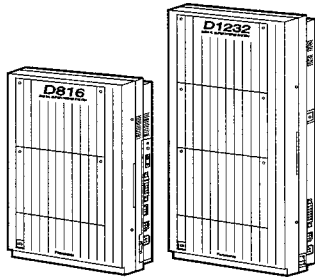# Panasonic

Digital Super Hybrid System

Features Guide

KX-TD816

Model KX-TD1232

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

Introduction

About this Features Guide

This Features Guide is designed to serve as an overall features reference for the Panasonic Digital Super Hybrid System, KX-TD816/1232.
It explains what the KX-TD816/1232 System can do, and how to obtain the most out of its many features and capabilities.

Terms used in this Feature Guide

Connection References

Lists any additional hardware required to use the feature.
Refer to the "Connection" section in the *Installation Manual* for detailed information.

Programming References

The related and required programming titles are noted for your reference.
System Programming can be done with a PC or a proprietary telephone.
To program with a proprietary telephone, refer to the "System Programming" section in the *Programming Guide* for detailed information.
Station Programming is individual programming executed by each Proprietary Telephone (PT) user at his or her own PT. They can customize their PTs based on their personal needs.
Refer to the "Station Programming" section in the *User Manual* for detailed information.

Feature References

The related feature titles described in this *Features Guide* are noted for your reference.

Operation References

The operation required to implement the feature is noted for your reference.
Refer to the "Station Features and Operation", "Station Programming" and "User Programming" sections in the *User Manual* for detailed information.

Additional Helpful Information

Along with this Feature Guide, the following manuals are available to help you install, program, and use the KX-TD816/1232 System:

Installation Manual

Provides instructions for installing and wiring the hardware.

User Manual

Designed for users of Digital Super Hybrid System, KX-TD816/1232.
The focus is Digital Proprietary Telephones (DPTs), Digital DSS Consoles, Single Line
Telephones (SLTs) and their features.

Programming Guide

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

Programming Tables

Designed to be used as a hard copy reference for planning and recording how the KX-TD816/
1232 System is to be programed.

Table of Contents

Section 1

General Features

1.1   General Features

Absent Message Capability

Description

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

Conditions

- Six default messages, which are changeable, are shown below. The "%" means a parameter to be entered when assigning a message at an individual extension.

  a) Will Return Soon

  b) Gone Home

  c) At Ext %%% (extension number)

  d) Back at %% : %% (hour : minute)

  e) Out Until %% / %% (month / day)

  f) In a Meeting

- An extension user can select only one message at a time. The selected message is displayed every time the user goes off-hook.

Programming Guide References

- [008] Absent Messages
- [100] Flexible Numbering

Features Guide References

None

User Manual References

- 4.3.1 Absent Message Capability

Account Code Entry

Description

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

In Verified-All Calls mode, the user must always enter a pre-assigned account code when making any of the following calls unless it has previously been stored in memory.

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

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

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

Conditions

- An account code can be stored into Memory Dialing (System / Station Speed Dialing; One-Touch Dialing; Pickup Dialing; Call Forwarding — to Outside Line).
- The Account button may be used in place of the feature number. A flexible button on the proprietary telephone set can be programmed as the Account button.
- Account code entry after Calling Party Control (CPC) Signal Detection must be done within 15 seconds. Otherwise, SMDR call record is activated and entry becomes impossible afterwards.
- If disconnection signal is selected in program [990], Area 1—Bit 3, the Verified-All Calls extension is allowed to make an outside call using the same line with Flash function.
- In any mode, emergency dial numbers stored in program [334] "Emergency Dial Number Set" can be dialed out without an account code entry.
- If the account code is entered several times, the last entered code is printed out in the Station Message Detail Recording (SMDR).
  Program [990], Area 6—Bit 5, can disable overwriting the data to print out the first entered code.

Programming Guide References

- [005] Flexible CO Button Assignment
- [100] Flexible Numbering
- [105] Account Codes
- [508] Account Code Entry Mode
- [990] System Additional Information

Features Guide References

- Toll Restriction Override by Account Code Entry

User Manual References

- 2.2.2 Flexible Button Assignment
- 4.3.2 Account Code Entry

Alternate Calling — Ring / Voice

Description

This system offers two methods of Intercom Calling — Ring-Calling and Voice-Calling. Ring-Calling informs the called party of an incoming call with a ring tone, while the Voice-Calling uses the calling party's voice. The proprietary telephone user can select ring tone or voice calling by Station Programming. If the user selects Voice-Calling, the calling party can talk to the user immediately after the confirmation tone. The calling extension user can change the called extension user's pre-set method (ring tone or voice) by pressing " ✶ " after dialing the extension number. By doing so, Ring-Calling is switched to Voice-Calling, or vice versa, at the called extension.

Conditions

Standard telephone users receive calls with Ring-Calling only.

Programming Guide References

No programming required.

Features Guide References

• Handsfree Answerback

User Manual References

• 2.1.1 Station Programming Instructions
• 4.3.3 Alternate Calling — Ring / Voice

Answering, Direct Outside Line

Description

Allows the 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.

Conditions

This feature permits the user to specify the desired line to be answered if multiple incoming lines are ringing.

Programming Guide References

No programming required.

Features Guide References

- Outside Line Connection Assignment

User Manual References

- 4.3.4 Answering, Direct Outside Line [PT only]

Automatic Callback Busy (Camp-On)

Description

Allows the caller to be informed when the called party or the selected outside line becomes free.

Automatic Callback — Extension

If the caller answers the callback ringing, the called extension automatically starts ringing.

Automatic Callback — Outside Line

If the caller answers the callback ringing, the line is automatically selected to allow the user to make an outside call.

Conditions

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

Programming Guide References

- [100] Flexible Numbering

Features Guide References

None

User Manual References

- 4.3.5 Automatic Callback Busy (Camp-On)

Automatic Configuration[*1]

Description

The system sends the Voice Processing System (VPS) data which contains the extension number configuration information. The VPS automatically creates mailboxes with this data (Quick Setup).

Conditions

The data is transmitted to the VPS via the lowest jack port.

Programming Guide References

No programming required.

Features Guide References

None

User Manual References

Not applicable.

[*1] Available when the Digital Super Hybrid System is connected to a Digital Proprietary Telephone capable Panasonic Voice Processing System (one that supports digital proprietary telephone integration; e.g. KX-TVS100).

Automatic Hold by CO Button

Description

This feature, if programmed, allows a proprietary telephone user to hold a current outside call by pressing another CO button. While talking to an outside party, pressing a CO button for an incoming or outgoing call provides an automatic hold for the current call.

Conditions

- If Automatic Hold mode is disabled, pressing a CO button disconnects the current call. (Default=Disable)
- It is possible to return to the held party by pressing the corresponding CO button.

Programming Guide References

- [108] Automatic Hold by CO / DSS Button

Features Guide References

None

User Manual References

Not applicable.

Automatic Route Selection (ARS)

Description

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

Programming Example

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

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

2. Store the telephone number of the outside party that will use the ARS feature. For example, if XYZ Company's telephone number is "1-234-567-8910" (not including the line access code), store the leading digits of the number "1234567890" (max. 10 digits). To store the numbers, use one of the programs [314] through [321] ARS Leading Digit Entry for Plans 1 through 8 (Leading Digit Tables 1 through 8). The following assumes that we have selected Leading Digit Table 1 to store the number. Remember that Table number 1 matches Route Plan Table 1.

   Example: Program Address [314] Leading Digit Table a

   Table a

Location	Entry
01	1234567890
02	
•	
•	
•	
100	

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

Carrier E — Outside Line Group 1

Carrier F — Outside Line Group 2

Carrier G — Outside Line Group 3

Then check the fee charged by each carrier:
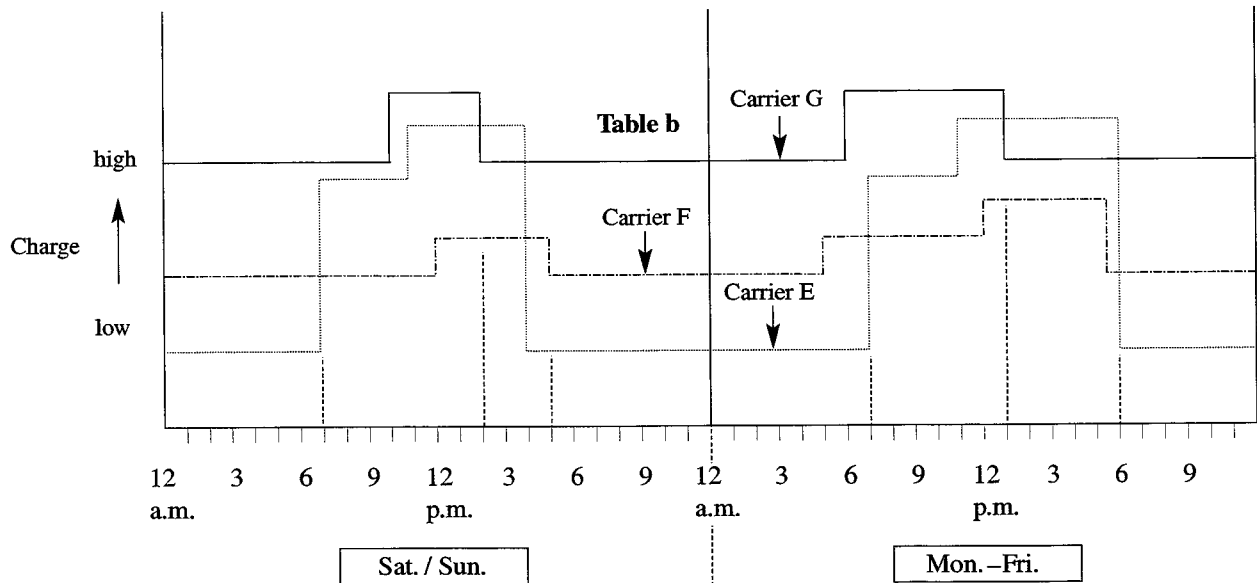
As shown in Table b, the least costly route varies with the day of the week and the time of day. To select the least expensive line at a certain time, split the day into three zones as follows:

Table c

Sat. / Sun.	Mon. - Fri.
(1) 7:00 a.m. - 2:00 p.m.	(1) 7:00 a.m. - 1:00 p.m.
(2) 2:00 p.m. - 5:00 p.m.	(2) 1:00 p.m. - 6:00 p.m.
(3) 5:00 p.m. - 7:00 a.m.	(3) 6:00 p.m. - 7:00 a.m.

To program the time zones above, use the program [313] ARS Time. Four time zones (Time-A, Time-B, Time-C, Time-D) are provided. Enter the starting hour for each zone.

Example: Program Address [313] ARS Time Table

Table d (Example: ARS Time Table)

Sat. / Sun.		Mon. - Fri.		
Time Zones	**Entry**	**Time Zones**	**Entry**	
Time-A	7:00 a.m.	Time-A	7:00 a.m.	◄— Enter the starting time of each zone. If a zone is not necessary, select "Disable."
Time-B	2:00 p.m.	Time-B	1:00 p.m.	
Time-C	5:00 p.m.	Time-C	6:00 p.m.	
Time-D	Disable	Time-D	Disable	

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

Table e

	Time-A	**Time-B**	**Time-C**
Least Costly Carrier / Outside Line Group (Priority 1)	Carrier F/Group 2	Carrier F/Group 2	Carrier E/Group 1
Next Less Costly Carrier / Outside Line Group (Priority 2)	Carrier E/Group 1	Carrier G/Group 3	Carrier F/Group 2
Most Costly Carrier / Outside Line Group (Priority 3)	Carrier G/Group 3	Carrier E/Group 1	Carrier G/Group 3

To have the system use the priorities shown above, use one of the programs [322] through [329] "ARS Routing Plans 1 through 8" (Route Plan Tables 1 through 8).
As we have already selected Leading Digit Table a, select Route Plan Table a. Enter the outside line group numbers in order of priority. If the specified outside line group requires digit modification, assign the appropriate digit modification table number (1 to 8).
This table is required to have the system automatically add a specific carrier access code to the user-dialed number.

Example: Program [322] Route Plan Table a

Table f

	Time -A		**Time -B**		**Time -C**		**Time -D**	
	COG	**Modify**	**COG**	**Modify**	**COG**	**Modify**	**COG**	**Modify**
Priority 1	2	2	2	2	1	1		
Priority 2	1	1	3	3	2	2		
Priority 3	3	3	1	1	3	3		

COG: Outside Line Group
Modify: Modification Table Number

5. Create a Digit Modification Table. Carriers E, F and G match the outside line groups and Modification Tables as follows and have the following Access Codes:

Table g

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

According to Table f, enter the Access Codes in the respective Modification Tables using programs [330] "RS Modify Removed Digit" and [331] "RS Modify Added Number" as follows:

Example: Program [330] Digit Modification Tables

Modification Table a		Modification Table b		Modification Table c		
Remove	0	Remove	0	Remove	0	◄─── Enter the number of digits to be deleted.
Add	10333	Add	10555	Add	10666	◄─── Enter the digits to be added.

If Modification Table a is applied, the user-dialed number "9-1-234-567-8910" is modified to "9-10333-1-234-567-8910" to access the least expensive Carrier E.

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

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

9-10333-1-234-567-8910.

The five digits are deleted and "10555" is added.
"10555-1-234-567-8910" is sent to the outside line.

Flow Chart of the ARS procedure

```
                    ┌─────────────────────────────────┐
                    │ A long distance call is initiated.│
                    └─────────────────────────────────┘
                                    │
                                    ▼
                    ┌─────────────────────────┐   Restricted   ┌──────────────────────┐
                    │   Toll Restriction Check │ ─────────────▶ │ The call is not made. │
                    └─────────────────────────┘                └──────────────────────┘
                                    │
                              Not Restricted
                                    │
                                    ▼
                    ┌─────────────────────────────────────────┐
                    │ Is the ARS Access Code (Default: 9) dialed? │
                    └─────────────────────────────────────────┘
              Yes                                           No
               │                                             │
               ▼                                             ▼
    ┌──────────────────────────────┐          ┌─────────────────────────────────────┐
    │ Are the leading digits found in a │       │ The call is routed via the selected line. │
    │ Leading Digit Table?            │       └─────────────────────────────────────┘
    └──────────────────────────────┘
       Yes                         No
        │                           │
        ▼                           ▼
┌────────────────────────────┐   ┌──────────────────────────────────┐
│ Obtains an applicable Route Plan Table │  │ The call is routed via an idle line. │
│ number from the Leading Digit Table.   │  └──────────────────────────────────┘
└────────────────────────────┘
        │
        ▼
┌─────────────────────────────────────────┐
│ Determines the outside line group of priority 1 in │
│ the Route Plan Table by the current time of day.   │
└─────────────────────────────────────────┘
        │
        ▼
┌─────────────────────────────────────────┐
│ Is there any line available in the outside line │
│ group of priority 1?                          │
└─────────────────────────────────────────┘
       Yes                                              No
        │                                                │
        ▼                                                ▼
┌────────────────────────────────┐  Yes   ┌─────────────────────────────────┐
│ Obtains an applicable Modification │ ◀──── │ Is the outside line group of priority │
│ Table number for the outside line │   Yes │ 2 assigned in the Route Plan Table? │
│ group from the Route Plan Table.  │       └─────────────────────────────────┘
└────────────────────────────────┘
        │                              ┌──────────────────────────────────┐
        ▼                              │ Is there any line available in the │
┌──────────────────┐                   │ outside line group of priority 2?  │
│ Modifies the digits. │                └──────────────────────────────────┘
└──────────────────┘                             │
        │                                         No
        ▼                                         │
┌──────────────────┐            ┌───────────────────────────────────┐
│                  │            │ Is the outside line group of priority 3 │
│     Calls.       │            │ assigned in the Route Plan Table?      │
│                  │            └───────────────────────────────────┘
└──────────────────┘                    │
                                        Yes
                                         │
                                         ▼
            ┌──────────────────────────────────┐   No   ┌──────────────────┐
            │ Is there any line available in the │ ─────▶ │ Sends a busy tone. │
            │ outside line group of priority 3?  │        └──────────────────┘
            └──────────────────────────────────┘
       Yes
```

Conditions

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

Programming Guide References

- [100] Flexible Numbering
- [312] ARS Mode
- [313] ARS Time
- [314-321] ARS Leading Digit Entry for Plans 1 through 8
- [322-329] ARS Routing Plans 1 through 8
- [330] ARS Modify Removed Digit
- [331] ARS Modify Added Number

Features Guide References

- Line Access, Automatic

User Manual References

- 4.3.61 Outward Dialing, Line Access — SUMMARY

Automatic Station Release

Description

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

Conditions

This function works in the following cases:
When making a call

a) The first digit has not been dialed within 10 seconds.

b) After a digit is dialed, the next one is not dialed within five seconds (Intercom call only).

Programming Guide References

- [207] First Digit Time
- [208] Inter Digit Time

Features Guide References

None

User Manual References

Not applicable.

Background Music (BGM)

Description

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

Conditions

- It may be required to connect a user-supplied external music source, such as a radio. One external music source can be connected to KX-TD816, and up to two sources can be connected to KX-TD1232 per system.
- It is required to select a music source used for BGM by System Programming.
- The music source is used for BGM and/or Music on Hold. It is also possible to disable the BGM and/or Music on Hold.
- The music is interrupted when you go off-hook.

Connection References

- 2.3.7 External Music Source Connection

Programming Guide References

- [803] Music Source Use
- [990] System Additional Information

Features Guide References

- Music on Hold

User Manual References

- 4.3.6 Background Music (BGM) [PT only]

Background Music (BGM) — External

Description

Background music (BGM) can be broadcast in your office through the external pagers. The BGM can be turned on and off by the operator or manager.

Conditions

- It is required to connect an external pager. The pager is a user-supplied item. One pager and one external music source can be installed to KX-TD816, and up to two pagers and up to two external music sources can be installed to KX-TD1232 per system.
- Each pager can be programmed to send BGM or not.
- Priority of access to external pager is: (1)Trunk (Outside Line) Answer From Any Station (TAFAS); (2)Paging; (3)BGM. Higher priorities will override the BGM.

Connection References

- 2.3.6 External Pager (Paging Equipment) Connection
- 2.3.7 External Music Source Connection

Programming Guide References

- [100] Flexible Numbering
- [803] Music Source Use
- [804] External Pager BGM
- [990] System Additional Information

Features Guide References

- Background Music (BGM)

User Manual References

- 4.3.6 Background Music (BGM) [PT only]

Bilingual Display

Description

Provides the display proprietary telephone user with either an English or French display. Either display can be selected by Station Programming.

Conditions

None

Programming Guide References

No programming required.

Features Guide References

None

User Manual References

- 2.1.1 Station Programming Instructions

Busy Lamp Field

Description

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

Conditions

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

Programming Guide References

* [005] Flexible CO Button Assignment

Features Guide References

* Button, Direct Station Selection (DSS)
* DSS Console

User Manual References

* 2.2.2 Flexible Button Assignment

Busy Station Signaling (BSS)

Description

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

Conditions

- This feature only works if the called extension has activated Call Waiting. If it is activated, the caller will hear ringback tone.
- If the called party has been set to activate the Off-Hook Call Announcement (OHCA) or Whisper OHCA function, the caller can announce the call through the speaker or the handset.
- If none of three features, Call Waiting, OHCA or Whisper OHCA is set at the called party, the caller will hear a reorder tone.

Programming Guide References

No programming required.

Features Guide References

- Call Waiting
- Off-Hook Call Announcement (OHCA)
- Whisper OHCA

User Manual References

- 4.3.7 Busy Station Signaling (BSS)

Button, Direct Station Selection (DSS)

Description

DSS button permits the proprietary telephone user one-touch access to other extension users.

Conditions

- A flexible CO button on a proprietary telephone can be assigned as a DSS button using either System or Station Programming.
- DSS buttons are provided on DSS Consoles with a default setting. Changing the setting is possible from the paired telephone using Station Programming.
- Once a button is assigned as a DSS button, it provides Busy Lamp Field (BLF) status.
- The mode of a DSS button on a DSS Console / proprietary telephone can be programmed to disconnect the outside line and calls the extension or hold and transfers the call to the extension (One-Touch Transfer by DSS Button).

Programming Guide References

- [005] Flexible CO Button Assignment
- [108] Automatic Hold by CO / DSS Button

Features Guide References

- Busy Lamp Field
- DSS Console
- One-Touch Transfer by DSS Button

User Manual References

- 2.2.2 Flexible Button Assignment
- 4.2.1 Making Calls
- 4.3.25 Call Transfer — to Extension

Button, Flexible

Description

The use of Flexible Buttons is determined by either System or Station Programming. The following three types of Flexible Buttons are provided on proprietary telephones (PT) and DSS Console:

- Flexible CO buttons (provided on PT only)
- Flexible Direct Station Selection (DSS) buttons (provided on DSS Console only)
- Programmable Feature (PF) buttons

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

Button Features to be assigned	CO (PT)	DSS (PT/DSS)	PF (PT/DSS)
Single-CO	✔		
Group-CO	✔		
Log-In / Log-Out	✔		
Loop-CO	✔		
Direct Station Selection (DSS)	✔	✔	
Live Call Screening*	✔	✔	
Live Call Screening Cancel*	✔	✔	
Message Waiting	✔	✔	
MESSAGE (Another / Phantom Extension)	✔	✔	
Night	✔	✔	
Phantom Extension	✔	✔	
Two-Way Record*	✔	✔	
Two-Way Transfer*	✔	✔	
Account Code Entry	✔	✔	✔
Conference	✔	✔	✔
FWD/DND	✔	✔	✔
One-Touch Dialing	✔	✔	✔

Button Features to be assigned	CO (PT)	DSS (PT/DSS)	PF (PT/DSS)
Saved Number Redial	✔	✔	✔
Voice Mail Transfer	✔	✔	✔

* Available when the Digital Super Hybrid System is connected to a Digital Proprietary Telephone capable Panasonic Voice Processing System (one that supports digital proprietary telephone integration; e.g. KX-TVS100).

" ✔ "indicates that the feature is available.

Conditions

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

Programming Guide References

- [005] Flexible CO Button Assignment

Features Guide References

- DSS Console
- Buttons on Proprietary Telephones

User Manual References

- 2.2.2 Flexible Button Assignment

Button, Group-CO (G-CO)

Description

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

Conditions

- No G-CO button is originally provided on a proprietary telephone (PT). It is programmable on a CO button by either System or Station Programming.
- It is necessary to program the extension for receiving and / or originating calls on outside lines.
- It is possible to assign the same outside line group to more than one G-CO button on the same PT.
- It is possible to assign the same line to a Single-CO (S-CO) button and to a G-CO button.
- Immediate, delayed, no ringing or no incoming call (disable) can be selected on an extension — outside line basis.
- The digital PT user can choose a desired ringer frequency for each G-CO button by System or Station Programming.

Programming Guide References

- [005] Flexible CO Button Assignment
- [400] Outside Line Connection Assignment
- [401] Outside Line Group Assignment
- [603-604] DIL 1:N Extension and Delayed Ringing —— Day / Night
- [605-606] Outgoing Permitted Outside Line Assignment —— Day / Night

Features Guide References

- Answering, Direct Outside Line
- LED Indication, Outside Line
- Line Access, Outside Line Group
- Line Access, Direct
- Outside Line Group
- Ringing, Delayed
- Ringing Tone Selection for CO Buttons

User Manual References

- 2.2.2 Flexible Button Assignment
- 2.2.4 Ringing Tone Selection for CO Buttons
- 4.2.1 Making Calls
- 4.2.2 Receiving Calls
- 4.3.4 Answering, Direct Outside Line [PT only]
- 4.3.61 Outward Dialing, Line Access — SUMMARY

Button, Loop-CO (L-CO)

Description

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

Conditions

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

Programming Guide References

* [005] Flexible CO Button Assignment
* [400] Outside Line Connection Assignment
* [603-604] DIL 1:N Extension and Delayed Ringing —— Day / Night
* [605-606] Outgoing Permitted Outside Line Assignment —— Day / Night

Features Guide References

* Answering, Direct Outside Line
* LED Indication, Outside Line
* Line Access, Automatic
* Line Access, Direct
* Ringing, Delayed
* Ringing Tone Selection for CO Buttons

User Manual References

* 2.2.2 Flexible Button Assignment
* 2.2.4 Ringing Tone Selection for CO Buttons
* 4.2.1 Making Calls
* 4.2.2 Receiving Calls
* 4.3.61 Outward Dialing, Line Access — SUMMARY

Button, Single-CO (S-CO)

Description

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

Conditions

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

Programming Guide References

- [005] Flexible CO Button Assignment
- [400] Outside Line Connection Assignment
- [603-604] DIL 1:N Extension and Delayed Ringing —— Day / Night
- [605-606] Outgoing Permitted Outside Line Assignment —— Day / Night

Features Guide References

- Answering, Direct Outside Line
- LED Indication, Outside Line
- Line Access, Direct
- Line Access, Individual
- Ringing, Delayed
- Ringing Tone Selection for CO Buttons

User Manual References

- 2.2.2 Flexible Button Assignment
- 2.2.4 Ringing Tone Selection for CO Buttons
- 4.2.1 Making Calls
- 4.2.2 Receiving Calls
- 4.3.61 Outward Dialing, Line Access — SUMMARY

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	7220	7230	7235	7250	7420	7425	7431	7433	7436
AUTO ANSWER / MUTE*1	✔	✔			✔	✔	✔	✔		✔	✔	✔	✔	✔
AUTO DIAL / STORE*1	✔	✔	✔	✔*2	✔	✔	✔	✔	✔*2	✔	✔	✔	✔	✔
CO*1*3	✔ (12)	✔ (12)	✔ (12)	✔ (3)	✔ (12)	✔ (24)	✔ (24)	✔ (12)	✔ (6)	✔ (12)	✔ (24)	✔ (12)	✔ (24)	✔ (24)
CONF*1	✔	✔	✔*2	✔*2	✔	✔	✔	✔		✔	✔	✔	✔	✔
FLASH	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Function								✔ (10)						✔ (10)
FWD / DND*1	✔	✔			✔	✔	✔	✔		✔	✔	✔	✔	✔
HOLD	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
INTERCOM*1	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Jog Dial										✔	✔	✔	✔	✔
MESSAGE*1	✔	✔	✔		✔	✔	✔	✔		✔	✔	✔	✔	✔
MODE												✔		
MONITOR			✔*1	✔					✔					
PAUSE	✔	✔	✔	✔	✔		✔	✔		✔	✔	✔	✔	✔
PF (Programmable Feature)	✔ (4)	✔ (4)	✔ (4)	✔ (3)	✔ (12)									
PROGRAM						✔	✔	✔	✔	✔	✔	✔	✔	✔
REDIAL	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
SAVE					✔									

KX-T Proprietary Telephones:

Buttons	7020	7030	7050	7055	7130	7220	7230	7235	7250	7420	7425	7431	7433	7436
SELECT												✔		
SHIFT*¹							✔	✔					✔	✔
Soft							✔ (3)	✔ (3)					✔ (3)	✔ (3)
SP-PHONE*¹	✔	✔			✔	✔	✔	✔		✔	✔	✔	✔	✔
TRANSFER	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
VOLUME						✔	✔	✔	✔					

*¹   The button is provided with an LED (Light Emitting Diode).

*²   The button is provided without an LED.

*³   The buttons which can be changed to function as a feature button are called flexible buttons.

✔:   The button is provided on the designated telephones.

(x):   Shows the number of buttons only if multiple buttons are provided.

The functions of the listed buttons are described below:

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

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

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

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

FLASH or FLASH / RCL 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).

Function: Used to perform the displayed function / operation.

FWD / DND (Call Forwarding / Do Not Disturb): Used to program Call Forwarding, set Do Not Disturb.

HOLD: Used to place a call on hold.

INTERCOM: Used to make or receive intercom calls.

Jog Dial: Used to adjust the ringer, speaker, handset and headset volume and the display contrast. With the KX-T7431, KX-T7433 and KX-T7436, it can also be used to select data from the Call Directory and the System Feature Access Menu on the display.

MESSAGE: Used to send a message or display current message.

MODE: Used to shift the display in order to access various features.

MONITOR: Used for a hands free operation.

PAUSE: Inserts a pause in a speed dial number. With an analogue proprietary telephone, it is used as the PROGRAM button.

PF (Programmable Feature): This flexible button can be programed to be a One-Touch Dialing, FWD / DND, SAVE, Account, CONF (Conference) or Voice Mail Transfer button, as desired.
PROGRAM: Used to enter / exit the Programming mode. With the KX-T7220 and KX-T7250, it can also be used as the PAUSE button.
REDIAL: Used for Last Number Redial.
SAVE: Used to store a dialed telephone number for Saved Number Redial.
SELECT: Used to select the displayed function or to call for the displayed phone number.
SHIFT: Used to access the second level of Soft button function.
Soft: Pressing a Soft button performs the function / operation appearing on the bottom line of the display.
SP-PHONE (Speakerphone): Used for a handsfree operation. Pressing the button causes the telephone to switch between handset and handsfree operation.
TRANSFER: Transfers a call to another extension or external destination.
VOLUME: Used to adjust the ringer, speaker, handset and headset volume and the display contrast.

Conditions

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

Programming Guide References

- [005] Flexible CO Button Assignment

Features Guide References

None

User Manual References

- 2.2.2 Flexible Button Assignment

CALL FORWARDING FEATURES — SUMMARY

Description

Call forwarding features enable you to have your calls forwarded to a specified destination. You may specify the circumstances under which your calls are forwarded. The following Call Forwarding features are available:

Call Forwarding — All Calls

Call Forwarding — Busy

Call Forwarding — Busy / No Answer

Call Forwarding — Follow Me

Call Forwarding — No Answer

Call Forwarding — to Outside Line

Call Forwarding — All Calls

Description

This feature is used when you want all your calls to be automatically re-directed to another extension.

Conditions

- Types of calls which are forwarded by this feature are:
  Outside calls —Direct In Lines (DIL) 1:1; Direct Inward System Access (DISA)[*1];
  Intercept Routing
  Intercom calls—Extension; Transfer
- There can only be one stage of Call Forwarding, if a call is forwarded to an extension which is also in Call Forwarding. In this case, Station Hunting can be activated for the forwarded call.
- Although calls are forwarded, Message Waiting is not. The MESSAGE button indicator is lit on the originally called extension.
- If an extension in Call Forwarding is also in a Hunt group, a call directed to the extension is forwarded. Station Hunting still applies for calls directed to other extensions in the Hunt group.
- Both the Call Forwarding and Do Not Disturb (DND) functions can be set at the same time, but cannot work at the same time.
- Pressing the FWD/DND button while on-hook allows the user to enable or disable the Call Forwarding or DND function. If the user sets both functions, alternating the mode is also available by pressing the FWD/DND button.
- A Floating Station cannot be programed as the forwarded destination.
- The flashing pattern of LED for FWD / DND button can be selected on program "[990] System Additional Information, Area 9 - Bit 4, 3".

[990] System Additional Information, Area 9–Bit 4, 3	FWD	DND
11	Red Flashing	Red on
10	Red on	Red on
01	Red on	Red Flashing
00	Red Flashing	Red Flashing

Programming Guide References

- [005] Flexible CO Button Assignment
- [100] Flexible Numbering
- [990] System Additional Information

[*1] Available for the KX-TD1232 only.

Features Guide References

None

User Manual References

- 2.2.2 Flexible Button Assignment
- 4.3.9 Call Forwarding — All Calls

Call Forwarding — Busy

Description

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

Conditions

- Types of calls which are forwarded by this feature are:
  Outside calls – Direct In Lines (DIL) 1:1; Direct Inward System
      Access (DISA)[*1]; Intercept Routing
  Intercom calls – Extension; Transfer
- There can only be one stage of Call Forwarding, if a call is forwarded to a station which is also in Call Forwarding. In this case, Station Hunting is activated for the forwarded call.
- Although calls are forwarded, Message Waiting is not. The MESSAGE button indicator is lit on the originally called extension.
- If an extension in Call Forwarding is also in a Hunt group, a call directed to the extension is forwarded. Station Hunting still applies for calls directed to other extensions in the Hunt group.
- Both the Call Forwarding and Do Not Disturb (DND) functions can be set at the same time, but cannot work at the same time.
- Pressing the FWD/DND button while on-hook allows the user to enable or disable the Call Forwarding or DND function. If the user sets both functions, alternating the mode is also available by pressing the FWD/DND button.
- A Floating Station cannot be programed as the forwarded destination.
- The flashing pattern of LED for FWD / DND button can be selected on program "[990] System Additional Information, Area 9 - Bit 4, 3".

[990] System Additional Information, Area 9–Bit 4, 3	FWD	DND
11	Red Flashing	Red on
10	Red on	Red on
01	Red on	Red Flashing
00	Red Flashing	Red Flashing

Programming Guide References

- [005] Flexible CO Button Assignment
- [100] Flexible Numbering
- [990] System Additional Information

[*1] Available for the KX-TD1232 only.

Features Guide References

None

User Manual References

- 2.2.2 Flexible Button Assignment
- 4.3.10 Call Forwarding — Busy

Call Forwarding — Busy / No Answer

Description

Your calls are forwarded to another extension if your extension is busy or you do not answer the call within a pre-determined time.

Conditions

- Types of calls which are forwarded by this function are:

    Outside calls – Direct In Lines (DIL) 1:1; Direct Inward System
    Access (DISA)[1]; Intercept Routing
    Intercom calls – Extension; Transfer

- This function operates the same way as Call Forwarding - Busy and Call Forwarding - No Answer.

- There can only be one stage of Call Forwarding if a call is forwarded to a station which is also in Call Forwarding. In this case, Station Hunting is activated for the forwarded call.

- Although calls are forwarded, Message Waiting is not. The MESSAGE button indicator is lit on the originally called extension

- If an extension in Call Forwarding is also in a Hunt group, a call directed to the extension is forwarded. Station Hunting still applies for calls directed to other extensions in the Hunt group.

