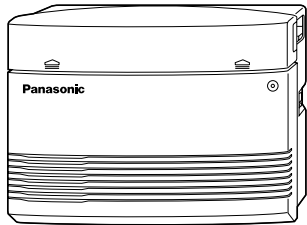


Panasonic



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-T7135	Proprietary telephone with backlit display
	KX-T7130	Proprietary telephone with display
	KX-T7020	Proprietary telephone
	KX-T7030	Proprietary telephone with display
	KX-T7050	Proprietary telephone
	KX-T7055	Proprietary telephone
Optional Equipment	KX-TA62460	Doorphone/Door Opener Card
	KX-TA62470	8 Extension Expansion Card
	KX-TA62477	3 CO Line and 8 EXT Expansion Card
	KX-TA62491	OGM/FAX Detection Card
	KX-TA62493	Caller ID Card
	KX-T30865	Doorphone

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 7 Programming Tables

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 with display. A PC is not required.

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

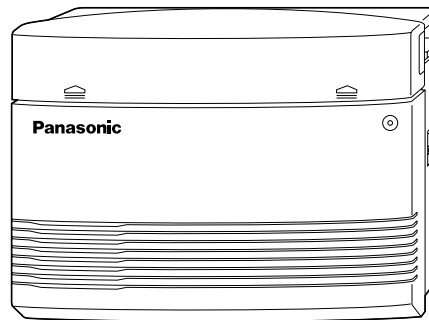
Allows an operator or manager to lock an extension so that outgoing calls cannot be made.

OGM/FAX Detection

The system greets callers with an Outgoing Message so that they know what to dial. Also, fax calls can be routed to your fax machine automatically.

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-T7135	Backlit Display, Speakerphone, 12 Flexible CO, 12 PF
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)

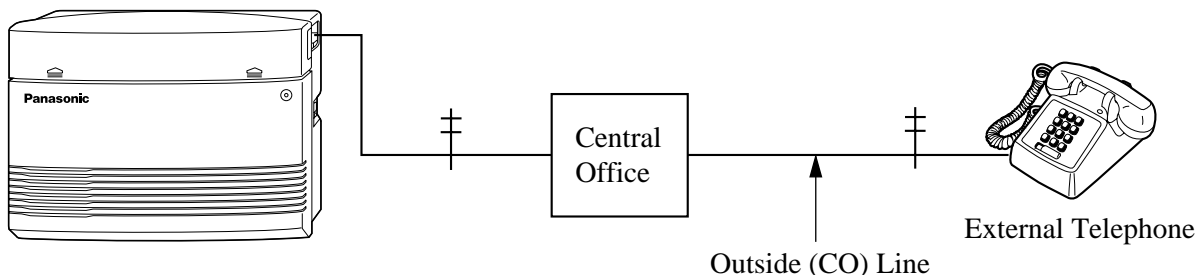
This card supports the following. There are two circuits, therefore up to two calls can be received simultaneously.

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.

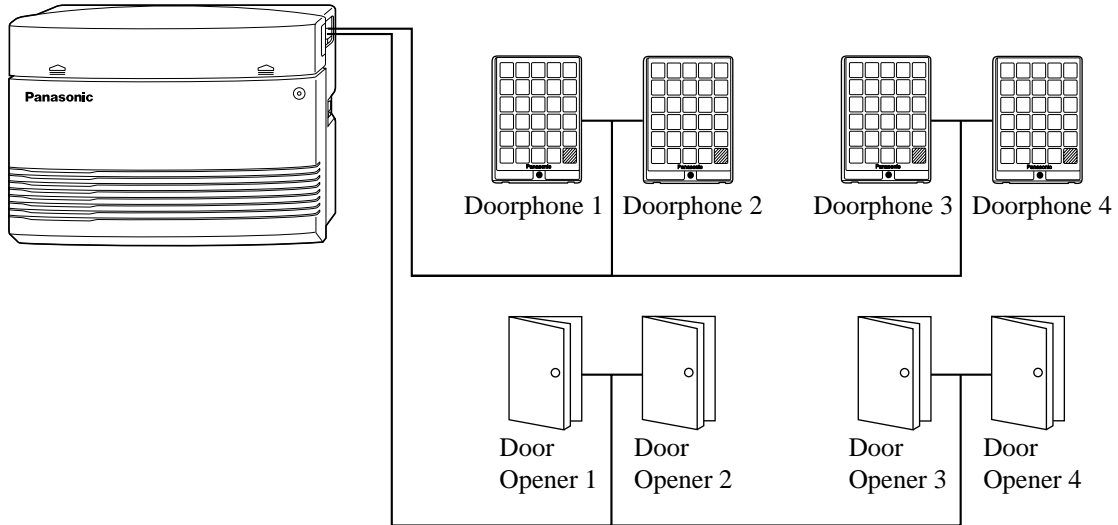
Facsimile detection:

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



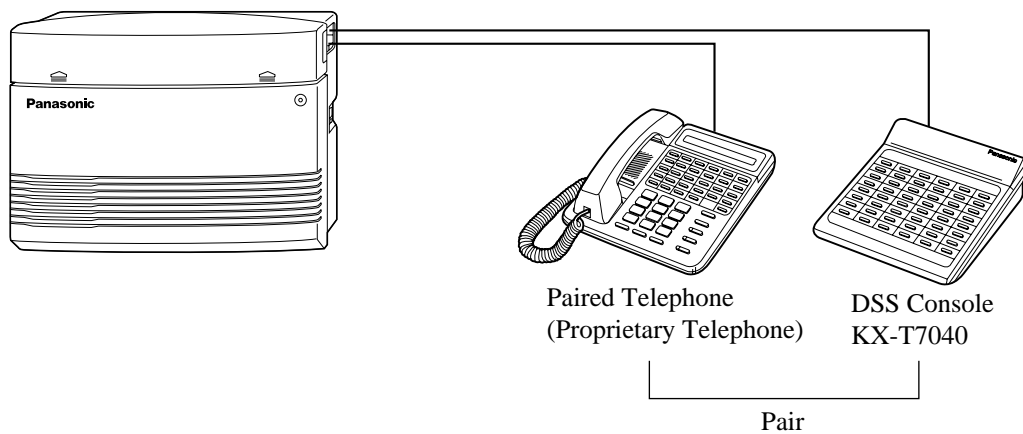
1.4.5 Doorphone/Door Opener Card (KX-TA62460)

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



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.



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
Power Consumption	45 W (When power is off by the Power Switch: 1.2 W)	
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, ϕ 3.5 mm in diameter)

Extension Connection Cable

Single Line Telephone	1 pair wire (T, R)
KX-T7020	2 pair wire (T, R, H, L)
KX-T7030	
KX-T7050	
KX-T7055	
KX-T7130	
KX-T7135	

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 / KX-T7135 40 Ω Single Line Telephone 600 Ω including set Doorphone 20 Ω
Minimum Leakage Resistance	15 000 Ω
Maximum Number of Station Instruments per Line	1 for a KX-T7135, 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 Ω max.
Environmental Requirements	0 $^{\circ}\text{C}$ – 40 $^{\circ}\text{C}$ {32 $^{\circ}\text{F}$ – 104 $^{\circ}\text{F}$ }, 10 % – 90 % relative humidity
Hookswitch Flash Time Range	204 ms – 1 000 ms
Door Opener	30 V DC, 5 A (Max) / 120 V AC, 5 A (Max)
Dimensions (H \times W \times D)	284 mm \times 368 mm \times 95 mm {11 $\frac{1}{8}$ " \times 14 $\frac{1}{2}$ " \times 3 $\frac{3}{4}$ "}
Mass (Weight)	Approx. 2.5 kg {5.6 lb}

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).

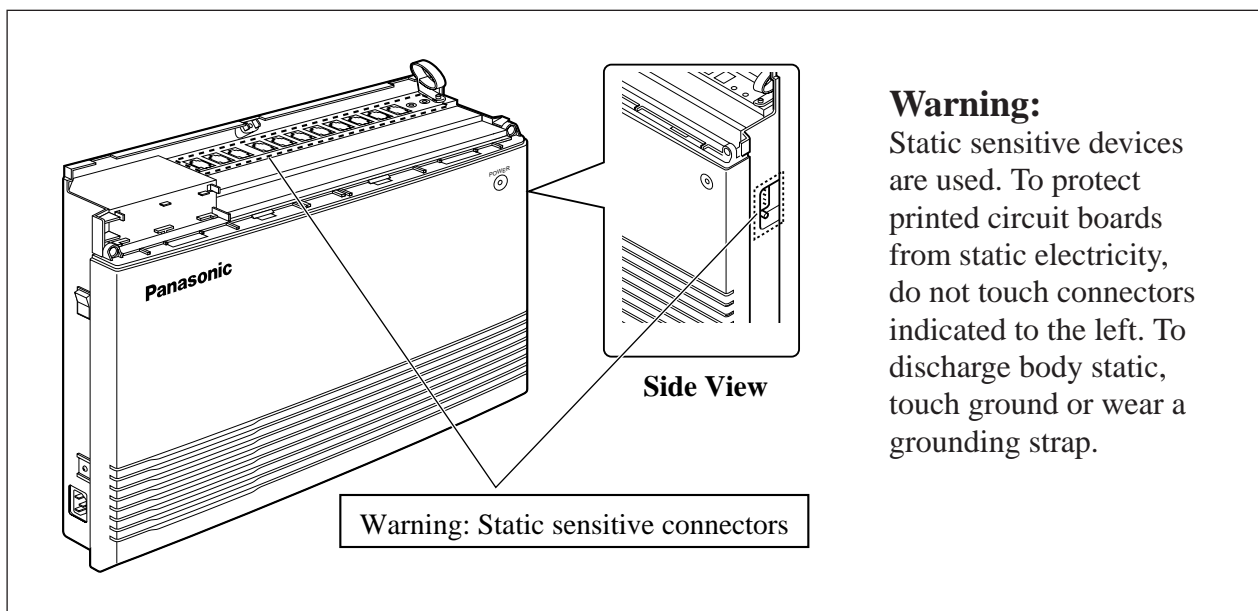
Wiring Precautions

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”.



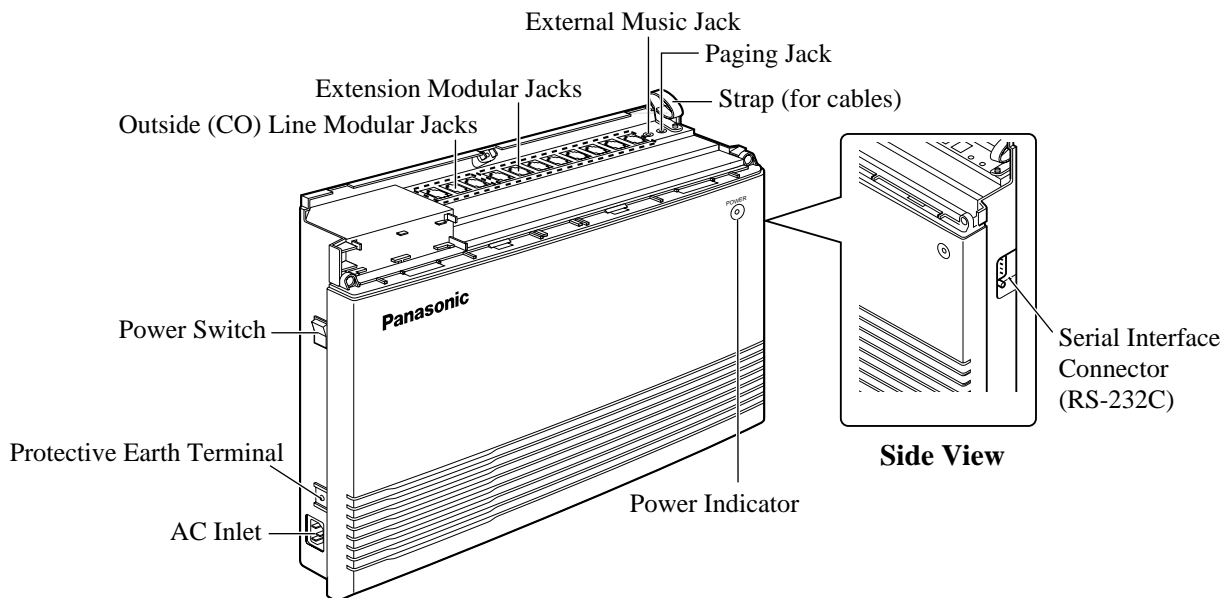
2.2 Installation of the Main Unit

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

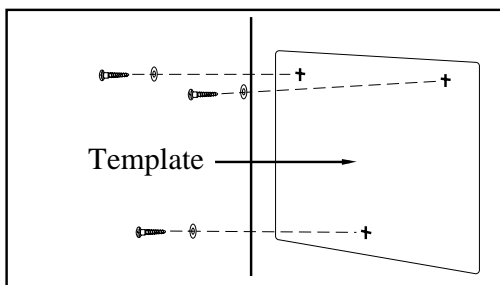


2.2.3 Wall Mounting

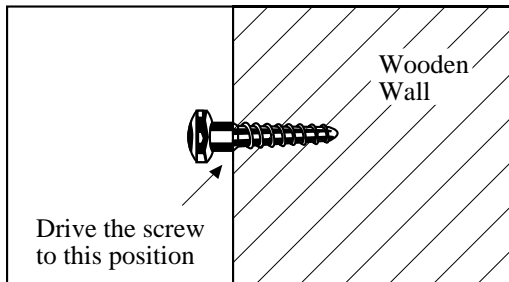
This set is designed for wall mounting only. The wall where the main unit is to be mounted must be able to support the weight of the main unit. If screws other than the ones supplied are used, use screws with the same diameter as the ones enclosed.

Mounting on a Wooden Wall

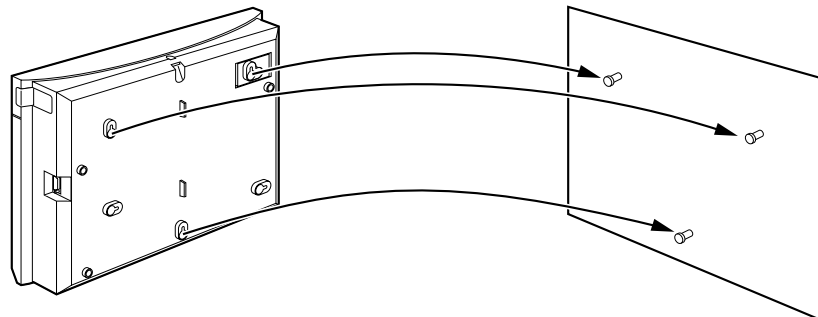
1. Place the template (included) on the wall to mark the screw positions.



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

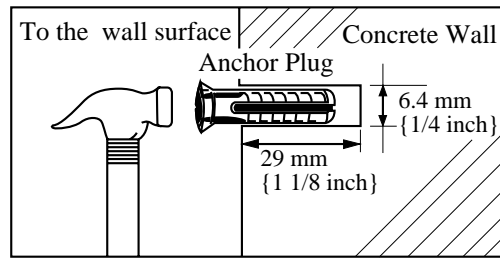


3. Hook the main unit on the screw heads.

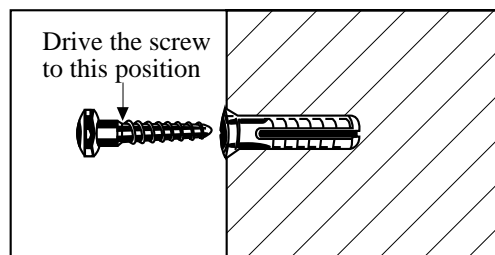


Mounting on a Concrete or Mortar Wall

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.



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



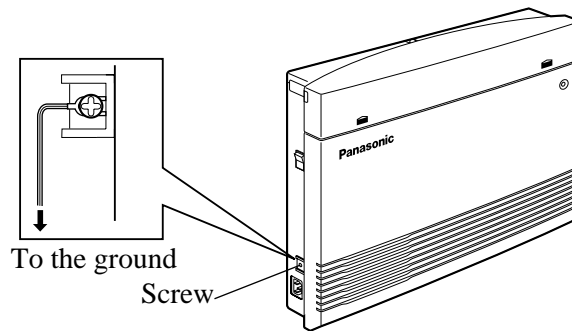
4. Hook the main unit on the screw heads.

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.



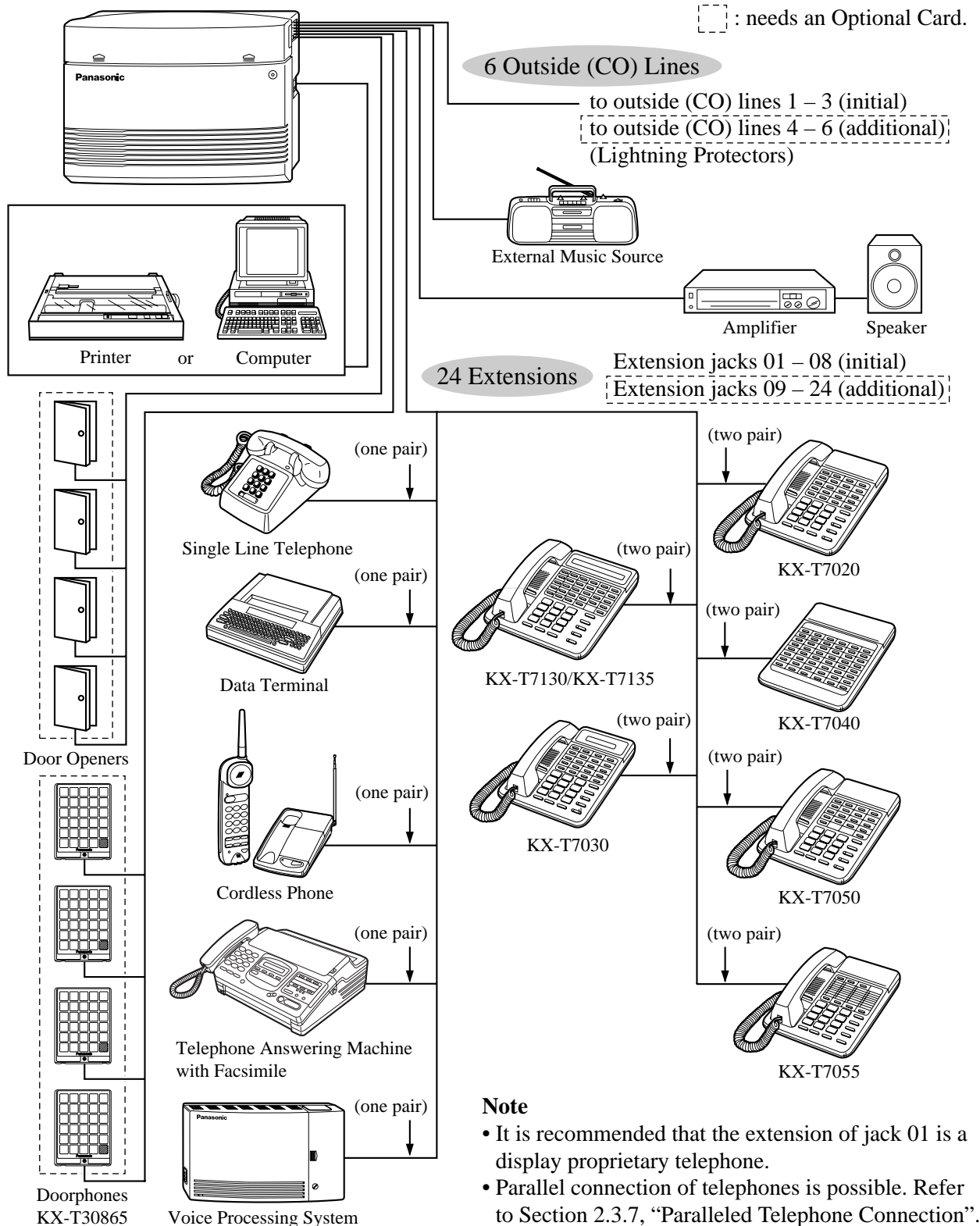
In most of North America, the ground provided by the “Third wire ground” at the commercial or residential power outlet will be satisfactory. However, in some cases this ground may be installed incorrectly. Therefore, the following test procedure should be performed.

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.

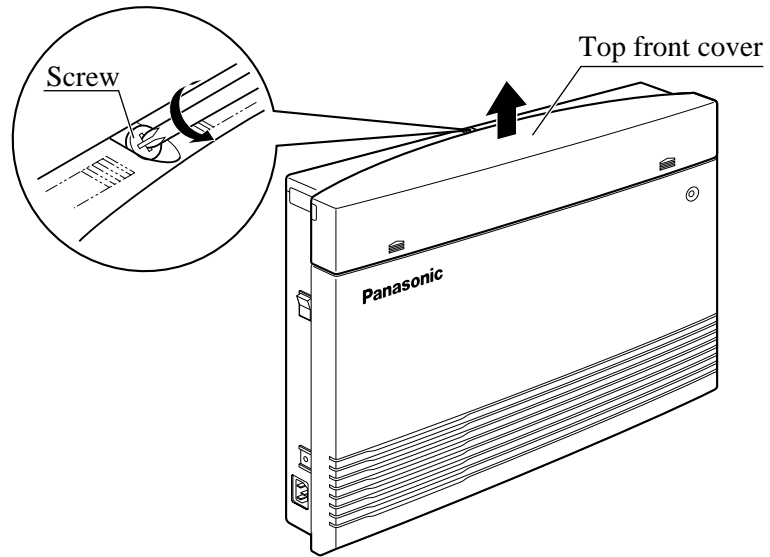
2.3 Connection

2.3.1 System Connection Diagram



2.3.2 Opening the Front Cover

1. Loosen the screw.
2. Remove the top front cover.

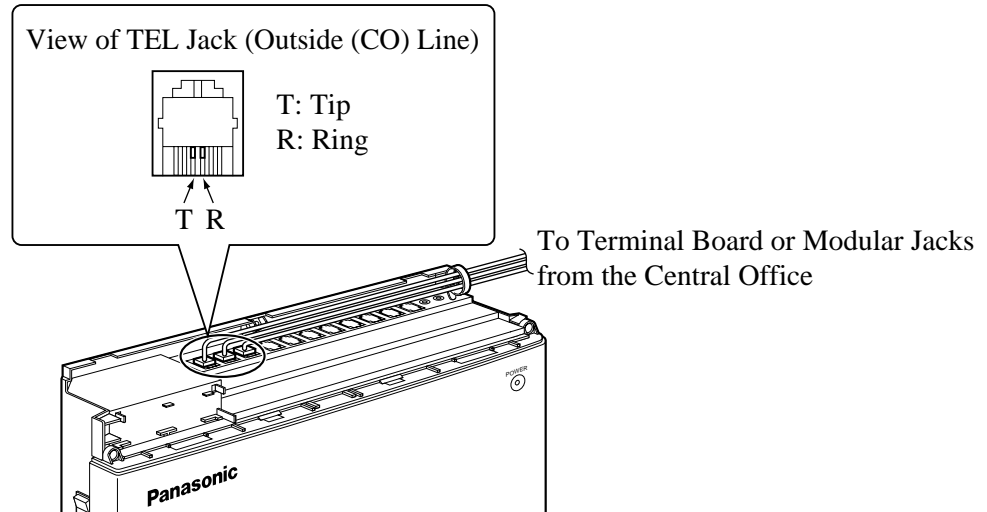


Note The screw cannot be removed from the cover.

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.



2.3.3 Outside (CO) Line Connection

Installing Lightning Protectors

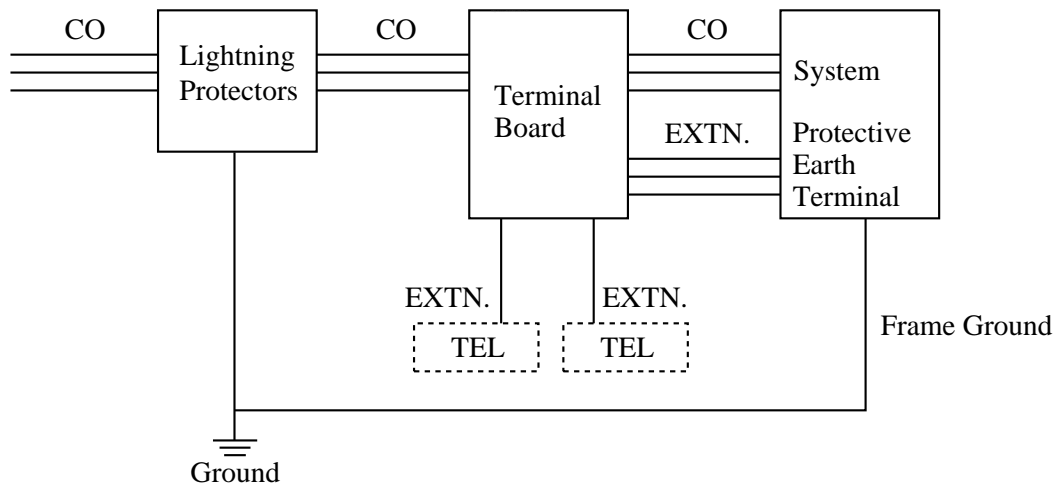
A lightning protector is a device to be installed on an outside (CO) line to prevent a dangerous surge from entering the building and damaging the equipment.

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

2.3.4 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: 600 Ω including set)	24 AWG	1128 m { 3700 feet }
Proprietary Telephone	22 AWG	360 m { 1180 feet }
(Station Loop Limit: 40 Ω)	24 AWG	229 m { 750 feet }
	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

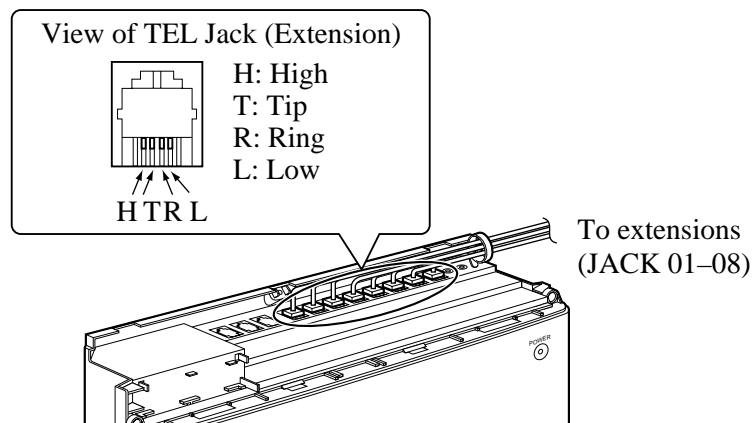
- **If a KX-TA62493 is installed;**

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.



