

# Panasonic®



## Advanced Hybrid & Wireless PBX

## Feature Manual

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Model No. **KX-TAW848**



Thank you for purchasing a Panasonic Advanced Hybrid & Wireless PBX.  
Please read this manual carefully before using this product and save this manual for future use.

**PSMPR Software File Version 4.0000 or later**

Document Version: 2007-02-01

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# Introduction

## About the Feature Manual

The Feature Manual is designed to serve as an overall reference describing the features of the Panasonic Advanced Hybrid & Wireless PBX. It explains what the PBX can do, as well as how to obtain the most of its many features and facilities.

The Feature Manual is divided into the following sections:

### Section 1 Features and Configurations

Describes the call handling, system configuration and administration features of the PBX.

### Section 2 Appendix

Provides tables listing capacity of system resources, tone and ring tone tables, and the revision history of this Feature Manual.

### Index

An alphabetical listing of features and terms, as well as the page numbers of related sections.

## References Found in the Feature Manual

### Installation Manual References

The Advanced Hybrid & Wireless PBX Installation Manual provides instructions detailing the installation and maintenance of the PBX. Sections from the Installation Manual are listed throughout the Feature Manual for your reference.

### Programming References

- **PC Programming Manual**

Commonly used settings can be programmed using the KX-TAW848 Maintenance Console (→1.13.5 PC Programming). These PC programming items are noted throughout the Feature Manual for your reference by title and System Menu number.

- **PT Programming Manual**

Commonly used settings can be programmed using a display PT (→ 1.13.15 PT Programming). These PT programming items are noted throughout the Feature Manual for your reference by title and program number.

### Feature Manual References

Related sections of the Feature Manual are listed for your reference.

### Operating Manual References

The Advanced Hybrid & Wireless PBX Operating Manual describes how users can access commonly used PBX features and functions with their proprietary telephones (PTs), single line telephones (SLTs), portable stations (PSs), and DSS Consoles. Sections from the Operating Manual are listed throughout the Feature Manual for your reference.

## Links to Other Pages and Manuals

If viewing this Feature Manual with a PC, certain items are linked to different sections of the Feature Manual and other PBX manuals. Click on a link to jump to that section.

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Linked items include:

- Installation Manual References
- Feature Manual References
- Operating Manual References
- PT Programming References
- PC Programming References

## Abbreviations

There are many abbreviations used in this manual (e.g., "PT", for proprietary telephone). Please refer to the list in the next section for the meaning of each abbreviation.

## Notes

- The contents of this manual apply to PBXs with a certain software version, as indicated on the cover of this manual. To confirm the software version of your PBX, see How do I confirm the software version of the PBX or installed cards? in the FAQ of the PC Programming Manual, or [190] Main Processing (MPR) Software Version Reference in the PT Programming Manual.
- Some optional service cards, PTs, and features are not available in some areas. Please consult your dealer for more information.
- Product specifications are subject to change without notice. In some cases, additional information, including updates to this and other manuals, is included in the KX-TAW848 Maintenance Console's **Information Before Programming**. Install the latest version of Maintenance Console to view this information.
- All system programming can be performed through PC programming (→ 1.13.5 PC Programming). However, only a subset can be performed through PT programming (→ 1.13.15 PT Programming). Throughout this manual, programming references are included as follows:

### PC Programming

The number within the brackets indicates the System Menu number for the Maintenance Console.  
→ 2.12.1 [6-1] System Speed Dial—CO Line Access Number + Telephone Number

### PT Programming

The number within the brackets indicates the programming number that is entered when performing PT programming.

→ [001] System Speed Dialing Number

For further details, please refer to the PC Programming Manual and PT Programming Manual.

## WARNING

**Unplug the PBX from the AC outlet if it emits smoke, an abnormal smell or makes unusual noise. These conditions can cause fire or electric shock. Confirm that smoke has stopped and contact an authorized Panasonic Factory Service Center.**

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## Feature Highlights

### Voice Mail Features

A Voice Processing System (VPS) can be connected to the PBX to provide Voice Mail (VM) and Automated Attendant (AA) services. A Panasonic VPS which supports DPT (Digital) Integration can be connected to the PBX effortlessly and with minimal setup required. Conventional DTMF (analog) voice mail systems, including those from other manufacturers, are also supported.

(→ 1.19.3 Voice Mail (VM) Group)

### Paralleled Telephone Features

By connecting an SLT in parallel to an analog proprietary telephone (APT) that is connected to a Hybrid port of the PBX, you can increase the number of telephones connected to the PBX without adding additional extension cards. The SLT shares the same extension number with the APT.

(→ 1.13.2 Paralleled Telephone)

### Portable Station (PS) Features

A Panasonic PS can be used in place of a PT to provide wireless access to PBX features and call handling. When in Wireless XDP Parallel Mode, a PS can share an extension number with a wired telephone, allowing extension users to use their PSs when they are away from their desks to answer or make calls as if they were using their wired telephones.

### Built-in Simplified Voice Message (SVM) Features

By just installing an optional voice message card in the PBX, simple answering machine services can be provided. (→ 1.16.5 SVM (Simplified Voice Message))

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# List of Abbreviations

## A

- AA → Automated Attendant
- ANI → Automatic Number Identification
- APT → Analog Proprietary Telephone
- ARS → Automatic Route Selection

## B

- BGM → Background Music

## C

- CLI → Calling Line Identification
- COS → Class of Service
- CPC → Calling Party Control
- CS → Cell Station

## D

- DIL → Direct In Line
- DISA → Direct Inward System Access
- DND → Do Not Disturb
- DSS → Direct Station Selection
- DTMF → Dual Tone Multi-Frequency

## E

- EFA → External Feature Access

## F

- FWD → Call Forwarding

## G

- G-CO → Group-CO

## I

- ICD → Incoming Call Distribution
- IRNA → Intercept Routing—No Answer

## L

- L-CO → Loop-CO
- LCS → Live Call Screening
- LED → Light Emitting Diode

## O

- OGM → Outgoing Message

---

## **P**

PIN → Personal Identification Number

PS → Portable Station

PT → Proprietary Telephone

## **S**

S-CO → Single-CO

SLT → Single Line Telephone

SMDR → Station Message Detail Recording

SVM → Simplified Voice Message

## **T**

TAFAS → Trunk Answer from Any Station

TRG → Trunk Group

TRS → Toll Restriction

## **U**

UCD → Uniform Call Distribution

## **V**

VM → Voice Mail

VPS → Voice Processing System

## **X**

XDP → EXtra Device Port

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# Table of Contents

<b>1</b>	<b>Features and Configurations</b>	<b>11</b>
<b>1.1</b>	<b>A</b>	<b>12</b>
1.1.1	Absent Message	12
1.1.2	Account Code Entry	13
1.1.3	ARS (Automatic Route Selection)	14
1.1.4	Automatic Callback Busy (Camp-on)	20
1.1.5	Automatic Extension Release	21
1.1.6	Automatic Fax Transfer	22
1.1.7	Automatic Time Adjustment	23
<b>1.2</b>	<b>B</b>	<b>25</b>
1.2.1	BGM (Background Music)	25
<b>1.3</b>	<b>C</b>	<b>26</b>
1.3.1	Caller ID	26
1.3.2	Call Hold	29
1.3.3	Call Log, Incoming	32
1.3.4	Call Monitor	34
1.3.5	Call Park	36
1.3.6	Call Pickup	37
1.3.7	Call Splitting	39
1.3.8	Call Transfer	39
1.3.9	Call Waiting Tone	41
1.3.10	CLI (Calling Line Identification) Distribution	42
1.3.11	CO Line Access	44
1.3.12	CO Line Call Limitation	46
1.3.13	Conference	47
1.3.14	Confirmation Tone	48
1.3.15	Consultation Hold	50
1.3.16	COS (Class of Service)	50
1.3.17	CPC (Calling Party Control) Signal Detection	51
<b>1.4</b>	<b>D</b>	<b>53</b>
1.4.1	Data Line Security	53
1.4.2	Dial Mode Selection	53
1.4.3	Dial Tone	54
1.4.4	Dial Tone Transfer	55
1.4.5	DIL (Direct In Line)	57
1.4.6	DISA (Direct Inward System Access)	58
1.4.7	Display Information	67
1.4.8	DND (Do Not Disturb)	68
1.4.9	Door Open	69
1.4.10	Doorphone Call	70
<b>1.5</b>	<b>E</b>	<b>72</b>
1.5.1	EFA (External Feature Access)	72
1.5.2	Emergency Call	73
1.5.3	Executive Busy Override	73
1.5.4	Extension Dial Lock	74
1.5.5	Extension Feature Clear	75
1.5.6	Extension PIN (Personal Identification Number)	76

1.5.7	Extension Port Configuration .....	78
1.5.8	External Relay .....	78
1.5.9	External Sensor .....	79
<b>1.6</b>	<b>F</b> .....	<b>82</b>
1.6.1	Fixed Buttons .....	82
1.6.2	Flash/Recall/Terminate.....	83
1.6.3	Flexible Buttons.....	84
1.6.4	Flexible Numbering/Fixed Numbering .....	87
1.6.5	Floating Extension.....	92
1.6.6	FWD (Call Forwarding).....	93
1.6.7	FWD/DND Button, Group FWD Button .....	97
<b>1.7</b>	<b>G</b> .....	<b>101</b>
1.7.1	GROUP FEATURES .....	101
<b>1.8</b>	<b>H</b> .....	<b>105</b>
1.8.1	Hands-free Answerback .....	105
1.8.2	Hands-free Operation.....	106
1.8.3	Headset Operation .....	106
1.8.4	HOSPITALITY FEATURES .....	107
1.8.5	Host PBX Access Code (Access Code to the Telephone Company from a Host PBX) .....	107
1.8.6	Hot Line.....	109
<b>1.9</b>	<b>I</b> .....	<b>111</b>
1.9.1	ICD GROUP FEATURES .....	111
1.9.2	ICD Group Features—Group Call Distribution .....	114
1.9.3	ICD Group Features—Log-in/Log-out .....	117
1.9.4	ICD Group Features—Overflow .....	119
1.9.5	ICD Group Features—Queuing.....	121
1.9.6	ICD Group Features—VIP Call .....	123
1.9.7	Idle Extension Hunting .....	124
1.9.8	INCOMING CALL FEATURES .....	126
1.9.9	Intercept Routing.....	128
1.9.10	Intercept Routing—No Destination.....	132
1.9.11	Intercom Call.....	133
1.9.12	Internal Call Block .....	134
<b>1.10</b>	<b>L</b> .....	<b>136</b>
1.10.1	LED Indication.....	136
1.10.2	Line Preference—Incoming.....	138
1.10.3	Line Preference—Outgoing.....	139
1.10.4	Local Alarm Information .....	139
<b>1.11</b>	<b>M</b> .....	<b>142</b>
1.11.1	Manager Features.....	142
1.11.2	MEMORY DIALING FEATURES .....	143
1.11.3	Message Waiting.....	145
1.11.4	Music on Hold .....	146
1.11.5	Mute .....	147
<b>1.12</b>	<b>O</b> .....	<b>148</b>
1.12.1	OGM (Outgoing Message).....	148
1.12.2	One-touch Dialing .....	150
1.12.3	Operator Features.....	151
<b>1.13</b>	<b>P</b> .....	<b>152</b>
1.13.1	Paging .....	152

1.13.2	Paralleled Telephone.....	154
1.13.3	Password Security .....	155
1.13.4	Pause Insertion .....	156
1.13.5	PC Programming .....	157
1.13.6	Power Failure Restart .....	159
1.13.7	Power Failure Transfer .....	160
1.13.8	Predialing.....	160
1.13.9	Printing Message .....	161
1.13.10	Privacy Release .....	161
1.13.11	PS Connection.....	162
1.13.12	PS Directory.....	164
1.13.13	PS Feature Buttons.....	165
1.13.14	PS Ring Group.....	165
1.13.15	PT Programming.....	169
<b>1.14</b>	<b>Q .....</b>	<b>171</b>
1.14.1	Quick Dialing.....	171
1.14.2	Quick Setup .....	172
<b>1.15</b>	<b>R .....</b>	<b>173</b>
1.15.1	Redial, Last Number .....	173
1.15.2	Ring Tone Pattern Selection .....	173
<b>1.16</b>	<b>S.....</b>	<b>176</b>
1.16.1	SMDR (Station Message Detail Recording).....	176
1.16.2	Special Carrier Access Code .....	183
1.16.3	Speed Dialing, Personal.....	183
1.16.4	Speed Dialing, System.....	184
1.16.5	SVM (Simplified Voice Message) .....	185
<b>1.17</b>	<b>T.....</b>	<b>192</b>
1.17.1	TAFAS (Trunk Answer From Any Station) .....	192
1.17.2	Tenant Service .....	192
1.17.3	Timed Reminder .....	196
1.17.4	Time Service.....	198
1.17.5	TRS (Toll Restriction) .....	202
<b>1.18</b>	<b>U .....</b>	<b>210</b>
1.18.1	Upgrading the Software .....	210
<b>1.19</b>	<b>V.....</b>	<b>211</b>
1.19.1	Verification Code Entry .....	211
1.19.2	Virtual PS.....	212
1.19.3	Voice Mail (VM) Group.....	213
1.19.4	Voice Mail DPT (Digital) Integration .....	216
1.19.5	Voice Mail DTMF Integration.....	222
<b>1.20</b>	<b>W.....</b>	<b>229</b>
1.20.1	Walking COS.....	229
1.20.2	Walking Extension.....	230
1.20.3	Wireless XDP Parallel Mode .....	231
<b>2</b>	<b>Appendix .....</b>	<b>235</b>
<b>2.1</b>	<b>Capacity of System Resources .....</b>	<b>236</b>
<b>2.2</b>	<b>Tones/Ring Tones .....</b>	<b>239</b>
<b>2.3</b>	<b>Revision History.....</b>	<b>241</b>
2.3.1	PSMPR Software File Version 1.1xxx .....	241
2.3.2	PSMPR Software File Version 2.0xxx .....	241

---

2.3.3	PSMPR Software File Version 3.0xxx .....	242
2.3.4	PSMPR Software File Version 4.0xxx .....	242
<b>Index</b>	.....	<b>245</b>

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# ***Section 1***

## ***Features and Configurations***

## 1.1 A

### 1.1.1 Absent Message

#### Description

Extension users can prepare a brief text message (Absent Message) that will be displayed to other extension users when they are called. These messages can explain the reason for their absence, and may be edited through system programming and personal programming.

The following Absent Messages may be programmed:

Type	Message No.	Message (Example)	Description
<b>System message</b>	1	Will Return Soon	Messages may be edited through system programming. They can be used by any extension user.
	2	Gone Home	
	3	At Ext %%% (Extension Number)	
	4	Back at %:% (Hour:Minute)	
	5	Out until %/% (Month/Day)	
	6	In a Meeting	
	7		
	8		
<b>Personal message</b>	9		A message is programmable by each extension through personal programming (Personal Absent Message), which can only be used by that extension user.

#### Note

The "%" shown above indicates a parameter to be entered when assigning a message at an individual extension.

Up to seven "%"s can be stored for each message.

#### Conditions

- An extension user can select only one Absent Message at a time. The selected message is displayed at the extension while on-hook.
- The caller must use a display proprietary telephone (PT) to see the Absent Message.

#### Programming References

##### PC Programming Manual

2.8.8 [2-6-1] Numbering Plan—Main—Features—Absent Message Set / Cancel

2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 3—Absent Message

2.10.8 [4-2-1] Portable Station—Extension Settings—Option 3—Absent Message

2.12.5 [6-5] Absent Message

**PT Programming Manual**

[008] Absent Message

## Feature Manual References

2.1 Capacity of System Resources

## Operating Manual References

1.3.1 Absent Message

3.1.2 Personal Programming

## 1.1.2 Account Code Entry

### Description

An account code is used to identify outgoing CO line calls for accounting and billing purposes. The account code is appended to the Station Message Detail Recording (SMDR) call record. For example, a firm can use an account code for each client to determine which calls were made for which client, and can submit a bill to the client according to the client's account code as shown on the SMDR call record.

There are two methods of entering account codes explained below.

One of the methods is selected for each extension based on Class of Service (COS) programming.

Mode	Description
<b>Option</b>	An extension user can enter an account code, but is not required to.
<b>Forced</b>	An extension user must always enter an account code before seizing a CO line.

### Conditions

- An account code can be stored in Memory Dialing (One-touch Dialing, for example).
- **Account Button**  
A flexible button can be customized as the Account button. The Account button is used in place of the feature number for entering an account code. This button is useful because it can be used at any time, while feature number entry is allowed only when hearing a dial tone before seizing a CO line.
- Extension users can enter an account code at any time during a call, including after the call has been disconnected and a reorder tone is heard. However, if an account code is entered after there is no longer a reorder tone, the call will not be stored in the SMDR record.
- If an account code is entered more than once, the code entered last is logged in the SMDR.
- Even in Forced mode, emergency numbers can be dialed without an account code. (→ 1.5.2 Emergency Call)
- Proprietary telephone (PT) users can also enter an account code for incoming CO line calls during a conversation.
- **Verification Code Entry**  
To identify who made a CO line call for accounting and billing purposes, a verification code can be used. This code can be used at any extension. (→ 1.19.1 Verification Code Entry)

### Programming References

#### PC Programming Manual

2.8.8 [2-6-1] Numbering Plan—Main—Features—Account Code Entry

2.8.11 [2-7-1] Class of Service—COS Settings—CO & SMDR—Account Code Mode

#### PT Programming Manual

[508] Account Code Mode

### Feature Manual References

1.3.16 COS (Class of Service)

1.6.3 Flexible Buttons

1.16.1 SMDR (Station Message Detail Recording)

### Operating Manual References

1.2.1 Making Calls

## 1.1.3 ARS (Automatic Route Selection)

### Description

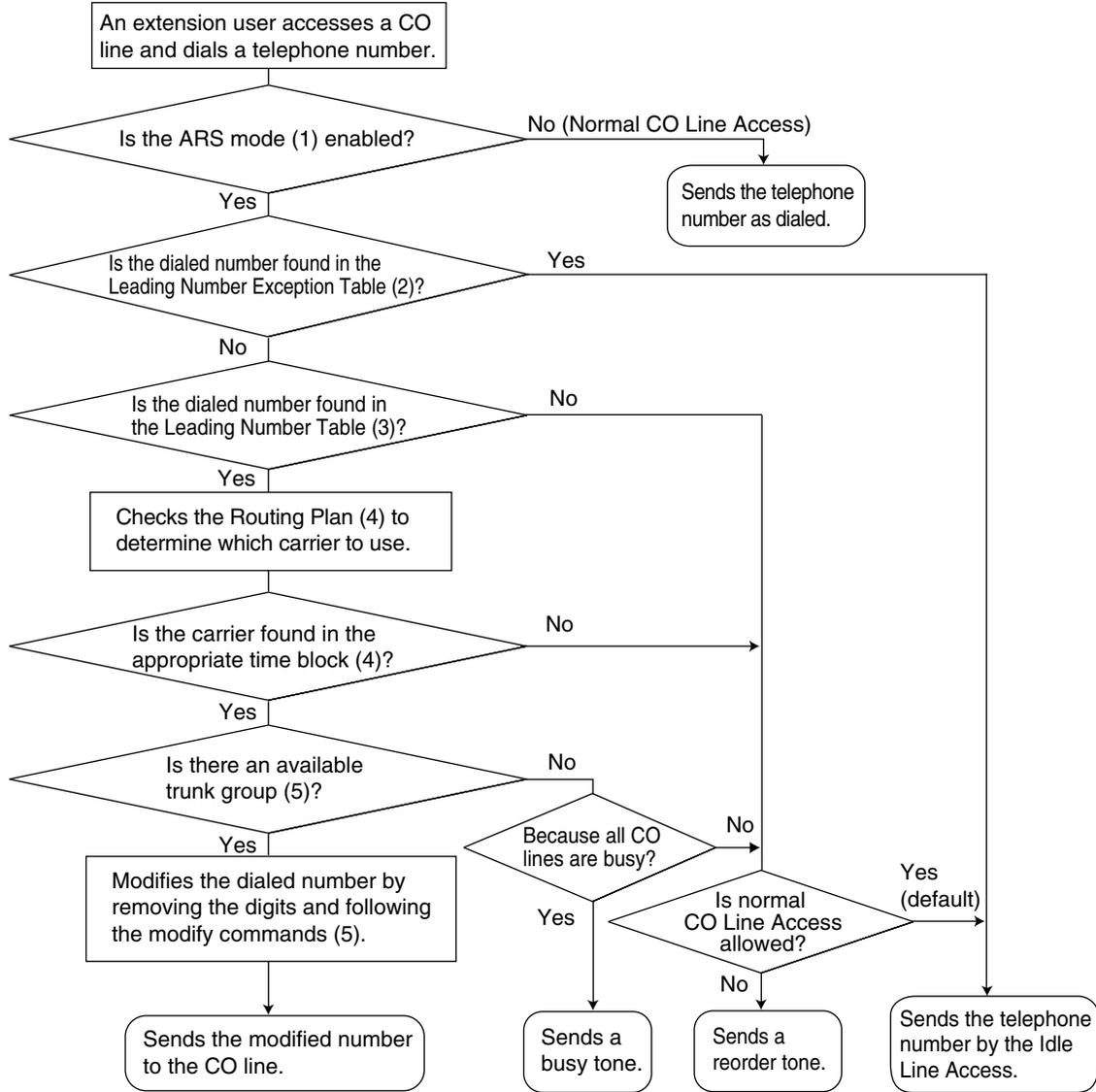
Different telephone carriers charge different rates for calls placed to different areas. Your PBX may use different telephone carriers to make calls to different areas in an effort to reduce costs.

Automatic Route Selection (ARS) is a feature which automatically selects different carriers each time a CO line call is made. In order to use ARS effectively, various ARS-related tables must be preprogrammed to tell the PBX which calls should be placed using which carriers, during which time of day.

If you do not activate ARS, if ARS is bypassed, or if you do not use multiple carriers, CO line calls will be connected via the carrier contracted for each line (default carrier).

**[Carrier Selection Procedure Flowchart]**

The numbers in parentheses indicate the corresponding items found under [Programming Procedures] on the following pages.



**[Programming Procedures]**

**1. ARS Mode**

ARS is turned on by selecting under which circumstances it operates – either when an extension user makes a call using the Idle Line Access method, or when any CO Line Access method is used. (→ 1.3.11 CO Line Access). ARS can also be turned off for the entire system.

→ 2.14.1 [8-1] System Settings—ARS Mode

→ [320] ARS Mode

**2. Leading Number Exception Table**

Once ARS is activated, store the telephone numbers that will bypass ARS in the Leading Number Exception Table.

Note that the first few digits (leading number) of a telephone number, such as an area code or local exchange, can also be stored, so that all calls to those areas or exchanges are exempted from ARS.

Also note that the CO Line Access number is always ignored by ARS and does not need to be programmed here.

Calls that are exempt from ARS are connected to the user-selected line, via the default carrier for that line.

**[Programming Example: ARS Leading Number Exception Table]**

Location No.	Leading No. Exception <sup>*1</sup>
1	555
2	556
3	567

<sup>\*1</sup> → 2.14.7 [8-6] Leading Number Exception  
 → [325] ARS Exception Number

**In this example:**

555, 556, and 567 are local exchanges. (555-XXXX, 556-XXXX, 567-XXXX)

These calls can be made using any carrier, and are therefore exempt from ARS.

### 3. Leading Number Table

Next, store the leading numbers of telephone numbers that should be routed by ARS, and assign a Routing Plan to each leading number that will control how calls containing these leading numbers are routed.

When an extension user dials a number which contains a leading number stored in the ARS Leading Number Table, the call will be routed the corresponding Routing Plan assigned here. Note that the CO Line Access number is always ignored by ARS and does not need to be programmed here.

Before programming the details of each Routing Plan (explained below), you can simply assign here the same Routing Plan number to all the different leading numbers which will be routed the same way.

If a dialed number matches two or more leading numbers stored in the ARS Leading Number Table, the lowest numbered location will have priority.

**[Programming Example: ARS Leading Number Table]**

Location No.	Leading No. <sup>*1</sup>	Additional No. of Digits <sup>*2</sup>	Routing Plan No. <sup>*3</sup>
1	1212	7	1
2	01181	0	5
3	01144	0	12

<sup>\*1</sup> → 2.14.2 [8-2] Leading Number—Leading Number  
 → [321] ARS Leading Number

<sup>\*2</sup> → 2.14.2 [8-2] Leading Number—Additional Number of Digits

<sup>\*3</sup> → 2.14.2 [8-2] Leading Number—Routing Plan Number  
 → [322] ARS Routing Plan Table Number

**Additional Number of Digits**

In order for calls to be made using the desired carrier, telephone numbers dialed by extension users must be modified to meet the criteria required by the carrier. (Refer to 5. Carrier Table.) This

modification usually involves removing digits and adding access codes to the beginning of the dialed number.

In situations where a preprogrammed number (such as an Itemized Billing Code) must be added automatically after the telephone number that was dialed by the extension user, set the Additional Number of Digits to a value greater than 0.

**4. Routing Plan**

Since the preferred carrier may vary depending on the time of day, you can create an ARS-specific time table and break each day of the week into different time blocks. A different carrier can then be assigned to each time block.

**Routing Plan Time Table:** For each Routing Plan, a different carrier can be assigned for each time of day and each day of the week. Each day can have up to four programmable time blocks.

**Routing Plan Priority:** For each Routing Plan, a different carrier can be assigned a different priority for each time of day. Generally, the carrier assigned to priority 1 will be used, however, if the CO lines assigned to this carrier are busy, a different available carrier will be used according to priority level.

**ARS Leading Number Table**

Location No.	Leading No.	Additional No. of Digits	Routing Plan No.
1	1212	7	①
2	01181	0	5
3	01144	0	12

**ARS Routing Plan No. ①**

Time Table <sup>1</sup>			Carrier <sup>2</sup>	
			Priority 1	Priority 2
Monday	Time Block A	9:00	Carrier A	Carrier M
	Time Block B	12:00	Carrier A	Carrier M
	Time Block C	17:00	Carrier C	Carrier M
	Time Block D	23:00	Carrier J	Carrier M

\*1 → 2.14.4 [8-3] Routing Plan Time—Time Setting  
 → [330] ARS Routing Plan Time Table

\*2 → 2.14.5 [8-4] Routing Plan Priority  
 → [331–346] ARS Routing Plan Table (1–16)

**5. Carrier Table**

Each carrier must be programmed in the Carrier Table. Here each carrier is assigned a carrier number, name, the CO lines it is used with, etc.

→ 2.14.6 [8-5] Carrier—Carrier

**Carrier Name:** Assign a name for the carrier. Used only as a reference.

**Trunk Group:** Assign the trunk groups which can be used when making calls via this carrier.

**Carrier Access Code:** Enter the carrier's access code. Consult carrier for details.

**Removed Number of Digits:** There may be circumstances where the user-dialed number must be modified in order for the carrier to connect the call. In this case, enter here the number of digits to be removed automatically from the beginning of the dialed number.

## 1.1 A

**Modify Command:** When a call is made using this carrier, the telephone number must be modified to meet the criteria required by the carrier in order to connect the call. Program here the commands needed to modify the user-dialed number as necessary.

### [Command Explanation]

Command	Description
C	Inserts the Carrier Access Code
H	Inserts the user-dialed number minus any removed digits
P	Inserts a pause
A	Inserts the Authorization Code for Tenant
G	Inserts the Authorization Code for Trunk Group
I	Inserts the Itemized Billing Code
[0-9, *, #]	You can enter any of these digits in a modify command

### [Programming Example: Carrier Table]

	Carrier 1	Carrier 2	
Carrier Name <sup>*1</sup>	Carrier A	Carrier J	
Trunk Group <sup>*2</sup>	1, 2, 3	4	
Carrier Access Code <sup>*3</sup>	0880	0700	
Removed No. of Digits <sup>*4</sup>	1	3	
Modify Command <sup>*5</sup>	CH	CPH	

#### In this example

Dialed number: 9-1-212-555-5555

#### Modification:



\*1 → 2.14.6 [8-5] Carrier—Carrier—Carrier Name

→ [350] ARS Carrier Name

\*2 → 2.14.6 [8-5] Carrier—TRG 01—TRG 64

→ [351] ARS Trunk Group for Carrier Access

\*3 → 2.14.6 [8-5] Carrier—Carrier—Carrier Access Code

→ [353] ARS Carrier Access Code

\*4 → 2.14.6 [8-5] Carrier—Carrier—Removed Number of Digits

→ [352] ARS Removed Number of Digits for Carrier Access

\*5 → 2.14.6 [8-5] Carrier—Carrier—Modify Command

## 6. ARS Options

### Authorization Code for Tenant

A Carrier Authorization Code can be assigned to each tenant.

→ 2.14.6 [8-5] Carrier—Authorization Code for Tenant

### Authorization Code for Trunk Group

A Carrier Authorization Code can be assigned to each trunk group.

→ 2.14.8 [8-7] Authorization Code for TRG

### Itemized Billing Code

An Itemized Billing Code can be assigned for each extension and for each verification code.

If a call is not made from an extension, such as via Direct Inward System Access (DISA), and no verification code is used, the Itemized Billing Code assigned to location 1 in the Verification Code Table will be used.

→ 2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 2—ARS Itemized Code

→ 2.10.8 [4-2-1] Portable Station—Extension Settings—Option 2—ARS Itemized Code

→ 2.12.3 [6-3] Verification Code—Itemized Billing Code for ARS

## Conditions

### **WARNING**

**The software contained in the ARS feature to allow user access to the network must be upgraded to recognize newly established network area codes and exchange codes as they are placed into service.**

**Failure to upgrade the premises PBXs or peripheral equipment to recognize the new codes as they are established will restrict the customer and the customer's employees from gaining access to the network and to these codes.**

**KEEP THE SOFTWARE UP-TO-DATE WITH THE LATEST DATA.**

- **Logging Outgoing Calls by SMDR**

Whether SMDR logs the user-dialed number or the ARS-modified number is determined through system programming. (→ 1.16.1 SMDR (Station Message Detail Recording))

→ 2.16.1 [10-1] Main—SMDR—SMDR Options—ARS Dial

- **ARS Data Import/Export**

ARS tables and data can be copied to and from the PBX and a PC using the KX-TAW848 Maintenance Console software. Files are saved in CSV (Comma Separated Value) format. Because of the large amounts of programming that may be necessary to use ARS effectively, you may choose to export ARS tables and data to a PC, edit them using the software of your choosing, then import the new data to the PBX. This is particularly convenient if you need to update your ARS tables for new area codes or telephone rates, or when you'd like to copy ARS tables from one PBX to another.

→ 2.4.5 Tool—Import

→ 2.4.6 Tool—Export

- **TRS**

Toll Restriction (TRS) checks are performed before ARS number modification, so program TRS Denied Code Tables and Exception Code Tables accordingly. (→ 1.17.5 TRS (Toll Restriction))

- **When ARS Routing Takes Place**

ARS routing takes place after the preprogrammed number of digits (leading number + additional number of digits) have been dialed.

## Programming References

### PC Programming Manual

## 1.1 A

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### 2.4.5 Tool—Import

- ARS - Leading Digit
- ARS - Except Code
- ARS - Routing Plan

### 2.4.6 Tool—Export

### 2.8.4 [2-3] Timers & Counters—Dial / IRNA / Recall / Tone—Dial—Extension Inter-digit

### 2.8.17 [2-9] System Options—Option 3—Dial Tone—Dial Tone for ARS

### 2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 2—ARS Itemized Code

### 2.10.8 [4-2-1] Portable Station—Extension Settings—Option 2—ARS Itemized Code

### 2.12.3 [6-3] Verification Code—Itemized Billing Code for ARS

### 2.14 [8] ARS

### 2.16.1 [10-1] Main—SMDR—SMDR Options—ARS Dial

### **PT Programming Manual**

[320] ARS Mode

[321] ARS Leading Number

[322] ARS Routing Plan Table Number

[325] ARS Exception Number

[330] ARS Routing Plan Time Table

[331–346] ARS Routing Plan Table (1–16)

[350] ARS Carrier Name

[351] ARS Trunk Group for Carrier Access

[352] ARS Removed Number of Digits for Carrier Access

[353] ARS Carrier Access Code

## **Feature Manual References**

### 2.1 Capacity of System Resources

## **1.1.4 Automatic Callback Busy (Camp-on)**

### **Description**

If the line is busy when a call is made, a callback ring can inform the caller when the line becomes free.

If the called party was another extension, or if the dialed number is handled by Automatic Route Selection (ARS), the number is automatically redialed after the extension user answers the callback ring.

### **Conditions**

- If the callback ring is not answered within 10 seconds, callback is canceled.
- If the extension hears a busy tone before dialing the telephone number, only the CO line or trunk group is reserved. After answering the callback ring, the extension should dial the telephone number.
- An extension can set only one Automatic Callback Busy. The last setting is effective.
- Multiple extension users can set this feature for the same CO line at the same time. However, a maximum of four extension users can set this feature to one extension. Callback ringing will be sent to extensions in the order that the feature was set. In other words, the extension that set the feature first will receive a callback ringing first.

- This feature cannot be used for calls to a Voice Processing System (VPS).

## Programming References

### PC Programming Manual

2.8.8 [2-6-1] Numbering Plan—Main—Features—Automatic Callback Busy Cancel

2.8.10 [2-6-3] Numbering Plan—B/NA DND Call Feature—Automatic Callback Busy

### PT Programming Manual

None

## Operating Manual References

1.3.4 Automatic Callback Busy (Camp-on)

# 1.1.5 Automatic Extension Release

## Description

After going off-hook, if an extension user fails to dial any digits within a preprogrammed time period, the user will hear a reorder tone. This operation applies to intercom calls only.

This feature is also known as Automatic Station Release.

## Conditions

- A proprietary telephone (PT)/portable station (PS) user hears a reorder tone for a preprogrammed time period, and then the PT/PS returns to idle status automatically. A single line telephone (SLT) user will hear a reorder tone until he or she goes on-hook.
- **This feature works in one of the following cases:**  
When making an intercom call
  - a) The first digit is not dialed within a preprogrammed time period.
  - b) A digit is dialed, but subsequent digits are not dialed within a preprogrammed time period.

## Programming References

### PC Programming Manual

2.8.4 [2-3] Timers & Counters—Dial / IRNA / Recall / Tone

→ Dial—Extension First Digit

→ Dial—Extension Inter-digit

→ Tone Length—Reorder Tone for PT Handset

→ Tone Length—Reorder Tone for PT Hands-free

### PT Programming Manual

None

## 1.1.6 Automatic Fax Transfer

### Description

The PBX can distinguish between fax calls and other types of calls arriving on DISA lines, and automatically transfer fax calls to preprogrammed destinations. When a call arrives on a DISA line, an OGM is played (→ 1.12.1 OGM (Outgoing Message)). At the same time, the PBX begins fax signal detection. If a fax signal is detected, the PBX recognizes that the call is a fax call, and transfers the call to the fax destination assigned to that OGM through system programming. This allows a single CO line to be used seamlessly for both voice and fax calls, with only voice calls arriving at user extensions.

#### [Available Automatic Fax Transfer Destinations]

Destination	Availability
Wired Extension (PT/SLT)	✓
PS	✓*
ICD Group	✓
PS Ring Group	
Floating Extension no. for SVM	
VM Group (DTMF/DPT)	
External Pager (TAFAS)	
DISA	
Analog Remote Maintenance	
Idle Line Access no. + Phone no.	
Trunk Group Access no. + Trunk Group no. + Phone no.	

\*: A PS destination can be used to forward fax calls to a fax machine. A virtual PS can be specified as the destination of fax calls. Then, the extension number of the fax machine can be specified as the FWD—ALL Calls destination for calls to that virtual PS. (→ 1.19.2 Virtual PS)

### Conditions

- **Hardware Requirement:** An MSG card
- This feature is only effective for calls arriving on DISA lines.
- If a fax signal is not detected before the DISA Intercept Routing—No Dial timer expires, the call is redirected to the operator extension, and fax detection ends.

### Installation Manual References

2.5.3 MSG2 Card (KX-TAW84891)

### Programming References

PC Programming Manual

2.11.4 [5-3-2] Voice Message—DISA Message—Fax Extension

**PT Programming Manual**

None

## Feature Manual References

1.4.6 DISA (Direct Inward System Access)

## 1.1.7 Automatic Time Adjustment

### Description

The PBX clock can be adjusted automatically in the following two ways:

#### 1. Daylight Saving Time Setting

The start and end dates of Daylight Saving Time can be programmed. The PBX clock will automatically adjust itself one hour forward or backward at 2:00 A.M. on the programmed date, if enabled through system programming. At 2:00 A.M. on the start date, the clock will change to 3:00 A.M., and at 2:00 A.M. on the end date, the clock will change to 1:00 A.M.

#### **Note**

If a Timed Reminder (Remote Wake-up call) is set:

- On the Daylight Saving Time start date, a reminder set for between 2:00 A.M. and 3:00 A.M. will not ring.
- On the Daylight Saving Time end date, a reminder set for between 1:00 A.M. and 2:00 A.M. will ring twice.

#### 2. Time Information from Telephone Company

Time information can be received when an incoming call through a CO line with Caller ID which includes time information is received.

The PBX clock will be adjusted everyday with the first call after 3:05 AM, if enabled through system programming.