- Both the Call Forwarding and Do Not Disturb (DND) functions can be set at the same time, but cannot work at the same time.

- Pressing the FWD/DND button while on-hook allows the user to enable or disable the Call Forwarding or DND function. If the user sets both functions, alternating the mode is also available by pressing the FWD/DND button.

- A Floating Station cannot be programed as the forwarded destination.

- The flashing pattern of LED for FWD / DND button can be selected on program "[990] System Additional Information, Area 9 - Bit 4, 3".

[990] System Additional Information, Area 9–Bit 4, 3	FWD	DND
11	Red Flashing	Red on
10	Red on	Red on
01	Red on	Red Flashing
00	Red Flashing	Red Flashing

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[1] Available for the KX-TD1232 only.

Programming Guide References

- [005] Flexible CO Button Assignment
- [100] Flexible Numbering
- [202] Call Forwarding — No Answer Time
- [990] System Additional Information

Features Guide References

- Call Forwarding — Busy
- Call Forwarding — No Answer

User Manual References

- 2.2.2 Flexible Button Assignment
- 4.3.11 Call Forwarding — No Answer

Call Forwarding — Follow Me

Description

If you forget to set Call Forwarding - All Calls before you leave your desk, this allows you to set the same function from the destination extension.

Conditions

- Same as the conditions of Call Forwarding - All Calls.
- It is programmable to enable or disable this feature on a Class of Service basis.
- The flashing pattern of LED for FWD / DND button can be selected on program "[990] System Additional Information, Area 9 - Bit 3, 4".

[990] System Additional Information, Area 9–Bit 4, 3	FWD	DND
11	Red Flashing	Red on
10	Red on	Red on
01	Red on	Red Flashing
00	Red Flashing	Red Flashing

Programming Guide References

- [005] Flexible CO Button Assignment
- [100] Flexible Numbering
- [990] System Additional Information
- [991] COS Additional Information

Features Guide References

- Call Forwarding — All Calls

User Manual References

- 2.2.2 Flexible Button Assignment
- 4.3.14 Call Forwarding — Follow Me

Call Forwarding — No Answer

Description

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

Conditions

- Types of calls which are forwarded by this function are:
  - Outside calls – Direct In Lines (DIL) 1:1; Direct Inward System
    - Access (DISA)[*1]; Intercept Routing
  - Intercom calls – Extension; Transfer
- This function operates if an incoming call is not answered in a specific period of time. Therefore, this function also applies if your extension is busy and cannot answer the incoming call within the time.
- There can only be one stage of Call Forwarding if a call is forwarded to a station which is also in Call Forwarding. In this case, Station Hunting is activated for the forwarded call.
- Although calls are forwarded, Message Waiting is not. The MESSAGE button indicator is lit on the originally called extension.
- If an extension in Call Forwarding is also in a Hunt group, a call directed to the extension is forwarded. Station Hunting still applies for calls directed to other extensions in the Hunt group.
- Both the Call Forwarding and Do Not Disturb (DND) functions can be set at the same time, but cannot work at the same time.
- Pressing the FWD/DND button while on-hook allows the user to enable or disable the Call Forwarding or DND function. If the user sets both functions, alternating the mode is also available by pressing the FWD/DND button.
- A Floating Station cannot be programed as the forwarded destination.
- The flashing pattern of LED for FWD / DND button can be selected on program "[990] System Additional Information, Area 9 - Bit 4, 3".

[990] System Additional Information, Area 9–Bit 4, 3	FWD	DND
11	Red Flashing	Red on
10	Red on	Red on
01	Red on	Red Flashing
00	Red Flashing	Red Flashing

[*1]   Available for the KX-TD1232 only.

- Each PT and SLT extension (not ISDN / T1 line extension) can be assigned a call forward no answer timer on program "[619] Extension Call Forwarding — No Answer Time". If it is not changed, the timer assigned in program "[202] Call Forwarding — No Answer Time" is used.

Programming Guide References

- [005] Flexible CO Button Assignment
- [100] Flexible Numbering
- [202] Call Forwarding — No Answer Time
- [990] System Additional Information

Features Guide References

None

User Manual References

- 2.2.2 Flexible Button Assignment
- 4.3.11 Call Forwarding — No Answer

Call Forwarding — to Outside Line

Description

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

Conditions

- Types of calls which are forwarded by this function are:

    Outside calls – Direct In Lines (DIL) 1:1;

    Direct Inward System Access (DISA)[*1]

    Intercom calls – Extension; Transfer

- The forwarding extension's Toll Restriction, Automatic Route Selection (ARS) and Account Code Entry requirements still apply.

- Although calls are forwarded, Message Waiting is not. The MESSAGE button indicator is lit on the originally called extension.

- If an extension in Call Forwarding is also in a Hunt group a call directed to the extension is forwarded. Station Hunting still applies for calls directed to other extensions in the Hunt group.

- Both the Call Forwarding and Do Not Disturb (DND) functions can be set at the same time, but cannot work at the same time.

- Pressing the FWD/DND button while on-hook allows the user to enable or disable the Call Forwarding or DND function. If the user sets both functions, alternating the mode is also available by pressing the FWD/DND button.

- Class of Service programming determines the extensions that are able to perform this function.

- If an extension is limited by the program "[502] Extension-to-Outside Line Call Duration Limit" according to its Class of Service, the extension is unable to forward an outside call to an outside line.

- If a call between an extension and an outside party is established by this feature, the duration of the call period can be restricted depending on the setting of the system timer. If a call between two outside parties is established by this feature, the duration of the call is determined by another 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.

[*1] Available for the KX-TD1232 only.

Features Guide

- The flashing pattern of LED for FWD / DND button can be selected on program "[990] System Additional Information, Area 9 - Bit 4, 3".

[990] System Additional Information, Area 9–Bit 4, 3	FWD	DND
11	Red Flashing	Red on
10	Red on	Red on
01	Red on	Red Flashing
00	Red Flashing	Red Flashing

Programming Guide References

- [005] Flexible CO Button Assignment
- [100] Flexible Numbering
- [205] Extension-to-Outside Line Call Duration Time
- [206] Outside-to-Outside Line Call Duration Time
- [502] Extension-to-Outside Line Call Duration Limit
- [504] Call Forwarding to Outside Line
- [990] System Additional Information

Features Guide References

- Limited Call Duration

User Manual References

- 2.2.2 Flexible Button Assignment
- 4.3.13 Call Forwarding — to Outside 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 at each telephone at one time (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 standard telephone, either one outside or intercom call can be held.
- If a call on hold is not retrieved within a specific period of time, Hold Recall is emitted.
- Music is sent to the party on hold, if available (Music on Hold).

Programming Guide References

- [100] Flexible Numbering
- [200] Hold Recall Time

Features Guide References

- Call Park
- Hold Recall
- Music on Hold

User Manual References

- 4.3.16 Call Hold

Call Hold — Outside Line

Description

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

Programming Guide References

- [100] Flexible Numbering
- [200] Hold Recall Time

Features Guide References

- Hold Recall
- Music on Hold

User Manual References

- 4.3.16 Call Hold

Call Hold Retrieve — Intercom

Description

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

Conditions

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

Programming Guide References

- [100] Flexible Numbering
- [990] System Additional Information

Features Guide References

- Call Hold — Intercom

User Manual References

- 4.3.18 Call Hold Retrieve

Call Hold, Exclusive — Intercom

Description

Allows the 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 in a specific period of time, Hold Recall is emitted. After Hold Recall is emitted, the held call can be retrieved from any extension.
- Music is sent to the party on hold, if available (Music on Hold).

Programming Guide References

- [200] Hold Recall Time

Features Guide References

- Hold Recall
- Music on Hold

User Manual References

- 4.3.17 Call Hold, Exclusive [PT only]

Call Hold, Exclusive — Outside Line

Description

Allows the 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 in a specific period of time, Hold Recall is emitted. After Hold Recall is emitted, the held call can be retrieved from any extension.
- If an outside party is placed on hold and not retrieved in 30 minutes, it is automatically disconnected.
- Music is sent to the party on hold, if available (Music on Hold).

Programming Guide References

- [200] Hold Recall Time

Features Guide References

- Hold Recall
- Music on Hold

User Manual References

- 4.3.17 Call Hold, Exclusive [PT only]

Call Log, Incoming

Description

If the display digital proprietary telephone (DPT: KX-T7433, KX-T7436, KX-T7230 or KX-T7235) user cannot answer a call, the telephone automatically records the caller's information. The user can also record the caller's information manually, even after answering the call. Moreover, the user can call back the caller by checking the call log. This is available if a telephone receives incoming outside calls with a Caller ID service.   A maximum of 30 calls per telephone can be logged.
The displayed information is as follows:

- The receiving outside line number and name
- The party's phone number and name
- The date and time the call was made
- The sequence number and number of times called

Conditions

- It is necessary to assign your area code first before you use the Caller ID feature.
- The call is registered at the time DPT finishes ringing. If a call is directed to multiple DPTs, the call is registered at the DPT that has the smallest jack number of the ringing DPTs. However, if the telephone which is connected to the smallest jack is not a DPT, the call is not registered.
- Information is also recorded even if a transferred call (unscreened) is not answered.
- When the call log is full (i.e. 30 calls are stored), the user can select to overwrite the data, replacing the oldest call with the newest one at his / her extension (Call Log, Incoming).
- The telephone user can lock the display of the unit so that incoming call information is not shown on the display. The operator can cancel the lock in case the user forgets the lock code.
- The system automatically modifies the incoming caller's number in a pre-programmed way for local or long distance calls. The modified number will be recorded for calling back. There are ten locations for area codes (program [125]) which are correspond to that of modified numbers for local call (program [126]).
  <Preparation example>
  [125] Area Code Assignment: 201
  [126] Caller ID Modification for Local Call: delete — 3 digits, add — blank
  [127] Caller ID Modification for Long Distance Call: delete — 0 digit, add — 1

	Caller's number provided by CO	Recorded caller's number
Local call	2011234567	1234567 (modified by steps [126])
Long distance call	7149876543	17149876543 (modified by [127])

Connection References

- 2.4.8 Caller ID Card Installation

Programming Guide References

- [100] Flexible Numbering
- [110] Caller ID Code Set
- [111] Caller ID Name Set
- [125] Area Code Assignment
- [126] Caller ID Modification for Local Call
- [127] Caller ID Modification for Long Distance Call
- [406] Caller ID Assignment
- [417] Outside Line Name Assignment

Features Guide References

- Caller ID

User Manual References

- 4.4.3 Call Log Lock Control, Incoming
- 4.5.3 Call Log, Incoming (KX-T7436 / KX-T7433 / KX-T7235 / KX-T7230 only)
- 4.5.4 Call Log Lock, Incoming (KX-T7436 / KX-T7433 / KX-T7235 / KX-T7230 only)

Call Park

Description

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

Conditions

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

Programming Guide References

- [100] Flexible Numbering
- [219] Call Park Recall Time
- [990] System Additional Information

Features Guide References

None

User Manual References

- 4.3.19 Call Park

Call Pickup Deny

Description

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

Conditions

Distinctive Dial Tone is sent to the user on the extension with this feature when the user goes off-hook.

Programming Guide References

- [100] Flexible Numbering

Features Guide References

- Call Pickup, Directed
- Call Pickup, Group
- Call Pickup, Outside Line

User Manual References

- 4.3.23 Call Pickup Deny

Call Pickup, Directed

Description

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

Conditions

- Doorphone calls can be picked up from extensions that are not programmed to answer doorphone calls.
- A confirmation tone is sent to the user when the call is picked up. Eliminating the tone is programmable.
- You can pick up a call by pressing a flashing DSS (Direct Station Selection) button assigned on a proprietary telephone.

Programming Guide References

- [100] Flexible Numbering
- [990] System Additional Information

Features Guide References

None

User Manual References

- 4.3.20 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.
- The priority of Group Call Pickup is as follows:
  Outside call > Transferred call > Extension call > Doorphone call
- Group Call Pickup starts with the lowest jack number.
- A confirmation tone is sent to the user when the call is picked up. Eliminating the tone is programmable.

Programming Guide References

- [100] Flexible Numbering
- [990] System Additional Information

Features Guide References

None

User Manual References

- 4.3.21 Call Pickup, Group

Call Pickup, Outside Line

Description

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

Conditions

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

Programming Guide References

* [100] Flexible Numbering
* [990] System Additional Information

Features Guide References

None

User Manual References

* 4.3.22 Call Pickup, Outside Line

Call Splitting

Description

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

Conditions

Call Splitting is impossible during Doorphone Call or Paging.

Programming Guide References

No programming required.

Features Guide References

None

User Manual References

• 4.3.24 Call Splitting

CALL TRANSFER FEATURES — SUMMARY

Description

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

Call Transfer, Screened — to Extension

Call Transfer, Screened — to Outside Line

Call Transfer, Unscreened — to Extension

Call Transfer, Screened — to Extension

Description

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

Conditions

*   The destination extension must have a CO button which is common to the outside line in use by the transferring party.
*   The destination extension shows the Caller ID and the extension number where the call was transferred from on the display.

<Example> The Caller ID number "123456789" is transferred from extension 101.

1 0 1 → 1 2 3 4 5 6 7 8 9

The priority of the display is:

Caller ID name > Caller ID number > Outside line number and name.

If your telephone has a two, three or six line display, both the Caller ID name and number are displayed.

Programming Guide References

*   [990] System Additional Information

Features Guide References

None

User Manual References

*   4.3.25 Call Transfer — to Extension

Call Transfer, Screened — to Outside Line

Description

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

Conditions

* Class of Service programming determines the extensions that are able to perform this.
* If a call between two external parties is established by this feature, the duration of the call period is restricted by a system timer. Hold Recall is generated to the extension who transferred the call 50 seconds before the time-out. Also Hold 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 restores the conference.

Programming Guide References

* [205] Extension-to-Outside Line Call Duration Time
* [206] Outside-to-Outside Line Call Duration Time
* [502] Extension-to-Outside Line Call Duration Limit
* [503] Call Transfer to Outside Line
* [990] System Additional Information

Features Guide References

* Hold Recall

User Manual References

* 4.3.26 Call Transfer – to Outside Line

Call Transfer, Unscreened — to Extension

Description

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

Conditions

* If the destination party does not answer within the transfer recall time, the call will return to the user or Operator 1. You can select either one by system programming.
* This function is possible when the destination is sending ringback or busy tone. If the destination is busy, Camp-On Transfer occurs.
* The ringing signal pattern follows the regular ringing pattern depending on the party being transferred: outside or extension call ringing.
* An outside call can be transferred directly to a Uniform Call Distribution (UCD) group so that an idle extension is automatically hunted by UCD. If all extensions in a UCD group are busy, the incoming outside call will be handled by the UCD Time Table.
* It is possible for any extension user to transfer a call to the modem for remote maintenance.
* If music on hold is enabled, music is sent to the caller while being transferred. It is system-programmable whether to send ringback tone or music on hold to the caller by program "[990] System Additional Information, Area 1 - Bit 1".
* The destination extension must have a CO button which is common to the outside line in use by the transferring party.

Programming Guide References

* [201] Transfer Recall Time
* [990] System Additional Information

Features Guide References

None

User Manual References

* 4.3.25 Call Transfer — to Extension

Call Waiting

Description

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

Conditions

* The call waiting tone is generated when an outside call (except a DISA (Direct Inward System Access)[1]call or doorphone call) is received, or when an extension caller executes Busy Station Signalling (BSS).
* Setting Data Line Security temporarily cancels Call Waiting which has been turned on by an extension user.
* For proprietary telephone users, two types of call waiting tone are provided to prevent them from missing the tone as shown below:
  A proprietary telephone user can select the desired type by Station Programming.
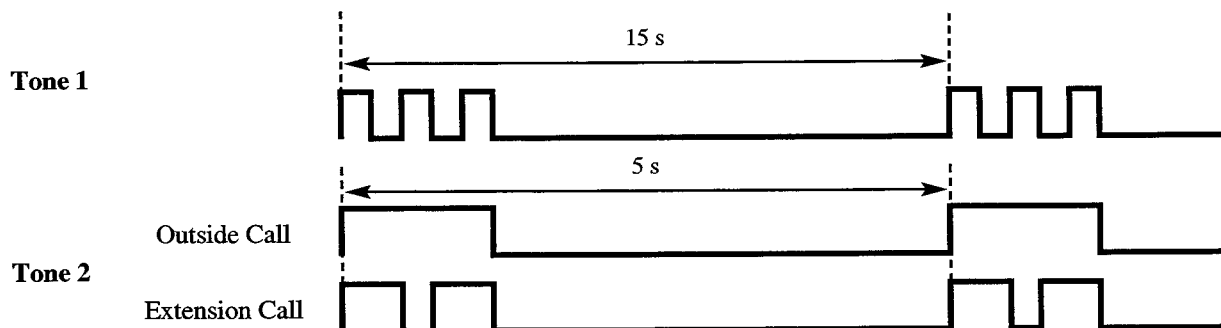
Programming Guide References

* [100] Flexible Numbering

Features Guide References

* Busy Station Signaling (BSS)

User Manual References

* 2.1.1 Station Programming Instructions
* 4.3.27 Call Waiting

---

[1]   Available for the KX-TD1232 only.

Call Waiting from Central Office

Description

During a conversation, a call waiting tone offered by your Central Office informs the user of another incoming call that is waiting. He or she can answer the second call by placing the current call on hold.

Conditions

None

Programming Guide References

No programming required.

Features Guide References

None

User Manual References

* 4.3.28 Call Waiting from Central Office

Caller ID

Description

Provides the display proprietary telephone and standard telephone users with caller information, such as his / her name and telephone number, on the outside line assigned to receive Caller ID service calls.

Conditions

- An optional Caller ID Card (KX-TD193) must be installed.
- For standard telephone users, an 8-Station Line Unit with SLT CID (KX-TD171) must be installed. This card adds eight extensions including either one of two extensions which enables the Caller ID feature for standard telephone users. Program [133] "aller ID Extension Assignment" is required to determine the Caller ID enabling extensions. However, receiving or not receiving Caller ID information depends on the type of standard telephone you have.
- Up to 500 Caller ID entry numbers can be stored in a table called the "Caller ID Table" in the system. Each entry can consist of a caller's telephone number and name.
- If neither the telephone number nor the name is stored in the Caller ID Table, the number sent from Caller ID service is displayed.
- If the network provides a single message, the system searches for the name from the number in the Caller ID Table and displays both of them.
- The outside lines where a Caller ID service is offered by a Central Office must be assigned.
- A display digital proprietary telephone (KX-T7433, KX-T7436, KX-T7230 or KX-T7235) user can record call information received by Caller ID (Call Log, Incoming feature).
- An analogue proprietary telephone will show either the name or the number. To alternate the display, press the ✶ key.
- If an outside line name is assigned or the DID (Direct Inward Dialing) lines are connected, the user can select the initial display, Caller ID, outside line name or DID extension name by Station Programming.
- A standard telephone, connected with a digital proprietary telephone by the XDP feature, can receive Caller ID information. But one connected in parallel with an analogue or digital proprietary telephone cannot receive the information.
- Caller ID information is for outside calls only. Call information transferred by the Call Forwarding, IRNA, and Station Hunting features can be sent to the destination extension. Call information transferred by the Call Transfer, Screened - to Extension feature cannot be sent. However, when a call is transferred by the Call Transfer, Unscreened feature, the information can be sent to the destination extension.
- If an ID Code transmitted from an ISDN line is found in the Caller ID Code Table, the caller's ID Code is displayed on the called party's telephone. If an ID Code is assigned a name, the name is displayed with the ID Code.

Connection References

- 2.4.4 8-Station Line Unit with SLT CID Connection
- 2.4.6 Installing Expansion Unit
- 2.4.8 Caller ID Card Installation

Programming Guide References

- [110] Caller ID Code Set
- [111] Caller ID Name Set
- [125] Area Code Assignment
- [126] Caller ID Modification for Local Call
- [127] Caller ID Modification for Long Distance Call
- [133] Caller ID Extension Assignment
- [406] Caller ID Assignment
- [417] Outside Line Name Assignment
- [990] System Additional Information

Features Guide References

- Calling Line Identification Presentation (CLIP)
- Call Log, Incoming

User Manual References

- 2.2.1 Initial Settings
- 4.5.3 Call Log, Incoming (KX-T7436 / KX-T7433 / KX-T7235 / KX-T7230 only)

Calling Line Identification Presentation (CLIP)

Description

Allows the extension user to display the calling party's number on the LCD of the called party's telephone when receiving a call (CLIP). This feature is one of ISDN's services.

Conditions

The CLIP service for outgoing outside calls can be restricted by System Programming (CLIR: Calling Line Identification Restriction).

Programming Guide References

- [454] DN Assignment

Features Guide References

- Calling Line Identification Restriction (CLIR)

User Manual References

Not applicable.

Calling Line Identification Restriction (CLIR)

Description

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

Conditions

If disabled, the called party can check the calling party's number before the called party answers the call (CLIP: Calling Line Identification Presentation).

Programming Guide References

- [419] ISDN Outgoing CLIR Service Assignment
- [454] DN Assignment

Features Guide References

- Calling Line Identification Presentation (CLIP)

User Manual References

Not applicable.

Calling Party Control (CPC) Signal Detection

Description

The Calling Party Control (CPC) Signal is an on-hook indication (disconnect signal) sent from the outside line when the telephone is hung up at the other end. To maintain efficient utilization of outside lines, the system monitors their state and when 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 on incoming and outgoing outside calls by System Programming.
- Generally CPC Signal Detection works on incoming outside calls, and does not work on outgoing outside calls (except once they are placed on Call Hold, Exclusive Call Hold, or Consultation Hold). In this case, if the extension user remains off-hook after the completion of an outgoing outside call, the system does not release all the switches used to establish the connection. The connected outside line will continue to be in use. To prevent this, it is programmable to make CPC Signal Detection work on outgoing outside calls. (Note: Some Central Offices may send CPC-like signals during the dialing sequence and an attempt to make a call may be terminated. If your CO does not send such signals, it is recommended to make CPC Signal Detection work on outgoing outside calls.)
- If your Central Office does not send CPC-like signals, it is effective to limit the dialed numbers during a call by the program [991] "COS Additional Information"; Class of Service to prevent unauthorized calls.
- If a CPC Signal is detected during a Conference call, the line is disconnected and the remaining two parties resume the call.
- If a CPC Signal is detected during a call between a caller using the Direct Inward System Access (DISA)*¹feature and an extension or an outside party, the line is disconnected.

Programming Guide References

- [405] CPC Signal Detection Incoming Set
- [415] CPC Signal Detection Outgoing Set
- [991] COS Additional Information

Features Guide References

None

User Manual References

Not applicable.

---

*¹   Available for the KX-TD1232 only.

Camp-On Transfer to Phantom Extension / Ring Group

Description

Allows the extension user to transfer an intercom or outside call directly to busy phantom extensions or extensions in a Ring Group. After dialing the destination number, the user hangs up the handset after hearing the busy tone. The call is transferred when at least one extension becomes free.

Conditions

- If the destination party is busy during the transfer recall time, the call will return to the user or Operator 1. You can select either one by system program [990], Area - 2 - Bit 1.
- If music on hold is enabled, music is sent to the caller while being transferred. Sending ringback tone or music on hold is programmable by program [990], Area 1 - Bit 1.

Programming Guide References

- [201] Transfer Recall Time
- [990] System Additional Information

Features Guide References

None

User Manual References

- 4.3.29 Camp-On Transfer to Phantom Extension / Ring Group

Class of Service (COS)

Description

COS is used to define the features which are allowed for a group of extensions. Each extension is assigned a COS number. Eight Classes of Service are available.

Conditions

- The programmable items are shown below:
  - **a)** Outgoing call restriction level (Day mode / Night mode) — 1 through 8
  - **b)** Restriction of outside call duration
  - **c)** Transfers a call to an outside party
  - **d)** Forwards a call to an outside party
  - **e)** Executive Busy Override
  - **f)** Executive Busy Override Deny
  - **g)** Overrides Do Not Disturb of the called extension
  - **h)** Account Code Entry operation — verified - all calls / verified - toll restriction override / option
  - **i)** Off-Hook Call Announcement (OHCA)
  - **j)** Accesses the Night Service
  - **k)** The number of permitted dialing digits during an outside call
  - **l)** Call Forwarding — Follow Me
- A Class of Service can be assigned to a DISA (Direct Inward System Access) user code[1].
- The extension user can use all of the COS functions of their own extension at another extension by entering a working COS password (Walking COS).

---

[1] Available for the KX-TD1232 only.

Programming Guide References

- [500]-[501] Toll Restriction Level ── Day / Night
- [502] Extension-to-Outside Line Call Duration Limit
- [503] Call Transfer to Outside Line
- [504] Call Forwarding to Outside Line
- [505] Executive Busy Override
- [506] Executive Busy Override Deny
- [507] Do Not Disturb Override
- [508] Account Code Entry Mode
- [509] Off-Hook Call Announcement (OHCA)
- [510] Night Service Access
- [601] Class of Service
- [613] ISDN Class of Service
- [811] DISA User Codes
- [991] COS Additional Information

Features Guide References

- Walking COS

User Manual References

Not applicable.

Conference

Description

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

Conditions

- Possible conference combinations are:1-inside and 2-outside; 2-inside and 1-outside; and 3-inside.
- Up to six conference calls are allowed simultaneously.
- A three-party call is also established by Executive Busy Override or Privacy Release.
- When a two-party call is changed to a three-party call or vice versa, a confirmation tone is sent to all three parties. Eliminating the tone is programmable.
- The third party must have a CO button which is common to the outside line used by the original parties.

Programming Guide References

- [005] Flexible CO Button Assignment
- [990] System Additional Information

Features Guide References

- Conference, Unattended

User Manual References

- 2.2.2 Flexible Button Assignment
- 4.3.30 Conference

Conference, Unattended

Description

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

Conditions

* An Unattended Conference can be established when the extension is allowed to transfer a call to an outside line.
* The duration of an unattended conference is restricted by a system timer. Hold Recall results to the extension user who left the conference 50 seconds before the time-out. 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 returns to the call.

Programming Guide References

* [206] Outside-to-Outside Line Call Duration Time
* [502] Extension-to-Outside Line Call Duration Limit
* [503] Call Transfer to Outside Line

Features Guide References

* Conference
* Hold Recall
* Limited Call Duration

User Manual References

* 4.3.31 Conference, Unattended [PT only]

Confirmation Tone

Description

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

Confirmation tone 1:

    a) Indicates that the new setting differs from the previous setting.

    b) Set or cancel the Electronic Station Lockout.
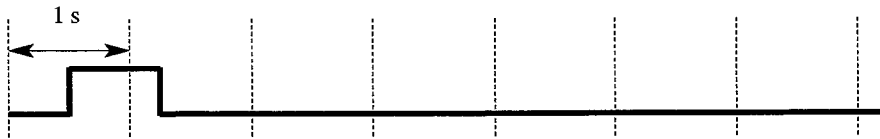
Confirmation tone 2:

    a) Indicates that the new setting is identical to the previous setting.

    b) In addition, sent when various features are successfully performed or accessed. (e.g. Call Hold; Automatic Callback Busy)

    c) Sent when accessing external paging equipment. (e.g. Paging — All; Paging — External) Confirmation tone from external pagers can be enabled or disabled.
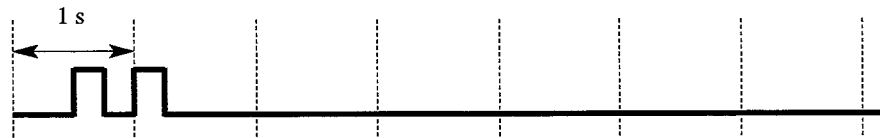
Confirmation tone 3:

Sent when a conversation is established just after dialing.

For example, when accessing the following features by the feature numbers:

- Call Park Retrieve
- Call Pickup
- Hold Retrieve
- Paging / Paging Answer
- Trunk (Outside Line) Answer From Any Station (TAFAS)

This tone can be eliminated by System Programming so that the user can start talking instantly.

Confirmation tone 4:

Sent when moving from a two-party call to a three-party call, and vice versa. (These are caused by Executive Busy Override, Conference, or Privacy Release.) It is possible to eliminate this tone by System Programming.

Conditions

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

Programming Guide References

- [805] External Pager Confirmation Tone
- [990] System Additional Information

Features Guide References

None

User Manual References

Not applicable.

Consultation Hold

Description

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

Conditions

- With a proprietary telephone, Consultation Hold is established by pressing TRANSFER or CONF button.   With a standard telephone, it is established by pressing the hooks witch lightly.
- Doorphone calls and paging calls cannot be placed on Consultation Hold.
- A new incoming call will not arise at the extension which is keeping a call on Consultation Hold. The extension is regarded as busy.
- If a calling party is placed on hold, music is sent to the party, if available. (Music on Hold)
- If a call on hold is not retrieved in a specific period of time, Transfer Recall starts.
- If an outside call is placed on hold and not retrieved in 30 minutes, it is automatically disconnected.

Programming Guide References

- [201] Transfer Recall Time
- [990] System Additional Information

Features Guide References

- Call Splitting
- Call Transfer, Screened — to Extension
- Call Transfer, Screened — to Outside Line
- Call Transfer, Unscreened — to Extension
- Conference
- Conference, Unattended
- Music on Hold

User Manual References

Not applicable.

Data Line Security

Description

Data Line Security is a function that can be set on individual extensions. Once set, communication between the extension and the other end is protected from signals such as Call Waiting, 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

* Assigning Data Line Security always offers conversation privacy unless Privacy Release is executed.
* If one extension in a conversation has set Data Line Security, it applies to both extensions.

Programming Guide References

* [100] Flexible Numbering

Features Guide References

None

User Manual References

* 4.3.32 Data Line Security

Dial Tone, Distinctive

Description

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

Dial tone 1: Normal dial tone. None of the features listed below are activated.
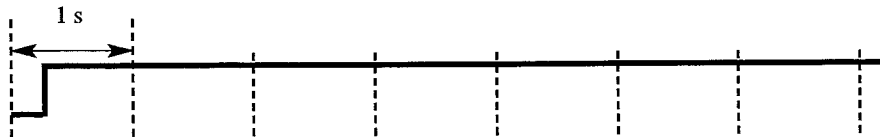
Dial tone 2: Emitted when any one of the features below are set.
Absent Message Capability
Background Music (BGM) (for proprietary telephones only)
Call Forwarding
Call Pickup Deny
Call Waiting
Data Line Security
Do Not Disturb (DND)
Electronic Station Lockout
Executive Busy Override Deny
Pickup Dialing
Timed Reminder

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

1s

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

Conditions

None

Programming Guide References

No programming required.

Features Guide References

None

User Manual References

Not applicable.

Dial Type Selection

Description

Allows you to select the desired dialing mode for each outside line regardless of originating call 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 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 line.

Call Blocking Mode

Set this mode on outside lines that can receive both tone and rotary, but under contract with the Central Office for rotary only. When dialing to a line using a touch-tone telephone, only rotary is sent to the Central Office.

Conditions

- It is possible for the extension user to 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)[1] outgoing line. With DISA[1], Pulse to Tone Conversion is not possible.
- In case an outside line can receive both DTMF and pulse signals and is contracted for DTMF with a Central Office, DTMF mode should be selected for the line. If it is contracted for rotary mode, Call Blocking mode should be selected for the line.
- If a line is assigned Pulse Dial mode, select an appropriate pulse speed, pulse break ratio, and inter-digit pause for the line, if necessary. If a line is assigned DTMF, select an appropriate DTMF duration for the line, if necessary.
- After a held call is retrieved, the dial mode goes back to the one originally programmed on the outside line.

Programming Guide References

- [402] Dial Mode Selection
- [403] Pulse Speed Selection
- [404] DTMF Time
- [990] System Additional Information

---

[1]   Available for the KX-TD1232 only.

Features Guide References

- End-to-End DTMF Signaling (Tone Through)
- Pulse to Tone Conversion

User Manual References

Not applicable.

Direct In Lines (DIL)

Description

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

DIL 1:1 puts an incoming outside call to a single destination. Assignable destinations are: (1) extension; (2) modem; (3) external pager; (4) DISA (Direct Inward System Access) [*1] message; (5) extension group; or (6) phantom extension;. This outside line can be used by multiple extension users to make calls.

DIL 1:N puts an incoming outside call to multiple destinations. Assignable destinations are extensions only. This outside line can be used by multiple extension users to make and receive calls.

Both DIL 1:1 and 1:N can have different destinations for day and night modes (Night Service).

Conditions

- If an outside line is programmed for both DIL 1:1 and DIL 1:N, it is regarded as a DIL 1:1 line.
- DIL 1:1 to the modem[*1] allows the caller to perform remote administration. DIL 1:1 to an external pager causes the pager to sound when receiving incoming calls (TAFAS: Trunk (Outside Line) Answer From Any Station feature). DIL 1:1 to DISA message allows an external caller to access the system directly (DISA feature)[*1].

Programming Guide References

- [407-408] DIL 1:1 Extension —— Day / Night
- [603-604] DIL 1:N Extension and Delayed Ringing —— Day / Night

Features Guide References

None

User Manual References

Not applicable.

[*1] Available for the KX-TD1232 only.

Direct Inward Dialing (DID)

Description

Incoming calls can be put directly through to destinations according to the subscriber numbers sent from the Central Office. Assignable destinations are: (1) extension, (2) external pager (for TAFAS: Trunk (Outside Line) Answer From Any Station), (3) modem (for remote system administration), (4) extension group, and (5) phantom extension.

The examples below explain the procedures for DID programming.

[Programming Example]

1. A subscriber number received from the exchange is converted into an DID transferred number programed in [433] "DID Subscriber Number Removed Digit" and [434] "DID Added Number".

   <Example>

   DID format settings
   Deleted Digit: 2
   Added Dial No.: 2

   Subscriber number received from the exchange: 43112

   <Explanation>

   1) 2 digits are deleted, "43", making the number 112.