2.3.5 External Pager (Paging Equipment) Connection

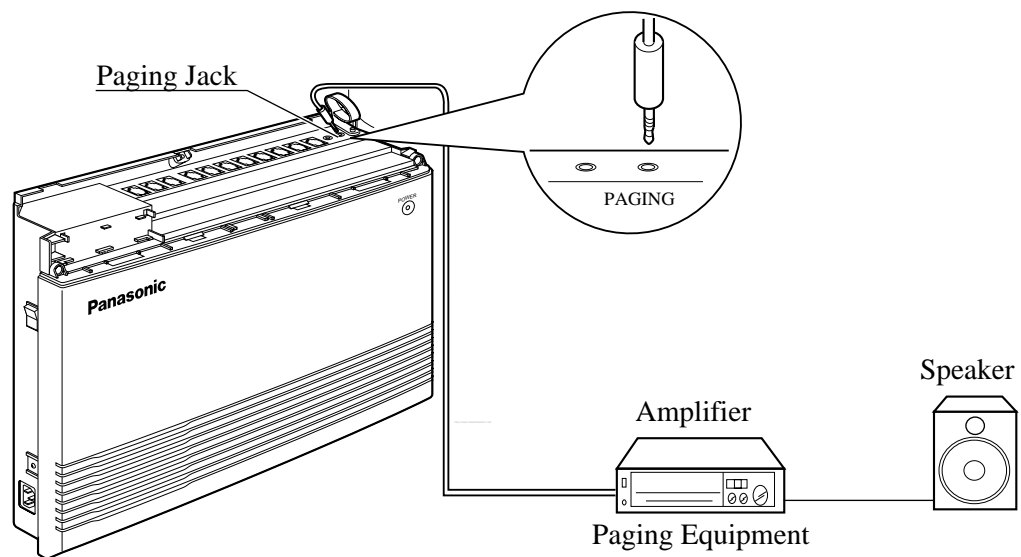
One external pager (user-supplied) can be connected to the KX-TA624 as illustrated below.

Use an EIAJ RC-6701 A plug (two-conductor, \varnothing 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.

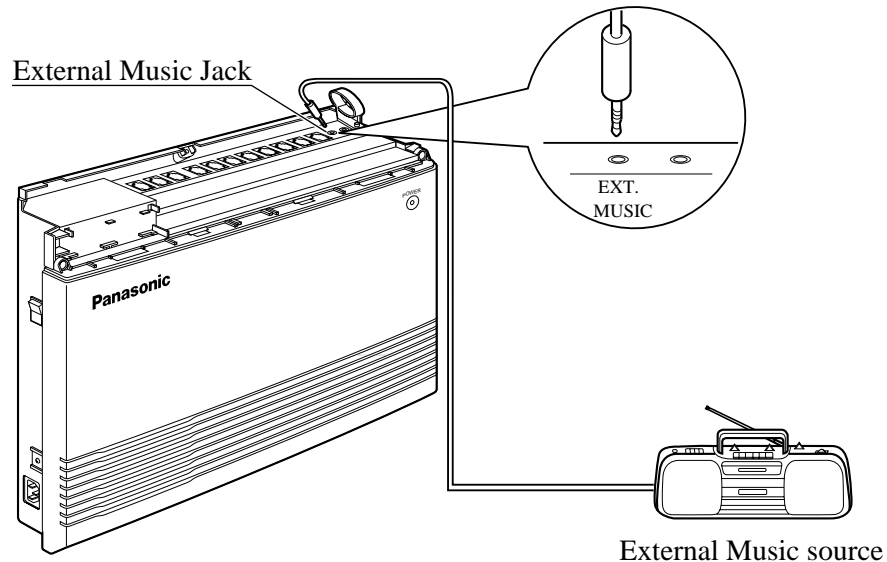
Insert the plug to the earphone/headphone jack on the external music source.

Use an EIAJ RC-6701 A plug (two-conductor, \varnothing 3.5 mm in diameter).

- Input impedance: 8 Ω

Maximum length of the cable

AWG 18 – 22: Under 10 m {33 feet}



- 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

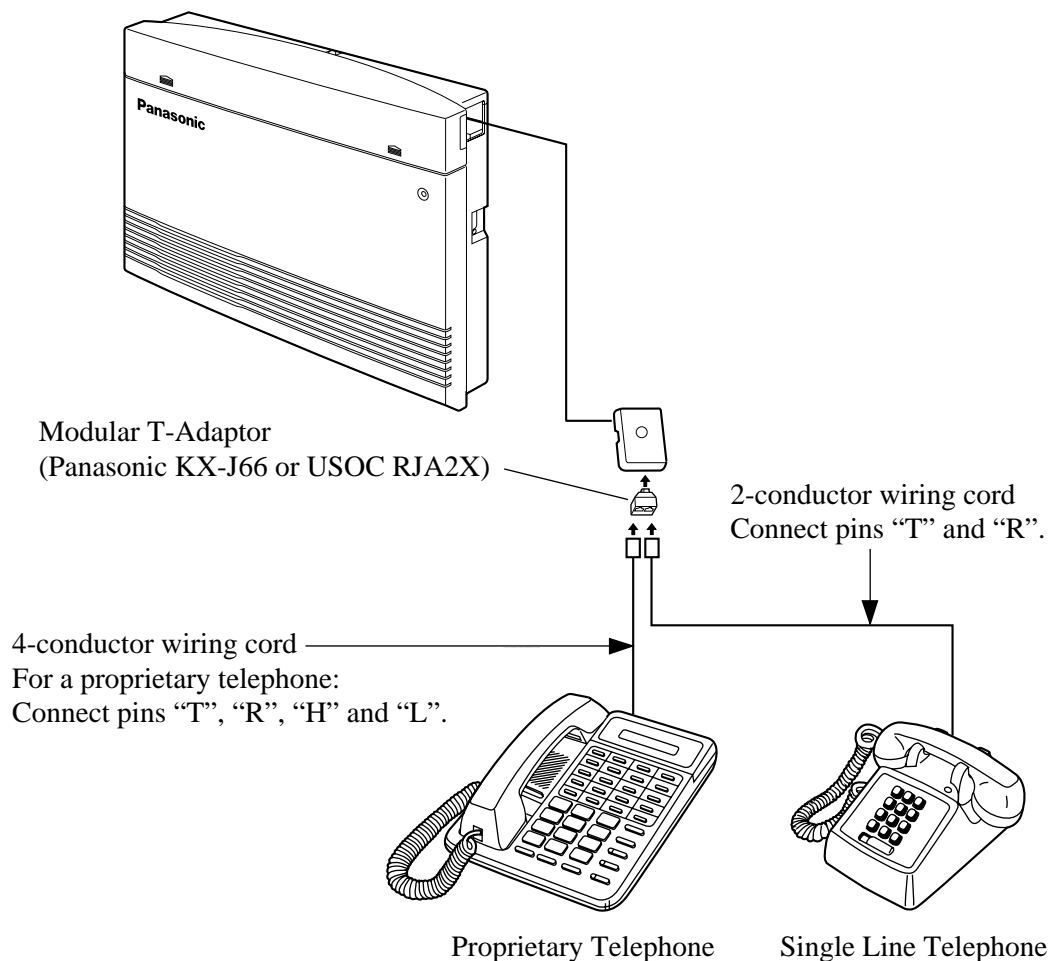
Background Music (BGM)

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



Programming Reference

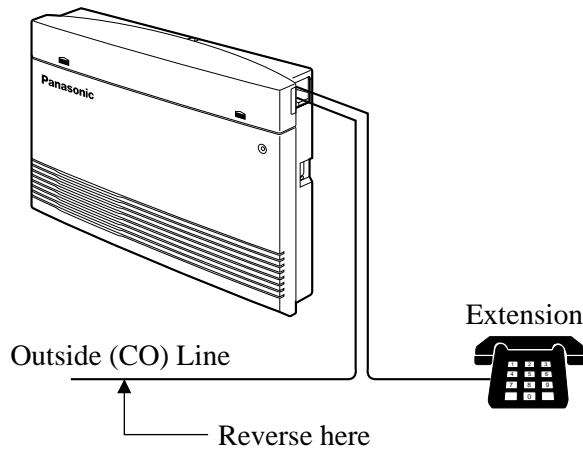
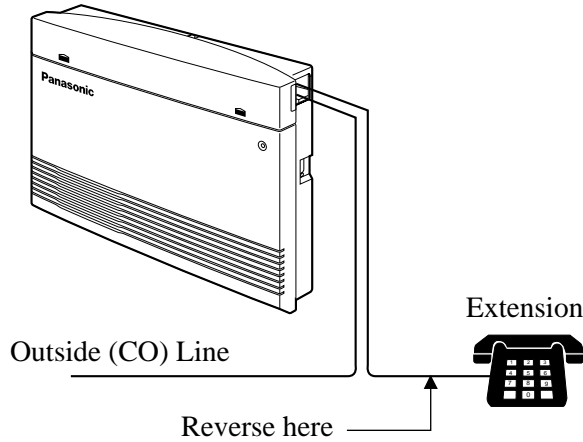
Section 4, System Programming
[610] Paralleled Telephone Connection

Feature Reference

Section 3, Features
Paralleled Telephone

2.3.8 Polarity Sensitive Telephone Connection

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

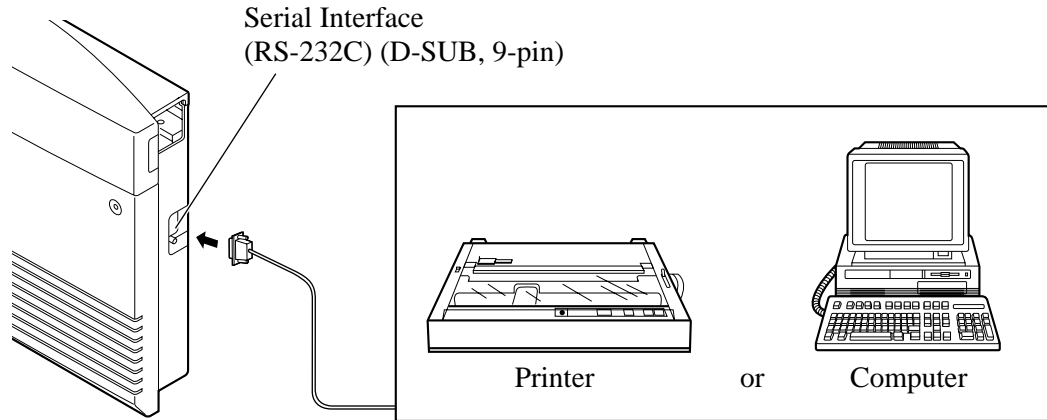


1. Complete all the required extension wiring.
2. Confirm that dialing can be done from all the extensions using a touchtone telephone.
If dialing fails, the polarity between the extension and the system must be reversed.
3. Reverse as shown.
4. Unplug the system.
5. Connect all outside (CO) lines.
6. Confirm that dialing can be done on the following extension using a touchtone 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}.



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

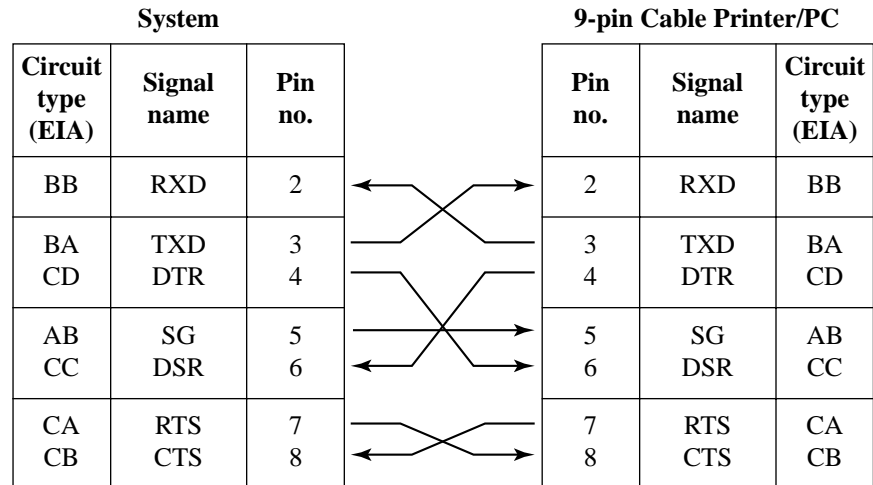
The pin configuration of the Serial Interface (RS-232C) Connector is as follows.

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

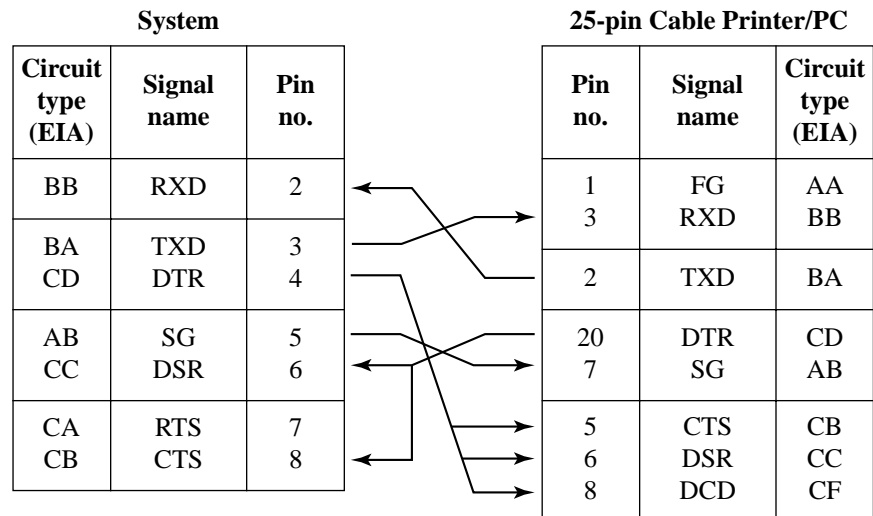
2.3.9 Printer and PC Connection

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.



If a printer or a PC with a 25-pin cable is connected, follow the chart below.



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

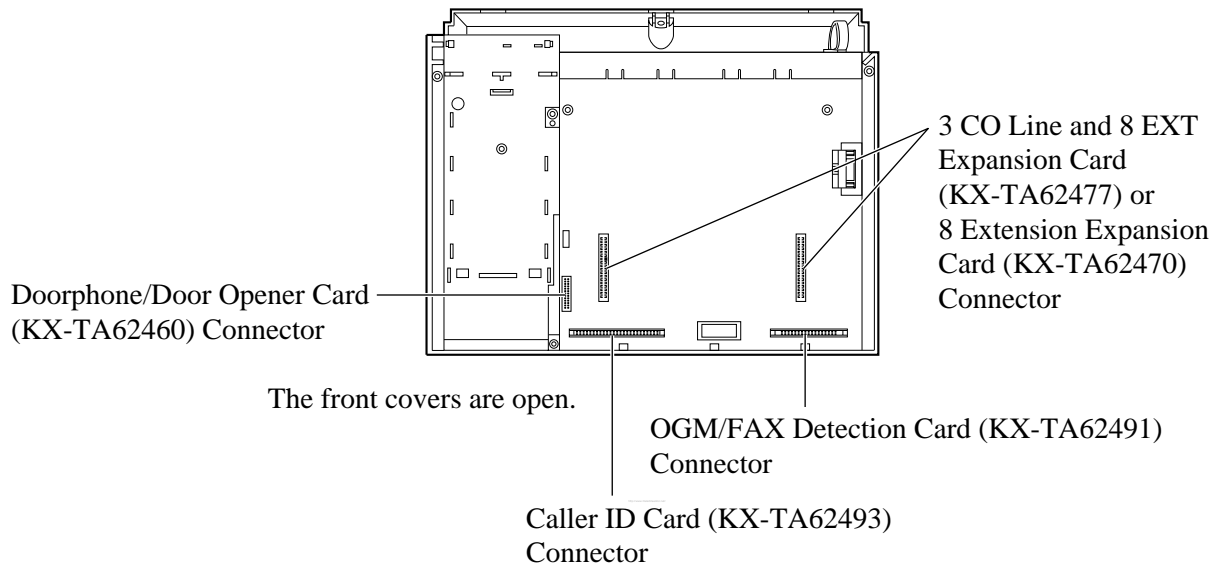
Station Message Detail Recording (SMDR)

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.



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.

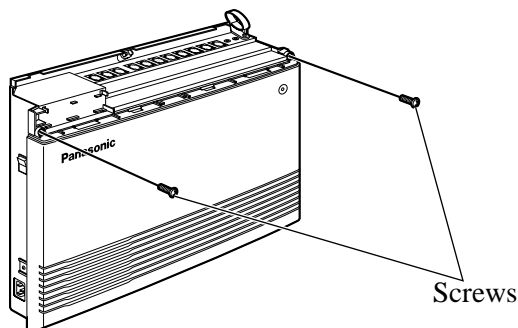
Direct Inward System Access (DISA) with an OGM:

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.

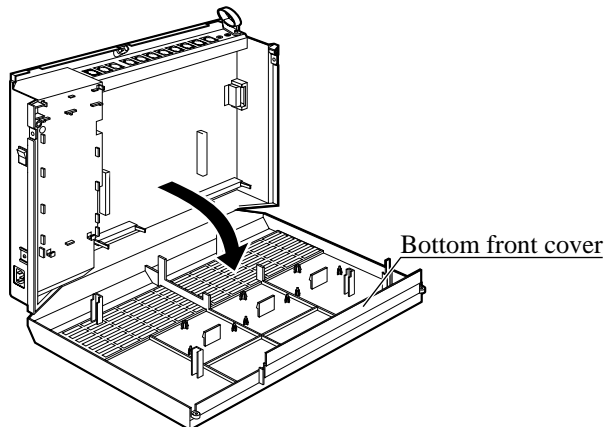
Facsimile detection:

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

1. Remove the two screws.

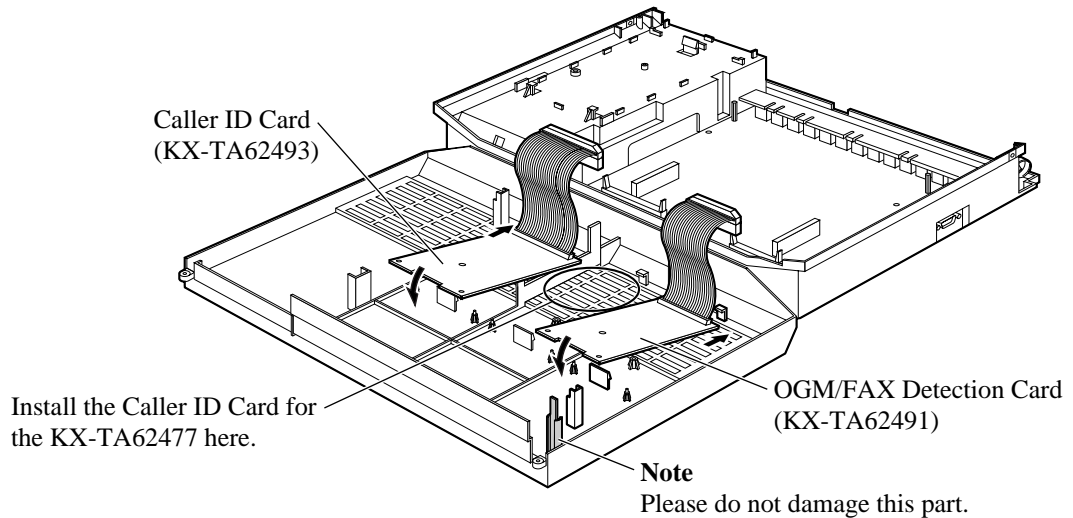


2. Open the bottom front cover.

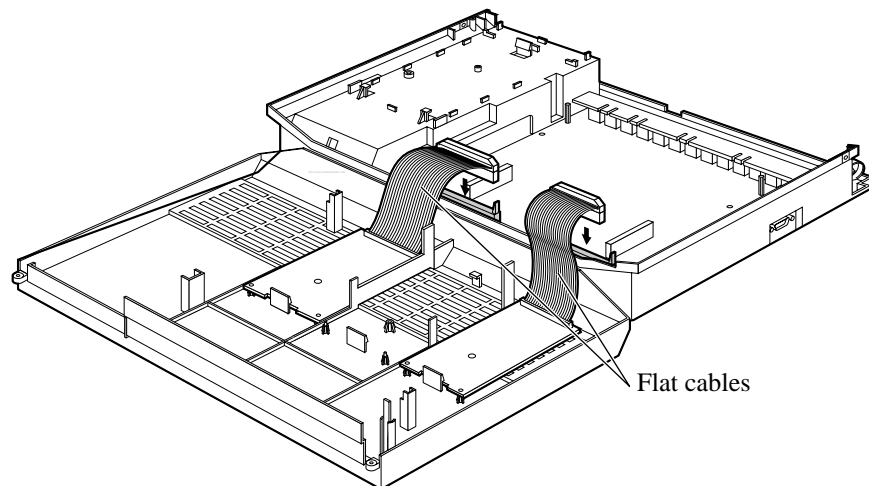


2.4.2 Caller ID and OGM/FAX Detection Card Installation

3. Attach the optional cards.



4. Insert the flat cables to each card connector.



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

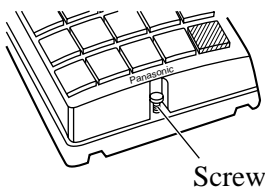
Four doorphones (KX-T30865) and four door openers (user-supplied) can be installed.

Maximum cable length

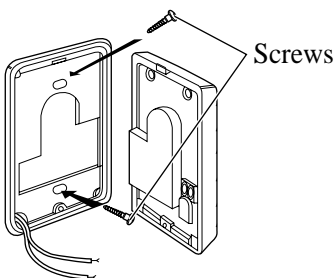
The maximum length of the doorphone and door opener line cord which connects the system is as follows.

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

Installing the Doorphone





1. Loosen the screw to open the doorphone unit.



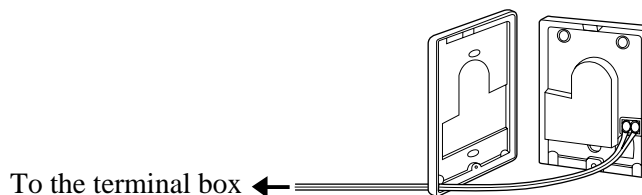
2. Attach the base cover to a wall using two screws.

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.