#### **Note**

If a Timed Reminder (Remote Wake-up call) is set, the setting will not ring or will ring twice depending on the adjustment.

### Conditions

- Station Message Detail Recording (SMDR) will log call information using the PBX clock so that the logging time will be overlapped at the end of Daylight Saving Time. (→ 1.16.1 SMDR (Station Message Detail Recording))

### Programming References

**PC Programming Manual**

2.8.1 [2-1] Date & Time/Daylight Saving

2.8.17 [2-9] System Options—Option 2—Automatic Time Adjustment—by Caller ID (FSK)

**PT Programming Manual**

## 1.1 A

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None

### Feature Manual References

1.17.3 Timed Reminder

## 1.2 B

### 1.2.1 BGM (Background Music)

#### Description

A proprietary telephone (PT) user can listen to background music (BGM) through the built-in speaker while on-hook and idle.

#### **BGM—External:**

BGM can also be broadcast in the office through the external pager (loudspeaker) and can be turned on and off by an extension assigned as a manager.

#### Conditions

##### [BGM]

- **Hardware requirement:** A user-supplied external audio source, such as a CD player or radio.
- The music heard through the PT is interrupted when going off-hook.
- Each user can only set/cancel BGM; the user cannot make a music selection.

##### [BGM—External]

- **Hardware requirement:** A user-supplied external pager
- The external pager can be used with the following priorities:  
Trunk Answer From Any Station (TAFAS) → Paging → BGM  
(→ 1.13.1 Paging, 1.17.1 TAFAS (Trunk Answer From Any Station))

#### Installation Manual References

2.9.1 Connection of Peripherals

#### Programming References

##### **PC Programming Manual**

2.8.3 [2-2] Operator & BGM—BGM and Music on Hold—Music Source of BGM

2.8.8 [2-6-1] Numbering Plan—Main—Features

→ External BGM On / Off

→ BGM Set / Cancel

2.8.19 [2-11-1] Audio Gain—Paging/MOH—MOH—(Music On Hold)

2.11.2 [5-2] External Pager

##### **PT Programming Manual**

None

#### Operating Manual References

1.3.5 BGM (Background Music)

2.1.2 External BGM (Background Music)

## 1.3 C

### 1.3.1 Caller ID

#### Description

The PBX can receive Caller ID information (a caller's name and telephone number) from calls received on CO lines. This information can be shown on a proprietary telephone (PT) display when receiving a call and can be used to direct calls from specific callers to specific destinations automatically. Additionally, Caller ID information is logged in the Incoming Call Log of the extension which received the call, allowing the caller to view a record of incoming calls or make a call to a person in the call log later.

The PBX can be programmed to modify a caller's telephone number when it is received and, for example, add a CO Line Access number or add/delete certain digits of incoming telephone numbers automatically. This allows an extension user to be able to make a call later to a telephone number logged in his or her call log without worrying about CO Line Access numbers, area codes, etc.

#### Notes

- The term "Caller ID" used in this Feature Manual refers to features that can receive caller information sent from the telephone company and received on CO lines. Your network provider may use a different name for this type of service.
- To receive Caller ID information, you must subscribe to the telephone company's Caller ID service and enable Caller ID for the appropriate CO line through system programming.

#### Caller ID to SLT Port:

Caller ID information can also be shown on a single line telephone (SLT) display. This feature is available only for SLTs compatible with FSK-type Caller ID.

#### 1. Caller ID-Related Features

Features	Description	Details in
<b>Calling Line Identification (CLI) Distribution</b>	Caller ID information received by the PBX is used to direct calls from specific callers to specific destinations. The caller's telephone number and a destination must be assigned in the System Speed Dialing Table.	• 1.3.10 CLI (Calling Line Identification) Distribution
<b>Incoming Call Log</b>	Caller information is automatically recorded in the call log of the extension which received the call. This information can be used to view a record of incoming calls or make calls to any number in the call log.	• 1.3.3 Call Log, Incoming

#### 2. Automatic Caller ID Number Modification

When a call is received, the PBX can automatically modify the caller's telephone number according to a preprogrammed set of rules (Caller ID Modification Table). This modified number will be automatically stored in the extension's Incoming Call Log, allowing the extension user to make a call to this number later without worrying about CO Line Access numbers, area codes, etc.

Each trunk group can be assigned a modification table. Each table has ten formulas for modifying local/international numbers, and one formula for modifying long distance numbers. When a call is received, the PBX compares the received telephone number to the area codes programmed under "Local/

International Call Data" first. If a match is not found, the telephone number will be modified according to the method programmed under "Long Distance Code".

**[Programming Example: Caller ID Modification]**

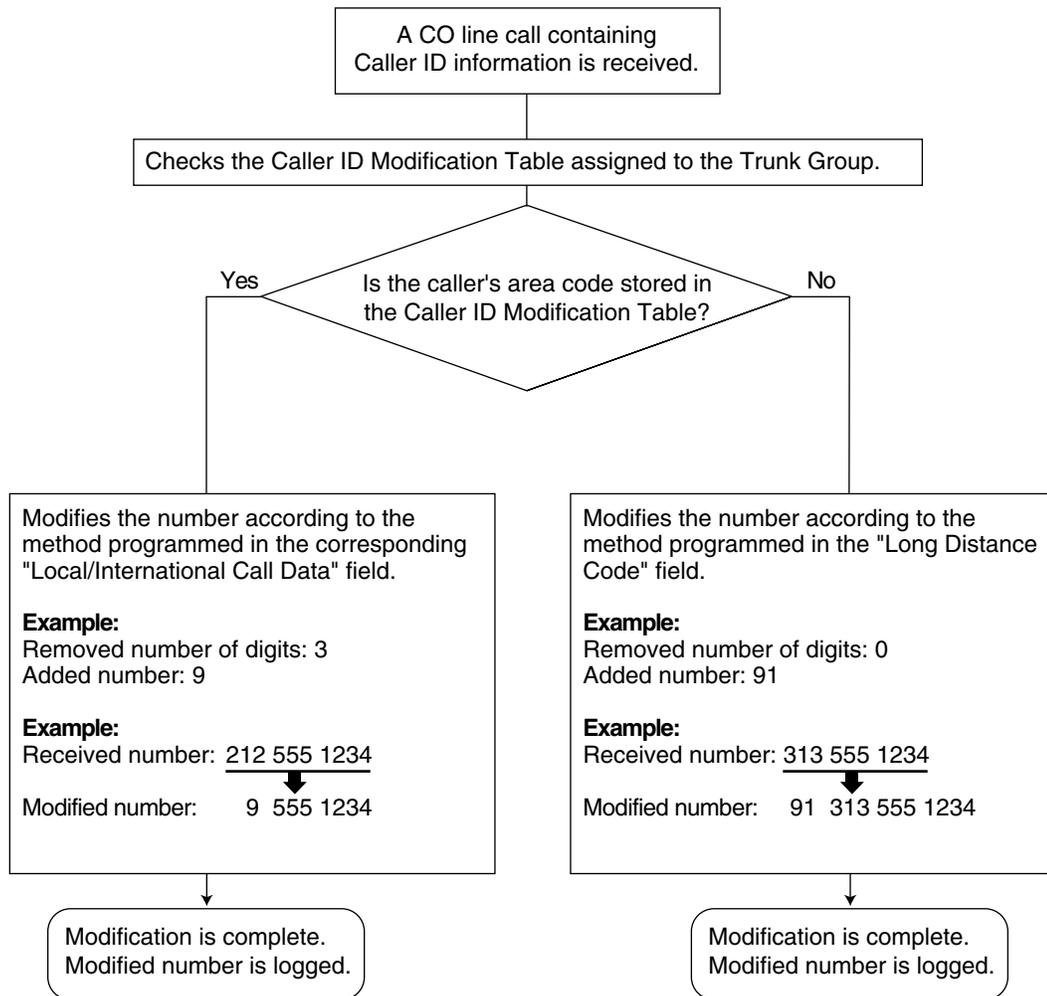
<Table Selection>

Trunk Group No.	Modification Table
1	1
2	3

<Modification Table>

Modification Table 1			
	Area Code	Removed No. of Digits	Added No.
Local/International Call Data 1	212	3	0
Local/International Call Data 2	011	3	001
Local/International Call Data 10			
Long Distance Code Data	[Not programmable]	0	0

<Modification Flowchart>



### 3. System Speed Dialing Table

The System Speed Dialing Table can store telephone numbers, names, and CLI destinations for hundreds of callers.

- a) **Telephone Number:** Contains a CO Line Access number and the caller's telephone number. If Automatic Caller ID Number Modification is used, telephone numbers should be stored in the System Speed Dialing Table in their modified format in order for CLI distribution to function.
- b) **Caller's Name:** Shown on the display and logged (Incoming Call Log, Station Message Detail Recording [SMDR]) when a call from this telephone number is received.
- c) **CLI Destination:** The destination to which an incoming call from the stored telephone number is directed via the CLI distribution feature.

**[Programming Example: System Speed Dialing Table]**

Location (System Speed Dialing No.)	System Speed Dialing Name <sup>*1</sup>	Telephone No. <sup>*2</sup>	CLI Destination <sup>*3</sup>
000	ABC Company	912125551234	200
001	XYZ Company	913135551234	300

\*1 → 2.12.1 [6-1] System Speed Dial—CO Line Access Number + Telephone Number

→ [001] System Speed Dialing Number

\*2 → 2.12.1 [6-1] System Speed Dial—Name

→ [002] System Speed Dialing Name

\*3 → 2.12.1 [6-1] System Speed Dial—CLI Destination

### 4. Displaying the Caller's Name

In addition to the System Speed Dialing Table, each extension can store names and numbers in Personal Speed Dialing. Therefore, it is entirely possible for the same telephone number to be stored under a different name in different locations within the PBX.

When a call containing Caller ID information is received, the PBX will search for the caller's name in the following order, then show that name on the display and log it via SMDR.

- 1) Personal Speed Dialing data of the extension which received the call
- 2) System Speed Dialing Table
- 3) The Caller ID information received from the telephone company

If a caller's name is not stored in the PBX or sent from the telephone company, it will not be displayed or logged.

## Conditions

### [General]

- Caller ID signaling type can be selected through system programming.

### [Caller ID to SLT Port]

- **Hardware Requirement:**  
The EXT-CID card
- When the caller's number is sent to an SLT, a CO Line Access number can be automatically added to the telephone number through system programming for calling back.
- Through system programming, a group of 4 SLT ports can be assigned to receive Caller ID information. Up to 2 groups can be programmed. Therefore, a maximum of 8 SLTs can receive Caller ID information.

- When the caller's number exceeds 16 digits, the SLT receives only the first 16 digits, not counting the preceding CO Line Access number (if it is programmed to be added).
- If a call is transferred to an SLT, the transferring extension's information will be shown on the SLT. If the transferring extension goes on-hook before the call is answered, the original caller's information will be shown.
- When Caller ID information such as "Private", "Out of Area", or "Long Distance" is received, this information will be shown instead of the caller's number and name.
- Even if the caller's name is sent, the name may not be shown depending on the type of SLT.
- Incoming Call Log information is not shown on the SLT.

## Programming References

### PC Programming Manual

2.8.4 [2-3] Timers & Counters—Miscellaneous

→ Caller ID—Waiting to receive

→ Caller ID—Visual Caller ID Display

2.8.18 [2-10] Extension CID Settings

2.9.1 [3-1-1] Trunk Group—TRG Settings—Main—Caller-ID Modification Table

2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 7

→ Extension Caller ID

→ Incoming Call Wait Timer for Extension Caller ID

2.12.1 [6-1] System Speed Dial

2.12.2 [6-2] Caller ID Modification

### PT Programming Manual

[001] System Speed Dialing Number

[002] System Speed Dialing Name

[490] Caller ID Signal Type

## Feature Manual References

1.16.1 SMDR (Station Message Detail Recording)

1.16.3 Speed Dialing, Personal

1.16.4 Speed Dialing, System

## 1.3.2 Call Hold

### Description

An extension user can put a call on hold. The following Hold features are available:

Feature	Description
<b>Call Hold General</b>	Any extension can retrieve a held call.
<b>Exclusive Call Hold</b>	Only the extension user who held the call can retrieve it.

The result of the holding operation can be determined through system programming. Pressing the HOLD button again just after the first time alternates the mode between General and Exclusive Call Hold.

**Conditions**

- Call Hold Limitation**  
 A proprietary telephone (PT) user can hold one intercom call and/or multiple CO line calls at a time. A single line telephone (SLT) user can hold either one intercom call or one CO line call at a time. By using the Call Park feature, PT and SLT users can hold multiple CO line calls and intercom calls simultaneously. (→ 1.3.5 Call Park)
- Music on Hold**  
 Music, if available, is sent to the held party. (→ 1.11.4 Music on Hold)
- Hold Recall**  
 If a call on hold is not retrieved within a preprogrammed time period, the Hold Recall tone is heard at the extension which put the call on hold. If the extension is engaged in a call, the Hold Alarm will be heard.
- If an outside party is placed on hold and the call is not retrieved within a preprogrammed time period after the Hold Recall time expires, the call is automatically disconnected.
- Automatic Call Hold**  
 A PT can be configured through system programming to place the current call on hold when the PT user presses a CO, ICD Group, or INTERCOM button to make or answer another call. If this feature is not enabled, the current call will be disconnected.  
**[Example of Automatic Call Hold]**  
 It is possible to receive an incoming CO line call by pressing the flashing ICD Group button. The current intercom call (on the INTERCOM button) is placed on hold. To return to the held call, press the INTERCOM button.
- Call Hold Retrieve Deny**  
 Internal Call Block (→ 1.9.12 Internal Call Block) also determines which extensions' calls an extension user can retrieve, i.e., if extension 101 cannot call extension 201, then it cannot retrieve extension 201's held calls either.
- SLT Hold Mode**  
 It is possible to choose how to hold and transfer a call with an SLT through system programming. The following methods are available:

	<b>Hold</b>	<b>Hold (to be Retrieved from Another Extension)*</b>	<b>Transfer to CO Line</b>	<b>Transfer to Extension</b>
<b>Mode 1</b>	Flashing the hookswitch + Going on-hook	Flashing the hookswitch + Hold Feature No. + Going on-hook	Flashing the hookswitch + CO Line Access No.	Flashing the hookswitch + Extension No.
<b>Mode 2 (Default)</b>	Flashing the hookswitch + Hold Feature No. + Going on-hook	Flashing the hookswitch + Hold Feature No. + Going on-hook	Flashing the hookswitch + CO Line Access No.	Flashing the hookswitch + Extension No.

	<b>Hold</b>	<b>Hold (to be Retrieved from Another Extension)*</b>	<b>Transfer to CO Line</b>	<b>Transfer to Extension</b>
<b>Mode 3</b>	Flashing the hookswitch + Hold Feature No. + Going on-hook	Flashing the hookswitch + Hold Feature No. + Hold Feature No. + Going on-hook	Flashing the hookswitch + Hold Feature No. + CO Line Access No.	Flashing the hookswitch + Extension No.
<b>Mode 4</b>	Flashing the hookswitch + Hold Feature No. + Going on-hook	Flashing the hookswitch + Hold Feature No. + Hold Feature No. + Going on-hook	Flashing the hookswitch + Hold Feature No. + CO Line Access No.	Flashing the hookswitch + Hold Feature No. + Extension No.

\*: These operations must be performed when the held call is intended to be retrieved from another extension using the holding extension number.

If one of the following occurs frequently with an SLT, choose "Mode 2", "Mode 3", or "Mode 4":

- a) When an SLT user answers a call, a reorder tone is heard or no one is heard on the other end.
- b) When an SLT user goes off-hook, a reorder tone is heard instead of a dial tone.

If a call is not terminated after going on-hook, the above cases occur. To avoid these problems, choose "Mode 2", "Mode 3", or "Mode 4". Every call will be terminated unless the Hold feature number is entered after flashing the hookswitch in Mode 2, Mode 3, and Mode 4.

- Hold Alarm tone pattern has a default. (→ 2.2 Tones/Ring Tones)

## Programming References

### PC Programming Manual

#### 2.8.4 [2-3] Timers & Counters—Dial / IRNA / Recall / Tone

- Recall—Hold Recall
- Recall—Disconnect after Recall

#### 2.8.8 [2-6-1] Numbering Plan—Main—Features

- Call Hold / Call Hold Retrieve
- Call Hold Retrieve : Specified with a Holding Extension Number
- Hold Retrieve : Specified with a Held CO Line Number

#### 2.8.17 [2-9] System Options

- Option 1—PT Operation—Automatic Hold by ICM / CO / ICD Group key
- Option 1—PT Operation— Hold Key Mode
- Option 5—SLT—SLT Hold Mode

### PT Programming Manual

#### [200] Hold Recall Time

## Operating Manual References

### 1.3.6 Call Hold

## 1.3.3 Call Log, Incoming

### Description

When a call containing Caller ID information is received by an extension, the information is shown on the telephone display, notifying the extension user of the caller's identity. This information is also automatically logged in the Incoming Call Log of the extension, and can be viewed later or used to call that caller back.

Each extension and incoming call distribution (ICD) group has its own Incoming Call Log.

#### Call Log button

The Call Log button will alert an extension user to any missed (unanswered) calls. A flexible button can be customized as the Call Log button, and will indicate the status of the Incoming Call Log for the extension or corresponding ICD group, as shown below.

Light pattern	Status of the corresponding call log
Red on	There are call records in the log which have not been viewed.
Off	There are no new call records in the log.

<b>John White</b> <b>DEC.12 10:00AM MON</b> <b>New: Not Answered</b> <b>123456789</b>	-- Caller's name (20 digits max.) -- Date and time of a call received -- Answering Status* -- Caller's number (16 digits max.)
--	---



**Call Log buttons**

← This extension

← ICD Group

\* **"New"** is displayed for call records which have not previously been viewed;  
**"Old"** is displayed for call records which have previously been viewed.

**Conditions**

- The following information is logged.

<div style="text-align: center;">Telephone</div> <div style="text-align: center;">Information</div>	KX-TD7690/KX-TD7680	3-line display PT	1-line display PT
			Wireless phone (KX-TD7895/KX-T7885)
Caller's Name or Caller's Phone Number*	✓	✓	✓
Date/Time call received	✓	✓	—
Answered or Not Answered Confirmed or Not Confirmed	✓	✓	—

\*: If the caller's name is not logged, the caller's phone number is displayed.  
 If the caller's name is logged, the caller's phone number is not displayed.

- If the answering destination is not the original extension (e.g., Call Pickup or FWD—No Answer), the call is logged in the Incoming Call Logs of both the original and the answering destination. If a call is forwarded to multiple extensions before being answered, the call is logged in the call logs of all the extensions it was forwarded to. If a call is forwarded to an ICD group and is not answered, the call is not logged in the call log for the ICD group.
- Incoming Call Log for Calls to an ICD Group**  
 If a call directed to an ICD group is not answered, the call is logged in the Incoming Call Log of the ICD group. If the call is answered, it is logged in the call log of the answering extension only. Through system programming, it is possible to select which Incoming Call Logs record call information when a member of an ICD group answers a call to the group:
  - Only the Incoming Call Log of the extension that answered the call.
  - Both the Incoming Call Log of the extension that answered the call and that of the ICD Group.
- Incoming Call Log for Calls to a PS**  
 Each portable station (PS) also has an Incoming Call Log. When a call is directed to a PS, the call will be logged in the call log of the PS even when:
  - The PS is out of range.
  - The PS is turned off.
  - The Cell Station (CS) is busy.
- Display Lock**  
 The Incoming Call Log of an extension can be locked through personal programming (Directory and Call Log Lock) to prevent other users from viewing its contents. In this case, the Outgoing Call Log display, the Personal Speed Dialing number display and the SVM Log display are also locked, and the voice messages in the user's message box cannot be played back. An extension personal identification number (PIN) is required to use this feature. (→ 1.5.6 Extension PIN (Personal Identification Number))
- Incoming Call Log Memory**  
 The total number of incoming calls that can be logged by the PBX is limited. The maximum number of calls that can be logged in the Incoming Call Log of each extension and ICD group can be specified through system programming. When a call log is full, the oldest call will be replaced each time a call is received.

- **Automatic Caller ID Number Modification**

If the PBX is programmed to automatically modify incoming telephone numbers, the modified numbers will be logged in the Incoming Call Log.

### Programming References

#### PC Programming Manual

2.9.9 [3-5-1] Incoming Call Distribution Group—Group Settings—Group Log / Group FWD—Incoming Call Log Memory

2.9.11 [3-5-3] Incoming Call Distribution Group—Miscellaneous—Options—Call Log to ICD Group for Answered Call

2.10.1 [4-1-1] Wired Extension—Extension Settings

→ Option 5—Incoming Call Display

→ Option 6—Incoming Call Log Memory

2.10.4 [4-1-4] Wired Extension—Flexible Button—Type

2.10.8 [4-2-1] Portable Station—Extension Settings

→ Option 5—Incoming Call Display

→ Option 6—Incoming Call Log Memory

2.10.13 [4-3] DSS Console—Flexible Button—Type

#### PT Programming Manual

None

### Feature Manual References

1.3.1 Caller ID

1.6.3 Flexible Buttons

1.16.3 Speed Dialing, Personal

2.1 Capacity of System Resources

### Operating Manual References

1.4.2 Call Log, Incoming

3.1.2 Personal Programming

## 1.3.4 Call Monitor

### Description

Allows an extension user to listen to a busy extension user's existing conversation. The user can hear the conversation but will not be heard. If desired, the monitoring user can interrupt the call to establish a three-party conference call.

### Conditions

- Class of Service (COS) programming determines extension users who can use this feature.
- This feature is available only when the busy extension is in a conversation with another extension or outside party.

- This feature will not function when the busy extension:
  - a) Has set Executive Busy Override Deny (→ 1.5.3 Executive Busy Override) or Data Line Security (→ 1.4.1 Data Line Security).
  - b) Is on a conference call (→ 1.3.13 Conference, → 1.5.3 Executive Busy Override, → 1.13.10 Privacy Release).
  - c) Is on a doorphone call (→ 1.4.10 Doorphone Call).
  - d) Is using Live Call Screening (LCS) or Two-way Record (→ 1.19.4 Voice Mail DPT (Digital) Integration).
  - e) Has a call on consultation hold (→ 1.4.6 DISA (Direct Inward System Access)).
- This feature stops when the busy extension user presses the following buttons during a conversation (→ 1.6.1 Fixed Buttons, → 1.6.3 Flexible Buttons):
  - FLASH/RECALL button
  - HOLD button
  - TRANSFER button
  - CONF (Conference) button
  - DSS button
  - EFA button
  - Two-way Record button
  - Two-way Transfer button
  - One-touch Two-way Transfer button
  - Voice Mail (VM) Transfer button

## Programming References

### PC Programming Manual

2.8.10 [2-6-3] Numbering Plan—B/NA DND Call Feature—Call Monitor

2.8.11 [2-7-1] Class of Service—COS Settings—CO & SMDR—Call Monitor

2.10.1 [4-1-1] Wired Extension—Extension Settings

→ Option 2—Data Mode

→ Option 3—Executive Override Deny

2.10.8 [4-2-1] Portable Station—Extension Settings—Option 3—Executive Override Deny

### PT Programming Manual

None

## Feature Manual References

1.3.16 COS (Class of Service)

## Operating Manual References

1.3.7 Call Monitor

## 1.3.5 Call Park

### Description

An extension user can place a call into a common parking zone of the PBX. The Call Park feature can be used as a transferring feature; this releases the user from the parked call to perform other operations. A parked call can be retrieved by any extension user.

### Conditions

- **Automatic Call Park**  
It is possible to select an idle parking zone automatically.
- **Retry**  
If the specified parking zone is occupied or there is no vacant zone for Automatic Call Park, the originator will hear a busy tone. Retrying is possible while hearing a busy tone by selecting another parking zone or a vacant zone.
- **Call Park Recall**  
If a parked call is not retrieved within a preprogrammed time period, the Call Park Recall tone will be heard at the Transfer Recall destination assigned to the extension which parked the call. If the destination is engaged in a call, the Hold Alarm will be heard.
- If a parked CO line call is not retrieved within a preprogrammed time period (Default: 30 minutes), it is automatically disconnected.
- **Call Park Button**  
Pressing the Call Park button parks or retrieves a call in a preset parking zone.  
Any flexible button can be customized as the Call Park button. It shows the current status of the preset parking zone as follows:

Light pattern	Status
Slow red flashing	A call is parked in the preset parking zone
Off	There are no parked calls

- **Call Park (Automatic Park Zone) Button**  
Pressing the Call Park (Automatic Park Zone) button parks a call in an idle parking zone automatically. Any flexible button can be customized as the Call Park (Automatic Park Zone) button.
- **Call Park Retrieve Deny**  
Internal Call Block (→ 1.9.12 Internal Call Block) also determines which extensions' calls an extension user can retrieve from a parking zone, i.e., if extension 101 cannot call extension 201, then it cannot retrieve extension 201's parked calls either.

### Programming References

#### PC Programming Manual

##### 2.8.4 [2-3] Timers & Counters

- Recall—Call Park Recall
- Recall—Disconnect after Recall

##### 2.8.8 [2-6-1] Numbering Plan—Main—Features—Call Park / Call Park Retrieve

##### 2.10.4 [4-1-4] Wired Extension—Flexible Button

- Type
- Parameter Selection (for Call Park)

- Optional Parameter (Ringing Tone Type Number) (for Call Park)
- 2.10.10 [4-2-3] Portable Station—Flexible Button
  - Type
  - Parameter Selection (for Call Park)
  - Optional Parameter (or Ringing Tone Type Number) (for Call Park)
- 2.10.13 [4-3] DSS Console—Flexible Button
  - Type
  - Parameter Selection (for Call Park)
  - Optional Parameter (Ringing Tone Type Number) (for Call Park)

**PT Programming Manual**

None

**Feature Manual References**

- 1.6.3 Flexible Buttons
- 2.1 Capacity of System Resources

**Operating Manual References**

- 1.3.6 Call Hold

**1.3.6 Call Pickup**

**Description**

An extension user can answer a call ringing at any other extension. The following types of Call Pickup are available:

Type	Description
<b>Directed</b>	A specified extension's call is answered.
<b>Group</b>	A call within a specified call pickup group is answered.

**Call Pickup Deny**

An extension user can prevent other extensions from picking up calls ringing at his or her own extension.

**Conditions**

- **Call Pickup applies to:**  
Intercom, CO line, and doorphone calls
- **Internal Call Block**  
An extension which cannot call certain extensions based on Class of Service (COS) programming (→ 1.9.12 Internal Call Block) also cannot pick up calls ringing at those extensions.

**[Directed Call Pickup]**

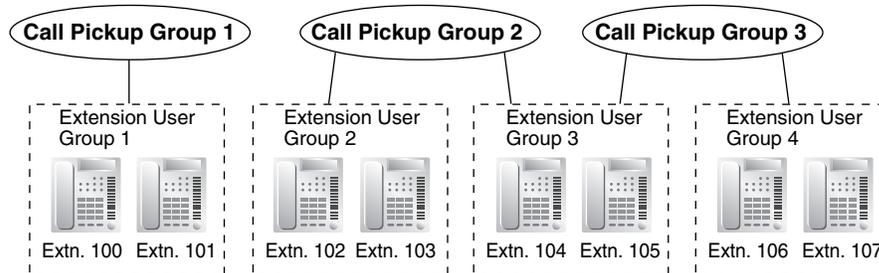
- A user can also pick up a call to a specified extension by pressing the corresponding DSS button. This feature is only available when DSS buttons for extensions or incoming call distribution (ICD) groups

have this feature enabled through system programming, and the light pattern of DSS buttons for incoming calls to extensions or ICD groups is set to "On or Flash" through system programming. The light pattern of a DSS button for an incoming call to an extension or Incoming Call Distribution (ICD) group can be programmed through system programming. Call Pickup is available only when the DSS button is red flashing.

### [Group Call Pickup]

- A specified number of call pickup groups can be created, each of which consists of extension user groups. One extension user group can belong to several call pickup groups. (→ 1.7.1 GROUP FEATURES)

#### [Example]



## Programming References

### PC Programming Manual

#### 2.8.8 [2-6-1] Numbering Plan—Main—Features

- Group Call Pickup
- Directed Call Pickup
- Call Pickup Deny Set / Cancel

#### 2.8.17 [2-9] System Options—Option 4

- DSS Key—DSS Key mode for Incoming Call
- DSS Key—Call Pick-up by DSS key for Direct Incoming Call
- DSS Key—Call Pick-up by DSS key for ICD Group Call

#### 2.9.4 [3-3] Call Pickup Group

#### 2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 3—Call Pickup Deny

#### 2.10.8 [4-2-1] Portable Station—Extension Settings—Option 3—Call Pickup Deny

### PT Programming Manual

#### [650] Extension User Groups of a Pickup Group

## Feature Manual References

#### 1.3.16 COS (Class of Service)

#### 2.1 Capacity of System Resources

## Operating Manual References

#### 1.3.9 Call Pickup

## 1.3.7 Call Splitting

### Description

During a conversation, an extension user can call another extension while putting the original party on Consultation Hold. The extension user can then alternate between the two parties and/or connect the original party with the third party.

### Conditions

- When the extension user is having a conversation with one party, the other party is in consultation hold. (→ 1.3.15 Consultation Hold)

### Operating Manual References

1.3.10 Call Splitting

## 1.3.8 Call Transfer

### Description

An extension user can transfer a call to another extension or an outside party. The following features are available:

Feature	Transferring method
<b>With Announcement</b>	Transfer is completed after announcing the transfer to the destination party.
<b>Without Announcement</b>	Transfer is completed without an announcement. After dialing the transfer destination, the originator can replace the handset once a ringback tone is heard.

Call Transfer with Announcement is also known as Call Transfer—Screened.

Call Transfer without Announcement is also known as Call Transfer—Unscreened.

### Conditions

- When an extension is transferring a party to another destination, the party will be in consultation hold until they reach the transfer destination. (→ 1.3.15 Consultation Hold)
- If Music on Hold is enabled, music can be sent to the held party while the call is being transferred. (→ 1.11.4 Music on Hold) It is programmable whether a ringback tone or music is sent to the caller.
- If the transfer destination extension has set FWD to an outside party, the call will be transferred to the outside party. (→ 1.6.6 FWD (Call Forwarding))
- Class of Service (COS) programming determines the extensions that are able to transfer a call to an outside party.
- **Transfer Recall for Call Transfer without Announcement**  
If the transfer destination does not answer within the preprogrammed Transfer Recall time, the call will be redirected to the Transfer Recall destination assigned to the extension which transferred the call. If a Transfer Recall destination is not assigned, the call will return to the extension.

**[Available destination for Transfer Recall]**

Destination	Availability
Wired Extension (PT/SLT)	✓
PS	✓
ICD Group	✓
PS Ring Group	
Floating Extension no. for SVM	
VM Group (DTMF/DPT)	
External Pager (TAFAS)	
DISA	
Analog Remote Maintenance	
Idle Line Access no. + Phone no.	
Trunk Group Access no. + Trunk Group no. + Phone no.	

- Automatic Transfer by DSS Button**  
 Pressing a DSS button during a conversation with an extension or outside party can automatically transfer the call to the specified destination. It is possible through system programming to prevent this feature operating for extension to extension calls.

## Programming References

### PC Programming Manual

- 2.8.3 [2-2] Operator & BGM—BGM and Music on Hold—Sound on Transfer
- 2.8.4 [2-3] Timers & Counters—Dial / IRNA / Recall / Tone—Recall—Transfer Recall
- 2.8.11 [2-7-1] Class of Service—COS Settings—TRS—Transfer to CO
- 2.8.17 [2-9] System Options—Option 4—Transfer—Transfer to Busy Extension without BSS Operation
- 2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 1—Transfer Recall Destination
- 2.10.8 [4-2-1] Portable Station—Extension Settings—Option 1—Transfer Recall Destination

### PT Programming Manual

- [201] Transfer Recall Time
- [503] Call Transfer to CO Line
- [712] Music for Transfer

## Feature Manual References

- 1.3.16 COS (Class of Service)

## Operating Manual References

- 1.3.11 Call Transfer

## 1.3.9 Call Waiting Tone

### Description

When an extension user attempts to call a busy extension (i.e., an extension that is ringing or having a conversation), a call waiting tone can be sent to the called extension to indicate another call is waiting. The tone can be heard from either the handset or the built-in speaker. The busy extension user can answer the second call by disconnecting the current call or placing it on hold.

Call Waiting can be enabled or disabled for intercom calls and CO line calls separately. Note that doorphone calls and CO line calls transferred from another extension or received via an incoming call distribution group are treated as CO line calls.

Call Waiting is also known as Busy Station Signaling (BSS).

### Conditions

- This feature functions only if the called extension has activated call waiting. If it is activated, the calling extension will hear a ringback tone.
- One of two call waiting tones can be selected (Tone 1 or Tone 2) through personal programming (Call Waiting Tone Type Selection).
- A PT user can hear different Call Waiting tones for CO line calls and intercom calls if "Tone 2" has been selected through personal programming (Call Waiting Tone Type Selection). If "Tone 1" has been selected, the same Call Waiting tone will be heard for both CO line calls and intercom calls. All Call Waiting tone patterns have a default (→ 2.2 Tones/Ring Tones).
- Call Waiting call for an extension in a VM group (DPT/DTMF) is not available.
- **Automatic Call Waiting**  
Through system programming, it is possible to select whether a call waiting tone is automatically sent to the extension when receiving CO line calls, doorphone calls, external sensor calls and hold-recall calls. Through system programming, it is also possible to select whether extensions will receive Automatic Call Waiting from intercom calls.
- **Data Line Security**  
Setting Data Line Security cancels the Call Waiting setting. (→ 1.4.1 Data Line Security)
- **Caller Information**  
With the Call Waiting tone, the caller's information flashes on the display for five seconds, followed by a 10-second pause, then flashes again for five seconds.
- **Call Waiting from the Telephone Company**  
Besides the Call Waiting service within the PBX, the Call Waiting tone offered from the telephone company informs the extension user of another incoming CO line call that is waiting. He can answer the second call by disconnecting the current call or placing it on hold using EFA. For details, consult your telephone company.
- **Call Waiting Caller ID (Visual Caller ID)**  
When using the call waiting tone supplied by the telephone company, the waiting caller's telephone number and name can be received. Either the name or the number will flash on the display for five seconds, followed by a 10-second pause, then flash again for five seconds.  
Note that the received caller information will not be displayed on telephones or wireless phones connected to SLT ports.
- Call waiting tone is available when the called extension is having a conversation with another party. If the extension is not having a conversation but is unavailable to receive the notification (dialing a number, for example), the calling extension will be kept waiting until the called extension becomes available. Even while waiting, the calling extension will hear a ringback tone.
- If call waiting tone is not set at the called party, the caller will hear a reorder tone after trying to send a call waiting notification.

### Programming References

#### PC Programming Manual

- 2.7.7 [1-1] Slot—LCO Card Property—Caller ID—Caller ID Signalling
- 2.8.4 [2-3] Timers & Counters—Miscellaneous—Caller ID—Visual Caller ID Display
- 2.8.8 [2-6-1] Numbering Plan—Main—Features
  - Call Waiting Mode: Manual Call Waiting for Extension Call
  - Call Waiting Mode: Automatic Call Waiting
- 2.8.10 [2-6-3] Numbering Plan—B/NA DND Call Feature
  - BSS / DND Override
  - BSS / DND Override-2
- 2.10.1 [4-1-1] Wired Extension—Extension Settings
  - Option 2—Manual C. Waiting for Extension Call
  - Option 2—Automatic C. Waiting
  - Option 4—Call Waiting Tone Type
- 2.10.8 [4-2-1] Portable Station—Extension Settings
  - Option 2—Manual C. Waiting for Extension Call
  - Option 2—Automatic C. Waiting
  - Option 4—Call Waiting Tone Type

#### PT Programming Manual

None

### Operating Manual References

- 1.3.13 Call Waiting Tone
- 3.1.2 Personal Programming

## 1.3.10 CLI (Calling Line Identification) Distribution

### Description

Directs an incoming CO line call to a specific destination when the caller's telephone number matches a number in the System Speed Dialing Table. Each telephone number in this table can be assigned its own Calling Line Identification (CLI) destination.

CLI distribution allows you to direct calls from specific people to specific destinations, and has many applications. For example, you can program the PBX to automatically connect calls from priority clients to their sales representatives, or automatically connect mobile phone calls from an executive to his or her assistant.

In order for CLI distribution to function, the PBX must receive Caller ID information from the telephone company.

CLI distribution works in conjunction with Direct In Line (DIL) distribution; it can be enabled or disabled for each time mode assigned on each CO line.

When a call has Caller ID information and CLI distribution is enabled for the current time mode, CLI distribution will direct the call to its destination, ignoring preprogrammed DIL destinations.

**[Programming Example: System Speed Dialing Table]**

Location (System Speed Dialing No.)	System Speed Dialing Name <sup>*1</sup>	Telephone No. <sup>*2</sup>	CLI Destination <sup>*3</sup>
000	ABC Company	912125551234	200
001	XYZ Company	913135551234	300

\*1: → 2.12.1 [6-1] System Speed Dial—Name  
→ [001] System Speed Dialing Number

\*2: → 2.12.1 [6-1] System Speed Dial—CO Line Access Number + Telephone Number  
→ [002] System Speed Dialing Name

\*3: → 2.12.1 [6-1] System Speed Dial—CLI Destination

**In this example:**

If the caller's telephone number is "1-212-555-1234":

- 1) The PBX looks for the number in the System Speed Dialing Table. (The CO Line Access number, "9", is disregarded.) The number is found in location 000.
- 2) If CLI distribution is enabled in the current time mode for the CO line carrying the call (for DIL distribution), the call is routed to its CLI destination, extension 200.