   2) The number "2" is added, making the final number 2112 which serves as the extension number. Note that digits are inserted at the beginning of the number.

2. The DID number programed in Programming Example 1, can be converted using the Transfer Table. Program [135] "DID Number Conversion Selection" is used to enable or disable to use the Transfer Table (default: use the Transfer Table).

<Example>

Location Number	[136] DID Number	[137] DID Extension (Day)	[138] DID Extension (Night)	[139] DID Extension Name
001	2111	101	101	Tom Smith
002	2112	102	101	Bob James
003	2 ＊ 03	103	101	Mike White
:	:	:	:	:
200	22 ＊ 0	192	101	John P.

<Explanation>

If the DID transferred number matches the DID number assigned in program [136] DID Number Assignment, the call is received at the DID extension assigned in program [137-138] DID Extension —— Day / Night. The name for the DID extension can be given in program [139] DID Extension Name Set.

The wild character "✳" can be entered in a DID number.
The DID extension name is displayed as follows.

```
DID:Tom Smith
```

Conditions

- An optional 4-DID Line Unit (KX-TD185) must be installed for this feature.
- If the destination is in the Do Not Disturb mode, or has disabled the Call Waiting mode and is busy, the following may occur:
  1) The call is sent to the IRNA destination.
  2) The call is received at the corresponding CO button which only flashes. (Default)
  3) The system sends a busy tone.
  To select how the call is treated, refer to program "[990] System Additional Information, Area 7 - Bit 11, 10".
- To prohibit outgoing calls from a DID line, program [605-606] Outgoing Permitted Outside Line Assignment —— Day / Night or [614-615] Outgoing Permitted Outside Line Assignment —— Day / Night for ISDN Extension is necessary to determine which outside lines cannot be accessed by an extension.

Connection References

- 2.4.5 4-DID Line Unit Connection
- 2.4.6 Installing Expansion Unit

Programming Guide References

- [109] Expansion Unit Type
- [135] DID Number Conversion Selection
- [136] DID Number Assignment
- [137-138] DID Extension —— Day / Night
- [139] DID Extension Name Set
- [401] Outside Line Group Assignment
- [430] DID / TIE Format Number Assignment
- [431] DID / TIE Incoming Assignment
- [432] DID / TIE Outgoing Assignment
- [433] DID / TIE Subscriber Number Removed Digit
- [434] DID / TIE Added Number
- [435] DID / TIE Wink Time Out Assignment
- [605-606] Outgoing Permitted Outside Line Assignment —— Day / Night
- [990] System Additional Information

Features Guide References

None

User Manual References

- 2.1.1 Station Programming Instructions

Direct Inward System Access (DISA)[*1]

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 intercom call to an extension, operator, modem (for remote system administration) or external pager (for TAFAS: Trunk (Outside Line) Answer From Any Station).
  You also have the option of dialing route for an extension using an one digit number (DISA built-in auto attendant number) via DISA calls.

- Calling an external party.

It is necessary to select either Non Security, Outside Line Security or All Security mode to have direct access to these features. In Non Security mode, any caller may make outside or intercom calls. In Outside Line Security mode, it is necessary to enter a pre-assigned DISA user code to make outside calls. In All Security mode, it is necessary to enter a pre-assigned DISA user code to make both outside and intercom calls. This prevents the caller from making unauthorized calls. However, when making an outside call by Call Forwarding — to Outside Line, the call is permitted (exception). An Outgoing Message can be programmed for the DISA feature. When a caller reaches the DISA line, a pre-recorded message will greet the caller. Two different DISA messages may be recorded by the operator or manager. Thus, one message may be used in day mode and the other in night mode, or they can be used for different outside lines.

Note
Warning for the Direct Inward System Access Users
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 User Code) of the system, you have a risk that they will make illegal phone call 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:

Carefully maintain the secrecy of the password.

Specify a complicated password as long and random as you can make it.

Change the password frequently.

[*1] Available for the KX-TD1232 only.

Flow chart of possible cases and results for DISA calls

```
┌─────────────────────────┐
│ An outside call is made.│
└─────────────────────────┘
             │
             ▼
┌───────────────────────────────┐
│ The DISA Delayed Timer starts.│
└───────────────────────────────┘
             │
             ▼
┌───────────────────────────────┐
│ The caller reaches the DISA line.│
└───────────────────────────────┘
```

```
┌──────────────┐                              ┌──────────────────┐
│ All resources│      ┌─────────────────┐ Yes │ Intercept        │
│ are busy.    │─────▶│ Is IRNA employed?│────▶│ Routing starts.  │
└──────────────┘      └─────────────────┘      └──────────────────┘
                                       │
                                    No ▼
                              ┌───────────────────┐
                              │ Kept waiting with │
                              │ a ringback tone.  │
                              └───────────────────┘
```

```
                         ┌──────────────────┐
┌─────────────────────┐  │ Making an        │        ┌──────────────┐
│ One of the resources│─▶│ extension call   │───────▶│ Is IRNA      │
│ is available.       │  └──────────────────┘        │ employed?    │
│ (Outgoing           │  ┌──────────────────┐        └──────────────┘
│ Message is sent.)   │─▶│ TAFAS            │────────▶   Yes    No
└─────────────────────┘  └──────────────────┘
```

```
┌──────────────────┐
│ The call is      │
│ accepted.        │
└──────────────────┘
        ▲
        │ Idle
┌──────────────────┐                      ┌──────────────────┐
│ Calling a        │◀─────── Busy ───────│ Intercept        │
│ modem.           │                      │ Routing starts.  │
└──────────────────┘                      └──────────────────┘
        │                                         │
        │ Busy                                    ▼
┌──────────────────┐                      ┌──────────────────┐
│ Making an        │                      │ No Answer        │
│ outside call     │                      │ Timer starts.    │
└──────────────────┘                      └──────────────────┘
        │ Idle                                    │
        │         Busy                            ▼
┌───────────────────────────────┐  No   ┌──────────────────┐
│ Is User Code accepted or      │──────▶│ Disconnected     │
│ unnecessary?                  │       │ after 10 seconds.│
└───────────────────────────────┘       └──────────────────┘
        │ Yes
        ▼
┌──────────────────┐
│ The call is      │
│ accepted.        │
└──────────────────┘
```

Conditions

- The following items are required for the DISA feature:
  - a) An optional DISA Card must be installed.

b) The Floating Station number of the DISA message should be assigned as the Direct In Lines (DIL) 1:1 destination. This assigns the DISA line and the message accessed by external callers.

c) The DISA message(s) should be recorded by the operator or manager.

- A DISA call is answered after a ringback tone is returned to the caller after the DISA Delayed Answer Time expires. The caller can dial during the message.

- The floating number of a DISA message may be selected as the destination of Intercept Routing.

- This system can store up to ten programmable DISA built-in auto attendant numbers. After listening to the DISA message, the caller can dial a single digit.

- The DISA built-in auto attendant number may be the same as the first digit of other numbers (extension number, floating number, etc.). To avoid confusion, the system waits for the second digit for a preprogrammed amount of time (default: 1 second). If the timer runs out of time, the system assumes that the first digit is a DISA built-in auto attendant number.

- Only one DISA card can be installed per system. During System Connection, the DISA card is effective only for an outside line used in the same system.

- 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 32 programmable DISA user codes. Each code should be unique. It is possible to assign a Class of Service number to each code. The Class of Service of the code defines the Toll Restriction level.

- The duration of outside-to-outside line calls can be limited. When the specified time expires, both lines are disconnected unless the caller re-tries or extends the time, if available. A warning tone is sent to both parties 15 seconds before the time-limit at five-second intervals.

- Extending the call duration can be enabled from one to seven minutes or disabled. The caller can do this several times.

- To detect the end of an outside-to-outside line call, CPC Signal Detection and Tone Detection can be assigned.

- When you dial the wrong DISA user code 3 times, your call will be disconnected.

- The "✶" key when retrying a DISA call can be disregarded when the program "[990] System Additional Information, Area 5 - Bit 3 is disabled".

- If the destination is in the Do Not Disturb mode, or has disabled the Call Waiting mode and is busy, the following may occur:
  1) The call is sent to the IRNA destination.
  2) The call is received at the corresponding CO button which only flashes. (Default)
  3) The system sends a busy tone.
  To select how the call is treated, refer to program "[990] System Additional Information, Area 7 - Bit 9, 8".

Connection References

- 2.4.7 DISA Card and Remote Card / Unit Installation

Programming Guide References

- [100] Flexible Numbering
- [405] CPC Signal Detection Incoming Set
- [407-408] DIL 1:1 Extension —— Day / Night
- [415] CPC Signal Detection Outgoing Set
- [809] DISA Security Type
- [810] DISA Tone Detection
- [811] DISA User Codes
- [812] DISA DTMF Repeat
- [815] DISA Built-in Auto Attendant
- [990] System Additional Information
- [206] Outside-to-Outside Line Call Duration Time
- [213] DISA Delayed Answer Time
- [214] DISA Prolong Time
- [215] Outgoing Message Time
- [218] DISA AA Wait Time
- [203] Intercept Time
- [409-410] Intercept Extension —— Day / Night

Features Guide References

- Intercept Routing
- Outgoing Message (OGM)

User Manual References

- 4.3.33 Direct Inward System Access (DISA)

Display Contrast Adjustment

Description

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

Conditions

The adjusting method depends on the type of proprietary telephone (PT) you have.
- With a KX-T7400 series digital PT, the MODE or Soft buttons and the Jog Dial are used to sharpen the contrast to one of three levels.
- With a KX-T7200 series digital PT, the Soft buttons and the Volume button are used to sharpen the contrast to one of three levels.
- With an analogue PT, a sliding lever on the telephone (CONTRAST selector) is used to select one of three available levels.

Programming Guide References

No programming required.

Features Guide References

None

User Manual References

- 1.1.5 Initial Setting for KX-T7400 Series
- 1.1.6 Initial Setting for KX-T7200 Series

Display, Call Information

Description

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

Extension number and name
These are shown when calling or when called by an extension user and during an established intercom call.
A display example: **123: Smith**

Dialed telephone number
This is shown when dialing the telephone number.
A display example: **91234567890**

Number or name of the caller
These are shown if the Caller ID feature is available.
Display examples: **CO 03: 1234567890**
                 CO 03: Panasonic

Outside Line number and name
This is shown when receiving an outside call.
A display example: **CO 03: AB COMPANY**

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

Conditions

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

Programming Guide References

- [003] Extension Number Set
- [004] Extension Name Set
- [012] ISDN Extension Number Set
- [013] ISDN Extension Name Set
- [212] Call Duration Count Start Time
- [417] Outside Line Name Assignment

Features Guide References

- Caller ID

User Manual References

Not applicable.

Display, in Idle

Description

Offers the display proprietary telephone user a display of either the present time and date or its own-extension number and name. This is displayed while on-hook.

Conditions

- There are two display types:

  Display example 1: Day of the week, Month, Day, Time (AM / PM)

  ```
  TUE  MAY16  12:00P
  ```

  Display example 2: self-extension number, name

  ```
  123:  Tony  Viola
  ```

- Pressing "✱" while on-hook allows you to alternate the display.
- The current date and time are set by System Programming.

Programming Guide References

- [000] Date and Time Set

Features Guide References

None

User Manual References

- 6.1.1 Display Examples

Display, Self-Extension Number

Description

Allows the display proprietary telephone user to display their own jack number and extension number in Station Programming mode.

Conditions

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

```
Jack02<=>EXT102
```

Programming Guide References

No programming required.

Features Guide References

None

User Manual References

- 2.2.6 Self-Extension Number Confirmation

Do Not Disturb (DND)

Description

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

Conditions

- If your proprietary telephone (PT) is not supplied with the FWD/DND button, it can be assigned on a flexible button.
- DND does not work for the following calls: recalls for hold / Timed Reminder alarm or calls directed by Intercept Routing.
- A PT user in DND mode can answer a call by pressing the button showing the arrival of the call.
- An extension in DND mode can be called by other extension users who are allowed to override DND in their Class of Service (Do Not Disturb Override).
- Both the Call Forwarding and DND functions can be set at the same time, but cannot work at the same time.
- Pressing the FWD/DND button while on-hook allows the user to enable or disable the Call Forwarding or DND function. If the user sets both functions, alternating the mode is also available by pressing the FWD/DND button.
- The flashing pattern of LED for FWD / DND button can be selected on program "[990] System Additional Information, Area 9 - Bit 4, 3".

[990] System Additional Information, Area 9–Bit 4, 3	FWD	DND
11	Red Flashing	Red on
10	Red on	Red on
01	Red on	Red Flashing
00	Red Flashing	Red Flashing

Programming Guide References

- [005] Flexible CO Button Assignment
- [100] Flexible Numbering
- [990] System Additional Information

Features Guide References

- Do Not Disturb (DND) Override

User Manual References

- 2.2.2 Flexible Button Assignment
- 4.3.34 Do Not Disturb (DND)

Do Not Disturb (DND) Override

Description

Permits the pre-assigned extension user to call another user who has set the Do Not Disturb feature. Dialing "1" enables the caller to override the DND programmed on the called extension user's telephone and causes the telephone to ring.

Conditions

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

Programming Guide References

* [507] Do Not Disturb Override

Features Guide References

* Do Not Disturb (DND) Override

Door Opener

Description

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

Conditions

- It is necessary to install a user-supplied door opener on each door to be opened. Two door openers can be installed. System Connection[*1] provides for four door openers.
- The door opener will open the door even if a doorphone is not installed.

Connection References

- 2.4.9 Doorphone and Door Opener Connection

Programming Guide References

- [100] Flexible Numbering
- [607-608] Doorphone Ringing Assignment —— Day / Night

Features Guide References

- Doorphone Call

User Manual References

- 4.3.36 Doorphone Call

[*1]   Available for the KX-TD1232 only.

Doorphone Call

Description

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

Conditions

- It is necessary to install a Doorphone Card and a Doorphone. These are optional.
- Two doorphones can be installed. System Connection[*1] provides for four doorphones.
- It is necessary to program the extensions that can receive calls from each doorphone during day and night mode.
- If no extension user answers an incoming doorphone call within 30 seconds, the call stops ringing and is canceled.
- While engaged on a doorphone call, any extension user can open the door from the telephone to let the visitor in (Door Opener). This requires a user-supplied door opener.
- If the doorphone call is placed on hold, the Music on Hold is not available.

Connection References

- 2.4.9 Doorphone and Door Opener Connection

Programming Guide References

- [100] Flexible Numbering
- [607-608] Doorphone Ringing Assignment —— Day / Night

Features Guide References

- Door Opener

User Manual References

- 4.3.36 Doorphone Call

[*1]   Available for the KX-TD1232 only.

DSS Console

Description

The Direct Station Selection (DSS) Console provides direct access to extensions and features and busy lamp display.
The DSS Console must be programmed to work with a proprietary telephone (PT). System Programming assigns the jack numbers of the DSS Console and its associated PT.
Up to four consoles can be installed per system. A PT can be paired with up to four DSS Consoles. The paired telephone user can carry out the following operations using the DSS Console:

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

The above functions are activated simply by pressing buttons on the console which were pre-programmed as function buttons.
DSS Consoles are provided with the following buttons listed below:

KX-T DSS Consoles:

Buttons	7040	7240	7440	7441
DSS	✔(32)	✔(32)	✔(64)	✔(48)
PF (Programmable Feature)	✔(16)	✔(16)		
ANSWER				✔
RELEASE				✔

✔: The button is provided on the designated telephones.
(x): Shows the number of buttons only if multiple buttons are provided.

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

Busy Lamp Field Table

Light	State of extension
Off	Idle
On	Busy

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

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

ANSWER button:
Used to answer an incoming call to the paired telephone.

RELEASE button:
Used to disconnect the line during or after a conversation or to complete a Call Transfer.

Conditions

- Programming the DSS and PF buttons can be done only from the paired telephone using Station Programming or Programming with Personal Computer. System Programming with a Proprietary Telephone is not available.
- If the extension number assigned to a DSS button is changed to another number, the DSS button automatically follows the new number. (Re-programming is not necessary.)
- During System Connection[1] DSS Consoles must be paired with telephones in the same system.
- If a port connected to a DSS Console is programmed for XDP jack, a standard telephone can be connected to the port in parallel.

Connection References

- 2.3.2 Extension Connection

Programming Guide References

- [007] DSS Console Port and Paired Telephone Assignment
- [600] EXtra Device Port

Features Guide References

- Button, Flexible
- EXtra Device Port (XDP)
- One-Touch Transfer by DSS Button

User Manual References

- 2.2.2 Flexible Button Assignment

---

[1] Available for the KX-TD1232 only.

Electronic Station Lockout

Description

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

Conditions

- Making intercom calls and receiving intercom or outside calls are permitted on the locked station.
- Remote Station Lock Control overrides Electronic Station Lockout. If the operator or manager sets Remote Station Lock on a station that has already been locked by the station user, the user cannot unlock it.

Programming Guide References

- [100] Flexible Numbering

Features Guide References

- Remote Station Lock Control

User Manual References

- 4.3.37 Electronic Station Lockout

Emergency Call

Description

Allows the extension user to dial out a pre-assigned emergency number after seizing the outside line.

Conditions

- Up to ten emergency numbers can be stored. "911" is already stored by the default setting.
- Registered emergency numbers can be dialed even under the following cases;
    a) in Account Code — Verified (All Calls, Toll Restriction Override) mode
    b) in any toll restriction level
    c) in Electronic Station Lockout

Programming Guide References

- [334] Emergency Dial Number Set

Features Guide References

None

User Manual References

- 4.3.38 Emergency Call

End-to-End DTMF Signaling (Tone Through)

Description

DTMF (Dual Tone Multi-Frequency) signaling is required for access to special network services offered by some telephone companies. This system allows the proprietary telephone user to send DTMF signals to the line during an established call.

Conditions

- If the dial type of the line is assigned to DTMF, Tone Through mode is established automatically after the dialling sequence is finished and the call is established.
- If the dial type of the line is assigned to dial pulse, Tone Through mode is established after the dialling sequence is finished and the " ✶#" buttons are pressed (Pulse to Tone Conversion).
- This function also applies to extension and conference calls.

Programming Guide References

No programming required.

Features Guide References

- Dial Type Selection
- Pulse to Tone Conversion

User Manual References

Not applicable.

Executive Busy Override — Extension

Description

Allows the pre-assigned extension user to interrupt an existing extension call, either between two inside parties or between an outside and an inside party, to establish a three-party conference call. It is possible for extension users to prevent this function from being executed by another extension user (Executive Busy Override Deny).

Conditions

- Class of Service programming determines the extension users who can perform Executive Busy Override and Executive Busy Override Deny.
- This feature does not work if the extension has set Executive Busy Override Deny or Data Line Security.
- When a two-party call is changed to a three-party call and vice versa, a confirmation tone is sent to all three parties. This tone can be eliminated by System Programming.

Programming Guide References

- [100] Flexible Numbering
- [505] Executive Busy Override
- [506] Executive Busy Override Deny
- [990] System Additional Information

Features Guide References

- Conference

User Manual References

- 4.3.39 Executive Busy Override — Extension

Executive Busy Override — Outside Line

Description

Allows the proprietary telephone user to interrupt an existing outside call, either between two outside parties or between an outside and an inside party, to establish a three-party conference call. It is possible for extension users to prevent this function from being executed by another extension user (Executive Busy Override Deny).

Conditions

* Class of Service programming determines the extension users who can perform Executive Busy Override and Executive Busy Override Deny.
* The pre-assigned extension users can interrupt any outside line even if access to the line is not allowed by System Programming.
* This feature does not work if the extension has set Executive Busy Override Deny or Data Line Security.
* When a two-party call is changed to a three-party call and vice versa, a confirmation tone is sent to all three parties. This tone can be eliminated by System Programming.

Programming Guide References

* [100] Flexible Numbering
* [505] Executive Busy Override
* [506] Executive Busy Override Deny
* [990] System Additional Information

Features Guide References

* Conference

User Manual References

* 4.3.40 Executive Busy Override — Outside Line [PT only]

Extension Group

Description

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

Conditions

- Every extension should belong to an extension group but cannot belong to more than one group.
- If System Connection*¹ is employed an extension group can include extensions on both systems.
- A floating number can be assigned to each extension group.

Programming Guide References

- [106] Station Hunting Type
- [602] Extension Group Assignment
- [813] Floating Number Assignment

Features Guide References

- Call Pickup, Group
- Paging — Group
- Station Hunting

User Manual References

Not applicable.

---

*¹ Available for the KX-TD1232 only.

External Feature Access

Description

Allows the extension user to have access to the features of a host PBX, Centrex 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 System Programming, this feature does not work.
- The flash time must be assigned as required by the Centrex, host PBX or outside line.
- With a proprietary telephone, the FLASH button, FLASH/RCL button or the feature number is used to perform this function. With a standard telephone, the feature number cannot be used when the user already has a Consultation Hold.
- During outside calls, a FLASH stored in System Speed Dialing, Station Speed Dialing or One-Touch Dialing functions as External Feature Access, not as Flash.

Programming Guide References

- [100] Flexible Numbering
- [413] Flash Time
- [990] System Additional Information

Features Guide References

- Flash
- Host PBX Access

User Manual References

- 4.3.42 External Feature Access

External Modem Control

Description

The system supports an external modem (see **Note 1**) plugged into the RS-232C port. Serial interface/remote programming software, which supports 9600 BPS, enables remote system maintenance by accessing the external modem. A pre-assigned AT Command (see **Note 2**) can be sent to an external modem automatically when it is plugged into the RS-232C port. The extension user is also allowed to control the external modem by sending the pre-assigned AT Command.

Conditions

*   To connect an external modem to your system, perform the following procedures:

    a) Connect the modem to the system with the Serial Interface (RS-232C) cable.

    b) Connect the modem to an extension port which is assigned as the DIL 1:1 destination. Or connect the outside (CO) line directly to the modem.

    c) Set the power switch of the modem to "ON", then the modem will be initialized with the default values.

    d) The following AT Command programming may be required for the modem.

    *   The Data Terminal Ready (DTR) signal should be ignored.
    *   The Data Terminal Equipment (DTE)/Modem flow control should be turned off.
    *   The data compression should be disabled.
    *   Error Correction is not necessary.

    Note 1:
    Not all modems will be compatible. Please contact the Panasonic Bulletin Board System (BBS) at (201) 271-3346 for a list of recommended modems.
    Note 2:
    Please refer to the modem instructions as the AT Command depends on the manufacturer or the model.

Serial Interface Connector

Modem

Serial Interface (25-pin) (RS-232C)
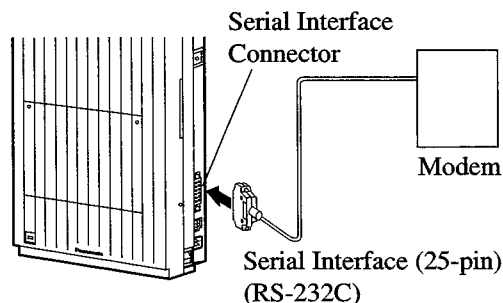
- The connection chart for the external modem (25-pin) is as follows:

Serial Interface (RS-232C)
port on the system

Serial Interface (RS-232C)
port on the modem

Signal Name	Pin No.		Pin No.	Signal Name
SD (TXD)	2	→	2	RD (RXD)
RD (RXD)	3	←	3	SD (TXD)
CS (CTS)	5	←	5	CS (CTS)
ER (DTR)	20	→	20	ER (DTR)
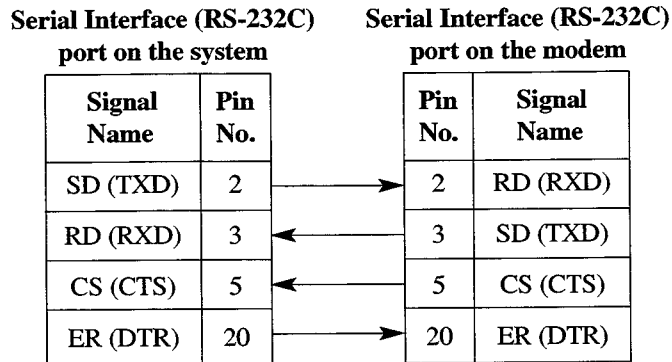
- Serial Interface (RS-232C) parameters of the serial interface/remote programming software should be the same as the PBX. When you use 9600 BPS, we recommend the combination of "8" Word Length, "None" Parity and "1" Stop Bit.
- An AT Command (for initialization, enabling Automatic Answer, etc.) can only be programmed by serial interface/remote programming software. The default is "ATQ0E0V1S0=1X0&D0".
- For more information about the AT Command, please refer to the modem instructions.

Programming Guide References

- [100] Flexible Numbering
- [806-807] Serial Interface (RS-232C) Parameters

Features Guide References

- System Programming and Diagnosis with Personal Computer

User Manual References

- 4.3.43 External Modem Control [PT only]

EXtra Device Port (XDP)

Description

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

Conditions

- XDP requires previous programming of the individual jack. Enable XDP mode for the desired jack by System Programming. Immediately after changing the assignment, the changed setting may not work for a maximum of eight seconds.
- If an analogue proprietary telephone (APT) and a standard telephone are connected to an XDP-enabled jack, neither telephone will work.
- If XDP is disabled for the jack, DPT and a standard telephone may be used as Paralleled Telephones. APT and a standard telephone also can be used as Paralleled Telephones.

Connection References

- 2.3.3 Telephone Connection

Programming Guide References

- [600] EXtra Device Port

Features Guide References

- Paralleled Telephone

User Manual References

Not applicable.

Flash

Description

The FLASH or FLASH/RCL button is used to allow a proprietary telephone user to disconnect the current call and originate another call without hanging up first.

Conditions

- If External Feature Access is enabled by System Programming, this function does not work for an outside call.
- Pressing the FLASH button re-starts the conversation duration, outputs a Station Message Detail Recording (SMDR) call record, inserts the automatic pause, and checks toll restriction level again.

Programming Guide References

- [414] Disconnect Time
- [990] System Additional Information

Features Guide References

- External Feature Access

User Manual References

- 4.3.44 Flash [PT only]

Flexible Numbering

Description

The numbers used for the access codes of system features and the numbers used for extension numbers are not fixed. They can be set as required, provided there are no conflicting numbers. Feature numbers can be from one to three digits, utilizing numbers "0 through 9" as well as "✕" and "#". Extension numbers can be two to four digits in length. Any number can be set as the leading first or second digit. If one digit is assigned as the leading digit, some extensions have 2-digit numbers and some have 3-digit numbers. If two digits are assigned as the leading digits, some have 3-digit numbers and some have 4-digit numbers.

Flexible Feature Numbers

Number	Feature	Default
01	1st hundred extension block	1
02	2nd hundred extension block	2
03 - 16	3rd through 16th hundred extension block	None
17	Operator call	0
18	Automatic line access / ARS	9
19	Outside line group line access	8
20	System speed dialing	✕
21	Station speed dialing	3✕
22	Station speed dialing programming	30
23	Doorphone call	31
24	Paging — external	32
25	Paging — external answer / TAFAS answer	42
26	Paging — group	33
27	Paging — group answer	43
28	Call pickup, outside line	4✕
29	Call pickup, group	40
30	Call pickup, directed	41
31	Call hold	50
32	Call hold retrieve — intercom	51
33	Call hold retrieve — outside line	53
34	Last number redial	#
35	Call park / call park retrieve	52

Flexible Feature Numbers

Number	Feature	Default
36	Account code entry	49
37	Door opener	55
38	External feature access	6
39	Station feature clear	790
40	Message waiting	70
41*¹	Outgoing message	36
42	Call forwarding / do not disturb	710
43	Call pickup deny	720
44	Data line security	730
45	Call waiting / OHCA / whisper OHCA	731
46	Executive busy override deny	733
47	Pickup dialing	74
48	Absent message	750
49	Timed reminder	76
50	Electronic station lockout	77
51	Day / Lunch / Break / Night service mode	78
52	Parallel telephone mode	39
53	Background music — external	35
54*²	LCS password	799
55	Call log, incoming	56
56	Call log lock, incoming	57
57	Timed reminder, remote	7✳
58	Log-in / log-out	45
59	Automatic callback busy cancel	46
60	Walking COS	47
61	External modem control	791
62	System working report	794
63 - 70	Quick dial location numbers 1-8	None
71 - 72	Reserved	None
73	TIE Line access code	None
74	Other PBX Extension 01	None

Flexible Feature Numbers

Number	Feature	Default
75	Other PBX Extension 02	None
76	Other PBX Extension 03	None
77	Other PBX Extension 04	None
78	Other PBX Extension 05	None
79	Other PBX Extension 06	None
80	Other PBX Extension 07	None
81	Other PBX Extension 08	None
82	Other PBX Extension 09	None
83	Other PBX Extension 10	None
84	Other PBX Extension 11	None
85	Other PBX Extension 12	None
86	Other PBX Extension 13	None
87	Other PBX Extension 14	None
88	Other PBX Extension 15	None
89	Other PBX Extension 16	None
90	Paging — deny	721
91	Hotel application — room status	736

*1   Available for the KX-TD1232 only.
*2   Available when the Digital Super Hybrid System is connected to a Digital Proprietary Telephone capable Panasonic Voice Processing System (one that supports digital proprietary telephone integration; e.g. KX-TVS100).

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

Fixed Feature Numbers

Feature	Default
While busy tone is heard	
Automatic Callback Busy	6
Busy Station Signaling (BSS)	1
Executive Busy Override	2
Off-Hook Call Announcement (OHCA) / Whisper OHCA	1
While Do Not Disturb tone is heard	
Do Not Disturb Override	1

Fixed Feature Numbers

Feature	Default
While calling or talking	
Account Code Delimiter	# / 99
Alternate Calling - Ring / Voice	✶
Conference	3
Door Open	5
Pulse to Tone Conversion	✶#
When the set is on-hook	
Background music on / off	1
Day / night mode display	#
Date and time display / self-extension number and name display switching	✶

Conditions

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

Programming Guide References

- [003] Extension Number Set
- [100] Flexible Numbering

Features Guide References

None

User Manual References

Not applicable.

Floating Station

Description

You can assign virtual extension numbers for resources to make them appear as extensions. These numbers are defined as floating numbers (FN). The following resources can have floating numbers:

a) External paging instruments: used for Trunk (Outside Line) Answer From Any Station (TAFAS) feature.   For KX-TD816, one FN is available. For KX-TD1232, four FNs are available.
These FNs can be assigned as:

   1) Direct In Lines (DIL) 1:1 destination

   2) Direct Inward System Access (DISA) destination[*1]

   3) Intercept Routing destination

b) Extension groups: used for Station Hunting feature. Eight FNs are available.
These FNs can be assigned as:

   1) DIL 1:1 destination

   2) DISA destination[*1]

   3) Intercept Routing destination

   4) Intercom call destination

c) [*1]DISA messages: used for DISA feature. Two FNs are available.
These FNs can be assigned as:

   1) DIL 1:1 destination

   2) Intercept Routing destination

d) [*1]Modem: used for system administration. One FN is available.
This can be assigned as:

   1) DIL 1:1 destination

   2) DISA destination can also be used as an extension number to call the modem.

Conditions

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

Connection References

- 2.4.7 DISA Card and Remote Card / Unit Installation

Programming Guide References

- [100] Flexible Numbering
- [813] Floating Number Assignment

[*1]   Available for the KX-TD1232 only.

Features Guide References

None

User Manual References

Not applicable.

Full One-Touch Dialing

Description

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

Conditions

* It is necessary to program automatic handsfree dial mode.
* This feature is also available with DSS buttons on a DSS Console.
* This feature is also available with the Function button or Jog Dial operation for KX-T7431, KX-T7433, KX-T7436 or KX-T7235 (Special Display Features).

Programming Guide References

No programming required.

Features Guide References

* Button, Direct Station Selection (DSS)
* One-Touch Dialing
* Redial, Last Number
* Redial, Saved Number
* Special Display Features

User Manual References

* 2.2.1 Initial Settings
* 4.3.45 Full One-Touch Dialing [PT only]

Handset / Headset Selection

Description

The system supports the use of headsets on proprietary telephones.

Please refer to the Operating Instructions for the Handset, KX-T30890.

Conditions

- The headset is an option.
- To set headset mode on a digital proprietary telephone (PT), use Station Programming. To set headset mode on an analogue PT, use the handset / headset selector provided on the set and / or on the headset.

Programming Guide References

No programming required.

Features Guide References

None

User Manual References

- 2.2.1 Initial Settings

Handset Microphone Mute

Description

Allows the KX-T7400 series digital proprietary telephone user to turn off the handset microphone, for privacy.

Conditions

- This is effective for the handset microphone only. Only your voice will be muted during a handset conversation.
- The user can hear the other party's voice during Handset Microphone Mute.

Programming Guide References

No programming required.

Features Guide References

None

User Manual References

- 4.3.46 Handset Microphone Mute [PT only]

Handsfree Answerback

Description

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

Conditions

- Handsfree 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.
- Handsfree Answerback set on a telephone overrides the Ring / Voice Intercom Alerting mode preset on the telephone; Handsfree conversation mode is established as soon as a confirmation tone is sent.

Programming Guide References

No programming required.

Features Guide References

- Alternate Calling — Ring / Voice

User Manual References

- 4.3.47 Hands-free Answerback [PT only]

Handsfree Operation

Description

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

Conditions

- This function can be utilized by pressing a button listed below when the SP-PHONE / MONITOR button indicator is off:
  SP-PHONE button; MONITOR button; INTERCOM button; CO button
- The KX-T7050 and the KX-T7250 can be used for handsfree dialing operations, etc., but cannot be used for a handsfree conversation.
- A single press of an One-Touch Button, DSS (Direct Station Selection) button, REDIAL button or a SAVE button also provides the handsfree mode if Full One-Touch Dialing is activated.

Programming Guide References

No programming required.