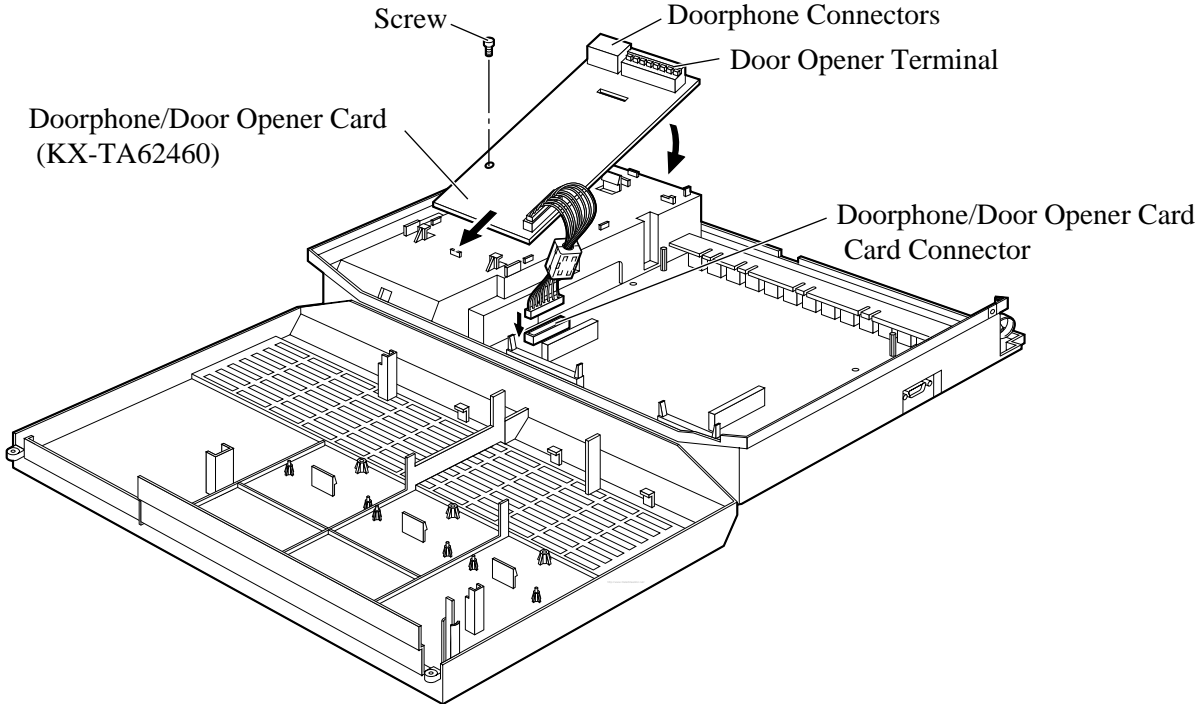


4. Put the doorphone together and re-install the screw.

2.4.3 Doorphone and Door Opener Connection

Doorphone/Door Opener Installation

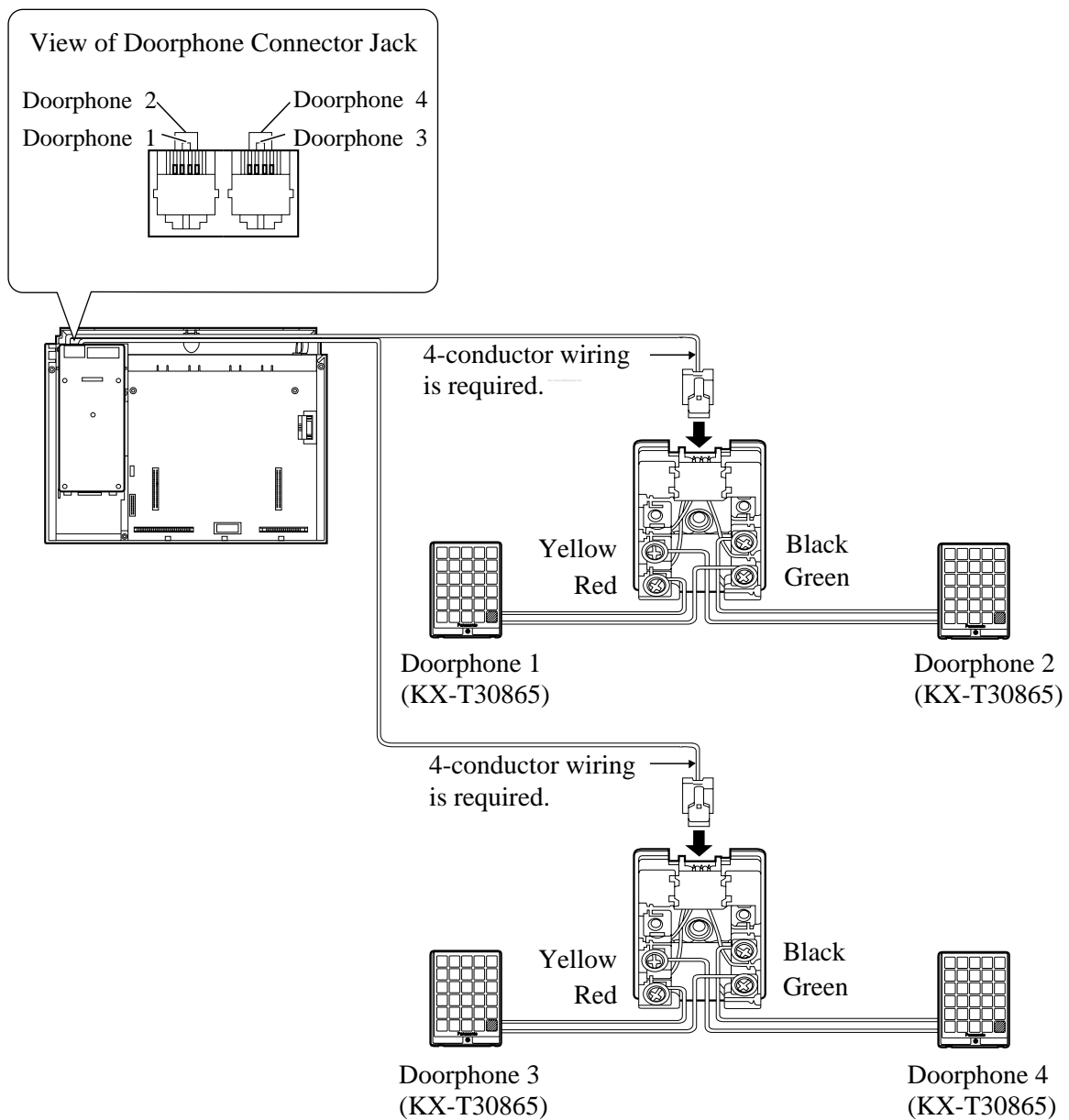
Attach the Doorphone/Door Opener Card to the main unit, connect the cord to the doorphone/door opener card connector and secure the screw.



2.4.3 Doorphone and Door Opener Connection

Wiring of the Doorphone

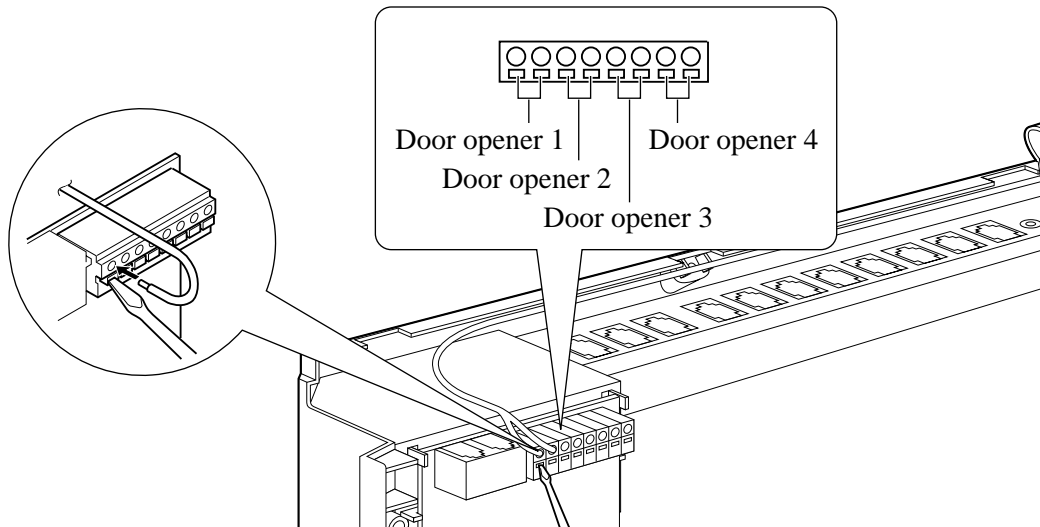
1. Connect the Doorphone/Door Opener Card to the terminal boxes using 4-conductor modular connectors.
2. Connect the wires of doorphones 1 and 3 to the red and green screws on the terminal box.
3. Connect the wires of doorphones 2 and 4 to the yellow and black screws on the terminal box.



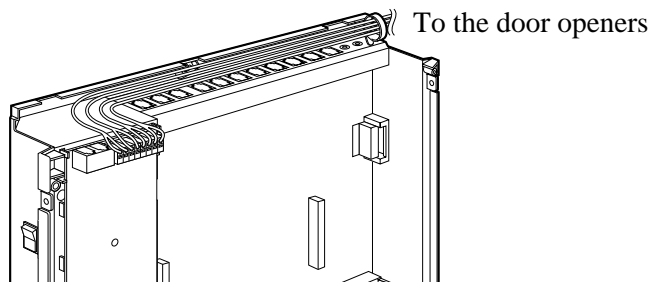
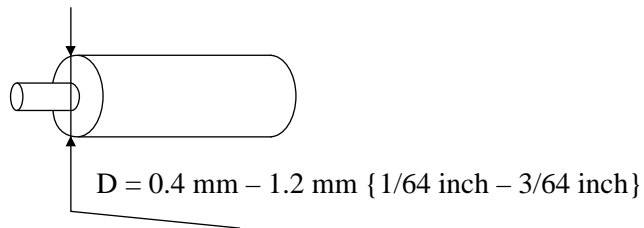
2.4.3 Doorphone and Door Opener Connection

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.



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).

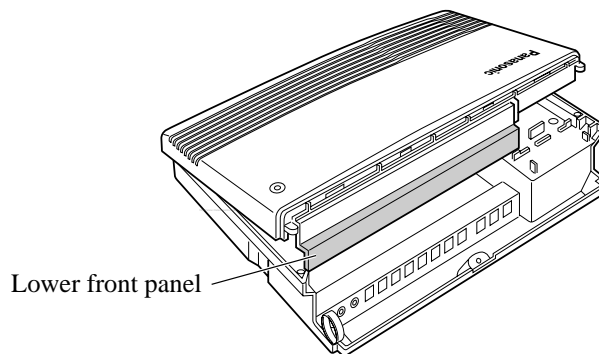
8 Extension Expansion Card Installation (KX-TA62470)

To add eight extensions (JACK 17 through 24), use an optional 8 Extension Expansion card (KX-TA62470).

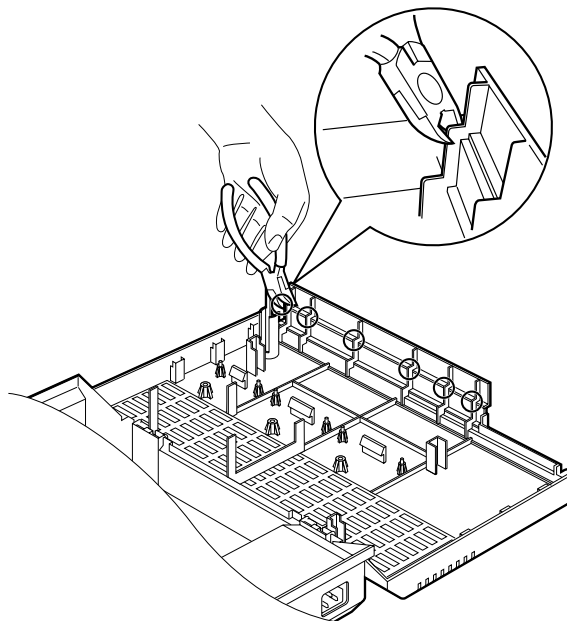
This card can be installed directly to the system or to the KX-TA62477.

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.

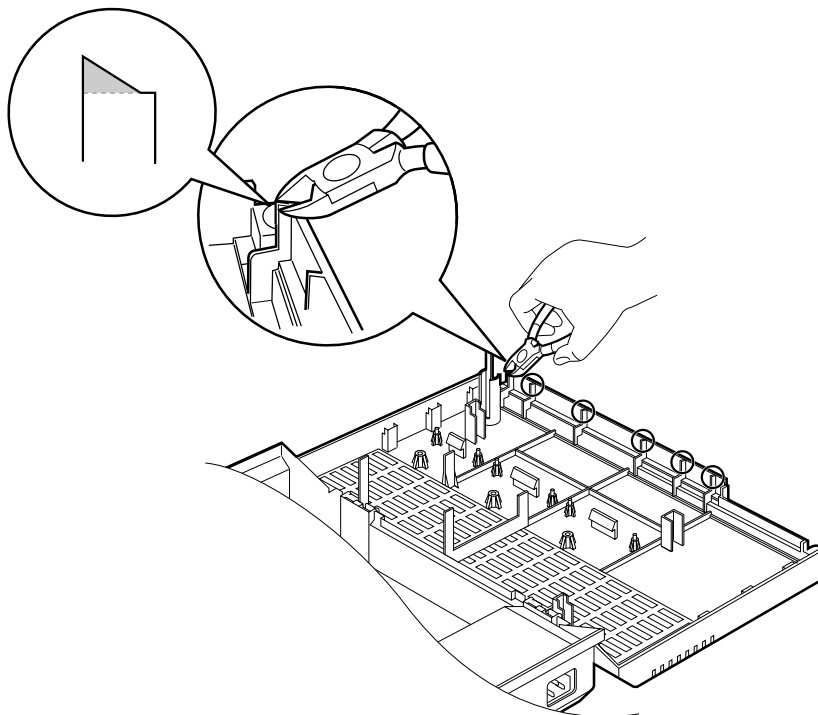


Cut the six areas marked with a circle.



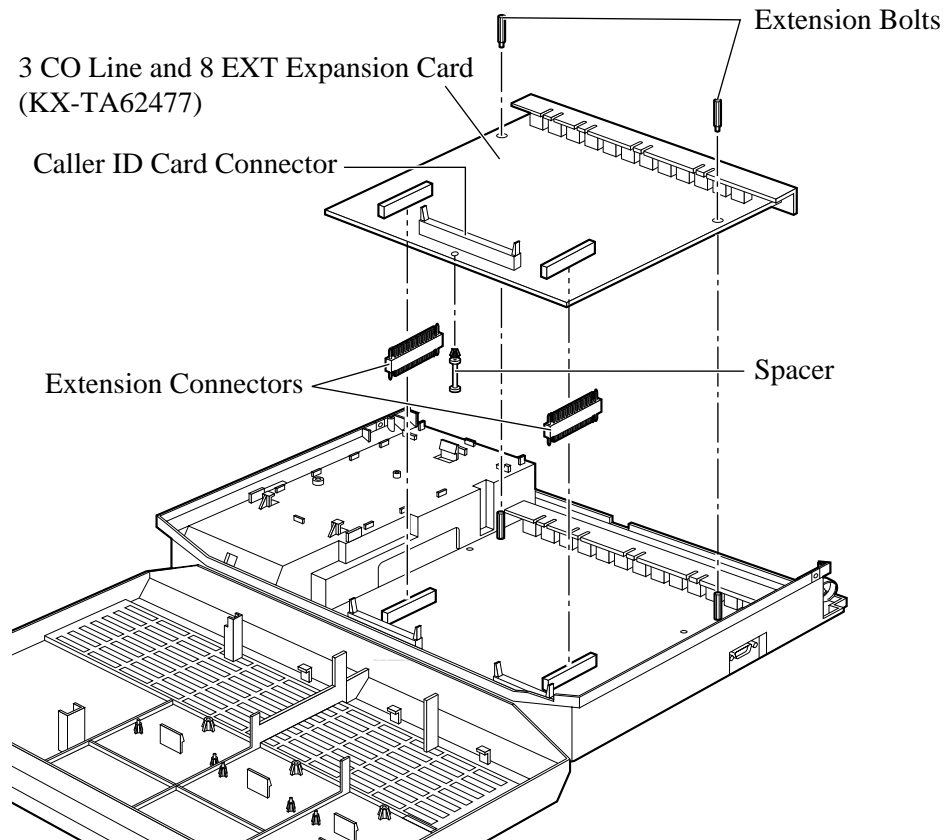
2.4.4 Installing a 3 CO Line and 8 EXT Expansion Card (KX-TA62477) and 8 Extension Expansion Card (KX-TA62470)

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.

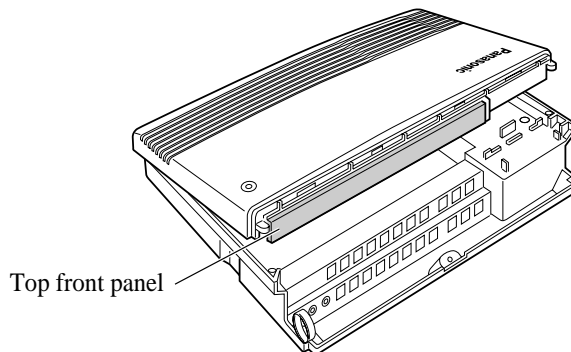


6. Insert the modular plugs of the telephone line cords (2-conductor wiring) into the modular jacks (CO 4 through 6) on the card. Refer to 2.3.3, Outside (CO) Line Connection.
7. Connect the line cords to the terminal board or the modular jacks from the Central Office.
8. Insert the modular plugs of 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.

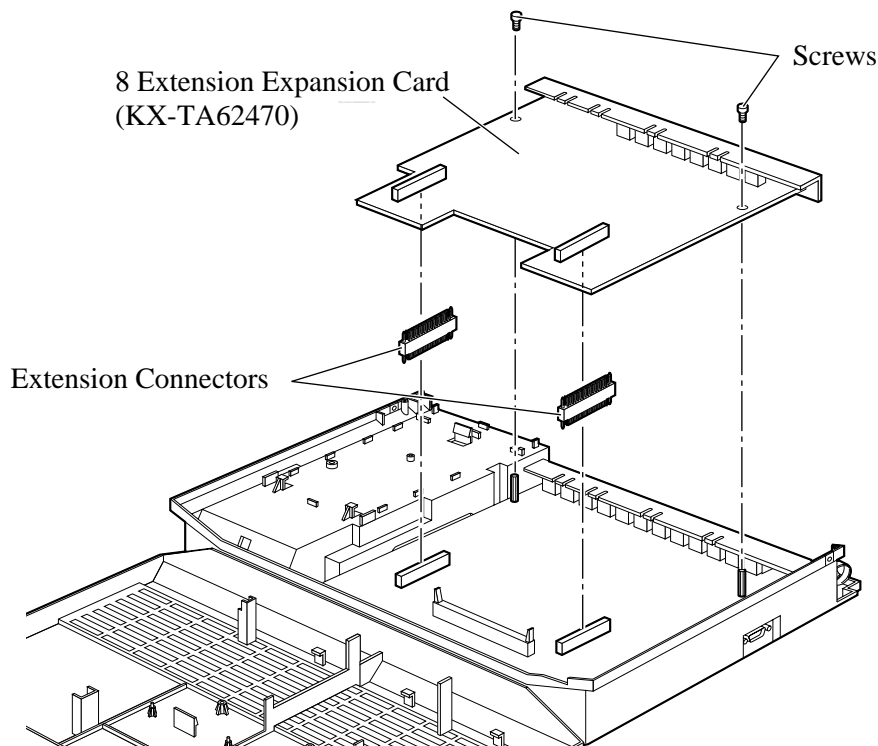
2.4.4 Installing a 3 CO Line and 8 EXT Expansion Card (KX-TA62477) and 8 Extension Expansion Card (KX-TA62470)

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”.



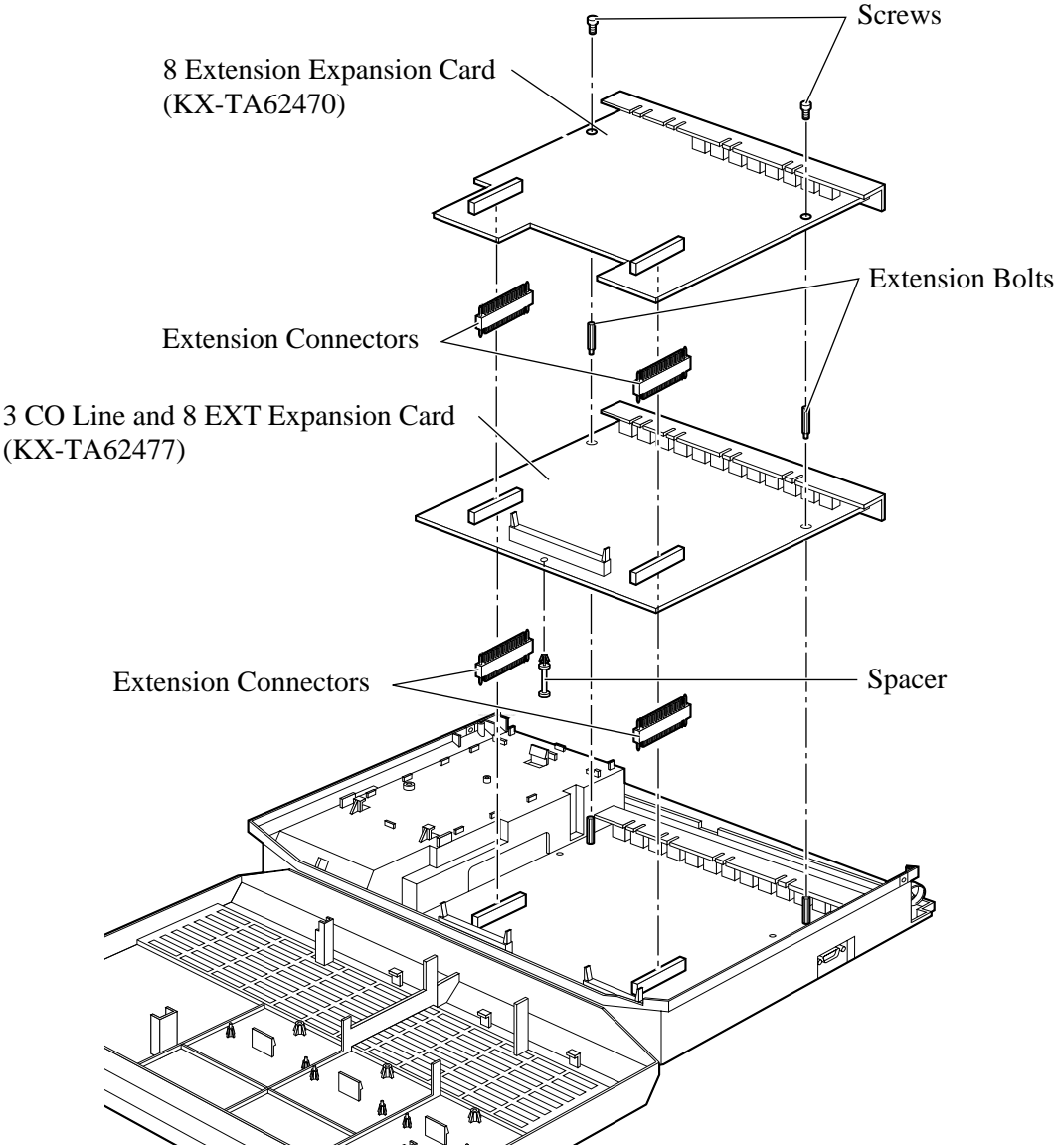
4. Attach the extension connectors to the system first, install the KX-TA62470 and secure the two screws.



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.

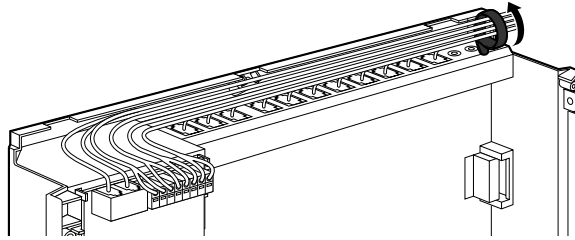
2.4.4 Installing a 3 CO Line and 8 EXT Expansion Card (KX-TA62477) and 8 Extension Expansion Card (KX-TA62470)

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



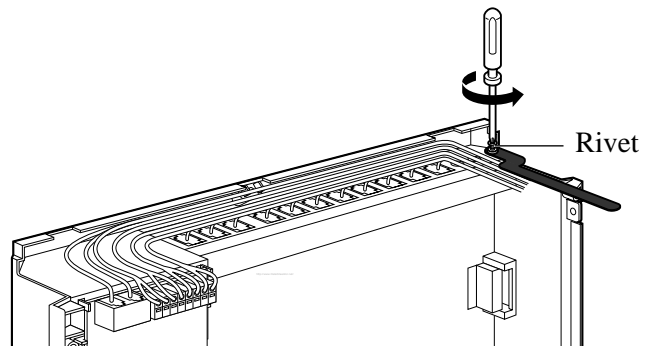
2.4.5 Securing the cords

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.



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.

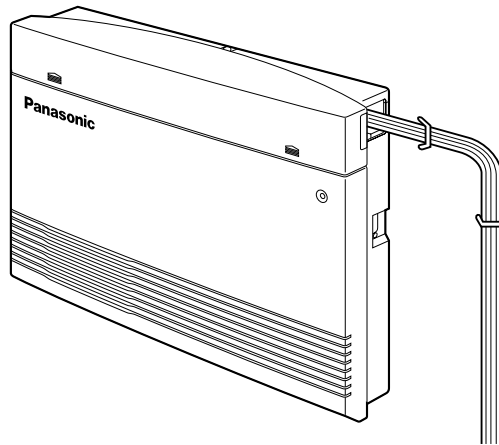
- Note**
- In the event of a power failure, system memory is protected by a factory-provided lithium battery. There is no memory loss except the Camp-on, Saved Number Redial, Last Number Redial, Call Park and Message Waiting memories.
 - The system automatically changes the current connection to the 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.

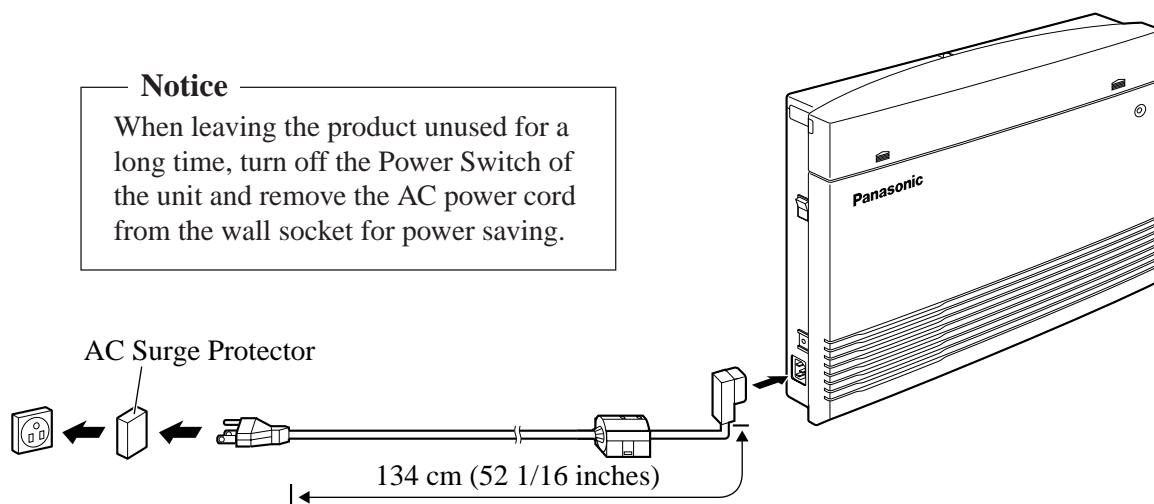


2.7 Starting the System for the First Time

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.



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.

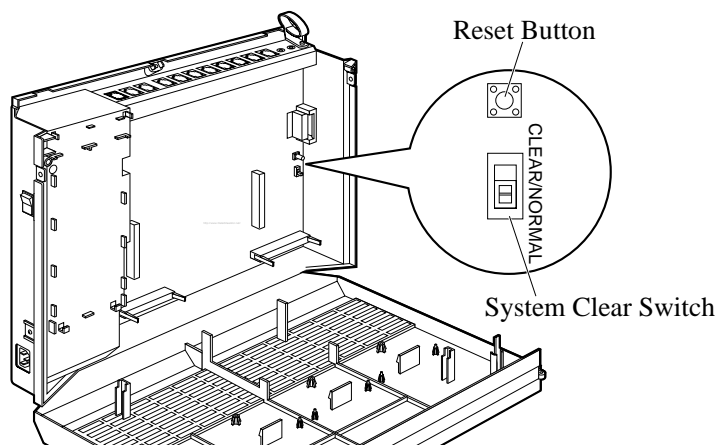
1. Turn the Power switch off and then on.