**Conditions**

- **If Automatic Caller ID Modification is used:**  
Store the modified number in the System Speed Dialing Table.

**Programming References****PC Programming Manual**

2.12.1 [6-1] System Speed Dial

→ Name

→ CO Line Access Number + Telephone Number

→ CLI Destination

2.15.2 [9-2] DIL Table & Port Settings—DIL—CLI Ring for DIL—Day, Lunch, Break, Night

**PT Programming Manual**

[001] System Speed Dialing Number

[002] System Speed Dialing Name

**Feature Manual References**

1.3.1 Caller ID

1.4.5 DIL (Direct In Line)

1.9.8 INCOMING CALL FEATURES

1.16.4 Speed Dialing, System

## 1.3.11 CO Line Access

### Description

There are three methods of accessing a CO line.

Method	Description	Operation
<b>Idle Line Access (Local Access)</b>	Selects an idle CO line automatically from the assigned trunk groups.	Dial the Idle Line Access number or press a L-CO button.
<b>Trunk Group Access</b>	Selects an idle CO line from the corresponding trunk group.	Dial the Trunk Group Access number and a trunk group number, or press a G-CO button.
<b>S-CO Line Access</b>	Selects the desired CO line directly.	Dial the S-CO Line Access number and the CO line number, or press the S-CO button.

### Conditions

- Class of Service (COS) programming determines the trunk groups available for making calls.
- CO Line numbers can be referred on a CO line port basis.
- **Button Assignment**

A flexible button can be customized as a G-CO, L-CO, or S-CO button as follows:

Type	Assignable parameter
<b>Loop-CO (L-CO)</b>	Any trunk group that is made available for Idle Line Access through system programming is applied.
<b>Group-CO (G-CO)</b>	A trunk group is assigned.
<b>Single-CO (S-CO)</b>	A specified CO line is assigned.

It is possible to assign:

- the same CO line to the S-CO button and to a G-CO button.
- the same trunk group to more than one G-CO button.
- more than one L-CO button.

Dialing the CO Line Access number selects a CO button according to the following priority: S-CO → G-CO → L-CO

- **Direct CO Line Access**  
If an extension user is on-hook when pressing an idle CO button, the proprietary telephone (PT) automatically enables hands-free operation mode. The user can dial without lifting the handset or pressing the SP-PHONE button or MONITOR button.
- **Group Hunting Order for Idle Line Access**  
An idle CO line is selected from the trunk groups assigned for Idle Line Access. If multiple trunk groups are available, the trunk group hunting sequence can be determined through system programming.
- **CO Line Hunting Order for Idle Line Access and Trunk Group Access**  
The CO line hunting sequence in a trunk group (from lowest numbered CO line, from highest numbered CO line or rotation) can be determined through system programming.

- A company name or customer name can be assigned on a CO line port basis so that the operator or extension user who is answering the call can view the destination which the caller is trying to reach before answering. This is useful, for example, when multiple companies share the same operator.
- It is possible to identify the CO line port that has a CO line connected to it. This prevents extension users from originating a call to a CO line which is not connected.

## Programming References

### PC Programming Manual

- 2.7.4 [1-1] Slot—Extension Port—Connection
- 2.7.8 [1-1] Slot—LCO Port—Connection
- 2.8.8 [2-6-1] Numbering Plan—Main—Features
  - Idle Line Access (Local Access)
  - Trunk Group Access
  - Single CO Line Access
- 2.8.12 [2-7-2] Class of Service—External Call Block
- 2.9.1 [3-1-1] Trunk Group—TRG Settings—Main—Line Hunting Order
- 2.9.2 [3-1-2] Trunk Group—Local Access Priority
- 2.10.4 [4-1-4] Wired Extension—Flexible Button
  - Type
  - Parameter Selection (for Single CO)
  - Parameter Selection (for Group CO)
- 2.10.10 [4-2-3] Portable Station—Flexible Button
  - Type
  - Parameter Selection (for Single CO)
  - Parameter Selection (for Group CO)
- 2.10.13 [4-3] DSS Console—Flexible Button
  - Type
  - Parameter Selection (for Single CO)
  - Parameter Selection (for Group CO)
- 2.14.1 [8-1] System Settings—ARS Mode
- 2.15.1 [9-1] CO Line Settings—CO Name

### PT Programming Manual

- [400] LCOT CO Line Connection
- [401] LCOT CO Line Name
- [409] LCOT CO Line Number Reference
- [500] Trunk Group Number

## Feature Manual References

- 1.3.16 COS (Class of Service)
- 1.6.3 Flexible Buttons

## Operating Manual References

- 1.2.1 Making Calls

## 1.3.12 CO Line Call Limitation

### Description

CO line calls are limited by the following features:

Feature	Description
<b>Extension-to-CO Line Call Duration</b>	If a call between an extension user and an outside party is established, the call duration can be restricted by the system timer selected for each trunk group. Both parties will hear warning tones at five-second intervals starting 15 seconds before the time limit. When the time limit expires, the line will be disconnected. COS programming determines whether this feature is enabled or disabled. Whether this feature applies to outgoing calls only, or to both outgoing and incoming calls is determined through system programming.
<b>CO-to-CO Line Call (except Unattended Conference Call) Duration</b>	If a call between two outside parties is established, the call duration can be restricted by the system timer selected for each trunk group. Both parties will hear warning tones at five-second intervals starting 15 seconds before the time limit. When the time limit expires, the line will be disconnected. If both parties involved in the CO-to-CO line call were established by an extension (e.g., an extension makes a CO line call, then transfers the call to an outside party), the time limit applied to the CO line call that was made first will be used.
<b>Dialing Digit Restriction during Conversation</b>	While engaged in an incoming CO line call, the dialing of digits can be restricted. If the number of dialed digits exceeds the limitation, the line will be disconnected.

### Conditions

- During an Unattended Conference Call, the Unattended Conference Recall time is applied. (→ 1.3.13 Conference)
- When using LCO lines that do not support Calling Party Control (CPC) signal detection (→ 1.3.17 CPC (Calling Party Control) Signal Detection), the CO-to-CO Line Call Duration timer should not be disabled, as automatic end of call detection cannot be performed.

### Programming References

#### PC Programming Manual

2.8.11 [2-7-1] Class of Service—COS Settings—TRS—Extension-CO Line Call Duration Limit

2.8.17 [2-9] System Options—Option 2—Extension - CO Call Limitation—For Incoming Call

2.9.1 [3-1-1] Trunk Group—TRG Settings—Main

→ CO-CO Duration Time

→ Extension-CO Duration Time

2.13.5 [7-5] Miscellaneous—Dial Digits Limitation After Answering—Dial Digits

#### PT Programming Manual

[472] Extension-to-CO Line Call Duration

[473] CO-to-CO Line Call Duration

[502] CO Line Call Duration Limitation

## Feature Manual References

1.3.16 COS (Class of Service)

### 1.3.13 Conference

#### Description

An extension user can establish a conference call by adding additional parties to an already existing two-party conversation. This PBX supports three-party through eight-party conference calls. Conferences with more than four parties are only possible when a PT user originates the conference.

#### Unattended Conference:

The conference originator can leave the conference and allow other parties to continue. Establishing an Unattended Conference allows the originator to return to the conference. Unattended Conferences can only be established by PT users.

#### Conditions

- When an extension is establishing a conference call the original party is put on hold.
- **CONF (Conference) Button**  
For a PT which does not have the CONF button, a flexible button can be customized as the Conference button.
- **Unattended Conference Call Duration**  
The length of time that a conference call can remain unattended is restricted by the following timers:
  - Callback Start Timer
  - Warning Tone Start Timer
  - Disconnect Timer
 These timers behave and operate according to the following chain of events:
  - 1) When the unattended conference is established, the Callback Start Timer will begin.
  - 2) When the Callback Start timer expires, the Unattended Conference originator's extension will start to receive a callback ringing from the PBX and the Warning Tone Start Timer begins.
  - 3) When the Warning Tone Start Timer expires, the remaining parties of the conference will start to hear a warning tone, the callback ringing will continue to be heard at the Unattended Conference originator's extension, and the Disconnect Timer begins.
  - 4) When the disconnect Timer expires, the conference is disconnected.
 If the Unattended Conference originator returns to the conference before the line is disconnected, all timers are cleared.
- **For a Conference With Six or More Parties**  
The ECHO card is required. Also the echo canceling function should be enabled through system programming.

## Installation Manual References

2.5.2 ECHO8 Card (KX-TAW84866)

## Programming References

### PC Programming Manual

2.8.4 [2-3] Timers & Counters—Dial / IRNA / Recall / Tone

- Unattended Conference—Recall Start Timer
- Unattended Conference—Warning Tone Start Timer
- Unattended Conference—Disconnect Timer

2.8.11 [2-7-1] Class of Service—COS Settings—TRS—Transfer to CO

2.8.17 [2-9] System Options—Option 3

- Confirmation Tone—Tone 4-1 : Start Conference
- Confirmation Tone—Tone 4-2 : Finish Conference
- Echo Cancel—Conference

2.10.4 [4-1-4] Wired Extension—Flexible Button—Type

2.10.10 [4-2-3] Portable Station—Flexible Button—Type

2.10.13 [4-3] DSS Console—Flexible Button—Type

### PT Programming Manual

None

## Feature Manual References

1.6.3 Flexible Buttons

2.1 Capacity of System Resources

## Operating Manual References

1.3.15 Conference

## 1.3.14 Confirmation Tone

### Description

At the end of feature operations, the PBX confirms the success of the operation by sending a confirmation tone to extension users.

Type	Description
<b>Tone 1</b>	<p><b>a)</b> Sent when the setting is accepted.</p> <p><b>b)</b> Sent when a call is received in voice-calling mode (Alternate Receiving—Ring/Voice). The caller's voice will be heard after the tone.</p>
<b>Tone 2</b>	<p><b>a)</b> Sent from an external paging device or an extension before being paged.</p> <p><b>b)</b> Sent when a call is received while an extension is in Hands-free Answerback mode.</p>

Type	Description
<b>Tone 3-1</b>	<p><b>a)</b> Sent before a conversation is established using the Paging feature.</p> <p><b>b)</b> Sent to the caller when a conversation is established with an extension in one of the following modes:</p> <ul style="list-style-type: none"> <li>• Hands-free Answerback mode</li> <li>• Voice-calling mode (Alternate Receiving—Ring/Voice)</li> </ul> <p><b>c)</b> Sent when making a call to or from a doorphone.</p>
<b>Tone 3-2</b>	<p>Sent before a conversation is established when accessing the following features by their feature numbers:</p> <ul style="list-style-type: none"> <li>• Call Park Retrieve</li> <li>• Call Pickup</li> <li>• Hold Retrieve</li> <li>• Paging Answer</li> <li>• Trunk Answer From Any Station (TAFAS)</li> </ul>
<b>Tone 4-1</b>	<p>Sent when a call changes from a two-party call to a three-party call (e.g., Executive Busy Override, Conference, Privacy Release, Two-way Record).</p>
<b>Tone 4-2</b>	<p>Sent when a call changes from a three-party call to a two-party call (e.g., Executive Busy Override, Conference, Privacy Release, Two-way Record).</p>
<b>Tone 5</b>	<p>Sent when a call is placed on hold (including a consultation hold).</p>

## Conditions

- **Confirmation Tone Patterns**  
All confirmation tone patterns have a default (→ 2.2 Tones/Ring Tones).
- It is possible to eliminate each tone.

## Programming References

### PC Programming Manual

#### 2.8.17 [2-9] System Options—Option 3

- Confirmation Tone—Tone 1 : Doorphone / Called by Voice
- Confirmation Tone—Tone 2 : Paged / Automatic Answer
- Confirmation Tone—Tone 3-1 : Start Talking after making call
- Confirmation Tone—Tone 3-2 : Start Talking after answering call
- Confirmation Tone—Tone 4-1 : Start Conference
- Confirmation Tone—Tone 4-2 : Finish Conference
- Confirmation Tone—Tone 5 : Hold

### PT Programming Manual

None

### 1.3.15 Consultation Hold

#### Description

Consultation Hold is a condition that a party is in, when an extension is calling other parties in order to perform Call Transfer, Conference, or Call Splitting. When the operation is completed or canceled, the consultation hold is released.

In Consultation Hold, the original call is treated as if it is on hold, allowing the extension to call a third party all on one line. In Call Hold, the party on hold and the third party are connected to the extension using separate lines.

#### Feature Manual References

- 1.3.7 Call Splitting
- 1.3.8 Call Transfer
- 1.3.13 Conference

### 1.3.16 COS (Class of Service)

#### Description

Each extension must belong to a Class of Service (COS). By assigning certain extensions to a COS, it is possible to control the behavior and privileges of extension users (allowing or denying certain extensions access to various features, extensions, and CO lines) depending on the duties appointed to them.

Many extensions can belong to the same COS by assigning each extension the same COS number, allowing the same restrictions and privileges to apply to a group of extensions.

The following features are controlled on a COS basis:

- a)** → 1.9.12 Internal Call Block
- b)** → 1.6.6 FWD (Call Forwarding)
- c)** → 1.4.8 DND (Do Not Disturb)—DND Override
- d)** → 1.1.2 Account Code Entry
- e)** → 1.3.11 CO Line Access
- f)** → 1.5.3 Executive Busy Override
- g)** → 1.3.4 Call Monitor
- h)** → 1.17.5 TRS (Toll Restriction)
- i)** → 1.5.4 Extension Dial Lock
- j)** → 1.20.1 Walking COS
- k)** → 1.3.12 CO Line Call Limitation
- l)** → 1.3.8 Call Transfer
- m)** → 1.4.9 Door Open
- n)** → 1.4.6 DISA (Direct Inward System Access)
- o)** → 1.20.3 Wireless XDP Parallel Mode
- p)** → 1.16.1 SMDR (Station Message Detail Recording)—SMDR for Outgoing CO Line Calls
- q)** → 1.17.4 Time Service—Time Service Switching

- r) → 1.11.1 Manager Features
- s) → 1.13.15 PT Programming

## Conditions

- **Walking COS**  
Extension users can make a call from extensions of a less-privileged COS by using their own COS temporarily. (→ 1.20.1 Walking COS)

## Programming References

### PC Programming Manual

- 2.8.11 [2-7-1] Class of Service—COS Settings
- 2.10.1 [4-1-1] Wired Extension—Extension Settings—Main—COS
- 2.10.8 [4-2-1] Portable Station—Extension Settings—Main—COS

### PT Programming Manual

- 2.1.8 COS Programming
- [602] Class of Service

## Feature Manual References

- 2.1 Capacity of System Resources

# 1.3.17 CPC (Calling Party Control) Signal Detection

## Description

The Calling Party Control (CPC) signal is an on-hook indication (disconnect signal) sent from an analog CO line when the other party hangs up. To maintain efficient utilization of CO lines, the PBX monitors each line's status and when CPC signal is detected on a line, the PBX disconnects the line and alerts the extension with a reorder tone.

## Conditions

- CPC signal detection is programmable for incoming CO line calls, and for outgoing CO line calls.
- If your telephone company sends signals similar to CPC, it is recommended not to enable CPC signal detection on outgoing CO line calls.
- If CPC signal is detected during a conference call (→ 1.3.13 Conference), the line is disconnected. The remaining parties stay connected.
- If CPC signal is detected during a call between a caller using the Direct Inward System Access (DISA) feature (→ 1.4.6 DISA (Direct Inward System Access)) and an extension or an outside party, the line is disconnected.

## Programming References

### PC Programming Manual

- 2.7.8 [1-1] Slot—LCO Port—CPC Signal Detection Time—Outgoing, Incoming

### PT Programming Manual

## 1.3 C

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[413] LCOT CPC Signal Detection Time—Outgoing

[414] LCOT CPC Signal Detection Time—Incoming

## 1.4 D

### 1.4.1 Data Line Security

#### Description

Once Data Line Security is set on an extension, communication between the extension and the other party is protected from signals such as Call Waiting, Hold Recall and Executive Busy Override. Extensions which have devices connected to them such as modems or fax machines may set this feature to maintain secure data transmission, by blocking tones or other interruptions during communication.

#### Programming References

##### PC Programming Manual

2.8.8 [2-6-1] Numbering Plan—Main—Features—Data Line Security Set / Cancel

2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 2—Data Mode

##### PT Programming Manual

None

#### Operating Manual References

1.3.17 Data Line Security

### 1.4.2 Dial Mode Selection

#### Description

The dialing mode (rotary or tone) can be selected for each CO line through system programming regardless of the originating extension (under contract with the telephone company).

Mode	Description
<b>DTMF (Dual Tone Multi-Frequency)</b>	Numbers dialed by an extension user are transmitted to the CO line using analog tones.
<b>Pulse Dial (Rotary)</b>	Numbers dialed by an extension user are transmitted to the CO line using analog pulses.

#### Conditions

- Pulse to Tone Conversion**  
 It is possible for an extension user to temporarily switch from Pulse mode to DTMF mode in order to access special services such as computer-accessed long distance calling or voice mail services. To switch to DTMF mode, wait for a preprogrammed time period (Default: 5 seconds) after the CO line is connected, or press ✖. This feature works only on CO lines set to Pulse mode. DTMF mode cannot be changed to Pulse mode.
- It is possible to select a pulse rate for the CO line port which has been set to Pulse mode. There are two pulse rates: Low (10 pps) and High (20 pps).

## 1.4 D

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- It is possible to assign the minimum duration of the DTMF signal sent to the CO line port which has been set to DTMF mode.

### Programming References

#### PC Programming Manual

##### 2.7.8 [1-1] Slot—LCO Port

- Dialing Mode
- DTMF Width
- Pulse Speed

#### PT Programming Manual

##### [410] LCOT Dialing Mode

##### [411] LCOT Pulse Rate

##### [412] LCOT DTMF Minimum Duration

## 1.4.3 Dial Tone

### Description

The following dial tones inform extension users about features activated on their extensions:

Each dial tone type has two frequencies, such as dial tone 1A and dial tone 1B.

Type	Description
<b>Tone 1A/1B</b>	A normal dial tone is heard when: <ul style="list-style-type: none"><li><b>a)</b> No features listed for dial tones 2 through 4 has been set, or</li><li><b>b)</b> Automatic Route Selection (ARS) is used.</li></ul>
<b>Tone 2A/2B</b>	This tone is heard when: <ul style="list-style-type: none"><li>• There are messages that have previously been listened to and no new messages on the SVM card.*</li><li>• Any of the features below are set.<ul style="list-style-type: none"><li>• Absent Message</li><li>• BGM</li><li>• Call Forwarding (FWD)</li><li>• Call Pickup Deny</li><li>• Call Waiting</li><li>• Do Not Disturb (DND)</li><li>• Extension Dial Lock</li><li>• Executive Busy Override Deny</li><li>• Hot Line</li><li>• Timed Reminder</li></ul></li></ul>

Type	Description
<b>Tone 3A/3B</b>	This tone is heard when: <ul style="list-style-type: none"> <li>• A called PS is being searched for.</li> <li>• The recording time used by the Simplified Voice Message (SVM) feature reaches the limit.*</li> <li>• Any of the features below are performed.               <ul style="list-style-type: none"> <li>• Account Code Entry</li> <li>• Consultation Hold</li> <li>• Answering a Timed Reminder call with no message</li> </ul> </li> </ul>
<b>Tone 4A/4B</b>	This tone is heard when new messages have been recorded for the extension.

\*: Active even when distinctive dial tones are disabled.

## Conditions

- **Dial Tone Type A/B**  
Through system programming, it is possible to select dial tone type A or B for dial tones 1 through 4. If "Type A" is selected, all dial tones 1 through 4 will become dial tone type A. The dial tone type for the ARS feature can be selected separately. If "Type A" is selected for ARS, dial tone 1A will be heard. If "Type B" is selected, dial tone 1B will be heard.
- **Distinctive Dial tone**  
Distinctive dial tones can be disabled. When disabled, dial tone 1 will be heard in all cases except those marked with "\*" in the table above.
- **Dial Tone Patterns**  
All dial tone patterns have a default (→ 2.2 Tones/Ring Tones).
- Only dial tone 1 is sent to the extensions in a VM (DPT/DTMF) group. (→ 1.19.3 Voice Mail (VM) Group)

## Programming References

### PC Programming Manual

- 2.8.17 [2-9] System Options—Option 3
- Dial Tone—Distinctive Dial Tone
  - Dial Tone—Dial Tone for Extension
  - Dial Tone—Dial Tone for ARS

### PT Programming Manual

None

## 1.4.4 Dial Tone Transfer

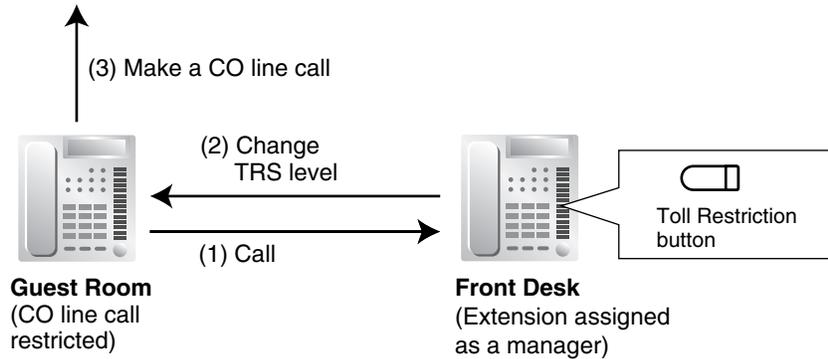
### Description

An extension assigned as the manager can change the TRS level (→ 1.17.5 TRS (Toll Restriction)) for an extension user temporarily. After that, the extension user can make his call.

## 1.4 D

### [Example]

A hotel guest calls the front desk and asks for the telephone's toll restriction to be lifted in order to make an international call.



### Conditions

- The modified TRS level only applies to the next one call placed at the user's extension.
- **Toll Restriction Button**  
A manager extension must store the TRS level granted by the Dial Tone Transfer beforehand, when assigning a flexible button as the Toll Restriction button.

### Programming References

#### PC Programming Manual

##### 2.10.4 [4-1-4] Wired Extension—Flexible Button

→Type

→Parameter Selection (for TRS Level Change)

##### 2.10.10 [4-2-3] Portable Station—Flexible Button

→Type

→Parameter Selection (for TRS Level Change)

##### 2.10.13 [4-3] DSS Console—Flexible Button

→Type

→Parameter Selection (for TRS Level Change)

#### PT Programming Manual

None

### Feature Manual References

#### 1.6.3 Flexible Buttons

### Operating Manual References

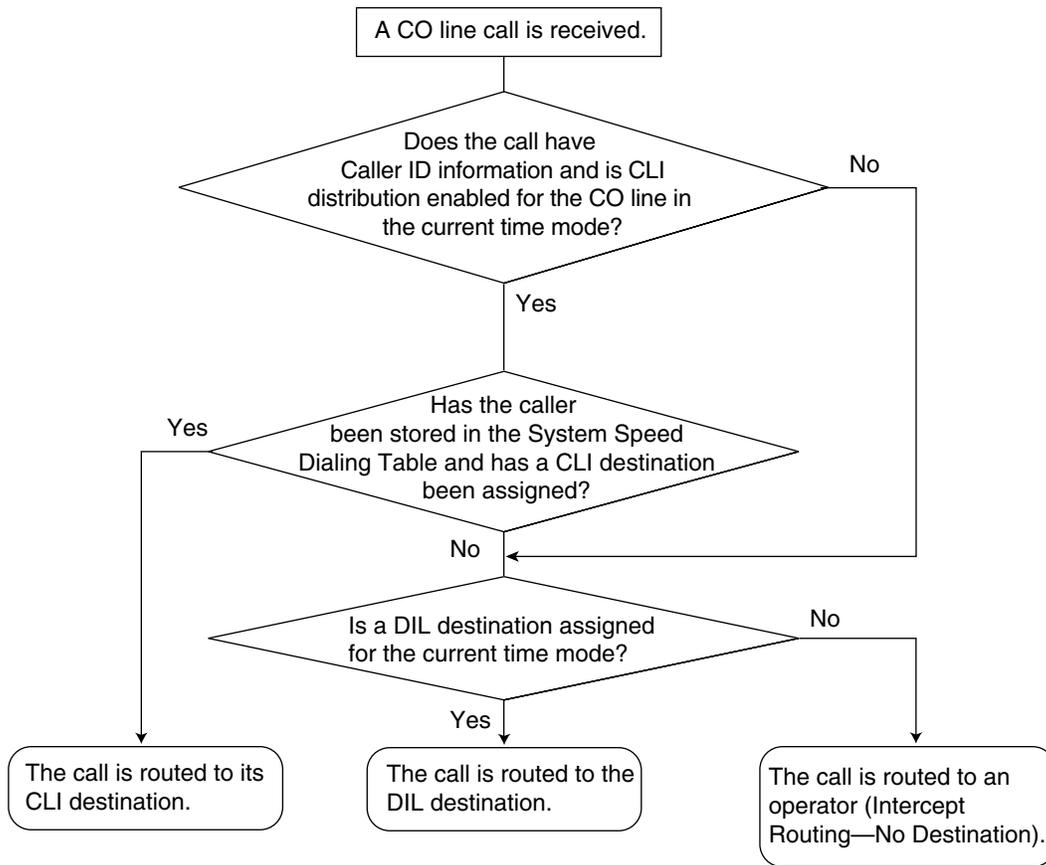
#### 2.1.1 Dial Tone Transfer

## 1.4.5 DIL (Direct In Line)

### Description

Directs an incoming CO line call to a preprogrammed destination based on the CO line carrying the call. Each CO line has a destination for each time mode.

#### [Method Flowchart]



#### [Programming Example: DIL Table]

The table can be programmed for each CO line.

Port No. (CO Line No.)	CLI Distribution				DIL Destination*			
	Day	Lunch	Break	Night	Day	Lunch	Break	Night
01	Enable	Disable	Enable	Disable	101	100	101	100
02	Enable	Disable	Disable	Disable	102	100	102	100

\*: → 2.15.2 [9-2] DIL Table & Port Settings—DIL—DIL Destination—Day, Lunch, Break, Night  
 → [450] DIL 1:1 Destination

#### In this example:

If a CO line call is received on CO line 01:

## 1.4 D

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In day mode: Calling Line Identification (CLI) distribution is enabled. The call is routed to its CLI destination, if assigned. If not assigned, the call is routed to the Direct In Line (DIL) destination, extension 101.

In lunch mode: CLI distribution is disabled. The call is routed to the DIL destination, extension 100.

### **Note**

Tenant numbers and VPS trunk group numbers (not shown here) can also be programmed in the DIL Table.

The tenant number programmed here is used only to determine the Time Table used by each CO line; selecting tenant 3 means the CO line will use Time Table 3, for example. The VPS trunk group number set here is used to determine the Incoming Call Service and greeting message used by the Voice Processing System (VPS) during the current time mode. (→ 1.19.4 Voice Mail DPT (Digital) Integration).

## Conditions

- To use this feature, DIL must be assigned as the distribution method for the desired CO line port.

## Programming References

### **PC Programming Manual**

2.15.2 [9-2] DIL Table & Port Settings—DIL

→ DIL Destination—Day, Lunch, Break, Night

→ Tenant Number

→ VM Trunk Group

### **PT Programming Manual**

[450] DIL 1:1 Destination

## Feature Manual References

1.3.10 CLI (Calling Line Identification) Distribution

1.9.8 INCOMING CALL FEATURES

1.17.4 Time Service

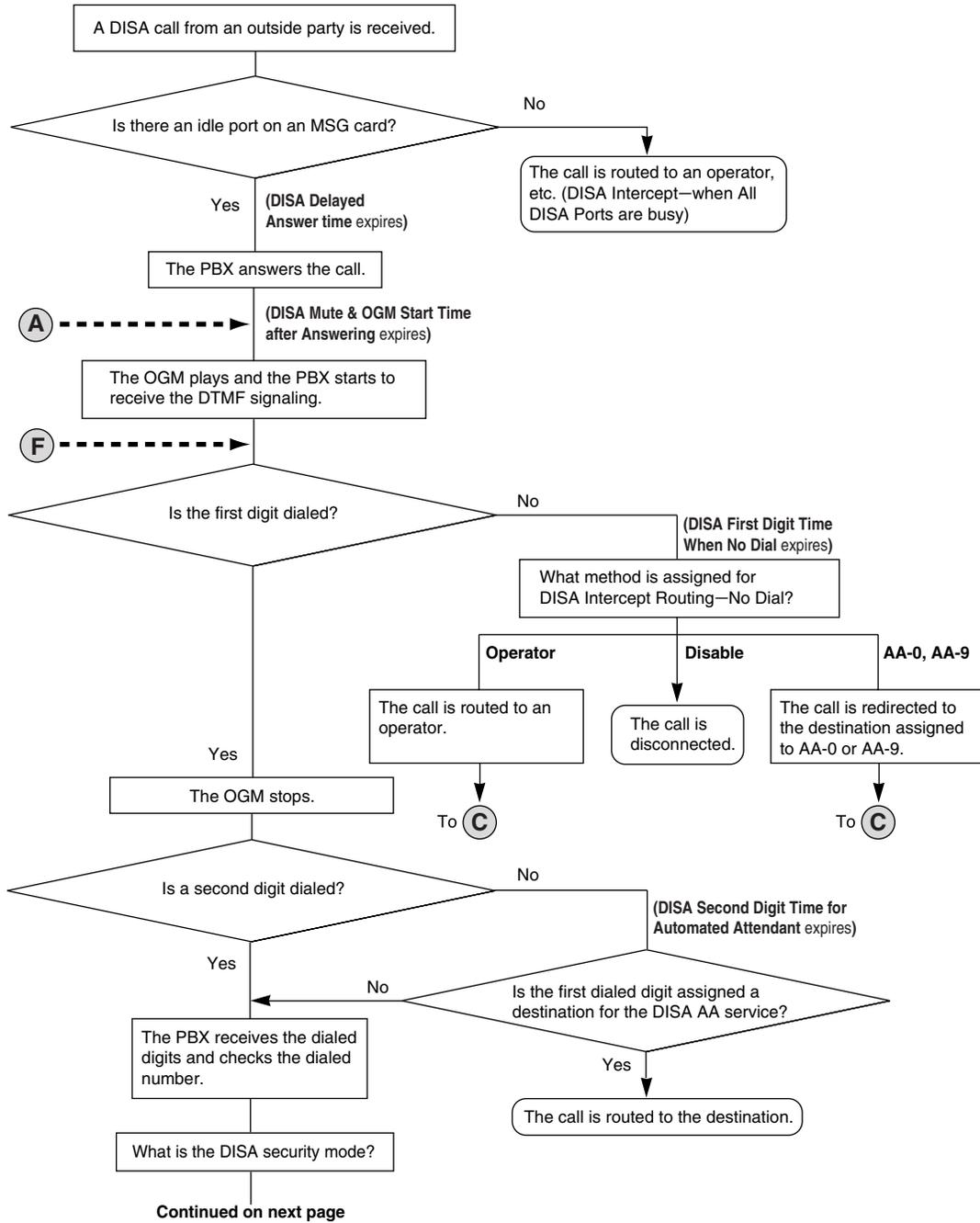
## 1.4.6 DISA (Direct Inward System Access)

### Description

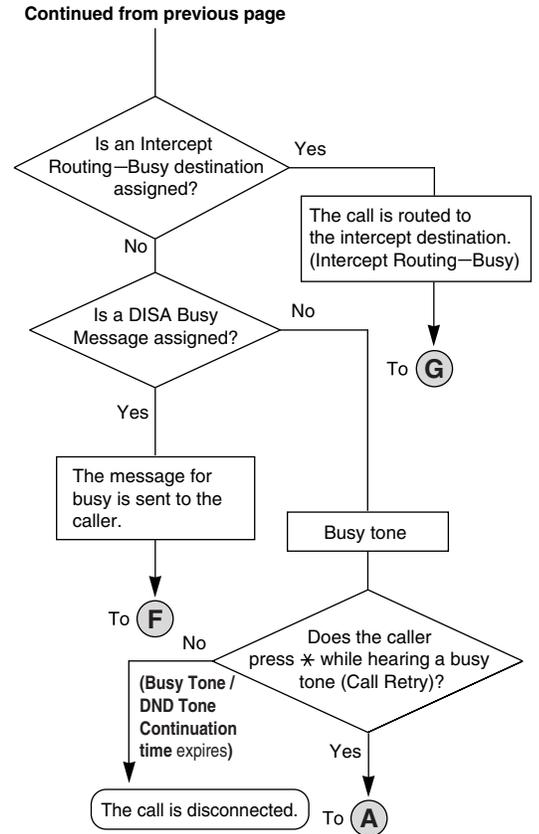
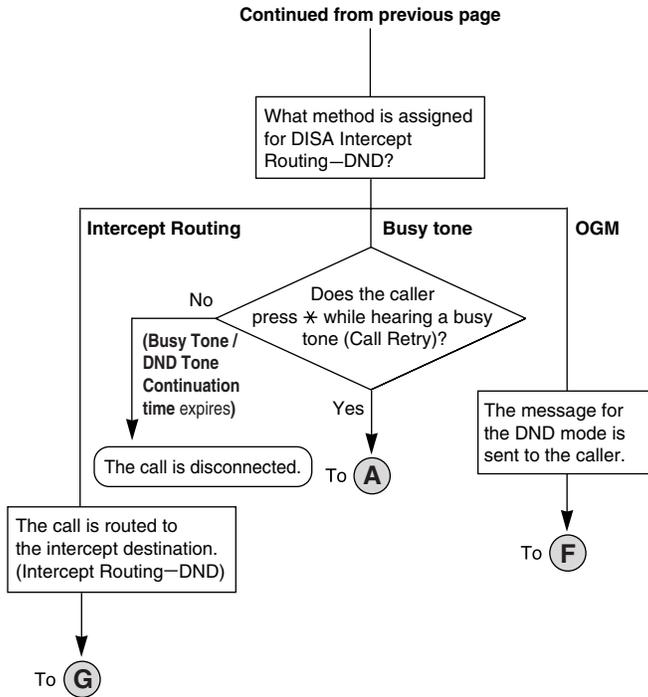
An outside caller can access specific PBX features as if the caller is an SLT extension user in the PBX, when the incoming call destination is a DISA floating extension number assigned to each DISA message. The caller can have direct access to features such as:

- Placing an intercom call to an extension, operator or any floating extensions (e.g., modem for remote system administration, an external pager for TAFAS).
- Calling an outside party via the PBX.
- Operating some PBX remote features (e.g., FWD)

[Flowchart]







**DISA Intercept Routing—No Dial**

If the caller fails to dial any digits within a preprogrammed time period (DISA 1st Dial Time for Intercept) after hearing the outgoing message (OGM), one of the following can be selected through system programming:

- a) **Disable:** The call will be terminated.
- b) **Operator:** The call will be redirected to the operator.
- c) **AA-0, AA-9:** The call will be redirected to the destination assigned to that AA number.

→ 2.8.4 [2-3] Timers & Counters—DISA / Door / Reminder / U. Conf—DISA—No Dial Intercept Timer  
 → [211] DISA Intercept Time

→ 2.11.3 [5-3-1] Voice Message—DISA System—Option 1—DISA Intercept—Intercept when No Dial after DISA answers

**DISA Built-in Automated Attendant Number (DISA AA Service)**

After listening to the outgoing message (OGM), the caller may dial a single digit (DISA AA number). The destination for each DISA AA number can be assigned for each message. It is also possible to assign other DISA floating extension numbers as the destination (**Multistep DISA AA Service**).

If the caller dials a second digit within a preprogrammed time period (DISA 2nd Dial Time for AA), the DISA AA service is not employed.

→ 2.11.4 [5-3-2] Voice Message—DISA Message—1 Digit AA Destination (Extension Number)—Dial 0–9  
 → 2.8.4 [2-3] Timers & Counters—DISA / Door / Reminder / U. Conf—DISA—2nd Dial Timer for AA

## 1.4 D

### Outgoing Message (OGM)

When a call arrives on a DISA line, a prerecorded DISA message will greet and guide the caller. Any extension assigned as the manager can record outgoing messages (OGMs). (→ 1.12.1 OGM (Outgoing Message))

#### [Programming Example]

Outgoing Message (OGM) No.	Floating Extn. No. <sup>*1</sup>	Automated Attendant No. <sup>*2</sup>										Busy/DND Message No. <sup>*3</sup>
		0	1	2	3	4	5	6	7	8	9	
01	501	100	301	200	103	202	101	102	400	104	205	04
02	502											05
:	:	:	:	:	:	:	:	:	:	:	:	:

\*1: → 2.11.4 [5-3-2] Voice Message—DISA Message—Floating Extension Number  
→ [730] Outgoing Message (OGM) Floating Extension Number

\*2: → 2.11.4 [5-3-2] Voice Message—DISA Message—1 Digit AA Destination (Extension Number)—Dial 0–9

\*3: → 2.11.4 [5-3-2] Voice Message—DISA Message—Busy / DND Message No.

### DISA Security Mode and Available Features

If the DISA AA service is not employed, the caller may access the PBX features by entering the feature numbers. To prevent others from accessing the PBX features, it is possible to assign DISA security.