Features Guide References

- Full One-Touch Dialing

User Manual References

- 4.3.48 Hands-free Operation [PT only]

Hold Recall

Description

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

Conditions

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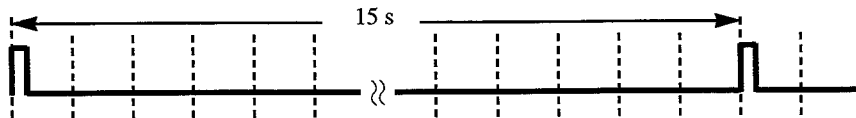
Programming Guide References

- [200] Hold Recall Time

Features Guide References

- Call Hold — Intercom
- Call Hold — Outside Line
- Call Hold, Exclusive — Intercom
- Call Hold, Exclusive — Outside Line

User Manual 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 line in the Digital Super Hybrid System.

Conditions

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

Programming Guide References

* [411] Host PBX Access Codes
* [412] Pause Time

Features Guide References

* External Feature Access
* Pause Insertion, Automatic

User Manual References

Not applicable.

Hotel Application — Room Status

Description

Allows the operator to handle the front/operator service of checking the room status, ready or not ready, with the DSS button on a DSS Console connected to a KX-T7436 or KX-T7235.

Conditions

- The hotel application must be enabled by System Programming.
- Changing the room status can be done by the operator and also by a person in a guest room.
- The DSS button indicates as follows.
    Ready mode: Off
    Not Ready mode: Flashes red

Programming Guide References

- [100] Flexible Numbering
- [134] Hotel Application

Features Guide References

None

User Manual References

- 4.4.4 Hotel Application — Room Status (operator only)

Integrated Services Digital Network (ISDN)

Description

The system can assign which directory number is answered and which extension receives a call by the ISDN line. An optional ISDN Line Unit, KX-TD382, KX-TD384, KX-TD386 or KX-TD284 is required. A maximum of eight Service Profile Identifiers (SPID) and Directory Numbers (DN) can be assigned to each ISDN line.

When a call through an ISDN line is received at your unit;

- The call is refused, if the dialed number does not match the stored DNs.

- The call is connected to the pre-assigned extension if the dialed number matches the stored DNs.

If a DN number sent through the ISDN line is not found, the call is received using the standard method.

The recommended parameter combinations are listed below. The underlined selections are recommended. The selections marked with "*" are activated, regardless of the assignment.

Program	[423] ISDN Port Type	[424] ISDN Layer 1 Active Mode	[425] ISDN Configura tion	[426] ISDN Data Link Mode	[427] ISDN TEI Mode
Parameter	CO	Call/ Permanent	Point/ Multipoint	Call/ Permanent	Fix/ Automatic
	Extension	Call/ Permanent	Point/ Multipoint	Call/ Permanent	Fix*/ Automatic

Conditions

- The PLL (Phase Locked Loops) Card (KX-TD112) must be installed to the system before the ISDN Line Unit is installed. This card is used to synchronize the system clock with the clock of the ISDN network.

- Program [420] ISDN Ring Service Assignment assigns the ring service, ISDN or Regular, for each outside line.

  a) If "ISDN" is selected, the extensions which are assigned in program "[455-456] Extension Ringing Assignment —— Day / Night for ISDN" receive a call if its dialed number matches the stored DN.

ISDN Port No.	Location No.	[454] DN Assignment	[455] Extension Ringing Assignment — Day for ISDN	[456] Extension Ringing Assignment — Night for ISDN
1	-1	201-1111	101	0 (operator)
	-2	201-2222	102	0 (operator)
	:			
	-8			

b) If "Regular" is selected, the extensions which are assigned in program [407-408] DIL 1:1 Extension —— Day / Night receive calls. If an extension is not assigned, the call will be received by DIL 1:N.

- If the destination is in the Do Not Disturb mode, or has disabled the Call Waiting mode and is busy, the following may occur:

  a) The call is sent to the IRNA destination.

  b) The call is received at the corresponding CO button which only flashes. (Default)

  c) The system sends a busy tone.

To select how the call is treated, refer to program [990] System Additional Information, Area 7 - Bit 13, 12.

Connection References

- 3.2.1 Location of the Units
- 3.2.2 Installation the Unit

Programming Guide References

- [420] ISDN Ring Service Assignment
- [423] ISDN Port Type
- [424] ISDN Layer 1 Active Mode
- [425] ISDN Configuration
- [426] ISDN Data Link Mode
- [427] ISDN TEI Mode
- [453] SPID Assignment
- [454] DN Assignment
- [455-456] Extension Ringing Assignment —— Day / Night for ISDN
- [990] System Additional Information

Features Guide References

None

User Manual References

Not applicable.

Integrated Services Digital Network (ISDN) Extension

Description

The system supports terminal equipment which have a separate power supply. For example, an ISDN telephone, G4 Facsimile and personal computers which are connected to the optional ISDN Line Unit, KX-TD284.

A maximum of eight terminal equipment can be connected to each ISDN bus with point-to-multi-point configuration. Terminal equipment can be addressed individually with Multiple Directory Numbers (MDN). The MDN consists of the ISDN extension number and an additional digit, 0 through 9. If MDN is not assigned, all equipment on the same ISDN bus are called simultaneously.

The following capabilities can be supported:

Transfer Mode	Transfer Capability
Circuit	Unrestricted digital
Circuit	Speech
Circuit	3.1 kHz Audio

The functions of the terminal equipment are similar to standard telephone functions except for the following features:

Automatic Callback Busy (Camp-On)

Busy Station Signaling (BSS)

CALL FORWARDING FEATURES — SUMMARY

Call Hold — Outside Line
Call Hold — Intercom
Call Hold Retrieve — Intercom
Call Hold, Exclusive — Outside Line
Call Hold, Exclusive — Intercom

Call Park

Call Pickup, Directed
Call Pickup, Group
Call Pickup, Outside Line

CALL TRANSFER FEATURES — SUMMARY

Call Waiting

Conference

Do Not Disturb (DND)

Log-In / Log-Out

Message Waiting

Paging — Group Answer

Paralleled Telephone

Pickup Dialing

Timed Reminder

The recommended parameter combinations are listed below. The underlined selections are recommended. The selections marked with "*" are activated, regardless of the assignment.

Program	[423] ISDN Port Type	[424] ISDN Layer 1 Active Mode	[425] ISDN Configura tion	[426] ISDN Data Link Mode	[427] ISDN TEI Mode
Parameter	CO	Call/ Permanent	Point/ Multipoint	Call/ Permanent	Fix/ Automatic
	Extension	Call/ Permanent	Point/ Multipoint	Call/ Permanent	Fix*/ Automatic

Conditions

- Class of Service for ISDN ports apply to all terminal equipment on the same ISDN bus.
- Each port can be assigned as follows:

  *1: Can be either an external or internal ISDN line. When assigned as internal, the corresponding analogue CO ports are available.

  *2: Can be either an external or internal ISDN line. When assigned as internal, the corresponding analogue CO ports are not available.

  *3: Can be either an external or internal ISDN line. When assigned as internal, the corresponding analogue CO ports are available, but the ISDN extensions are not available.

  *4: Can be either an external or internal ISDN line. When assigned as internal, the corresponding analogue CO ports and the ISDN extensions are not available.

TD816

CO No.	ISDN Port	TD284	TD382	TD384	TD386
1, 2	1	*1	Analogue	*3	*3
3, 4	2	*1	Analogue	*3	*3
5, 6	3	*2	*4	*4	*4
7, 8	4	*2	*4	*4	*4

TD1232

CO No.	ISDN Port	TD284	TD382	TD384	TD386
1, 2	1	Analogue	Analogue	Analogue	*3
3, 4	2	Analogue	Analogue	Analogue	*3
5, 6	3	*1	Analogue	*3	*3
7, 8	4	*1	Analogue	*3	*3
9, 10	5	*2	*4	*4	*4
11, 12	6	*2	*4	*4	*4

Connection References

- 3.2.1 Location of the Units
- 3.2.2 Installation the Unit

Programming Guide References

- [012] ISDN Extension Number Set
- [013] ISDN Extension Name Set
- [423] ISDN Port Type
- [424] ISDN Layer 1 Active Mode
- [425] ISDN Configuration
- [426] ISDN Data Link Mode
- [427] ISDN TEI Mode
- [428] ISDN Extension Multiple Directory Number
- [429] ISDN Extension Progress Tone
- [613] ISDN Class of Service
- [614-615] Outgoing Permitted Outside Line Assignment —— Day / Night for ISDN Extension

Features Guide References

None

User Manual References

- 4.3.3 Alternate Calling — Ring / Voice
- 4.1.1 Before Operating

Intercept Routing

Description

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

Conditions

- Intercept Routing applies to ISDN, Direct In Lines (DIL) 1:1, DIL 1:N, Direct Inward System Access (DISA)[1], Trunk (Outside Line) Answer From Any Station (TAFAS), Call Forwarding, and Station Hunting.
- The final destination of intercepted calls must be programmed for day and night modes. There are five possible destinations.

  a) An extension

  b) An external pager

  c) A DISA outgoing message[1]

  d) An extension group

  e) A phantom extension
- If the destination is in Do Not Disturb mode, Do Not Disturb does not function and the call is sent.
- The final destination of IRNA shows which extension the call is transferred from on the display.

  <Example>
  A call from outside line 12 (outside line name: AB COMPANY) is received as follows, and transferred by IRNA.

  Display example 1: ISDN / DIL 1:1 / DID / Call Forwarding / Station Hunting

  ```
  101→CO12:AB  COM
  ```

  Display example 2: Floating Station

  ```
  291→CO12:AB  COM
  ```

  Display example 3: DIL 1:N / TAFAS

  ```
  ****→CO12:AB  COM
  ```

- The Caller ID is displayed, if assigned. The priority of the display is:
  Caller ID name > Caller ID number > Outside line name > Blank (if none of these is assigned).

---

[1] Available for the KX-TD1232 only.

If your telephone has a two or six line display, both the Caller ID name and number are displayed.

Programming Guide References

- [203] Intercept Time
- [409-410] Intercept Extension —— Day / Night

Features Guide References

None

User Manual References

Not applicable.

Intercom Calling

Description

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

Conditions

- Extension numbers are assigned to all extensions by System Programming. An extension number is programmed to be two, three, or four digits.
- Names can be given to extension numbers by System Programming. An extension number and a name, if programmed, is shown on the display proprietary telephone during an intercom call.
- DSS (Direct Station Selection) buttons permit one-touch access to an extension and provide Busy Lamp Field.
- KX-T7431, KX-T7433, KX-T7436 and KX-T7235 users can make an extension call with an extension dialing directory on the display.
- After dialing an extension number, the user will hear one of the following:

  Ringback tone: indicates the other extension is being called.
  Confirmation tone: indicates the user can perform Voice Calling.
  Busy tone: indicates the other extension is busy.
  Do Not Disturb (DND) tone: indicates the other extension has DND assigned.

Programming Guide References

- [003] Extension Number Set
- [004] Extension Name Set
- [005] Flexible CO Button Assignment
- [012] ISDN Extension Number Set
- [013] ISDN Extension Name Set
- [100] Flexible Numbering

Features Guide References

- Busy Lamp Field
- Button, Direct Station Selection (DSS)

User Manual References

- 2.2.2 Flexible Button Assignment
- 4.3.49 Intercom Calling

LED Indication, Intercom

Description

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

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

Conditions

None

Programming Guide References

No programming required.

Features Guide References

* Busy Lamp Field

## User Manual References

Not applicable.

LED Indication, Outside Line

Description

The LED (Light Emitting Diode) indicators of the buttons associated with outside lines show the line conditions with 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 pattern for different line conditions.

LED Indicator	Outside Line Status
Off	Idle
Green On	You-use
Green slow flashing	You-hold
Green moderate flashing	You-Exclusive Hold / Outside-to-outside line call / Unattended Conference
Green rapid flashing	Hold Recall / Privacy Release possible / Incoming call
Red On	Other-use / Log-Out
Red slow flashing	Other-hold

Flashing light patterns
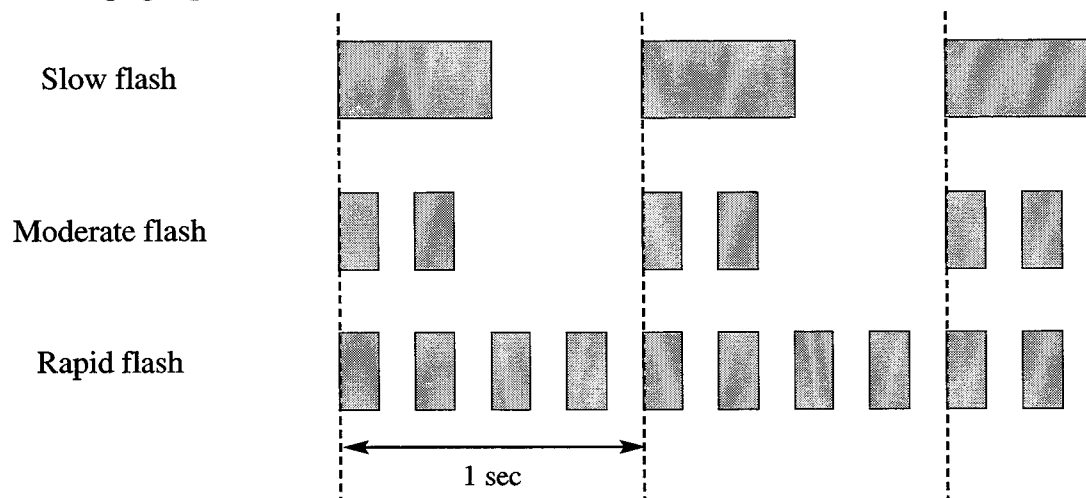
Conditions

* Red slow flashing indication appears on the Single-CO (S-CO) button only.
* The indication of Privacy Release appears on the S-CO button only.

Programming Guide References

- [005] Flexible CO Button Assignment

Features Guide References

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

User Manual References

- 2.2.2 Flexible Button Assignment

Limited Call Duration

Description

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

Conditions

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

Programming Guide References

- [205] Extension-to-Outside Line Call Duration Time
- [502] Extension-to-Outside Line Call Duration Limit
- [990] System Additional Information

Features Guide References

- Conference, Unattended
- Call Forwarding — to Outside Line
- Call Transfer, Screened — to Outside Line

User Manual References

Not applicable.

Line Access, Automatic

Description

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

Conditions

- This feature functions with Automatic Route Selection (ARS), if ARS is activated. If so, the least expensive route is automatically selected.
- Each extension is subject to System Programming items for outside lines available to access.
- An idle outside line is selected from the outside line groups assigned to the extension. If one outside line group is available, an idle line is selected from that group. If multiple outside line groups are available, the outside line group hunting sequence is determined by System Programming.
- This feature requires a CO button (Group-CO, Loop-CO or Single-CO) assignment on a proprietary telephone (PT). Dialing the line access code selects a CO button on a PT according to the priority:

  Single-CO > Group-CO > Loop-CO
  (on a hunted outside line or outside line group)

- If Idle Line Preference — Outgoing is set on the telephone, the user can access a free line only by going off-hook.
- The system waits for a programed time before dialing after an outside line is seized.

Programming Guide References

- [100] Flexible Numbering
- [103] Automatic Access Outside Line Assignment
- [211] Dial Start Time
- [400] Outside Line Connection Assignment
- [605-606] Outgoing Permitted Outside Line Assignment —— Day / Night

Features Guide References

- Outside Line Connection Assignment — Outgoing

User Manual References

- 4.3.61 Outward Dialing, Line Access — SUMMARY

Line Access, Direct

Description

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

Conditions

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

Programming Guide References

- [005] Flexible CO Button Assignment
- [211] Dial Start Time
- [400] Outside Line Connection Assignment
- [605-606] Outgoing Permitted Outside Line Assignment —— Day / Night

Features Guide References

- Button, Group-CO (G-CO)
- Button, Loop-CO (L-CO)
- Button, Single-CO (S-CO)
- Outside Line Connection Assignment — Outgoing

User Manual References

- 2.2.2 Flexible Button Assignment
- 4.3.61 Outward Dialing, Line Access — SUMMARY

Line Access, Individual

Description

Allows the proprietary telephone user one-button access to an outside line without having to dial a line access code.

Conditions

- Each extension is subject to System Programming items for outside lines available to access.
- This feature requires a Single-CO button assignment on a proprietary telephone.
- The system waits for a programmed time before dialing after an outside line is seized.

Programming Guide References

- [005] Flexible CO Button Assignment
- [211] Dial Start Time
- [400] Outside Line Connection Assignment
- [605-606] Outgoing Permitted Outside Line Assignment —— Day / Night

Features Guide References

- Button, Single-CO (S-CO)
- Outside Line Connection Assignment — Outgoing

User Manual References

- 2.2.2 Flexible Button Assignment
- 4.3.61 Outward Dialing, Line Access — SUMMARY

Line Access, Outside Line Group

Description

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

Conditions

* It is programmable to access the outside line based on each extension.
* An idle line is selected in sequence from the lines in the specified outside 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 a free line only by going off-hook.

Programming Guide References

* [005] Flexible CO Button Assignment
* [100] Flexible Numbering
* [211] Dial Start Time
* [400] Outside Line Connection Assignment
* [401] Outside Line Group Assignment
* [605-606] Outgoing Permitted Outside Line Assignment —— Day / Night

Features Guide References

* Button, Group-CO (G-CO)
* Outside Line Connection Assignment — Outgoing
* Outside Line Group

User Manual References

* 2.2.2 Flexible Button Assignment
* 4.3.61 Outward Dialing, Line Access — SUMMARY

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:

a) No Line Preference
   No line is selected when you go off-hook. You must select a line to answer an incoming call.

b) Prime Line Preference
   You can assign a prime line beforehand and answer a call on that line, when multiple calls are received simultaneously.

c) Ringing Line Preference
   When you go off-hook, you can answer the call ringing at your telephone.

Conditions

- Setting a new line preference feature cancels 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 the Single-CO button.
- If Ringing Line Preference is selected, going off-hook does not answer a line programmed for "no ring" even though there is an incoming call. Going off-hook during the delay time does not answer a line programmed for "delayed ringing".
- A standard telephone is always set to Ringing Line Preference and cannot be changed.

Programming Guide References

No programming required.

Features Guide References

None

User Manual References

- 2.2.2 Flexible Button Assignment
- 4.2.2 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:

a) Idle Line Preference:
When you go off-hook, you are connected to an idle line. An idle line is automatically selected from the pre-assigned lines.

b) No Line Preference:
No line is selected when you go off-hook. You must select a line to make a call.

c) Prime Line Preference:
When you go off-hook, you are connected to the pre-assigned line. Assign a line as your prime line beforehand.

Conditions

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

Programming Guide References

- [005] Flexible CO Button Assignment
- [103] Automatic Access Outside Line Assignment
- [400] Outside Line Connection Assignment
- [605-606] Outgoing Permitted Outside Line Assignment —— Day / Night

Features Guide References

- Outside Line Connection Assignment — Outgoing

User Manual References

- 2.2.1 Initial Settings
- 2.2.2 Flexible Button Assignment
- 4.2.1 Making Calls

Live Call Screening (LCS)*1

Description

Allows a digital 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 goes off hook with the handset or speaker phone.
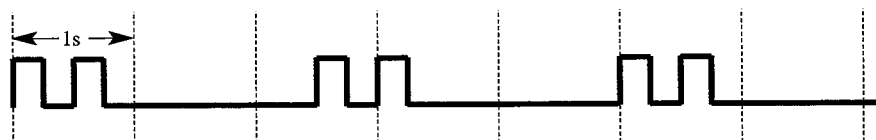
Alert Tone
To intercept the call in either Hands-Free or Private mode, press the LCS button.

A standard telephone, which is connected to a proprietary telephone in parallel, can be also used to monitor a message recording.
Be sure that Live Call Screening on the connected proprietary telephone has been activated. This feature is useful when you are using a cordless telephone (standard telephone). The handset emits an alert tone to let you know that a message is being recorded. To intercept the call, flash the hookswitch.

Conditions

* When the extension user is having a conversation, a call waiting tone is sent. 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 Guide References

* [005] Flexible CO Button Assignment
* [610] Live Call Screening Recording Mode Assignment

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*1 Available when the Digital Super Hybrid System is connected to a Digital Proprietary Telephone capable Panasonic Voice Processing System (one that supports digital proprietary telephone integration; e.g. KX-TVS100).

Features Guide References

None

User Manual References

- 2.2.2 Flexible Button Assignment
- 4.3.50 Live Call Screening (LCS) [PT only]

Lockout

Description

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

Conditions

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

Programming Guide References

No programming required.

Features Guide References

None

User Manual References

*   4.3.51 Lockout

Log-In / Log-Out

Description

Assigns an extension to join (log-in) or leave (log-out) a hunting, ring or Uniform Call Distribution (UCD) group. Extensions in log-out status will not receive calls via Station Hunting but will receive other calls, unlike the Do Not Disturb (DND) feature.

Conditions

- There should be at least one extension that is in log-in status. Or all extensions can be assigned to be in log-out status by system programming.
- The lighting patterns and status of the Log-In/Log-Out button are shown below.

Lighting pattern	Outside Line Status	
	UCD	Station Hunting
Red on	Log-Out	Log-Out
Flashing red	Log-In (waiting calls)	
Off	Log-In (no calls)	Log-In (no calls)

Programming Guide References

- [100] Flexible Numbering
- [990] System Additional Information

Features Guide References

- Station Hunting
- Ring Group
- Uniform Call Distribution (UCD)

User Manual References

- 2.2.2 Flexible Button Assignment
- 4.3.52 Log-In / Log-Out

Lunch / Break Service

Description

The system supports both night and day modes of operation. The day mode includes the lunch and break mode. Only a DIL 1:1 destination can perform in lunch / break mode.   And, any other feature can perform in day mode.

Switching the Day / Lunch / Break / Night Mode

Day / Lunch / Break / Night mode can be switched either automatically at a pre-assigned time or manually by a pre-assigned extension, operator or the manager at any desired time.
Class of Service programming determines which extensions can perform this.

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

> **Manual Service:** If you select the manual switching mode, the pre-assigned extension, operator or the manager can switch the day / lunch / break / night mode by dialing the feature number.

Conditions

- A DIL 1:1 assignment in lunch / break mode
  [457-458] DIL 1:1 — Lunch / Break Group
- Assignments for day mode can be performed even on lunch / break time, except groups assigned on program "[457-458] DIL 1:1 — Lunch / Break Group".
- A DIL 1:1 destination assigned in program "[457-458] DIL 1:1 — Lunch / Break Group" is assigned a lunch / break group.
  A lunch / break group can be assigned to up to 8 extensions (PT / SLT).
- ISDN extensions, OPX extensions, phantom extensions, floating numbers and voice mail extensions cannot be assigned to a lunch / break group.
- If DIL 1:1 is not assigned for lunch / break mode, DIL 1:1 (Day) / DIL 1:N (Day) performs in day mode as usual.
- On receiving a call on an ISDN extension, lunch / break mode will work, only if "Regular" is assigned in program [420] ISDN Ring Service Assignment.
- Lunch / break extension group works same as "Ring Group". Also, it works as the data assigned in program [990] System Additional Information, Area 06– Bit 7, 6.

Programming Guide References

- [100] Flexible Numbering
- [101] Day / Night Service Switching Mode
- [102] Day / Night Service Starting Time
- [150] Lunch Service Starting / Ending Time
- [151] Break Service Starting / Ending Time
- [457-458] DIL 1:1 — Lunch / Break Group
- [510] Night Service Access
- [620] Lunch / Break Group Assignment
- [990] System Additional Information

Features Guide References

None

User Manual References

- 2.2.2 Flexible Button Assignment
- 4.3.55 Night / Day (Lunch / Break) Service

Manager Extension

Description

One extension in the system can be assigned as the system manager. This extension can perform System Programming and the following manager services:
- Clearing the Call Log Lock
- Clearing the Live Call Screening Password
- Printing / clearing the System Working Report
- Recording and playing outgoing messages
- Setting / canceling / confirming the Timed Reminder (Wake-up Call) remotely
- Setting / clearing the Remote Station Lock
- Setting the Background Music — External on and off

Conditions

- Besides the manager extension, the extension that is connected to jack 1 is able to perform System Programming.
- If eXtra Device Port mode is activated at the manager extension, the proprietary telephone user is regarded as the manager.

Programming Guide References

- [006] Operator / Manager Extension Assignment

Features Guide References

None

User Manual References

- 4.4.1 Operator/Manager Service Features

Message Waiting

Description

The system supports the ability to inform the called party of a message waiting. The called party, with a MESSAGE button, another Extension Message Waiting button or a Phantom Message button knows there is a message if the MESSAGE button, another Extension Message Waiting button or Phantom Message button LED (Light Emitting Diode) lights red. If the button is not provided or assigned, the called party hears a special dial tone, when he / she goes off-hook (MESSAGE button only). Pressing the lit MESSAGE button, another Extension Message Waiting button / Phantom Message button or dialing the Message Waiting feature number can call back the caller or listen to messages which are stored in a mailbox in the Voice Processing System.

Conditions

- For a proprietary telephone which does not have a MESSAGE button, a flexible CO button can be assigned as the MESSAGE button either by System or Station Programming.
- Standard telephone users with a message waiting lamp can activate the lamp in the same way as a MESSAGE button on the proprietary telephone by connecting a SLT Message Waiting Lamp Adaptor Unit (KX-TD194) to the system. The message waiting lamp lighting pattern can be selected from twelve patterns. System Programming is required to use this feature.
- For standard telephone users without a message waiting lamp, the message waiting ring tone can be sent to notify the user. The message waiting ring interval time is programmable by System Programming (default: 0=no ring).
- Canceling a message can be performed from the sending extension or from the receiving extension.
- The system supports a maximum of 128 simultaneous messages.
- Messages are always left on the original extension. They can not be sent to a Call Forwarding or Station Hunting destination.
- The message waiting ring type can be changed in program "[990] System Additional Information, Area 5 - Bit 11".

Connection References

- 2.4.10 SLT Message Waiting Lamp Adaptor Unit Connection

Programming Guide References

- [005] Flexible CO Button Assignment
- [100] Flexible Numbering
- [130] Message Waiting Control
- [131] Message Waiting Lamp Assignment
- [132] Message Waiting Port Set
- [216] Message Waiting Ring Interval Time
- [990] System Additional Information

Features Guide References

- Dial Tone, Distinctive
- Voice Mail Integration

User Manual References

- 2.2.2 Flexible Button Assignment
- 4.3.53 Message Waiting
- 4.3.85 Voice Mail Integration

Microphone Mute

Description

Allows the proprietary telephone user to turn off the microphone, for privacy reasons.

Conditions

- This is effective for the microphone only; only your voice will be muted during a handsfree conversation.
- The user can hear the other party's voice during Microphone Mute.

Programming Guide References

No programming required.

Features Guide References

None

User Manual References

- 4.3.54 Microphone Mute [PT only]

Mixed Station Capacities

Description

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

Conditions

If a telephone is replaced by another one, the stored data (such as feature button storage) is preserved for the new one.

Connection References

- 2.3.2 Extension Connection
- 2.4.3 8-Station Line Unit Connection

Programming Guide References

No programming required.

Features Guide References

None

User Manual References

Not applicable.

Module Expansion

Description

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

- A 4-CO Line Unit adds 4 outside line jacks.
- An 8-Station Line Unit adds 8 extension jacks.
- An 8-Station Line Unit with SLT CID adds 8 extension jacks with the Caller ID feature for standard telephone.
- A 4-DID Line Unit adds 4 DID line jacks.
- A 2-ISDN U-point Line Unit (2-ISDN Unit) adds 2 ISDN U-point line jacks.
- A 4-ISDN U-point Line Unit (4-ISDN Unit) adds 4 ISDN U-point line jacks.
- A 6-ISDN U-point Line Unit (6-ISDN Unit) adds 6 ISDN U-point line jacks.
- A 4-ISDN S/T-point Line Unit (4-ISDN Unit) adds 4 ISDN S/T-point line jacks.

The KX-TD816 can have one extension line unit (8-Station Line Unit or 8-Station Line Unit with SLT CID) and one outside line unit (4-CO Line Unit, 4-DID Line Unit, 2-/4-/6-ISDN U-point Line Unit or 4-ISDN S/T-point Line Unit). The KX-TD1232 can have a maximum of two extension line units (8-Station Line Units or Extension Cards with SLT CID) or one outside line unit (4-CO Line Unit, 4-DID Line Unit, 2-/4-/6-ISDN U-point Line Unit or 4-ISDN S/T-point Line Unit). Therefore, the KX-TD816 can have 4 or 8 outside line jacks and 8 or 16 extension jacks, and the KX-TD1232 can have 8 or 12 outside line jacks and 16, 24 or 32 extension jacks.

Conditions

- The number of extension jacks may be different from the number of telephones if the Paralleled Telephone or eXtra Device Port feature is activated. These features allow one extension jack to have two telephones.
- When an expansion unit is installed, the unit identification is set by System Programming.
- When you install an ISDN Line Unit, you should install it to the Master System first and then the Slave System. If only installed to the Slave System, noise may occur.

Connection References

- 2.4.2 4-CO Line Unit Connection
- 2.4.3 8-Station Line Unit Connection
- 2.4.4 8-Station Line Unit with SLT CID Connection
- 2.4.5 4-DID Line Unit Connection
- 3.1.1 Overview

Programming Guide References

- [109] Expansion Unit Type

Features Guide References

- EXtra Device Port (XDP)
- Paralleled Telephone

User Manual References

Not applicable.

Music on Hold

Description

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

Conditions

- Operations such as Call Hold, Exclusive Call Hold or Consultation Hold generates Music on Hold. In case of Call Transfer, it is possible to assign either Music on Hold or ringback tone is generated.
- It is required to select the internal or external music source by System Programming. A user-supplied external music source such as a radio can be connected to the system. Up to two external music sources for KX-TD1232, and one external music source for KX-TD816 can be connected.
- The music source is used for Music on Hold and/or BGM. In the case of KX-TD1232, you can select a music source for each usage. It is also possible to disable the Music on Hold and/or BGM.
- A beep is added in Music on Hold, Either a beep or an usual music on hold can be selected by System Programming.

Connection References

- 2.3.7 External Music Source Connection

Programming Guide References

- [803] Music Source Use
- [990] System Additional Information

Features Guide References

- Background Music (BGM)

User Manual References

Not applicable.

Night Service

Description

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

Switching the Day / Night Mode

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

Class of Service programming determines which extensions can perform this.

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

Manual Night Service:
If you select the manual switching mode, the pre-assigned extension, operator or the manager can switch the day / night mode by dialing the feature number or pressing the Night button.

Conditions

The following programming items may be assigned differently for the day and night modes.

[137-138] DID Extension —— Day / Night

[407-408] DIL 1:1 Extension —— Day / Night

[409-410] Intercept Extension —— Day / Night

[455-456] Extension Ringing Assignment —— Day / Night for ISDN

[500]-[501] Toll Restriction Level —— Day / Night

[603-604] DIL 1:N Extension and Delayed Ringing —— Day / Night

[605-606] Outgoing Permitted Outside Line Assignment —— Day / Night

[607-608] Doorphone Ringing Assignment —— Day / Night

[614-615] Outgoing Permitted Outside Line Assignment —— Day / Night for ISDN Extension

Programming Guide References

*   [100] Flexible Numbering
*   [101] Day / Night Service Switching Mode
*   [102] Day / Night Service Starting Time
*   [510] Night Service Access

Features Guide References

None

User Manual References

- 2.2.2 Flexible Button Assignment
- 4.3.55 Night / Day (Lunch / Break) Service

Off-Hook Call Announcement (OHCA)

Description

OHCA allows you to inform a busy extension that another call is waiting by talking through the built-in speaker of the called party's proprietary telephone. If the existing call is using the handset, the second conversation is made with the speakerphone so that the called party can talk to two parties independently. OHCA is performed the same way as Busy Station Signaling (BSS).   It depends on the telephone type used by the called party whether Call Waiting, OHCA or Whisper OHCA is activated by the operation. If the called telephone is one of the following, OHCA becomes active: for KX-TD816: KX-T7436, KX-T7235, for KX-TD1232: KX-T7436, KX-T7235, KX-T7130.

Conditions

- Class of Service programming determines which extensions can perform this.
- If none of three features, Call Waiting, OHCA or Whisper OHCA is set at the called party, the caller will hear a reorder tone.

Programming Guide References

- [100] Flexible Numbering
- [509] Off-Hook Call Announcement (OHCA)

Features Guide References

- Busy Station Signaling (BSS)
- Call Waiting
- Whisper OHCA

User Manual References

- 4.3.56 Off-Hook Call Announcement (OHCA)

Off-Hook Monitor

Description

Allows the KX-T7431, KX-T7433, and KX-T7436 digital proprietary telephone users to let the other users listen to the conversation through the built-in speaker, while continuing the same call using the handset.

Conditions

This is effective with a handset conversation.

Programming Guide References

*   [148] Off-Hook Monitor

Features Guide References

None

User Manual References

*   4.3.58 Off-Hook Monitor [PT only]

One-Touch Dialing

Description

One-Touch Dialing offers the 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 16-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: CO, DSS (Direct Station Selection) or PF (Programmable Feature).

Conditions

- It is possible to store an account code into an One-Touch Dialing button.
- It is possible to assign an One-Touch Dialing button for direct access to Voice Mail.
- Speed Dialing, One-Touch Dialing, manual dialing, Last Number Redial and Saved Number Redial can be used together.
- It is possible to store a number consisting of 17 digits or more by dividing it and storing it in two One-Touch Dialing buttons. In this case, a line access code should be stored in the first button.
- If Full One-Touch Dialing is enabled, there is no need to go off-hook, before pressing the One-Touch Dialing button.