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

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
— User Manual

Telephone Features
Answering, Direct Outside (CO) Line

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)

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.
 - 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
DSS Console (KX-T7040)
One-Touch Transfer Using a DSS Button

Operation References — User Manual

Basic Operations
Making Calls
Telephone Features
Call Transfer – to Extension
DSS Console 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.

Button	CO (PT)	DSS (DSS)	PF (PT/DSS)	MESSAGE
Group-CO	✓			
Other-CO	✓			
Single-CO	✓			
Caller ID Indication — Common	✓			
Caller ID Indication — Personal	✓			
Caller ID Selection — Common	✓			
Caller ID Selection — Personal	✓			
Conference	✓			
FWD/DND	✓			
Log-In/Log-Out	✓			
Saved Number Redial	✓			
Day		✓		
Lunch		✓		
Night		✓		
Station Lock		✓		
Message Waiting				✓
Another Extension Message Waiting	✓	✓		
Live Call Screening (LCS)†	✓	✓		
LCS Cancel†	✓	✓		
Two-Way Record†	✓	✓		
Two-Way Transfer†	✓	✓		
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/KX-TVS80).

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.

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

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	7135
AUTO ANSWER/MUTE❖	✓	✓			✓	✓
AUTO DIAL/STORE❖	✓	✓	✓	✓!	✓	✓
CO❖*	✓(12)	✓(12)	✓(12)	✓(3)	✓(12)	✓(12)
CONF❖	✓	✓	✓!	✓!	✓	✓
FLASH	✓	✓	✓	✓	✓	✓
FWD/DND❖	✓	✓			✓	✓
HOLD	✓	✓	✓	✓	✓	✓
INTERCOM❖	✓	✓	✓	✓	✓	✓
MESSAGE❖*	✓	✓	✓		✓	✓
MONITOR❖			✓	✓!		
PAUSE	✓	✓	✓	✓	✓	✓
PF (Programmable Feature)	✓(4)	✓(4)	✓(4)	✓(3)	✓(12)	✓(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.

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

— User Manual

Refer to the appropriate operating instructions.

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.
- System Programming determines which extensions are able to perform this feature for certain outside calls.

Programming References

Section 4, System Programming
 [963] Call Forwarding Selection
Station Programming **User Manual**
 Flexible Button Assignment – FWD/DND Button

Feature References None

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

Call 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.
 - System Programming determines which extensions are able to perform this feature for certain outside calls.

Programming References

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

Feature References None

Operation Reference **Telephone Features**
— User Manual Call Forwarding — Busy/No Answer

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.
- System Programming determines which extensions are able to perform this feature for certain outside calls.

Programming References

Section 4, System Programming
[963] Call Forwarding Selection
Station Programming User Manual
Flexible Button Assignment – FWD/DND Button

Feature Reference **Section 3, Features**
Call Forwarding – All Calls

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

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

— User Manual

Telephone Features

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

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 — User Manual	Telephone Features 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 — User Manual	Telephone Features Call Hold Retrieve

Call Log, Incoming

Description

If display proprietary telephone (KX-T7030, KX-T7130 or KX-T7135) users cannot answer a call, the incoming outside call information from the Caller ID service is automatically logged in the system and the Caller ID Indication button indicator lights. Moreover, the user can call back the caller by checking the call log. There are two kinds of call log areas available in the system. One is the personal area, which stores call logs per telephone. The other is the common area, which stores call logs for the system. Up to 20 calls can be logged in each personal area and up to 300 calls in the common area.

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.
- To check the caller's information stored in the personal area, the user needs to assign the Caller ID Indication — Personal button. For the common area, the Caller ID Indication — Common button is necessary.
- The call is registered when the PT finishes ringing. If a call is directed to a certain PT, the call will be registered in the PT's personal area and the PT's Caller ID Indication — Personal button indicator will light. A call via an outside (CO) line assigned "Normal" in programs [414]-[416] "Outside (CO) Line Mode — Day/Night/Lunch" or a call via the DISA Intercept Routing feature will be registered in the common area and all corresponding PT's Caller ID Indication — Common button indicators will light. However in this case, if nobody has assigned the Caller ID Indication — Common button, the call will be registered in a PT's personal area that is connected to the lowest jack number and the PT's Caller ID Indication — Personal button will light.
- After someone has checked the new call log in the common area, all corresponding Caller ID Indication — Common button indicators will turn off.
- Information is also registered even if a transferred call (unscreened) is not answered. In this case, the information will be stored in the transferred extension's personal area.
- When the call log in the personal area is full (20 calls are stored), the user can select how the 21st call is treated. Overwriting the data by replacing the oldest call with the newest one at their extension, or disregarding the 21st call can be selected (Default: Record the new call) (Call Log, Incoming). When the call log in the common area is full (300 calls are stored), only the operator or manager can select the 301st call treatment (Default: Record the new call) (The 301st Call Log, Incoming in the Common Area Treatment).

- A telephone user can lock their display so that the incoming call information stored in their personal area is not shown on the display. The operator or manager can cancel the lock. The call information stored in the common area can be locked and unlocked only by the operator and manager.
- 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

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
- [909] Common Area Call Log Check Assignment

Station Programming User Manual

Flexible Button Assignment – Caller ID Indication Button,
Caller ID Selection Button

Feature Reference

Section 3, Features

Caller ID

Operation References

— User Manual

Telephone Features

- Call Log, Incoming
- Call Log Lock, Incoming in the Personal Area

Operator/Manager Service Features

- Call Log, Incoming in the Common Area — CLEAR ALL
- Call Log Lock, Incoming in the Common Area
- Electronic Station Lockout — CANCEL ALL
- Remote Station Lock Control
- The 301st Call Log, Incoming in the Common Area Treatment

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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 — User Manual	Telephone Features 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

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 — User Manual	Telephone Features 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	<ul style="list-style-type: none"> • 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

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 **Telephone Features**
— User Manual 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	<ul style="list-style-type: none">• 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

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 **Telephone Features**
— User Manual Call Transfer — to Extension

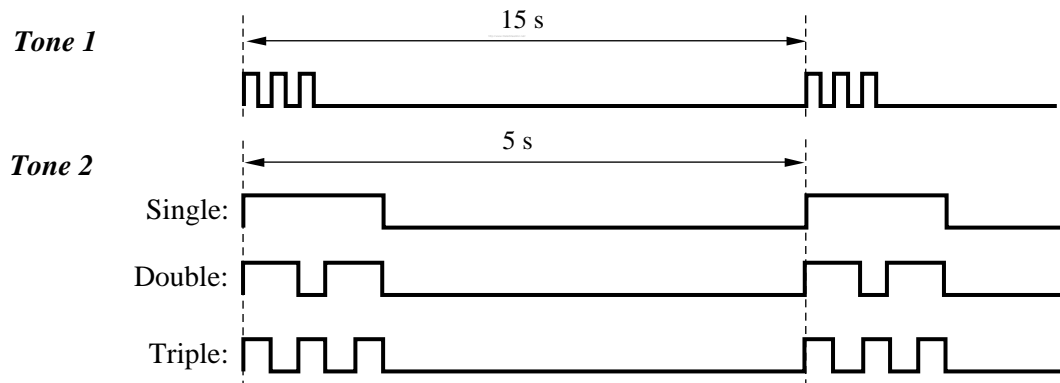
Call Waiting

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 is received, or when an extension caller executes Busy Station Signaling, or when a doorphone call is received, 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 (Tone 1 and Tone 2) are provided for an incoming outside call and intercom call. A proprietary telephone user can select the desired type by station programming. As for a doorphone call, Tone 1 is used as a call waiting tone (not changeable).
- 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.



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

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

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, KX-T7130 or KX-T7135) 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
- [907] Caller ID SMDR Printout Selection

Feature Reference

Section 3, Features

Call Log, Incoming

Operation References

— User Manual

Telephone Features

Call Information/Log, Incoming
Call Log, Incoming

Caller ID Call Waiting

Description

During a conversation, a call waiting tone offered by the Central Office informs the user that there is a call waiting. If the Caller ID service provides them with a caller's information, such as the name and telephone number, the new caller's information will be displayed (flashing) on their extension (KX-T7030, KX-T7130 and KX-T7135 only) during the assigned time. They can answer the second call by disconnecting the first call or placing it on hold.

Conditions

- The second caller information display timer can be programmed. If the user does not press the FLASH button while the information is displayed (flashing), the display stops flashing. In this situation, the caller information is automatically recorded in the user's personal area and the user's Caller ID Indication — Personal button indicator lights if the call has been directed to the user. A call via an outside (CO) line assigned "Normal" in programs [414]-[416] "Outside (CO) Line Mode — Day/Night/Lunch" is automatically recorded in the common area and all corresponding user's Caller ID Indication — Common button indicators light. However in this case, if nobody has assigned the Caller ID Indication — Common button, the call information is recorded in an user's personal area that is connected to the lowest jack number and the user's Caller ID Indication — Personal button indicator lights.
- This feature is available during a conversation with an external party except for the following cases: (1) during a conference, (2) during holding a call, (3) during transferring a call, (4) during the Two-Way Recording, (5) during the Live Call Screening, (6) during an outside-to-outside (CO-to-CO) line call and (7) during DISA outgoing message.
- A contract with the Central Office may be required for the Call Waiting service. Consult the Central Office for details.

Programming References

Section 4, Features

[900] Caller ID Assignment

[908] Caller ID Call Waiting Time

Feature References

Section 3, Features

Call Log, Incoming

Call Waiting from a Central Office

Operation References

— User Manual

Telephone Features

Caller ID Call Waiting

Call Information/Log Incoming

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.

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

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.

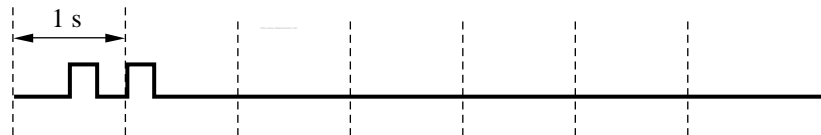
Confirmation tone 1:

- (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)

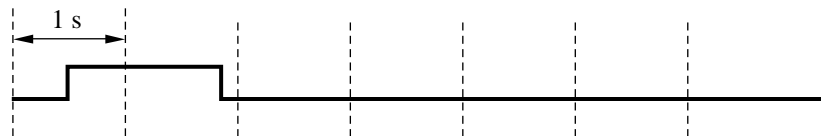


Confirmation tone 3:

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

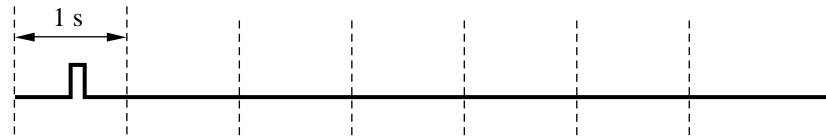
- Conference
- Call Pickup
- Paging – External
- Paging Answer

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.

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

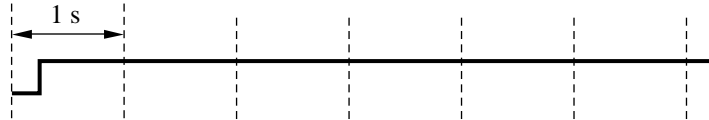
Telephone Features
Data Line Security

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.



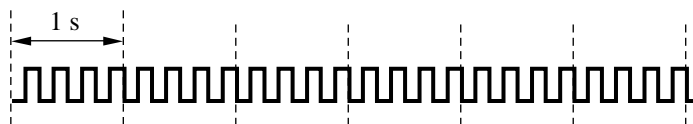
Dial tone 2: Sent when any one of the features below are set.

- 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 touchtone 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
(Tone Through)

Pulse to Tone Conversion

Operation References

Not applicable.

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. The number of digits of the codes can be programmed (default: 4 digits). 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

[530] DISA Security Codes Digits Selection

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 — User Manual

Telephone Features
Direct Inward System Access (DISA)

When you enable the Outside – Outside Line Call feature of **Direct Inward System Access (DISA) function**, if a third party discovers the password (a DISA security code) of the system, you have a risk that they will make illegal phone calls using your telephone line, and the cost may be charged to your account.

In order to avoid this problem, we strongly recommend the following points:

- 1: Carefully maintain the secrecy of the password.
- 2: Specify a complicated password as long and random as you can make it.
- 3: Change the password frequently.

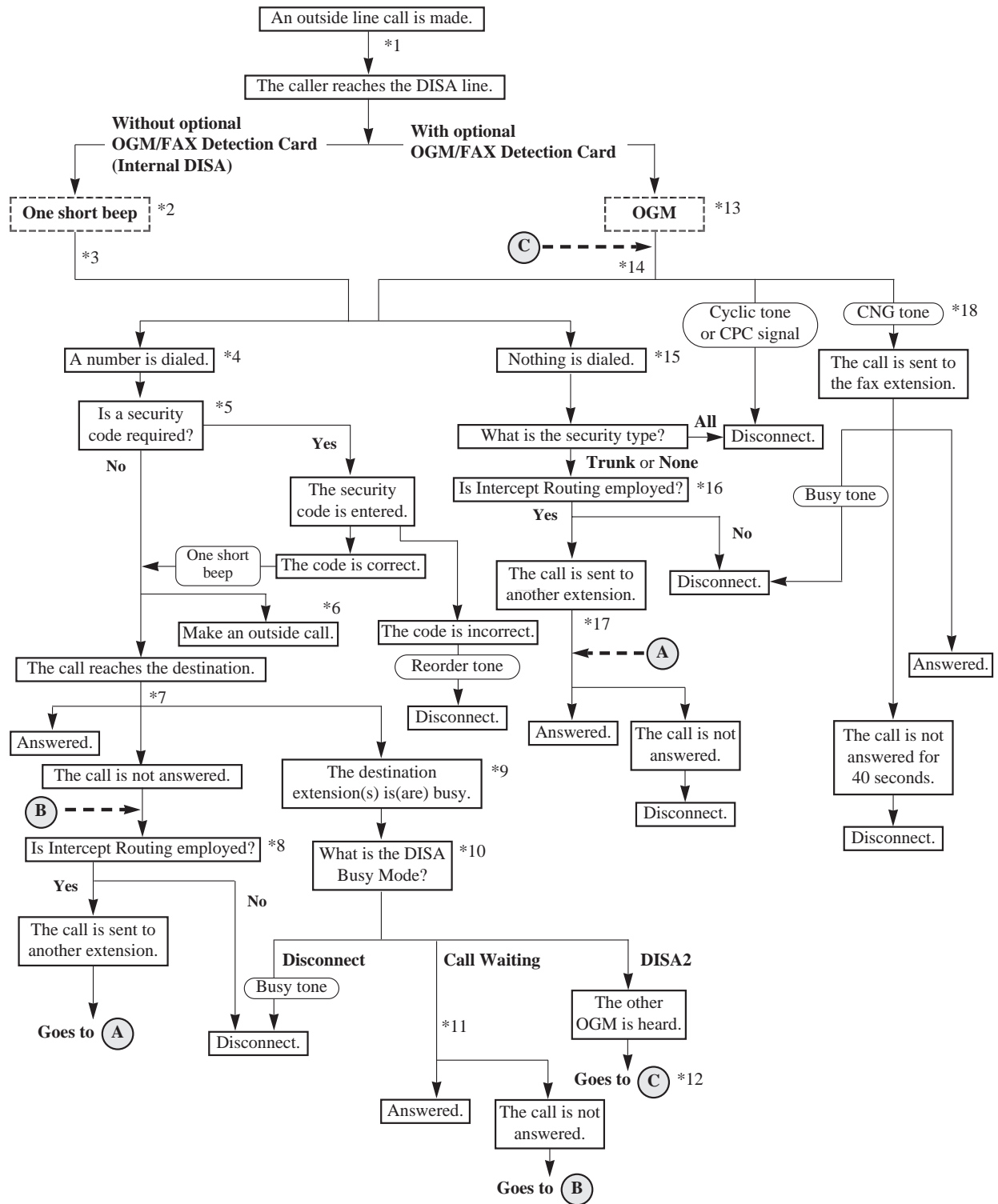
Condition

- The manager (jack number 01) can change the DISA security codes in program [512] “DISA Security Codes”, and change the number of digits of the DISA security codes in program [530] “DISA Security Codes Digits Selection” with their extension password.

Operation Reference — User Manual

Operator/Manager Service Features
Manager Programming
Extension Password Set (Manager only)

Flow chart of possible cases and results for DISA calls



-
- *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.

Display, Call Information

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.

Display, in Idle

Description

A display proprietary telephone can display: (1) date and time, (2) date and day of the week, or (3) 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): Month, Day, 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-hour format or 24-hour format, 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

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, KX-T7130 and KX-T7135 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, KX-T7130 and KX-T7135 only)

Feature References None

Operation References Not applicable.

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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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

Door Opener

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 — User Manual

Telephone Features
Door Opener

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

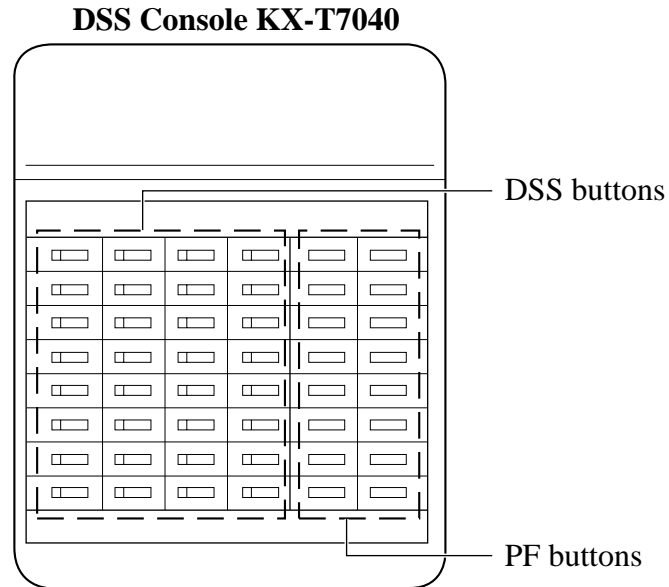
The Direct Station Selection (DSS) Console provides direct access to stations, a busy lamp display, as well as 16 PF (Programmable Feature) buttons.

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
- Direct access to an Another Extension Message Waiting (Another Extension Message Waiting Button Assignment)
- Quick setting and cancel the Live Call Screening† (Live Call Screening (LCS) Button Assignment, Live Call Screening (LCS) Cancel Button Assignment)
- Quick setting of the Two-Way Recording into Voice Mail† (Two-Way Recording Button Assignment, Two-Way Transfer Button Assignment)
- Quick setting of the Voice Mail Transfer† (Voice Mail (VM) Transfer Button Assignment)
- 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 (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 and so on. Each button can be 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.

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

Busy Lamp Field Table

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. (Re-programming 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

Live Call Screening (LCS)

Message Waiting for Another Extension

One-Touch Transfer Using a DSS Button

Remote Station Lock Control

Time (Day/Night/Lunch) Service

Two-Way Recording into Voice Mail

Operation Reference

— User Manual

DSS Console Features

† Available when the KX-TA624 is connected to a Proprietary Telephone capable Panasonic Voice Processing System (one that supports APT Integration; KX-TVS50/KX-TVS80).

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.
- This feature will not block Emergency Calls. These calls are registered in [309] “Emergency Dial Number Set”.

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 — User Manual

Telephone Features

Electronic Station Lockout

Operator/Manager Features

Electronic Station Lockout — CANCEL ALL

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

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 — User Manual

Telephone Features
Executive Busy Override — Outside (CO) Line

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

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 **Telephone Features**
— User Manual Flash

Handset/Headset Selection

Description The system supports the use of headsets on proprietary telephones (KX-T7030, KX-T7130 and KX-T7135 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

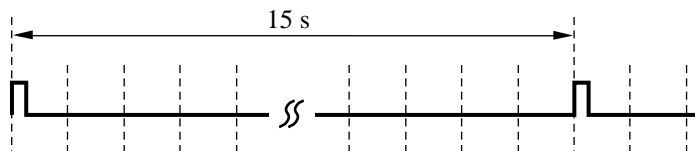
Hold Alarm/Hold Recall

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.

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 **Telephone Features**
—User Manual Intercom Calling
Switching to Tone Alert

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.

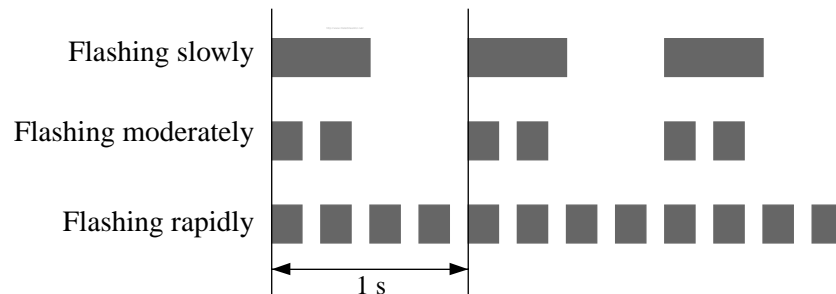
LED Indication, Outside (CO) Line

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.

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 — User Manual

Telephone Features

Outward Dialing – Line Access, Automatic

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

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 — User Manual

Telephone Features
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 —User Manual

Basic Operation
Receiving Calls

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.

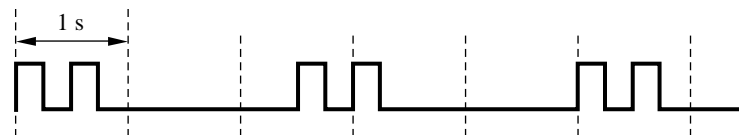
Hands-free Mode

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.
- Each extension can be programmed to either close the mailbox or keep recording the conversation after the call is intercepted.

Programming References

Section 4, System Programming

[620] Live Call Screening Recording Mode Assignment

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

3 Features

L

Feature References None

Operation Reference **Telephone Features**
— User Manual Live Call Screening (LCS)

† Available when the KX-TA624 is connected to a Proprietary Telephone capable Panasonic Voice Processing System (one that supports APT Integration; KX-TVS50/KX-TVS80).

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

— User Manual

Telephone Features

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

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 in the Common Area
- Canceling the Call Log Lock in the Personal Area and Electronic Station Lockout
- Changing the Day/Night/Lunch mode manually
- Clearing the call logs in the common area
- Clearing the Live Call Screening passwords
- 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
- Setting the treatment of the 301st call log in the common area

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
Message Waiting for Another Extension
Station Hunting
Voice Mail Integration for KX-TVS50/KX-TVS80
Voice Mail Integration for KX-TVS75/KX-TVS100/KX-TVS110

Operation References —User Manual

Telephone Features
Message Waiting
Voice Mail Integration for KX-TVS50/KX-TVS75/KX-TVS80/
KX-TVS100/KX-TVS110

Message Waiting for Another Extension

Description

Allows a proprietary telephone user to be notified that there is a message waiting at another extension(s) by the red lit LED indicator on the Another Extension Message Waiting button on their own extension. Pressing the lit Another Extension Message Waiting button enables the user to call back the called party or listen to the messages which are stored in the mailbox of the Voice Processing System.

Conditions

- System Programming determines which user can perform this feature.
- When the LED indicator on the MESSAGE button on another extension lights red, the LED indicator on the Another Extension Message Waiting button also lights red.
- More than one Another Extension Message Waiting button can be assigned on one extension.
- After calling back all the called parties and listening to all messages left at another extension, the LED indicators (both on the MESSAGE button on another extension and on the Another Extension Message Waiting button on the user's extension) will go out simultaneously.
- The user can cancel all messages left at another extension by a feature number.
- The user can lock the Message Waiting for Another Extension feature so that another extension cannot check and/or clear messages left at the user's extension. The operator or manager can cancel the lock.

Programming References

Section 4, System Programming

[618] Message Waiting for Another Extension

Station Programming **User Manual**

Flexible Button Assignment – Another Extension Message Waiting Button

DSS Console Features **User Manual**

Station Programming

Feature References

Section 3, Features

Message Waiting

Operation References

— User Manual

Telephone Features

Message Waiting for Another Extension

Message Waiting for Another Extension Lock

Operator/Manager Service Features

Electronic Station Lockout — CANCEL ALL

Microphone Mute

Description	Allows a proprietary telephone user to turn off the microphone for privacy.
Conditions	<ul style="list-style-type: none">• 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 — User Manual	Telephone Features Microphone Mute (— for KX-T7020/KX-T7030/KX-T7130/KX-T7135 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	<ul style="list-style-type: none">• 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.

Music on Hold

Description	While an external party is on hold, music is automatically activated.
Conditions	<ul style="list-style-type: none">• 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 — User Manual

Telephone Features
One-Touch Dialing
DSS Console Features
One-Touch Dialing
One-Touch Access for System Features

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

Operator

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.

- Canceling the Call Log Lock in the Common Area
- Canceling the Call Log Lock in the Personal Area and Electronic Station Lockout
- Changing the Day/Night/Lunch mode manually
- Clearing the call logs in the common area
- Clearing the Live Call Screening passwords
- 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 treatment of the 301st call log in the common area

Conditions

None

Programming Reference

Section 4, System Programming
[008] Operator Assignment

Feature References

None

Operation Reference — User Manual

Operator/Manager Service Features

Operator 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

Outgoing Message (OGM)

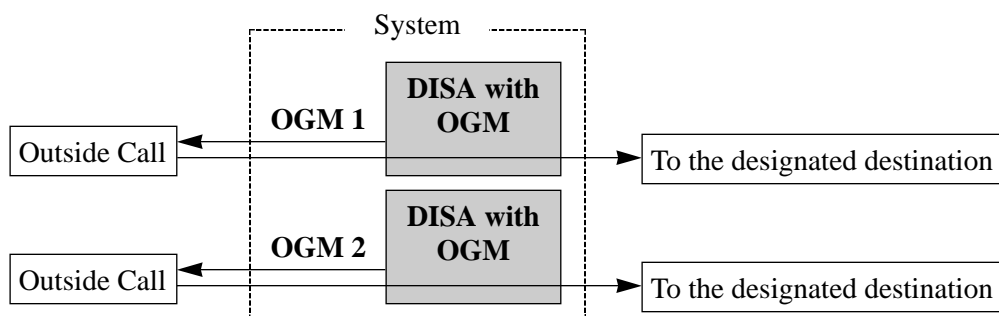
Description

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.)

