				✓			
01																												
02																												
03																												
04																												
05																												
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24																												
✳																												

7   Programming Tables

Extension jack no.	Outside line 1				Outside line 2				Outside line 3				Outside line 4				Outside line 5				Outside line 6				✳ (All)			
	Selection (I: Immediately, 5: 5 seconds delay, 10: 10 seconds delay, 15: 15 seconds delay)																											
	I	5	10	15	I	5	10	15	I	5	10	15	I	5	10	15	I	5	10	15	I	5	10	15	I	5	10	15
Default: All	✓				✓				✓				✓				✓				✓				✓			
01																												
02																												
03																												
04																												
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20																												
21																												
22																												
23																												
24																												
✳																												

[412] Delayed Ringing Assignment — Night

7 Programming Tables

Extension jack no.	Outside line 1				Outside line 2				Outside line 3				Outside line 4				Outside line 5				Outside line 6				✳ (All)			
	— Selection (I: Immediately, 5: 5 seconds delay, 10: 10 seconds delay, 15: 15 seconds delay)																											
	I	5	10	15	I	5	10	15	I	5	10	15	I	5	10	15	I	5	10	15	I	5	10	15	I	5	10	15
Default: All	✓				✓				✓				✓				✓				✓				✓			
01																												
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[413] Delayed Ringing Assignment — Lunch

7 Programming Tables

	[414] Outside (CO) Line Mode — Day					[415] Outside (CO) Line Mode — Night					[416] Outside (CO) Line Mode — Lunch				
Outside line no.	Selection — N: Normal, DIL + Extension jack no. (01···24), D1: DISA1, D2: DISA2															
	N	DIL	Extn. no.	D1	D2	N	DIL	Extn. no.	D1	D2	N	DIL	Extn. no.	D1	D2
Default: All	✓					✓					✓				
1															
2															
3															
4															
5															
6															
✳															

	[417] Pause Time				[418] Flash Time						
Outside line no.	Selection (seconds)				Selection (milliseconds)						
	1.5	2.5	3.5	4.5	80	100	160	300	600	900	1200
Default: All	✓								✓		
1											
2											
3											
4											
5											
6											
✳											

	[419] Automatic Designated Outside (CO) Line Access		[420] Calling Party Control (CPC) Signal	[421] CPC Detection for Outgoing Calls	
Outside line no.	Selection		Selection: 00 (Disable), 01 (22 msec)···75 (614 msec)	Selection	
	Enable	Disable		Enable	Disable
Default: All	✓		42 (350 milliseconds)		✓
1					
2					
3					
4					
5					
6					
✳					

7   Programming Tables

	[422] Disconnect Time			[423] Outside (CO) Line Ringing Pattern Selection		
Outside line no.	Selection (seconds)			Selection		
	0.5	1.5	4.0	Single	Double	Triple
Default: All		✓		✓		
1						
2						
3						
4						
5						
6						
✳						

	[500] DISA Incoming Dialing Mode Selection		[502] OGM Mode Selection		[503] FAX Connection
Selection	Without AA	With AA	MODE 1	MODE 2	Extension jack no. (01···24) / Disable
Default	✓		✓		Disable
Change					

	[501] DISA Built-in Auto Attendant	
Auto attendant no.	Selection	
	Jack: Extension jack no. (01···24)	GRP: Ring group no. (1···8)
Default	All: Not stored	
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		

	[504] DISA Delayed Answer Time				[505] DISA Waiting Time after OGM			
Selection	0 sec	3 sec	6 sec	12 sec	0 sec	5 sec	10 sec	15 sec
Default		✓				✓		
Change								

	[506] DISA Busy Mode			[507] DISA Intercept Mode		[508] DISA Ringing Time before Intercept					
Selection	Disconnect	Call Waiting	DISA 2	Intercept	Disconnect	10 sec	20 sec	30 sec	40 sec	60 sec	120 sec
Default	✓			✓			✓				
Change											

	[509] DISA Ringing Time after Intercept						[510] DISA No Dial Mode			
							DISA 1		DISA 2	
Selection	10 sec	20 sec	30 sec	40 sec	60 sec	120 sec	Intercept	Disconnect	Intercept	Disconnect
Default		✓					✓		✓	
Change										

	[511] DISA Security Type			[512] DISA Security Codes				[513] Cyclic Tone Detection			
Selection	Trunk	All	None	0···9, 4 digit				Disable	2 Times	3 Times	4 Times
Default	✓			All codes = Not stored							✓
Change				CODE=01	CODE=02	CODE=03	CODE=04				

	[514] FAX Tone Detection		[515] Intercept Time for Internal DISA			[517] DISA AA Wait Time				
Selection	1 Time	2 Times	3 sec	6 sec	9 sec	1 sec	2 sec	3 sec	4 sec	5 sec
Default	✓		✓				✓			
Change										