Programming Guide References

- [005] Flexible CO Button Assignment

Features Guide References

- Full One-Touch Dialing

User Manual References

- 2.2.2 Flexible Button Assignment
- 4.3.59 One-Touch Dialing [PT only]
- 5.2.1 Station Programming Instructions
- 5.3.2 One-Touch Dialing
- 5.2.4 One-Touch Access Assignment for System Features

One-Touch Transfer by 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 outside party, pressing a DSS button on the console or the proprietary telephone provides automatic hold and transfer. There is no need to press the TRANSFER button. The extension starts ringing immediately.

Conditions

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

Programming Guide References

* [108] Automatic Hold by CO / DSS Button

Features Guide References

* Button, Direct Station Selection (DSS)

User Manual References

* 4.3.25 Call Transfer — to Extension
* 5.3.4 Call Transfer

Operator

Description

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

- Clearing the Call Log Lock
- Clearing the Live Call Screening Password
- Handling the Hotel Application — Room Status
- Printing / clearing the System Working Report
- Recording and playing outgoing messages
- Setting / canceling / confirming the Timed Reminder (Wake-up Call) remotely
- Setting / clearing the Remote Station Lock
- Setting the Background Music — External on and off

Conditions

- If eXtra Device Port mode is activated at the operator's extension, the proprietary telephone user is regarded as the operator.
- The operator can be assigned as the destination of Transfer Recall and Call Park Recall by System Programming.

Programming Guide References

- [006] Operator / Manager Extension Assignment
- [100] Flexible Numbering
- [990] System Additional Information

Features Guide References

None

User Manual References

- 4.4.1 Operator/Manager Service Features

Operator Call

Description

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

Conditions

When an operator call (default: 0) is made, the call is connected to Operator 1 first, and then Operator 2 if Operator 1 is busy. Through System Programming, it is possible to change the routing so that Operator 1 and Operator 2 are called simultaneously when the operator is called.

Programming Guide References

- [006] Operator / Manager Extension Assignment
- [100] Flexible Numbering
- [990] System Additional Information

Features Guide References

None

User Manual References

- 4.3.60 Operator Call

Outgoing Message (OGM)*1

Description

Allows the extension assigned as an operator or manager to record outgoing voice messages. There are three types of outgoing messages that can be recorded.

DISA (Direct Inward System Access) message:
This message is played when a caller accesses the DISA feature. There can be two different DISA messages.

UCD (Uniform Call Distribution) message:
If assigned in the UCD Table, this message is played when all extensions in an UCD group are busy or not available.
There can be four different UCD messages.

Timed Reminder message:
This message is used in Timed Reminder. When answering the Timed Reminder alarm (often used as a wake-up call), the user will hear this message. There can be only one Timed Reminder message.

After recording these messages, the operator or manager can also play them back for confirmation.

Conditions

- Outgoing messages are numbered as follows:
  OGM 1 specifies DISA message 1 or UCD message 1
  OGM 2 specifies DISA message 2 or UCD message 2
  OGM 3 specifies Timed Reminder message or UCD message 3
  OGM 4 specifies UCD message 4
- A DISA Card is required to program the OGM. One card can be installed per system. System Connection permits two DISA Cards. If there are two DISA Cards, the same message is recorded for both simultaneously.

Connection References

- 2.4.7 DISA Card and Remote Card / Unit Installation

Programming Guide References

- [100] Flexible Numbering
- [215] Outgoing Message Time
- [990] System Additional Information

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*1 Available for the KX-TD1232 only.

Features Guide References

- Direct Inward System Access (DISA)
- Timed Reminder
- Uniform Call Distribution (UCD)

User Manual References

- 4.4.6 Outgoing Message (OGM)

Outside Line Connection Assignment

Description

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

Conditions

- If the user tries to make a call with a disconnected line, a reorder tone sounds to indicate that the line is out of use.
- This is effective for all outgoing calls including Direct Inward System Access (DISA).[*1]

Programming Guide References

- [400] Outside Line Connection Assignment

Features Guide References

None

User Manual References

Not applicable.

[*1]   Available for the KX-TD1232 only.

Outside Line Connection Assignment — Outgoing

Description

Allows you to assign the outside line to an extension user which is used for outgoing calls. This feature is useful to prevent unauthorized toll calls.

Conditions

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

Programming Guide References

* [605-606] Outgoing Permitted Outside Line Assignment —— Day / Night

Features Guide References

None

User Manual References

Not applicable.

Outside Line Group

Description

Outside lines can be grouped into up to eight outside line groups (for example, WATS, DDD, FX services, etc). This allows extensions to call outside parties without designating a specific outside line, since an outside line is automatically selected from the designated outside line group. All outside lines belonging to an outside line group follow the assignment determined for that outside line group. A list of assignments for each outside line group is shown as follows:

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

Conditions

- Each outside line can only belong to one outside line group.
- Outside lines in an outside line group are selected uniformly if all lines belong to the same system.
- If System Connection*1 is established, an outside line group can include outside lines in both systems. In this case, an outside line is first selected from the user's system. If all lines in the user's system are in use, a line in the other system is selected.

Programming Guide References

- [100] Flexible Numbering
- [401] Outside Line Group Assignment
- [409-410] Intercept Extension —— Day / Night
- [411] Host PBX Access Codes
- [412] Pause Time
- [413] Flash Time
- [414] Disconnect Time

Features Guide References

None

User Manual References

Not applicable.

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*1   Available for the KX-TD1232 only.

PAGING FEATURES — SUMMARY

Description

Paging allows you to make a voice announcement to many people at the same time. Your message is announced over the built-in speakers of proprietary telephones and / or external speakers (external pagers). The paged person can answer your page from a nearby telephone. Making and answering a page is possible from either a proprietary or standard telephone. You can do paging with a call on hold in order to transfer the call (Paging and Transfer).
The page can also be denied.
Paging features are classified as follows:

    Paging — All

    Paging — External

    Paging — Group

Paging — All

Description

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

Conditions

- If System Connection*¹ is established, paging is performed to all proprietary telephones and all external paging devices in both systems.
- A confirmation tone is sent to extensions, when the page is made or answered. Eliminating the tone is programmable.
- A confirmation tone is sent from external pagers, before the voice announcement. Eliminating the tone is programmable.
- A ringing or busy extension cannot receive a page.

Connection References

- 2.3.6 External Pager (Paging Equipment) Connection

Programming Guide References

- [100] Flexible Numbering
- [805] External Pager Confirmation Tone
- [990] System Additional Information

Features Guide References

None

User Manual References

- 4.3.62 Paging — SUMMARY
- 4.3.63 Paging — ANSWER
- 4.3.64 Paging — Deny [PT only]
- 4.3.65 Paging and Transfer

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*¹   Available for the KX-TD1232 only.

Features Guide

Paging — External

Description

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

Conditions

- An external pager must be connected beforehand.
- External pagers can be used for Trunk (Outside Line) Answer From Any Station (TAFAS), Paging - External, or Background Music (BGM) - External in this order. For example, if Paging - External is overridden by TAFAS, reorder tone is returned to the performer of the Paging - External. If BGM is overridden by a higher priority, it is interrupted and starts again when the higher priority is finished.
- If System Connection*1 is established, up to four pagers are available.
- A confirmation tone is sent to the extensions and external pager, when the paging is made or answered. Eliminating the tone is programmable.
- A confirmation tone is sent from external pagers before the voice announcement. Eliminating the tone is programmable.

Connection References

- 2.3.6 External Pager (Paging Equipment) Connection

Programming Guide References

- [100] Flexible Numbering
- [805] External Pager Confirmation Tone
- [990] System Additional Information

Features Guide References

None

User Manual References

- 4.3.62 Paging — SUMMARY
- 4.3.63 Paging — ANSWER
- 4.3.65 Paging and Transfer

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*1 Available for the KX-TD1232 only.

Paging — Group

Description

Allows you 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 your paging, you can talk to the person through the connected line.

Conditions

- To select all groups page all extensions.
- A confirmation tone is sent when the page is made or answered. Eliminating the tone is programmable.

Programming Guide References

- [100] Flexible Numbering
- [990] System Additional Information

Features Guide References

- Extension Group

User Manual References

- 4.3.62 Paging — SUMMARY
- 4.3.63 Paging — ANSWER
- 4.3.64 Paging — Deny [PT only]
- 4.3.65 Paging and Transfer

Paralleled Telephone

Description

Any proprietary telephone can be connected in parallel with a standard telephone. The following two combinations of telephones are available:

a) APT + Standard Telephone (an analogue proprietary telephone and a standard telephone/device)

b) DPT + Standard Telephone (a digital proprietary telephone and a standard telephone/device)

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

Conditions

- The proprietary telephone (PT) can be used to perform normal operations whether or not the standard telephone is enabled.
- In the DPT + standard telephone combination, if one telephone goes off-hook while the other telephone is on a call, the call is switched to the former.
- In the APT + standard telephone combination, if one telephone goes off-hook while the other telephone is on a call, a three-party call is established. If one user goes on-hook, the other user continues the call.
- When receiving a call;
  The standard telephone is activated; both the PT and the standard telephone will ring except when the PT is in Handsfree Answerback mode or Voice Alerting mode.
  The standard telephone is deactivated; the PT rings but the standard telephone does not ring. However, the standard telephone can answer the phone.
- When the standard telephone is in operation, the display and LED (Light Emitting Diode) indicator on the paired PT will work in the same way as if the PT is in operation.
- If APT + standard telephone are used, the extension user cannot originate a call from the standard telephone if the APT is:
  — playing Background Music (BGM)
  — in programming mode
  — receiving a paging announcement over the built-in speaker.
- If eXtra Device Port feature is available, a DPT + standard telephone can act as completely different extensions.
- The Call Waiting tone can be heard only by a PT.
- If a standard telephone with the Caller ID feature is connected in parallel, the Caller ID feature will not function.

Connection References

- 2.3.3 Telephone Connection

Programming Guide References

- [100] Flexible Numbering

Features Guide References

- EXtra Device Port (XDP)

User Manual References

- 4.3.66 Paralleled Telephone Connection

Pause Insertion, Automatic

Description

This function is used to insert a pre-assigned pause between the outside line access number, the host PBX, Centrex or carrier access code and dialed digits.

Conditions

- This feature requires previous programming of an outside line access number, host PBX, Centrex and special carrier access codes as well as assignment of the pause duration.
- This feature works for Speed Dialing, One-Touch Dialing, Last Number Redial, Saved Number Redial, Pickup Dialing, Call Forwarding — to Outside Line as well as for ordinary calls.
- Pressing the PAUSE button in dialing number inserts a pause for a pre-assigned time.

Programming Guide References

- [100] Flexible Numbering
- [311] Special Carrier Access Codes
- [411] Host PBX Access Codes
- [412] Pause Time

Features Guide References

- Host PBX Access
- Toll Restriction

User Manual References

Not applicable.

Phantom Extension

Description

Allows the system to route calls to a phantom extension. A call to a phantom extension is sent to extensions that have the corresponding Phantom Extension button. A Phantom Extension button can be assigned by Station Programming.

Conditions

- Types of calls whose destination can be the phantom extension are:
  Outside calls —
  Direct In Lines (DIL) 1:1;
  Direct Inward System Access (DISA)[*1];
  Intercept Routing — No Answer (IRNA);
  Uniform Call Distribution (UCD)-Overflow
  Intercom calls —
  Extension; Transfer
- You can call the phantom extension by pressing the Phantom Extension button or by dialing the phantom extension number. If several extensions have the same phantom extension number, they will ring simultaneously.
- A phantom number must be assigned by System Programming before assigning the Phantom Extension button by Station Programming.
- There is a maximum of 128 phantom numbers. Each number has two to four digits, consisting of numbers **0 through 9.**
- The phantom number cannot be used for feature settings such as Call Forwarding.
- The lighting patterns and statuses of the Phantom Extension button are shown below.

Lighting pattern	Phantom Extension Status
Off	Idle
Red on	Calling a phantom extension
Flashing green rapidly	Incoming call

- A DSS (Direct Station Selection) button can be assigned as the Phantom Extension button so that the operator can use the button for transferring a call.
- Whether or not the extension will ring when a call is received at a phantom extension is programmable.

Programming Guide References

- [124] Phantom Extension Number Assignment

[*1]   Available for the KX-TD1232 only.

Features Guide References

None

User Manual References

- 2.2.2 Flexible Button Assignment
- 2.2.3 Phantom Extension Ringing On/Off Set
- 4.3.67 Phantom Extension

Pickup Dialing

Description

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

Conditions

- A rotary dial telephone without the "#" button cannot program this feature. For programming the phone number, temporarily replace a rotary dial telephone with a pulse telephone with the "#" button.
- 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 is generated for the waiting time and then dialing starts. During the waiting time the user can dial another party, overriding the Pickup Dialing function.
- If the user answers an incoming call or retrieves a call on hold, the Pickup Dialing feature does not work.
- If the proprietary telephone is provided with a PF 12 button, the stored number in the PF12 button is common with the one for Pickup Dialing.

Programming Guide References

- [100] Flexible Numbering
- [204] Pickup Dial Waiting Time

Features Guide References

None

User Manual References

- 4.3.68 Pickup Dialing (Hot Line)

Power Failure Restart

Description

When turning the electricity back on, the system restarts the stored data automatically. Before restarting, the system records the error log if necessary.

Conditions

- In the case of KX-TD1232, if System Connection is established, the Slave System makes a copy of the restored data in the Master system.
- In the event of a power failure, system memory is protected by a factory-provided lithium battery. There is no memory loss except the memories of Camp-On and Call Park.

Programming Guide References

No programming required.

Features Guide References

None

User Manual References

Not applicable.

Power Failure Transfer

Description

If a power failure should happen, or a system is in an off-line condition, specific extension telephone instruments are automatically connected to specific outside lines. This provides outside line conversations between the following extensions and outside lines:

KX-TD816:
Outside line 1 is connected to extension jack number 1
Outside line 2 is connected to extension jack number 2
Outside line 5 is connected to extension jack number 9
Outside line 6 is connected to extension jack number 10

KX-TD1232:
Outside line 1 is connected to extension jack number 1
Outside line 2 is connected to extension jack number 2
Outside line 3 is connected to extension jack number 9
Outside line 4 is connected to extension jack number 10
Outside line 9 is connected to extension jack number 17
Outside line 10 is connected to extension jack number 18

Standard telephones can work in case of a power failure. Connect these telephone instruments to the above extension jacks.

Conditions

- All other conversations except for the above combinations are disconnected during a power failure.
- Only the outside line conversations can operate. All other features do not work.

Connection References

- 2.3.1 Outside Line Connection
- 2.3.2 Extension Connection
- 2.4.2 4-CO Line Unit Connection
- 2.4.3 8-Station Line Unit Connection
- 2.5.1 Auxiliary Connection for Power Failure Transfer

Programming Guide References

No programming required.

Features Guide References

- Power Failure Restart

User Manual References

Not applicable.

Privacy Release

Description

Allows the proprietary telephone user to release Automatic Privacy for an existing call in order to establish a three-party call. During a conversation with an outside party on a CO button, the user can allow another extension party to join the conversation by pressing the CO button.

Conditions

When a two-party call is changed to a three-party call or vice versa, a confirmation tone is sent to all three parties. Eliminating the tone is programmable.

Programming Guide References

- [990] System Additional Information

Features Guide References

- Privacy, Automatic

User Manual References

- 4.3.69 Privacy Release [PT only]

Privacy, Automatic

Description

By default all conversations which take place on outside lines, extension lines and doorphone lines have privacy activated.

Conditions

Automatic privacy may be temporarily suspended for a three-party conference, which is established either by Executive Busy Override or Privacy Release.

Programming Guide References

No programming required.

Features Guide References

- Executive Busy Override — Extension
- Executive Busy Override — Outside Line
- Privacy Release

User Manual References

Not applicable.

Pulse to Tone Conversion

Description

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

Conditions

- This feature works only on outside lines set to Pulse Dialing mode or Call Blocking mode.
- Dial Type Selection provides selection of a dial mode for each outside line.
- This feature is unavailable to DISA (Direct Inward System Access)[*1] callers.
- Changing tone to pulse is not possible.

Programming Guide References

- [402] Dial Mode Selection

Features Guide References

- Dial Type Selection

User Manual References

- 4.3.70 Pulse to Tone Conversion

[*1] Available for the KX-TD1232 only.

Quick Dialing

Description

Quick Dialing offers the extension user one-touch access to a desired party. This is enabled by storing an extension number or a telephone number up to 16-digits as a quick dial number.

Conditions

- Up to eight quick dial numbers can be stored.
- For example, Quick Dialing is convenient for room service calls in a hotel.
- You must assign a feature number first in program [100] "Flexible Numbering", and then a quick dial number in program [009] "Quick Dial Number Set" in order for Quick Dialing to be effective.
  Example: If you want to assign the extension number 101 in quick dial number 3;

  a) Change or clear the feature numbers which have "3" in the first digit in program [100].

  b) Assign "3" in the selection number 63 (Quick dial location number 1) in program [100].

  c) Assign "101" in location number 1 (the same location number as the quick dial location number 1 in program [100]) in program [009].

  Now you can dial quick dial number 3 to call extension 101.

Programming Guide References

- [009] Quick Dial Number Set
- [100] Flexible Numbering

Features Guide References

None

User Manual References

- 4.3.71 Quick Dialing

Redial, Last Number

Description

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

Conditions

*   With a proprietary telephone, REDIAL button is used to carry out Last Number Redial. With a standard telephone, the feature number is used.
*   The memorized telephone number is replaced by a new one if at least one digit sent to an outside line is dialed. Dialing an outside line access code alone does not change the memorized number.

Programming Guide References

*   [100] Flexible Numbering

Features Guide References

None

User Manual References

*   4.3.72 Redial, Last Number

Redial, Saved Number

Description

Allows the proprietary telephone user to save a telephone number and redial the number afterwards. The user can store it while in conversation on an outside line. The saved number can be redialed until another number is stored.

Conditions

* If the SAVE button is not provided on your PT, it is possible to assign a flexible button to be the SAVE button.

Programming Guide References

* [005] Flexible CO Button Assignment

Features Guide References

* Button, Flexible

User Manual References

* 2.2.2 Flexible Button Assignment
* 4.3.73 Redial, Saved Number [PT only]

Remote Station Lock Control

Description

The operator and manager are given the facility of controlling Electronic Station Lockout on any station.

Conditions

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

Programming Guide References

No programming required.

Features Guide References

- Electronic Station Lockout

User Manual References

- 4.4.7 Remote Station Lock Control

Reverse Circuit

Description

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

Conditions

None

Programming Guide References

- [416] Reverse Circuit Assignment

Features Guide References

None

User Manual References

Not applicable.

Ring Group

Description

All extensions in a ring group ring simultaneously by dialing the floating number of the extension group. A ring group can be a Station Hunting type.

Conditions

*   Types of calls whose destination can be the ring group are:
    Outside calls —
    Direct In Lines (DIL) 1:1;
    Direct Inward System Access (DISA)[*1];
    Intercept Routing — No Answer (IRNA);
    Uniform Call Distribution (UCD)-Overflow
    Intercom calls —
    Extension; Transfer
*   The floating number of the extension group is used for all other hunting types, Circular, Termination, Voice Mail (VM), Automated Attendant (AA) and Uniform Call Distribution (UCD).

Programming Guide References

*   [106] Station Hunting Type
*   [602] Extension Group Assignment
*   [813] Floating Number Assignment

Features Guide References

*   Floating Station
*   Station Hunting

User Manual References

Not applicable.

[*1]   Available for the KX-TD1232 only.

Ringing Tone Selection for CO Buttons

Description

Allows the digital proprietary telephone user to select the desired ringer frequency for each CO button. This distinguishes different incoming outside calls.

Conditions

There are eight ringer frequencies available. One of them can be assigned to a CO button that is assigned as each of the following buttons: Single-CO, Group-CO, or Loop-CO button. It is not possible to assign a ringer frequency to any other button.

Programming Guide References

- [005] Flexible CO Button Assignment

Features Guide References

None

User Manual References

- 2.2.4 Ringing Tone Selection for CO Buttons

Ringing Tone Selection for Intercom Calls

Description

Allows the digital proprietary telephone user to select the desired ringer frequency for intercom calls. This distinguishes incoming intercom calls.

Conditions

There are eight ringer frequencies available. One of them can be assigned to the INTERCOM button.

Programming Guide References

No programming required.

Features Guide References

None

User Manual References

*   2.2.5 Ringing Tone Selection for Intercom Calls

Ringing, Delayed

Description

If Direct In Lines (DIL) 1:N is installed, a telephone set is set by default to ring instantly. This setting can be changed to delayed ringing, no ringing or no incoming calls (disable) on an outside line number basis.

Conditions

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

Programming Guide References

- [603-604] DIL 1:N Extension and Delayed Ringing —— Day / Night

Features Guide References

- Direct In Lines (DIL)

User Manual References

Not applicable.

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[1]   Available for the KX-TD1232 only.

Ringing, Discriminating

Description

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

Conditions

- When there are multiple incoming calls and the extension goes from off-hook to on-hook, the calls are rung according to the following priority:

  a) Consultation Hold Recall

  b) An incoming call from a line in which the Prime Line Preference — Incoming function has been set (with a proprietary telephone only)

  c) Call Waiting

  d) Incoming calls; Hold Recall; Transfer Recall; Unattended Conference Recall

- If multiple incoming calls arrive at an on-hook extension simultaneously, priority as to which calls should be rung is generally on a "first-come, first-served" basis. In the case of proprietary telephones (PT), however, when the Prime Line Preference — Incoming function has been set, this line takes precedence.

- Incoming TAFAS (Trunk (Outside Line) Answer From Any Station) calls can be identified by ringing signals sent out from the external pager. The ringing pattern is the same as the outside calls.

- The digital PT user can select a desired tone frequency for each CO and the INTERCOM button.

Programming Guide References

No programming required.

Features Guide References

- Ringing Tone Selection for CO Buttons
- Ringing Tone Selection for Intercom Calls

User Manual References

Not applicable.

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 Station Speed Dialing (KX-T7431, KX-T7433, KX-T7436 and KX-T7235 only), System Speed Dialing or One-Touch Dialing numbers assigned to flexible buttons on proprietary telephones and DSS Consoles. When a display telephone user makes a call to the telephone number that is set to Secret Dialing, all or part of the number does 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.
- You can conceal one or more parts of a telephone number.
- The concealed part will be printed out by Station Message Detail Recording (SMDR).

Programming Guide References

- [001] System Speed Dialing Number Set

Features Guide References

- One-Touch Dialing
- Special Display Features — Call Directory
- System Speed Dialing

User Manual References

- 2.2.2 Flexible Button Assignment
- 4.3.74 Secret Dialing [PT only]

Special Display Features

Description

The KX-T7431, KX-T7433, KX-T7436 and KX-T7235 feature a display that allow the user to originate calls or to access system facilities with ease. The display prompts the user with information related to the desired feature.

Examples of this special function are shown below:

Special Display Features — Call Directory (Extension Dialing / Station Speed Dialing / System Speed Dialing)

Special Display Features — Call Forwarding / Do Not Disturb

Special Display Features — Call Log, Outgoing

Special Display Features — System Feature Access Menu

Special Display Features — Call Directory

Description

Allows you to make a call using the following call directories.

Extension Dialing: Provides a display of extension names and numbers. System Programming of extension numbers and names is required.

Station Speed Dialing: Provides a display of names and numbers stored in One-Touch Dialing.

System Speed Dialing: Provides a display of names stored in System Speed Dialing. System Programming of numbers and names is required.

Conditions

- It is programmable to select the initial display of the Station Speed Dialing for names and numbers.
- If a name is not stored for a System Speed Dialing number, it is not displayed and cannot be called with this feature.

Programming Guide References

- [001] System Speed Dialing Number Set
- [002] System Speed Dialing Name Set
- [003] Extension Number Set
- [004] Extension Name Set
- [012] ISDN Extension Number Set
- [013] ISDN Extension Name Set
- [100] Flexible Numbering
- [990] System Additional Information

Features Guide References

- One-Touch Dialing
- System Speed Dialing

User Manual References

- 2.2.8 Station Speed Dialing Number/Name Assignment [KX-T7235/KX-T7431/KX-T7433/KX-T7436 only]
- 4.5.7 KX-T7235 Display Features - Call Directory
- 4.5.10 KX-T7431 / KX-T7433 / KX-T7436 Display Features - Call Directory

Special Display Features — Call Forwarding / Do Not Disturb

Description

Allows the KX-T7436 and KX-T7235 users to set or cancel the Call Forwarding and Do Not Disturb (DND) features using the display messages after pressing the FWD/DND button.

Conditions

None

Programming Guide References

No programming required.

Features Guide References

- CALL FORWARDING FEATURES — SUMMARY
- Do Not Disturb (DND)

User Manual References

- 4.5.2 Call Forwarding / Do Not Disturb (KX-T7436 / KX-T7235 only)

Special Display Features — Call Log, Outgoing

Description

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

Conditions

If the call log is full, the oldest telephone number will be eliminated when a new number is dialed.

Programming Guide References

No programming required.

Features Guide References

None

User Manual References

*   4.5.5 Call Log, Outgoing (KX-T7436 / KX-T7235 only)

Special Display Features — System Feature Access Menu

Description

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

Conditions

- The features available are:

      Absent Message Capability
      Automatic Callback Busy (Camp-On) (cancel)
      Call Forwarding (set / cancel)
      Call Park
      Call Pickup (access / deny)
      Call Log, Incoming
      Call Log Lock, Incoming
      Data Line Security
      Do Not Disturb (set / cancel)
      Door Opener
      Doorphone Call
      Electronic Station Lockout
      Executive Busy Override Deny
      External Modem Control
      Live Call Screening (LCS) (password set)
      Log-In / Log-Out
      Message Waiting
      Paging (access / answer / deny)
      Paralleled Telephone
      Pickup Dialing (Hot Line)
      Station Feature Clear
      Timed Reminder
      Walking COS

- In addition to the features above, the operator and manager can display the following features:

      Background Music (BGM) — External
      Hotel Application — Room Status (operator only)
      Night Service (pre-assigned extension also)
      Outgoing Message (OGM)*1
      System Working Report
      Timed Reminder, Remote (Wake-Up Call)

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*1   Available for KX-TD1232 only.

Programming Guide References

No programming required.

Features Guide References

None

User Manual References

- 4.5.8 KX-T7235 Display Features - System Feature Access Menu
- 4.5.11 KX-T7431 / KX-T7433 / KX-T7436 Display Features - System Feature Access Menu

Station Feature Clear

Description

Allows the extension user to cancel the functions set on the user's own telephone. The following functions 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 enabled
Data Line Security
Do Not Disturb (DND)
Executive Busy Override Deny
Log-Out status
Message Waiting — All the messages that have been left by other extension users
Off-Hook Call Announcement (OHCA)
Paging-DENY
Paralleled Telephone enabled
Pickup Dialing
Timed Reminder
Whisper OHCA

Conditions

None

Programming Guide References

• [100] Flexible Numbering

Features Guide References

None

User Manual References

• 4.3.75 Station Feature Clear

Station Hunting

Description

If a called extension is busy, Station Hunting redirects the incoming call to an idle member of the extension group. Idle extensions are automatically searched according to the programmed type. Six hunting types are available as follows:

Circular hunting:
The extensions are searched until an idle one is found, regardless of the jack number.
Termination hunting:
The extensions are searched until reaching the extension which has the highest jack number in the group.
Voice Mail (VM) hunting:
All the VM ports are searched until an idle one is found to permit VM Service.
Automated Attendant (AA) hunting:
All the AA ports are searched until an idle one is found to permit AA Service.
Ring Group hunting:
All the extensions in the ring group ring simultaneously.
Uniform Call Distribution (UCD) hunting:
Successive calls go to a different extension each time a call is received. Extensions are hunted in a circular way.

One of the hunting types is selected for each extension group.
To leave the hunting group temporarily, use the Log-Out function.
To re-join, use the Log-In function.

Conditions

- If all the searched extensions are busy, a busy tone is sent to the caller.
- If the called extension has set Do Not Disturb, Call Forwarding or Log-Out, Station Hunting skips the extension.
- If UCD is set, the Hunting is performed as a setting of UCD.

Programming Guide References

- [106] Station Hunting Type
- [602] Extension Group Assignment

Features Guide References

- Extension Group
- Log-In / Log-Out
- Ring Group
- Uniform Call Distribution (UCD)
- Voice Mail Integration

User Manual References

Not applicable.

Station Message Detail Recording (SMDR)

Description

Station Message Detail Recording (SMDR) automatically records detailed call information for 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 a record of System Programming items that have been assigned, use program [802] "System Data Printout". To print the call records, use program [800] "SMDR Incoming / Outgoing Call Log Printout", which allows you to print out the following records:

- Record all outgoing outside calls or outgoing toll calls
- Record all incoming outside calls.

An example of a call record printout

Date	Time	Ext	CO	Dial Number	Ring	Duration	Acc code	CD
06/24/93	10:03AM	101	01	12345678901234567890123345		00:05'12	1234567890	
06/24/93	10:07AM	103	20	<I>		00:00'56		
06/24/93	10:08AM	104	10	<I>		00:00'20	431211	
06/24/93	10:08AM	105	10	<I>		00:10'01	431211	TR
06/24/93	10:09AM	28	14	10222PI-202-346-7890		00:09'18	001	FW
06/24/93	10:10AM	103	20	<I>		00:01'24		
06/24/93	10:11AM	280	12	<I>		00:00'24		
06/24/93	10:11AM	280	22	0924312111		00:03'02		D1
06/24/93	10:20AM	120	13	<I>4312111		00:21'46		RM
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

Explanation

(1) Date : shows the date of the call as Month / Day / Year.

(2)Time : shows the end time of a call as Hour / Minute / AM or PM.

(3) Ext : shows the extension number, floating number, etc., which was engaged in the call.

(4) CO : shows the outside line number used for the call.

(5) Dial Number
Outgoing call:
 shows the other party's telephone number (maximum 25 digits). Valid digits are 0 through 9, ✶, #, P (if the PAUSE button is pressed), or the mark "=" (if a host PBX access code is entered).
Received call:
 shows <I>. If a Caller ID is assigned to the other party, it shows <I>, number and name.

(6) Ring : shows the ring duration of the incoming call in Minutes / Seconds.

(7) Duration : shows the duration of the call in Hours / Minutes / Seconds.

(8) Acc Code (Account Code): shows the account code appended to the call.

(9) CD (Condition Code): shows call handling type with the following codes:

TR:

Transfer

FW:

Call Forwarding to Outside Line

·¹D0:

Non Security Outside Line Access using Direct Inward System Access (DISA)

·¹D1 through D32:

DISA User Codes 1 through 32

·¹RM:

Remote access to a modem

RC:

Received an incoming call

AN:

Answered an incoming call

NA:

Unanswered an incoming call

Conditions

- Connect a printer to the Serial Interface (RS-232C) connector of the main unit. After connecting a printer, do not press the RETURN key, if provided on the printer, for 10 seconds.

- When programed for outgoing toll calls only, printing occurs only for calls which start with the numbers stored in any Denied Code Table from levels 2 to 6. If Automatic Route Selection (ARS) is employed, the modified number is checked against these tables.

- This system can store information of up to 100 calls. If more calls are originated or received, previous records are deleted starting with the oldest one.

- It is possible to select the SMDR format for an incoming call with Caller ID, the caller's number only or caller's number and name, by program [990], Area 5—Bit 12.

- It is possible to select whether the SMDR prints out received incoming calls (RC) and answered incoming calls (AN) information by program [990], Area 5—Bit 13.

- It is possible to select whether the SMDR prints out the DID subscriber number by program [990], Area 7—Bit 16. If it is printed out, it replaces the Caller ID number.

- This data is not deleted when you reset the system.

- If the system clock is not set by System Programming or if the calendar IC is out of order, the date and time will not be printed out.

- If the FLASH signal is manually sent during a conversation, the call record is printed and a new record is started.

Connection References

- 2.3.8 Printer and PC Connection

·¹ Available for the KX-TD1232 only.

Programming Guide References

- [000] Date and Time Set
- [212] Call Duration Count Start Time
- [800] SMDR Incoming / Outgoing Call Log Printout
- [801] SMDR Format
- [802] System Data Printout
- [806-807] Serial Interface (RS-232C) Parameters
- [990] System Additional Information

Features Guide References

None

User Manual References

Not applicable.

Station Programming

Description

Allows the proprietary telephone (PT) user to customize the extension to their needs. The following programming items are available:

For the PT (KX-T7420; KX-T7425; KX-T7431; KX-T7433; KX-T7436; KX-T7220; KX-T7230; KX-T7235; KX-T7250; KX-T7130; KX-T7020; KX-T7030; KX-T7050)

   Call Waiting Tone Type Assignment
   Flexible Button Assignment
   Full One-Touch Dialing Assignment
   Intercom Alert Assignment
   Preferred Line Assignment — Incoming / Outgoing
   Station Programming Data Default Set

For digital PT (KX-T7420; KX-T7425; KX-T7431; KX-T7433; KX-T7436; KX-T7220; KX-T7230; KX-T7235; KX-T7250) only,

   Handset / Headset Selection
   Live Call Screening Mode Set
   Phantom Extension Ringing On / Off Set
   Ringing Tone Selection for CO Buttons
   Ringing Tone Selection for Intercom Calls

For display PT (KX-T7431; KX-T7433; KX-T7436; KX-T7230; KX-T7235; KX-T7130; KX-T7030) only,

   Bilingual Display Selection
   Initial Display Selection
   Self-Extension Number Confirmation

For digital display PT (KX-T7431; KX-T7433; KX-T7436; KX-T7235) only,

   Station Speed Dialing Number / Name Assignment

For the operator and manager's extension PT only,

   Call Log Lock Control, Incoming
   Live Call Screening Password Control
   Remote Station Lock Control

Detailed information and programming instructions are described in the User Manual, Station Programming.

Conditions

During Station Programming, the PT is considered to be in busy status.

Programming Guide References

No programming required.