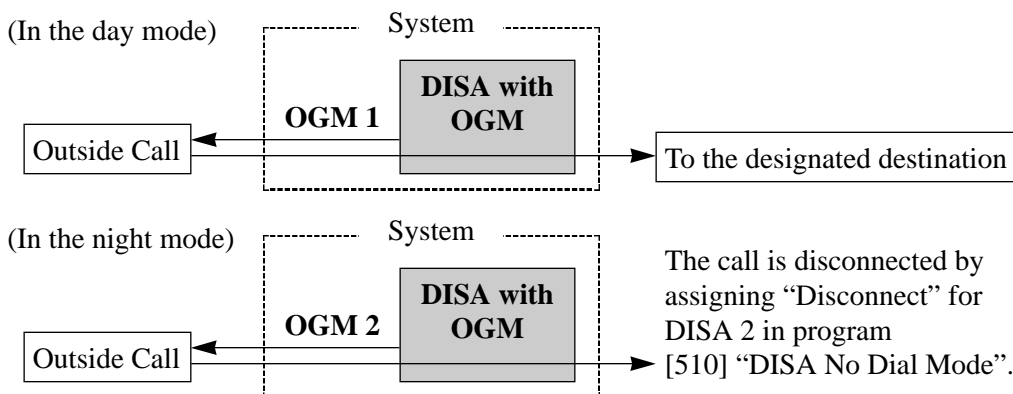


OGM1: “This is A company. For the sales division, press 1. For the service division, press 2. To call the operator, press 0.”

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.

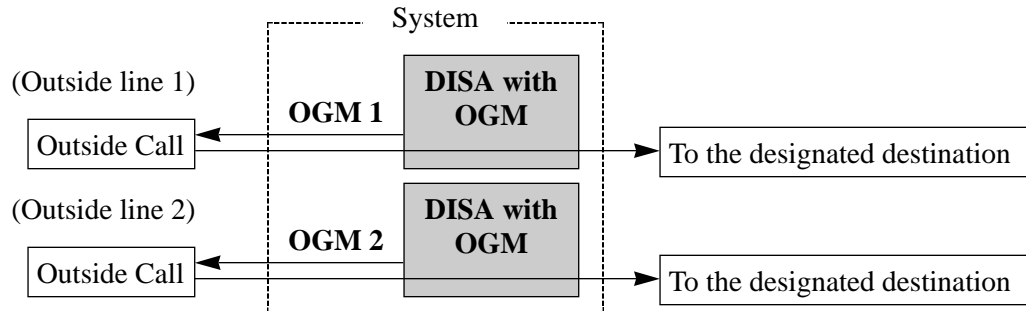


OGM1: “This is A company. For the sales division, press 1. For the service division, press 2. To call the operator, press 0.”

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.”

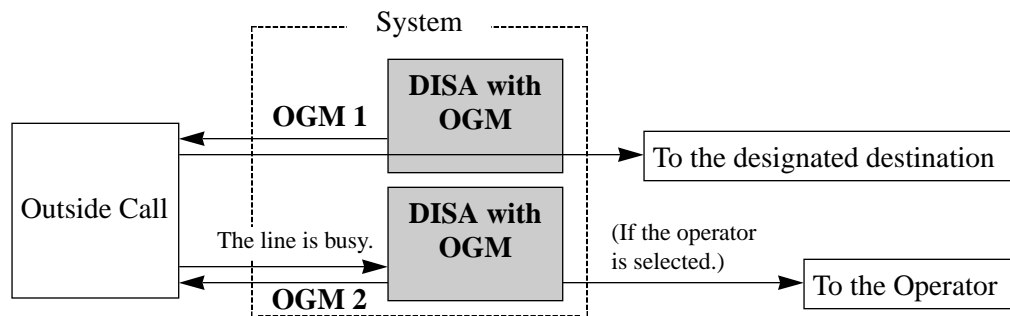
OGM2: “This is B company. To contact Mr. A, press 101. To contact Mr. B, press 102.”

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”

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

Section 4, System Programming

[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)

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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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.

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.

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

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	<ul style="list-style-type: none">• 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 — User Manual	Telephone Features 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	<ul style="list-style-type: none">• 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 — User Manual	Telephone Features Paging — External Paging and Transfer Paging — ANSWER Paging — DENY

Paralleled Telephone

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
 - When calling an extension from a doorphone.
- The paired single line telephone cannot use the following features.
 - Call Splitting
 - Caller ID Call Waiting
 - Conference
 - Door Opener while talking to the doorphone
 - External Feature Access
 - 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

— User Manual

Telephone Features

Paralleled Telephone Connection

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.

Personal Speed Dialing

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

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 — User Manual

Telephone Features
Pickup Dialing (Hot Line) (— Single Line Telephone only)

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

— User Manual

Telephone Features

Power Failure Transfer

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

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 and KX-T7135, 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

Remote Station Lock Control

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

- Conditions**
- Remote Station Lock Control has higher priority over Electronic Station Lockout and Call Log Lock in the Personal Area. If Electronic Station Lockout or Call Log Lock in the Personal Area 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.
 - This feature will not block Emergency Calls. These calls are registered in [309] “Emergency Dial Number Set”.

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
Call Log Lock, Incoming in the Personal Area
Electronic Station Lockout — CANCEL ALL
Extension Password Set (Manager only)
Remote Station Lock Control

Ring 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.

Ringling, 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	<ul style="list-style-type: none">• 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.

Ringling, 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

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

Ringling Tone Selection for Doorphones

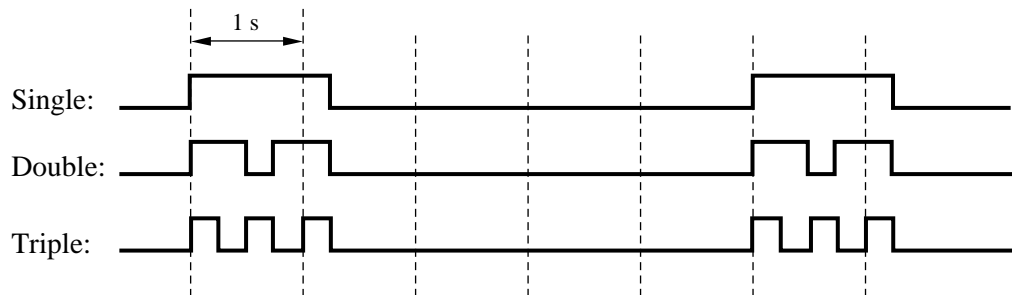
Operation References Not applicable. —

Ringling 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.

Ringing Tone Selection for Doorphones

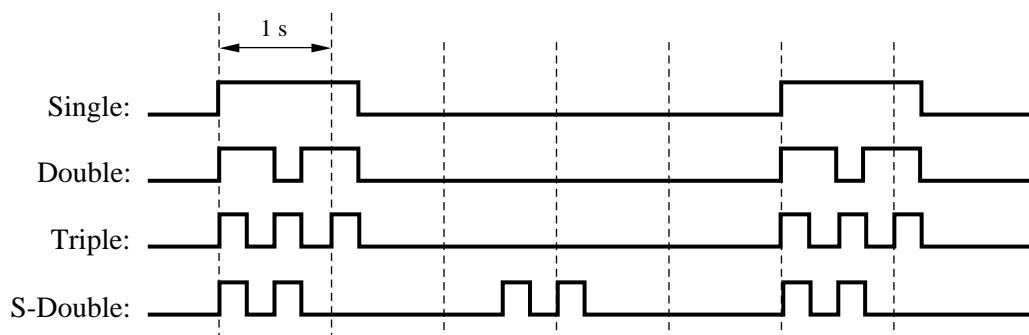
Description

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.

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 —

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
- 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

— User Manual

Telephone Features
Station Feature Clear

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	12345678901234567890123456789012	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
[907] Caller ID SMDR Printout Selection

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-T7135; 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-T7135; 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.

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	<ul style="list-style-type: none">• 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	<p>This system can be programmed with a proprietary telephone (PT). Proprietary telephones available for system programming are: KX-T7130, KX-T7030 and KX-T7135 (Display Proprietary Telephones).</p> <p>An extension connected to JACK 01 is allowed to perform system programming.</p> <p>For more information and programming instructions, refer to Section 4, “System Programming”.</p>
Conditions	<ul style="list-style-type: none">• 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.

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)
Caller ID Call Waiting Time	10 / 20 / 30 / 40 / 60 / 120 s
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 / 20 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 / 22 / 30 / 38 / ... / 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
- [908] Caller ID Call Waiting 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 **Telephone Features**
— User Manual 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 preset 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 **Operator/Manager Service Features**
— User Manual 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.)

3 Features



[Entry Example]

COS number	Denied Codes	Excepted Codes
2	Class 2 011xxxxxxx 976xxxxxxx 1xxx976xxxx	0112xxxxxxx 9762xxxxxxx 1xx8976xxxx 9824xxxxxxx 123x975xxxx 092xxxxxxx x01xxxxxxx x12xxxxxxx x123xxxxxxx 4112xxxxxxx 12xx555xxxx
3	Class 2 011xxxxxxx 976xxxxxxx 1xxx976xxxx	0112xxxxxxx 9762xxxxxxx 1xx8976xxxx 9824xxxxxxx 123x975xxxx 092xxxxxxx x01xxxxxxx x12xxxxxxx x123xxxxxxx 4112xxxxxxx 12xx555xxxx
	Class 3 982xxxxxxx 12xx975xxxx	
4	Class 2 011xxxxxxx 976xxxxxxx 1xxx976xxxx	0112xxxxxxx 9762xxxxxxx 1xx8976xxxx 9824xxxxxxx 123x975xxxx 092xxxxxxx x01xxxxxxx x12xxxxxxx x123xxxxxxx 4112xxxxxxx
	Class 3 982xxxxxxx 12xx975xxxx	
	Class 4 0xxxxxxx x0xxxxxxx x1xxxxxxx	
5	Class 2 011xxxxxxx 976xxxxxxx 1xxx976xxxx	0112xxxxxxx 9762xxxxxxx 1xx8976xxxx 9824xxxxxxx 123x975xxxx
	Class 3 982xxxxxxx 12xx975xxxx	
	Class 4 0xxxxxxx x0xxxxxxx x1xxxxxxx	
	Class 5 411xxxxxxx 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]

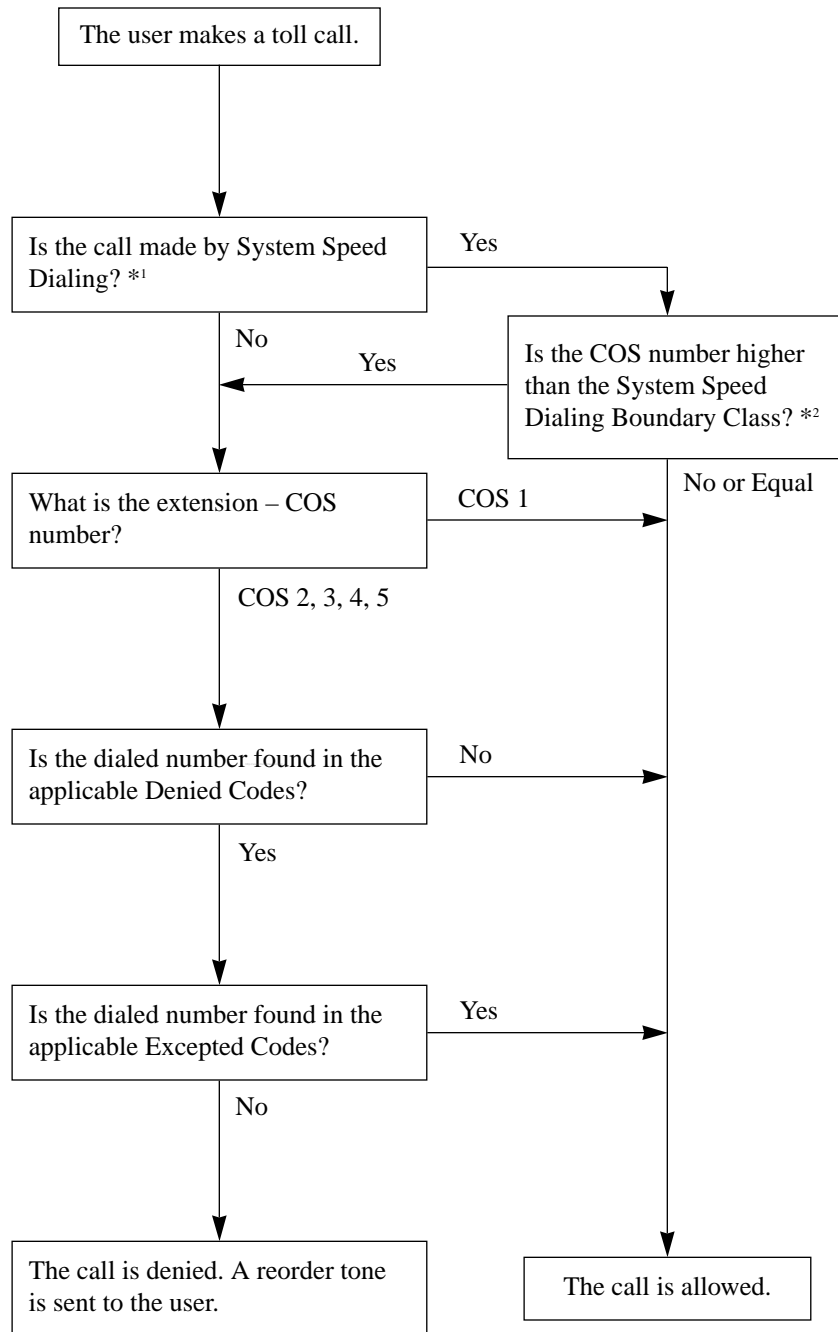
If your extension is jack 03;

- 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



*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 “*” 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 * 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.

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
Toll Restriction

Walking COS

Operation Reference

— User Manual

Telephone Features

Toll Restriction Override – Toll Restriction for System Speed Dialing

Toll Restriction Override by Account Codes

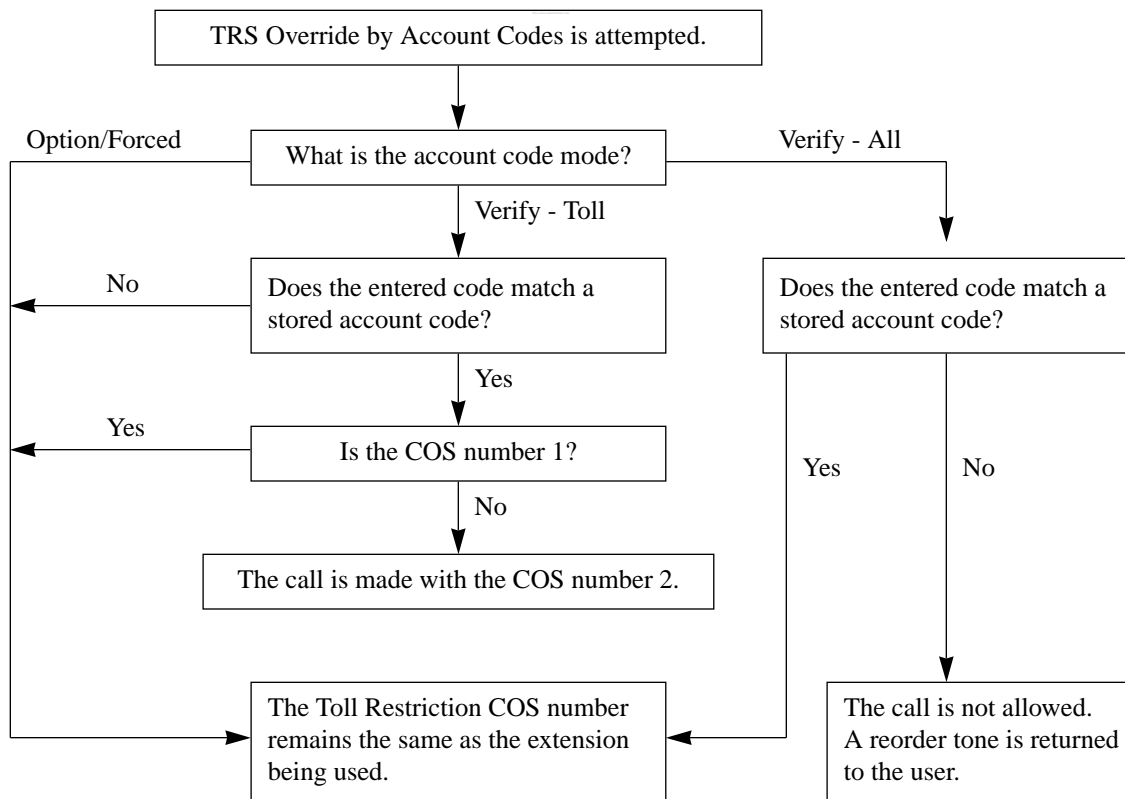
Description

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



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 — User Manual

Telephone Features
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.

Two-Way Recording into Voice Mail †

Description

Allows a proprietary telephone user to record a conversation into one's mailbox or another mailbox, while talking on the phone.

Note:

When you record Two-Way telephone conversations, you should inform the other party that the conversation is being recorded. Use the Two-Way Record button to record into your own mailbox. Use the Two-Way Transfer button to record into someone else's mailbox.

Condition

- A flexible CO and DSS (Direct Station Selection) button can be assigned as the Two-Way Record button or the Two-Way Transfer button.
- When all of the voice mail ports are busy, pressing the Two-Way Record button sends an alarm tone.
- When all of the voice mail ports are busy, pressing the Two-Way Transfer button followed by an extension number sends an alarm tone.

Programming Reference

Station Programming **User Manual**
Flexible Button Assignment — Two-Way Record button,
Two-Way Transfer button
DSS Console Features **User Manual**
Station Programming

Feature References

None

Operation References

— User Manual

Telephone Features
Two-Way Recording into Voice Mail

† Available when the KX-TA624 is connected to a Proprietary Telephone capable Panasonic Voice Processing System (one that supports APT Integration; KX-TVS50/KX-TVS80).

Voice Mail Integration for KX-TVS50/KX-TVS80

Description

When a Panasonic Voice Processing System (KX-TVS50/KX-TVS80) is connected to the system, they communicate in a tightly integrated fashion using APT Integration. For example, when the Voice Processing System (VPS) executes Auto Configuration using Quick Setup (PC required) or using DIP switch initialization (PC is not required), the VPS reads data from the system to automatically create mailboxes for each extension and to set the VPS clock (date and time).

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. APT Integration is established after System Programs [130] and/or [131] are executed and after the VPS performs Quick Setup (or DIP switch initialization). See the KX-TVS50 Installation Manual for further details.

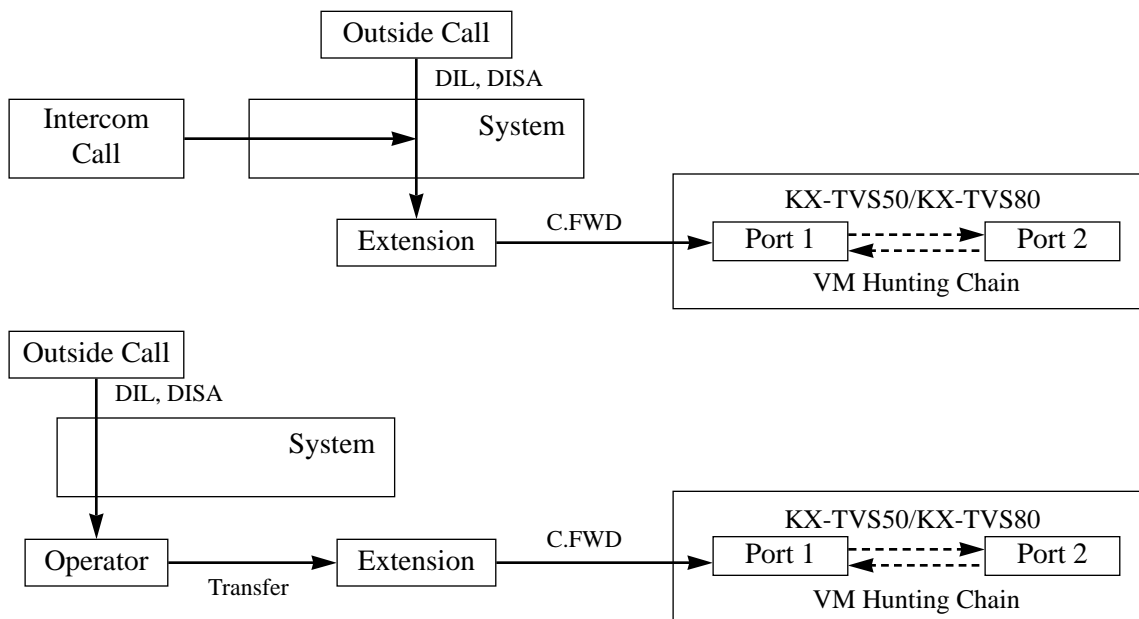
System Explanation

1. Voice Mail Service

1.1 Call Forwarding to VM

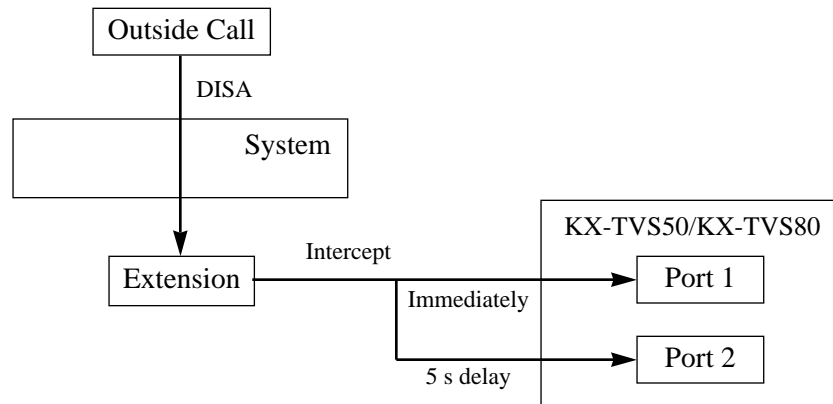
If an extension user sets Call Forwarding (C. FWD) to the VPS, an incoming call will be forwarded to the VPS. The system will send the VPS the extension mailbox number at that time.

Therefore, the calling party can leave his/her message in the mailbox of the desired extension without knowing 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.



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)
- Two-Way Recording into Voice Mail
- Voice Mail Transfer

With these features, a proprietary telephone user can monitor incoming messages being recorded into his/her mailbox, or easily record a conversation in his/her or a specified mailbox, or easily transfer outside calls to a desired extension mailbox.

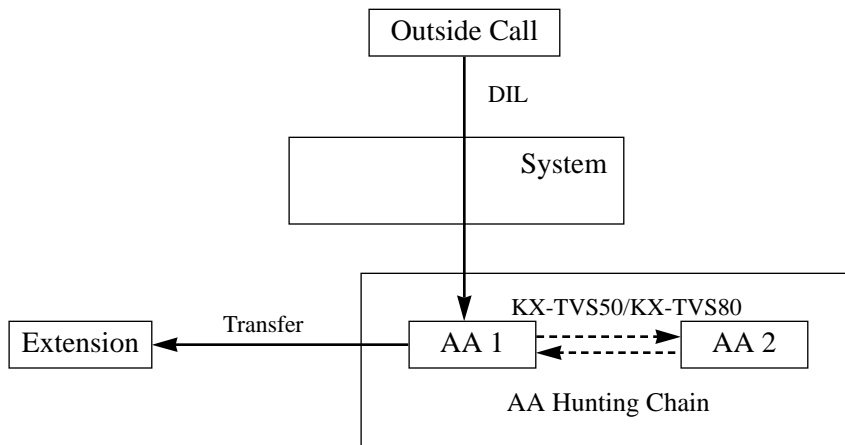
1.4 Listening to a Recorded Message

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

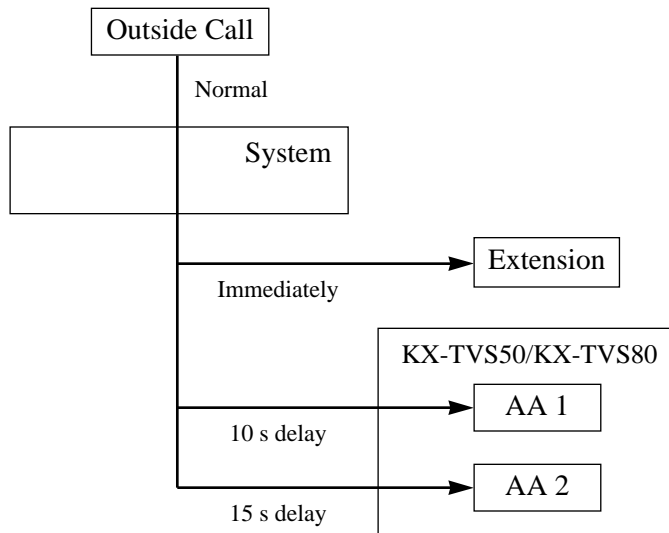
2.1 AA to Extension

AA receives and answers outside calls and offers services such as transferring to an extension or mailbox using DTMF signaling from the calling party.