→ 2.11.3 [5-3-1] Voice Message—DISA System—DISA Security—DISA Security Mode  
→ [732] DISA Security Mode

The features available depend on the preprogrammed DISA security mode as follows:

Security Mode	Intercom Call	CO Line Call
All Security		
CO Line Security	✓	
No Security	✓	✓*

✓: Available

\*: If CO line call is available, Account Code Entry (→ 1.1.2 Account Code Entry) is also available.

#### Note

DISA AA service and Operator Call (→ 1.12.3 Operator Features) are available for any security mode.

#### Security Mode Override by Verification Code Entry

If the caller performs Verification Code Entry (→ 1.19.1 Verification Code Entry) while hearing a DISA message, the security mode can be temporarily changed to No Security mode.

Entry method:

Verification Code Entry feature number + \* + verification code + verification code PIN

After changing mode, the new mode remains in force for the duration of the call.

### DISA Intercept Routing—Busy

If the first destination called by the outside party is busy, the call is redirected as follows:

- a) The call is redirected to the Intercept Routing—Busy destination assigned to the first destination.
- b) If an Intercept Routing—Busy destination is not assigned to the first destination and a prerecorded DISA Busy Message is assigned, the caller will hear the DISA Busy Message.
- c) If neither an intercept destination nor a DISA Busy Message is assigned, the caller will hear a busy tone.

→ 2.10.1 [4-1-1] Wired Extension—Extension Settings—Intercept Destination—Intercept Destination—When Called Party is Busy

### DISA Intercept Routing—DND

If the destination called by the outside party is in DND mode and Idle Extension Hunting is not available, one of the following can be selected through system programming:

- a) **Busy Tone:** The caller will hear a busy tone.
- b) **Intercept:** DND will redirect the call to the preprogrammed destination on an extension basis.
- c) **OGM:** An outgoing message (OGM) will be sent to the caller. The message for DND mode can be assigned for each outgoing message (OGM) which has a DISA floating extension number.

→ 2.11.3 [5-3-1] Voice Message—DISA System—DISA Intercept—Intercept when Destination through DISA sets DND

### DISA Intercept Routing—No Answer

If a destination is not available to answer a DISA call within a preprogrammed time period (DISA Intercept time) after the call is reached, the call will be redirected to the programmed destination by the Intercept feature.

If the intercept destination is not available to answer the call within a preprogrammed time period (DISA Disconnect Time after Intercept) after the DISA Intercept time expires, the call will be disconnected.

2.8.4 [2-3] Timers & Counters—DISA / Door / Reminder / U. Conf

→ DISA—Intercept Timer—Day, Lunch, Break, Night

→ DISA—Disconnect Timer after Intercept

→ 2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 1—Intercept Destination—When called party does not answer—Day, Lunch, Break, Night

→ 2.10.8 [4-2-1] Portable Station—Extension Settings—Option 1—Intercept Destination—When called party does not answer—Day, Lunch, Break, Night

→ [604] Extension Intercept Destination

### Walking COS Through DISA

If the caller performs Walking COS (extension number and PIN entry) while hearing a DISA message, the security mode can be temporarily changed to No Security mode (→ 1.20.1 Walking COS). After performing Walking COS, the following features are available, using the settings of the specified extension:

- Intercom call
- CO line call
- Call Forwarding (FWD)/Do Not Disturb (DND) setting (→ 1.4.8 DND (Do Not Disturb), → 1.6.6 FWD (Call Forwarding))
- Incoming Call Distribution Group Log-in/Log-out (→ 1.9.3 ICD Group Features—Log-in/Log-out)
- Absent Message setting (→ 1.1.1 Absent Message)
- Extension Dial Lock (→ 1.5.4 Extension Dial Lock)

## 1.4 D

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- Time Service Switching Mode (→ 1.17.4 Time Service)

### SMDR

The call information for DISA is recorded as the one of the DISA floating extension numbers. (→ 1.16.1 SMDR (Station Message Detail Recording))

### Conditions

#### **WARNING**

**There is a risk that fraudulent telephone calls will be made using the CO-to-CO Line Call feature of DISA.**

**The cost of such calls will be billed to the owner/renter of the PBX.**

**To protect the PBX from this kind of fraudulent use, we strongly recommend:**

- a) Enabling DISA security (CO Line Security or All Security).**
- b) Keeping passwords (verification code PINs/extension PINs) secret.**
- c) Selecting complex, random PINs that cannot be easily guessed.**
- d) Changing PINs regularly.**

- **Hardware Requirement:**

An MSG card

- **DISA Delayed Answer Time**

It is possible to set the Delayed Answer time so that the caller will hear a ringback tone within a preprogrammed time period first before hearing an outgoing message (OGM).

→ 2.8.4 [2-3] Timers & Counters—DISA / Door / Reminder / U. Conf—Recall—Hold Recall

→ [209] DISA Delayed Answer Time

- **Call Retry**

While hearing a ringback, reorder, or busy tone, retrying the call is possible by pressing "\*". System programming selects whether pressing "\*" during a CO-to-CO line conversation returns to the DISA top menu or sends a DTMF tone.

- **DISA Mute Time**

It is possible to set the Mute time until the outgoing message (OGM) plays and the PBX starts to receive the DTMF signaling after the caller reaches the DISA line.

→ 2.8.4 [2-3] Timers & Counters—DISA / Door / Reminder / U. Conf—DISA—Mute & OGM Start Timer after Answering

- **End of Call Detection**

If a call through DISA is routed to a CO line, DISA can be used to detect the end of the call. This function can be disabled through system programming. If disabled, DISA is released when the CO-to-CO line connection is made.

The following three types of tone detection can be enabled for each trunk group to disconnect a CO-to-CO line call via DISA.

- Silence Detection

→ 2.9.1 [3-1-1] Trunk Group—TRG Settings—Main—DISA Tone Detection—Silence

→ [475] DISA Silence Detection

- Continuous Signal Detection

→ 2.9.1 [3-1-1] Trunk Group—TRG Settings—Main—DISA Tone Detection—Continuous

→ [476] DISA Continuous Signal Detection

- Cyclic Signal Detection

- 2.9.1 [3-1-1] Trunk Group—TRG Settings—Main—DISA Tone Detection—Cyclic
- [477] DISA Cyclic Signal Detection

- **CO-to-CO Line Call Duration Limitation**

For a call between two outside parties, even if end of call detection cannot be performed, the call can be disconnected by a system timer. (→ 1.3.12 CO Line Call Limitation) If the timer expires, the line will be disconnected unless the originating caller extends the time by sending any DTMF signaling. The caller can prolong the call duration within the preprogrammed time period and preprogrammed number of times.

2.8.4 [2-3] Timers & Counters—DISA / Door / Reminder / U. Conf

- DISA—CO-to-CO Call Prolong Counter

- DISA—CO-to-CO Call Prolong Time

- [210] DISA CO-to-CO Line Call Prolong Time

- **DISA Reorder Tone Duration**

It is possible to set the DISA Reorder Tone Duration time. This specifies the length of time that a reorder tone will be sent to the caller. When the timer expires, the call will be disconnected. Call Retry is possible during the DISA Reorder Tone Duration time.

- 2.8.4 [2-3] Timers & Counters—DISA / Door / Reminder / U. Conf—DISA—Reorder Tone Duration

- **Call Deny**

Extensions can deny DISA calls on a COS basis.

- 2.8.11 [2-7-1] Class of Service—COS Settings—Extension Feature—Accept the Call from DISA

- **Verification Code PIN Lock/Extension PIN Lock**

If the wrong PIN is entered three times, the line will be disconnected. If the wrong PIN is entered a preprogrammed number of times successively, that extension or verification code will become locked, and even entering the correct PIN will not unlock it. Only an extension assigned as the manager can unlock it. In this case, the PIN will be unlocked and cleared.

- 2.8.4 [2-3] Timers & Counters—Miscellaneous—Extension PIN—Lock Counter

- Each outgoing message (OGM) can be assigned a name through system programming for programming reference.

- 2.11.4 [5-3-2] Voice Message—DISA Message—Name

- [731] Outgoing Message (OGM) Name

## Installation Manual References

2.5.3 MSG2 Card (KX-TAW84891)

## Programming References

### PC Programming Manual

2.8.4 [2-3] Timers & Counters—DISA / Door / Reminder / U. Conf

- DISA—Delayed Answer Timer

- DISA—Mute & OGM Start Timer after Answering

- DISA—No Dial Intercept Timer

- DISA—2nd Dial Timer for AA

- DISA—Intercept Timer—Day, Lunch, Break, Night

- DISA—Disconnect Timer after Intercept

- DISA—CO-to-CO Call Prolong Counter

- DISA—CO-to-CO Call Prolong Time

- DISA—Progress Tone Continuation Time before Recording Message

- DISA—Reorder Tone Duration

## 1.4 D

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- 2.8.4 [2-3] Timers & Counters—Miscellaneous—Extension PIN—Lock Counter
- 2.8.11 [2-7-1] Class of Service—COS Settings—Extension Feature—Accept the Call from DISA
- 2.9.1 [3-1-1] Trunk Group—TRG Settings
  - Tone Detection—DISA Tone Detection—Silence
  - Tone Detection—DISA Tone Detection—Continuous
  - Tone Detection—DISA Tone Detection—Cyclic
- 2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 1—Intercept Destination—When called party does not answer—Day, Lunch, Break, Night
- 2.10.8 [4-2-1] Portable Station—Extension Settings—Option 1—Intercept Destination—When called party does not answer—Day, Lunch, Break, Night
- 2.11.3 [5-3-1] Voice Message—DISA System
- 2.11.4 [5-3-2] Voice Message—DISA Message
- 2.12.1 [6-1] System Speed Dial
  - CO Line Access Number + Telephone Number
  - CLI Destination
- 2.15.2 [9-2] DIL Table & Port Settings
  - DIL—DIL Destination—Day, Lunch, Break, Night
  - CLI for DIL—CLI Ring for DIL—Day, Lunch, Break, Night

### PT Programming Manual

- [209] DISA Delayed Answer Time
- [210] DISA CO-to-CO Line Call Prolong Time
- [211] DISA Intercept Time
- [475] DISA Silence Detection
- [476] DISA Continuous Signal Detection
- [477] DISA Cyclic Signal Detection
- [604] Extension Intercept Destination
- [730] Outgoing Message (OGM) Floating Extension Number
- [731] Outgoing Message (OGM) Name
- [732] DISA Security Mode

### Feature Manual References

- 1.3.16 COS (Class of Service)
- 1.4.8 DND (Do Not Disturb)
- 1.6.6 FWD (Call Forwarding)
- 1.9.9 Intercept Routing
- 1.9.10 Intercept Routing—No Destination

### Operating Manual References

- 1.3.18 DISA (Direct Inward System Access)
- 1.3.57 Walking COS

## 1.4.7 Display Information

### Description

A display proprietary telephone (PT) can relay the following information to the user while making or receiving calls:

Display Item	Display Example	Condition
The extension number and name of the calling or called extension, or Incoming Call Distribution (ICD) Group	123: Tom Smith	—
Status of the called extension	123: Busy	—
The number and name of the optional device	Door 02: 1st Door	—
The telephone number dialed	1234567890	—
The received call information <b>a)</b> Caller's name <b>b)</b> Caller's number <b>c)</b> CO line number/name <b>d)</b> Original Destination, if the call is forwarded	ABC Company 12345678 Line 001: Sales →102:Mike	The first line message can be either (a), (c), or (e) at each extension through system programming.
Duration of the current CO line call	Line 001 11:02'28	—

### Conditions

- **Multilingual Display**  
Each extension can select its display language through personal programming (Display Language Selection).
- Characters (name) or digits (number) exceeding the display's limitations are not displayed. Although in this case information may not be displayed properly, the received information is not altered.

### Programming References

#### PC Programming Manual

##### 2.10.1 [4-1-1] Wired Extension—Extension Settings

- Option 4—Display Language
- Option 5—Incoming Call Display
- Option 5—Automatic LCD Switch when Start Talking

##### 2.10.8 [4-2-1] Portable Station—Extension Settings

- Option 4—Display Language
- Option 5—Incoming Call Display
- Option 5—Automatic LCD Switch when Start Talking

##### 2.15.1 [9-1] CO Line Settings—CO Name

#### PT Programming Manual

None

### Operating Manual References

#### 3.1.2 Personal Programming

## 1.4.8 DND (Do Not Disturb)

### Description

An extension user can make use of the DND feature. If this feature is set, calls will not arrive at the extension, but will arrive at another extension using the Idle Extension Hunting feature (→ 1.9.7 Idle Extension Hunting) or the Intercept Routing—Busy/DND feature (→ 1.9.9 Intercept Routing). When a destination cannot be found, the calling extension will hear the DND tone, while the calling outside party will hear a busy tone.

### Conditions

- **DND for CO Line Calls/Intercom Calls**  
The DND feature can be set for CO line calls, for intercom calls, or for both of them by the extension user.
- **DSS button in DND Mode**  
The DSS button light will turn red if the assigned extension has set DND.
- **DND Override**  
An extension in DND mode can be called by other extension users who are allowed to override DND in their COS.
- **Paging DND**  
It is programmable whether the PBX pages extensions in DND mode through system programming. (→ 1.13.1 Paging)
- **Intercept Routing—Busy/DND**  
If a call arrives at an extension in DND mode, the call can be redirected to a preprogrammed destination by the Intercept Routing—Busy/DND feature.
- **Idle Extension Hunting**  
While searching for an idle extension within an idle extension hunting group, any extension that has DND set will be skipped. The call will go to the next extension in the group, not the Intercept Routing—Busy/DND destination.
- If (1) a CO line call arrives at an extension in DND mode and (2) the Intercept Routing—Busy/DND destination is not available and (3) there is no available extension in the idle extension hunting group, then the original extension in DND mode will ring.
- Calls from a doorphone arrive at the extension even when the extension is in DND mode.

### Programming References

#### PC Programming Manual

2.8.4 [2-3] Timers & Counters—Dial / IRNA / Recall / Tone—Tone Length—Busy Tone / DND Tone

2.8.10 [2-6-3] Numbering Plan—B/NA DND Call Feature

→ BSS / DND Override

→ BSS / DND Override-2

2.8.11 [2-7-1] Class of Service—COS Settings—CO & SMDR—DND Override

2.10.2 [4-1-2] Wired Extension—FWD/DND

→ Call from CO—DND Status Availability

→ Call from Extension—DND Status Availability

**PT Programming Manual**

[507] DND Override

**Feature Manual References**

1.3.16 COS (Class of Service)

**Operating Manual References**

1.3.19 DND (Do Not Disturb)

**1.4.9 Door Open****Description**

Using an extension telephone, an extension user can unlock a door for a visitor.

The door can be unlocked by extension users who are allowed to unlock the door in Class of Service (COS) programming. While engaged on a doorphone call, any extension user can unlock the door to let the visitor in. (→ 1.4.10 Doorphone Call)

**Conditions**

- **Hardware Requirement:** A user-supplied door opener installed on each door.
- A door opener can unlock a door even if no doorphone is installed.
- **Door Open Duration**  
An opened door will remain unlocked for a preprogrammed length of time.
- The port of the DPH4 card to which the door opener is connected must be assigned through system programming as a door opener port (not a relay port). If it is not, it may not be possible to open the door while on a doorphone call.

**Installation Manual References**

2.8.1 Connection of Doorphones, Door Openers, External Sensors, and External Relays

**Programming References****PC Programming Manual**

2.8.4 [2-3] Timers &amp; Counters—DISA / Door / Reminder / U. Conf—Doorphone—Open Duration

2.8.8 [2-6-1] Numbering Plan—Main—Features—Door Open

2.8.11 [2-7-1] Class of Service—COS Settings—CO &amp; SMDR—Door Unlock

**PT Programming Manual**

[207] Door Unlock Time

[512] Permission for Door Open Access

**Feature Manual References**

1.3.16 COS (Class of Service)

### Operating Manual References

1.3.20 Door Open

## 1.4.10 Doorphone Call

### Description

A visitor can use a doorphone to call its preprogrammed destination. Extension users can call a doorphone.

### Conditions

- **Hardware Requirement:**  
An optional doorphone and a DPH card
- **Call Destination**  
The destination of doorphone calls can be assigned to each doorphone port for each time mode. The Time Table is determined by the tenant number assigned to each doorphone port. (→ 1.17.4 Time Service)  
The following destinations cannot be the destination for doorphone calls:
  - Floating Extension no. for SVM
  - DISA
  - Analog Remote Maintenance
- Class of Service (COS) programming determines the doorphone ports that are able to make an outgoing CO line call.
- Internal Call Block determines which extensions can call a doorphone. (→ 1.9.12 Internal Call Block)
- **Ring Duration**  
If an incoming doorphone call is not answered within a preprogrammed time period, ringing stops and the call is canceled.
- **Call Duration**  
The duration of doorphone calls can be restricted by a system timer. If the timer expires, the call will be disconnected.
- **Door Open**  
While engaged on a doorphone call, an extension user can unlock the door to let the visitor in. (→ 1.4.9 Door Open)
- A doorphone number can be referenced for each doorphone port.
- Doorphones 1 and 2 (or 3 and 4) cannot make a call simultaneously. If a visitor presses the doorphone button while the other doorphone is engaged in a call, he will hear no tone.  
Doorphones 1 and 2 (or 3 and 4) cannot receive a call simultaneously. If an extension user calls a doorphone while the other doorphone is engaged in a call, he will hear a busy tone.

### Installation Manual References

2.5.1 DPH4 Card (KX-TAW84861)

2.8.1 Connection of Doorphones, Door Openers, External Sensors, and External Relays

### Programming References

#### PC Programming Manual

2.8.4 [2-3] Timers & Counters—DISA / Door / Reminder / U. Conf

→ Doorphone—Call Ring Duration

→ Doorphone—Call Duration

2.8.8 [2-6-1] Numbering Plan—Main—Features—Doorphone Call

2.8.11 [2-7-1] Class of Service—COS Settings—TRS—TRS Level—Day, Lunch, Break, Night

2.8.15 [2-8-2] Ring Tone Patterns—Call from Doorphone

2.8.17 [2-9] System Options—Option 3—Confirmation Tone—Tone 1 : Doorphone / Called by Voice

2.11.1 [5-1] Doorphone

**PT Programming Manual**

[720] Doorphone Call Destination

[729] Doorphone Number Reference

## Operating Manual References

1.3.21 Doorphone Call

# 1.5 E

## 1.5.1 EFA (External Feature Access)

### Description

Normally, an extension user can only access features within the PBX. However, when performing External Feature Access (EFA) the extension user performs features outside of the PBX, such as using the transfer services of the telephone company or host PBX. When EFA is performed, the PBX sends a flash/recall signal to the telephone company or the host PBX (→ 1.8.5 Host PBX Access Code (Access Code to the Telephone Company from a Host PBX)).

This feature is only available on CO line calls.

This feature is performed by pressing the EFA button or the FLASH/RECALL button that is set to EFA mode (→ 1.6.2 Flash/Recall/Terminate).

### Conditions

- **Flash/Recall Time**  
The Flash/Recall time can be assigned for each CO line port.
- **EFA Button**  
A flexible button can be customized as the EFA button.
- It is possible to perform this feature by entering the feature number while the current call is placed on Consultation Hold (e.g., is going to be transferred to an extension of the host PBX).  
(→ 1.3.15 Consultation Hold)

### Programming References

#### PC Programming Manual

2.7.8 [1-1] Slot—LCO Port—Flash Time

2.8.8 [2-6-1] Numbering Plan—Main—Features—External Feature Access

2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 6—Flash Mode during CO Conversation

2.10.4 [4-1-4] Wired Extension—Flexible Button—Type

2.10.8 [4-2-1] Portable Station—Extension Settings—Option 6—Flash Mode during CO Conversation

2.10.10 [4-2-3] Portable Station—Flexible Button—Type

2.10.13 [4-3] DSS Console—Flexible Button—Type

2.13.5 [7-5] Miscellaneous—TRS Check after EFA

#### PT Programming Manual

[417] LCOT Flash/Recall Time

### Feature Manual References

1.6.3 Flexible Buttons

### Operating Manual References

1.3.22 EFA (External Feature Access)

## 1.5.2 Emergency Call

### Description

An extension user can dial preprogrammed emergency numbers after seizing a CO line regardless of the restrictions imposed on the extension.

### Conditions

- A specified number of emergency numbers can be stored.
- Emergency numbers may be called, regardless of Toll Restriction (TRS) level (→ 1.17.5 TRS (Toll Restriction)), even when:
  - in Account Code—Forced mode (→ 1.1.2 Account Code Entry)
  - in Extension Dial Lock (→ 1.5.4 Extension Dial Lock)

### Programming References

#### PC Programming Manual

2.13.4 [7-4] Emergency Dial

#### PT Programming Manual

[304] Emergency Number

### Feature Manual References

2.1 Capacity of System Resources

## 1.5.3 Executive Busy Override

### Description

Allows an extension user to interrupt an existing call to establish a three-party conference call.

#### Executive Busy Override Deny

It is possible for extension users to prevent their calls from being interrupted by another extension user.

### Conditions

- Class of Service (COS) programming determines the extension users who can use Executive Busy Override and set Executive Busy Override Deny.
- This feature will not function when the busy extension:
  - a) Has set Executive Busy Override Deny or Data Line Security (→ 1.4.1 Data Line Security).
  - b) Is being monitored by another extension (→ 1.3.4 Call Monitor).
  - c) Is on a conference call (→ 1.3.13 Conference, → 1.13.10 Privacy Release).
  - d) Is on a doorphone call (→ 1.4.10 Doorphone Call).
  - e) Is using Live Call Screening (LCS) or Two-way Record (→ 1.19.4 Voice Mail DPT (Digital) Integration).
  - f) Has a call on consultation hold (→ 1.4.6 DISA (Direct Inward System Access)).

## 1.5 E

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- This feature is not available for a CO-to-CO line call via Direct Inward System Access (DISA).

### Programming References

#### PC Programming Manual

2.8.8 [2-6-1] Numbering Plan—Main—Features—Executive Override Deny Set / Cancel

2.8.10 [2-6-3] Numbering Plan—B/NA DND Call Feature—Executive Busy Override

2.8.11 [2-7-1] Class of Service—COS Settings

→ CO & SMDR—Executive Busy Override

→ Extension Feature—Executive Busy Override Deny

2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 3—Executive Override Deny

2.10.8 [4-2-1] Portable Station—Extension Settings—Option 3—Executive Override Deny

#### PT Programming Manual

[505] Executive Busy Override

[506] Executive Busy Override Deny

### Feature Manual References

1.3.16 COS (Class of Service)

### Operating Manual References

1.3.23 Executive Busy Override

## 1.5.4 Extension Dial Lock

### Description

An extension user can change the Toll Restriction (TRS) level of the telephone (→ 1.17.5 TRS (Toll Restriction)) so that other users cannot make inappropriate CO line calls. An extension personal identification number (PIN) is used to unlock the telephone (→ 1.5.6 Extension PIN (Personal Identification Number)).

This feature is also known as Electronic Station Lockout.

### Conditions

- This feature also restricts changing the Call Forward (FWD) destination. (→ 1.6.6 FWD (Call Forwarding))
- **Remote Extension Dial Lock**  
Overrides Extension Dial Lock. If an extension assigned as the manager sets Remote Extension Dial Lock on an extension that has already been locked by the extension user, the user cannot unlock it. If a manager extension unlocks an extension that has been locked by the extension user, the extension will be unlocked.  
This feature is also known as Remote Station Lock Control.
- **TRS Level**  
COS programming determines the TRS level for Extension Dial Lock.
- Other features can also temporarily change an extension's TRS level, similar to Extension Dial Lock. If an extension is locked, the TRS level determined by the following features takes priority. The numbers

below (1 through 3) indicate the priority of each feature, with 1 having the highest priority, and 3 having the lowest.

- 1) Dial Tone Transfer (→ 1.4.4 Dial Tone Transfer)
- 2) TRS Override by System Speed Dialing (→ 1.17.5 TRS (Toll Restriction))
- 3) Verification Code Entry/Walking COS (→ 1.19.1 Verification Code Entry, → 1.20.1 Walking COS)

## Programming References

### PC Programming Manual

2.8.8 [2-6-1] Numbering Plan—Main—Features

- Extension Dial Lock Set / Cancel
- Remote Extension Dial Lock Off
- Remote Extension Dial Lock On

2.8.11 [2-7-1] Class of Service—COS Settings—TRS—TRS Level on Extension Lock

### PT Programming Manual

[510] TRS Level for Extension Dial Lock

## Feature Manual References

1.3.16 COS (Class of Service)

## Operating Manual References

1.3.24 Extension Dial Lock

3.2.2 Manager Programming

## 1.5.5 Extension Feature Clear

### Description

Extension users can clear the following features set on their own telephone all at once:

Features	After Setting
Absent Message	Off
BGM	Off
FWD*/DND*	Off
Call Pickup Deny	Allow
Call Waiting*	Enable (Call Waiting tone)
Data Line Security	Off
Executive Busy Override Deny	Allow
Log-in/Log-out	Log-in
Message Waiting	All messages left by other extensions will be cleared.
Paging Deny	Allow

## 1.5 E

Features	After Setting
Hot Line*	Off
Timed Reminder	Cleared

\* These features can be programmed to not be canceled by Extension Feature Clear.

This feature is also known as Station Program Clear.

### Conditions

- Extension Dial Lock (→ 1.5.4 Extension Dial Lock) and the extension personal identification number (PIN) (→ 1.5.6 Extension PIN (Personal Identification Number)) will not be cleared by this feature.
- **If dial tone 2 is heard after Extension Feature Clear:**  
After performing Extension Feature Clear, Call Waiting will be enabled if "Extension Clear: Call waiting" is set to "Clear" through system programming. In this case, dial tone 2 will be heard when going off-hook. (→ 1.4.3 Dial Tone)

### Programming References

#### PC Programming Manual

2.8.8 [2-6-1] Numbering Plan—Main—Features—Extension Feature Clear

2.8.17 [2-9] System Options—Option 2

→ Extension Clear—Call Waiting

→ Extension Clear—Fwd/DND

→ Extension Clear—Hot Line (Pickup Dial)

#### PT Programming Manual

None

### Operating Manual References

1.3.25 Extension Feature Clear

## 1.5.6 Extension PIN (Personal Identification Number)

### Description

Each extension user can be assigned a personal identification number (PIN) through system programming or personal programming (Extension PIN [Personal Identification Number]). This PIN is used to set features or access the extension remotely.

The following features require a valid PIN:

- a) Live Call Screening (LCS)\* (→ 1.19.4 Voice Mail DPT (Digital) Integration)
- b) Incoming Call Log Display Lock (→ 1.16.3 Speed Dialing, Personal), Personal Speed Dialing Display Lock (→ 1.3.3 Call Log, Incoming)
- c) Walking Extension (→ 1.20.2 Walking Extension)
- d) Extension Dial Lock (→ 1.5.4 Extension Dial Lock)
- e) Walking COS (→ 1.20.1 Walking COS)

f) Walking COS through DISA (→ 1.4.6 DISA (Direct Inward System Access))

\*: If an extension user has assigned an extension PIN, the PIN is required when activating this feature.

## Conditions

### **WARNING**

**There is a risk that fraudulent telephone calls will be made if a third party discovers a personal identification number (PIN) (verification code PIN or extension PIN) of the PBX. The cost of such calls will be billed to the owner/renter of the PBX. To protect the PBX from this kind of fraudulent use, we strongly recommend:**

- a) **Keeping PINs secret.**
  - b) **Selecting complex, random PINs that cannot be easily guessed.**
  - c) **Changing PINs regularly.**
- **Extension PIN Lock**  
If the extension PIN is entered incorrectly three times, the line will be disconnected. If an incorrect PIN is entered a preprogrammed number of times, the PIN will be locked. Only an extension assigned as a manager can unlock a PIN, after which it will be reset. In this case, the PIN will be unlocked and cleared. This feature is also known as Station Password Lock.
  - **Remote Extension PIN Clear**  
If an extension user forgets his or her PIN, a manager can clear (reset) the PIN, and the extension user can assign a new PIN.
  - **Extension PIN Display**  
It is possible to select whether to show the extension PIN on the display through system programming. By default, it is shown as dots.

## Programming References

### **PC Programming Manual**

- 2.8.4 [2-3] Timers & Counters—Miscellaneous—Extension PIN—Lock Counter
- 2.8.8 [2-6-1] Numbering Plan—Main—Features—Extension PIN Set / Cancel
- 2.8.17 [2-9] System Options—Option 1—PT LCD—Password / PIN Display
- 2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 2—Extension PIN
- 2.10.8 [4-2-1] Portable Station—Extension Settings—Option 2—Extension PIN

### **PT Programming Manual**

- [005] Extension Personal Identification Number (PIN)

## Operating Manual References

- 3.1.2 Personal Programming
- 3.2.2 Manager Programming

### 1.5.7 Extension Port Configuration

#### Description

There are three types of extension ports, used to connect analog proprietary telephones (APTs), single line telephones (SLTs), Cell Stations (CSs), DSS Consoles, and Voice Processing Systems (VPS) to the PBX. The devices which can be connected to each type of port are listed below.

- a) **APT Port:** APT, DSS Console, and Panasonic VPS which supports DPT (Digital) Integration
- b) **SLT Port:** SLT and Panasonic VPS which supports DTMF Integration
- c) **Hybrid Port:** APT, SLT, DSS Console, Panasonic VPS, and PT-interface CS

#### Conditions

- **Automatic Detection on Hybrid Port**  
An APT, SLT or PT-interface CS connected to a hybrid port can be detected automatically without any programming.
- **APT and SLT in Parallel Mode**  
An APT and an SLT can also be connected to a hybrid port and used in parallel mode.
- **Wireless XDP Parallel Mode**  
A PS can be used in Wireless XDP Parallel mode with a wired telephone.  
(→ 1.20.3 Wireless XDP Parallel Mode)
- **DSS Console and Paired Telephone Assignment**  
When a DSS Console is connected, a PT must be paired with the DSS Console through system programming.

#### Programming References

##### PC Programming Manual

2.7.4 [1-1] Slot—Extension Port

2.10.13 [4-3] DSS Console—Flexible Button—Pair Extension

##### PT Programming Manual

[007] DSS Console Paired Telephone

### 1.5.8 External Relay

#### Description

By turning external device relays on and off, the PBX can control external devices such as alarms.

When an extension user enters the External Relay Control feature number, the specified relay turns on for a preprogrammed length of time. When this timer expires, the relay turns off automatically. This gives the PBX simple control over other equipment, allowing an extension user to, for example, activate an alarm from his extension.

If the relay cannot be accessed (for example, because use is not permitted by COS, or the port is not in service), a reorder tone will be heard at the extension.

#### Conditions

- **Hardware Requirement:**

- An external relay device and DPH card
- The port of the DPH4 card to which the relay is connected must be assigned through system programming as a relay port (not a door opener port).
- Some devices may be unable to communicate correctly with the PBX. Confirm compatibility with the manufacturer of a device before installing it.
- Each external relay port has a COS assigned. This and the COS of an extension determine the extension users who can use External Relay Control.
- The length of time that a relay is turned on can be specified separately for each relay through system programming.
- If the same or another extension tries to access an external relay that has already been switched on, the timer for that relay is reset.

## Installation Manual References

2.5.1 DPH4 Card (KX-TAW84861)

2.8.1 Connection of Doorphones, Door Openers, External Sensors, and External Relays

## Programming References

### PC Programming Manual

2.7.10 [1-1] Slot—DPH Card Property—For Output (EIO)—Device Type

2.8.8 [2-6-1] Numbering Plan—Main—Features—External Relay Access

2.8.11 [2-7-1] Class of Service—COS Settings—Extension Feature—External Relay Access

2.11.6 [5-4] External Relay

### PT Programming Manual

None

## Feature Manual References

1.3.16 COS (Class of Service)

## Operating Manual References

1.3.27 External Relay

# 1.5.9 External Sensor

## Description

External sensing devices, such as security alarms or smoke detectors, can be connected to the PBX. When the PBX receives input from a sensor, a call is made to the preset destination, alerting the extension user.

The available destinations of a sensor call are as follows:

### [Available Destinations]

Destination	Availability
Wired Extension (PT/SLT)	✓

## 1.5 E

Destination	Availability
PS	✓
ICD Group	
PS Ring Group	
Floating Extension no. for SVM	
VM Group (DTMF/DPT)	
External Pager (TAFAS)	
DISA	
Analog Remote Maintenance	
Idle Line Access no. + Phone no.	
Trunk Group Access no. + Trunk Group no. + Phone no.	

When the call is answered, if distinctive dial tones are enabled, dial tone 3 is heard, which continues until the user goes on-hook. If the sensor call is not answered within a specified time, the call will be canceled. It is possible to set a different ring tone pattern for calls received from each external sensor, to distinguish between them.

### Conditions

- **Hardware Requirement:**
  - An external sensor and DPH card
- Some devices may be unable to communicate correctly with the PBX. Confirm compatibility with the manufacturer of a device before installing it.
- After a sensor has been activated, the PBX will ignore any further alerts from the same sensor for the duration specified by a timer. This timer can be set separately for each sensor.
- As long as the previous sensor call is still being performed, any further alerts from the same sensor are ignored.
- The assigned sensor name and/or number are shown on the display of PTs and PSs when a sensor call is received.
- If the destination of a sensor call has set FWD, the sensor call will be redirected to the FWD destination. However, if the FWD destination is not supported as the destination of a sensor call (e.g., an outside party), the call will be received at the original destination. (→ 1.6.6 FWD (Call Forwarding))
- The following features cannot be used when a sensor call is received:
  - Alternate Receiving—Voice (→ 1.9.11 Intercom Call)
  - Hands-free Answerback (→ 1.8.1 Hands-free Answerback)
  - Consultation Hold/Call Hold (→ 1.3.2 Call Hold)
  - Call Transfer (→ 1.3.8 Call Transfer)
  - Executive Busy Override (→ 1.5.3 Executive Busy Override)
- Sensor call information is output on SMDR.

### Installation Manual References

2.5.1 DPH4 Card (KX-TAW84861)

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## 2.8.1 Connection of Doorphones, Door Openers, External Sensors, and External Relays

### Programming References

#### PC Programming Manual

##### 2.7.10 [1-1] Slot—DPH Card Property

→ For Sensor (EIO)—Input Signal Decision Time

→ For Sensor (EIO)—Input Signal Detection Reopening Time

##### 2.8.4 [2-3] Timers & Counters—Miscellaneous—External Sensor—Ring Duration

##### 2.8.16 [2-8-3] Ring Tone Patterns—Call from Others—External Sensor—Ring Tone Pattern Plan 1–8

##### 2.11.7 [5-5] External Sensor

#### PT Programming Manual

None

## 1.6 F

### 1.6.1 Fixed Buttons

#### Description

Proprietary telephones (PTs) and DSS Consoles feature a wide variety of feature buttons and Line Access buttons, explained below.

Note that certain models do not feature certain buttons.

For a description of the buttons found on portable stations (PSs), please refer to the Operating Instructions for each PS.

Button		Usage
Navigator Key, Volume Key		Used to adjust the volume of the speaker, handset and headset, and also adjust the display contrast. The Navigator Key can also be used to select data from the Call Directory on the display.
		
		
<b>PROGRAM</b>		Used to enter and exit programming mode.
<b>FLASH/RECALL</b>		Used to disconnect the current call and make another call without hanging up (Flash/Recall mode or Terminate mode), or used to send a flash/recall signal to the telephone company or host PBX to access external features (External Feature Access mode). This button can also be used as a CANCEL button while on-hook.
<b>HOLD</b>		Used to place a call on hold.
<b>SP-PHONE (Speakerphone)</b>		Used for hands-free operation. Also used to switch between handset and hands-free operation.
<b>MONITOR</b>		Used for hands-free dialing. Also used to monitor the other party's voice in hands-free mode.
<b>MESSAGE</b>		Used to leave a Message Waiting indication or call back the party who left the Message Waiting indication.
<b>REDIAL</b>		Used to redial the last number dialed.
<b>TRANSFER</b>		Used to transfer a call to another party.
<b>Flexible CO</b>		Used to access a CO line or trunk group when making or receiving a call according to the button's preprogrammed CO Line Access method (Default: S-CO). Can also be customized as a different feature button.
<b>INTERCOM</b>		Used to make or receive intercom calls.
<b>AUTO ANS (Auto Answer) /MUTE</b>		Used to receive an incoming call in hands-free mode, or used to mute the built-in microphone or handset during a conversation.

Button	Usage
<b>VOICE CALL</b>	Used to monitor an intercom call automatically (a hands-free conversation is not possible).
<b>AUTO DIAL/STORE</b>	Used for System/Personal Speed Dialing and storing program changes.
<b>CONF (Conference)</b>	Used to establish a multiparty conversation.
<b>FWD/DND</b>	Used to set Call Forwarding (FWD) or Do Not Disturb (DND)
<b>PAUSE</b>	Used to insert a dialing pause in a stored number. Also used as the Program button on analog proprietary telephones (APTs) which do not have the PROGRAM button.
<b>PF (Programmable Feature)</b>	Used to access a preprogrammed feature with a one-touch operation. (no default)

#### [DSS Console]

Button	Usage
<b>ANSWER</b>	Used to answer an incoming call, or place the current call on hold and answer another call with a one-touch operation.
<b>RELEASE</b>	Used to disconnect the line during or after a conversation, or to complete a Call Transfer.
<b>Flexible CO</b>	Used to access a CO line or trunk group when making or receiving a call according to the button's preprogrammed CO Line Access method. Can also be customized as a different feature button.
<b>Flexible DSS (Direct Station Selection)</b>	Used to call an extension with a one-touch operation. Each button is programmed to correspond to an extension. DSS buttons can also be customized as other different feature buttons.
<b>PF (Programmable Feature)</b>	Used to access a preprogrammed feature with a one-touch operation. (no default)

### Conditions

- Certain buttons are equipped with a light to indicate the status of the corresponding line or feature.