Features Guide References

None

User Manual References

- 2.1.1 Station Programming Instructions
- 4.4.3 Call Log Lock Control, Incoming
- 4.4.5 Live Call Screening Password Control
- 4.4.7 Remote Station Lock Control

Station Programming Data Default Set

Description

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

Programming Items	Default
Bilingual Display Selection	English Display
Call Waiting Tone Type Assignment	Tone 1
Full One-Touch Dialing Assignment	On
Handset / Headset Selection	Handset
Initial Display Selection	Caller ID
Intercom Alert Assignment	Tone Call
Live Call Screening Mode Set	Hands-free
Preferred Line Assignment — Incoming	Ringing Line
Preferred Line Assignment — Outgoing	Intercom Line

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

Conditions

None

Programming Guide References

No programming required.

Features Guide References

• Station Programming

User Manual References

• 2.2.7 Station Programming Data Default Set

Station Speed Dialing

Description

Allows an extension user to store frequently dialed numbers in order to place a call with abbreviated dialing. It is performed by dialing the feature number and a speed dial number from 0 through 9. Up to 10 numbers can be stored in each telephone.

Conditions

- Station Speed Dialing can be followed by manual dialing to supplement the dialed digits.
- You may make a call with One-Touch Dialing button, instead of Station Speed Dialing.
- The standard telephone may be replaced with a proprietary telephone (PT) temporarily to store one-touch dialing into memory. The Function Buttons F1 through F10 correspond to speed dial numbers as follows:

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

Programming Guide References

- [100] Flexible Numbering

Features Guide References

- One-Touch Dialing

User Manual References

- 4.3.76 Station Speed Dialing

System Connection*1

Description

System Connection allows two main units (KX-TD1232) to work together as one system. This expands the capacity of the system, number of extensions, outside lines and so on. One main unit is called the master system and the other is called the slave system.
The maximum capacity of the system is as follows:

Item	Maximum Quantity (Single System)	Maximum Quantity (System Connection)
Outside Line	12	24
Extension Jack	32	64
DSS Console	4	8
Doorphone	2	4
Door Opener	2	4
External Pager	2	4
Music Source	2	4

Conditions

- The following resources can be used by either system:
  a) External pagers
  b) Music sources used for Music on Hold
  c) Music sources used for Background Music (BGM)
  d) Station Message Detail Recording (SMDR); Serial Interface (RS-232C) ports
  e) Call Parking areas
- System Inter Connection Card (KX-TD192), optional expansion cards to connect both systems, must be installed for this feature.
- Once this feature is employed, the data adjustment in both systems are performed at the programmed time (default is 1:00 AM) every day. The time can be changed by System Programming.

Connection References

- 2.4.11 System Connection

Programming Guide References

- [115] Adjust Time

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*1 Available for the KX-TD1232 only.

Features Guide References

None

User Manual References

Not applicable.

System Data Default Set

Description

This system permits re-initialization of system-programmed data. If all the programmed data is cleared, the system will restart with the default setting.

Conditions

The default setting for each programming item is listed in Section 3 "Default Values" section in Programming Guide.

Connection References

- 2.9.1 System Data Clear

Programming Guide References

No programming required.

Features Guide References

None

User Manual References

Not applicable.

System Programming and Diagnosis with Personal Computer

Description

This system can be programed and administered using a personal computer. The Serial Interface/Remote Programming & Diagnosis Manual and its floppy disk are required to perform this feature. The KX-TD816 cannot perform the diagnosis. There are two programming methods:

On-Site Programming

By connecting a personal computer (PC) to your system, system programming and maintenance can be performed locally. There are two ways available to perform the above:
(Method 1.) Using the Serial Interface (RS-232C) port
Connect the PC to the Serial Interface (RS-232C) port provided. The main unit has an Serial Interface (RS-232C) port which can be used for either system administration or Station Message Detail Recording (SMDR).
(Method 2.) Using a modem
Install the optional Remote Card. Connect the PC to an extension jack. Assign the floating number of the modem in System Programming. Dial this number from the PC.

Remote Programming

You can perform system programming and maintenance from a remote site using a PC. Install the Remote Card and assign the floating number of the modem in System Programming. Starting system administration from a remote location can be done in the following ways.

* Call an extension (probably the Operator) from a remote location and request a transfer to the modem.

* Dial the floating number of the modem using the Direct Inward System Access (DISA) feature.

* Assign the modem as the destination of the Direct In Lines (DIL) 1:1 feature.

For more information and programming instructions, refer to the Serial Interface / Remote Programming & Diagnosis Manual.

Conditions

* A proprietary telephone can be used to perform System Programming.
* Access to System Programming is allowed only one at a time.
* To access system administration, a valid password must be entered. The password is factory-programed and can be changed.
* System administration can be performed on-line except for the procedures of the diagnosis. If the system goes off-line, the system functions as if it was in power failure. (Refer to Power Failure Transfer feature.)

Connection References

- 2.4.7 DISA Card and Remote Card / Unit Installation

Programming Guide References

- [107] System Password
- [813] Floating Number Assignment
- [814] Modem Standard
- [817] KX-TD197 / KX-TD198 Baud Rate Set

Features Guide References

- System Programming with Proprietary Telephone
- Station Message Detail Recording (SMDR)

User Manual References

Not applicable.

System Programming with Proprietary Telephone

Description

The system can be programmed with a personal computer or a proprietary telephone (PT).
PTs available for System Programming are: KX-T7436;
KX-T7433; KX-T7431; KX-T7235; KX-T7230; KX-T7130; and KX-T7030 (Display Proprietary Telephones).
Two extensions are allowed to perform System Programming.
The available extensions are:

a) An extension that is connected to jack 01.

b) An extension that is assigned as a manager.

For more information and programming instructions, refer to "System Programming" section in the Programming Guide.

Conditions

* During System Programming the system operates normally.
* During System Programming the programming extension is considered to be busy.
* The display on the PT permits interactive programming.
* Access to System Programming is allowed only one at a time.
* To access system administration, a valid password must be entered. The password is factory-programmed and can be changed.
* A personal computer can be used to perform System Programming.

Programming Guide References

* [006] Operator / Manager Extension Assignment
* [107] System Password

Features Guide References

* System Programming and Diagnosis with Personal Computer

User Manual References

Not applicable.

System Speed Dialing

Description

This feature supports 500 abbreviated dial numbers that are available to all users. A system speed dial number is dialed out by pressing the AUTO button and a 3-digit code (000 through 499).
It is possible to store five hundred 24-digit telephone numbers per system (maximum).

Conditions

* Overriding Toll Restriction for System Speed Dialing can be activated or deactivated by system programming.

[For proprietary telephone users only]

* Speed Dialing, One-Touch Dialing, manual dialing, Last Number Redial and Saved Number Redial can be used in combinations.

[For standard telephone users only]

* If a stored feature number includes "✱" or "#", rotary single line telephones cannot use it.

Programming Guide References

* [001] System Speed Dialing Number Set
* [002] System Speed Dialing Name Set
* [100] Flexible Numbering
* [300] TRS Override for System Speed Dialing

Features Guide References

* Toll Restriction Override for System Speed Dialing

User Manual References

* 4.3.77 System Speed Dialing

System Working Report

Description

The Digital Super Hybrid System automatically records the system's working status condition. A printer connected to the Serial Interface (RS-232C) port can be used to print the recorded data. The recorded data can be printed out by the operator or manager.

Recorded contents are as follows:

a) Date of record
- The date and time when cleared
- The date and time when printed out

b) Incoming calls
- The number of incoming calls
- The number of answered incoming calls
- The ratio of answered calls to incoming calls

$$\frac{\text{Number of answered calls}}{\text{Number of incoming calls}} \quad \times \quad 100\ (\%)$$

- The average time from receipt of call to answer of the incoming and answered calls
- The average talk duration of the answered calls

c) Outgoing calls
- The number of requested accesses
- The number of successful accesses
- The ratio of successful accesses to requested accesses

$$\frac{\text{Number of successful accesses}}{\text{Number of requested accesses}} \quad \times \quad 100\ (\%)$$

- The average duration of the dialed calls

These records can be deleted by the operator or manager and new data will be recorded thereafter.

Conditions

- Connect a printer to the Serial Interface (RS-232C) connector to the main unit.
- Referring and deleting the system working report can be done using a serial interface or a remote programming software.

Connection References

- 2.3.8 Printer and PC Connection

Programming Guide References

- [100] Flexible Numbering
- [806-807] Serial Interface (RS-232C) Parameters

Features Guide References

- System Working Report

User Manual References

- 4.4.8 System Working Report

T1 Line

Description

The T1 line is at the bottom of the digital transmission hierarchy.
The T1 line contains 24 voice channels. Voice is digitized by Pulse Code Modulation.
This feature is available for KX-TD1232 only.

Conditions

- **Hardware Requirements**
  T1 unit (KX-TD187) and user-supplied certified CSU (Channel Service Unit) are required to utilize T1 line with the KX-TD1232 system.
- **Trunk Interface**
  This card supports five different trunk interfaces to provide desired connection at minimum expense. One of the following five trunk types can be assigned to one of 24 channels of T1 unit individually according to tariffs and customer needs.

       Trunk types: LCOT, GCOT, DID, OPX, TIE
- One T1 unit (24 ports) can be installed in the KX-TD1232 master system. However, it cannot be installed in the KX-TD1232 slave system or KX-TD816 system.
- Select the external clock mode, if your system is interfaced by T1 interface with another exchange.

<Outside Line Assignment - LCOT / GCOT / DID / TIE Line>

- When the T1 unit is installed, the outside line numbers are as follows.

Basic Outside Line Port Number	Outside Line Number	T1 Unit Port Number	Outside Line Number
1	1	1	25
2	2	2	26
:	:	:	:
7	7	7	31
8	8	8	32
		:	:
		23	47
		24	48

- Actual number of CO is 32 when you connect the KX-TD187.
- Each outside line can be assigned to an outside line group, and it works on assignments of the group.
- Assigns a name to each outside line. During receiving an outside line call, the outside line name appears on the display.

- Assigns a Reference CO (1 through 24) to each T1 CO channel. T1 CO channels refer to the following programs for analogue outside lines 1 through 24.
  For example, if a T1 CO channel 25 (LCOT) is regarded as a reference CO number 13, when an incoming call is received on a T1 CO channel 25, a DIL 1:1 destination data for the CO 13 is referred firstly. However, if it has not been assigned, the DIL 1:N destination data for the CO 13 is referred.

  [407-408] DIL 1:1 Extension —— Day / Night

  [457-458] DIL 1:1 — Lunch / Break Group

  [603-604] DIL 1:N Extension and Delayed Ringing —— Day / Night

  [605-606] Outgoing Permitted Outside Line Assignment —— Day / Night

  [728] T1 Extension Outgoing Permitted Outside Line Assignment – Day

  [729] T1 Extension Outgoing Permitted Outside Line Assignment – Night

Reference CO

Each channel of the T1 line is assigned a Reference CO number for outside line (CO) No. (01-24) and then works as the assigned data.

An example is as follows.

a) CO Port No.	b) CO No.	c) T1 Channel No.	d) T1 Channel CO No.	e) Reference CO No. (Examples)
01	01	01	25	01
02	02	02	26	02
:	:	:	:	:
08	08	08	32	08
	09	09	33	09
	10	10	34	10
	:	:	:	:
	23	23	47	23
	24	24	48	24

a) Outside Line (CO) Port No. :

If the T1 unit (KX-TD187) is connected, only the 8 analogue ports can be used. Other outside line expansion cards cannot be installed to the expansion slot in the master or slave system. Also, basic outside lines in the slave system cannot be used.

b) Outside Line (CO) No. :

Though CO No. s (09-24) are not connected to outside lines due to (1), it can be assigned the data. And they can be used to assign T1 outside line datas by Reference CO.

c) T1 Channel No. :

T1 has outside lines for 24 channels.

d) T1 Outside Line (CO) No. :

T1 channel No. (01-24) are the CO No. (25-48).

e) Reference Outside Line (CO) No. :

The assignment to receive outside lines for T1 channels (01-24) is referred to the assignment for CO No. (01-24).
This can be changed easily.
In the example as follows;
T1 channel 01 refers to the data for the CO No. 01[*1].
T1 channel 02 refers to the data for the CO No. 02[*2].
T1 channel 24 refers to the data for CO No. 24[*3].

1. The assignment for DIL 1:1 destination

a) CO Port No.	b) CO No.	c) T1 Channel No.	d) T1 Channel CO No.	e) Reference CO No. (Examples)	f) [407] DIL1:1 (Day) (Examples)	g) [408] DIL1:1 (Night) (Examples)
01	01	01	25	01[*1]	EXT. 101	EXT. 201
02	02	02	26	02[*2]	EXT. 102	EXT. 202
:	:	:	:	:		
08	08	08	32	08	EXT. 108	EXT. 208
	09	09	33	09	EXT. 109	EXT. 209
	10	10	34	10	EXT. 110	EXT. 210
	:	:	:	:		
	23	23	47	23	EXT. 123	EXT. 223
	24	24	48	24[*3]	EXT. 124	EXT. 224

f) Examples for the program [407] DIL 1:1 (Day):

The assignment for DIL 1:1 (Day) destination on CO No. s (01-24)
In the example above;
T1 channel No. 01 refers to the data assigned in program [407] for CO No. 01.
It causes DIL 1:1 (Day) to be received at the extension 101.
T1 channel No. 02 refers to the data assigned in program [407] for CO no. 02.
It causes DIL 1:1 (Day) to be received at the extension 102.

g) Examples for the program [408] DIL 1:1 (Night):

The assignment for DIL 1:1 (Night) destination on CO No. s (01-24)

In the example on the previous page;

T1 channel No. 01 Night refers to the data assigned in program [407] for CO No. 01.

It causes DIL 1:1 (Night) to be received at the extension 201.

T1 channel No. 02 refers to the data assigned in program [407] for CO No. 02.

It causes DIL 1:1 (Night) to be received at the extension 202.

2. The assignment for DIL 1:N destination

a) CO Port No.	b) CO No.	c) T1 Channel No.	d) T1 Channel CO No.	e) Reference CO No. (Examples)	h) [603] DIL1:N (Day) (Examples)	i) [604] DIL1:N (Night) (Examples)
01	01	01	25	01	EXT. 101-132	EXT. 201-232
02	02	02	26	02	EXT. 102-132	EXT. 202-232
:	:	:	:	:		
08	08	08	32	08	EXT. 108-132	EXT. 208-232
	09	09	33	09	EXT. 109-132	EXT. 209-232
	10	10	34	10	EXT. 110-132	EXT. 210-232
	:	:	:	:		
	23	23	47	23	EXT. 123-132	EXT. 223-232
	24	24	48	24	EXT. 124-132	EXT. 224-232

h) Examples for the program [603] DIL 1:N (Day)

The assignment for DIL 1:N (Day) destination on CO No. s (01-24)

In the example above;

T1 channel No. 01 refers to the data assigned in program [603] for CO No. 01.

It causes DIL 1:N (Day) to be received at the extension 101-132.

T1 channel No. 02 refers to the data assigned in program [603] for CO No. 02.

It causes DIL 1:N (Day) to be received at the extension 102-132.

i) Examples for the program [604] DIL 1:N (Night)

The assignment for DIL 1:N (Night) destination on CO No. s (01-24)

In the example above;

T1 channel No. 01 refers to the data assigned in program [604] for CO No. 01.

It causes DIL 1:N (Night) to be received at the extension 201-232.

T1 channel No. 02 refers to the data assigned in program [604] for CO No. 02.

It causes DIL 1:N (Night) to be received at the extension 202-232.

3. The assignment for lunch / break DIL 1:1 destination

a) CO Port No.	b) CO No.	c) T1 Channel No.	d) T1 Channel CO No.	e) Reference CO No. (Examples)	j) [457] Lunch DIL1:1 Group (Examples)	k) [458] Break DIL1:1 Group (Examples)
01	01	01	25	01	1	1
02	02	02	26	02	2	2
:	:	:	:	:		
08	08	08	32	08	8	8
	09	09	33	09	1	1
	10	10	34	10	2	2
	:	:	:	:		
	23	23	47	23	7	7
	24	24	48	24	8	8

j) Examples for the program [457] Lunch DIL 1:1 Group

The assignment for lunch DIL 1:1 destination on CO No. s (01-24)

In the example above;

T1 channel No. 01 refers to the data assigned in program [457] for CO No. 01.
It causes lunch DIL 1:1 to be received at the Group 1.
T1 channel No. 02 refers to the data assigned in program [457] for CO No. 02.
It causes lunch DIL 1:1 to be received at the Group 2.

k) Examples for the program [457] Break DIL 1:1 Group

The assignment for break DIL 1:1 destination on CO No. s (01-24)

In the example above;

T1 channel No. 01 refers to the data assigned in program [458] for CO No. 01.
It causes break DIL 1:1 to be received at the Group 1.
T1 channel No. 02 refers to the data assigned in program [458] for CO No. 02.
It causes break DIL 1:1 to be received at the Group 2.

4. The assignment to enable outside lines to be made

a) CO Port No.	b) CO No.	c) T1 Channel No.	d) T1 Channel CO No.	e) Reference CO No. (Examples)	l) [605] Outgoing Permit CO Line (Day) – If the extension 101 is; (Examples)	m) [606] Outgoing Permit CO Line (Night) – If the extension 101 is; (Examples)
01	01	01	25	01	EXT. 101 enables to make an outside call	EXT. 101 enables to make an outside call
02	02	02	26	02	EXT. 101 enables to make an outside call	EXT. 101 enables to make an outside call
:	:	:	:	:		
08	08	08	32	08	EXT. 101 enables to make an outside call	EXT. 101 enables to make an outside call
	09	09	33	09	EXT. 101 disables to make an outside call	EXT. 101 disables to make an outside call
	10	10	34	10	EXT. 101 disables to make an outside call	EXT. 101 disables to make an outside call
	:	:	:	:		
	23	23	47	23	EXT. 101 disables to make an outside call	EXT. 101 disables to make an outside call
	24	24	48	24	EXT. 101 disables to make an outside call	EXT. 101 disables to make an outside call

l)   Examples for the program [605] Outgoing Dermit CO Line (Day)
The assignment to enable outside calls on CO No. (01-24) to be made from the extension 101
In the example above;
T1 channel No. 01 (CO No. 25) refers to the data assigned in program [605] for the CO No. 01.
And then the extension 101 can make an outside call on CO No. 25.
T1 channel No. 09 (CO No. 33) refers to the data assigned in program [605] for the CO No. 01. And then the extension 101 cannot send a outside line on CO No. 33.

m)Examples for the program [606] Outgoing permit CO Line (Night)

The assignment to enable outside calls on CO No. (01-24) to be sent from the extension 101

In the example on the previous page;

T1 channel No. 01 (CO No. 25) refers to the data assigned in program [606] for the CO No. 01.

And then the extension 101 can make an outside call on CO No. 25.

T1 channel No. 09 (CO No. 33) refers to the data assigned in program [606] for the CO No. 01. And then the extension 101 cannot send a outside line on CO No. 33.

5. The assignment to enable outside lines to be made from OPX extensions

a) CO Port No.	b) CO No.	c) T1 Channel No.	d) T1 Channel CO No.	e) Reference CO No. (Examples)	n) [728] Outgoing Permitted Outside Line (Day) – If the T1 extension 01 is; (Examples)	o) [729] Outgoing Permitted Outside Line (Night) – If the T1 extension 01 is; (Examples)
01	01	01	25	01	OPX. 01 enables to make an outside call	OPX. 01 enables to make an outside call
02	02	02	26	02	OPX. 01 enables to make an outside call	OPX. 01 enables to make an outside call
:	:	:	:	:		
08	08	08	32	08	OPX. 01 enables to make an outside call	OPX. 01 enables to make an outside call
	09	09	33	09	OPX. 01 disables to make an outside call	OPX. 01 disables to make an outside call
	10	10	34	10	OPX. 01 disables to make an outside call	OPX. 01 disables to make an outside call
	:	:	:	:		
	23	23	47	23	OPX. 01 disables to make an outside call	OPX. 01 disables to make an outside call
	24	24	48	24	OPX. 01 disables to make an outside call	OPX. 01 disables to make an outside call

n) Examples for the program [728] T1 Extension Outgoing Permitted Outside Line
Assignment (Day)
The assignment to enable outside lines on CO No. (01-24) to be made from the T1
extension 01
In the example on the previous page;
T1 channel No. 01 (CO No. 25) refers to the data assigned in program [728] for the CO
No. 01.
And then the T1 extension 01 can make an outside line on CO No. 25.
T1 channel No. 09 (CO No. 33) refers to the data assigned in program [728] for the CO
No. 01. And then the extension 01 cannot make an outside line on CO No. 33.

o) Examples for the program [729] T1 Extension Outgoing Permitted Outside Line
Assignment (Night)
The assignment to enable outside lines on CO No. (01-24) to be made from the T1
extension 01
In the example on the previous page;
T1 channel No. 01 (CO No. 25) refers to the data assigned in program [729] for the CO
No. 01.
And then the T1 extension 01 can make an outside line on CO No. 25.
T1 channel No. 09 (CO No. 33) refers to the data assigned in program [729] for the CO
No. 01. And then the extension 01 cannot make an outside line on CO No. 33.

- Enables to send a caller ID (extension numbers) to each outside line assigned on TIE line.
  If a caller ID is received, the display for the caller ID appears to the extension user.
  However, the caller ID name does not appear by finding the system data.
  If a PBX code is assigned on the system data, "PBX + extension number" for the caller ID
  is displayed. However, it is not, only the "extension number" is displayed.
- Enables to send a dial tone to the other party, if each outside line assigned on the TIE line
  is used.
- For a DID line, refer to "Direct Inward Dialing (DID)".
- For a TIE line, refer to "TIE Line Service".
- If a DID / TIE is assigned, the automatic function for disconnection will work.
  It is a function to disconnect the line if the called party does not answer with in the assigned
  time.
  The time can be assigned 0, 1, 2 or 3 minutes on program. (0 is not to disconnect, 1 is the
  default.)

<Extension Line Assignment – OPX>

- If OPX is assigned, a standard telephone installed to out of PBX can perform through the
  T1 line like an extension installed to PBX.
- If OPX is set, as a default for an extension number has not been assigned, it must be
  assigned by programming.
- An extension line set OPX can be assigned a name. On receiving an extension line call from
  OPX, the extension number and name is displayed on LCD.
- An extension line set OPX can be assigned COS and regulated depending on it.
- An extension line set OPX can be regulated to connect to an outside line.
- The valid features for an extension line set OPX are as follows.

a) Class of Service

b) Walking COS, Printing out for SMDR

c) Functions to make an outside call on SLT

d) Flexible feature numbers and dial functions for SLT

- The invalid features for an extension line set OPX are as follows.

  a) Prohibit to belong to an extension group

  b) Receiving a DIL 1:N, Receiving a doorphone and door opener

  c) In flexible feature numbers,
  Door open / LCS password / Log mode / Log lock / Paging deny / Paging – Group answer / Paralleled telephone connection mode / Log-in/Log-out / Room status / Hotel application

  d) OPX cannot be assigned to the operator.

- Receiving a call assigned OPX is as follows.

— *Receiving an outside line call*
DIL 1:1 / DISA / DID / Intercept / TIE / Call Forward

— *Receiving an extension line call*
EXT / Transfer / Camp on Transfer / Call Forward / Call Hunt

— *Receiving a call with features*
Hold Recall / Transfer Recall / BSS / EX-Hold Recall / Camp on Recall / Park Recall / Operator

Programming Guide References

- [401] Outside Line Group Assignment
- [417] Outside Line Name Assignment
- [457-458] DIL 1:1 — Lunch / Break Group
- [700] T1 Channel Assignment
- [701] T1 Dial Mode
- [702] T1 COT CPC (IN)
- [703] T1 DID CPC (IN)
- [704] T1 COT CPC (OUT)
- [705] T1 DID CPC (OUT)
- [706] T1 DID Receive Digits
- [707] T1 Clock Mode
- [708] T1 Line Coding
- [709] T1 Frame Sequence
- [710] T1 Frame Option
- [711] T1 First Dial Timer (CO)
- [712] T1 First Dial Timer (DID / TIE)
- [713] T1 %Break
- [714] T1 Dial Click Tone
- [715] T1 Inter Digit Pause
- [716] T1 Flash Detection
- [717] T1 Answer Decision Timer
- [718] T1 Break Detection
- [719] T1 Pulse Type
- [720] T1 TIE Ringing Service
- [721] T1 Reference CO
- [722] T1 Answer Wait Timer
- [723] T1 Sending TIE Caller ID
- [725] T1 Extension Number
- [726] T1 Extension Name
- [727] T1 Extension COS Number
- [728] T1 Extension Outgoing Permitted Outside Line Assignment – Day
- [729] T1 Extension Outgoing Permitted Outside Line Assignment – Night
- [730] T1 Extension Voice Mail Access Codes

Features Guide References

None

User Manual References

Not applicable.

TIE Line Service

Description

A TIE line is a privately leased communication line between two or more PBXs, which provides cost effective communications between company members at different locations. The TIE lines can be used to call through your system to reach another switching system (PBX or Outside [CO] line). By utilizing TIE lines, your system can support not only communications with the public network but with other company locations in the private network where your system is included.

System Explanation

1. Making a TIE Call

One of the following two methods can be used to make a TIE call.

1.1 Extension Number method

Dial the [Extension Number] only to make a TIE call.

<Example>
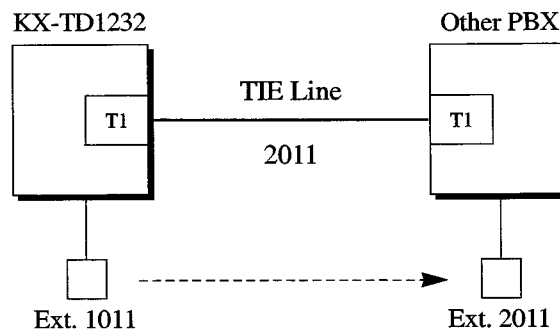
Explanation

To use this method, it is necessary to change the first one or two digits of extension numbers of either PBX to avoid having the same extension number.

1) Extension 1011 dials extension number "2011".

2) Extension 1011 is connected to extension "2011" of the other PBX.

1.2 PBX Code method

Dial the [TIE Line Access Code] [PBX Code] [Extension Number] to make a TIE call.

<Example>
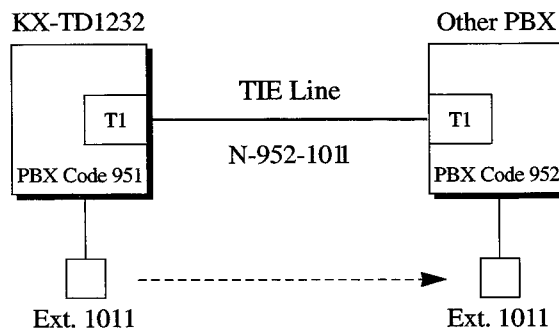
Explanation

To use this method, it is necessary to have each PBX code in order to identify the location of an extension.

1) Extension 1011 dials TIE line access code "N", PBX code "952" and extension number "1011".

2) Extension 1011 is connected to extension 1011 of the other PBX which has PBX code "952".

2. TIE Line and Outside (CO) Line Connection

To connect the TIE line with the outside line, the following patterns are available.

2.1 CO-to-TIE Transfer

The system transfers incoming outside calls to the other PBX through the TIE line. The following patterns are available.

TIE call using DISA

<Example>
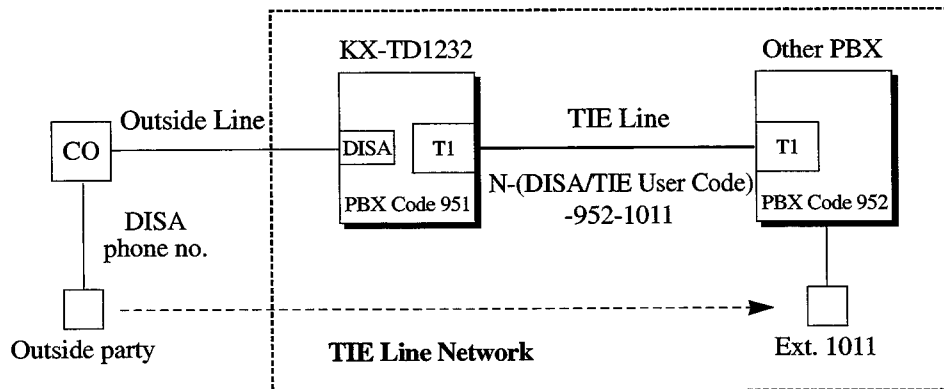
Explanation

The outside caller dials as follows:

1) The DISA phone number, and the DISA-OGM is sent.

2) TIE line access code "N", and a dial tone is heard.

3) The DISA/TIE user code (if required), PBX code "952" and extension number "1011".

The outside caller is connected to extension 1011 of the other PBX which has PBX code "952".

Call Forwarding / Call Transfer to the TIE line
<Example>
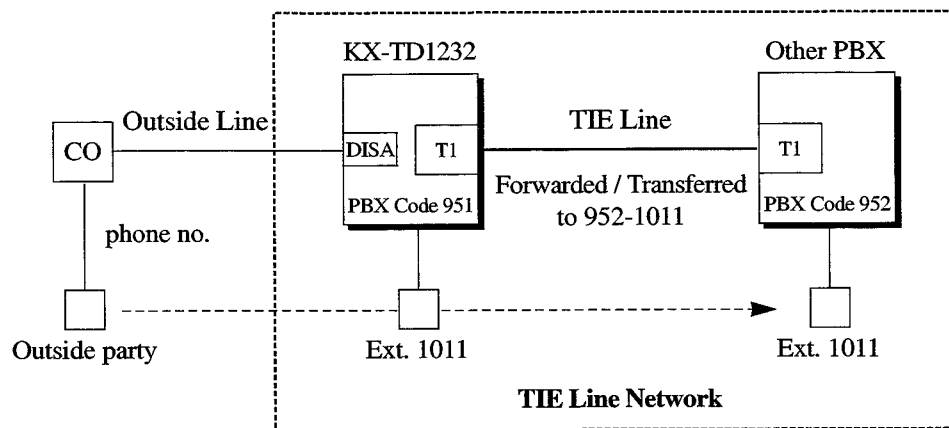
Explanation
The outside caller dials the phone number, and the call is forwarded or transferred to extension 1011 of the other PBX which has PBX code "952".

Note: Setting the destination of Call Forwarding to the TIE line is the same as Call Forwarding to an Outside Line.
Transferring a call to the TIE line is the same as a Call Transfer to an Outside Line.

2.2 TIE-to-CO Transfer
The system transfers TIE calls to the outside (CO) line of the other PBX through the TIE line. The following patterns are available.
Outside call through the other PBX
<Example>

Explanation
Extension 1011 dials as follows:
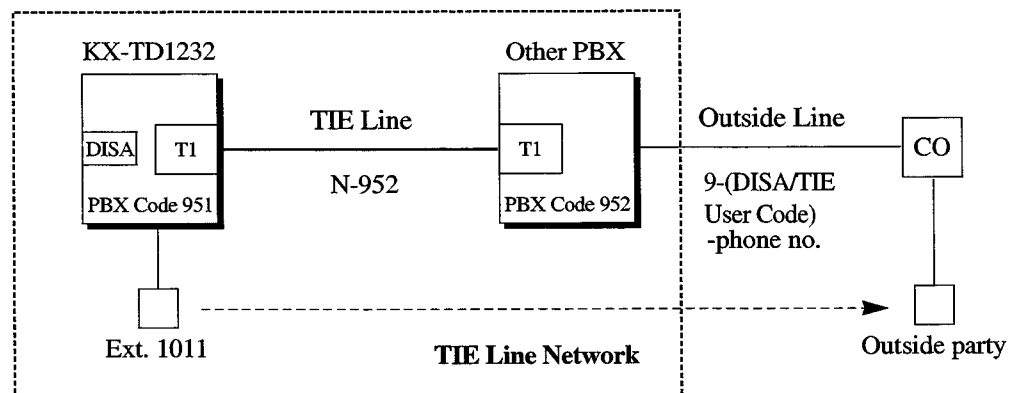
1) TIE line access code "N", PBX code "952" and outside line access code "9", and a special dial tone is heard.

2) The DISA/TIE user code (if required) and desired phone number.

Extension 1011 is connected to the desired outside party through the other PBX which has PBX code "952".

Note: The DISA/TIE user code (assigned in program [811]) is required when the outside
line security mode is selected in program [439].

Call Forwarding / Call Transfer to Outside (CO) line
<Example>
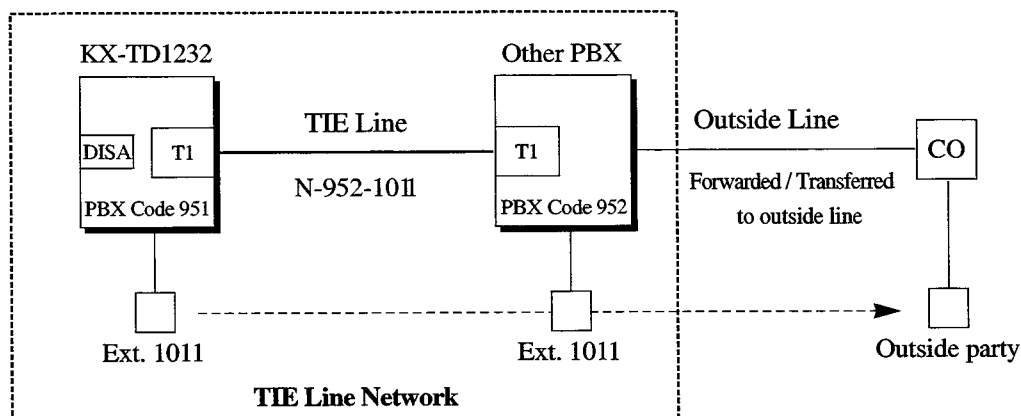
Explanation
Extension 1011 dials as follows:

1) TIE line access code "N", PBX code "952" and extension number "1011".

2) The call is forwarded or transferred by extension 1011 of the other PBX which has
   PBX code "952" to the designated outside line.