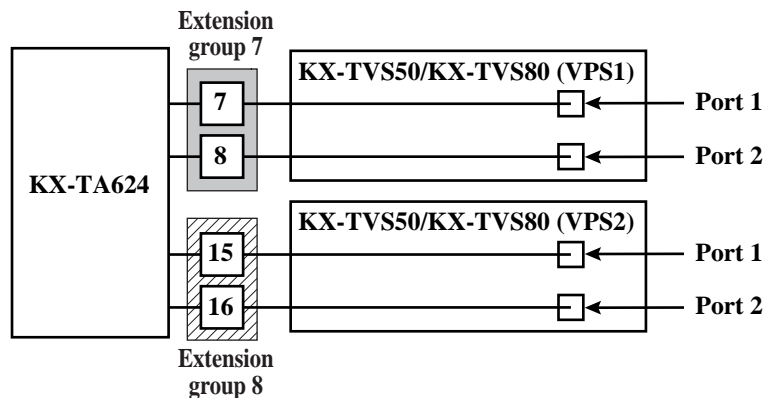
2.2 Extension Backup

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.



Conditions

- A maximum of two VPSs can be connected to the system. When two VPSs are connected to the system, keep in mind that each extension can have only one mailbox — but when the VPSs have executed Auto Configuration, an extension has a mailbox in both VPSs. Therefore, you must delete a mailbox in either VPS so that there are no duplicates. See the KX-TVS50 Installation Manual for further details.



- 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.

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/KX-TVS80

[131] Voice Mail 2 APT Port for KX-TVS50/KX-TVS80

[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

Call Forwarding – Busy/No Answer

Direct Inward System Access (DISA)

Intercept Routing

Live Call Screening (LCS)

Station Hunting

Two-Way Recording into
Voice Mail

Operation Reference — User Manual

Telephone Features

Live Call Screening (LCS)

Two-Way Recording into Voice Mail

Voice Mail Integration for KX-TVS50/KX-TVS75/KX-TVS80/
KX-TVS100/KX-TVS110

Voice Mail Transfer

Voice Mail Integration for KX-TVS75/KX-TVS100/KX-TVS110

Description

This system supports Voice Processing System (VPS) equipment (Panasonic KX-TVS75/KX-TVS100/KX-TVS110) 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 VPS ports can be connected to the extension jacks as extensions in the system.

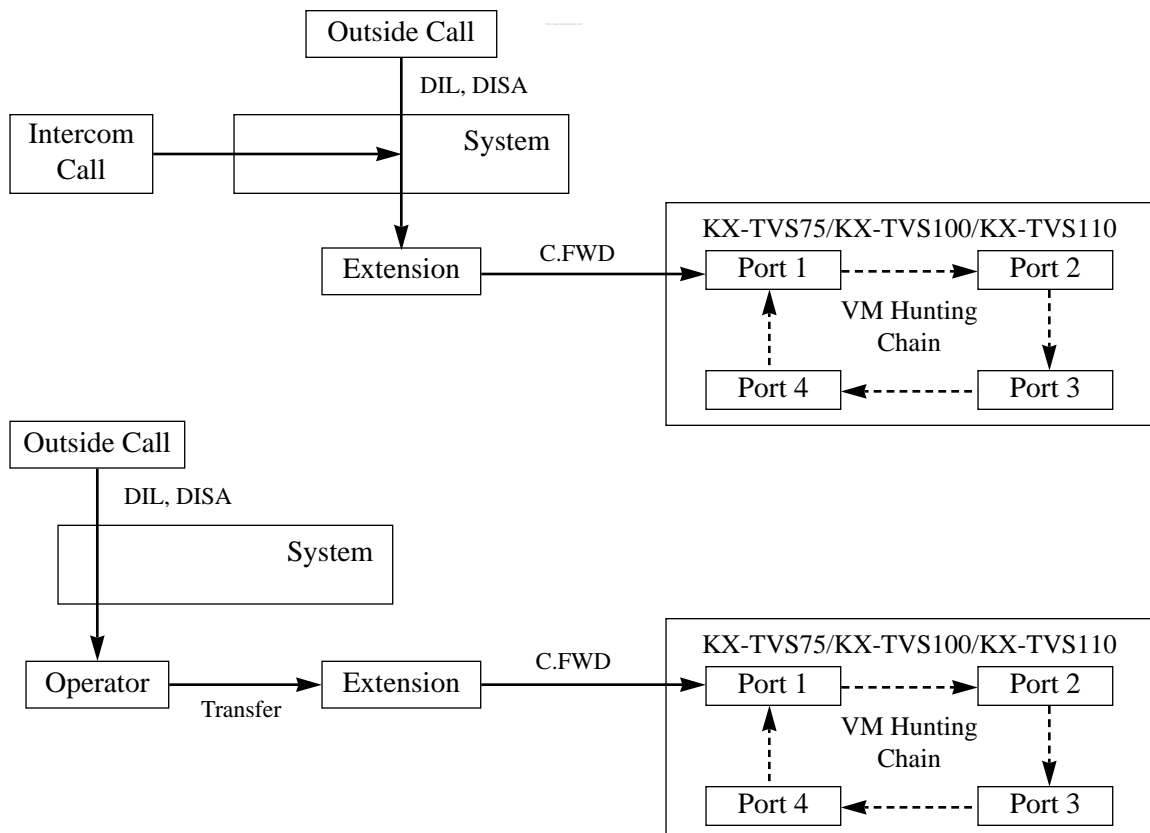
System Explanation

1. Voice Mail Service

1.1 Call Forwarding to VM

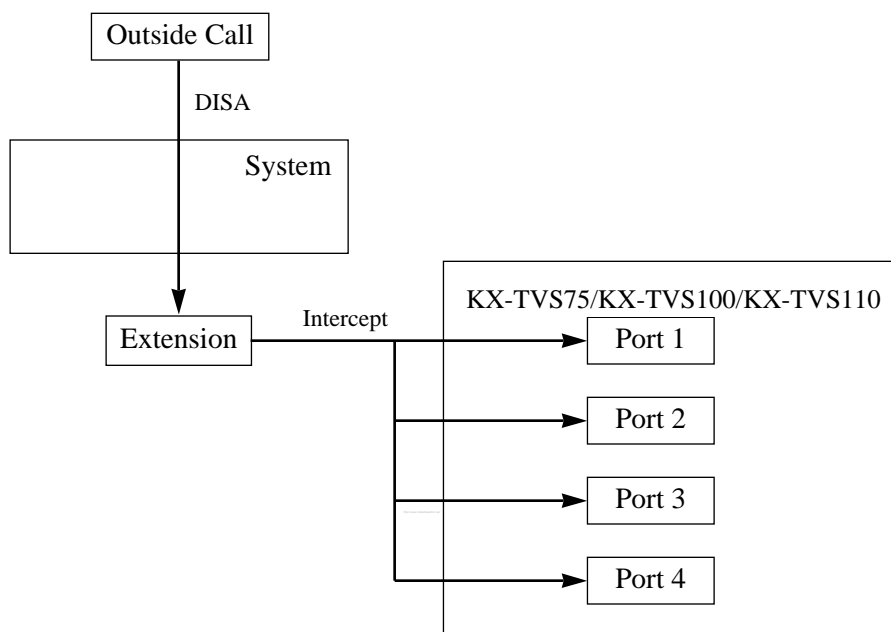
If an extension user sets Call Forwarding (C. FWD) to the VPS, an incoming call will be forwarded to the VPS. The system will send the VPS the extension mailbox number at that time.

Therefore, the calling party can leave his/her message in the mailbox of the desired extension without knowing 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.



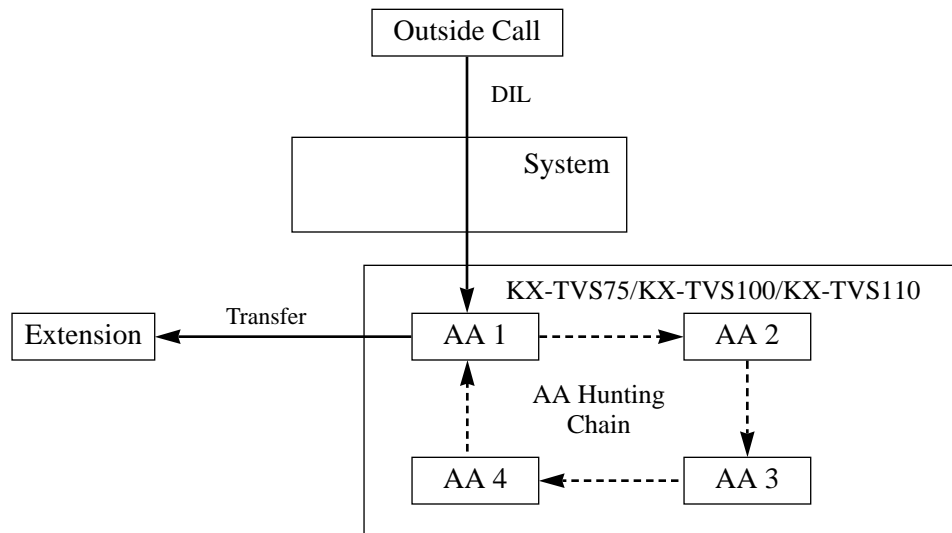
1.3 Listening to a Recorded Message

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.

2. Automated Attendant (AA) Service

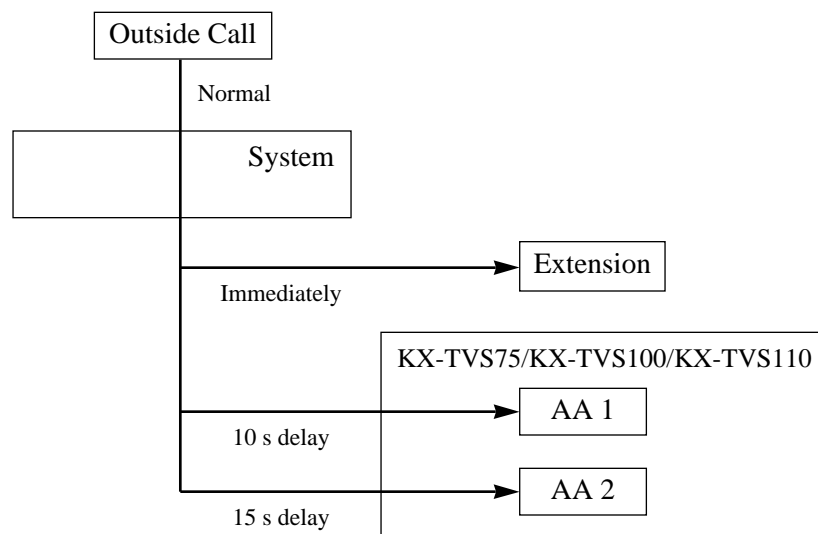
2.1 AA to Extension

AA receives and answers outside calls and offers services such as transferring to an extension or mailbox using DTMF signaling from the calling party.



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.



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 AnswerFor 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/KX-TVS110
[103] DTMF Integration for KX-TVS75/KX-TVS100/KX-TVS110
[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-TVS80/
KX-TVS100/KX-TVS110

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	<ul style="list-style-type: none"> 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.

Condition

- 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.

Programming Reference

Operator/Manager Service Features User Manual
Extension Password Set (Manager only)

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-T7135, 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

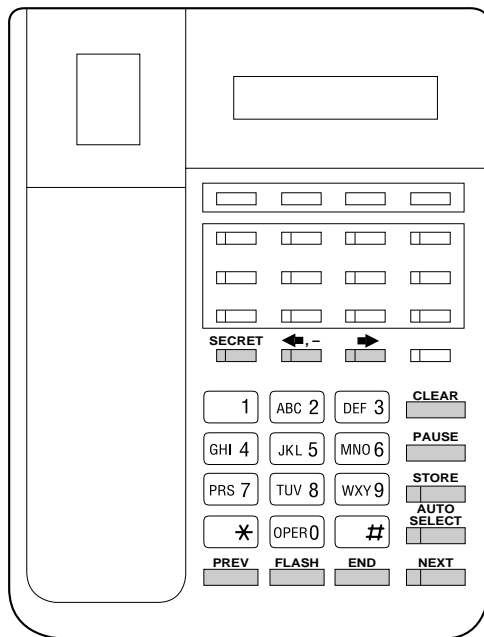
Using the Overlay

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.)

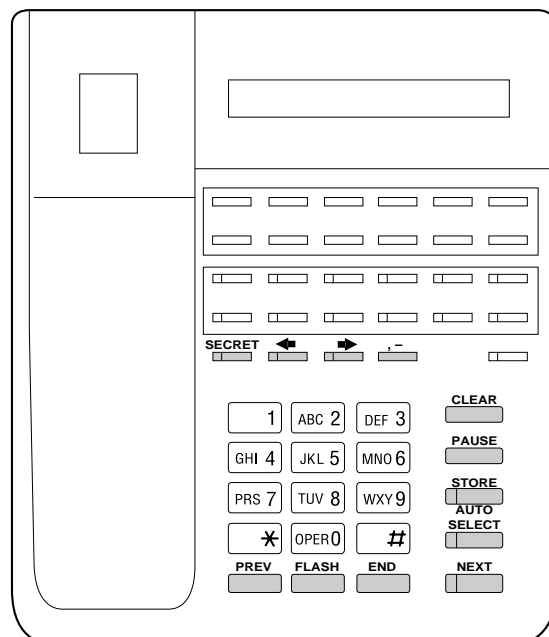
During Normal Operation	During Programming
(PAUSE)	PAUSE
(SP-PHONE)	NEXT
(REDIAL)	PREV (PREVIOUS)
(AUTO ANSWER/MUTE)	SELECT
(FLASH)	FLASH
(TRANSFER)	CLEAR
(FWD/DND)	➡
(CONF)	⬅, - (KX-T7030) /
(INTERCOM)	⬅ (KX-T7130/KX-T7135)
(AUTO DIAL/STORE)	SECRET
(HOLD)	STORE
(SAVE)	END
	, - (KX-T7130/KX-T7135)

Location of Controls with the Overlay

The pictures below show the features of the buttons of the KX-T7030, KX-T7130 and KX-T7135 during programming.



KX-T7030





KX-T7130/KX-T7135

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-T7135, 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 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: Date/Time Set

_____ 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
<p>001⁽¹⁾ 4.2 System Programming⁽²⁾ <i>System Speed Dialing Entry⁽³⁾</i></p> <hr/> <p>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.</p> <p>Selection⁽⁵⁾ • Speed dialing number: 00 – 99 • Telephone number: 32 digits (max.)</p> <p>Default⁽⁶⁾ All speed dialing numbers – Not stored</p> <p>Programming⁽⁷⁾</p> <ol style="list-style-type: none"> 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⁾ <p>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.</p> <p style="text-align: center;">• • • •</p> <p>Feature Reference⁽²⁰⁾ Section 3, Features System Speed Dialing</p>	<p>(1) Program address: This address is printed at the top of every page to quickly find the desired program.</p> <p>(2) Mode title.</p> <p>(3) Program title.</p> <p>(4) Provides a more detailed description of the program.</p> <p>(5) Shows the user the assignable choices.</p> <p>(6) Shows the user the factory default setting.</p> <p>(7) Shows the user programming procedures step by step.</p> <ul style="list-style-type: none"> • During programming, use the overlay. • Before starting to program, enter the programming mode. (See “Entering the programming mode” on page 4-4.) <p>(8) Enter the program address.</p> <p>(9) The display shows the program title.</p> <p>(10) Press NEXT shown on the overlay.</p> <p>(11) The display asks the user to enter a speed dialing number.</p> <p>(12) If the telephone number has already been stored, the number is displayed.</p> <p>(13) Enter the telephone number that the user wants to store. The entry will be displayed as the user enters the digits.</p> <p>(14) Pressing CLEAR erases the whole entry.</p> <p>(15) The entry is now stored. The indicator lights red and a confirmation tone lets the user know that storing is completed.</p> <p>(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.</p> <p>(17) The user can continue programming another entry.</p> <p>(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.</p> <p>(19) Tells the user what should be noted or considered when doing the program.</p> <p>(20) Lists all of the features related to the program. These features are described in Section 3.</p>

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 **▶**.

Date and Time Setting (contd.)

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

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	<ul style="list-style-type: none">• Speed dialing number: 00 – 99• Telephone number: 32 digits (max.)
Default	All speed dialing numbers – Not stored
Programming	<ol style="list-style-type: none">1. Enter 001. Display: Speed Dialing2. Press NEXT. Display: Speed NO? →3. Enter a speed dialing number. Pressing NEXT also can enter speed dialing number 00. Display example: 00:Not Stored4. 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.

System Speed Dialing Entry (contd.)

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

System Password

Description	Assigns the password required for entering the system programming mode or assigning extension passwords.
Selection	Password: 0000 – 9999
Default	1234
Programming	<ol style="list-style-type: none">1. Enter 002. Display: System Password2. Press NEXT. Display: Password : 12343. 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	<ul style="list-style-type: none">• DSS Console number: 1 or 2• Jack number: 02 – 24 / Disable
Default	All DSS Consoles — Disable
Programming	<ol style="list-style-type: none">1. Enter 003. Display: DSS Jack Assign2. 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:Disable4. 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	<ul style="list-style-type: none">• 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)

Paired Telephone Assignment for DSS Console

Description	Assigns the jack numbers for the paired extensions with DSS Consoles.
Selection	<ul style="list-style-type: none">• DSS Console number: 1 or 2• Jack number: 01 – 24 / Disable
Default	DSS1 – Disable, DSS2 – Disable
Programming	<ol style="list-style-type: none">1. Enter 004. Display: DSS Pair Assign2. 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:Disable4. 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	<ul style="list-style-type: none">• 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. <ul style="list-style-type: none">• 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	<ol style="list-style-type: none">1. Enter 005. Display: DSS Mode2. Press NEXT. Display example: With Transfer3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.___5. Press END.
Condition	<ul style="list-style-type: none">• 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

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	<ol style="list-style-type: none">1. Enter 006. Display: Day/Night Mode2. Press NEXT. Display example: Mode Change:Man3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• 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

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	<ul style="list-style-type: none"> • 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	<ol style="list-style-type: none"> 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 ➡.

Time (Day/Night/Lunch) Service Start Time (contd.)

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	<ol style="list-style-type: none">1. Enter 008. Display: Operator Ext2. Press NEXT. Display example: OPT :Jack-013. 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

Extension Number Assignment

Description	Assigns an extension number to each extension.
Selection	<ul style="list-style-type: none">• Jack number: 01 – 24• Extension Number: 100 – 199
Default	Jack 01 – 24 = Ext 101 – 124
Programming	<ol style="list-style-type: none">1. Enter 009. Display: Extension No Set2. Press NEXT. Display: Jack NO? →3. Enter a jack number. Pressing NEXT also can enter jack number 01. Display: Jack01:Ext1014. 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	<ul style="list-style-type: none">• 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

LCD Time Display Selection

Description	Selects how the current time and date will be displayed on a proprietary telephone while it is idle. Either 12-hour format or 24-hour format (military time) is available.
Selection	12 HOUR / 24 HOUR
Default	12 HOUR
Programming	<ol style="list-style-type: none">1. Enter 010. Display: Time Display2. Press NEXT. Display example: 12 HOUR3. Press SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Condition	<ul style="list-style-type: none">• 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 format regardless of this program. The SMDR printout is also printed using 12-hour format.
Feature Reference	Section 3, Features Display, in Idle

Hunting Group Set

Description	Assigns to enable or disable the station hunting feature for each extension group.
Selection	<ul style="list-style-type: none">• Extension group number: 1 – 8, * (* = all extension groups)• Disable / Enable
Default	All extension groups — Disable
Programming	<ol style="list-style-type: none">1. Enter 100. Display: Hunting Group2. Press NEXT. Display: Group NO? →3. Enter an extension group number. Pressing NEXT also can enter extension group number 1. Display example: Group1:Disable4. 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	<ul style="list-style-type: none">• 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

Station Hunting Type

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	<ul style="list-style-type: none"> • Extension group number: 1 – 8, * (* = all extension groups) • Terminate (terminating) / Circular
Default	All extension groups – Terminate
Programming	<ol style="list-style-type: none"> 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	<ul style="list-style-type: none"> • 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

Voice Mail Port for KX-TVS75/KX-TVS100/KX-TVS110

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/KX-TVS110).
Selection	<ul style="list-style-type: none">• Jack number: 07 / 08 / 15 / 16, * (* = all jacks)• Enable / Disable
Default	All jacks — Disable
Programming	<ol style="list-style-type: none">1. Enter 102. Display: VM Port2. Press NEXT. Display: Jack NO? →3. Enter a jack number. Pressing NEXT also can enter jack number 07. Display example: #07:Disable4. 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	<ul style="list-style-type: none">• 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/KX-TVS110

DTMF Integration for KX-TVS75/KX-TVS100/KX-TVS110

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/KX-TVS110) to immediately recognize the current status of the call and speed up the call handling.
Selection	Enable / Disable
Default	Disable
Programming	<ol style="list-style-type: none"> Enter 103. Display example: DTMF Integration Press NEXT. Display example: Disable Keep pressing SELECT until the desired selection is displayed. Press STORE. Press END.
Conditions	<ul style="list-style-type: none"> 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/KX-TVS80” and [131] “Voice Mail 2 APT Port for KX-TVS50/KX-TVS80” should first be set to “Disable”. This feature improves the performance of the Panasonic KX-TVS75/KX-TVS100/KX-TVS110 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/KX-TVS110

DTMF Integration (contd.)

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.

*Hold Mode Selection***Description**

Assigns the call hold mode for single line telephones.
Each mode is explained as follows.

Hold Mode	Operation	
	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	<ol style="list-style-type: none">1. Enter 105. Display: Conference Tone2. Press NEXT. Display example: Enable3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Conditions	None
Feature Reference	Section 3, Features — Conference

External Paging Access Tone

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	<ol style="list-style-type: none"> 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	<ul style="list-style-type: none"> • 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

DTMF Receiver Check

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	<ul style="list-style-type: none">• DTMF Receiver number: 1 – 6• Enable / Disable
Default	All DTMF receivers — Enable
Programming	<ol style="list-style-type: none">1. Enter 107. Display: DTMF-R Selection2. 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:Enable4. 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	<ol style="list-style-type: none"> Enter 108. Display: Locked Ext Flash Press NEXT. Display example: FLASH:Disable Keep pressing SELECT until the desired selection is displayed. Press STORE. 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	<p>Enable (A CO button indicator will flash when a call is received. An extension user can answer the call by pressing the flashing button.)</p> <p>Disable (A CO button indicator lights when a call is received, but an extension user cannot answer the call.)</p>
Default	Enable
Programming	<ol style="list-style-type: none">1. Enter 109. Display: CO Indicator2. Press NEXT. Display example: Enable3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE. ___5. Press END.
Conditions	None
Feature References	None

Flash Key Mode

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	<ol style="list-style-type: none">1. Enter 110. Display: Flash Key2. Press NEXT. Display example:MODE 13. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Condition	<ul style="list-style-type: none">• 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

Hold Music Selection

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.



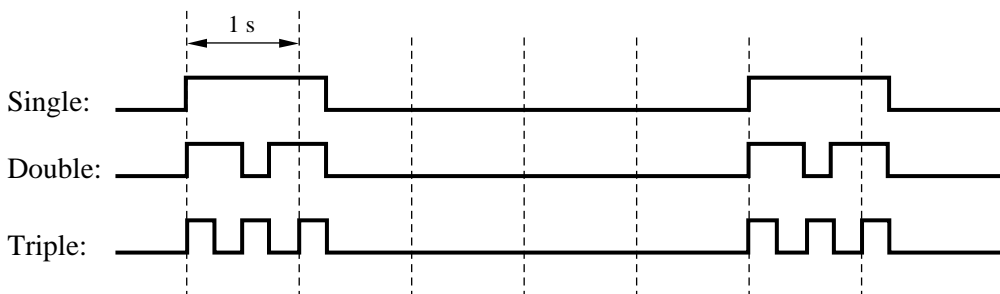
Feature Reference Section 3, Features
Music on Hold

DSS Console Indication Mode

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	<ol style="list-style-type: none">1. Enter 112. Display: DSS Indication2. Press NEXT. Display example: Enable3. 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)

Extension Ringing Pattern Selection

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	<ol style="list-style-type: none">1. Enter 117. Display: Call Pickup Tone2. Press NEXT. Display example: Enable3. 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

Pulse Restriction

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	<ol style="list-style-type: none">1. Enter 118. Display: Pulse Restrict2. Press NEXT. Display example: Enable3. 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	<ol style="list-style-type: none">1. Enter 119. Display: Redial After * #2. Press NEXT. Display example: Disable3. 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

*Toll Restriction Check for * and #*

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	<ol style="list-style-type: none">1. Enter 125. Display: TRS Check for * #2. Press NEXT. Display example: Enable3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Conditions	None
Feature Reference	Section 3, Features Toll Restriction

Voice Mail 1 APT Port for KX-TVS50/KX-TVS80 †

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/KX-TVS80).
Selection	• Port 7 / Port 7 & 8 / Disable
Default	All jacks — Disable
Programming	<ol style="list-style-type: none"> Enter 130. Display: VM1(APT)Port Press NEXT. Display example: Port:Disable Keep pressing SELECT until the desired selection is displayed. Press STORE. Press END.
Condition	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> [600] Extension Group Assignment: <ul style="list-style-type: none"> 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/KX-TVS110: <ul style="list-style-type: none"> extension jack number 07 — Enable extension jack number 08 — Enable If “Enable” is assigned in program [103] “DTMF Integration for KX-TVS75/KX-TVS100/KX-TVS110”, “Port 7” or “Port 7 & 8” cannot be selected.
Feature Reference	Section 3, Features Voice Mail Integration for KX-TVS50/KX-TVS80

† Available when the KX-TA624 is connected to a Proprietary Telephone capable Panasonic Voice Processing System (one that supports APT Integration; KX-TVS50/KX-TVS80).

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/KX-TVS80).
Selection	• Port 15 / Port 15 & 16 / Disable
Default	All jacks — Disable
Programming	<ol style="list-style-type: none">1. Enter 131. Display: VM2(APT)Port2. Press NEXT. Display example: Port:Disable3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Condition	<ul style="list-style-type: none">• 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.<ul style="list-style-type: none">[600] Extension Group Assignment:<ul style="list-style-type: none">extension jack number 15 — extension group 8extension 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/KX-TVS110:<ul style="list-style-type: none">extension jack number 15 — Enableextension jack number 16 — Enable• If “Enable” is assigned in program [103] “DTMF Integration for KX-TVS75/KX-TVS100/KX-TVS110”, “Port 15” or “Port 15 & 16” cannot be selected.
Feature Reference	Section 3, Features Voice Mail Integration for KX-TVS50/KX-TVS80

† Available when the KX-TA624 is connected to a Proprietary Telephone capable Panasonic Voice Processing System (one that supports APT Integration; KX-TVS50/KX-TVS80).