[516] DISA Incoming Assignment								
Extension jack no.	Selection		Extension jack no.	Selection		Extension jack no.	Selection	
	Enable	Disable		Enable	Disable		Enable	Disable
Default: All	✓		09			18		
01			10			19		
02			11			20		
03			12			21		
04			13			22		
05			14			23		
06			15			24		
07			16			✳		
08			17					

7 Programming Tables

	[518] DISA Tone Selection after the Security Code	
Selection	Enable	Disable
Default	✓	
Change		

Extension jack no.	[601] TRS – Class of Service (COS) Assignment — Day					[602] TRS – Class of Service (COS) Assignment — Night					[603] TRS – Class of Service (COS) Assignment — Lunch				
	COS no. (1···5)					COS no. (1···5)					COS no. (1···5)				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Default: All	✓					✓					✓				
01															
02															
03															
04															
05															
06															
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7 Programming Tables

Extension jack no.	[605] Account Code Entry Mode				[606] Call Transfer to Outside (CO) Line	
	Selection				Selection	
	Option	Forced	Verify-All	Verify-Toll	Enable	Disable
Default: All	✓					✓
01						
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
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✳						

7　Programming Tables

Extension jack no.	[607] Call Forwarding to an Outside (CO) Line Selection		[608] Executive Busy Override Selection		[609] Do Not Disturb Override Selection		[610] Paralleled Telephone Connection Selection	
	Enable	Disable	Enable	Disable	Enable	Disable	Enable	Disable
Default: All		✓		✓		✓		✓
01								
02								
03								
04								
05								
06								
07								
08								
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11								
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7 Programming Tables

Extension jack no.	[611] TAM Extension		[612] Room Monitor Assignment		[617] Wireless PT Port Assignment	
	Selection		Selection		Selection	
	Enable	Disable	Enable	Disable	Not Connect	Connect
Default: All		✓		✓	✓	
01						
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
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✳						

7   Programming Tables

Extension jack no.	[700] Doorphone Ringing Assignment — Day								[701] Doorphone Ringing Assignment — Night								[702] Doorphone Ringing Assignment — Lunch							
	1···4: Doorphone no., E: Enable / D: Disable																							
	1		2		3		4		1		2		3		4		1		2		3		4	
	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	✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓	
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7 Programming Tables

Extension jack no.	[703] Door Opener Assignment — Day								[704] Door Opener Assignment — Night								[705] Door Opener Assignment — Lunch							
	1···4: Door opener no., E: Enable / D: Disable																							
	1		2		3		4		1		2		3		4		1		2		3		4	
	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	✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓	
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7   Programming Tables

	[706] Doorphone Ringing / Tone Pattern Selection				[707] Doorphone Access Tone Selection		[708] Doorphone Ringing Time	
Doorphone no.	Selection				Selection		Selection	
	Single	Double	Triple	S-Double	Enable	Disable	15 sec	30 sec
Default: All			✓		✓		✓	
1								
2								
3								
4								
✳								

[709] Door Opener Time								
Door opener no.	Selection							
	1 sec	2 sec	3 sec	4 sec	5 sec	6 sec	7 sec	8 sec
Default: All					✓			
1								
2								
3								
4								
✳								

[800] SMDR RS-232C Communication Parameters																			
Selection	New line code		Baud rate							Word length		Parity bit					Stop bit	
	CR+LF	CR	150	300	600	1200	2400	4800	9600	7	8	Mark	Space	Even	Odd	None	1	2
Default	✓								✓		✓	✓					✓	
Change																		

[801] SMDR Parameter		
	Default	Selection
Page length (4···99)	66	
Skip perforation (0···95)	0	

[802] Incoming/Outgoing Call Selection for Printing		Default	Selection
Incoming calls	On	✓	
	Off		
Outgoing calls	On	✓	
	Off		
	Toll		

7   Programming Tables

	[803] Secret Speed Dialing / One-Touch Dialing Printing		[805] SMDR Account Code Selection	
Selection	No Printing	Printing	CODE	INDEX
Default	✓		✓	
Change				

[900] Caller ID Assignment									
Selection	Default	Outside (CO) line no. (1···6, ✻ : All)							
	All	1	2	3	4	5	6	✻	
Enable									
Disable	✓								

[901] Caller ID Area Code Assignment	
CODE no.	Parameter: 6 digits max., 0 – 9
Default	All: Not stored
1	
2	
3	
4	
5	

	[902] Caller ID Modification for Local Calls		[903] Caller ID Modification for Long Distance Calls	
Selection	Default	Change	Default	Change
Number of digits to be deleted (0···9, 0: no deletion)	3		0	
Number to be added (4 digits max.)	blank (not stored)		1	

7   Programming Tables

[904] Caller ID Log Priority Selection					
Extension jack no.	Selection		Extension jack no.	Selection	
	Number	Name		Number	Name
Default: All		✓	13		
01			14		
02			15		
03			16		
04			17		
05			18		
06			19		
07			20		
08			21		
09			22		
10			23		
11			24		
12					

[906] Caller ID SMDR Format		
Selection	Without CID	With CID
Default		✓
Change		

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