3. TIE Line Routing Table
The TIE Line Routing Table is referenced by the system to identify the outside (CO) line route,
when an extension user makes a TIE call.
It is necessary to make unified routing tables with each PBX in your TIE line network.
A routing pattern appropriate for each call is decided by the first three digits (except the TIE
line access code) of the dialed number.
There are two system programs for the tables:
[340] TIE Line Routing Table: used to assign the access number (PBX code or extension
number) and outside line group hunt sequence.
[341] TIE Modify Removed / Added Digit: used to assign removed and added digits of the
dialed digits of the TIE call.

Programming Example

<Example>

Your system is PBX-1 and there are four PBXs in your TIE line network. To identify the outside line route as illustrated below, you should make the following routing table.
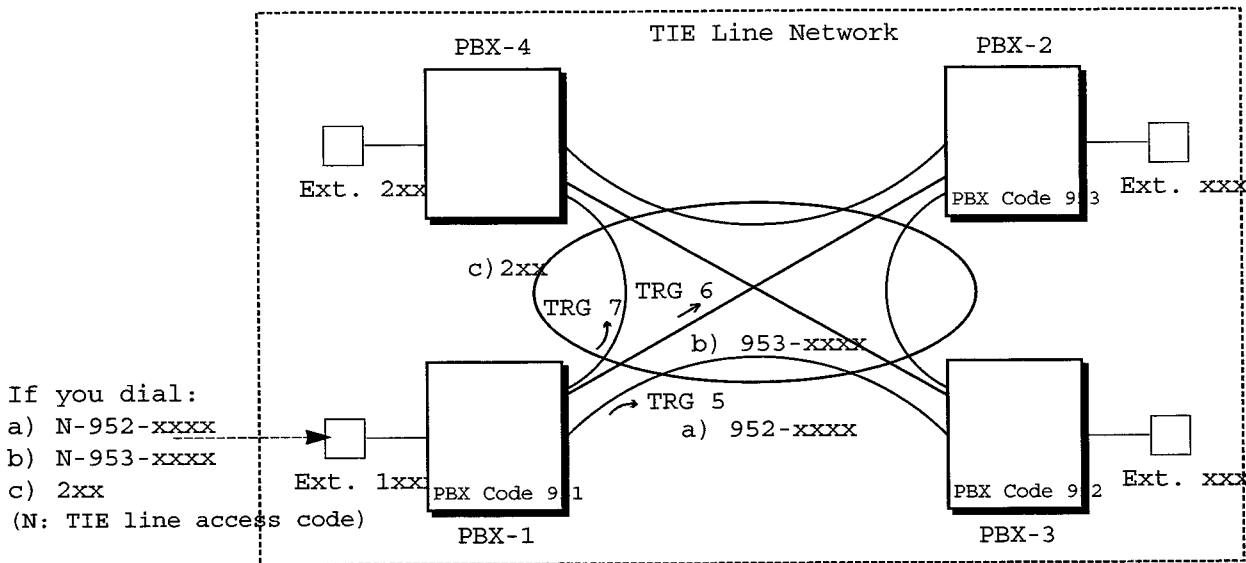
TIE Line Routing Table of PBX-1

Location	PBX Code	Removed	Added	Outside Line Group Hunt Sequence				
No.	/ Ext. No.	Digit	Digit	01	02	03	04	05
01	952	0		5	6			
02	953	0		6	5			
03	2xx	0		7				

Explanation

Location 01: The hunt sequence by dialing [N+PBX Code 952]:

   The 1st route — Outside line group (TRG) 5

   The 2nd route — Outside line group (TRG) 6

Location 02: The hunt sequence by dialing [N+PBX Code 953]:

   The 1st route — Outside line group (TRG) 6

   The 2nd route — Outside line group (TRG) 5

Location 03: The hunt sequence by dialing [Ext.no. 2xx]:

   The 1st route — Outside line group (TRG) 7

If the received number does not match the PBX Code, the system checks the number in the routing table. If it is found, the system automatically sends the number to the corresponding PBX.

For example, if PBX-1 receives the number "952-xxxx" from PBX-4, PBX-1 automatically sends the number through Outside line group 5.

4. TIE Call Dialing Method

The following patterns are TIE call dialing methods. The dial number modification depends on the dialing method.

Your telephone	Dialing Method	Dial Modification
APT / DPT	Extension no.	Enable
	CO button + (PBX code) + Extension no.	Disable
	TIE line access code + (PBX code) + Extension no.	Enable
	CO button + PBX code (+ TIE user code) + Phone no.	Disable
	TIE line access code + PBX code (+ TIE user code) + Phone no.	Enable
	Select outside line group + (PBX code) + Extension no.	Disable
	Select outside line group + PBX code (+ TIE user code) + Phone no.	Disable
SLT	Extension no.	Enable
	TIE line access code + (PBX code) + Extension no.	Enable
	TIE line access code + PBX code (+ Account code) + Phone no.	Enable
	Select outside line group + (PBX code) + Extension no.	Disable
	Select outside line group + PBX code (+ Account code) + Phone no.	Disable

In addition to the methods above, the system can use the TIE line for sending outside line access code "9" through other PBX. When you dial the outside line access code and the outside line is busy, the system automatically sends outside line access code "9" to a TIE line so that you can access the outside line through other PBX. This is enabled by program "[990] System Additional Information, Area 6 - Bit 4".

5. TIE Line Routing Flow Chart
Making a TIE Call from an Extension

A TIE call is made as follows.
PBX Code Method – N-abc-xxxx
Extension No. Method – dexx

↓

Is the dialed number identified with the stored numbers? (Checks in program [100].) ──No──> Not treated as a TIE call.

Yes:
TIE line access code – N
Other PBX extension no – de

↓

Are the accessed digits (abc or de) found in a TIE Line Routing Table? (Checks in program [340].) ──No──> Reorder tone

Yes

↓

Modifies the dialed number if a removed or added number is assigned. (Checks in program [341].) ──NG──> Reorder tone

Your extension no. ↓   TIE or CO call no. ↓

Calls an extension.   Routes to the TIE or CO line.

Receiving a Call through a TIE Line

A call is received through a TIE line as follows.
xxxx
abc-xxxx
dexx

↓

Is the system allowed to receive TIE dial numbers? (Checks in program [720].) —DIL→ DIL 1:1 or DIL 1:N

↓ TIE

Modifies the dialed number if a removed or added number is assigned. (Checks in programs [430–435].)

xxxx → Extension no.

dexx → Found in a TIE Line Routing Table. (Checks in program [340].)

abcxxxx → Checks the PBX code "abc". (Checks in program [128].)

---

xxxx branch:

Extension no.
↓
Does the corresponding extension exist? —No→
↓ Yes
Is the corresponding extension idle? —No→
↓ Yes
Calls an extension. (A ringback tone is sent.)

- Call Waiting
- Busy tone or IRNA

---

dexx branch:

Found in a TIE Line Routing Table. (Checks in program [340].)
↓
Modifies the dialed number if a removed or added number is assigned. (Checks in program [341].)
↓
Is outside trunk group available?
↓ Yes
Is there a hunt sequence assignment? (Checks in program [340].) —Yes→
↓ No
Calls an extension.

Reorder tone or IRNA

---

abcxxxx branch:

Checks the PBX code "abc". (Checks in program [128].)
↓ xxxx

busy tone

Line access code / Ext. no.

Checks the code in program [100]. —No→ busy tone

Calls an extension. (Ext. no.)

↓ Yes

Is the TIE-to-CO Transfer (Checks in program [437].) or TIE-to-TIE Transfer (Checks in program [438].) enabled? —Disable→ Reorder tone or IRNA

↓ Enable

Did you employ the CO line security mode? (Checks in program [439].) —No→
↓ Yes
Is a DISA/TIE user code received? (Programs in program [340].) —No→ Reorder tone or IRNA
↓ Yes
Routes to an Outside or TIE line. (ARS / Local / TRG routing)

Conditions

- The ability to perform Call Forwarding/Call Transfer to TIE line is determined on a Class of Service basis. See programs [503] and [504].
- Extensions on TIE line cannot be assigned as one another's destination of call Forwarding In the example, if the Ext. 101 (PBX No.1) is assigned as the Call Forwarding destination for the Ext. 301 (PBX No. 2), the Ext. 301 cannot be assigned as the destination for the Ext. 101.

Programming Guide References

- [100] Flexible Numbering
- [109] Expansion Unit Type
- [128] PBX Code
- [220] TIE First / Inter Digit Time
- [340] TIE Line Routing Table
- [341] TIE Modify Removed / Added Digit
- [430] DID / TIE Format Number Assignment
- [431] DID / TIE Incoming Assignment
- [432] DID / TIE Outgoing Assignment
- [433] DID / TIE Subscriber Number Removed Digit
- [434] DID / TIE Added Number
- [435] DID / TIE Wink Time Out Assignment
- [436] CO-to-TIE Transfer
- [437] TIE-to-CO Transfer
- [438] TIE-to-TIE Transfer
- [439] TIE Security Type
- [440] Line Hunting Sequence
- [503] Call Transfer to Outside Line
- [504] Call Forwarding to Outside Line
- [811] DISA User Codes
- [990] System Additional Information

User Manual References

Not applicable.

Time-Out, Variable

Description

Provides timers to control various features or functions.
The following timers are programmable:

System Timer Items	Range
Call Forwarding — No Answer Time-Out	1— 12 rings
Call Park Recall Time	3 — 48 rings
*¹ DISA AA Wait Time	1 — 5 s
*¹ DISA Delayed Answer Time	0 — 6 rings
*¹ DISA Outside-to-Outside Call Prolong Time	0 — 7 min
Extension-to-Outside Call Duration Time	1 — 64 min
Hold Recall Time	0 — 240 s
Intercept Routing Time-Out	3 — 48 rings
Message Waiting Ring Interval Time	0 — 64 min
*¹ Outgoing Message Duration Time	0 / 16 / 32 / 64 s
Outside Line Dial Starting Time	n x 100 ms, n:0 — 40
Outside-to-Outside Line Call Duration Time	1 — 64 min
Pickup Dialing Waiting Time	1 — 5 s
SMDR Duration Count Starting Time	0 — 60 s
Timed Reminder Alarm Ring Time	30 — 240 s
Toll Restriction First Digit Time-Out	5 — 120 s
Toll Restriction Inter-digit Time-Out	5 — 30 s
Transfer Recall Time	0 — 48 rings

*¹   Available for the KX-TD1232 only.

Outside Line Group Timer Items	Range
Disconnect Time	1.5 / 4.0 s
Hookswitch Flash Time	Disable / 80 / 96 / 112 / 200 / 300 / 400 / 500 / 600 / 700 / 800 / 900 / 1000 / 1100 / 1200 ms
Pause Time	1.5 / 2.5 / 3.5 / 4.5 s

Outside Line Timer Items	Range
CPC Signal Detection Time (Incoming)	Disable / 100 / 200 / 300 / 400 / 500 / 600 ms
DTMF Digit Time	80 / 160 ms

Extension Timer Items	Range
Delayed Ringing Count	Disable / Immediate / 1 / 3 / 6 rings / No ring

Voice Mail Integration Timer Items	Range
DTMF Signal Duration	80 / 160 ms
DTMF Signal Waiting Time after VPS Answer	0.5 / 1.0 / 1.5 / 2.0 s
DTMF Signal Waiting Time after VPS calls Extension	0.5 / 1.0 / 1.5 / 2.0 s

Conditions

None

Programming Guide References

- [200] Hold Recall Time
- [201] Transfer Recall Time
- [202] Call Forwarding — No Answer Time
- [203] Intercept Time
- [204] Pickup Dial Waiting Time
- [205] Extension-to-Outside Line Call Duration Time
- [206] Outside-to-Outside Line Call Duration Time
- [207] First Digit Time
- [208] Inter Digit Time
- [211] Dial Start Time
- [212] Call Duration Count Start Time
- [213] DISA Delayed Answer Time
- [214] DISA Prolong Time
- [215] Outgoing Message Time
- [216] Message Waiting Ring Interval Time
- [217] Timed Reminder Alarm Ring Time
- [218] DISA AA Wait Time
- [219] Call Park Recall Time
- [404] DTMF Time
- [405] CPC Signal Detection Incoming Set
- [412] Pause Time
- [413] Flash Time
- [414] Disconnect Time
- [603-604] DIL 1:N Extension and Delayed Ringing —— Day / Night
- [619] Extension Call Forwarding — No Answer Time
- [990] System Additional Information

Features Guide References

None

User Manual References

Not applicable.

Timed Reminder

Description

Each telephone can be set to generate an alarm tone at a preset time as a wake up tone or reminder. This feature can be programmed to be active once only or daily. In the case of KX-TD1232, a voice message can be recorded for this feature.

Conditions

- Be sure that the system clock works.
- Setting a new time clears the preset time.
- The alarm continues for a programmed period of time (default: 30 seconds). To stop it, lift the handset or, with a proprietary telephone, press any button.
- If a voice message is used, when the user goes off-hook during the alarm, a pre-recorded voice message is sent. The message feature requires the optional DISA Card [*1] and the message is recorded by the operator or manager. If the message is not activated, the user hears special dial tone.
- There is no limit for the number of the extensions who can set the Timed Reminder at the same time.
- Station Message Detail Recording (SMDR) automatically records the detailed Timed Reminder information (date, time, extension number, start/no answer). It is programmable to be printed out when the Timed Reminder starts and the alarm is not answered.

Connection References

- 2.4.7 DISA Card and Remote Card / Unit Installation

Programming Guide References

- [100] Flexible Numbering
- [215] Outgoing Message Time
- [217] Timed Reminder Alarm Ring Time
- [990] System Additional Information

Features Guide References

- Outgoing Message (OGM)

User Manual References

- 4.3.78 Timed Reminder

[*1] Available for the KX-TD1232 only.

Timed Reminder, Remote (Wake-Up Call)

Description

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

Conditions

- When either an operator/manager or the extension sets a new time, the pre-set time is cleared.
- There is no limit for the number of the extensions that can set the Timed Reminder at the same time.
- Station Message Detail Recording (SMDR) automatically records the detailed Timed Reminder information (date, time, extension number, start/no answer). It is programmable to be printed out when the Timed Reminder starts and the alarm is not answered. An example of a printed Timed Reminder record is shown below.

Date	Time	Ext	CO	Dial Number	Ring	Duration	Acc code	CD
06/24/96	10:03AM	103		Timed Reminder / Start				
06/24/96	10:04AM	103		Timed Reminder / No Answer				

Programming Guide References

- [100] Flexible Numbering
- [990] System Additional Information

Features Guide References

- Timed Reminder

User Manual References

- 4.4.9 Timed Reminder, Remote (Wake-Up Call)

Toll Restriction

Description

Toll Restriction is a system programmable feature that, in conjunction with the assigned Class of Service, can prohibit certain extension users from placing unauthorized toll calls.

Every extension is programed to belong to one of eight Classes of Service. Each Class of Service is programed to have a toll restriction level for day mode and night mode.

There are eight toll restriction levels available. Toll restriction level 1 is the highest level and the level 8 is the lowest. That is, level 1 allows all toll calls and levels 7 and 8 disallows all toll calls. Levels 2 through 6 are used to restrict calls by combining pre-programed deny and excepted code tables.

Denied Code Tables

An outgoing outside call made by an extension with a toll restriction level between 2 and 6 is first checked against the selected Denied Code Tables. If the leading digits of the dialed number (not including the line access code) are not found in the table, the call is made. There are five system programs for Denied Code Tables: **[301]-[305] TRS Denied Code Entry for Levels 2 through 6:** Each program is used to make up a Denied Code Table for Levels 2 through 6 respectively.
Complete every table by storing numbers that are to be prohibited. These numbers are defined as denied codes. Each table can store up to 20 denied codes, each consisting of a maximum of ten digits.

Excepted Code Tables

These tables are used to override a programed denied code. A call denied by the selected Denied Code Tables is checked against the selected Excepted Code Tables, and if a match is found, the call is made.
There are five system programs for these tables:
[306]-[310] TRS Excepted Code Entry for Levels 2 through 6: Each program is used to make up an Excepted Code Table for Levels 2 through 6.
Complete every table by storing numbers that are exceptions to the denied codes. These numbers are defined as excepted codes. Each table can store up to five excepted codes, each consisting of a maximum of ten digits.

Extra Table

400 extra codes can be entered in one of Denied or Excepted Code Table. There is a maximum of either 420 entries for Denied Code Table or 405 entries for Excepted Code Table.

Applicable Denied and Excepted Code Tables depend on the assigned toll restriction level of an extension as follows:

	Denied Code Tables	**Excepted Code Tables**
Level 1	None	None
Level 2	Table for Level 2	Tables for Levels 2 through 6
Level 3	Tables for Levels 2 and 3	Tables for Levels 3 through 6
Level 4	Tables for Levels 2 to 4	Tables for Levels 4 through 6
Level 5	Tables for Levels 2 to 5	Tables for Levels 5 through 6
Level 6	Tables for Levels 2 to 6	Tables for Level 6
Level 7	None	None
Level 8	None	None

[Explanation]

Level 1:
allows all calls.
Level 2:
denies codes stored in the Denied Code Table for Level 2 except the codes stored in Excepted Code Tables for Levels 2 through 6.
Level 3:
denies codes stored in the Denied Code Tables for Levels 2 and 3 except the codes stored in Excepted Code Tables for Levels 3 through 6.
Level 4:
denies codes stored in the Denied Code Tables for Levels 2 through 4 except the codes stored in Excepted Code Tables for Levels 4 through 6.
Level 5:
denies codes stored in the Denied Code Tables for Levels 2 through 5 except the codes stored in Excepted Code Tables for Levels 5 and 6.
Level 6:
denies codes stored in the Denied Code Tables for Levels 2 through 6 except the codes stored in Excepted Code Table for Level 6.
Level 7:
allows intercom calls only.
Level 8:
allows operator calls only.

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 levels 2 through 6. (Levels 1, 7 and 8 are fixed and do not require programming.)

[Entry Example]

Level	Denied Code	Excepted Code
2	011	None
3	011 976 1xxx976	None
4	011 976 1xxx976 0	None
5	011 976 1xxx976 0 411 1xxx555	None
6	011 976 1xxx976 0 411 1xxx555 1 x0 x1	911 1911 800 1800

Note: "x" substitutes a digit.

2. Programming

a) [500]-[501] Toll Restriction Level —— Day / Night
Assign a toll restriction level to each Class of Service (COS).

[Example]

COS	Level (Day)	Level (Night)
1	1	6
2	2	6
:	:	:
8	8	8

b) [301-305] TRS Denied Code Entry for Levels 2 through 6

Depending on the application, enter the denied codes in the associated tables. You can use numeric characters and the wild card character "✳".

Level-2 Denied Code Table

Location	Code
01	001
:	
:	
20	

Level-3 Denied Code Table

Location	Code
01	976
02	1✳✳✳976
:	
20	

Level-4 Denied Code Table

Location	Code
01	0
:	
:	
20	

Level-5 Denied Code Table

Location	Code
01	411
02	1✳✳✳555
:	
20	

Level-6 Denied Code Table

Location	Code
01	1
02	✳0
03	✳1
⋮	
20	

c) [306]-[310] Excepted Code Table Entry
Depending on the application, enter the excepted codes in the associated tables. You can use numeric characters and the wild card character "✳".

Level-6 Excepted Code Table

Location	Code
1	911
2	1911
3	800
4	1800
5	

[Explanation]

If your Toll Restriction Level is 6;

a) You cannot make a call whose toll call number is "201", because the number whose second digit "0" is one of the Denied Codes for Level 6.

b) You can make a call whose toll call number is "800". Though the number whose second digit "0" is one of the Denied Codes for Level 6, the number "800" is one of the Excepted Codes for Level 6. The Excepted Codes override the Denied Codes.

Flow Chart of Toll Restriction (TRS)

```
                    ┌──────────────────────────┐
                    │ The user makes a toll call.│
                    └──────────────────────────┘
                                 │
                                 ▼
          ┌──────────────────────────────┐  Yes
          │ Is the call made by System Speed ├────────────┐
          │ Dialing ?                        │            │
          └──────────────────────────────┘            ▼
                       │ No              ┌──────────────────────────┐
                       │          No     │ Is TRS Override for System│
                       │◄────────────────┤ Speed Dialing enabled?    │
                       │                 └──────────────────────────┘
                       ▼                              │ Yes
   Levels 7, 8  ┌──────────────────────────┐  Level 1
  ┌─────────────┤ What is the extension - toll├──────────────────►
  │             │ restriction level?         │
  │             └──────────────────────────┘
  │                   Levels 2, 3, 4, 5, 6
  │                       │
  │                       ▼
  │             ┌──────────────────────────┐  No
  │             │ Is the dialed number found in├────────────────►
  │             │ applicable Denied Code Tables?│
  │             └──────────────────────────┘
  │                   Yes │
  │                       ▼
  │             ┌──────────────────────────┐  Yes
  │             │ Is the dialed number found in├────────────────►
  │             │ applicable Excepted Code Tables?│
  │             └──────────────────────────┘
  │                   No  │
  └───────────────►      │
                       ▼
          ┌──────────────────────────┐    ┌──────────────────────┐
          │ The call is denied.  A reorder│   │ The call is allowed. │
          │ tone is returned to the user.│   └──────────────────────┘
          └──────────────────────────┘
```

Conditions

- Toll restriction checks are applied to the following:

  a) Automatic Route Selection (ARS)

  b) Account Code Entry

  c) Dial Access, Automatic

  d) Line Access, Outside Line Group

  e) Line Access, Individual

  f) Special Carrier Code Entry

  g) System Speed Dialing

- Emergency numbers the Police or Fire Department should be stored in Program [334] "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, a toll restriction check starts for the subsequent telephone number.

- Toll restriction for System Speed Dialing can be canceled for the whole system.

- It is programmable whether the "✶" or "#" the user dials is to be checked or not on the Toll Restriction code. This is useful to prevent unauthorized calls which could be possible through certain Central Office exchange systems.

- It is programmable to allow the press of the FLASH or FLASH/RCL button, during an outside call on the extensions in Levels 7 and 8.

Programming Guide References

- [207] First Digit Time
- [208] Inter Digit Time
- [300] TRS Override for System Speed Dialing
- [301-305] TRS Denied Code Entry for Levels 2 through 6
- [306-310] TRS Excepted Code Entry for Levels 2 through 6
- [311] Special Carrier Access Codes
- [332] Extra Entry Table Selection
- [333] TRS Entry Code Assignment for Extra Table
- [500]-[501] Toll Restriction Level —— Day / Night
- [601] Class of Service
- [990] System Additional Information

Features Guide References

- Toll Restriction for Special Carrier Access
- Toll Restriction Override by Account Code Entry
- Toll Restriction Override for System Speed Dialing

User Manual References

Not applicable.

Toll Restriction for Special Carrier Access

Description

If your system has access to multiple telephone companies, access to a specific company requires a carrier access code preceding the telephone number. Toll Restriction on 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 for the subsequent telephone number.

Conditions

A carrier access code is followed by Automatic Pause Insertion. It is possible to select the pause time in System Programming.

Programming Guide References

- [311] Special Carrier Access Codes
- [412] Pause Time

Features Guide References

- Toll Restriction

User Manual References

Not applicable.

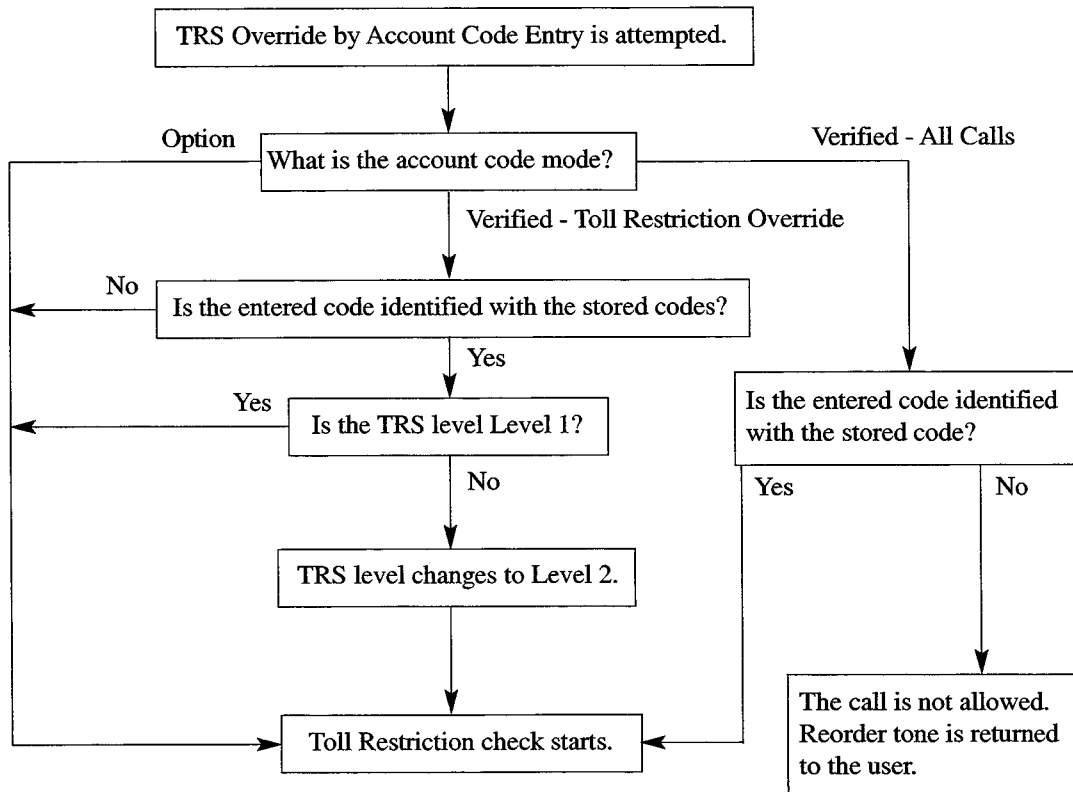# Toll Restriction Override by Account Code Entry

Description

Allows the extension user to override toll restriction temporarily to make a toll call from a toll-restricted telephone. The user can carry out this feature by entering the appropriate account code before dialing the telephone number.

Conditions

- The toll restriction level of the user is set to level 2 by this feature. This can be used by extension users assigned a toll restriction level from 3 through 8. Levels 1 and 2 are not changed.
- A Class of Service which is assigned Account Code Entry — Verified Toll Restriction Override permits the class members to override their toll restrictions.
- Up to 128 account codes can be programmed for Verified Account code operation. These are used for Toll Restriction Override.
- If the user does not enter any account code or enters an invalid account code, an ordinary toll restriction check is done.

Flow Chart of Toll Restriction (TRS) Override by Account Code Entry

TRS Override by Account Code Entry is attempted.

Option   What is the account code mode?   Verified - All Calls

Verified - Toll Restriction Override

No   Is the entered code identified with the stored codes?

Yes

Yes   Is the TRS level Level 1?

Is the entered code identified with the stored code?

Yes   No

No

TRS level changes to Level 2.

The call is not allowed. Reorder tone is returned to the user.

Toll Restriction check starts.

Programming Guide References

- [100] Flexible Numbering
- [508] Account Code Entry Mode

Features Guide References

- Account Code Entry
- Toll Restriction

User Manual References

- 4.3.80 Toll Restriction Override by Account Code Entry

Toll Restriction Override for System Speed Dialing

Description

Allows you to cancel Toll Restriction in System Speed Dialing. Normally, calls originated by System Speed Dialing are restricted depending on the extension's toll restriction level. Once this function is activated, it permits all extension users to make System Speed Dialing calls without restrictions.

Conditions

None

Programming Guide References

- [300] TRS Override for System Speed Dialing

Features Guide References

- System Speed Dialing
- Toll Restriction

User Manual References

- 4.3.81 Toll Restriction Override for System Speed Dialing

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

Description

A tone signal is sent through the external pager when an incoming outside call is received. Any extension user can answer the call.

Conditions

- Connect a user-supplied external paging device.
- One external pager can be installed in the KX-TD816. Two external pagers can be installed in the KX-TD1232 per system, and System Connection[*1] permits four pagers (maximum). These pagers are numbered from 1 through 4. To answer an incoming call dial the feature number and 1 to 4. The feature number is the same as that used to answer Paging — External.
- A floating number of a pager is programmable.
- TAFAS can be used in the following cases:
  - **a)** The floating number of an external pager is assigned as the Direct In Lines (DIL) 1:1 destination. In this case, all incoming calls on the specified line will be signaled.
  - **b)** [*1] A DISA (Direct Inward System Access) caller dials the floating number of an external pager.
  - **c)** The floating number of an external pager is assigned as the Intercept Routing destination. In this case incoming calls redirected to the destination will be signaled.
- A confirmation tone is sent to the user before being connected to the caller. Eliminating the tone is programmable.

Connection References

- 2.3.6 External Pager (Paging Equipment) Connection

Programming Guide References

- [100] Flexible Numbering
- [813] Floating Number Assignment
- [990] System Additional Information

Features Guide References

- Floating Station

[*1] Available for the KX-TD1232 only.

User Manual References

- 4.3.82 Trunk Answer From Any Station (TAFAS)

Two-Way Recording into Voice Mail [*1]

Description

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

Note

Many states have imposed regulations on the manner in which 2-way telephone conversations may be recorded, so you should inform the other party that the conversation is being recorded. Consult your local telephone company for further information.

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.

Conditions

* 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 Guide References

* [005] Flexible CO Button Assignment

Features Guide References

None

User Manual References

* 2.2.2 Flexible Button Assignment
* 4.3.83 Two-Way Recording into Voice Mail [PT only]

[*1] Available when the Digital Super Hybrid System is connected to a Digital Proprietary Telephone capable Panasonic Voice Processing System (one that supports digital proprietary telephone integration; e.g. KX-TVS100).
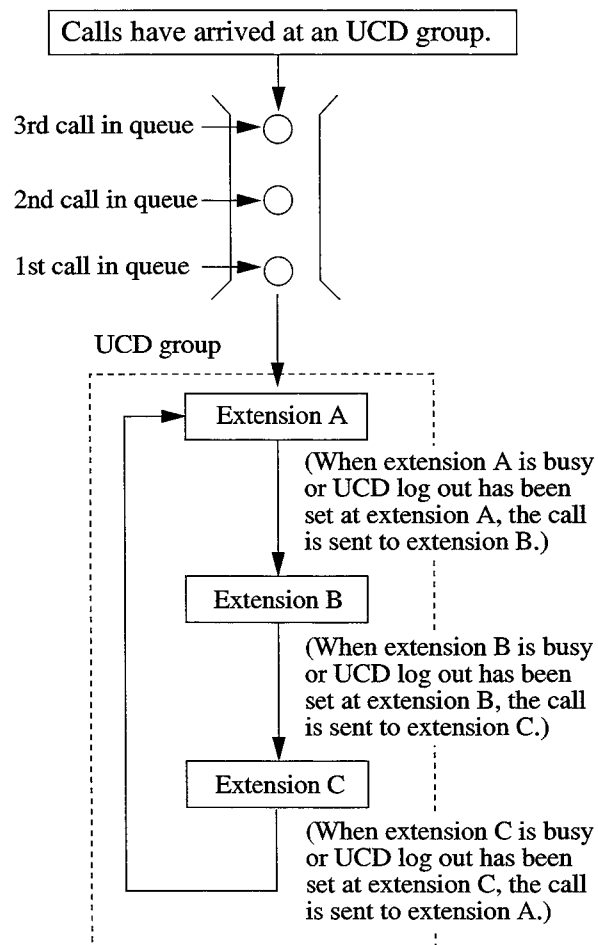
Uniform Call Distribution (UCD)

Description

Allows incoming calls to be distributed uniformly to a specific group of extensions called an UCD group. Calls to an UCD group hunt for an idle station in a circular way. This UCD feature is particularly helpful when a certain extension receives a high volume of calls compared with other extensions.
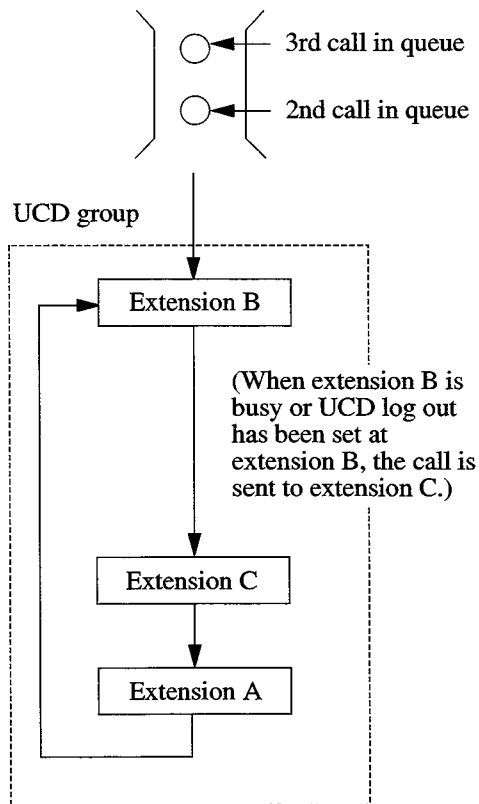
If all extensions in an UCD group are busy or not available, the incoming outside call will be handled by the UCD Time Table.

An outline sketch of an UCD is shown below.

1. When a number of calls have arrived at an UCD group, the 1st call is sent to extension A first.

2. When the 1st call arrives at extension A, the 2nd call is sent to extension B.

3rd call in queue

2nd call in queue

UCD group

Extension B

(When extension B is
busy or UCD log out
has been set at
extension B, the call is
sent to extension C.)

Extension C

Extension A

3. When the 2nd call arrives at extension C, the 3rd call will be sent to extension A.

4. When all extensions in an UCD group are busy or not available, the incoming outside call
will be handled by the UCD Time Table.
An example is shown below.