Hold Recall Time

Description	Assigns the length of the hold recall timer. This timer is used to alert an extension that a call has been held for an extended period of time.
Selection	Time: 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	<ol style="list-style-type: none">1. Enter 200. Display: Hold Recall Time2. Press NEXT. Display example: Time:30 sec3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Condition	<ul style="list-style-type: none">• 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	<ol style="list-style-type: none">1. Enter 201. Display: Transfer Recall2. Press NEXT. Display example: Time:30 sec3. 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

Call Forwarding Start Time

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	<ol style="list-style-type: none">1. Enter 202. Display: Call FWD Delay2. Press NEXT. Display example: 15sec delay3. 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	<ol style="list-style-type: none">1. Enter 203. Display: Pickup Dial Time2. Press NEXT. Display example: PUD Time:3sec3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Conditions	None
Feature Reference	Section 3, Features Pickup Dialing

Call Duration Count Start Time

Description	Sets the number of seconds the system waits between the end of dialing and the start of the SMDR timer for outgoing toll calls. When the system has sent 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	<ol style="list-style-type: none">1. Enter 204. Display: Durat-Time Count2. Press NEXT. Display example: 5s after dial3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Condition	<ul style="list-style-type: none">• 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	<ol style="list-style-type: none">1. Enter 205. Display: CO-CO Dur. Limit2. Press NEXT. Display example: Time:10min3. 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)

Dialing Start Time

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	<ol style="list-style-type: none">1. Enter 206. Display: Dial Start Time2. Press NEXT. Display example: Time: 0 msec3. 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

Interdigit Time

Description	Assigns the maximum time allowed between digits for an outgoing outside call.
Selection	5 sec / 10 sec / 15 sec / 20 sec (seconds)
Default	10 sec
Programming	<ol style="list-style-type: none">1. Enter 208. Display: Interdigit Time2. Press NEXT. Display example: Time:10 sec3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• 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

No Dial Disconnection

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	<ol style="list-style-type: none">1. Enter 211. Display: No Dial Mode2. Press NEXT. Display example: Disable3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Condition	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• Code number: 01 – 20• Carrier code number: 10 digits (max.)
Default	All codes – Not stored
Programming	<ol style="list-style-type: none">1. Enter 300. Display: Carrier Excepted2. Press NEXT. Display: CODE NO? →3. Enter a code number. Pressing NEXT also can enter code number 01. Display example: 01:Not Stored4. 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	<ul style="list-style-type: none">• 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

Toll Restriction — System Speed Dialing Boundary Class

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	<ol style="list-style-type: none">1. Enter 301. Display: SSD Boundary2. Press NEXT. Display example: Boundary Class-13. 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

Toll Restriction — Class 2 – 5 Denied Codes

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	<ul style="list-style-type: none">• Code number: 01 – 20• Toll restriction number: 11 digits
Default	All codes – Not stored
Programming	<ol style="list-style-type: none">1. Enter a program address (302 to 305). Display example: Class-2 Table2. 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	<ul style="list-style-type: none">• 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

Toll Restriction — Exception Codes

Description	This allows the user to assign numbers which are exceptions to toll restriction specified in programs [302] – [305].
Selection	<ul style="list-style-type: none"> • Code number: 01 – 80 • Exception number: 11 digits
Default	All codes – Not stored
Programming	<ol style="list-style-type: none"> 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none">• Code number: 1 – 5• Emergency number: 11 digits (max.)
Default	Code-01 = 911, Other Codes = Not stored
Programming	<ol style="list-style-type: none">1. Enter 309. Display: Emergency Code2. 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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• Code number: 01 – 24• Account code: 4 digits
Default	All codes – Not stored
Programming	<ol style="list-style-type: none">1. Enter 310. Display: Account Code2. 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	<ul style="list-style-type: none">• 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

Automatic Pause Insertion 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: **11 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

Toll Restriction — Station Lock Boundary Class

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	<ol style="list-style-type: none">1. Enter 312. Display: LOCK Boundary2. Press NEXT. Display example: Boundary Disable3. 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 Toll Restriction — Station Lock Boundary Class

Outside (CO) Line Connection Assignment

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	<ul style="list-style-type: none">• Outside (CO) line number: 1 – 6, * (* = all outside (CO) lines)• Connect / Not Connect
Default	All outside (CO) lines – Connect
Programming	<ol style="list-style-type: none">1. Enter 400. Display: CO Connection2. 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:Connect4. 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	<ul style="list-style-type: none">• 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	<p>Each outside (CO) line can be programmed for DTMF, pulse or call blocking. This program assigns the selection to each line.</p> <p>DTMF: The dialing signals from an extension, either tone or pulse, are converted to tone signals and transmitted to an outside (CO) line.</p> <p>Pulse: The dialing signals from an extension, either tone or pulse, are converted to pulse signals and transmitted to an outside (CO) line.</p> <p>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.</p>
Selection	<ul style="list-style-type: none"> • 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	<ol style="list-style-type: none"> 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none">• 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	<ol style="list-style-type: none">1. Enter 402. Display: Pulse Speed2. 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 Speed4. 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	<ul style="list-style-type: none">• 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

Host PBX Access Codes

Description	Assigns Host PBX access codes. If the system is installed behind a host PBX system, an access code is required to make an outside call. Up to eight codes can be stored for an outside (CO) line connected to the host PBX.
Selection	<ul style="list-style-type: none">• 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	<ol style="list-style-type: none">1. Enter 403. Display: Host PBX Access2. 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 Stored4. 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 1:015. 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 1:01,08,10,226. 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.

Host PBX Access Codes (contd.)

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	<ul style="list-style-type: none"> • 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	<ol style="list-style-type: none"> 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	<ul style="list-style-type: none"> • 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

Flexible Outward Dialing Assignment — Day/Night/Lunch

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

Flexible Ringing Assignment — Day/Night/Lunch

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	<ul style="list-style-type: none"> • 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	<ol style="list-style-type: none"> 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

Delayed Ringing Assignment — Day/Night/Lunch

Description	Assigns the ringing start time for each jack in the day, night and lunch modes.
Selection	<ul style="list-style-type: none"> • 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	<ol style="list-style-type: none"> 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

Outside (CO) Line Mode — Day/Night/Lunch

Description	<p>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.</p> <p>Normal: an incoming outside call will be received at the extension(s) assigned in programs [408]–[410].</p> <p>DIL: an incoming outside call will be received at the assigned extension.</p> <p>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.</p> <p>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)”.</p>
Selection	<ul style="list-style-type: none"> • Outside (CO) line number: 1 – 6, * (* = all outside (CO) lines) • Normal / DIL + extension jack number / DISA1 / DISA2
Default	Normal
Programming	<ol style="list-style-type: none"> 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)

Pause Time

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	<ul style="list-style-type: none">• 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	<ol style="list-style-type: none">1. Enter 417. Display: Pause Time2. 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 1:1.5sec4. 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	<ul style="list-style-type: none">• 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

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	<ul style="list-style-type: none">• 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	<ol style="list-style-type: none">1. Enter 418. Display: Flash Time Set2. 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: 600ms4. 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	<ul style="list-style-type: none">• 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

Automatic Designated Outside (CO) Line Access

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	<ul style="list-style-type: none"> • Outside (CO) line number: 1 – 6, * (* = all outside (CO) lines) • Enable / Disable
Default	All outside (CO) lines — Enable
Programming	<ol style="list-style-type: none"> 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	<ul style="list-style-type: none"> • 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

Calling Party Control (CPC) Signal

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**.

Calling Party Control (CPC) Signal (contd.)

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

CPC Detection for Outgoing Calls

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	<ul style="list-style-type: none">• Outside (CO) line number: 1 – 6, * (* = all outside (CO) lines)• Enable (detect) / Disable (will not detect)
Default	Disable
Programming	<ol style="list-style-type: none">1. Enter 421. Display: CPC Out Detect2. 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:Disable4. 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	<ul style="list-style-type: none">• 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

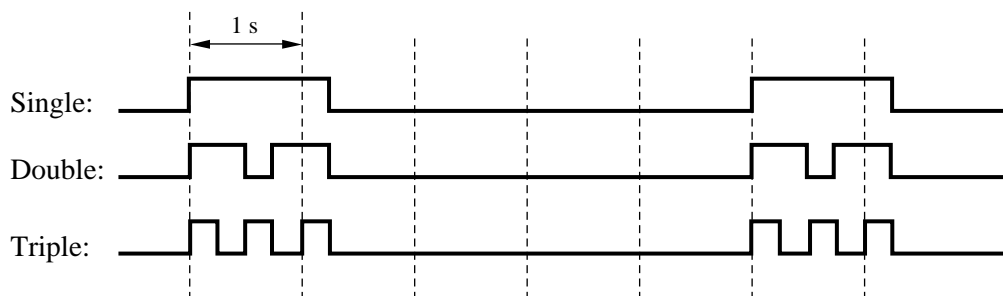
Disconnect Time

Description	Determines the amount of time to send the disconnect signal from the system to the Central Office or host PBX.
Selection	<ul style="list-style-type: none">• 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	<ol style="list-style-type: none">1. Enter 422. Display: Disconnect Time2. 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 1:1.5sec4. 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	<ul style="list-style-type: none">• 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

Outside (CO) Line Ringing Pattern Selection

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

DISA Incoming Dialing Mode Selection

Description	<p>Selects the mode of an incoming DISA call. There are two modes as follows.</p> <p>Without AA: the system can receive an extension number, line access number and operator call number, and send the call to the designated destination.</p> <p>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.</p>
Selection	Without AA / With AA
Default	Without AA
Programming	<ol style="list-style-type: none">1. Enter 500. Display: DISA Dial Mode2. Press NEXT. Display example: Without AA3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Condition	<ul style="list-style-type: none">• 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)

DISA Built-in Auto Attendant

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	<ul style="list-style-type: none">• DISA built-in auto attendant (AA) number: 0 – 9• Jack number: 01 – 24 / Ring Group number: 1 – 8
Default	All numbers — Not stored
Programming	<ol style="list-style-type: none">1. Enter 501. Display: DISA Built-In2. 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 Stored4. 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-015. 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	<ul style="list-style-type: none">• 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	<p>Selects how the two outgoing messages (OGM) are used. There are two modes as follows.</p> <p>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.</p> <p>MODE 2: OGM1 is used for DISA1 and OGM2 is used for DISA2.</p>
Selection	MODE 1 / MODE 2
Default	MODE 1
Programming	<ol style="list-style-type: none"> Enter 502. Display: OGM Selection Press NEXT. Display example: MODE 1 Keep pressing SELECT until the desired selection is displayed. Press STORE. Press END.
Conditions	<ul style="list-style-type: none"> 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	<p>Section 3, Features</p> <p>Direct Inward System Access (DISA)</p> <p>Outgoing Message (OGM)</p>

FAX Connection

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	<ol style="list-style-type: none">1. Enter 503. Display: Fax Connection2. Press NEXT. Display example: FAX :Disable3. 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	<ul style="list-style-type: none">• 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	<ol style="list-style-type: none">1. Enter 504. Display: Ans Delay Time2. Press NEXT. Display example: Time: 3sec3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Condition	<ul style="list-style-type: none">• 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)

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	<ol style="list-style-type: none">1. Enter 505. Display: DISA Wait Time2. Press NEXT. Display example: Time :5sec3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Condition	<ul style="list-style-type: none">• An optional OGM/FAX Detection card is necessary.
Feature Reference	Section 3, Features Direct Inward System Access (DISA)

DISA Busy Mode

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	<ol style="list-style-type: none">1. Enter 506. Display: DISA Busy Mode2. Press NEXT. Display example: Disconnect3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Condition	<ul style="list-style-type: none">• 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)

DISA Intercept Mode

Description	<p>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.</p> <p>Intercept: the call is directed to the extensions assigned in programs [408]–[410].</p> <p>Disconnect: the call is disconnected.</p>
Selection	Disconnect / Intercept
Default	Intercept
Programming	<ol style="list-style-type: none">1. Enter 507. Display: DISA IRNA Mode2. Press NEXT. Display example: Intercept3. 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/KX-TVS80 Voice Mail Integration for KX-TVS75/KX-TVS100/KX-TVS110

DISA Ringing Time before Intercept

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	<ol style="list-style-type: none">1. Enter 508. Display: DISA Befor IRNA2. Press NEXT. Display example: Time: 20sec3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Condition	<ul style="list-style-type: none">• 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

DISA Ringing Time after Intercept

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	<ol style="list-style-type: none">1. Enter 509. Display: DISA After IRNA2. Press NEXT. Display example: Time: 20sec3. 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

DISA No Dial Mode

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	<ul style="list-style-type: none">• DISA1 / DISA2• Intercept / Disconnect
Default	DISA1 and DISA2 — Intercept
Programming	<ol style="list-style-type: none">1. Enter 510. Display: No Dial Mode2. Press NEXT. Display example: DISA1:Disconnect3. 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

DISA Security Type

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	<ol style="list-style-type: none">1. Enter 511. Display: Security Type2. Press NEXT. Display example: Trunk Security3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Condition	<ul style="list-style-type: none">• Program [512] “DISA Security Codes” is used to program the DISA Security Codes.
Feature Reference	Section 3, Features Direct Inward System Access (DISA)

DISA Security Codes

Description	Assigns the DISA (Direct Inward System Access) Security Codes.
Selection	<ul style="list-style-type: none"> • Code number : 1 – 4 • DISA security code: 4 digits (programmable)
Default	All codes — Not stored
Programming	<ol style="list-style-type: none"> 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	<ul style="list-style-type: none"> • 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 numerical digits, 0 – 9. • The number of digits for the security codes can be programmed in [530] “DISA Security Codes Digits Selection”. • The used security code numbers (not security codes) are printed on the SMDR.
Feature Reference	<p>Section 3, Features Direct Inward System Access (DISA)</p>

Cyclic Tone Detection

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	<ol style="list-style-type: none">1. Enter 513. Display: Tone Detection2. Press NEXT. Display example: 4 Times3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Condition	<ul style="list-style-type: none">• An optional OGM/FAX Detection card is necessary.
Feature Reference	Section 3, Features Direct Inward System Access (DISA)

FAX Tone Detection

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	<ol style="list-style-type: none">1. Enter 514. Display: FAX Detection2. Press NEXT. Display example: 1 Time3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Condition	<ul style="list-style-type: none">• An optional OGM/FAX Detection card is necessary.
Feature References	Section 3, Features Direct Inward System Access (DISA) Facsimile Detection

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	<ol style="list-style-type: none">1. Enter 515. Display: Internal DISA2. Press NEXT. Display example: Time: 3 sec3. 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)

DISA Incoming Assignment

Description	Assigns the extensions which can receive calls via DISA.
Selection	<ul style="list-style-type: none">• Jack number: 01 – 24, * (* =all jacks)• Enable / Disable
Default	All jacks — Enable
Programming	<ol style="list-style-type: none">1. Enter 516. Display: DISA Assign2. Press NEXT. Display example: Jack NO? →3. Enter a jack number. Pressing NEXT also can enter jack number 01. Display example: #01:Enable4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program <u>another</u> jack, press NEXT or PREV, or SELECT and enter the desired jack number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• 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)

DISA AA Wait Time

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	<ol style="list-style-type: none">1. Enter 517. Display: DISA AA Time2. Press NEXT. Display example: Time: 2 sec3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Condition	<ul style="list-style-type: none">• The AA wait timer will only work when “1” or “8” is dialed.
Feature Reference	Section 3, Features Direct Inward System Access (DISA)

DISA Tone Selection after the Security Code

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	<ol style="list-style-type: none">1. Enter 518. Display: DISA Dial Tone2. Press NEXT. Display: Enable3. 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)

DISA Security Codes Digits Selection

Description	Selects the number of digits for the DISA security codes assigned in program [512] “DISA Security Codes”.
Selection	Number of digits: 4 – 10 digits
Default	4 digits
Programming	<ol style="list-style-type: none">1. Enter 530. Display: Security Digits2. Press NEXT. Display example: 4 digits3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Condition	<ul style="list-style-type: none">• When the setting has been changed in this program, the DISA security codes, if already assigned, will be canceled.
Feature Reference	Section 3, Features Direct Inward System Access (DISA)

*Extension Group Assignment***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
Extension Group
Station Hunting

Paging – Group
Ring Group

Description	Programs Toll Restriction (TRS) – Class of Service (COS) for each extension.
Selection	<ul style="list-style-type: none">• Jack number: 01 – 24, * (* = all jacks)• COS-1 / COS-2 / COS-3 / COS-4 / COS-5
Default	All jacks — COS-1
Programming	<ol style="list-style-type: none">1. Enter a program address (601 for day, 602 for night, or 603 for lunch). Display example: Day Toll Restr2. Press NEXT. Display: Jack NO? →3. Enter a jack number. Pressing NEXT also can enter jack number 01. Display example: #01: COS-14. 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	<ul style="list-style-type: none">• 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

Extension Name Setting

Description	Assigns names to the extensions.
Selection	<ul style="list-style-type: none"> • Jack number: 01 – 24 • Name: 10 characters (max.)
Default	All jacks – Not stored
Programming	<ol style="list-style-type: none"> 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	<ul style="list-style-type: none"> • 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

Account Code Entry Mode

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**.

Account Code Entry Mode (contd.)

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

Call Transfer to an Outside (CO) Line

Description	Enables or disables performing the Call Transfer to an Outside (CO) Line feature.
Selection	<ul style="list-style-type: none">• Jack number: 01 – 24, * (* = all jacks)• Enable / Disable
Default	All jacks – Disable
Programming	<ol style="list-style-type: none">1. Enter 606. Display: Transfer to CO2. Press NEXT. Display: Jack NO? →3. Enter a jack number. Pressing NEXT also can enter jack number 01. Display example: #01:Disable4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another jack, press NEXT or PREV, or SELECT and enter the desired jack number.7. Repeat steps 4 through 6.8. Press END.
Condition	<ul style="list-style-type: none">• 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

Call Forwarding to an Outside (CO) Line

Description	Enables or disables performing the Call Forwarding to an Outside (CO) Line feature.
Selection	<ul style="list-style-type: none"> • Jack number: 01 – 24, * (* = all jacks) • Disable / Enable
Default	All jacks – Disable
Programming	<ol style="list-style-type: none"> 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	<ul style="list-style-type: none"> • To assign all jacks to the same selection, press the * key in step 3. In this case, the display will show: # * :Mixed.
Feature Reference	<p>Section 3, Features Call Forwarding – to an Outside (CO) Line</p>

Executive Busy Override

Description	Enables or disables performing Executive Busy Override – Extension/Outside (CO) Line. Executive Busy Override allows a user to interrupt an established call.
Selection	<ul style="list-style-type: none">• Jack number: 01 – 24, * (* = all jacks)• Disable / Enable
Default	All jacks – Disable
Programming	<ol style="list-style-type: none">1. Enter 608. Display: Busy Override2. Press NEXT. Display: Jack NO? →3. Enter a jack number. Pressing NEXT also can enter jack number 01. Display example: #01:Disable4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.—6. To program another jack, press NEXT or PREV, or SELECT and enter the desired jack number.7. Repeat steps 4 through 6.8. Press END.
Condition	<ul style="list-style-type: none">• 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

Do Not Disturb Override

Description	Enables or disables performing the Do Not Disturb (DND) Override feature.
Selection	<ul style="list-style-type: none">• Jack number: 01 – 24, * (* = all jacks)• Disable / Enable
Default	All jacks – Disable
Programming	<ol style="list-style-type: none">1. Enter 609. Display: DND Override2. Press NEXT. Display: Jack NO? →3. Enter a jack number. Pressing NEXT also can enter jack number 01. Display example: #01:Disable4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another jack, press NEXT or PREV, or SELECT and enter the desired jack number.7. Repeat steps 4 through 6.8. Press END.
Condition	<ul style="list-style-type: none">• 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

Paralleled Telephone Connection

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	<ul style="list-style-type: none">• Jack number: 01 – 24, * (* = all jacks)• Disable / Enable
Default	All jacks – Disable
Programming	<ol style="list-style-type: none">1. Enter 610. Display: Parallel Connect2. Press NEXT. Display: Jack NO? →3. Enter a jack number. Pressing NEXT also can enter jack number 01. Display example: #01:Disable4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program another jack, press NEXT or PREV, or SELECT and enter the desired jack number.7. Repeat steps 4 through 6.8. Press END.
Condition	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none"> • Jack number: 01 – 24, * (* = all jacks) • Disable / Enable
Default	All jacks – Disable
Programming	<ol style="list-style-type: none"> 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	<ul style="list-style-type: none"> • To assign all jacks to the same selection, press the * key in step 3. In this case, the display will show: # * :Mixed.
Feature Reference	<p>Section 3, Features Call Retrieving from a TAM (Telephone Answering Machine)</p>

Room Monitor Assignment

Description	Assigns which extensions can be monitored by another telephone.
Selection	<ul style="list-style-type: none">• Jack number: 01 – 24, * (* = all jacks)• Disable / Enable
Default	All jacks – Disable
Programming	<ol style="list-style-type: none">1. Enter 612. Display: Room Monitor2. Press NEXT. Display: Jack NO? →3. Enter a jack number. Pressing NEXT also can enter jack number 01. Display example: #01:Disable4. Keep pressing SELECT until the desired selection is displayed.5. Press STORE.6. To program <u>another</u> jack, press NEXT or PREV, or SELECT and enter the desired jack number.7. Repeat steps 4 through 6.8. Press END.
Conditions	<ul style="list-style-type: none">• To assign all jacks to 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

Wireless PT Port Assignment

Description

Used to identify whether a Panasonic Wireless Phone (e.g., KX-TD7894, KX-TD7895, 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.

Message Waiting for Another Extension

Description	Enables or disables performing the Message Waiting for Another Extension feature. If disabled, an extension user cannot assign the Another Extension Message Waiting button.
Selection	<ul style="list-style-type: none">• Jack number: 01 – 24, * (* = all jacks)• Disable / Enable
Default	All jacks – Enable
Programming	<ol style="list-style-type: none">1. Enter 618. Display: Another MW Set2. Press NEXT. Display: Jack NO? →3. Enter a jack number. Pressing NEXT also can enter jack number 01. Display example: #01:Enable4. 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	<ul style="list-style-type: none">• 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 Message Waiting for Another Extension

Live Call Screening Recording Mode Assignment †

Description	Assigns whether to close the mailbox or keep recording the conversation after a call is intercepted.
Selection	<ul style="list-style-type: none"> • Jack number: 01 – 24, * (* = all jacks) • Stop-Rec / Keep-Rec
Default	All jacks – Stop-Rec (Stop recording)
Programming	<ol style="list-style-type: none"> 1. Enter 620. Display: LCS Rec mode 2. Press NEXT. Display: Jack NO? → 3. Enter a jack number. Pressing NEXT also can enter jack number 01. Display example: #01:Stop-Rec 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	<ul style="list-style-type: none"> • 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 Live Call Screening (LCS) Voice Mail Integration for KX-TVS50/KX-TVS80

† Available when the KX-TA624 is connected to a Proprietary Telephone capable Panasonic Voice Processing System (one that supports APT Integration; KX-TVS50/KX-TVS80).

Doorphone Ringing Assignment — Day/Night/Lunch

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

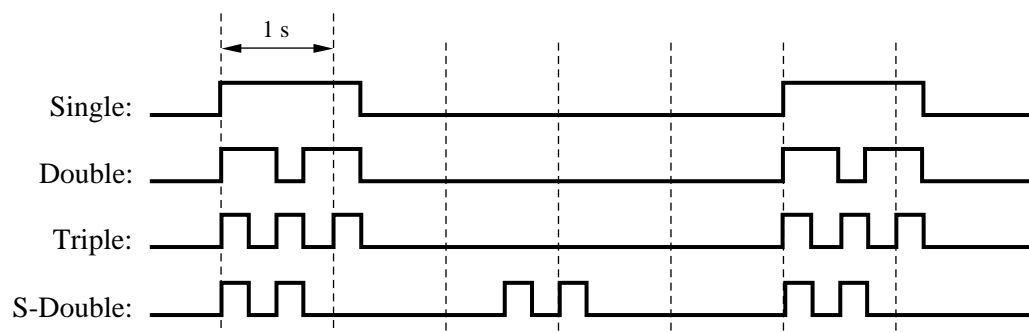
Door Opener Assignment — Day/Night/Lunch

Description	These programs assign which extensions can open a door in the day, night and lunch modes.
Selection	<ul style="list-style-type: none"> • Door opener number: 1 – 4, * (* = all door openers) • Jack number: 01 – 24, * (* = all jacks) • Enable / Disable
Default	All door openers – all jacks – Enable
Programming	<ol style="list-style-type: none"> 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	<ul style="list-style-type: none"> • 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	<p>Section 3, Features</p> <p>Door Opener</p> <p>Time (Day/Night/Lunch) Service</p>

Doorphone Ringing/Tone Pattern Selection

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

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	<ul style="list-style-type: none">• Doorphone number: 1 – 4, * (* = all doorphones)• Enable / Disable
Default	All doorphones — Enable
Programming	<ol style="list-style-type: none">1. Enter 707. Display: Door Ack-Tone2. Press NEXT. Display: Door NO? →3. Enter a doorphone number. Pressing NEXT also can enter doorphone number 1. Display example: DP-1:Enable4. 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	<ul style="list-style-type: none">• 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

Doorphone Ringing Time

Description	Selects the doorphone ringing time.
Selection	<ul style="list-style-type: none">• Doorphone number: 1 – 4, * (* = all doorphones)• 15 sec / 30 sec (seconds)
Default	All doorphones — 15 sec
Programming	<ol style="list-style-type: none">1. Enter 708. Display: Doorphone R-Time2. Press NEXT. Display: Door NO? →3. Enter a doorphone number. Pressing NEXT also can enter doorphone number 1. Display example: DP-1:15 sec4. 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	<ul style="list-style-type: none">• 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

Door Opener Time

Description	Selects the door opener time. The door is unlocked for the assigned period of time.
Selection	<ul style="list-style-type: none">• 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	<ol style="list-style-type: none">1. Enter 709. Display: Door-Opner Time2. Press NEXT. Display: Door NO? →3. Enter a door opener number. Pressing NEXT also can enter doorphone number 1. Display example: DP-1: 5 sec4. 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	<ul style="list-style-type: none">• 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: **None / Mark / Space / Even / Odd**
 - Stop bit length (bits): **1 / 2**

Default

New line code = CR+LF;
Baud rate = 9600;
Word length = 8;
Parity = 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

SMDR RS-232C Communication Parameters (contd.)