## 1.6.2 Flash/Recall/Terminate

### Description

A proprietary telephone (PT) user can use the FLASH/RECALL button (Flash/Recall mode or Terminate mode) or Terminate button (Terminate mode) to disconnect the current call and originate another call without hanging up.

**Flash/Recall Mode:** Disconnects the line and the extension user hears the dial tone from the line used last. For example, if a CO line call is disconnected, the extension user will hear a new dial tone from the same CO line.

**Terminate Mode:** Disconnects the line and the extension user hears a dial tone via the preferred CO line. (→ 1.10.3 Line Preference—Outgoing)

### Conditions

- **FLASH/RECALL Button Mode**  
One of the following modes can be selected for each extension through system programming:
  - Flash/Recall mode
  - Terminate mode
  - EFA mode. (→ 1.5.1 EFA (External Feature Access))
- **Terminate Button**  
Any flexible button can be customized as the Terminate button.
- **Disconnect Time (Only for Flash/Recall Mode)**  
The amount of time between successive accesses to the same CO line is programmable for each CO line port.
- This feature generates a Station Message Detail Recording (SMDR) call record (→ 1.16.1 SMDR (Station Message Detail Recording)), restarts the call timer, inserts a pause, and checks the Toll Restriction (TRS) level (→ 1.17.5 TRS (Toll Restriction)) again.
- The Terminate feature will be performed when pressing the FLASH/RECALL button regardless of the mode that the FLASH/RECALL button has been set to, in the following situations:
  - When a call is made using ARS. (→ 1.1.3 ARS (Automatic Route Selection))
  - When a CO line call is made with the INTERCOM button.
  - When a CO line call is made with an Incoming Call Distribution (ICD) group button.

### Programming References

#### PC Programming Manual

2.7.8 [1-1] Slot—LCO Port—Disconnect Time

2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 6—Flash Mode during CO Conversation

2.10.4 [4-1-4] Wired Extension—Flexible Button—Type

2.10.8 [4-2-1] Portable Station—Extension Settings—Option 6—Flash Mode during CO Conversation

2.10.10 [4-2-3] Portable Station—Flexible Button—Type

2.10.13 [4-3] DSS Console—Flexible Button—Type

#### PT Programming Manual

[418] LCOT Disconnect Time

### Feature Manual References

1.6.3 Flexible Buttons

## 1.6.3 Flexible Buttons

### Description

Flexible buttons are customized through either system or personal programming. The following types of flexible buttons are found on proprietary telephones (PTs), DSS Consoles, and/or portable stations (PSs):

- a) Flexible CO buttons
- b) Flexible Direct Station Selection (DSS) buttons
- c) Programmable Feature (PF) buttons

## [Button Usage]

Button	Usage
<b>Single-CO (S-CO)</b>	Used to access a specified CO line for making or receiving calls. (→ 1.3.11 CO Line Access)
<b>Group-CO (G-CO)</b>	Used to access an idle CO line in a specified trunk group for making calls. Incoming calls from CO lines in the assigned trunk group arrive at this button. (→ 1.3.11 CO Line Access)
<b>Loop-CO (L-CO)</b>	Used to access an idle CO line for making calls. Incoming calls from any CO line arrive at this button. (→ 1.3.11 CO Line Access)
<b>Direct Station Selection (DSS)</b>	Used to call an extension with a one-touch operation. (→ 1.9.11 Intercom Call)
<b>One-touch Dialing</b>	Used to call a preprogrammed party or access a feature with a one-touch operation. (→ 1.12.2 One-touch Dialing)
<b>Incoming Call Distribution (ICD) Group</b>	Used to access a specified incoming call distribution (ICD) group for making or receiving calls. (→ 1.9.1 ICD GROUP FEATURES)
<b>Message</b>	Used to leave a Message Waiting indication or call back the party who left the Message Waiting indication. (→ 1.11.3 Message Waiting)
<b>FWD/DND (External/Internal/Both)*</b>	Used to set the FWD or DND feature for the extension. The feature is applied to CO line calls, intercom calls, or both. (→ 1.6.7 FWD/DND Button, Group FWD Button)
<b>Group FWD (External/Internal/Both)</b>	Used to set the FWD feature for a specified ICD group. The feature is applied to CO line calls, intercom calls, or both. (→ 1.6.7 FWD/DND Button, Group FWD Button)
<b>Account Code Entry (Account)</b>	Used to enter an account code. (→ 1.1.2 Account Code Entry)
<b>Conference</b>	Used to establish a multiparty conversation. (→ 1.3.13 Conference)
<b>Terminate</b>	Used to disconnect the current call and make another call without hanging up. (→ 1.6.2 Flash/Recall/Terminate)
<b>External Feature Access (EFA)</b>	Used to send a flash/recall signal to the telephone company or host PBX to access external features. (→ 1.5.1 EFA (External Feature Access))
<b>Call Park</b>	Used to park or retrieve a call in a preset PBX parking zone. (→ 1.3.5 Call Park)
<b>Call Park (Automatic Park Zone)</b>	Used to park a call in an idle PBX parking zone automatically. (→ 1.3.5 Call Park)
<b>Call Log</b>	Used to show a log of received calls. (→ 1.3.3 Call Log, Incoming)
<b>Log-in/Log-out*</b>	Used to switch between Log-in and Log-out status. (→ 1.9.3 ICD Group Features—Log-in/Log-out)
<b>Hurry-up</b>	Used to redirect the longest waiting call in the queue of an ICD group to the overflow destination. (→ 1.9.5 ICD Group Features—Queuing)
<b>Wrap-up*</b>	Used to switch between Wrap-up/Not Ready and Ready modes. (→ 1.9.3 ICD Group Features—Log-in/Log-out)
<b>System Alarm</b>	Used to display a PBX error. (→ 1.10.4 Local Alarm Information)

Button	Usage
<b>Time Service*</b>	Used to change or display the current time mode (day/lunch/break/night). (→ 1.17.4 Time Service)
<b>Answer</b>	Used to answer an incoming call. (→ 1.8.3 Headset Operation)
<b>Release</b>	Used to disconnect the line during or after a conversation, or to complete a Call Transfer. (→ 1.8.3 Headset Operation)
<b>Toll Restriction</b>	Used to change the Toll Restriction (TRS) level of other extension users temporarily. (→ 1.4.4 Dial Tone Transfer)
<b>Headset</b>	Used to turn headset mode on/off while idle. Used to switch between hands-free mode and headset modes during a conversation. (→ 1.8.3 Headset Operation)
<b>Time Service Switching Mode (Automatic/Manual)*</b>	Used to switch between Automatic Switching and Manual Switching mode. (→ 1.17.4 Time Service)
<b>Two-way Record</b>	Used to record a conversation into your own mailbox. (→ 1.19.4 Voice Mail DPT (Digital) Integration)
<b>Two-way Transfer</b>	Used to record a conversation into the mailbox of a specified extension. (→ 1.19.4 Voice Mail DPT (Digital) Integration)
<b>One-touch Two-way Transfer</b>	Used to record a conversation into the mailbox of a specified extension with a one-touch operation. (→ 1.19.4 Voice Mail DPT (Digital) Integration)
<b>Live Call Screening (LCS)</b>	Used to monitor your own voice mailbox while a caller is leaving a message and, if desired, intercept the call. (→ 1.19.4 Voice Mail DPT (Digital) Integration)
<b>Voice Mail (VM) Transfer</b>	Used to transfer a call to the mailbox of a specified extension. (→ 1.19.4 Voice Mail DPT (Digital) Integration, → 1.19.5 Voice Mail DTMF Integration)

\*: **One-touch Feature Setting Buttons:** Pressing these buttons while on-hook changes the feature settings. The new mode will be displayed for a preprogrammed time period.

## Programming References

### PC Programming Manual

2.8.4 [2-3] Timers & Counters—Miscellaneous—PT Display—PT Last Display Duration in Idle Mode

2.10.4 [4-1-4] Wired Extension—Flexible Button

2.10.5 [4-1-4] Wired Extension—Flexible Button—Flexible Button Data Copy

2.10.6 [4-1-5] Wired Extension—PF Button

2.10.10 [4-2-3] Portable Station—Flexible Button

2.10.13 [4-3] DSS Console—Flexible Button

### PT Programming Manual

None

## Operating Manual References

3.1.4 Customizing the Buttons

## 1.6.4 Flexible Numbering/Fixed Numbering

### Description

To dial another extension user or to access PBX features, the access numbers (extension numbers or feature numbers) are required.

There are three types of numbering plans:

- 1) Flexible Numbering (available while a dial tone is heard)
- 2) Flexible Numbering (available while busy, DND, or ringback tone is heard)
- 3) Fixed Numbering (available while dialing or talking)

#### 1. Flexible Numbering (available while a dial tone is heard)

Extension numbers and feature numbers which are available while a dial tone is heard can be customized for easy use. The numbers must not conflict. It is also possible to use default (Pattern 1 or Pattern 2) shown in the following table:

- a) **Extension Numbers:** Extension numbers consist of leading numbers and additional numbers. Extension numbers (consisting of "0" through "9") can be assigned as follows:
- Numbering schemes: 1-64
  - Leading number: up to three digits
  - Additional number: up to two digits (default: two digits)

#### [Example]

If the number "3" is programmed as a leading number for the 1st extension numbering scheme, and "XX" is programmed as the additional digits, extension numbers 300 through 399 are available.

- b) **Feature Numbers:** Up to four digits, consisting of 0-9, "X", and "#"

#### [Flexible Numbering Table (available while a dial tone is heard)]

Feature	Default	
	Pattern 1 (with ✕)	Pattern 2 (without ✕)
Extension Numbering Scheme 1—Leading Number	1 / 2	10
Extension Numbering Scheme 2—Leading Number	2 / 3	11
Extension Numbering Scheme 3—Leading Number	3 / 4	12
Extension Numbering Scheme 4—Leading Number	4 / 1	13
Extension Numbering Scheme 5—Leading Number	None	14
Extension Numbering Scheme 6—Leading Number	None	15
Extension Numbering Scheme 7—Leading Number	None	16
Extension Numbering Scheme 8—Leading Number	None	17
Extension Numbering Scheme 9—Leading Number	None	18
Extension Numbering Scheme 10—Leading Number	None	None
Extension Numbering Scheme 11—Leading Number	None	20

## 1.6 F

Feature	Default	
	Pattern 1 (with *)	Pattern 2 (without *)
Extension Numbering Scheme 12—Leading Number	None	21
Extension Numbering Scheme 13—Leading Number	None	22
Extension Numbering Scheme 14—Leading Number	None	23
Extension Numbering Scheme 15—Leading Number	None	24
Extension Numbering Scheme 16—Leading Number	None	25
Extension Numbering Scheme 17—Leading Number	None	26
Extension Numbering Scheme 18—Leading Number	None	27
Extension Numbering Scheme 19—Leading Number	None	28
Extension Numbering Scheme 20—Leading Number	None	None
Extension Numbering Scheme 21—Leading Number	5 / 5	19
Extension Numbering Scheme 22—Leading Number	6 / 6	29
Extension Numbering Scheme 23–64—Leading Number	None	None
Operator Call	9 / 0	0
Idle Line Access (Local Access)	0 / 1 / 9	9
Trunk Group Access	8	8
Redial	#	#
Speed Dialing—System/Personal	**	*
Personal Speed Dialing—Programming	*30	30
Doorphone Call	*31	31
Group Paging	*33	33
External BGM on/off	*35	35
Outgoing Message (OGM) playback/record/clear	*36	36
S-CO Line Access	*37	37
SVM—Personal Greeting Message playback/record/clear	*38	None
Group Call Pickup	*40	40
Directed Call Pickup	*41	41
TAFAS—Calls through an External Pager	*42	42
Group Paging answer	*43	43
Automatic Callback Busy cancel/CCBS cancel	*46	46
User Remote Operation/Walking COS/Verification Code Entry	*47	47
Wireless XDP Parallel Mode set/cancel	*48	48

Feature	Default	
	Pattern 1 (with *)	Pattern 2 (without *)
Account Code Entry	*49	49
Call Hold/Call Hold Retrieve	*50	50
Call Hold Retrieve—Specified with a Holding Extension Number	*51	51
Call Park/Call Park Retrieve	*52	52
Call Hold Retrieve—Specified with a Held CO line Number	*53	53
Door Open	*55	55
External Relay	*56	56
External Feature Access	*60	60
Message Waiting set/cancel/callback	*70	70
FWD/DND set/cancel—Both	*710	710
FWD/DND set/cancel—External	*711	711
FWD/DND set/cancel—Internal	*712	712
FWD/DND No Answer Timer set	*713	713
Group FWD set/cancel—Both	*714	714
Group FWD set/cancel—External	*715	715
Group FWD set/cancel—Internal	*716	716
Call Pickup Deny set/cancel	*720	720
Paging Deny set/cancel	*721	721
Walking Extension	*727	727
Data Line Security set/cancel	*730	730
Manual Call Waiting for Extension Call off/BSS	*731	731
Automatic Call Waiting set/cancel	*732	732
Executive Busy Override Deny set/cancel	*733	733
Not Ready Mode on/off	*735	735
Log-in/Log-out	*736	736
Hot Line program/set/cancel	*740	740
Absent Message set/cancel	*750	750
BGM set/cancel	*751	751
Remote Wake-up Call	*76*	76*

Feature	Default	
	Pattern 1 (with ✖)	Pattern 2 (without ✖)
Timed Reminder set/cancel	✖760	760
Printing Message	✖761	761
Extension Dial Lock set/cancel	✖77	77
Time Service Switch	✖780	780
Remote Extension Dial Lock off	✖782	782
Remote Extension Dial Lock on	✖783	783
Extension Feature Clear	✖790	790
Extension Personal Identification Number (PIN) set/cancel	✖799	799
Quick Dialing 1-80	None	None

**2. Flexible Numbering (available while a busy, DND, or ringback tone is heard)**

Feature numbers which are available while a busy, DND, or ringback tone is heard can be customized for easy use. The numbers should be one digit (0-9, "✖", or "#") and must not conflict. For a list of the default settings, refer to the following table:

**[Flexible Numbering Table (available while a busy, DND, or ringback tone is heard)]**

Feature	Default
Call Waiting/DND Override	1 or 2*
Executive Busy Override	3
Message Waiting set	4
Call Monitor	5
Automatic Callback Busy	6
Alternate Calling—Ring/Voice	✖

\*: To use Call Waiting/DND Override, both "1" and "2" are available by default.

**3. Fixed Numbering (available while dialing or talking)**

Features which are available while dialing or talking have fixed numbers, as shown in the following table:

**[Fixed Numbering Table (available while dialing or talking)]**

Feature	Fixed Numbering
Pulse to Tone Conversion	✖
Conference	3
Door Open	5

## Conditions

- The following are examples of feature number conflicts: 1 and 11, 0 and 00, 2 and 21, 10 and 101, 32 and 321, etc.
- **Feature number + Additional number (Parameter)**  
Certain 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".
- Rotary single line telephone (SLT) users cannot dial feature numbers which include "\*" or "#".
- Portable station (PS) users cannot use the following features:
  - Personal Speed Dialing
  - OGM playback/record
  - S-CO Line Access
  - Walking Extension
  - BGM set/cancel
  - Timed Reminder

## Programming References

### PC Programming Manual

2.8.8 [2-6-1] Numbering Plan—Main

→ Extension

→ Features

2.8.9 [2-6-2] Numbering Plan—Quick Dial

2.8.10 [2-6-3] Numbering Plan—B/NA DND Call Feature

### PT Programming Manual

[100] Flexible Numbering

## Feature Manual References

1.13.11 PS Connection

1.19.3 Voice Mail (VM) Group

2.1 Capacity of System Resources

## Operating Manual References

4.2.1 Feature Number Table

## 1.6.5 Floating Extension

### Description

Virtual extension numbers can be assigned to resources to make them as easily accessible as extensions. These numbers are referred to as "floating extension numbers" and can be assigned as a destination of incoming calls, intercepted calls, etc.

This feature is also known as Floating Station.

Resource		Description	Default
<b>Device</b>	<b>External Pager</b>	Used as the destination for the Trunk Answer From Any Station (TAFAS) feature. (→ 1.17.1 TAFAS (Trunk Answer From Any Station))	600
	<b>Outgoing Message (OGM)</b>	Used to play messages for callers via the Direct Inward System Access (DISA) feature. (→ 1.4.6 DISA (Direct Inward System Access))	5 + two-digit OGM number
	<b>Simplified Voice Message (SVM)</b>	Used to access message boxes associated with extensions. (→ 1.16.5 SVM (Simplified Voice Message))	SVM card 1: 591 SVM card 2: 592
	<b>Analog Remote Maintenance</b>	Used to access PC programming mode through a modem on a PC.	599
<b>Group</b>	<b>Incoming Call Distribution (ICD) Group</b>	Used to call an ICD group. (→ 1.9.1 ICD GROUP FEATURES)	6 + two-digit group number
	<b>PS Ring Group</b>	Used to call a PS ring group. (→ 1.13.14 PS Ring Group)	—
	<b>VM (DPT) Group</b>	Used to call a VM (DPT) group.	500 (VM [DPT] Group 1)
	<b>VM (DTMF) Group</b>	Used to call a VM (DTMF) group.	—

### Conditions

- Certain resources which are assigned a floating extension number can also be assigned a name.

### Programming References

#### PC Programming Manual

2.8.8 [2-6-1] Numbering Plan—Main—Extension

2.9.9 [3-5-1] Incoming Call Distribution Group—Group Settings—Main

→ Floating Extension Number

→ Group Name

2.9.16 [3-7-2] VM(DPT) Group—Unit Settings—Floating Extension No.

2.9.19 [3-8-2] VM(DTMF) Group—Group Settings—Floating Ext. No.

2.9.21 [3-9] PS Ring Group—Floating Extension Number

- 2.11.2 [5-2] External Pager—Page Number 1—Floating Extension Number
- 2.11.4 [5-3-2] Voice Message—DISA Message—Floating Extension Number
- 2.16.1 [10-1] Main—Remote—Remote—Analog Remote (Modem) Floating Extension Number

#### PT Programming Manual

- [623] Incoming Call Distribution Group Name
- [660] VM Group Floating Extension Number
- [700] External Pager Floating Extension Number
- [730] Outgoing Message (OGM) Floating Extension Number
- [731] Outgoing Message (OGM) Name
- [811] Modem Floating Extension Number

### Feature Manual References

- 1.13.5 PC Programming
- 1.19.3 Voice Mail (VM) Group

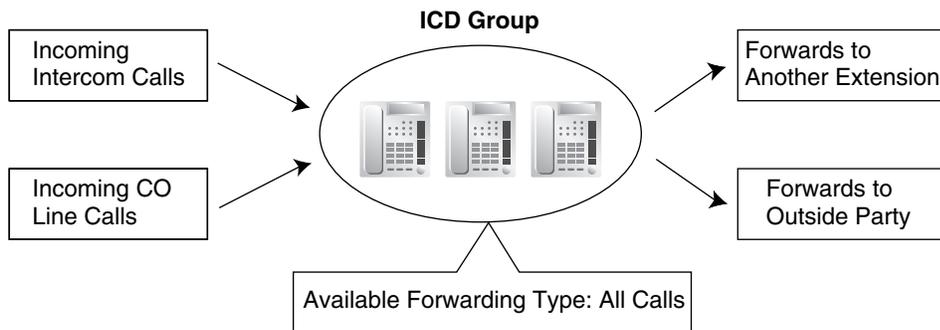
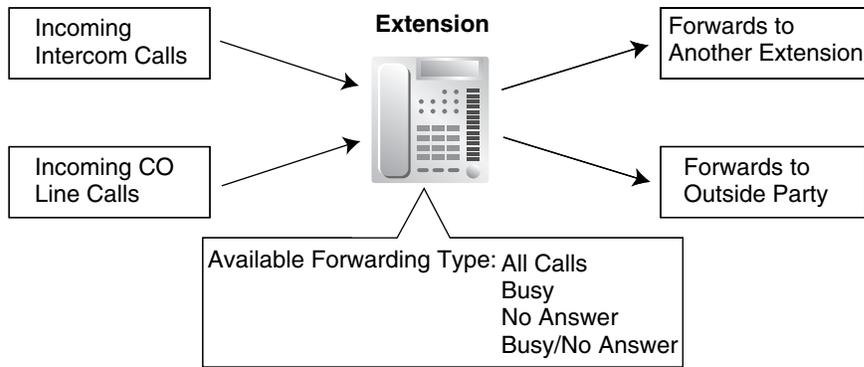
## 1.6.6 FWD (Call Forwarding)

### Description

Extensions and incoming call distribution groups can forward their calls to preset destinations. There are several different types of forwarding, and the circumstances under which the calls are forwarded for each type differ as follows:

Type	Circumstance
<b>All Calls</b>	Any time <b>Follow Me:</b> When an extension user fails to set this feature before leaving the desk, this feature can be set from the destination extension.
<b>Busy</b>	When the extension user's line is busy.
<b>No Answer</b>	When the extension user does not answer within a preprogrammed time.
<b>Busy/No Answer</b>	When the extension user's line is busy or the user does not answer within a preprogrammed time.

Depending on the type of incoming intercom or CO line calls, it is possible to set a different destination for each.



**[Available Destinations]**

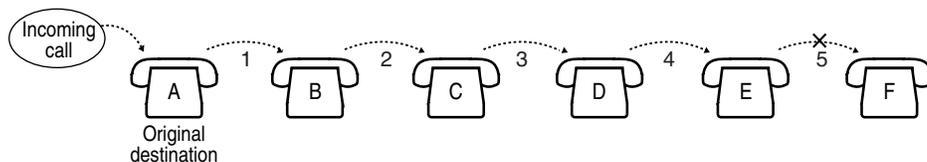
Destination	Availability	Condition for Original Extension/ Incoming Call Distribution Group
Wired Extension (PT/SLT)	✓	Only available when FWD to extension is allowed through COS programming.*
PS	✓	
ICD Group	✓	
PS Ring Group	✓	–
Floating Extension no. for SVM	✓	–
VM Group (DTMF/DPT)	✓	–
External Pager (TAFAS)	✓	–
DISA	✓	Only available for incoming CO line calls. Incoming intercom and doorphone calls cannot be forwarded to a DISA floating extension number.
Analog Remote Maintenance	✓	–
Idle Line Access no. + Phone no.	✓	Only available when FWD to CO line is allowed through COS programming.
Trunk Group Access no. + Trunk Group no. + Phone no.	✓	

- \*: If an extension user is not permitted by COS to call a certain extension (→ 1.9.12 Internal Call Block), the FWD feature will not function if that extension is set as the forwarding destination.

## Conditions

### [General]

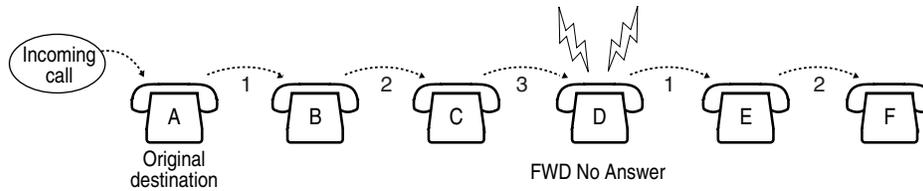
- **FWD for CO Line Calls/Intercom Calls**  
The extension user can set the FWD feature for CO line calls, for intercom calls, or for both.
- **FWD from Incoming Call Distribution Group (Group FWD)**  
COS programming determines the incoming call distribution groups that can use this feature.
- **FWD to CO Line**  
COS programming determines the extensions or incoming call distribution groups that can forward calls externally.  
The original extension's Toll Restriction and ARS still apply to the forwarded call.
- **CO Line Call Duration**  
The duration of a CO line call can be restricted by a system timer. CO line call duration is assigned separately for calls between an extension user and an outside party, and calls between two outside parties.  
If the timer expires, the line will be disconnected. (→ 1.3.12 CO Line Call Limitation)
- **Multiple FWD**  
Calls can be forwarded up to four times. The following forwarding features are counted as Multiple FWD:
  - FWD—Busy or Busy/No Answer (when the destination extension is busy), or All Calls
  - Idle Extension Hunting—Overflow
  - Intercept Routing—Busy/DND (when the destination extension is busy or in DND mode)
  - Incoming Call Distribution Group—Overflow



In the above illustration, forwarding stops at extension E. However, forwarding can go farther in the following cases:

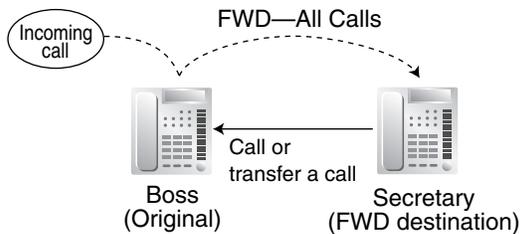
- If a destination extension rings, and then the call is redirected to the forward destination by the FWD—No Answer or Busy/No Answer feature.
- If a destination extension rings, and then the call is redirected to the intercept destination by the Intercept Routing—No Answer feature.
- If a call waits in a queue of an incoming call distribution group, and then the call is redirected to the overflow destination by the Queuing Time Table. (→ 1.9.5 ICD Group Features—Queuing)

In the above cases, the forwarding counter resets to zero, and the call can be forwarded up to four times again from the destination extension described above.



- **Boss & Secretary feature**

It is possible to call the original extension from the destination extension regardless of the forward setting.



- **Message Waiting**

While calls are forwarded, Message Waiting information is not forwarded. The Message button light turns on at the originally called extension. (→ 1.11.3 Message Waiting)

- **Idle Extension Hunting**

Idle Extension Hunting applies to calls forwarded to a busy extension in an idle extension hunting group.

### [All Calls and Busy]

- If the forward destination is not available to answer a call, this feature is canceled and the original destination will ring for the following type of call:
  - Doorphone call
  - CO line calls

### [No Answer and Busy/No Answer]

- **No Answer Time**

The number of rings before the call is forwarded is programmable for each extension.

### [Follow Me]

- This feature is only available when the original extension has set "**Remote Operation by Other Extension**" to "Allow" through COS programming.

## Programming References

### PC Programming Manual

2.8.8 [2-6-1] Numbering Plan—Main—Features—FWD No Answer Timer Set

2.8.11 [2-7-1] Class of Service—COS Settings

→ TRS—Call Forward to CO

→ Extension Feature—Group Forward Set

→ Extension Feature—Remote Operation by Other Extension

2.9.1 [3-1-1] Trunk Group—TRG Settings—Main

→ CO-CO Duration Time

→ Extension-CO Duration Time

2.9.9 [3-5-1] Incoming Call Distribution Group—Group Settings—Group Log / Group FWD

2.10.2 [4-1-2] Wired Extension—FWD/DND

2.10.9 [4-2-2] Portable Station—FWD / DND

#### PT Programming Manual

[472] Extension-to-CO Line Call Duration

[473] CO-to-CO Line Call Duration

[504] Call Forwarding to CO Line

[605] Call Forwarding—No Answer Time

## Feature Manual References

1.3.16 COS (Class of Service)

1.9.4 ICD Group Features—Overflow

1.9.7 Idle Extension Hunting

1.9.9 Intercept Routing

## Operating Manual References

1.3.29 FWD (Call Forwarding)

## 1.6.7 FWD/DND Button, Group FWD Button

### Description

The FWD/DND fixed button, or a customized flexible button, can display the FWD/DND setting status of the extension. Using this button, the FWD status and DND status of the extension can be temporarily set or canceled without clearing FWD destination settings.

### FWD/DND Button Types

Multiple types of FWD/DND buttons can be customized on an extension.

Type		Description
FWD/DND for Extension	FWD/DND—Internal	Works for incoming intercom calls
	FWD/DND—External	Works for incoming CO line calls
	FWD/DND—Both	Works for all incoming calls

### [Button Status]

The FWD/DND button shows the current status as follows:

Light Pattern	Status (default)
Red on	DND on
Slow red flashing	FWD on
Off	FWD/DND off

The functions assigned to the "on" and "flashing" patterns can be changed through system programming.

## Group FWD Button Types

The FWD feature for the incoming call distribution group can be customized on a flexible button. Multiple types of Group FWD buttons can be customized on an extension.

Type		Description
FWD for Incoming Call Distribution Group	Group FWD—Internal	Works for incoming intercom calls
	Group FWD—External	Works for incoming CO line calls
	Group FWD—Both	Works for all incoming calls

### [Button Status]

The Group FWD button shows the current status as follows:

Light Pattern	Status (default)
Red on	FWD on
Off	FWD off

## FWD/DND Setting by Fixed FWD/DND button

Pressing the fixed FWD/DND button in idle status allows the extension user to set the following items for FWD/DND:

- **FWD/DND for CO line calls**  
The FWD/DND status for CO line calls to that extension can be switched temporarily without clearing the FWD destination. During setting, the LED of the button shows the current CO line call FWD/DND status. The forwarding type and destination for CO line calls can also be set.
- **FWD/DND for intercom calls**  
The FWD/DND status for intercom calls to that extension can be switched temporarily without clearing the FWD destination. During setting, the LED of the button shows the current intercom call FWD/DND status. The forwarding type and destination for intercom calls can also be set.
- **FWD—No Answer timer**  
The length of time until unanswered calls are forwarded can be modified. This setting is applied to both intercom and CO line call forwarding.

These settings are only available when FWD/DND buttons are set through system programming to FWD/DND Setting mode.

## Conditions

- When FWD/DND buttons are set to FWD/DND Cycle Switch mode, pressing the FWD/DND button cycles the FWD/DND setting.  
In this mode, when intercom calls are set to be handled differently from CO line calls (forwarding type, forward destination, DND on/off):
  - a) in idle mode, the light patterns of the FWD/DND—Both button (including FWD/DND button [fixed button]) and the Group FWD—Both button will indicate the setting for either CO line calls or intercom calls, but not both.
  - b) the FWD and DND icons on a PS display reflect the settings for CO line calls only.
  - c) pressing the FWD/DND—Both button (including FWD/DND button [fixed button]) or the Group FWD—Both button will be ignored.

- When both the FWD and DND features are assigned simultaneously, pressing the button changes the settings as follows:



- A FWD/DND button customized on a flexible button is always in FWD/DND Cycle Switch mode, and the mode cannot be changed.

## Programming References

### PC Programming Manual

#### 2.8.8 [2-6-1] Numbering Plan—Main—Features

- FWD/DND Set / Cancel: Call from CO & Extension
- FWD/DND Set / Cancel: Call from CO
- FWD/DND Set / Cancel: Call from Extension
- Group FWD Set / Cancel: Call from CO & Extension
- Group FWD Set / Cancel: Call from CO
- Group FWD Set / Cancel: Call from Extension

#### 2.8.17 [2-9] System Options—Option 1

- PT Fwd / DND—Fwd LED
- PT Fwd / DND—DND LED
- PT Fwd / DND—Fwd/DND key mode when Idle

#### 2.10.1 [4-1-1] Wired Extension—Extension Settings—FWD / DND Reference

#### 2.10.4 [4-1-4] Wired Extension—Flexible Button

- Type
- Ext. No. / Floating Ext. No. (for Group FWD (Both))
- Ext. No. / Floating Ext. No. (for Group FWD (External))
- Ext. No. / Floating Ext. No. (for Group FWD (Internal))

#### 2.10.8 [4-2-1] Portable Station—Extension Settings—FWD / DND Reference

#### 2.10.10 [4-2-3] Portable Station—Flexible Button

- Type
- Ext. No. / Floating Ext. No. (for Group Fwd (Both))
- Ext. No. / Floating Ext. No. (for Group Fwd (External))
- Ext. No. / Floating Ext. No. (for Group Fwd (Internal))

#### 2.10.13 [4-3] DSS Console—Flexible Button

- Type
- Ext. No. / Floating Ext. No. (for Group Fwd (Both))
- Ext. No. / Floating Ext. No. (for Group Fwd (External))
- Ext. No. / Floating Ext. No. (for Group Fwd (Internal))

### PT Programming Manual

None

## Feature Manual References

1.6.1 Fixed Buttons

1.6.3 Flexible Buttons

## Operating Manual References

3.1.2 Personal Programming

# 1.7 G

## 1.7.1 GROUP FEATURES

### Description

This PBX supports various types of groups.

#### 1. Trunk Group

CO lines can be grouped into trunk groups based on carrier, CO line type, etc. Several settings can be assigned on a trunk group basis. All CO lines belonging to a trunk group follow the programming for that trunk group.

→ 2.9.1 [3-1-1] Trunk Group—TRG Settings

→ [402] LCOT Trunk Group Number

Each CO line can belong to only one trunk group. CO lines are assigned to a trunk group based on their port numbers.

#### 2. Extension User Group

Extensions can be grouped into extension user groups. Extension user groups then compose the following groups:

- a) Tenant (→ 1.17.2 Tenant Service)
- b) Call Pickup Group (See below.)
- c) Paging Group (See below.)

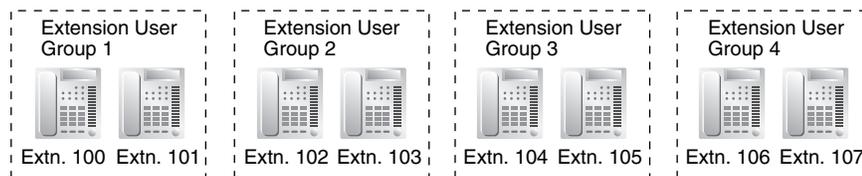
Every extension must belong to one extension user group and cannot belong to more than one extension user group.

→ 2.9.3 [3-2] Extension Group

→ [603] Extension User Group

**Assignable Extensions:** Proprietary telephone (PT)/single line telephone (SLT)/portable station (PS)

#### [Example]



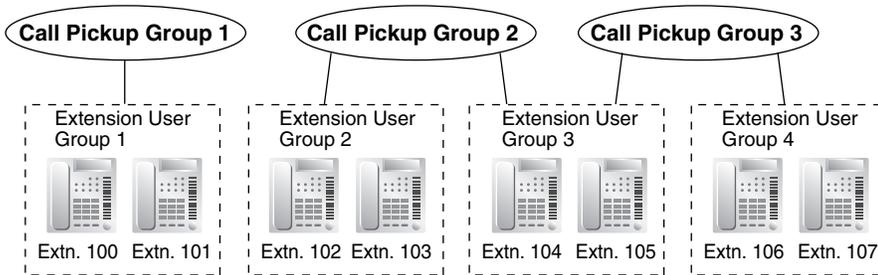
#### 2.1 Call Pickup Group

Using the Group Call Pickup feature, extensions can answer any calls within the call pickup group to which they belong. One extension user group can belong to several call pickup groups. (→ 1.3.6 Call Pickup)

→ 2.9.4 [3-3] Call Pickup Group

→ 2.9.5 [3-3] Call Pickup Group—All Setting

→ [650] Extension User Groups of a Pickup Group

**[Example]****2.2 Paging Group**

Using the Paging feature, extensions can make a page to any paging group or answer a page to their own groups. One extension user group or external pager (loudspeaker) can belong to several paging groups.

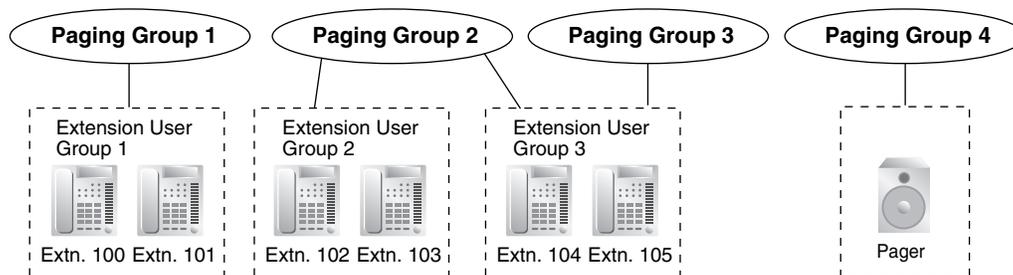
(→ 1.13.1 Paging)

→ 2.9.6 [3-4] Paging Group

→ 2.9.7 [3-4] Paging Group—All Setting

→ 2.9.8 [3-4] Paging Group—External Pager

→ [640] Extension User Groups of a Paging Group

**[Example]****3. Idle Extension Hunting Group**

If a called extension is busy or in Do Not Disturb (DND) mode, Idle Extension Hunting redirects the incoming call to an idle member of the same idle extension hunting group. Members are programmed through system programming. When calls are received, idle extensions are automatically searched for according to a preprogrammed hunting type: Circular Hunting or Terminated Hunting. (→ 1.9.7 Idle Extension Hunting)

→ 2.9.13 [3-6] Extension Hunting Group

→ 2.9.14 [3-6] Extension Hunting Group—Member List

→ [680] Idle Extension Hunting Type

→ [681] Idle Extension Hunting Group Member

**4. Incoming Call Distribution Group (ICD Group)**

An ICD group is a group of extensions which receives incoming calls directed to the group. Each ICD group has a floating extension number (default: 6 + two-digit group number) and name. One extension can belong to multiple ICD groups.