UCD Time Table Assignment

UCD	FN	OFN	TT
1	191	101	1
2	192	291	2
3	193		
4	194		
5	291		
6	292		
7	293		
8	294		

UCD: UCD Group Number (1-8)
FN: Floating Number of the UCD Group

OFN: Overflow Extension Number
TT: Time Table Number (1-4)

Sequence Assignment

TT	SEQUENCE
1	S1 → 4T → 4T → TR →
2	S1 → 2T → → →
3	S4 → RT → → →
4	TR → → → →

[*1]S1: Send Outgoing Message(OGM)1
[*1]S2: Send OGM 2
[*1]S3: Send OGM 3
[*1]S4: Send OGM 4
TR: Transfer to overflow extension
RT: Return to top
Blank: Disconnect the line
1T: Timer—16 seconds
2T: Timer—32 seconds
3T: Timer—48 seconds
4T: Timer—64 seconds

Sequence Activation Examples

☐S4→ → → →	: Sends OGM 4 and then disconnects the line.
☐S4→TR→N/A→N/A→N/A	: Sends OGM 4 and then transfers to an overflow extension.
☐S4→1T→S1→ →	: Sends OGM 4, Music on Hold for 16 seconds and then disconnects the line.
☐S1→S2→S3→ →	: Sends OGM 1, OGM 2, OGM 3 and then disconnects the line.
☐S4→1T→S1→ →	: Sends OGM 4, Music on Hold for 16 seconds, OGM 1 and then disconnects the line.
☐S4→1T→4T→RT→N/A	: Sends OGM 4, Music on Hold for 16 + 64 seconds and then OGM 4 again.
☐S4→RT→N/A→N/A→N/A	: Sends OGM 4 repeatedly.
☐TR→N/A→N/A→N/A→	: Directly transfers to an overflow extension.
☐RT→N/A→N/A→N/A→	: Waits for an idle extension. The caller hears a ringback tone. (Intercept Routing — No Answer (IRNA) works.)

[*1] Available for the KX-TD1232 only.

☐ →N/A→N/A→N/A→	: Waits for an idle extension. The caller hears a ringback tone. (IRNA works.)
☐1T→ → → →	: Waits for an idle extension. The caller hears a ringback tone. (IRNA does not work.)
☐1T→RT→N/A→N/A→	: Waits for an idle extension. The caller hears a ringback tone. (IRNA does not work.)
☐1T→TR→N/A→N/A→	: Waits for an idle extension for 16 seconds and then transfers to an overflow extension.

Note

N/A: not available for assignment.

Note:

- The UCD Time Table is not available for incoming extensions or transferred calls.
- If the overflow extension or Time Table number is not assigned, the system will not answer the call and waits for an idle extension. In this case, IRNA will be employed.
- An OGM is only available for the KX-TD1232.
- If the system sends the OGM after queuing, the OGM answering time is subject to the time assigned in program [213] DISA Delayed Answer Time.
- Dialing is disregarded during the OGM.
- In sequence assignment, "Sx" can be assigned to a space other than the first only when another "Sx" is assigned in the first space.
- In sequence assignment, an assignment after "TR", "RT" or "Blank" is not available.
- If a timer is the first item in a Time Table sequence, it will delay answering according to the Timer's setting. The caller will hear a ringback tone.
- Music on Hold after an OGM can be changed to a ringback tone by program "[990] System Additional Information, Area 1, Bit 1".

Conditions

- UCD can be used in the following cases:

  a) The floating number of UCD is assigned as the Direct In Lines (DIL) 1:1 destination.

  b) The floating number of UCD is assigned as the Intercept Routing destination.

  c) The floating number of UCD is dialed from an extension.

  d) The floating number of UCD is dialed from DISA (Direct Inward System Access)[1]

  e) The floating number of UCD is assigned as the UCD Overflow destination.

- This feature requires assigning an UCD group in System Programming. An extension cannot belong to two or more UCD groups.

- The floating number can be assigned on an UCD group basis. The UCD group is based on the extension group.

- It is possible to set the log-in or log-out status on an extension basis. An UCD call can be sent to an extension in log-in status within the UCD group, but cannot be sent to extensions in log-out status. If the extension would like to leave the group temporarily, the extension sets the log-out status by the feature number to prevent UCD calls being sent to his/her extension. When the extension re-joins the group, the extension sets the log-in status.

- There should be at least one extension that is in log-in status.

Programming Guide References

- [106] Station Hunting Type
- [122] UCD Overflow
- [123] UCD Time Table
- [602] Extension Group Assignment
- [813] Floating Number Assignment

Features Guide References

- Extension Group
- Log-In / Log-Out
- Station Hunting

User Manual References

- 4.3.84 Uniform Call Distribution (UCD)

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[1]   Available for the KX-TD1232 only.

User Programming (Manager Programming)

Description

User Programming (Manager Programming) can be programmed by the end user. Programs [000] through [013] can be changed by the user.

Conditions

None

Programming Guide References

No programming required.

Features Guide References

None

User Manual References

*   3.1.1 General Programming Instructions

Voice Mail Integration

Description

This system can accommodate Voice Processing System (VPS) equipment, which offers the user Voice Mail (VM) and Automated Attendant (AA) Services. If an extension user has set the Call Forwarding destination to the VPS, the calling party will be forwarded to the VPS and can leave a voice message in the mailbox of the extension. When a call is transferred to the VPS by Call Forwarding or Intercept Routing — No Answer (IRNA) features, the mailbox number is sent to the VPS automatically with DTMF (Dual Tone Multi-Frequency) signaling (Follow On ID). Up to twelve extension jacks can be connected to VPS as extensions in the system.

System Explanation

1. Voice Mail Service

    a) Call Forwarding to VM

        If an extension user sets Call Forwarding (C. FWD) whose destination is the VPS, an incoming call is forwarded to the VPS under the proper conditions. The system sends to the VPS a mailbox number of the corresponding extension at that time. Therefore the calling party can leave his / her message in the mailbox of the desired extension without knowing the mailbox number.
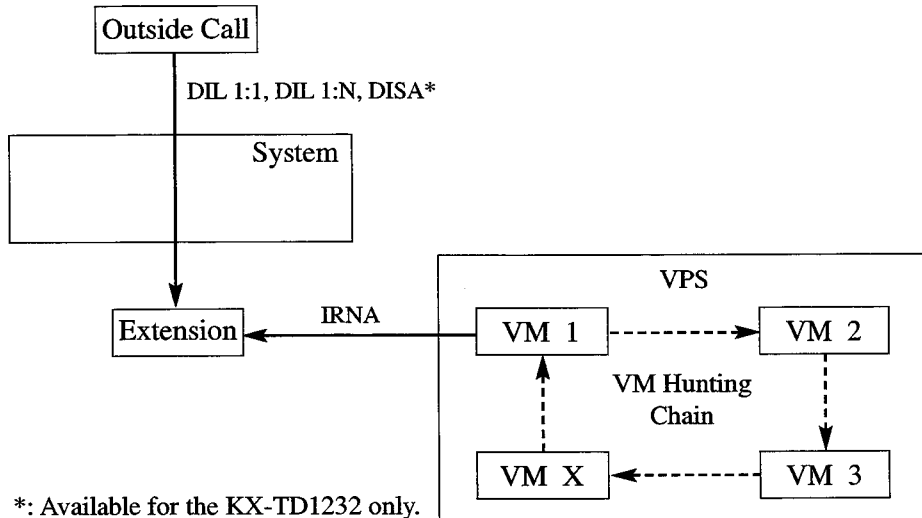

*: Available for the KX-TD1232 only.

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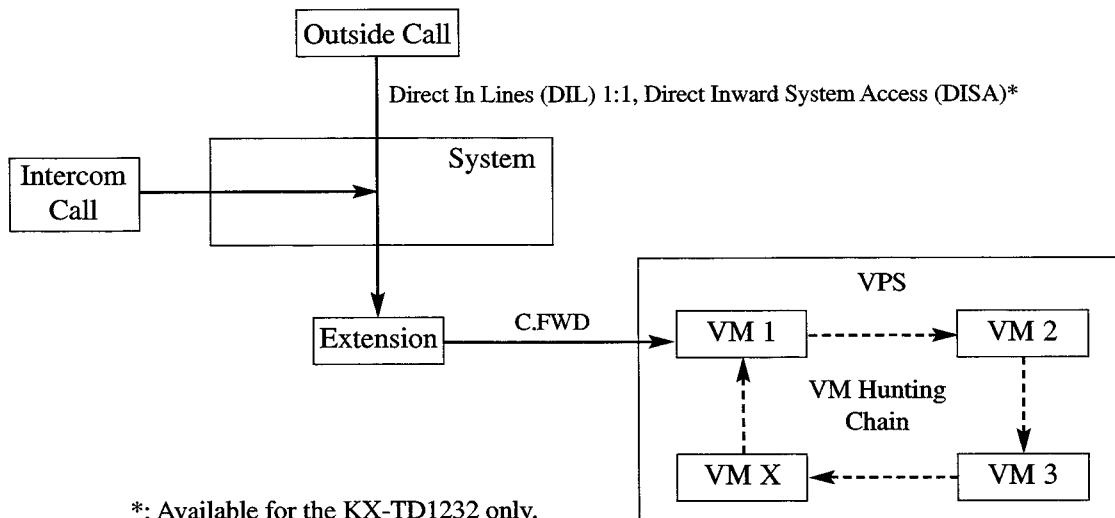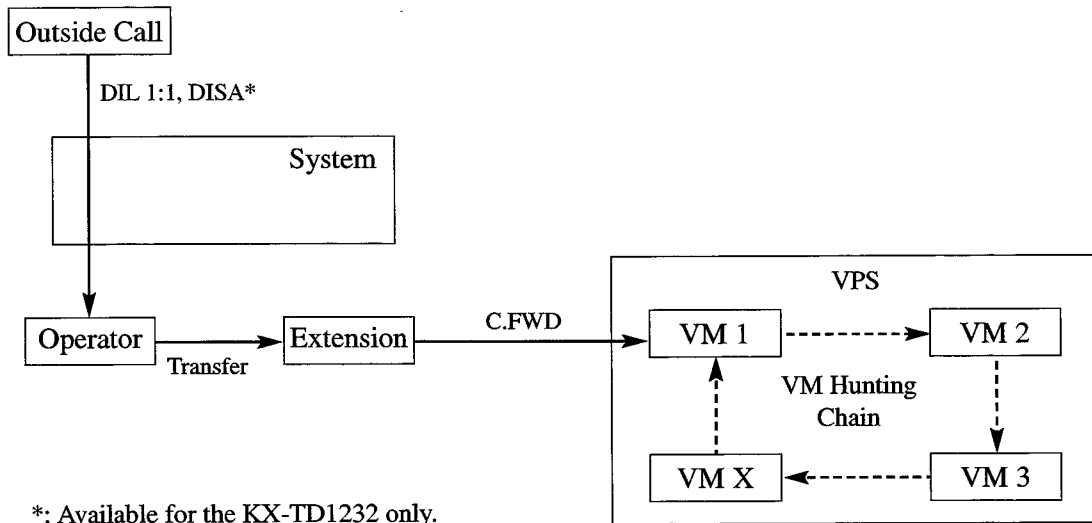
*: Available for the KX-TD1232 only.

b) Intercept Routing to VM

If an outside line is set as Intercept Routing — No Answer (IRNA) whose destination is the VPS, an outside call is forwarded to the VPS under the proper conditions. The system sends to the VPS a mailbox number of the corresponding extension at that time. Therefore the calling party can leave his / her message in the mailbox of the desired extension without knowing the mailbox number.

*: Available for the KX-TD1232 only.

c) Transferring to VM

The extension user can transfer an outside call to the VPS so that calling party can leave his / her message in the mailbox of the desired extension. The extension user should use the Voice Mail (VM) Transfer button, when transferring a call to the VPS. Pressing this button and entering the extension number allows the extension user to transfer the call to the mailbox of the corresponding extension.
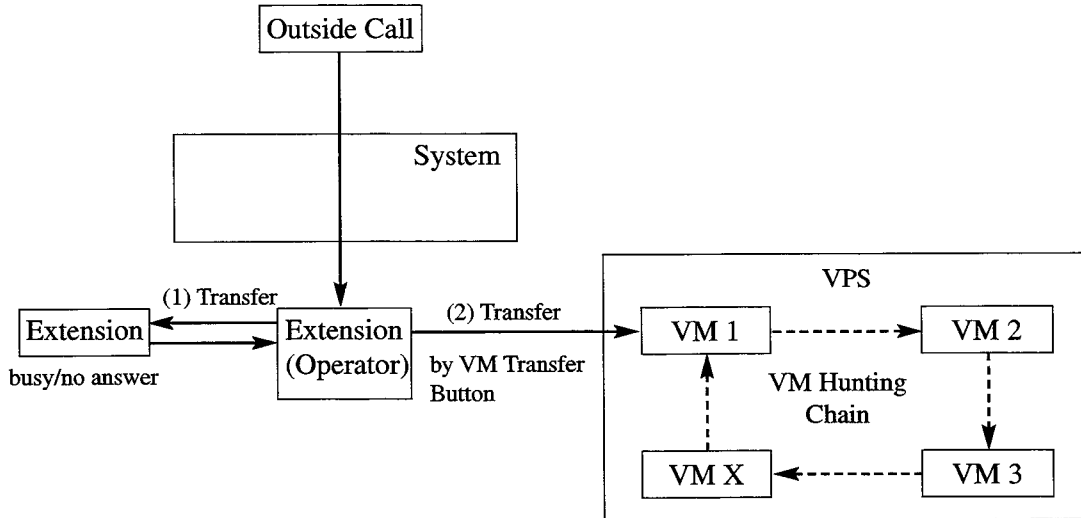
d) Changing from VM to Automated Attendant (AA)

The Automated Attendant Service is automatically activated in the following cases:

1) The incoming call is not answered by the operator and IRNA is activated.

2) The operator is assigned as a destination of DIL 1:1 and the operator sets the Call Forwarding to VPS.
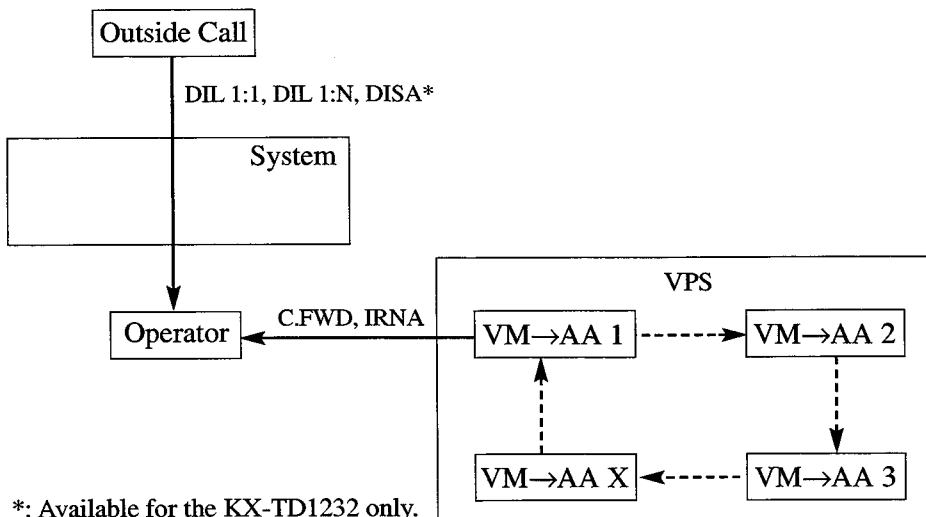
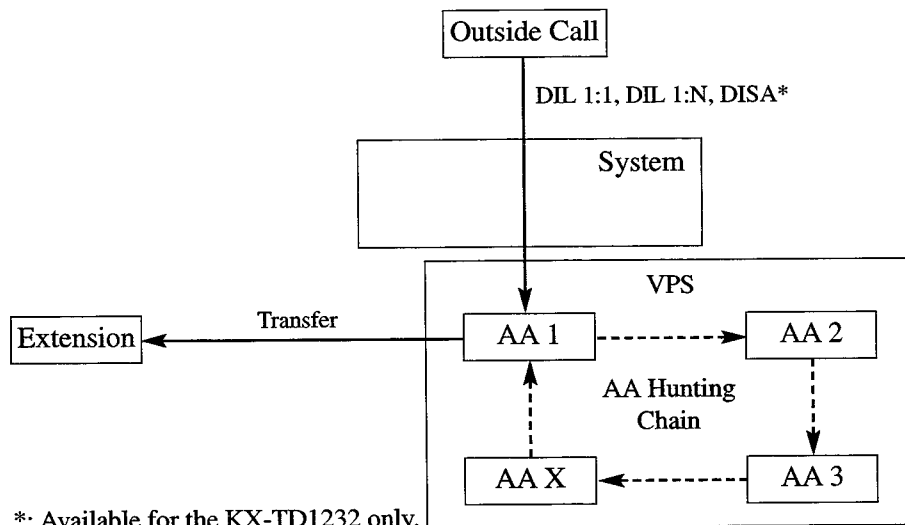*: Available for the KX-TD1232 only.

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e) Listening to a Recorded Message

If the VPS receives a message, the VPS can turn on the MESSAGE button indicator of the corresponding telephone as notification to the user of the telephone. (Panasonic KX-TVP series can do this.) The VPS notifies the extension user that there is a message waiting in his / her mailbox. When the MESSAGE button indicator is lit, pressing the button allows the extension user to play back the stored message.

2. Automated Attendant (AA) Service

a) AA to Extension

AA receives and answers an outside call and offers services such as transferring to a specified extension or the corresponding mailbox by the DTMF signaling, which is sent from the calling party.

```
                        ┌──────────────┐
                        │ Outside Call │
                        └──────────────┘
                          DIL 1:1, DIL 1:N, DISA*

              ┌──────────────────────────┐
              │              System       │
              │                           │
              └──────────────────────────┘

              ┌──────────────────────────────────┐
              │                         VPS        │
┌───────────┐       Transfer    ┌────────┐        ┌────────┐
│ Extension │◄─────────────────►│  AA 1  │------► │  AA 2  │
└───────────┘                   └────────┘        └────────┘
                                     ▲   AA Hunting    │
                                     │   Chain         │
                                ┌────────┐        ┌────────┐
                                │  AA X  │◄-------│  AA 3  │
                                └────────┘        └────────┘
              └──────────────────────────────────┘
```

*: Available for the KX-TD1232 only.

Conditions

- A VPS can be assigned as the destination of the following features.
  - Call Forwarding — All Calls
  - Call Forwarding — Busy
  - Call Forwarding — Busy / No Answer
  - Call Forwarding — No Answer
  - Intercept Routing — No Answer

  In these functions, the caller to the extension need not know the mailbox number of the called extension because the code is automatically transmitted to the VPS (Follow On ID function). If a DIL 1:N call is transferred to the VPS by IRNA, your system transmits the mailbox number of the lowest jack number of the receiving extensions.

- A mailbox number is a respective extension number by default. The mailbox number can be changed, only if program "[990] System Additional Information, Area 2 — Bit 8" is set to "free".

- Pressing the Voice Mail Transfer button and dialing the extension number allows the extension user to transfer to the corresponding mailbox. In this case, Follow On ID function is available.

- The Voice Mail extension should be set to Data Line Security to achieve proper recording.

- The Voice Mail extension can execute the Busy Station Signaling (BSS) function to the ringing extension.
- The KX-TD816 has one Extension Card and can have one 8-Station Line Unit. The KX-TD1232 has two Extension Cards and can have two 8-Station Line Units. It is recommended that you do not connect more than two VM ports to each card or unit.
- Voice mail can be assigned to a mail box for phantom extensions. The voice mail for the phantom extensions can work as follows.

  a) IRNA to Voice mail

  b) Voice mail transfer to Phantom mail box

  c) Two-way transfer into Phantom mail box

- A voice mail port name can be changed on program [014] VM Name Set.
- On LCS in Hands-Free mode, a Caller ID display appears on the LCD, replacing the display for conference.
- On LCS in Private mode, a Caller ID display appears on the LCD, replacing the "Live Call Screen" display

Connection References

- 2.3.2 Extension Connection
- 2.4.3 8-Station Line Unit Connection

Programming Guide References

- [005] Flexible CO Button Assignment
- [014] VM Name Set
- [100] Flexible Numbering
- [106] Station Hunting Type
- [113] VM Status DTMF Set
- [114] VM Command DTMF Set
- [407-408] DIL 1:1 Extension —— Day / Night
- [409-410] Intercept Extension —— Day / Night
- [603-604] DIL 1:N Extension and Delayed Ringing —— Day / Night
- [609] Voice Mail Access Codes
- [990] System Additional Information

Features Guide References

- Call Forwarding — All Calls
- Call Forwarding — Busy
- Call Forwarding — Busy / No Answer
- Call Forwarding — No Answer
- Intercept Routing
- Station Hunting

User Manual References

- 2.2.2 Flexible Button Assignment
- 4.3.85 Voice Mail Integration
- 4.3.86 Voice Mail Transfer [PT only]

Voice Mail Integration for Digital Proprietary Telephones *1

Description

A Digital Proprietary Telephone capable Panasonic Voice Processing System can be connected to a Digital Super Hybrid System (DSHS) in a tightly integrated fashion.
The system sends the Voice Processing System (VPS) data which contains the extension number configuration information and the VPS automatically creates mailboxes with this data (Automatic Configuration —— Quick Setup).

Conditions

- A maximum of one VPS can be connected to each DSHS cabinet.
- A maximum of six DSHS jacks can be connected to a digital proprietary telephone capable VPS. Because a digital proprietary telephone connection supports up to two simultaneous voice calls, only one DSHS jack needs to be connected for every two VPS ports.
- Connect the jacks and ports in order. In other words, the lowest number DSHS jack used for VPS connection must be connected to the lowest number VPS port.
- The VPS data is transmitted to the VPS via the lowest jack port.

Programming Guide References

- [117] Voice Mail Number Assignment
- [118] Voice Mail Extension Number Assignment
- [119] Voice Mail Extension Group Assignment
- [610] Live Call Screening Recording Mode Assignment

Features Guide References

- Voice Mail Integration

User Manual References

Not applicable.

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*1   Available when the Digital Super Hybrid System is connected to a Digital Proprietary Telephone capable Panasonic Voice Processing System (one that supports digital proprietary telephone integration; e.g. KX-TVS100).

Volume Control — Speaker / Handset Receiver / Headset / Ringer

Description

Allows the proprietary telephone user to change the following as desired:

Handset receiver volume

Headset volume

Ringer volume

Speaker volume

Conditions

The control method depends on the telephone type:

*   With a KX-T7400 series digital proprietary telephone, rotate the Jog Dial in the desired direction to select the desired volume level.
    With a KX-T7200 series digital proprietary telephone, press the volume control button (VOLUME∧ / ∨ UP / DOWN) to select the desired volume level.
    However the ringer volume of KX-T7420, KX-T7425, KX-T7220 and KX-T7250 is selected with Ringer Volume Selector (OFF / LOW / HIGH).

*   With other proprietary telephones, slide the following levers located on the left side of the telephone.

    Volume Control: (MIN — MAX)

    Handset Headset Volume Selector: (NORMAL / MID / HIGH)

    Ringer Volume Selector: (OFF / LOW / HIGH)

Programming Guide References

No programming required.

Features Guide References

None

User Manual References

*   1.1.5 Initial Setting for KX-T7400 Series
*   1.1.6 Initial Setting for KX-T7200 Series

Walking COS

Description

Allows a user who is not at their own telephone to use all of the Class of Service (COS) functions of their extension. At another extension, the user dials the walking COS password, and for the duration of the call, the COS of the extension is changed to the COS of their own extension.

Conditions

None

Programming Guide References

- [100] Flexible Numbering
- [121] Walking COS Password
- [601] Class of Service
- [613] ISDN Class of Service

Features Guide References

- Class of Service (COS)

User Manual References

- 4.3.87 Walking COS

Whisper OHCA

Description

When attempting to call a busy extension, Whisper OHCA allows the extension user to notify the busy party through the handset, which will only be heard by the party. Only KX-T7400 series telephone users can send or receive the Whisper OHCA.

Conditions

- Class of Service programming determines which extensions are able to perform this feature.
- You can select receiving Call Waiting tone, Off-Hook Call Announcement (OHCA), Whisper OHCA or none of these at your extension. However, the setting may change depending on each telephone setting or the telephone type as listed below.

Calling party's OHCA COS mode	Called Party's Call Waiting Mode			
	OFF	ON		
	0: Cancel	1: Call Waiting	2: OHCA	3: Whisper OHCA
Disable	Call Waiting disabled	Call Waiting tone	Call Waiting tone	Call Waiting tone
Enable (default)	Call Waiting disabled	Call Waiting tone	OHCA Call Waiting tone	Whisper OHCA, OHCA, Call Waiting tone

<Example> If the user selects 3 (Whisper OHCA mode);
— If using the KX-T7436 handset: Whisper OHCA
— If using the KX-T7436 SP-PHONE: Call Waiting
—Other: Call Waiting

- Only the Voice Mail extension can only execute BSS regardless of the setting.
- If the Whisper OHCA sender does not use a KX-T7400 series telephone, it will work as OHCA. If the receiver does not use a KX-T7400 series telephone, it may not work properly. (E.g. the announcement may be heard by the other party.)

Programming Guide References

- [100] Flexible Numbering
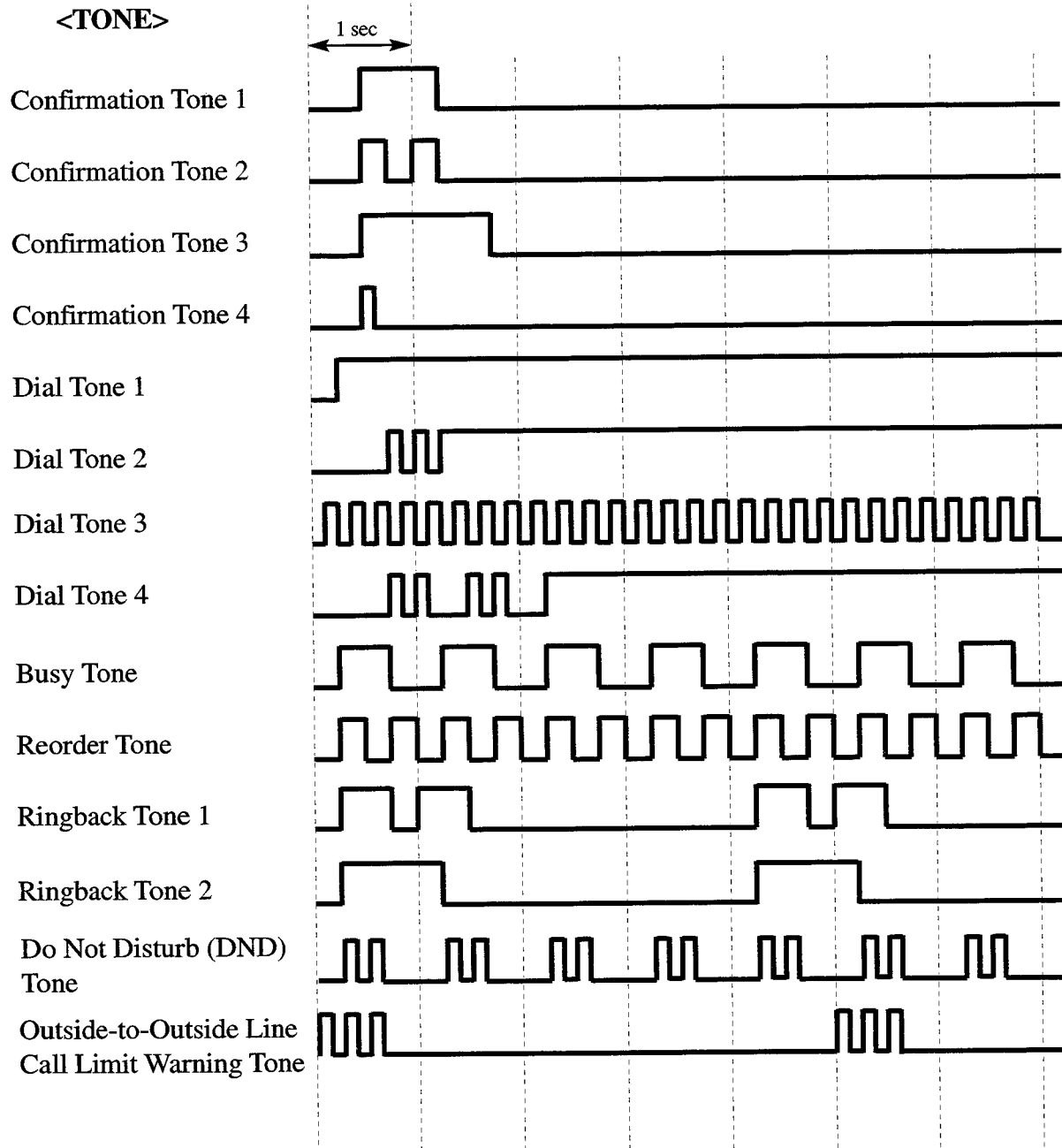- [509] Off-Hook Call Announcement (OHCA)

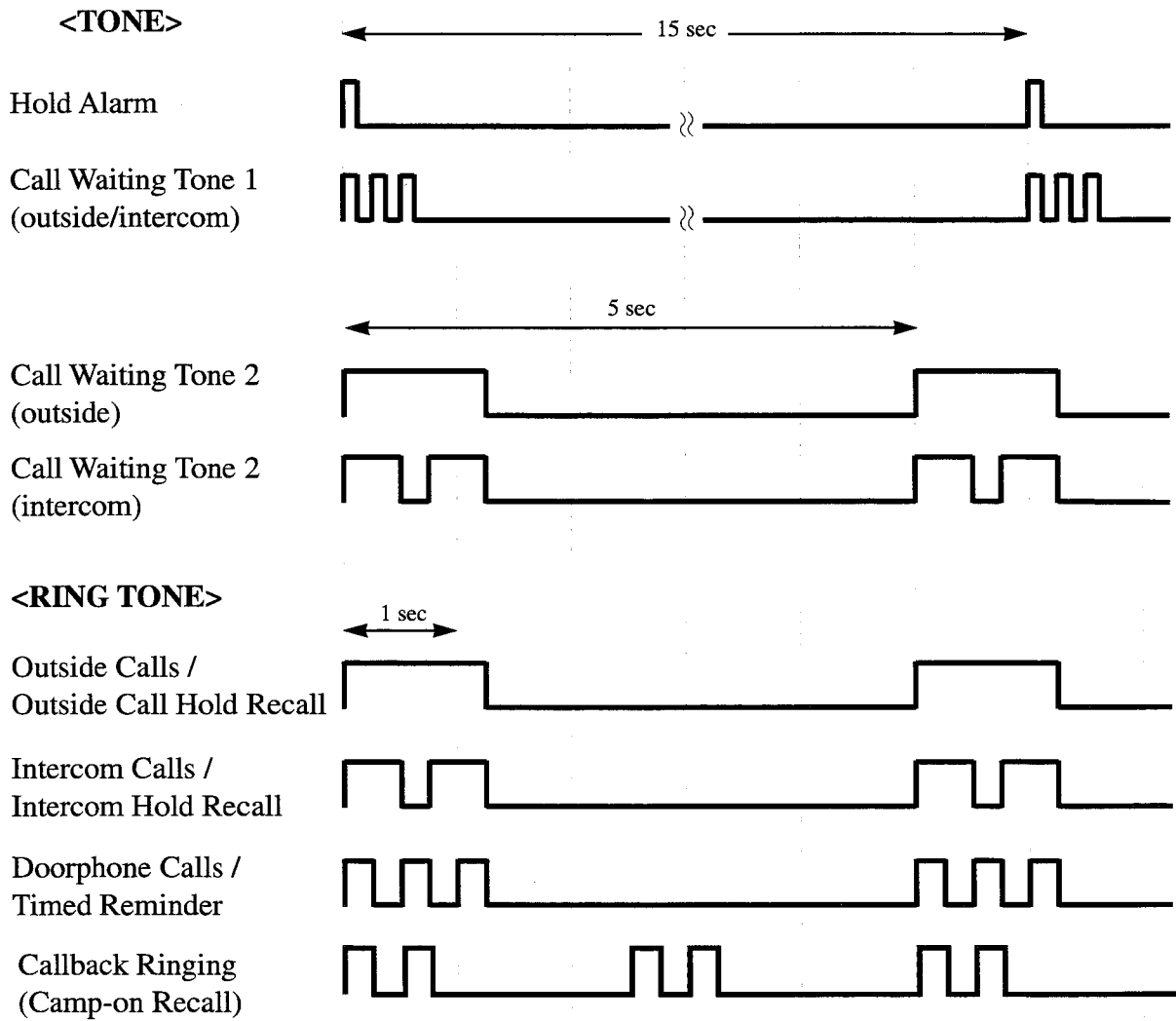## Features Guide References

- Busy Station Signaling (BSS)
- Call Waiting
- Off-Hook Call Announcement (OHCA)

User Manual References

- 4.3.57 Off-Hook Call Announcement (OHCA) —Whisper [PT only]

Section   2

Tone / Ring Tone

<TONE>

| 1 sec |

Confirmation Tone 1

Confirmation Tone 2

Confirmation Tone 3

Confirmation Tone 4

Dial Tone 1

Dial Tone 2

Dial Tone 3

Dial Tone 4

Busy Tone

Reorder Tone

Ringback Tone 1

Ringback Tone 2

Do Not Disturb (DND) Tone

Outside-to-Outside Line Call Limit Warning Tone

\<TONE\>

Hold Alarm

Call Waiting Tone 1
(outside/intercom)

Call Waiting Tone 2
(outside)

Call Waiting Tone 2
(intercom)

\<RING TONE\>

Outside Calls /
Outside Call Hold Recall

Intercom Calls /
Intercom Hold Recall

Doorphone Calls /
Timed Reminder

Callback Ringing
(Camp-on Recall)

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