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	<ul style="list-style-type: none">• Page length (lines): 4 – 99• Skip perforation (lines): 0 – 95
Default	Page length – 66; Skip perforation – 0
Programming	<ol style="list-style-type: none">1. Enter 801. Display: SMDR Parameter2. Press NEXT to program the page length. Display example: Page Length:663. 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: 06. Enter the skip perforation. To change the current entry, press CLEAR and enter the new skip perforation.7. Press STORE.8. Press END.
Conditions	<ul style="list-style-type: none">• 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)

Incoming/Outgoing Call Selection for Printing

Description	Used to determine which calls will produce an SMDR printout.
Selection	<ul style="list-style-type: none">• 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	<ol style="list-style-type: none">1. Enter 802. Display: Call Printing2. Press NEXT to program outgoing calls. Display: Outgoing:On3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press NEXT to program incoming calls. Display: Incoming:On6. Keep pressing SELECT until the desired selection is displayed.7. Press STORE.8. Press END.
Conditions	<ul style="list-style-type: none">• 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)

Secret Speed Dialing/One-Touch Dialing Printing

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	<ol style="list-style-type: none">1. Enter 803. Display: Secret Printing2. Press NEXT. Display example: No Printing3. 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)

*System Data Dump***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**.

System Data Dump (contd.)

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	<p>Selects the account code type printed on the SMDR. There are the following two types.</p> <p>CODE: the 4-digit account code number programmed in [310] “Account Codes”.</p> <p>INDEX: a 2-digit code number (01 – 24).</p>
Selection	CODE / INDEX
Default	CODE
Programming	<ol style="list-style-type: none"> Enter 805. Display: Account Select Press NEXT. Display example: CODE Keep pressing SELECT until the desired selection is displayed. Press STORE. Press END.
Condition	<ul style="list-style-type: none"> 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	<p>Section 3, Features</p> <p>Account Code Entry</p> <p>Station Message Detail Recording (SMDR)</p>

Caller ID Assignment

Description	Enables or disables the Caller ID feature for outside (CO) lines which have contracted the Caller ID Service by a Central Office.
Selection	<ul style="list-style-type: none">• Outside (CO) line number: 1 – 6, * (* = all outside (CO) lines)• Enable / Disable
Default	All outside (CO) lines – Disable
Programming	<ol style="list-style-type: none">1. Enter 900. Display: CID Assign2. 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:Disable4. 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	<ul style="list-style-type: none">• 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

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	<ul style="list-style-type: none">• Code number: 1 – 5• Area code: 6 digits max.
Default	All codes – Not stored
Programming	<ol style="list-style-type: none">1. Enter 901. Display: CID Area Code2. 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	<ul style="list-style-type: none">• 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	<p>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.</p> <p>Digits are removed from or added to the beginning of the received number.</p>
Selection	<ul style="list-style-type: none">• 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	<ol style="list-style-type: none">1. Enter 902. Display: CID Local Call2. 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	<ul style="list-style-type: none">• The added number has a maximum of 4 digits, consisting of 0 – 9, * and #.• An optional Caller ID card is required.
Feature References	<p>Section 3, Features Call Log, Incoming Caller ID</p>

Caller ID Modification for Long Distance Calls

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

Caller ID Log Priority Selection

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

Caller ID SMDR Format

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	<ol style="list-style-type: none">1. Enter 906. Display: CID SMDR Format2. Press NEXT. Display example: With CID3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• 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)

Caller ID SMDR Printout Selection

Description	Selects whether a Caller ID number is printed out or not on the SMDR before the call is answered.
Selection	Enable (printed) / Disable (not printed)
Default	Disable
Programming	<ol style="list-style-type: none">1. Enter 907. Display: Caller-ID Inf.2. Press NEXT. Display example: Disable3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Feature References	Section 3, Features Caller ID Station Message Detail Recording (SMDR)

Caller ID Call Waiting Time

Description	Assigns the length of the second caller information display timer. The caller's information flashes on the display of a proprietary telephone during the assigned time when a caller's information is sent from the Central Office with a Call Waiting tone.
Selection	Time: 10 sec / 20 sec / 30 sec / 40 sec / 60 sec / 120 sec
Default	30 sec
Programming	<ol style="list-style-type: none">1. Enter 908. Display: C.W CID Time2. Press NEXT. Display example: Time:30 sec3. Keep pressing SELECT until the desired selection is displayed.4. Press STORE.5. Press END.
Conditions	<ul style="list-style-type: none">• If a proprietary telephone user does not talk to the caller on the display (flashing) by pressing the FLASH button during the assigned time, the caller's information will be recorded automatically on the telephone and the Caller ID Indication button indicator lights.• The TRANSFER button and HOLD button do not work during the assigned time.
Feature References	Section 3, Features Caller ID Call Waiting

Common Area Call Log Check Assignment

Description	Enables or disables checking call logs stored in the common area. If enabled, the Caller ID Indication — Common button and Caller ID Selection — Common button can be assigned.
Selection	<ul style="list-style-type: none">• Jack number: 01 – 24, * (* = all jacks)• Disable / Enable
Default	All jacks – Enable
Programming	<ol style="list-style-type: none">1. Enter 909. Display: Call Log Assign2. Press NEXT. Display: Jack NO? →3. Enter a jack number. Pressing NEXT also can enter jack number 01. Display example: #01:Enable4. 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	<ul style="list-style-type: none">• 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 Log, Incoming

Call Forwarding Selection

Description	Enables or disables the Call Forwarding feature for each extension for an outside call via an outside (CO) line assignment “Normal” in programs [414]-[416] “Outside (CO) Line Mode — Day/Night/Lunch”. If disabled, an extension user cannot forward the outside call even if the user has set the Call Forwarding feature.
Selection	<ul style="list-style-type: none"> • Jack number: 01 – 24, * (* = all jacks) • Disable / Enable
Default	All jacks – Disable
Programming	<ol style="list-style-type: none"> 1. Enter 963. Display: FWD Selection 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	<ul style="list-style-type: none"> • If set to “Disable” for an extension whose Call Forwarding destination is a Voice Processing System (VPS) and the extension has been assigned to ring with other extensions, for example, it can prevent the VPS from receiving a call before other extensions receive it. • This assignment also works for an outside call via the DISA Intercept Routing feature or when a call via DISA is received by a ring group.
Feature Reference	Section 3, Features Call Forwarding – All Calls Call Forwarding – Busy/No Answer Call Forwarding – Follow Me

ROM Version

Description

Confirms the System ROM version.

Display example: Y501B 980430(M)

| |
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	<ol style="list-style-type: none">1. Enter 999. Display: System Clear2. Press NEXT. Display: Menu:All Para3. 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	<ul style="list-style-type: none">• Please refer to program [804] for each parameter.
Feature Reference	Section 3, Features System Data Default Set

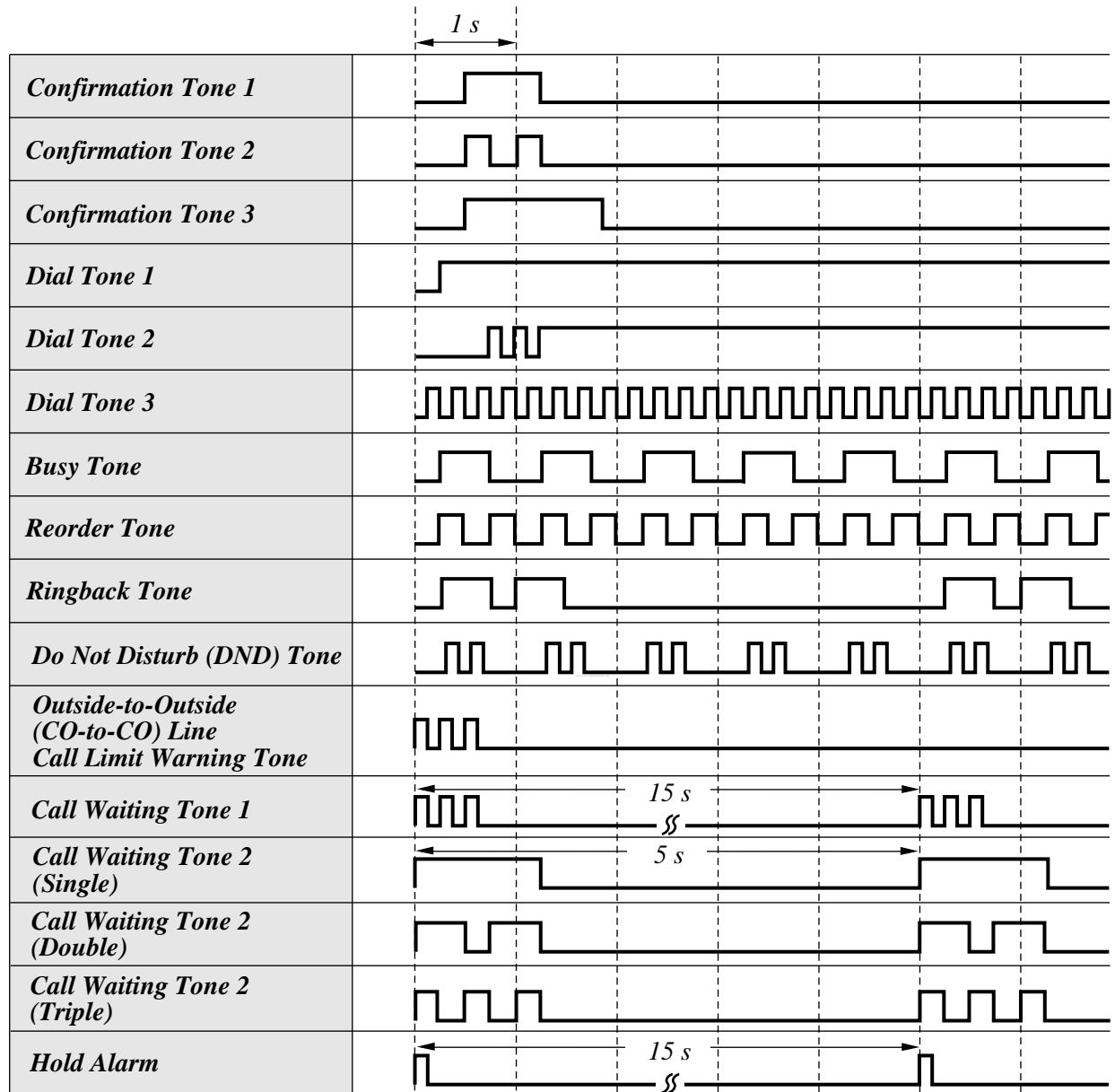
Section 5

List

This section lists the tone, ring and default values of system programming.

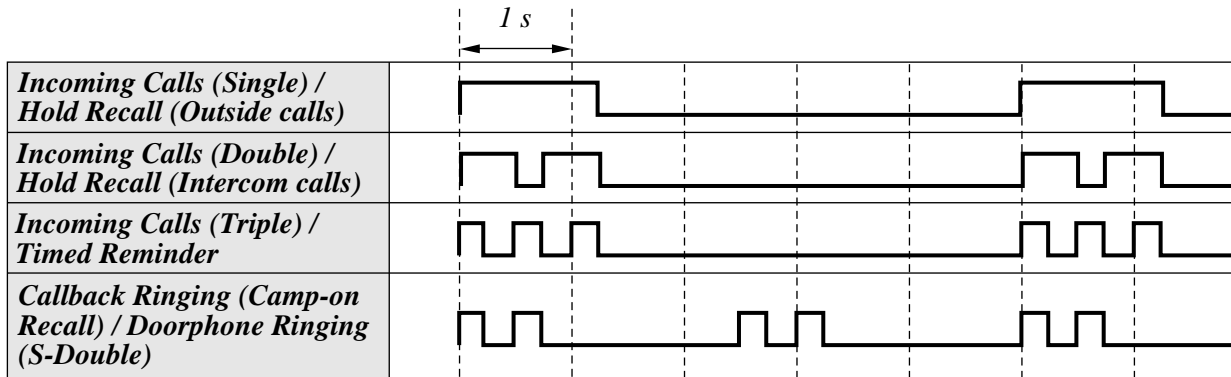
5.1 Tone/Ring Tone

< TONE >



5.1 Tone/Ring Tone

< RING TONE >



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/KX-TVS110	All jacks — Disable
[103]	DTMF Integration for KX-TVS75/ KX-TVS100/KX-TVS110	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/KX-TVS80	Disable
[131]	Voice Mail 2 APT Port for KX-TVS50/KX-TVS80	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
[506]	DISA Busy Mode	Disconnect
[507]	DISA Intercept Mode	Intercept

5.2 Default Values

Address	Program	Default
[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
[530]	DISA Security Codes Digits Selection	4 digits
[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
[618]	Message Waiting for Another Extension	All jacks – Enable
[620]	Live Call Screening Recording Mode Assignment	All jacks – Stop-Rec

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 = 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
[907]	Caller ID SMDR Printout Selection	Disable
[908]	Caller ID Call Waiting Time	30 sec
[909]	Common Area Call Log Check Assignment	All jacks — Enable
[963]	Call Forwarding Selection	All jacks — Disable
[998]	ROM Version	Not applicable.
[999]	System Data Clear	Not applicable.

Section 6

Troubleshooting

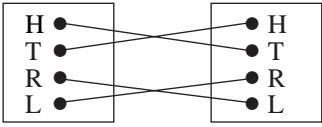
This section provides information for system
and telephone troubleshooting.

6.1 Installation

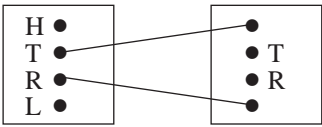
PROBLEM	PROBABLE CAUSE	POSSIBLE SOLUTION
Extension does not operate.	<p>Something is wrong with the printed circuit board (Extension Card).</p> <p>Something is wrong with the connection between the system and extension.</p> <p>A telephone with an A-A1 relay is connected.</p> <p>Something is wrong with the extension.</p>	<p>Exchange the printed circuit board with another printed circuit board.</p> <p>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.</p> <p>Use a 2 wire cord. Set the A-A1 relay switch on the telephone to the "OUT" or "OFF" position.</p> <p>Take the extension and plug it into another extension port that is working. If the telephone does not work, replace the phone.</p>
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

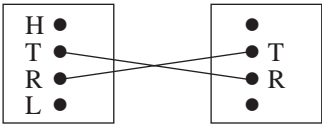
Connection between the system and a proprietary telephone:

CAUSE		SOLUTION
T/R is connected to H/L.  KX-TA624 extension		Use the correct cord (the inner 2 wires are for T/R and the outer 2 wires are for H/L).

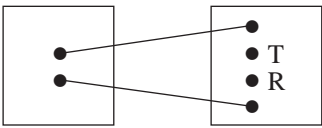
Connection between the system and a single line telephone:

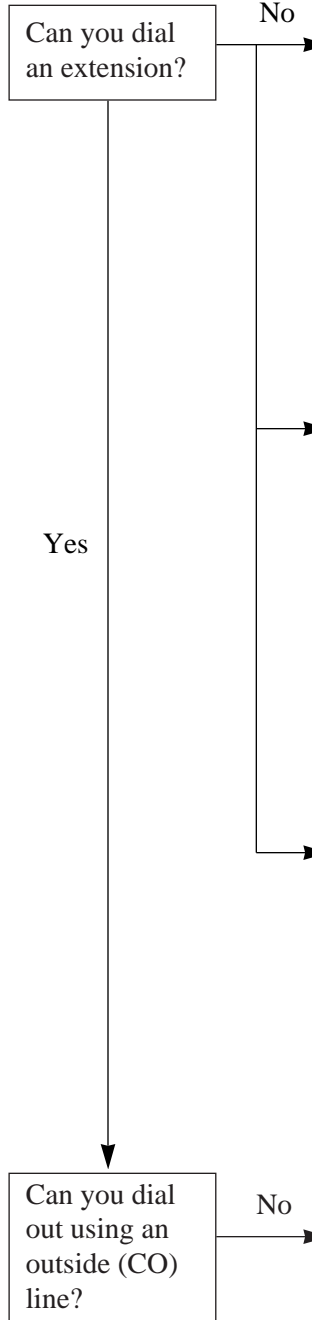
CAUSE		SOLUTION
T/R is connected to H/L.  KX-TA624 extension		Use the correct cord (the inner 2 wires are for T/R).

Connection between the system and a single line telephone that is polarity-sensitive:

CAUSE		SOLUTION
"T" is connected to "R".  KX-TA624 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 KX-TA624		Reconnect the outside (CO) lines to T/R using 2-conductor wiring.



6.3 Operation

PROBLEM	PROBABLE CAUSE	POSSIBLE SOLUTION
When using the speaker-telephone with a proprietary telephone, KX-T7135, KX-T7130 or KX-T7030, nothing is heard.	The HANDSET/HEADSET selector on the KX-T7135, 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.	<ol style="list-style-type: none"> 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

[001] System Speed Dialing Entry			
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	

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	Change	1	2	3	4	5	6	7	8	Default: All – Not stored
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										
*	X										X

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						
	Default	Extn. jack no. (07, 08, 15, 16, *: all)					Default	DTMF receiver no. (1...6)					
Selection	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	
	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	
	Enable	Disable	Enable	Disable	MODE 1	MODE 2	External	Tone
Default		✓	✓			✓	✓	
Change								

	[112] DSS Console Indication Mode	
	Enable	Disable
Default	✓	
Change		

7 Programming Tables

	[115] Extension Ringing Pattern Selection			[117] Call Pickup Tone		[118] Pulse Restriction	
	Single	Double	Triple	Enable	Disable	Enable	Disable
Selection							
Default		✓		✓		✓	
Change							

	[119] Redialing after Pulse to Tone Conversion		[125] Toll Restriction Check for * and #	
	Enable	Disable	Enable	Disable
Selection				
Default		✓	✓	
Change				

	[130] Voice Mail 1 APT Port for KX-TVS50/KX-TVS80			[131] Voice Mail 2 APT Port for KX-TVS50/KX-TVS80		
	Port 7	Port 7 & 8	Disable	Port 15	Port 15 & 16	Disable
Selection						
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			
	15 sec	30 sec	1 min	2 min	5 sec	10 sec	15 sec	20 sec	1 sec	2 sec	3 sec	4 sec
Selection												
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	20 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 (11 digits max.)	CODE no.	Pause code (11 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

Outside line no.	[400] Outside (CO) Line Connection Assignment		[401] Dial Mode			[402] Pulse Speed Selection	
	Connect	No Connect	DTMF	Pulse	Call Blocking	Low Speed	High Speed
Default: All	✓		✓			✓	
1							
2							
3							
4							
5							
6							
*							

Outside line no.	[403] Host PBX Access Codes						[404] Outside (CO) Line Group Assignment	
	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

[405] Flexible Outward Dialing Assignment — Day															
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															
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19															
20															
21															
22															
23															
24															
*															

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														
08														
09														
10														
11														
12														
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23														
24														
*														

7 Programming Tables

[407] Flexible Outward Dialing Assignment — Lunch															
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															
08															
09															
10															
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16															
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18															
19															
20															
21															
22															
23															
24															
*															

7 Programming Tables

[408] Flexible Ringing Assignment — Day														
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														
08														
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10														
11														
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22														
23														
24														
*														

7 Programming Tables

[409] Flexible Ringing 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															
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20															
21															
22															
23															
24															
*															

7 Programming Tables

[410] Flexible Ringing Assignment — Lunch														
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														
08														
09														
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20														
21														
22														
23														
24														
*														

7 Programming Tables

[411] Delayed Ringing Assignment — Day																																
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	✓				✓				✓				✓				✓				✓				✓				✓			
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02																																
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24																																
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7 Programming Tables

[412] Delayed Ringing 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 (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	I	5	10	15
Default: All	✓				✓				✓				✓				✓				✓				✓				✓			
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23																																
24																																
*																																

7 Programming Tables

[413] Delayed Ringing Assignment — Lunch																																
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	I	5	10	15
Default: All	✓				✓				✓				✓				✓				✓				✓				✓			
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7 Programming Tables

Outside line no.	[414] Outside (CO) Line Mode — Day					[415] Outside (CO) Line Mode — Night					[416] Outside (CO) Line Mode — Lunch				
	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															
*															

Outside line no.	[417] Pause Time				[418] Flash Time						
	1.5	2.5	3.5	4.5	80	100	160	300	600	900	1200
Default: All	✓								✓		
1											
2											
3											
4											
5											
6											
*											

Outside line no.	[419] Automatic Designated Outside (CO) Line Access		[420] Calling Party Control (CPC) Signal	[421] CPC Detection for Outgoing Calls	
	Enable	Disable	Selection: 00 (Disable), 01 (22 msec)···75 (614 msec)	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		
	Selection (seconds)			Selection		
Outside line no.	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
	Without AA	With AA	MODE 1	MODE 2	Extension jack no. (01...24) / Disable
Selection					
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			
	0 sec	3 sec	6 sec	12 sec	0 sec	5 sec	10 sec	15 sec
Selection								
Default		✓				✓		
Change								

7 Programming Tables

	[506] DISA Busy Mode			[507] DISA Intercept Mode		[508] DISA Ringing Time before Intercept					
	Disconnect	Call Waiting	DISA 2	Intercept	Disconnect	10 sec	20 sec	30 sec	40 sec	60 sec	120 sec
Selection											
Default	✓			✓			✓				
Change											

	[509] DISA Ringing Time after Intercept						[510] DISA No Dial Mode			
	10 sec	20 sec	30 sec	40 sec	60 sec	120 sec	DISA 1		DISA 2	
Selection							Intercept	Disconnect	Intercept	Disconnect
Default		✓					✓		✓	
Change										

	[511] DISA Security Type			[512] DISA Security Codes				[513] Cyclic Tone Detection			
	Trunk	All	None	0...9, 4 digit (programmable)				Disable	2 Times	3 Times	4 Times
Selection											
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				
	1 Time	2 Times	3 sec	6 sec	9 sec	1 sec	2 sec	3 sec	4 sec	5 sec
Selection										
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			X		

7 Programming Tables

	[518] DISA Tone Selection after the Security Code	
Selection	Enable	Disable
Default	✓	
Change		

	[530] DISA Security Codes Digits Selection
Selection	4 – 10 digit
Default	4 digits
Change	

	[601] TRS – Class of Service (COS) Assignment — Day					[602] TRS – Class of Service (COS) Assignment — Night					[603] TRS – Class of Service (COS) Assignment — Lunch				
Extension jack no.	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															
07															
08															
09															
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19															
20															
21															
22															
23															
24															
*															

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						
13						
14						
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16						
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22						
23						
24						
*						

7 Programming Tables

Extension jack no.	[607] Call Forwarding to an Outside (CO) Line		[608] Executive Busy Override		[609] Do Not Disturb Override		[610] Paralleled Telephone Connection	
	Enable	Disable	Enable	Disable	Enable	Disable	Enable	Disable
Default: All		✓		✓		✓		✓
01								
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
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21								
22								
23								
24								
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7 Programming Tables

Extension jack no.	[611] TAM Extension		[612] Room Monitor Assignment		[617] Wireless PT Port Assignment		[618] Message Waiting for Another Extension		[620] Live Call Screening Recording Mode Assignment	
	Enable	Disable	Enable	Disable	Not Connect	Connect	Enable	Disable	Stop-Rec	Keep-Rec
Default: All		✓		✓	✓		✓		✓	
01										
02										
03										
04										
05										
06										
07										
08										
09										
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24										
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7 Programming Tables

	[700] Doorphone Ringing Assignment — Day				[701] Doorphone Ringing Assignment — Night				[702] Doorphone Ringing Assignment — Lunch							
Extension jack no.	1...4: Doorphone no., E: Enable / D: Disable															
	1	2	3	4	1	2	3	4	1	2	3	4				
Default: All	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D
01	✓		✓		✓		✓		✓		✓		✓		✓	
02																
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7 Programming Tables

	[703] Door Opener Assignment — Day				[704] Door Opener Assignment — Night				[705] Door Opener Assignment — Lunch							
	1...4: Door opener no., E: Enable / D: Disable															
Extension jack no.	1		2		3		4		1		2		3		4	
	E	D	E	D	E	D	E	D	E	D	E	D	E	D	E	D
Default: All	✓		✓		✓		✓		✓		✓		✓		✓	
01																
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7 Programming Tables

	[706] Doorphone Ringing / Tone Pattern Selection				[707] Doorphone Access Tone Selection		[708] Doorphone Ringing Time	
	Selection				Selection		Selection	
Doorphone no.	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					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	
	No Printing	Printing	CODE	INDEX
Selection				
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	
	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					

Selection	[906] Caller ID SMDR Format		[907] Caller ID SMDR Printout Selection	
	Without CID	With CID	Enable	Disable
Default		✓		✓
Change				

[908] Caller ID Call Waiting Time						
Selection	10 sec	20 sec	30 sec	40 sec	60 sec	120 sec
Default			✓			
Change						

7 Programming Tables

Extension jack no.	[909] Common Area Call Log Check Assignment		[963] Call Forwarding Selection	
	Selection		Selection	
Default: All	Enable	Disable	Enable	Disable
01	✓			✓
02				
03				
04				
05				
06				
07				
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