→ 2.9.9 [3-5-1] Incoming Call Distribution Group—Group Settings

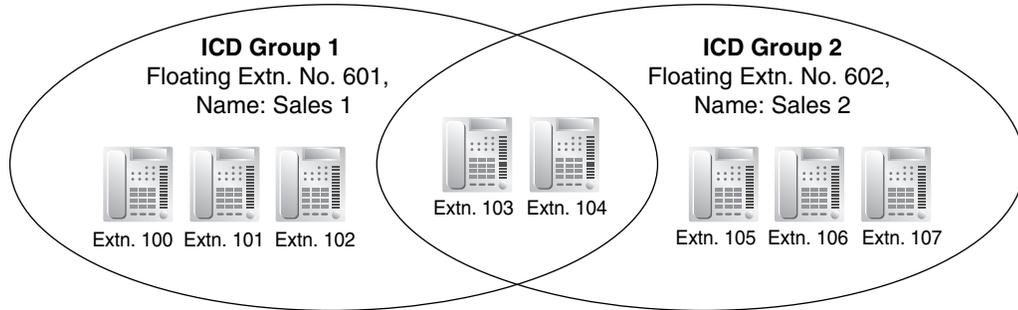
→ 2.9.12 [3-5-4] Incoming Call Distribution Group—Member

→ [623] Incoming Call Distribution Group Name

**Assignable Extensions:** PT/SLT/PS/PS ring group

(→ 1.9.1 ICD GROUP FEATURES)

[Example]



5. VM Group

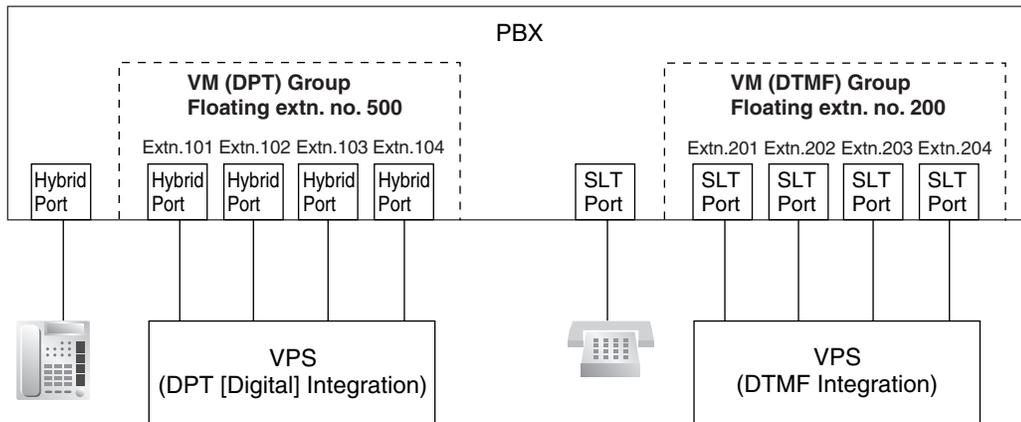
There are two types of VM groups, explained below.

Type	Description
<b>VM (DPT) Group</b>	A group of APT or hybrid ports which use Voice Mail DPT (Digital) Integration features. One APT or hybrid port can belong to only one group.
<b>VM (DTMF) Group</b>	A group of SLT ports which use Voice Mail DTMF Integration features. One SLT port can belong to only one group.

(→ 1.19.3 Voice Mail (VM) Group)

- 2.9.15 [3-7-1] VM(DPT) Group—System Settings
- 2.9.16 [3-7-2] VM(DPT) Group—Unit Settings
- 2.9.18 [3-8-1] VM(DTMF) Group—System Settings
- 2.9.19 [3-8-2] VM(DTMF) Group—Group Settings
- 2.9.20 [3-8-2] VM(DTMF) Group—Group Settings—Member List
- [660] VM Group Floating Extension Number

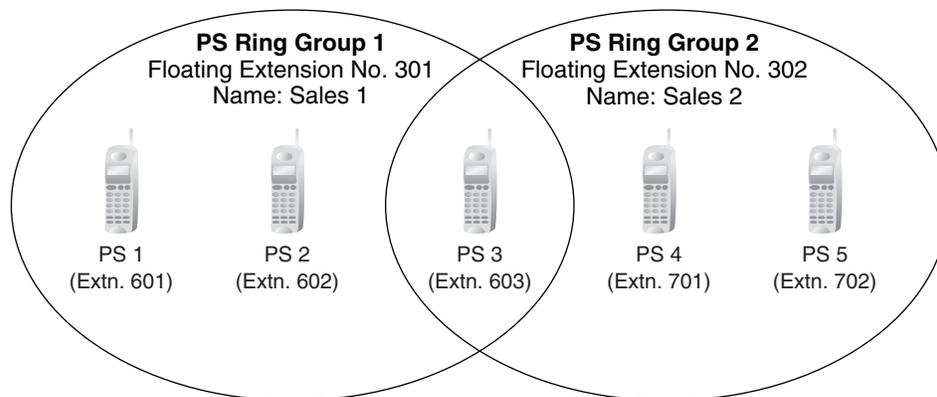
[Example]



6. PS Ring Group

A PS ring group is a group of PS extensions which receives incoming calls directed to the group. Each group has a floating extension number and name assigned through system programming. One PS can belong to multiple PS ring groups.

- (→ 1.13.14 PS Ring Group)
- 2.9.21 [3-9] PS Ring Group
- 2.9.22 [3-9] PS Ring Group—Member List



## Programming References

### PC Programming Manual

2.9 [3] Group

### PT Programming Manual

[402] LCOT Trunk Group Number

[603] Extension User Group

[620] Incoming Call Distribution Group Member

[622] Incoming Call Distribution Group Floating Extension Number

[623] Incoming Call Distribution Group Name

[640] Extension User Groups of a Paging Group

[650] Extension User Groups of a Pickup Group

[660] VM Group Floating Extension Number

[680] Idle Extension Hunting Type

[681] Idle Extension Hunting Group Member

## Feature Manual References

2.1 Capacity of System Resources

# 1.8 H

## 1.8.1 Hands-free Answerback

### Description

A proprietary telephone (PT) user with a speakerphone or optional headset can talk to a caller without lifting the handset. If the user receives a call in Hands-free Answerback mode, a hands-free conversation is established in the following method:

Type	Answering Method
Intercom Call	Established immediately after a beep tone at the called extension and the caller hears a confirmation tone.
CO Line Call	Established after a specified number of rings, a called extension hears a beep tone.

### Conditions

- Hands-free Answerback applies to:**  
 Intercom calls and CO line calls, including calls directed to an incoming call distribution group (ICD) in UCD or Priority Hunting distribution method. (→ 1.9.2 ICD Group Features—Group Call Distribution)
- Hands-free Answerback for CO Line Calls**  
 System programming is required to use this feature.
- Hands-free Answerback for Calls From an Extension That Placed a CO Line Call on Consultation Hold**  
 Calls from an extension that placed a CO line call on Consultation Hold can be treated by this feature as either intercom calls or CO line calls, depending on system programming. If treated as intercom calls, the call will be established immediately.  
 When transferring a call from an analog CO line, users are strongly recommended to perform a screened transfer, so that the outside caller is not automatically connected to an extension using Hands-free Answerback when the extension user is absent.
- Secret Monitor**  
 The beep tone heard by the called party before answering can be eliminated through system programming.
- Alternate Receiving/Calling Mode (Ring/Voice) Override**  
 Hands-free Answerback overrides the Alternate Receiving mode preset on the telephone and the Alternate Calling mode from the caller.
- Hands-free Answerback with Headset**  
 The Hands-free Answerback feature can also be used with a headset.

### Programming References

#### PC Programming Manual

2.8.4 [2-3] Timers & Counters—Dial / IRNA / Recall / Tone—Tone Length—Reorder Tone for PT Hands-free

2.8.17 [2-9] System Options

- Option 1—PT Operation—Automatic Answer for Call from CO after
- Option 3—Confirmation Tone—Tone 2 : Paged / Automatic Answer
- Option 4—Transfer—Automatic Answer for Transferred Call

## 1.8 H

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### 2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 5

→ Automatic Answer for CO Call

→ Forced Automatic Answer

#### **PT Programming Manual**

None

### **Feature Manual References**

1.9.11 Intercom Call

### **Operating Manual References**

1.3.30 Hands-free Answerback

## 1.8.2 Hands-free Operation

### **Description**

A proprietary telephone (PT) user can talk to another party without lifting the handset. Pressing specific buttons, such as REDIAL, automatically activate hands-free mode.

### **Conditions**

- **PTs with the MONITOR Button**  
PTs with the MONITOR button can dial in hands-free mode but cannot have hands-free conversations.

### **Programming References**

#### **PC Programming Manual**

2.8.4 [2-3] Timers & Counters—Dial / IRNA / Recall / Tone—Tone Length—Reorder Tone for PT Hands-free

2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 4—LCS Answer Mode

#### **PT Programming Manual**

None

## 1.8.3 Headset Operation

### **Description**

This PBX supports headset compatible proprietary telephones (PTs). A PT user can talk to another party hands-free and without lifting the handset by using an optional headset.

For connection and operation, refer to the Operating Instructions for the headset.

This feature is also known as Handset/Headset Selection.

### **Conditions**

- Pressing the SP-PHONE button activates the headset, not the built-in speaker.

- **Answer/Release Button**

A flexible button can be customized as an Answer button or a Release button. Such buttons are useful for headset operation. It is possible to answer an incoming call by pressing the Answer button. While hearing a call waiting tone during a conversation, pressing the Answer button enables one to answer the second call by placing the current call on hold. Pressing the Release button enables one to disconnect the line during or after conversation, or to complete a Call Transfer.

## Programming References

### PC Programming Manual

2.10.4 [4-1-4] Wired Extension—Flexible Button—Type

2.10.13 [4-3] DSS Console—Flexible Button—Type

### PT Programming Manual

None

## Feature Manual References

1.6.3 Flexible Buttons

## Operating Manual References

1.3.32 Headset Operation

3.1.2 Personal Programming

## 1.8.4 HOSPITALITY FEATURES

### Description

This PBX has several features that support its use in a hotel-type environment.

Feature	Description	Details in
<b>Remote Wake-up Call</b>	An extension designated as the hotel operator can set a timed reminder for a room remotely.	• 1.17.3 Timed Reminder
<b>SMDR for External Hotel Application</b>	Timed reminder times can be output to SMDR for use in a PC-based hotel application.	• 1.16.1 SMDR (Station Message Detail Recording)

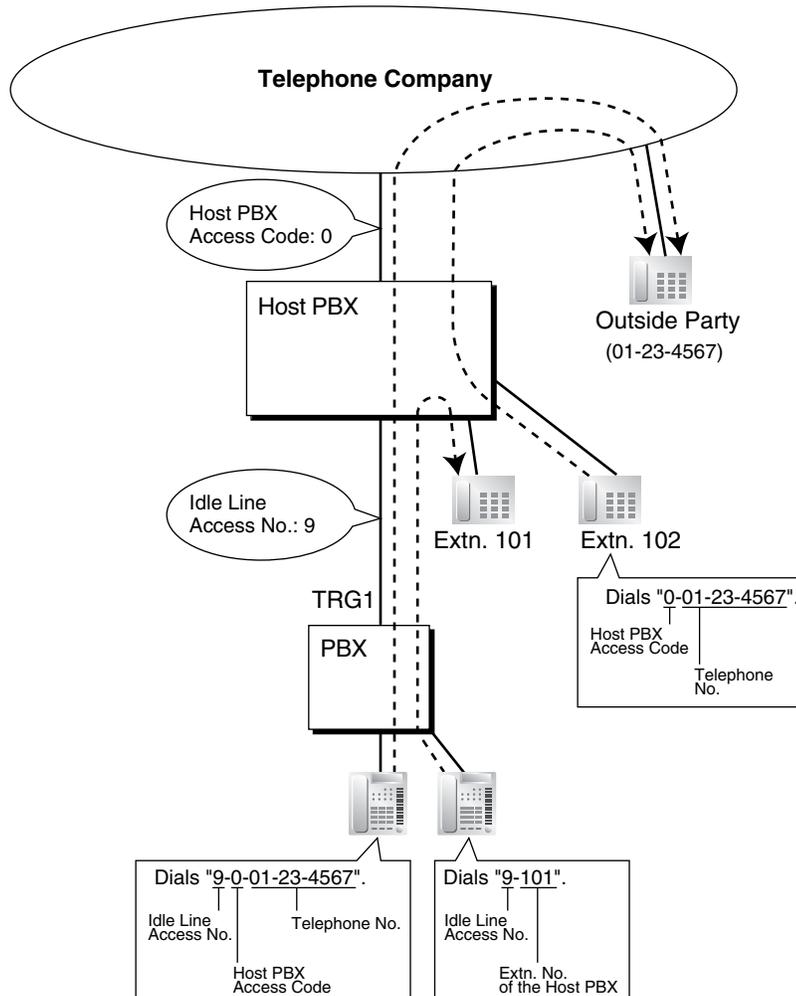
## 1.8.5 Host PBX Access Code (Access Code to the Telephone Company from a Host PBX)

### Description

This PBX can be installed behind an existing PBX (host PBX) by connecting the extension ports of the host PBX to the CO line ports of this PBX (behind PBX). A Host PBX Access code is required for the behind PBX to access the telephone company (e.g., to make outside calls) through the host PBX. The CO line access number of the host PBX should be stored as a Host PBX Access code on a trunk group of the behind PBX. A preprogrammed Pause time will be automatically inserted between the user dialed Host PBX Access code

and the subsequent digits (1.13.4 Pause Insertion).

**[Example]**



**Note**

In this example, "0" should be assigned as a Host PBX Access code for trunk group (TRG) 1 of this PBX.

**Conditions**

- **TRS**  
TRS checks only the dialed telephone number excluding the Host PBX Access code when accessing the telephone company through the host PBX. (→ 1.17.5 TRS (Toll Restriction))
- **ARS**  
A pause is not automatically inserted between the user-dialed access code and the subsequent digits when ARS mode is enabled. (→ 1.1.3 ARS (Automatic Route Selection))
- **SMDR**  
The dialed number including the Host PBX Access code will be recorded on Station Message Detailed Recording (SMDR) only if the modified number setting is selected in the ARS setting for SMDR.

- When a Host PBX Access code is assigned to a trunk group, calls to extensions of the host PBX are not recorded on SMDR.
- A Host PBX Access Code can be used to record only long distance calls on SMDR when a CO line port is connected directly to the telephone company (not a host PBX). This is allowed when the long distance code (e.g., "0") is assigned as the Host PBX Access code. All local calls (e.g., calls that do not require a "0" to be dialed first) are treated as extensions of the telephone company and do not get recorded on SMDR, because in this case this PBX recognizes the telephone company as the host PBX. Therefore, only long distance calls are recorded on SMDR.

## Programming References

### PC Programming Manual

2.9.1 [3-1-1] Trunk Group—TRG Settings—Host PBX Access Code

2.16.1 [10-1] Main—SMDR—SMDR Options—ARS Dial

### PT Programming Manual

[471] Host PBX Access Code

## Feature Manual References

1.16.1 SMDR (Station Message Detail Recording)

2.1 Capacity of System Resources

## 1.8.6 Hot Line

### Description

An extension user can make an outgoing call by simply going off-hook, if the user has previously stored the telephone number or the extension number.

If the Hot Line feature is set and the user goes off-hook, a dial tone is generated for a specified time assigned through system programming and then dialing starts. During this waiting time the user can dial another party, overriding the Hot Line feature.

This feature is also known as Pickup Dialing.

### Conditions

- **Compatible Telephone**  
Proprietary telephone (PT), single line telephone (SLT), and portable station (PS)

## Programming References

### PC Programming Manual

2.8.4 [2-3] Timers & Counters—Dial / IRNA / Recall / Tone—Dial—Hot Line (Pickup Dial) Start

2.8.8 [2-6-1] Numbering Plan—Main—Features—Hot Line (Pickup Dial) Program Set / Cancel

2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 2

→ Pickup Dial Set

→ Pickup Dial Number

2.10.8 [4-2-1] Portable Station—Extension Settings—Option 2

→ Pickup Dial Set

## 1.8 H

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→ Pickup Dial No.

### **PT Programming Manual**

[204] Hot Line Waiting Time

### **Feature Manual References**

2.1 Capacity of System Resources

### **Operating Manual References**

1.3.33 Hot Line

# 1.9 I

## 1.9.1 ICD GROUP FEATURES

### Description

An incoming call distribution group is a group of extensions programmed through system programming.

→ 2.9.12 [3-5-4] Incoming Call Distribution Group—Member

→ [620] Incoming Call Distribution Group Member

An incoming call distribution group receives calls directed to the group. Each incoming call distribution group has a floating extension number (default: 6 + two-digit group number).

Incoming calls directed to an incoming call distribution group are distributed to the member extensions in the group using a distribution method. When a preprogrammed number of extensions in the group are busy, the incoming calls can wait in a queue.

Each incoming call distribution group and member extensions can be programmed as desired to handle incoming calls.

2.9.9 [3-5-1] Incoming Call Distribution Group—Group Settings

→ Main

→ Overflow Queuing Busy

→ Overflow No Answer

→ Miscellaneous

A		B	C	D	E	F				Tenant No. <sup>9</sup>		
Group No.	Floating Extn. No. <sup>1</sup>	Group Name <sup>2</sup>	Distribution Method <sup>3</sup>	Max. No. of Busy Extensions (No. of Agents) <sup>4</sup>	Queuing Call Capacity <sup>5</sup>	Hurry-up Level <sup>6</sup>	Overflow Time <sup>7</sup>	Overflow Destination <sup>8</sup>				
								Day	Lunch	Break	Night	
1	601	Sales	Ring	3	5	3	60	100	103	100	100	1
2	602	Engineering	UCD	Max.	11	8	90	200	203	200	200	5
3												

\*1: → [622] Incoming Call Distribution Group Floating Extension Number

\*2: → [623] Incoming Call Distribution Group Name

\*3: → [624] Incoming Call Distribution Group Distribution Method

\*4: → [632] Maximum Number of Agents

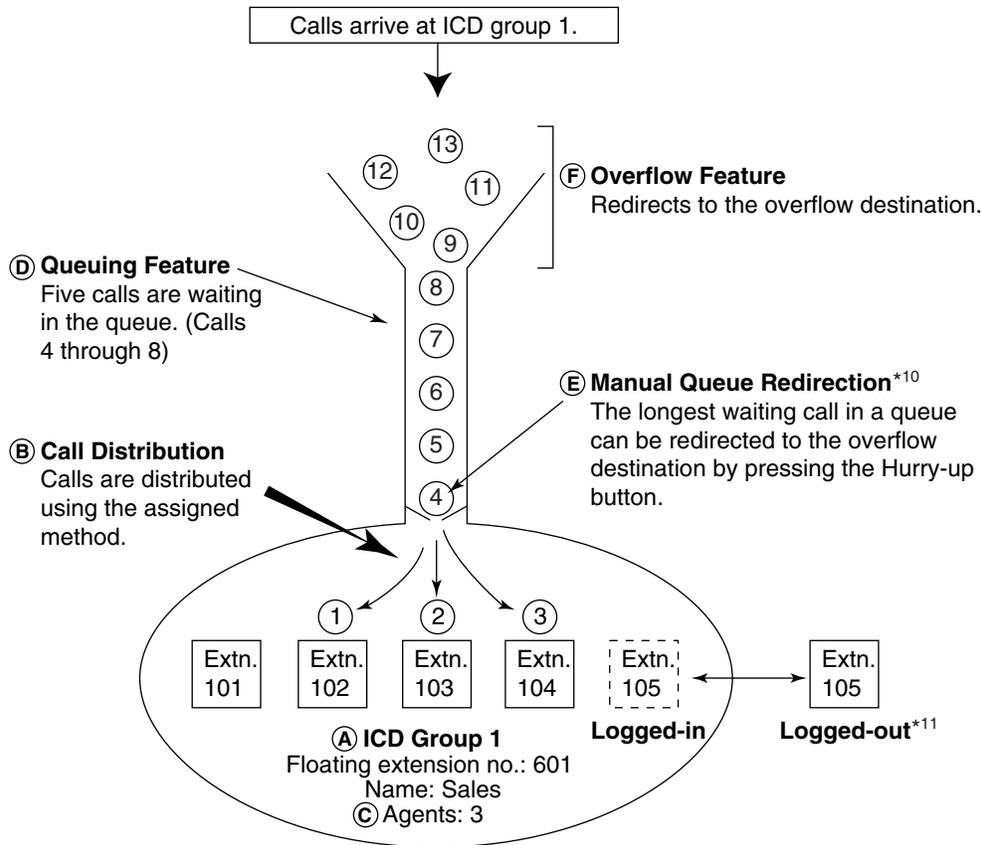
\*5: → [628] Queuing Call Capacity

\*6: → [629] Queuing Hurry-up Level

\*7: → [626] Overflow Time

\*8: → [625] Destination for Overflow Time Expiration/[627] Destination When All Busy

\*9: The tenant number is required to determine the time mode (day/lunch/break/night) (→ 1.17.4 Time Service) and the music source (for Music on Hold) for each group.



\*10: → 1.9.5 ICD Group Features—Queuing

\*11: → 1.9.3 ICD Group Features—Log-in/Log-out

**1. Group Call Distribution** [→ 1.9.2 ICD Group Features—Group Call Distribution]

Incoming calls are distributed using one of the following methods:

Distribution Method	Description
<b>Uniform Call Distribution (UCD)</b>	Calls are distributed evenly to a different extension each time a call is received.
<b>Priority Hunting</b>	An idle extension is searched for in the specified order, always starting from the same location.
<b>Ring</b>	All extensions in the incoming call distribution group ring simultaneously.

**2. Queuing Feature** [→ 1.9.5 ICD Group Features—Queuing]

If a preprogrammed numbers of extensions in an incoming call distribution group are busy, a preprogrammed number of additional calls can wait in a queue. While calls are waiting in the queue, an outgoing message (OGM) or Music on Hold can be sent to the waiting callers.

**3. VIP Call** [→ 1.9.6 ICD Group Features—VIP Call]

It is possible to assign a priority to incoming call distribution groups so that incoming calls can be

received in priority order.

**4. Overflow Feature** [→ 1.9.4 ICD Group Features—Overflow]

A call is redirected to a preprogrammed destination when it cannot be answered or queued (**Intercept Routing—Overflow in an Incoming Call Distribution Group**).

**5. Incoming Call Distribution Group Controlling Feature**

Feature	Description & Reference
<b>Log-in/Log-out</b>	<p>Member extensions can join the group to handle calls (Log-in) or leave the group for a break (Log-out).</p> <p>They can leave the group temporarily when they are away from their desks, to prevent calls being sent to their extensions.</p> <p>→ 1.9.3 ICD Group Features—Log-in/Log-out</p>

## Conditions

- One extension can belong to multiple incoming call distribution groups.
- **ICD Group button**  
An Incoming Call Distribution (ICD) Group button can be assigned on a flexible button for each incoming call distribution group. It receives the incoming calls to the group.  
One extension can have more than one ICD Group button of the same or different incoming call distribution groups (**Multiple ICD Group**). If all ICD Group buttons in the same incoming call distribution group are occupied, the next incoming call will be held in a queue or will overflow. If the ICD Group button is not assigned, incoming calls will arrive at the INTERCOM or CO button.  
An extension can have an ICD Group button for an incoming call distribution group that the extension does not belong to through system programming. However, the ICD Group button will not receive calls to that group.
- **Group FWD**  
The FWD feature can be assigned on an incoming call distribution group basis.
- **COS for Incoming Call Distribution Groups**  
Each incoming call distribution group is assigned a COS number. Group FWD to an outside party can be enabled or disabled for each COS. The COS for incoming call distribution groups is also used for the Internal Call Block feature; when an extension user calls an incoming call distribution group, the PBX checks the COS of the calling extension against the COS of the incoming call distribution group (→ 1.9.12 Internal Call Block).

## Programming References

### PC Programming Manual

#### 2.8.11 [2-7-1] Class of Service—COS Settings

- CO & SMDR—Call Forward to CO
- Programming & Manager—Group Forward Set

#### 2.9.9 [3-5-1] Incoming Call Distribution Group—Group Settings

- Main
- Overflow Queuing Busy
- Overflow No Answer

→ Miscellaneous

2.9.12 [3-5-4] Incoming Call Distribution Group—Member

**PT Programming Manual**

- [620] Incoming Call Distribution Group Member
- [621] Incoming Call Distribution Group Delayed Ringing
- [622] Incoming Call Distribution Group Floating Extension Number
- [623] Incoming Call Distribution Group Name
- [624] Incoming Call Distribution Group Distribution Method
- [625] Destination for Overflow Time Expiration
- [626] Overflow Time
- [627] Destination When All Busy
- [628] Queuing Call Capacity
- [629] Queuing Hurry-up Level
- [630] Queuing Time Table
- [631] Sequences in Queuing Time Table
- [632] Maximum Number of Agents

**Feature Manual References**

- 1.6.3 Flexible Buttons
- 1.6.6 FWD (Call Forwarding)
- 2.1 Capacity of System Resources

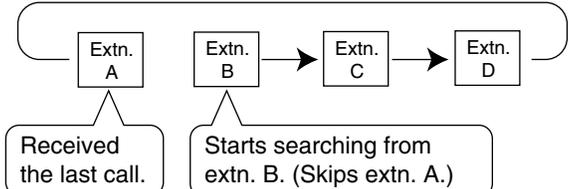
**1.9.2 ICD Group Features—Group Call Distribution**

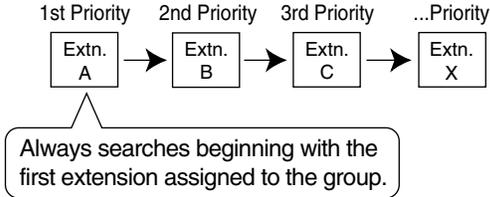
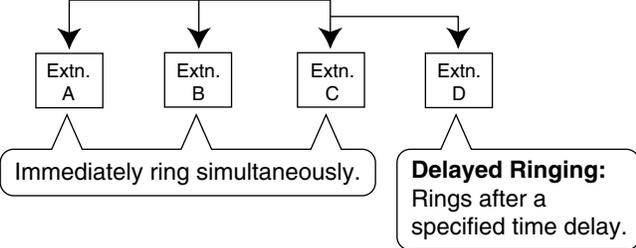
**Description**

Incoming calls directed to an incoming call distribution group are distributed to the member extensions using the selected distribution method until a preprogrammed number of extensions (agents) are busy with calls. When incoming calls exceed the number of available extensions, calls enter a queue (→ 1.9.5 ICD Group Features—Queuing).

**1. Distribution Method**

One of the three distribution methods below can be assigned to each incoming call distribution group.

Distribution Method	Description
<p><b>Uniform Call Distribution (UCD)</b></p>	<p>Calls are distributed evenly to a different extension each time a call is received. Extensions are hunted in a circular way in the preprogrammed order for the group, starting at the extension after the extension that received the last call.</p>  <pre> graph LR     A[Extn. A] --&gt; B[Extn. B]     B --&gt; C[Extn. C]     C --&gt; D[Extn. D]     D --&gt; A     </pre> <p>The diagram illustrates a circular hunt sequence for four extensions: Extn. A, Extn. B, Extn. C, and Extn. D. Arrows show the flow from A to B, B to C, C to D, and D back to A. A call that was received by Extn. A is shown to skip Extn. A and start searching from Extn. B.</p>

Distribution Method	Description
<b>Priority Hunting</b>	<p>An idle extension is searched for using the preprogrammed order for the group.</p> 
<b>Ring</b>	<p>All extensions in the group ring simultaneously.</p> <p><b>Delayed Ringing:</b> Delayed ringing or no ringing can be programmed for each extension in the group. The call can be answered by pressing the flashing button even if no ring or a delayed time is set.</p> 

**2. Call Waiting for Incoming Call Distribution Group (Group Call Waiting)**

When there are no available extensions in an incoming call distribution group, the group members can receive the Call Waiting tone. To use this feature:

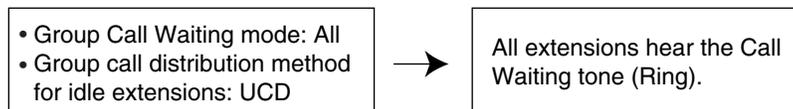
- Select the Group Call Waiting mode through system programming. This determines the distribution method for waiting calls.
- Member extensions must assign the Call Waiting mode individually, or they will not be notified. (→ 1.3.9 Call Waiting Tone)

**[How the Group Call Waiting Feature Activates]**

Programming Conditions		Result	
Group Call Waiting Mode	Group Call Distribution Method	Group Call Waiting Distribution Method	Capable Telephone
Distribution	UCD	UCD	PT/PS with idle
	Priority Hunting	Priority Hunting	ICD Group button
	Ring	Not available*	Any telephone
All	UCD/Priority Hunting/	Ring	
	Ring		

\*: Incoming calls enter the queue immediately. Member extensions do not receive the Call Waiting tone.

**[Example]**



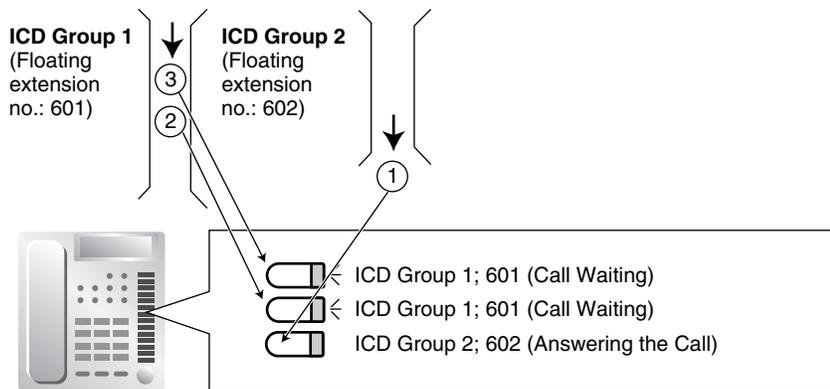
**[ICD Group Button for Group Call Waiting]**

The way that the Group Call Waiting feature works depends on the Group Call Waiting Distribution method as follows:

- a) **Ring:** The Group Call Waiting feature activates for all busy member extensions (even when the extensions do not have ICD Group buttons) simultaneously for only one incoming call—additional calls will wait in a queue.
- b) **UCD/Priority Hunting:** The Group Call Waiting feature activates on an idle ICD Group button located on busy member extensions in a certain order. (This order depends on the type: UCD or Priority Hunting.) Calls will arrive at idle buttons until all ICD Group buttons are occupied—additional calls will wait in a queue.

**Note**

In method b), if an extension has one or more ICD Group buttons for an incoming call distribution group and all the ICD Group buttons on the extension are occupied, the Group Call Waiting feature for the group will not work at the extension.

**3. No Reply Redirection (UCD or Priority Hunting Method)**

If a call received at a member extension is not answered within a preprogrammed time period (No Answer time), the call will be redirected to the next member extension. If there is no idle group member, the call queues at the target extension until a group member becomes available.

**Conditions**

- **FWD/DND Extension**  
System programming for each incoming call distribution group is required to skip or ring extensions which have the FWD or DND feature set. If set to ring, the FWD/DND settings are ignored. (→ 1.4.8 DND (Do Not Disturb), → 1.6.6 FWD (Call Forwarding))
- The Group Call Waiting feature cannot be used with the VIP Call feature (→ 1.9.6 ICD Group Features—VIP Call) and/or Wrap-up feature (→ 1.9.3 ICD Group Features—Log-in/Log-out). To use the VIP Call feature and/or Wrap-up feature, Call Waiting mode on each extension should be off.

**Programming References****PC Programming Manual**

2.9.1 [3-1-1] Trunk Group—TRG Settings—Main—Line Hunting Order

2.9.9 [3-5-1] Incoming Call Distribution Group—Group Settings

→ Main—Distribution Method

- Main—Call Waiting Distribution
- Miscellaneous—Extension No Answer Redirection Time
- Miscellaneous—Maximum No. of Busy Extensions

2.9.12 [3-5-4] Incoming Call Distribution Group—Member—Delayed Ring

2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 7—Wrap-up Timer

2.10.8 [4-2-1] Portable Station—Extension Settings—Option 6—Wrap-up Timer

### PT Programming Manual

[621] Incoming Call Distribution Group Delayed Ringing

[624] Incoming Call Distribution Group Distribution Method

[632] Maximum Number of Agents

## 1.9.3 ICD Group Features—Log-in/Log-out

### Description

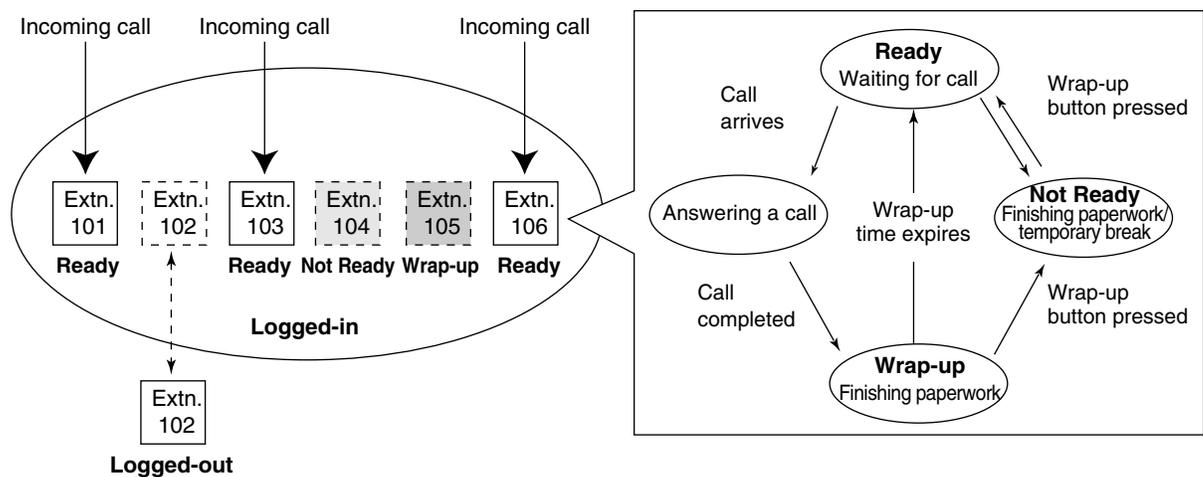
Members of an incoming call distribution group can join (Log-in) or leave (Log-out) the group manually. They can leave the group temporarily when they are away from their desks, to prevent calls being sent to their extensions. They can return to the group when they are ready to answer calls.

#### Wrap-up:

While logged in, a member extension can have a preprogrammed time period automatically for refusing calls after completing the previous call (Wrap-up time). While the Wrap-up timer is active, calls to all incoming call distribution groups to which the extension belongs will skip the extension so that the extension user can perform necessary tasks such as reporting on the previous call.

Wrap-up mode can also be activated manually (Not Ready) by pressing the Wrap-up button.

#### [Log-in/Log-out and Wrap-up Status Example]



### Conditions

- It is programmable whether the last remaining logged-in extension can log out.
- **Log-in/Log-out Button**  
A flexible button can be customized as the Log-in/Log-out button with the following parameters:

Parameter	Usage	Light Pattern	
		Red on	Off
No parameter	Used with an ICD Group button, or with the floating extension number of an incoming call distribution group, or with * (All).	—	—
Floating extension number of a specified incoming call distribution group	Used to log in to or out of the specified incoming call distribution group.	Log-out Status	Log-in Status
* (All)	Used to log in to or out of all incoming call distribution groups to which the extension user belongs.	After Log-out Operation	After Log-in Operation

- If an ICD Group button is assigned, it also shows the log-in/log-out status of the corresponding group. The light pattern is the same as the Log-in/Log-out button that includes the group number.
- **Wrap-up Timer**
  - The timer is activated after all calls to or from the extension, including a retrieved call on hold.
  - Only calls from ICD Groups cannot be received during the wrap-up time. Other calls are received as normal.
  - The wrap-up timer does not work for PS Ring Groups.
- **Wrap-up Button**  
A flexible button can be customized as the Wrap-up button. It shows the current status as follows:

Light pattern	Status
Slow red flashing	Wrap-up
Red on	Not Ready
Off	Ready (Wrap-up mode cancel)

- When a PS in Wireless XDP Parallel Mode completes a call, neither the PS nor its wired telephone can have Wrap-up time. (→ 1.20.3 Wireless XDP Parallel Mode)
- **Automatic Log-out**  
A member extension may be logged out automatically, if the Unanswered time expires a preprogrammed number of times consecutively. The number of consecutive unanswered calls can be assigned for each incoming call distribution group. If the extension is a member of more than one incoming call distribution group, the unanswered number is counted across all corresponding incoming call distribution groups. It is possible to return to log-in mode manually.  
The Automatic Log-out feature does not work for extensions in an incoming call distribution group using the Ring distribution method (→ 1.9.2 ICD Group Features—Group Call Distribution).
- **Log-in/Log-out Information on SMDR**  
Log-in/Log-out information can be printed out on SMDR. (→ 1.16.1 SMDR (Station Message Detail Recording))

## Programming References

### PC Programming Manual

#### 2.8.8 [2-6-1] Numbering Plan—Main—Features

→ Log-in / Log-out

- Not Ready (Manual Wrap-up) Mode On / Off
  - 2.9.9 [3-5-1] Incoming Call Distribution Group—Group Settings—Miscellaneous
    - No. of Unanswered Calls for Automatic Log-out
    - Last Extension Log-out
  - 2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 7—Wrap-up Timer
  - 2.10.4 [4-1-4] Wired Extension—Flexible Button
    - Type
    - Parameter Selection (for Log-in/Log-out)
    - Ext. No. / Floating Ext. No. (for Log-in/Log-out)
  - 2.10.8 [4-2-1] Portable Station—Extension Settings—Option 6—Wrap-up Timer
  - 2.10.10 [4-2-3] Portable Station—Flexible Button
    - Type
    - Parameter Selection (for Log-in/Log-out)
    - Ext. No. / Floating Ext. No. (for Log-in/Log-out)
  - 2.10.13 [4-3] DSS Console—Flexible Button
    - Type
    - Parameter Selection (for Log-in/Log-out)
    - Ext. No. / Floating Ext. No. (for Log-in/Log-out)
  - 2.16.1 [10-1] Main—SMDR—Print Information—Log-in / Log-out
- PT Programming Manual**
- None

## Feature Manual References

- 1.6.3 Flexible Buttons

## Operating Manual References

- 1.3.35 ICD Group Features—Log-in/Log-out

## 1.9.4 ICD Group Features—Overflow

### Description

When waiting calls exceed the waiting queue capacity, they may be redirected to a preprogrammed destination.

### Intercept Routing—Overflow in an Incoming Call Distribution Group

Intercept Routing—Overflow in an Incoming Call Distribution Group works in one of following conditions:

- a) There is no space in the waiting queue.
- b) The Queuing Time Table is not assigned and there are no extensions logged in.
- c) An Overflow command is assigned to the Queuing Time Table.
- d) The Overflow time expires.

- e) Manual Queue Redirection is performed.

#### [Available Destination]

The overflow destinations can be assigned for each incoming call distribution group and each time mode (day/lunch/break/night) (→1.17.4 Time Service). The destination can be assigned as follows, depending on the above conditions.

- For a) and b):
  - 2.9.9 [3-5-1] Incoming Call Distribution Group—Group Settings—Overflow Queuing Busy—Queuing Busy—Destination-Day, Lunch, Break, Night
  - [627] Destination When All Busy
- For c), d), and e):
  - 2.9.9 [3-5-1] Incoming Call Distribution Group—Group Settings—Overflow No Answer—Time out & Manual Queue Redirection—Destination-Day, Lunch, Break, Night
  - [625] Destination for Overflow Time Expiration

Destination	Availability
Wired Extension (PT/SLT)	✓
PS	✓
ICD Group	✓
PS Ring Group	✓
Floating Extension no. for SVM	✓
VM Group (DTMF/DPT)	✓
External Pager (TAFAS)	✓
DISA	✓
Analog Remote Maintenance	✓
Idle Line Access no. + Phone no.	✓
Trunk Group Access no. + Trunk Group no. + Phone no.	✓

## Conditions

- **If the Overflow time expires, and the overflow destination is unavailable:**
  - (1) If the call was once in a queue and an outgoing message (OGM) was sent to it, or the call reached an incoming call distribution group by using the DISA feature (→ 1.4.6 DISA (Direct Inward System Access)): The line is disconnected.
  - (2) In all other cases: Redirection is ignored and the Overflow timer activates again.

## Programming References

### PC Programming Manual

2.9.9 [3-5-1] Incoming Call Distribution Group—Group Settings

→ Overflow Queuing Busy

→ Overflow No Answer

2.9.10 [3-5-2] Incoming Call Distribution Group—Queuing Time Table

### PT Programming Manual

- [625] Destination for Overflow Time Expiration
- [626] Overflow Time
- [627] Destination When All Busy
- [628] Queuing Call Capacity
- [632] Maximum Number of Agents

## Feature Manual References

### 1.9.5 ICD Group Features—Queuing

## 1.9.5 ICD Group Features—Queuing

### Description

When a preprogrammed number of extensions in an incoming call distribution group are busy, additional incoming calls can wait in a queue. The number of calls which can wait in the queue is programmable. While calls are waiting in the queue, the calls are handled by the Queuing Time Table, which can be assigned for each time mode (day/lunch/break/night) (→ 1.17.4 Time Service). This PBX supports a specified number of Queuing Time Tables which each have a specified number of sequences (specific commands which are performed when a caller enters a queue). The following commands can be assigned to each sequence when making a Queuing Time Table:

#### [Command Table]

Command	Description	Condition
<b>OGM xx</b>	An outgoing message is sent to the caller. "xx" applies to the OGM number.	After the OGM, Music on Hold will be sent and the next event in the sequence will be activated.
<b>Wait</b>	The caller waits for the specified time while hearing a ringback tone or Music on Hold.	If an OGM has not been sent to the caller, the caller hears a ringback tone. If an OGM has been sent to the caller, the caller hears Music on Hold.
<b>Sequence c</b>	Redirects to sequence c. "c" applies to the sequence number.	None
<b>Overflow</b>	Redirects to the overflow destination.	None
<b>Disconnect</b>	Disconnects the line.	None
<b>None</b> (No command)	Redirects to the next sequence.	If assigned as sequence 01, the Queuing Time Table will not be activated.

#### [Programming Example of Queuing Time Table]

Queuing Time Table No.	Sequence*1				
	Sequence 01	Sequence 02	Sequence 03	Sequence 04	...
01	OGM 01	Wait 30 s	OGM 03	Overflow	
02*2	OGM 02	Wait 30 s	OGM 04	None	

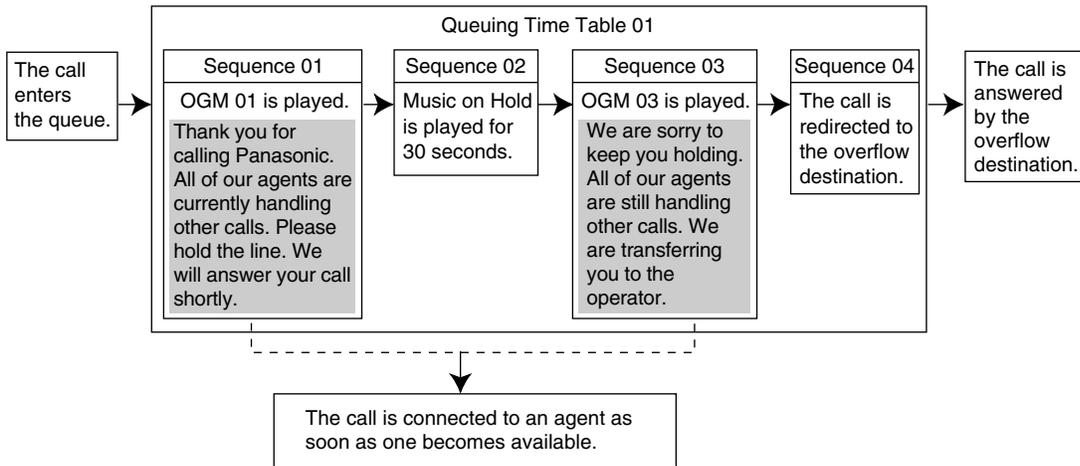
Queuing Time Table No.	Sequence*1				
	Sequence 01	Sequence 02	Sequence 03	Sequence 04	...
03					
:	:	:	:	:	:

\*1: → 2.9.10 [3-5-2] Incoming Call Distribution Group—Queuing Time Table—Queuing Sequence—Sequence 01–16

→ [631] Sequences in Queuing Time Table

\*2: If a call has not reached a destination by the time the final sequence is completed, the call will be disconnected.

**Explanation for Queuing Time Table 01:**



**Conditions**

- **If the call is transferred to the incoming call distribution group and is handled by the Queuing Time Table:**  
Transfer Recall will not occur even if the Transfer Recall time expires.
- **Manual Queue Redirection**  
It is possible to redirect the longest waiting call in a queue to the overflow destination by pressing the Hurry-up button. (If the call is already ringing at an extension, it will not be redirected.) This feature is also known as Hurry-up Transfer.
- **Hurry-up Button**  
A flexible button can be customized as the Hurry-up button. The number of calls queuing before Manual Queue Redirection may be performed is programmable. The button shows the current status as follows:

Light Pattern	Calls in the Waiting Queue
Off	No queued call
Red on	At or under the assigned number for Hurry-up
Rapid red flashing	Over the assigned number for Hurry-up

**Programming References**

PC Programming Manual

- 2.8.17 [2-9] System Options—Option 4—Transfer—Transfer to Busy Extension without BSS Operation
- 2.9.9 [3-5-1] Incoming Call Distribution Group—Group Settings
  - Overflow Queuing Busy
  - Overflow No Answer
  - Queuing Time Table
  - Miscellaneous—Extension No Answer Redirection Time
  - Miscellaneous—Maximum No. of Busy Extensions
- 2.9.10 [3-5-2] Incoming Call Distribution Group—Queuing Time Table
- 2.9.15 [3-7-1] VM(DPT) Group—System Settings—Call Waiting on VM Group
- 2.9.18 [3-8-1] VM(DTMF) Group—System Settings—Others—Call Waiting on VM Group
- 2.10.4 [4-1-4] Wired Extension—Flexible Button
  - Type
  - Ext. No. / Floating Ext. No. (for Hurry-up)
- 2.10.10 [4-2-3] Portable Station—Flexible Button
  - Type
  - Ext. No. / Floating Ext. No. (for Hurry-up)
- 2.10.13 [4-3] DSS Console—Flexible Button
  - Type
  - Ext. No. / Floating Ext. No. (for Hurry-up)

#### **PT Programming Manual**

- [628] Queuing Call Capacity
- [629] Queuing Hurry-up Level
- [630] Queuing Time Table
- [631] Sequences in Queuing Time Table
- [632] Maximum Number of Agents

## **Feature Manual References**

- 1.6.3 Flexible Buttons
- 1.9.4 ICD Group Features—Overflow
- 2.1 Capacity of System Resources

## **Operating Manual References**

- 1.3.36 ICD Group Features—Manual Queue Redirection

## **1.9.6 ICD Group Features—VIP Call**

### **Description**

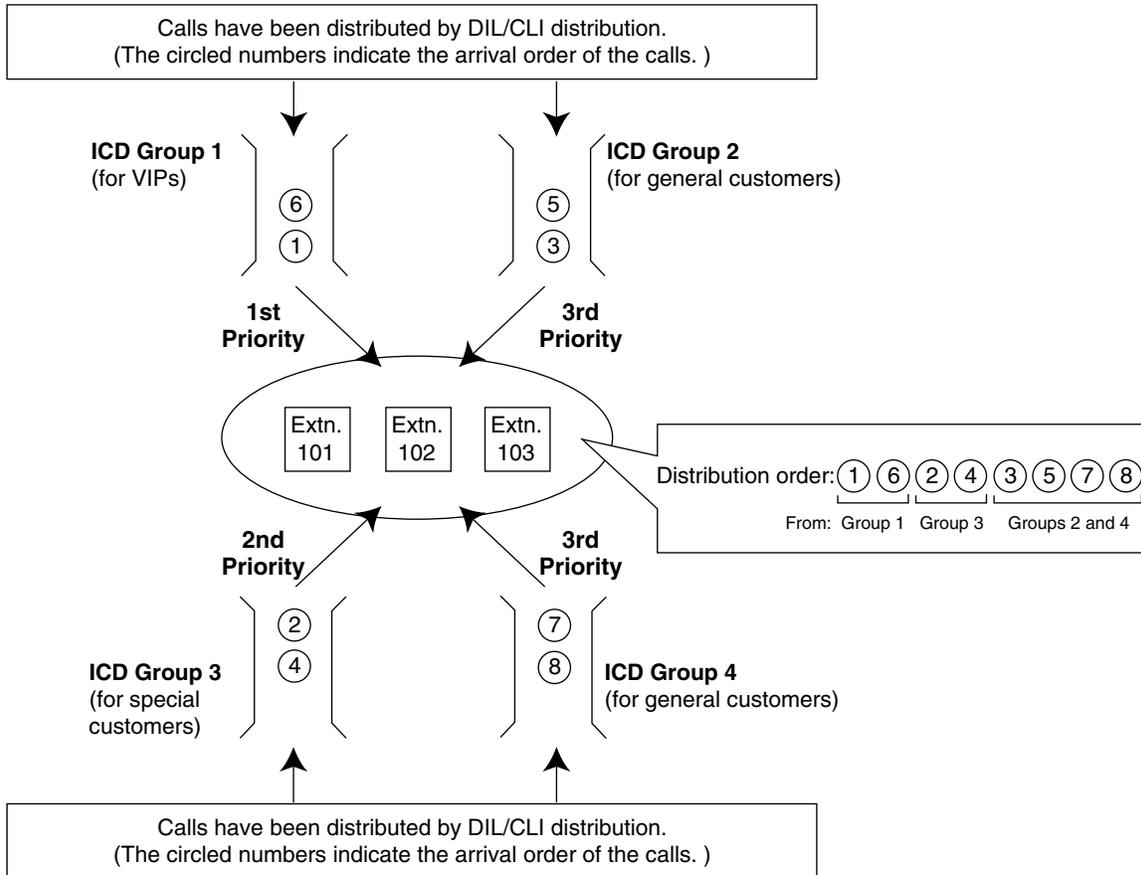
It is possible to assign a priority to incoming call distribution groups. If an extension belongs to multiple groups and the extension becomes idle, queuing calls in the groups will be distributed to the extension in priority order.

Each incoming call distribution group can enable or disable the VIP Call mode. When multiple groups enable the VIP Call mode, the incoming call distribution group with the lowest numbered group has the highest priority. When multiple groups disable the VIP Call mode, queuing calls are distributed to extensions

uniformly.

**[Example]**

In the call center, incoming call distribution groups 1 and 3 enable the VIP Call mode, while incoming call distribution groups 2 and 4 disable the VIP Call mode.



**Programming References**

**PC Programming Manual**

2.9.9 [3-5-1] Incoming Call Distribution Group—Group Settings—Miscellaneous—VIP Call Mode

**PT Programming Manual**

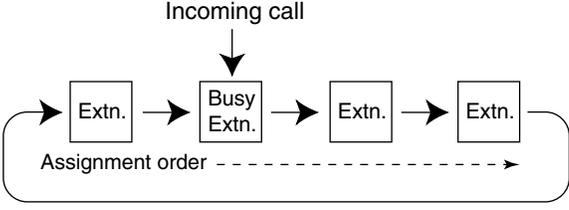
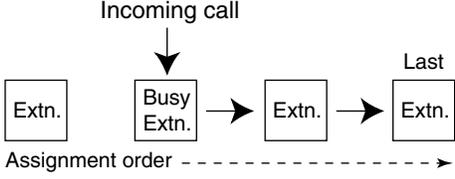
None

**1.9.7 Idle Extension Hunting**

**Description**

If a called extension is busy or in DND mode, Idle Extension Hunting redirects the incoming call to an idle member of the same idle extension hunting group, which can be programmed through system programming. Idle extensions are automatically searched according to a preprogrammed hunting type.

This feature is also known as Station Hunting.

Type	Description
<p><b>Circular Hunting</b></p>	<p>An idle extension is searched for in the order specified in the idle extension hunting group in a circular way.</p> 
<p><b>Terminated Hunting</b></p>	<p>An idle extension is searched for in the order specified in the idle extension hunting group until reaching the last assigned extension.</p> 

**Conditions**

- **Idle Extension Hunting applies to:**  
Intercom, CO line, and doorphone calls to a single destination.
- An extension user can belong to only one idle extension hunting group.
- **If all the searched extensions are busy:**  
The PBX redirects the call to an overflow destination which can be assigned for each idle extension hunting group and each time mode (day/lunch/break/night) (→ 1.17.4 Time Service).  
**[Available Destination]**

Destination	Availability
Wired Extension (PT/SLT)	✓
PS	✓
ICD Group	✓
PS Ring Group	✓
Floating Extension no. for SVM	
VM Group (DTMF/DPT)	✓
External Pager (TAFAS)	✓
DISA	✓
Analog Remote Maintenance	✓
Idle Line Access no. + Phone no.	✓
Trunk Group Access no. + Trunk Group no. + Phone no.	✓

- **FWD/DND Mode**  
While searching for an idle extension within an idle extension hunting group, any extension that has set FWD—All Calls or DND feature will be skipped, and the call will go to the next extension in the group.

## Programming References

### PC Programming Manual

2.9.13 [3-6] Extension Hunting Group

2.9.14 [3-6] Extension Hunting Group—Member List

### PT Programming Manual

[680] Idle Extension Hunting Type

[681] Idle Extension Hunting Group Member

## Feature Manual References

1.4.8 DND (Do Not Disturb)

1.6.6 FWD (Call Forwarding)

2.1 Capacity of System Resources

## 1.9.8 INCOMING CALL FEATURES

### Description

CO lines are used to connect a PBX to a public network, i.e., the telephone company.

#### 1. Distribution Method

Each CO line port can use a different method of directing calls to their destinations as they are received.

Distribution Method	Description	Details in
<b>Direct In Line (DIL)</b>	Directs a call to a preprogrammed destination, such as an operator, based on the CO line carrying the call.	• 1.4.5 DIL (Direct In Line)
<b>Calling Line Identification (CLI) Distribution</b>	Directs a call to its preprogrammed destination if the caller's telephone number and its CLI destination have been stored in the System Speed Dialing Table.	• 1.3.10 CLI (Calling Line Identification) Distribution

Calling Line Identification (CLI) distribution is the more customizable call distribution method. It allows calls from specific people to be directed to specific destinations, based on the callers' telephone numbers. CLI distribution, when enabled for the current time mode, takes precedence over DIL distribution.

#### 2. Available Destination

The following destination types can be programmed as DIL or CLI destinations.

Destination Type	Availability
Wired Extension (PT/SLT)	✓

Destination Type	Availability
PS	✓
ICD Group	✓
PS Ring Group	✓
Floating Extension no. for SVM	✓
VM Group (DTMF/DPT)	✓
External Pager (TAFAS)	✓
DISA	✓
Analog Remote Maintenance	✓
Idle Line Access no. + Phone no.	
Trunk Group Access no. + Trunk Group no. + Phone no.	

### 3. Intercept Routing

After a call has been directed to its DIL or CLI destination, the following Intercept Routing features, if programmed, can redirect the call.

Type	Description	Details in
<b>No Answer (IRNA)</b>	If a called party does not answer a call within a preprogrammed time period (Intercept time), the call is redirected to a preprogrammed destination.	• 1.9.9 Intercept Routing
<b>Busy</b>	If a called party is already handling another call, the new call is redirected to a preprogrammed destination.	
<b>DND</b>	If a called party is in Do Not Disturb (DND) mode, the call is redirected to a preprogrammed destination.	
<b>No Destination</b>	If a destination is not assigned, the call is redirected to an operator.	• 1.9.10 Intercept Routing—No Destination

## Programming References

### PC Programming Manual

None

### PT Programming Manual

None

## 1.9.9 Intercept Routing

### Description

Redirects an incoming CO line call or intercom call to a preprogrammed destination when the original destination does not, or can not, answer the call. There are four types of Intercept Routing, described below.

Type	Description
<b>No Answer (IRNA)</b>	<p>If a called party does not answer a call within a preprogrammed time period (IRNA Timer), the call is redirected to a preprogrammed intercept destination. The assigned intercept destination of the extension port.</p> <p>→ 2.8.4 [2-3] Timers &amp; Counters  → Dial / IRNA / Recall / Tone—Intercept Routing No Answer (IRNA)—Day, Lunch, Break, Night  → DISA / Door / Reminder / U. Conf—DISA—Intercept Timer—Day, Lunch, Break, Night  → [203] Intercept Time</p>
<b>Busy</b>	<p>If a called party is already handling a call, new calls are handled as follows:</p> <ul style="list-style-type: none"> <li>– the call is redirected to the preprogrammed Intercept Routing—Busy destination, if enabled through system programming.</li> <li>– If an Intercept Routing—Busy destination is not enabled, the caller will hear a busy tone. However, if the call is made through an LCOT card, the caller hears a ringback tone.</li> </ul>
<b>DND</b>	<p>If a called party is in Do Not Disturb (DND) mode, the call is redirected to a preprogrammed intercept destination.</p>
<b>No Destination</b>	<p>If a call has no destination (i.e., if a destination is not assigned), the call is redirected to an operator. (→ 1.9.10 Intercept Routing—No Destination)</p>

Intercept Routing redirects calls to destinations based on the original destination of the call, as shown in the table below. Different intercept destinations can be programmed for each time mode. Note that calls redirected by Intercept Routing—No Answer/Busy/DND are directed to the same destination, while Intercept Routing—Busy is directed to a separate destination, and that the intercept destination for Intercept Routing—No Destination is always an operator.

When the original destination is:	The Available Intercept Destination is:
<ul style="list-style-type: none"> <li>• Wired Extension (PT/SLT)</li> <li>• PS</li> </ul>	<p>The destination assigned to the original extension.</p> <p>2.10.1 [4-1-1] Wired Extension—Extension Settings—Intercept Destination  → Intercept Destination—When called party does not answer—Day, Lunch, Break, Night  → Intercept Destination—When Called Party is Busy</p> <p>2.10.8 [4-2-1] Portable Station—Extension Settings—Intercept Destination  → Intercept Destination—When called party does not answer—Day, Lunch, Break, Night  → Intercept Destination—When Called Party is Busy</p> <p>→ [604] Extension Intercept Destination</p>
<ul style="list-style-type: none"> <li>• ICD Group</li> </ul>	<p>The ICD Group Overflow destination assigned to the group. (→ 1.9.4 ICD Group Features—Overflow)</p> <p>→ 2.9.9 [3-5-1] Incoming Call Distribution Group—Group Settings—Overflow No Answer—Time out &amp; Manual Queue Redirection—Destination-Day, Lunch, Break, Night</p> <p>→ [625] Destination for Overflow Time Expiration</p>
<ul style="list-style-type: none"> <li>• VM Group (DTMF/DPT)</li> </ul>	<p>The destination assigned to the first extension of the VM group.</p>
<ul style="list-style-type: none"> <li>• DISA*</li> </ul>	<p>If all DISA ports are busy when a call is made using DISA, one of the following can be selected through system programming:</p> <ul style="list-style-type: none"> <li>• <b>Disable:</b> Busy tone is sent to the caller.</li> <li>• <b>Operator:</b> The call will be redirected to the operator.</li> <li>• <b>AA-0, AA-9:</b> The call will be redirected to the destination assigned to that AA number.</li> </ul> <p>→ 2.11.3 [5-3-1] Voice Message—DISA System—Option 1—DISA Intercept—Intercept when all DISA ports are busy</p>
<ul style="list-style-type: none"> <li>• PS Ring Group**</li> <li>• External Pager (TAFAS)**</li> <li>• Analog Remote Maintenance</li> </ul>	<p>Not assignable (Intercept Routing is not available.)</p>

\* Intercept Routing for DISA will redirect a call only if all of the Direct Inward System Access (DISA) ports are busy. If Intercept Routing is activated after a call from DISA reaches the destination extension, the Intercept Routing settings assigned to that extension will be applied.

- \*\* By assigning the forward destination of a Virtual PS to a PS Ring Group or external pager, and assigning Intercept Routing destinations to the Virtual PS, calls to these destinations will be redirected to the Intercept Routing destination of the Virtual PS.

**Programming Example**

**<Forward Destination of Virtual PS>**

Ext. No. of the Virtual PS	FWD Destination
2001	600
...	...

"600" is an example of a Floating Extension No. for the External Pager

**<Intercept Destination of Virtual PS>**

Ext. No. of the Virtual PS	Intercept Destination				...
	Day	Lunch	Break	Night	
2001	1001	1001	1001	1001	...
...	...	...	...	...	...

When extension 2001 is called from another extension or is the first destination of an incoming CO line call, etc., the call will ring at extension 600 (external pager) first, and then ring at the intercept destination (extension 1001) after the IRNA Timer expires.

**[Available Intercept Destination]**

The following can be used as intercept destinations:

Intercept Destination	Availability
Wired Extension (PT/SLT)	✓
PS	✓
ICD Group	✓
PS Ring Group	✓
Floating Extension no. for SVM	✓
VM Group (DTMF/DPT)	✓
External Pager (TAFAS)	✓
DISA	✓
Analog Remote Maintenance	✓
Idle Line Access no. + Phone no.	✓
Trunk Group Access no. + Trunk Group no. + Phone no.	✓

## Conditions

### [General]

- **If the intercept destination is busy or in DND mode and therefore cannot receive the call:**
  - a) When the call was intercepted via Intercept Routing—No Answer, the call is sent back to the original destination and continues to ring at the original destination until answered.
  - b) When the call was intercepted via Intercept Routing—Busy, the call waits at the original destination. If the extension has Call Waiting activated, the user will hear a call waiting tone.
  - c) When the call was intercepted via Intercept Routing—DND, the call waits at the original destination and it rings.
- **If the intercept destination can, but does not, answer the call:**  
The call continues to ring at the intercept destination until answered.
- **Intercept Routing—DND on/off**  
Intercept Routing—DND can each be enabled or disabled for the entire system, through system programming. If enabled, calls will be routed to the appropriate destination.  
If disabled, a call to an extension which is in DND mode will be handled as described below, depending on the type of line carrying the call.  
→ 2.15.3 [9-3] Miscellaneous—Intercept—Intercept Routing - DND (Destination sets DND)
  - a) LCOT Card: The caller will hear a ringback tone. If in DND mode, the extension will ring.
  - b) All other lines: An outside caller will hear a busy tone and an extension caller will hear a DND tone.
- **Idle Extension Hunting**  
If an extension is a member of an idle extension hunting group, calls to that extension will not be redirected by Intercept Routing—Busy/DND. If the extension is busy or in DND mode, calls to that extension will be redirected to the next extension in the idle extension hunting group.
- Intercept Routing for intercom calls can be enabled or disabled on a system basis.  
→ 2.15.3 [9-3] Miscellaneous—Intercept—Intercept Routing for Extension Call
- **IRNA Timer**  
The IRNA timer can be set on a system basis and an extension basis for each time mode (day, lunch, break, night).  
→ 2.10.1 [4-1-1] Wired Extension—Extension Settings—Intercept Destination—Intercept No Answer Time—Day, Lunch, Break, Night
- The Intercept Routing destination for each time mode will not apply for Intercept Routing—Busy. When the original destination is busy, the call is redirected to the Intercept Routing—Busy destination assigned through system programming. If no destination is assigned the caller will hear a busy tone.
- When a call arrives at an extension that is currently receiving a call, the call will be redirected to the extension's Intercept Routing—No Answer destination for each time mode.
- The time modes that are selected for CO line calls arriving at extensions and VM groups are decided on a tenant basis.

## Programming References

### PC Programming Manual

#### 2.8.4 [2-3] Timers & Counters

→ Dial / IRNA / Recall / Tone—Intercept Routing No Answer (IRNA)—Day, Lunch, Break, Night

→ DISA / Door / Reminder / U. Conf—DISA—Intercept Timer—Day, Lunch, Break, Night

#### 2.9.9 [3-5-1] Incoming Call Distribution Group—Group Settings—Overflow No Answer—Time out & Manual Queue Redirection—Destination-Day, Lunch, Break, Night

#### 2.10.1 [4-1-1] Wired Extension—Extension Settings

→ Intercept Destination

→ Intercept No Answer Time

### 2.10.8 [4-2-1] Portable Station—Extension Settings

→ Intercept Destination

→ Intercept No Answer Time

### 2.11.3 [5-3-1] Voice Message—DISA System—Option 1—DISA Intercept—Intercept when all DISA ports are busy

### 2.15.3 [9-3] Miscellaneous

→ Intercept—Intercept Routing - DND (Destination sets DND)

→ Intercept—Routing to Operator - No Destination (Destination is not programmed)

→ Intercept—Intercept Routing for Extension Call

#### **PT Programming Manual**

[203] Intercept Time

[604] Extension Intercept Destination

[625] Destination for Overflow Time Expiration

## **Feature Manual References**

1.4.8 DND (Do Not Disturb)

## **1.9.10 Intercept Routing—No Destination**

### **Description**

Directs a CO line call to an operator when the call has no assigned destination.

### **Conditions**

- **Intercept Routing—No Destination on/off**  
Intercept Routing—No Destination can be enabled or disabled for the entire system, through system programming. If disabled, the caller will hear a reorder tone.
- **If an operator is not assigned:**  
The default intercept destination will be the extension connected to the lowest numbered port, on the card installed in the lowest numbered slot.
- Intercept Routing—No Destination also applies to calls from doorphones.

### **Programming References**

#### **PC Programming Manual**

2.8.3 [2-2] Operator & BGM—PBX Operator—Day, Lunch, Break, Night

2.15.3 [9-3] Miscellaneous—Intercept—Routing to Operator - No Destination (Destination is not programmed)

#### **PT Programming Manual**

[006] Operator Assignment

## Feature Manual References

### 1.12.3 Operator Features

## 1.9.11 Intercom Call

### Description

An extension user can call another extension user.

### Conditions

- **Extension Number/Name Assignment**  
Extension numbers and names are assigned to all extensions. The assigned number and name of the other extension are shown on display PTs during intercom calls.
- **DSS Button**  
It is possible to call another extension by simply pressing the corresponding Direct Station Selection (DSS) button. Any flexible button can be customized as a DSS button.
- **Call Directory—Extension Dialing**  
A KX-T7737 analog proprietary telephone (APT) user can make a call by selecting stored names on the display.
- **Alternate Receiving—Ring/Voice**  
A PT user can select to receive intercom calls by ring tone or by voice, through personal programming (Alternate Receiving—Ring/Voice). If a user selects voice-calling, the calling party talks to the user immediately after a confirmation tone. Denying voice-calling can also be selected.
- **Alternate Calling—Ring/Voice**  
A caller can change the called party's preset call receiving method (ring tone or voice) temporarily. By doing so, ring-calling is switched to voice-calling, or vice versa, at the called party. The called party may deny voice-calling.
- **Tone after Dialing**  
After dialing an extension number, a user will hear one of the following:

Type	Description
<b>Ringback Tone</b>	Indicates the called party is being called.
<b>Confirmation Tone</b>	Indicates the called party has set voice-calling.
<b>Busy Tone</b>	Indicates the called party is busy.
<b>DND Tone</b>	Indicates the called party has set DND.

## Programming References

### PC Programming Manual

2.8.10 [2-6-3] Numbering Plan—B/NA DND Call Feature—Alternate Calling - Ring / Voice

2.10.1 [4-1-1] Wired Extension—Extension Settings

- Main—Extension Number
- Main—Extension Name
- Option 4—Intercom Call by Voice

2.10.8 [4-2-1] Portable Station—Extension Settings—Main

## 1.9 I

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→ Extension Number

→ Extension Name

### PT Programming Manual

[003] Extension Number

[004] Extension Name

## Feature Manual References

1.6.3 Flexible Buttons

## Operating Manual References

1.2.1 Making Calls

1.3.3 Alternate Calling—Ring/Voice

1.4.1 Directories

3.1.2 Personal Programming

## 1.9.12 Internal Call Block

### Description

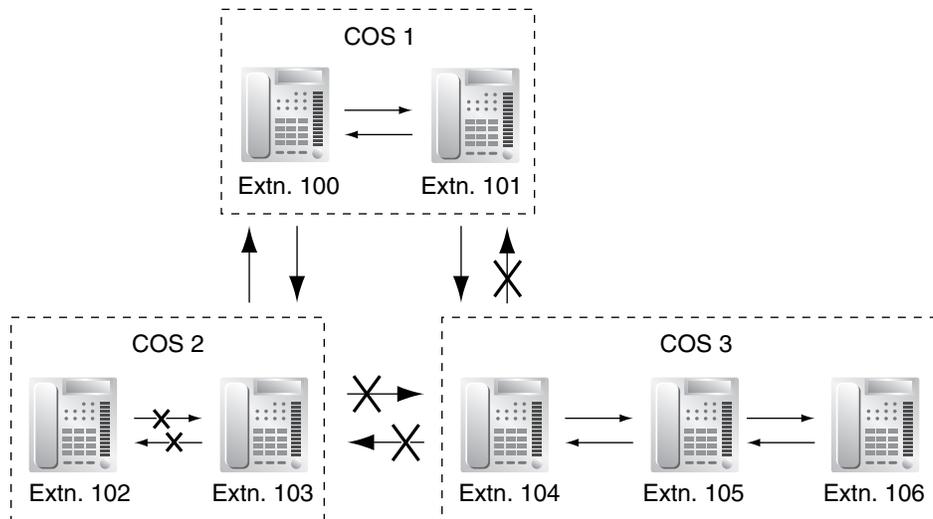
Internal calls can be restricted based on the Class of Service (COS) assigned to the caller and to the called party.

#### [Programming Example: Internal Call Block]

Caller	Called Party			
	COS 1	COS 2	COS 3	COS...
COS 1				
COS 2		Block	Block	Block
COS 3	Block	Block		Block

#### In this example:

- a) COS 1 can make calls to all extensions.
- b) COS 2 can make calls to COS 1 only. (COS 2 cannot make calls to COS 2.)
- c) COS 3 can make calls to COS 3 only.



## Conditions

- Internal Call Block also prohibits certain features, such as Walking Extension and Walking COS, from being performed between certain extensions.
- Any extension can make an Operator Call regardless of the Internal Call Block setting of its COS. (→ 1.12.3 Operator Features)
- Because each doorphone port is assigned a COS, the Internal Call Block feature can restrict certain extensions from calling certain doorphones. (→ 1.4.10 Doorphone Call)

## Programming References

### PC Programming Manual

2.8.13 [2-7-3] Class of Service—Internal Call Block—COS Number of the Extension Which Receive the Call from Other Extension 1–64

2.9.9 [3-5-1] Incoming Call Distribution Group—Group Settings—Main—COS

2.10.1 [4-1-1] Wired Extension—Extension Settings—Main—COS

2.10.8 [4-2-1] Portable Station—Extension Settings—Main—COS

2.11.1 [5-1] Doorphone—COS

2.11.6 [5-4] External Relay—COS Number

### PT Programming Manual

None

## Feature Manual References

1.3.16 COS (Class of Service)

# 1.10 L

## 1.10.1 LED Indication

### Description

The LED of the Message/Ringer Lamp and the following buttons (Line Status Buttons and Corresponding Extension Status Button) can indicate line status with a variety of light patterns.

**Line Status Buttons:** S-CO, G-CO, L-CO, INTERCOM, ICD Group

**Corresponding Extension Status Button:** DSS

#### 1. Light Pattern of the Message/Ringer Lamp

- Incoming call: Red flashing
- Message(s) present (no incoming call): Red on
- No message(s) present (no incoming call): Off

#### 2. Light Pattern of the Line Status Buttons

Line Status Button: Light Pattern	CO Line Status			Intercom Line Status	Incoming Call Distribution (ICD) Group Line Status
	S-CO	G-CO	L-CO	INTERCOM	ICD Group
Off	Idle				
Green on	This extension is using the line.				
Slow green flashing	This extension is holding the line.				
Moderate green flashing	This extension is holding the line using Exclusive Hold or using the line for an Unattended Conference.				
Rapid green flashing	Incoming call/Privacy Release	Incoming call			
Red on	Incoming call for another extension/ Another extension is using the line/Another extension has the line on Exclusive Hold.	Other extensions are using all CO lines in the trunk group.	–	–	This extension is logged out of the ICD group.
Slow red flashing	Another extension is holding the line.	–	–	–	–
Rapid red flashing	Incoming call to the ICD group in Ring distribution method			–	–

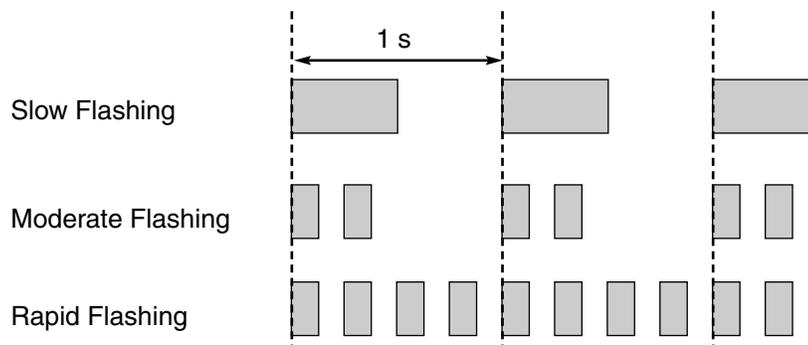
### 3. Light Pattern of the Corresponding Extension Status Button

Corresponding Extension Status Button Light Pattern	DSS
Off	Idle
Red on	Busy/Incoming call*1/DND for CO line calls
Rapid red flashing	Incoming call*2

\*1: Only when Call Pickup by a DSS button is disabled.

\*2: Only when Call Pickup by a DSS button is enabled.

### 4. Flashing Light Patterns



## Conditions

- The incoming CO line call shows on the buttons in the following priority: ICD Group→S-CO→G-CO→L-CO→INTERCOM
- The light pattern of a DSS button for incoming calls can be set to "Off" through system programming. In this case, the DSS button light will not indicate the status of the corresponding extension.

## Programming References

### PC Programming Manual

2.8.17 [2-9] System Options

- Option 1—PT Fwd / DND—Fwd LED
- Option 1—PT Fwd / DND—DND LED
- Option 4—DSS Key—DSS Key mode for Incoming Call

### PT Programming Manual

None

## Feature Manual References

- 1.3.2 Call Hold
- 1.3.13 Conference
- 1.6.7 FWD/DND Button, Group FWD Button

## 1.10 L

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- 1.9.2 ICD Group Features—Group Call Distribution
- 1.9.3 ICD Group Features—Log-in/Log-out
- 1.13.10 Privacy Release

### 1.10.2 Line Preference—Incoming

#### Description

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

Each of these line preferences can be assigned on each extension through personal programming (Preferred Line Assignment—Incoming).

Type	Description
<b>No Line</b>	Selects a line by pressing the desired Line Access button to answer an incoming call after you go off-hook.
<b>Prime Line</b>	Answers a call arriving at a CO button or ICD Group button (on which the "Prime Line" is assigned) simply by going off-hook. This works even when multiple calls are received simultaneously.
<b>Ringling Line (default)</b>	Answers the longest ringing call when multiple calls arrive at one's own telephone simply by going off-hook.

#### Conditions

##### [Prime Line]

- The priority of the incoming call is as follows:
  - 1) The call arriving at a button on which the "Prime Line" is assigned.
  - 2) The call arriving at the INTERCOM button.

#### Programming References

##### PC Programming Manual

2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 4—Incoming Preferred Line

2.10.8 [4-2-1] Portable Station—Extension Settings—Option 4—Incoming Preferred Line

##### PT Programming Manual

None

#### Operating Manual References

3.1.2 Personal Programming

## 1.10.3 Line Preference—Outgoing

### Description

Through personal programming, a proprietary telephone (PT) user can select the preferred method of seizing a line (Preferred Line Assignment—Outgoing) that is used each time the user goes off-hook.

Method	Description
<b>ICM</b>	When an extension user goes off-hook, an extension line is selected automatically.
<b>Idle Line</b>	When an extension user goes off-hook, an idle CO line is selected automatically from the assigned trunk groups.
<b>No Line</b>	When an extension user goes off-hook, no line is selected. In order to make a call, the user must select the desired line manually.
<b>Prime Line</b>	When an extension user goes off-hook, the preset line is selected automatically. A prime line can be selected from the Line Access buttons: S-CO, G-CO, L-CO, ICD Group.

### Conditions

- **Line Preference Override**  
A user can override the preset Line Preference temporarily by pressing the desired Line Access button or a Memory Dialing button, such as One-touch Dialing, before going off-hook.
- To select Idle Line Preference, the trunk groups available to the extension should be programmed on a COS basis. Also trunk groups available for Idle Line Access should be assigned.

### Programming References

#### PC Programming Manual

2.8.12 [2-7-2] Class of Service—External Call Block

2.9.2 [3-1-2] Trunk Group—Local Access Priority

2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 4—Outgoing Preferred Line

2.10.8 [4-2-1] Portable Station—Extension Settings—Option 4—Outgoing Preferred Line

#### PT Programming Manual

[103] Idle Line Access (Local Access)

[500] Trunk Group Number

### Operating Manual References

3.1.2 Personal Programming

## 1.10.4 Local Alarm Information

### Description

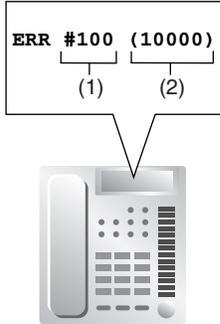
When the PBX detects an error, the System Alarm button on the proprietary telephone (PT) of an extension which is allowed to use this feature through system programming (a maximum of two extensions per PBX),

## 1.10 L

lights red. Pressing the button will show the error number on the display. If multiple errors occur, the error number will be displayed in order of highest priority to lowest. The System Alarm button light turns off automatically after all error numbers have been displayed.

For details about the errors and their solutions, refer to the Installation Manual.

### [Error Example]



### [Explanation]

Number in the Example	Item	Description
(1)	<b>Error Code</b>	Shows three-digit error code.
(2)	<b>Sub Code</b>	Shows five-digit sub code (XYZZ). <b>X:</b> Cabinet number (1–4) <b>YY:</b> Slot number (00–11) <b>ZZ:</b> Physical port number (01–08)

## Conditions

- **System Alarm Button**  
Any flexible button can be customized as the System Alarm button.
- The alarm information will be logged on the Station Message Detail Recording (SMDR), if enabled through system programming.
- The PBX can be automatically diagnosed at a preprogrammed time everyday.

## Installation Manual References

4.1.5 Troubleshooting by Error Log

## Programming References

### PC Programming Manual

2.5.7 Utility—Message File Transfer PBX to PC

2.10.4 [4-1-4] Wired Extension—Flexible Button—Type

2.10.10 [4-2-3] Portable Station—Flexible Button—Type

2.10.13 [4-3] DSS Console—Flexible Button—Type

2.16.1 [10-1] Main

→ SMDR—Print Information—Error Log

- Maintenance—Local Alarm Display—Extension 1, Extension 2
- Maintenance—Daily Test Start Time—Set
- Maintenance—Daily Test Start Time—Hour
- Maintenance—Daily Test Start Time—Minute

**PT Programming Manual**

None

**Feature Manual References**

1.6.3 Flexible Buttons

1.16.1 SMDR (Station Message Detail Recording)

## 1.11 M

### 1.11.1 Manager Features

#### Description

An extension assigned as a manager (manager extension) is allowed to use certain features which most extensions cannot. Class of Service (COS) programming determines which extensions are manager extensions and can therefore use the following features:

Feature		Description	Manager Password	Details in
<b>Manager Programming</b>	<b>Manager Password Change</b>	Changes the manager password.	Required	–
	<b>Verification Code Personal Identification Number (PIN) Set</b>	Sets a Verification Code PIN for each Verification Code.	Required	• 1.19.1 Verification Code Entry
	<b>Remote PIN Clear</b>	Clears the extension PIN of an extension remotely, or a verification code PIN. PIN Lock is also unlocked.	Required	• 1.5.6 Extension PIN (Personal Identification Number) • 1.19.1 Verification Code Entry
	<b>Remote Extension Dial Lock</b>	Sets or cancels the Extension Dial Lock on an extension remotely.	Required	• 1.5.4 Extension Dial Lock
<b>Dial Tone Transfer</b>		Changes the Toll Restriction (TRS) level of an extension temporarily, allowing the extension user to make a normally unauthorized call.	Not required	• 1.4.4 Dial Tone Transfer
<b>Outgoing Message (OGM)</b>		Records and plays back OGMs.	Not required	• 1.12.1 OGM (Outgoing Message)
<b>Time Service</b>		Switches the time mode manually.	Not required	• 1.17.4 Time Service
<b>BGM—External</b>		Turns the External BGM on and off.	Not required	• 1.2.1 BGM (Background Music)

#### Conditions

##### **WARNING**

There is a risk that fraudulent telephone calls will be made if a third party discovers a personal identification number (PIN) (verification code PIN or extension PIN) of the PBX. The cost of such

calls will be billed to the owner/renter of the PBX. To protect the PBX from this kind of fraudulent use, we strongly recommend:

- a) Keeping PINs secret.
  - b) Selecting complex, random PINs that cannot be easily guessed.
  - c) Changing PINs regularly.
- **Manager Password**  
Only one manager password can be assigned per PBX.

## Programming References

### PC Programming Manual

2.8.11 [2-7-1] Class of Service—COS Settings—Extension Feature—Manager

2.16.1 [10-1] Main—Password—Manager Password - PT Programming—Prog \*1

### PT Programming Manual

[112] Manager Password

[511] Manager Assignment

## Feature Manual References

1.3.16 COS (Class of Service)

## Operating Manual References

2.1 Manager Service Features

3.2.2 Manager Programming

## 1.11.2 MEMORY DIALING FEATURES

### Description

An extension user can store frequently dialed numbers in the PBX extension data and/or the PBX system data. A stored number is dialed automatically with a simple operation.

#### 1. Features

Feature	Storing Method	Details in
<b>One-touch Dialing</b>	<ul style="list-style-type: none"> <li>• Personal Programming</li> <li>• System Programming (PC Programming only)</li> </ul>	• 1.12.2 One-touch Dialing
<b>Last Number Redial (Outgoing Call Log)</b>	The last or most recent dialed numbers are automatically stored.	• 1.15.1 Redial, Last Number

Feature		Storing Method	Details in
Speed Dialing	Personal	<ul style="list-style-type: none"> <li>Personal Programming</li> <li>Personal Operation with the Feature Number</li> <li>System Programming (PC Programming only)</li> </ul>	• 1.16.3 Speed Dialing, Personal
	System	System Programming	• 1.16.4 Speed Dialing, System
Quick Dialing		System Programming (PC Programming only)	• 1.14.1 Quick Dialing
Hot Line		<ul style="list-style-type: none"> <li>Personal Programming</li> <li>Personal Operation with the Feature Number</li> <li>System Programming (PC Programming only)</li> </ul>	• 1.8.6 Hot Line
Incoming Call Log		Incoming call information is automatically stored.	• 1.3.3 Call Log, Incoming

## 2. Valid Input

Input	Displayed while Entering	Description
0–9/*/#	0–9/*/#	Store digits, * and # by pressing the corresponding buttons.
PAUSE (Pause)	P	Store a dialing pause by pressing the PAUSE button. (→ 1.13.4 Pause Insertion)
FLASH/RECALL (Hooking)*	F	Store a flash/recall signal (EFA mode) by pressing the FLASH/RECALL button at the beginning of the number. (→ 1.5.1 EFA (External Feature Access))
INTERCOM (Secret)*	[ ]	Conceal all or part of the number by pressing the INTERCOM button at the beginning and at the end of the number to be concealed. It is programmable whether the concealed part will be shown on the SMDR (→ 1.16.1 SMDR (Station Message Detail Recording)).
TRANSFER (Transfer)*	T	Store a transfer command by pressing the TRANSFER button at the beginning of the number (used only for One-touch Dialing). (→ 1.3.8 Call Transfer) <b>[Example]</b> Storing "T + 305"= Transferring a call to extension 305.

\*: Available only when in the system/personal programming mode

### [Secret Dialing Example]

When storing the number "9-123-456-7890", to conceal the telephone number "123-456-7890",

Enter  →  →           → .

### Notes

- It is possible to store a Memory Dialing feature number at the beginning of Memory Dialing numbers.

- It is possible to store several feature numbers in one Memory Dialing location.

## Conditions

- **CO Line Access by Memory Dialing**

A specific CO Line Access number can be stored along with the telephone number in Memory Dialing. However, if Memory Dialing is done after selecting a CO line, the stored CO Line Access number is ignored and the telephone number is sent using the selected CO line.

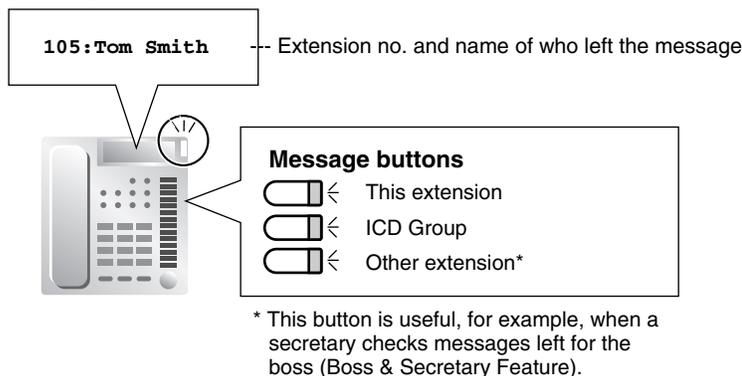
## 1.11.3 Message Waiting

### Description

When an extension user calls another extension that does not or cannot answer the call, he or she can leave a Message Waiting notification. The appropriate button or lamp on the called extension user's telephone will light, indicating that a call was missed or a message recorded by the Voice Processing System (VPS) or the Simplified Voice Message (SVM) feature is waiting. A Message button can be used to call the caller back or listen to the message.

When a message is left for a proprietary telephone (PT), the Message button on it lights or the Message/Ringer Lamp turns red. Pressing the lit Message button while on-hook shows the caller's information as shown below:

#### [Example]



### Conditions

- **Message Button**

Any flexible button can be assigned as a Message button. This button can be used on a PT which does not have the MESSAGE button (fixed button), or can be used on any PT to access messages left for another extension or for an incoming call distribution (ICD) group.

- **Distinctive Dial Tone for Message Waiting**

If Distinctive Dial mode is enabled, dial tone 4 will be sent to an extension when a message has been left on the extension. (→ 1.4.3 Dial Tone)

- It is possible to leave a Message Waiting notification while hearing a ringback tone, busy tone, or DND tone.
- Messages are always left on the original destination extension, regardless of that extension's FWD settings. (→ 1.6.6 FWD (Call Forwarding))
- Both the calling extension and the called extension can cancel a notification after it has been left.

- If the extension that received a notification calls back the extension that sent the notification, and the call is answered, the notification will be cleared automatically. However, if a voice message has been left on the VPS, whether the notification is cleared or not depends on the VPS settings.

### Programming References

#### PC Programming Manual

- 2.8.8 [2-6-1] Numbering Plan—Main—Features—Message Waiting Set / Cancel / Call Back
- 2.8.10 [2-6-3] Numbering Plan—B/NA DND Call Feature—Message Waiting Set
- 2.8.17 [2-9] System Options—Option 3—Dial Tone—Distinctive Dial Tone
- 2.9.18 [3-8-1] VM(DTMF) Group—System Settings—VM DTMF Command—Listening Message
- 2.10.4 [4-1-4] Wired Extension—Flexible Button—Type
- 2.10.10 [4-2-3] Portable Station—Flexible Button—Type
- 2.10.13 [4-3] DSS Console—Flexible Button—Type

#### PT Programming Manual

None

### Feature Manual References

- 1.6.3 Flexible Buttons
- 2.1 Capacity of System Resources

### Operating Manual References

- 1.3.37 Message Waiting

## 1.11.4 Music on Hold

### Description

Music can be played to any party on hold. The following audio sources are available:

- a) Internal audio source
- b) External audio source
- c) Tone

#### Music Source Assignment

Only one external music port is available. If BGM is selected, it is possible to select whether external music port, internal music port 1, or internal music port 2 is assigned to BGM.

### Conditions

- **Hardware Requirement:** User-supplied audio device (CD player, radio, etc.) when an external music source is assigned.
- **Volume Control**  
It is possible to change the volume of an internal and/or external audio source.
- Each tenant can select a music source to use for Music on Hold. The type of call determines which tenant's music source is used, as follows:

Type	Music Source
<b>Incoming Intercom Calls/ Outgoing Calls</b>	Selected based on the tenant setting to which the extension user belongs.
<b>Incoming CO Line Calls</b>	Selected based on the tenant setting of the distribution method (DIL).

After finishing an incoming CO line call, if an extension user makes another call using the FLASH/RECALL (→ 1.6.2 Flash/Recall/Terminate) or EFA button (→ 1.5.1 EFA (External Feature Access)), and puts the call on hold, the music source is selected based on the tenant setting to which the extension user belongs.  
(→1.17.2 Tenant Service)

## Installation Manual References

2.9.1 Connection of Peripherals

## Programming References

### PC Programming Manual

2.8.3 [2-2] Operator & BGM

→ BGM and Music on Hold—Music Source of BGM

→ BGM and Music on Hold—Music on Hold

2.8.19 [2-11-1] Audio Gain—Paging/MOH—MOH—(Music On Hold)

### PT Programming Manual

[710] Audio Source Selection for BGM

[711] Music on Hold

## 1.11.5 Mute

### Description

During a conversation, a proprietary telephone (PT) user can disable the built-in microphone or the handset microphone to consult privately with others while listening to the other party on the phone through the built-in speaker or the handset receiver. The user can hear the other party's voice during Mute. Only your voice will be muted.

### Conditions

- This feature is available on all PTs that have the AUTO ANS/MUTE button.

## Operating Manual References

1.3.38 Mute

## 1.12 O

### 1.12.1 OGM (Outgoing Message)

#### Description

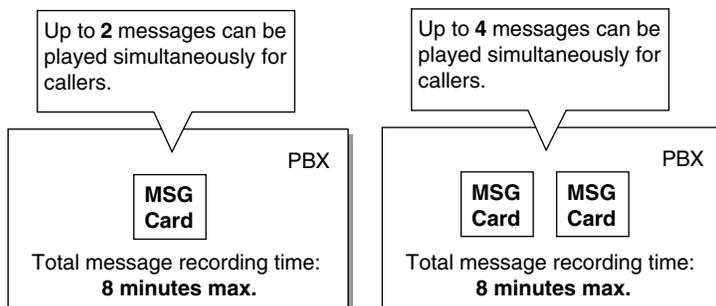
An extension assigned as a manager (manager extension) can record outgoing messages (OGMs) for the following features:

Feature	Usage	Details in
<b>Direct Inward System Access (DISA)</b>	When a call arrives on a DISA line, the caller will hear a message.	• 1.4.6 DISA (Direct Inward System Access)
<b>Queuing Feature</b>	If assigned in the Queuing Time Table of the incoming call distribution (ICD) group, callers waiting in a queue will hear a message.	• 1.9.5 ICD Group Features—Queuing
<b>Timed Reminder</b>	When answering the Timed Reminder Alarm, the user will hear a message.	• 1.17.3 Timed Reminder

#### Conditions

- **Hardware Requirement:**  
The MSG card
- **Number of Messages and Recording Time**  
The PBX can record a maximum of 32 messages can be recorded. The total recording time of the PBX is 8 minutes.
- A floating extension number is assigned to each outgoing message (OGM) (default: 5 + two-digit OGM number).
- Each MSG card can play two messages simultaneously. Adding additional MSG cards increases the number of messages that can be played simultaneously, but does not increase the total recording time or the number of messages that can be recorded.

#### [Example]



#### Note

When an additional MSG card is added, it is blank—all necessary messages will need to be stored in the new card. This can be done in two ways:

- a) By installing the new MSG card then recording each message again. The PBX will automatically store the new recordings in each MSG card.
  - b) By transferring messages from the PBX to a PC using KX-TAW848 Maintenance Console, then transferring them back to the PBX with the new MSG card installed.
- The same message can be played to multiple callers simultaneously.
- **Recording Methods**
  - a) Record voice messages through the extension telephone.
  - b) Transfer prerecorded voice messages from an external audio source to the PBX via an external music port.

**Note**

Record voice messages only; avoid the recording of music.

- After recording messages, a manager extension can also play them back for confirmation.
- A progress tone is sent to a manager extension before recording messages for a preprogrammed time period, or while clearing a prerecorded message assigned to a floating extension number.
- Record a message when PBX traffic is light, such as early morning or late evening.
- When a manager tries to record a message, he or she will hear a ringback tone if a message channel is in use. When all ports of the MSG card(s) become idle, the manager will hear the progress tone for a preprogrammed time period, then the PBX will automatically switch to the recording mode.

**Installation Manual References**

2.5.3 MSG2 Card (KX-TAW84891)

**Programming References****PC Programming Manual**

2.5.6 Utility—Message File Transfer PC to PBX

2.5.7 Utility—Message File Transfer PBX to PC

2.8.4 [2-3] Timers & Counters—DISA / Door / Reminder / U. Conf—DISA—Progress Tone Continuation Time before Recording Message

2.8.8 [2-6-1] Numbering Plan—Main—Features—OGM Record / Clear / Playback

2.9.10 [3-5-2] Incoming Call Distribution Group—Queuing Time Table—Queuing Sequence—Sequence 01–16

2.11.4 [5-3-2] Voice Message—DISA Message

→ Floating Extension Number

→ Delayed Ring

**PT Programming Manual**

[631] Sequences in Queuing Time Table

[730] Outgoing Message (OGM) Floating Extension Number

**Feature Manual References**

2.1 Capacity of System Resources

### Operating Manual References

2.1.3 OGM (Outgoing Messages)

## 1.12.2 One-touch Dialing

### Description

A proprietary telephone (PT) user can make a call or access a feature with a one-touch operation. This is possible by storing the number, such as an extension number, telephone number, or feature number in a One-touch Dialing button.

### Conditions

- **One-touch Dialing Button**  
Any flexible button can be customized as a One-touch Dialing button.
- **Full One-touch Dialing**  
There is no need to go off-hook before pressing a One-touch Dialing button.

### Programming References

#### PC Programming Manual

2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 5—Flexible Button Programming Mode

2.10.4 [4-1-4] Wired Extension—Flexible Button

→ Type

→ Dial (for One-touch)

2.10.8 [4-2-1] Portable Station—Extension Settings—Option 5—Flexible Button Programming Mode

2.10.10 [4-2-3] Portable Station—Flexible Button

→ Type

→ Dial (for One-touch)

2.10.13 [4-3] DSS Console—Flexible Button

→ Type

→ Dial (for One-touch)

#### PT Programming Manual

None

### Feature Manual References

1.6.3 Flexible Buttons

2.1 Capacity of System Resources

### Operating Manual References

1.3.39 One-touch Dialing

## 1.12.3 Operator Features

### Description

Any extension or Incoming Call Distribution (ICD) group can be designated as an operator. This PBX supports the following types of operators:

Type	Description
<b>PBX operator</b>	An extension or ICD group can be assigned as a PBX operator for each time mode (day/lunch/break/night).
<b>Tenant operator</b>	An extension or incoming call distribution group can be assigned as a tenant operator. The tenant operator may be the extension or ICD group of another tenant. <b>[Example]</b> Extension 110 in tenant 1 is the tenant operator of tenant 3.

#### Operator Call:

An extension user can call an operator by dialing the preprogrammed Operator Call feature number. The destination of the Operator Call depends on the following:

- If the Tenant Service is not in use:  
The call is directed to the PBX operator according to the corresponding time mode.
- If the Tenant Service is in use:  
The call is directed to the extension's tenant operator. If a tenant operator is not assigned, the call is directed to the PBX operator. In this case, the current time mode of the extension's tenant is used to determine the PBX operator that the call is directed to.

If neither a tenant operator nor a PBX operator is assigned, the caller will hear a reorder tone.

### Conditions

- An extension or ICD group can be assigned as both a tenant operator and the PBX operator.
- The same tenant operator can be assigned as the operator for multiple tenants.

### Programming References

#### PC Programming Manual

2.8.3 [2-2] Operator & BGM—PBX Operator—Day, Lunch, Break, Night

2.12.6 [6-6] Tenant—Operator (Extension Number)

#### PT Programming Manual

[006] Operator Assignment

### Feature Manual References

1.17.2 Tenant Service

2.1 Capacity of System Resources

### Operating Manual References

1.2.1 Making Calls— Operator Call

# 1.13 P

## 1.13.1 Paging

### Description

An extension user can make a voice announcement to several people at once.

The announcement is heard through the built-in speakers of proprietary telephones (PTs) and/or an external pager (loudspeaker) which belong to a paging group.

The paged person can answer the page from a nearby telephone.

It is possible to page with a call on hold in order to transfer the call.

### Paging Deny

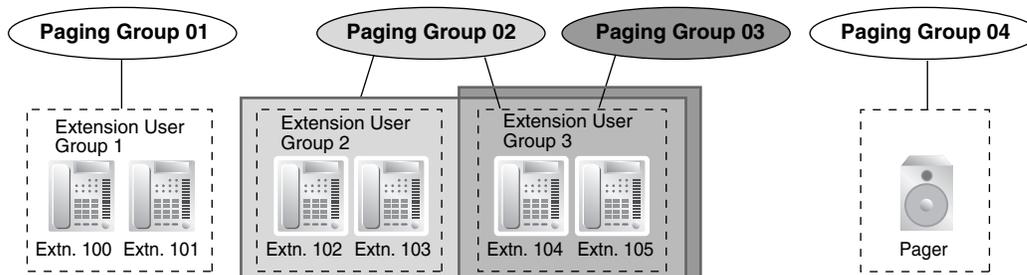
It is possible to deny being paged on an extension basis.

### Paging Group

Each paging group consists of extension user groups and the external pager. One extension user group or the external pager can belong to several paging groups.

(→ 1.7.1 GROUP FEATURES)

#### [Example]



#### [Programming Example]

Paging Group No.	Extension User Group No. <sup>*1</sup>				External Pager <sup>*2</sup>
	001	002	003	...	
01	✓				
02		✓	✓		
03			✓		
04					✓
05	✓	✓	✓		✓

✓: Constituent

- \*1: → 2.9.6 [3-4] Paging Group
  - or
  - 2.9.7 [3-4] Paging Group—All Setting
  - [640] Extension User Groups of a Paging Group
- \*2: → 2.9.8 [3-4] Paging Group—External Pager
  - [641] External Pager of a Paging Group

## Conditions

- Extensions which cannot be paged are:
  - Portable stations (PSSs)
  - Single line telephones (SLTs)
  - Ringing or busy PTs
  - PTs in Paging Deny mode
  - PTs in Paging DND mode

These extensions cannot be paged, but can answer a page.
- **External Pager Priority**  
 The external pager can be used with the following priorities:  
 Trunk Answer From Any Station (TAFAS) → Paging → Background Music (BGM)  
 (→ 1.17.1 TAFAS (Trunk Answer From Any Station), 1.2.1 BGM (Background Music))
- **Volume Control**  
 The volume level of pages heard from the external pager can be changed through system programming.
- **Paging DND**  
 When Do Not Disturb (DND) (→ 1.4.8 DND (Do Not Disturb)) is set for incoming calls, it is programmable whether an extension receives paging through system programming.

## Programming References

### PC Programming Manual

- 2.8.8 [2-6-1] Numbering Plan—Main—Features
  - Group Paging
  - Group Paging Answer
  - Paging Deny Set / Cancel
- 2.8.17 [2-9] System Options
  - Option 1—PT Fwd / DND—Paging to DND Extension
  - Option 3—Confirmation Tone—Tone 2 : Paged / Automatic Answer
- 2.8.19 [2-11-1] Audio Gain—Paging/MOH—Paging—EPG (External Pager)
- 2.9.6 [3-4] Paging Group
- 2.9.7 [3-4] Paging Group—All Setting
- 2.9.8 [3-4] Paging Group—External Pager
- 2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 6—Paging Deny

### PT Programming Manual

- [640] Extension User Groups of a Paging Group
- [641] External Pager of a Paging Group

**Feature Manual References**

2.1 Capacity of System Resources

**Operating Manual References**

1.3.40 Paging

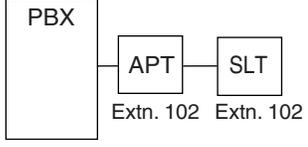
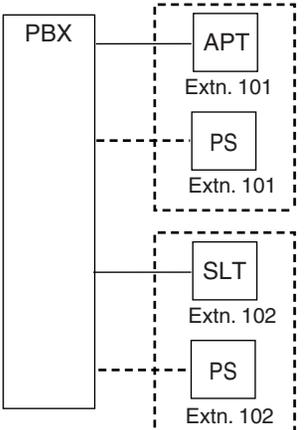
**1.13.2 Paralleled Telephone**

**Description**

By connecting telephones in parallel, you can increase the number of telephones connected to the PBX without adding additional extension cards.

Both wired and wireless telephones can be connected in parallel. Single line telephones (SLTs) and analog proprietary telephones (APTs) can be connected through just one extension port. Additionally, portable stations (PSs) can be linked to other telephones wirelessly and used as "paired" extensions.

The different type of parallel connections are described below.

Features	Descriptions	Connections
Parallel Mode	<p>Allows an SLT to be connected to an APT which is connected to a pre-installed hybrid port of the PBX. When parallel mode is enabled, the two telephones function as follows:</p> <ul style="list-style-type: none"> <li>• Both share the extension number of the telephone connected directly to the PBX (main telephone).</li> <li>• Either telephone can make or answer a call.</li> </ul>	<p style="text-align: center;"><b>APT + SLT</b></p> 
Wireless XDP Parallel Mode	<p>For information on this type of parallel connection, refer to the Wireless XDP Parallel mode feature. (→ 1.20.3 Wireless XDP Parallel Mode).</p>	<p style="text-align: center;"><b>APT/SLT + PS</b></p> 

## Conditions

### [APT + SLT]

- If one telephone goes off-hook while the other is on a call, a three-party call is established. If one user goes on-hook, the other user continues the call.
- An extension user cannot originate a call from the SLT if the APT is:
  - playing background music (BGM)
  - receiving a paging announcement over the built-in speaker.

## Installation Manual References

- 1.4.3 System Capacity
- 2.6.2 Parallel Connection of the Extensions

## Programming References

### PC Programming Manual

2.7.4 [1-1] Slot—Extension Port

### PT Programming Manual

None

## 1.13.3 Password Security

### Description

To maintain system security, system passwords are required to access certain programming functions of the PBX. By giving different users access to different passwords, it is possible to control the amount of programming that each user is able to perform.

The following types of system passwords are available:

Password		Description	Format
PT	System Password (PT) for User	Used to access user-level PT programming. The specific PT programming items that may be programmed at user level can be selected through system programming item.	4 – 10 digits
	System Password (PT) for Administrator	Used to access administrator-level PT programming. All PT programming settings are available.	
PC	System Password (PC) for User	Used with the user-level programmer code to access user-level PC programming. The installer can specify which system programming settings are available.	4 – 10 characters
	System Password (PC) for Administrator	Used with the administrator-level programmer code to access administrator-level PC programming. The installer can specify which system programming settings are available.	
	System Password (PC) for Installer	Used with the installer-level programmer code to access installer-level PC programming. All system programming settings are available.	

## 1.13 P

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For more information about programmer codes, see Section 2.1.2 Access Levels in the PC Programming Manual.

### ***Warning to the Administrator or Installer regarding the system password***

1. Please provide all system passwords to the customer.
2. To avoid unauthorized access and possible abuse of the PBX, keep the passwords secret, and inform the customer of the importance of the passwords, and the possible dangers if they become known to others.
3. The PBX has default passwords preset. For security, change these passwords the first time that you program the PBX.
4. Change the passwords periodically.
5. It is strongly recommended that passwords of 10 numbers or characters be used for maximum protection against unauthorized access. For a list of numbers and characters that can be used in system passwords, refer to Section 1.1.2 Entering Characters in the PC Programming Manual.
6. If a system password is forgotten, it can be found by loading a backup of the system data into a PC, and checking the password using the Maintenance Console software. If you do not have a backup of the system data, you must reset the PBX to its factory defaults and reprogram it. Therefore, we strongly recommend maintaining a backup of the system data. For more information on how to back up the system data, refer to the PC Programming Manual. However, as system passwords can be extracted from backup copies of the system data file, do not allow unauthorized access to these files.

## Programming References

### **PC Programming Manual**

- 1.1.2 Entering Characters
- 2.1.2 Access Levels
- 2.16.1 [10-1] Main—Password

### **PT Programming Manual**

None

## Feature Manual References

- 2.1 Capacity of System Resources

## 1.13.4 Pause Insertion

### Description

Pressing a PAUSE button inserts a preprogrammed Pause time between digits of a user-dialed number before the number is dialed out, allowing certain numbers separated with a pause to be used to access certain features (e.g., access codes, seizing idles lines, etc.).

When a pause is needed, pauses must be inserted manually (pressing the PAUSE button) in all cases, except for the following access codes where a pause is automatically inserted between the user-dialed access code and the subsequent digits:

- a) Host PBX Access code (→ 1.8.5 Host PBX Access Code (Access Code to the Telephone Company from a Host PBX))
- b) Special Carrier Access code (→ 1.16.2 Special Carrier Access Code)

## c) Second Dial Tone Waiting code

**Conditions**

- The length of a pause is programmable for each CO line.
- Numbers stored in Memory Dialing can contain pauses.
- When a Second Dial Tone Waiting code is dialed after seizing a CO line, a preprogrammed number of pauses are inserted after the code.
- **ARS**  
A pause is not automatically inserted between the user-dialed access code and the subsequent digits when the ARS mode is enabled. (1.1.3 ARS (Automatic Route Selection))

**Programming References****PC Programming Manual**

2.7.8 [1-1] Slot—LCO Port—Pause Time

2.8.4 [2-3] Timers &amp; Counters—Miscellaneous—During Conversation—Pause Signal Time

2.12.4 [6-4] Second Dial Tone

**PT Programming Manual**

[416] LCOT Pause Time

**1.13.5 PC Programming****Description**

Although many PBX features can be programmed using a proprietary telephone (PT) (→ 1.13.15 PT Programming), a PC connected to the PBX can use the KX-TAW848 Maintenance Console software to program in further detail. System programming, diagnosis, and data upload/download can be performed either through on-site programming or remote programming.

- 1) On-site Programming:** Programming that is performed using an on-site PC connected directly to the PBX.
- 2) Remote Programming:** Programming that is performed using an off-site PC that connects to the PBX via a CO line.

**1. Connection Methods for On-site Programming**

Method	Description	Required Hardware
<b>Serial Interface (RS-232C port)</b>	The PC is connected to the PBX via the Serial Interface (RS-232C port) of the PBX.	—
<b>USB</b>	The PC is connected to the PBX via the USB port.	—
<b>Modem (connected to SLT port)*</b>	The PC is connected to a modem, which is then connected to an SLT port of the PBX. Use the modem to dial the floating extension number (default: 599) assigned to the analog remote maintenance feature to access the PBX.	RMT card and user-supplied modem

- \* Remote access must be enabled through system programming when performing on-site programming via modem.

## 2. Connection Methods for Remote Programming

Method	Description	Required Hardware
<b>Off-site modem</b>	<p>Call the PBX and have the call directed to the floating extension number (default: 599) assigned to the analog remote maintenance feature using one of the following methods:</p> <p><b>Direct Access:</b> Using the off-site modem, dial a telephone number with the modem which will direct your call (via Direct In Line (DIL) distribution) to the floating extension number assigned to the analog remote maintenance feature.</p> <p><b>DISA:</b> Using a telephone, dial a telephone number which will direct your call (via DIL distribution) to a floating extension number used by the Direct Inward System Access (DISA) feature (→ 1.4.6 DISA (Direct Inward System Access)). Next, dial the floating extension number assigned to the analog remote maintenance feature. Then access the PBX with the modem.</p> <p><b>Call Transfer:</b> Using a telephone, dial a telephone number which will direct your call to an operator (or other extension of the PBX) and request to be transferred to the floating extension number assigned to the analog remote maintenance feature. (→ 1.3.8 Call Transfer) Then access the PBX with the modem.</p>	RMT card and user-supplied modem
<b>On-site modem</b>	<p>The modem is connected to the Serial Interface (RS-232C port) and also to either an extension port which is assigned as the DIL destination, or to a CO line directly. AT commands can be sent to the modem automatically when it is connected to the Serial Interface (RS-232C port) and can be programmed beforehand, through system programming, to initialize the modem. AT commands can also be sent manually in the PT system programming mode.</p>	User-supplied modem

### Conditions

- Only one system programming session is permitted at a time. Access will be denied when a second party tries to perform system programming, including system programming via a PT.
- **Programmer Code and Password for System Programming**  
To access system programming, a programmer code and its password must be entered. For more details, see Section 1.13.3 Password Security.
- **Remote Programming Limitation**  
It is possible to disable remote access through system programming. Disabling this feature will also disable the ability to perform on-site programming via modem.

- If an extension user sets Walking Extension at the same time that the extension's data is being programmed through PC programming, the data may not be transferred properly. (→ 1.20.2 Walking Extension)

## Installation Manual References

- 2.5.6 RMT Card (KX-TAW84896)
- 3.1 Overview
- 3.2 Connection
- 3.3 Installation of the PC Programming Software

## Programming References

### PC Programming Manual

- 2.16.1 [10-1] Main
  - RS-232C—External Modem Command—Automatic Initialization
  - RS-232C—External Modem Command—Manual Initialization 1—Manual Initialization 5
  - Remote
  - Password—System Password - PC Programming—User Level
  - Password—System Password - PC Programming—Administrator Level
  - Password—System Password - PC Programming—Installer Level

### PT Programming Manual

- [801] External Modem Control
- [810] Remote Programming
- [811] Modem Floating Extension Number

## Feature Manual References

- 1.4.5 DIL (Direct In Line)
- 1.13.3 Password Security

## 1.13.6 Power Failure Restart

### Description

When the electricity is turned back on, the PBX restarts, loads its stored data automatically, and logs the event as a System Restart in the error log.

### Conditions

- In the event of a power failure, PBX memory is protected by a factory-installed lithium battery. There is no memory loss except the memories of Automatic Callback Busy (Camp-on) (→ 1.1.4 Automatic Callback Busy (Camp-on)) and Call Park (→ 1.3.5 Call Park).

### 1.13.7 Power Failure Transfer

#### Description

If the power supply to the PBX fails, specific single line telephones (SLTs) are automatically connected to specific CO line (**Power Failure Connections**). The PBX will switch from the current connections to the Power Failure Connections, and all existing conversations will be disconnected.

Only CO line conversations handled by Power Failure Connections can be made during a power failure.

#### Conditions

- Only CO line calls can be made during a power failure. All other features do not work.
- Only ports 1 and 2 of the pre-installed LCOT card and ports 1 and 2 of the pre-installed hybrid ports can be used for Power Failure Connections.

#### Note

The Power Failure Connections between the LCOT card and hybrid ports are automatically kept so that the conversation is maintained when the power is restored and the Main Board is recovering.

#### Installation Manual References

2.10.1 Power Failure Connections

#### Programming References

**PC Programming Manual**

None

**PT Programming Manual**

None

### 1.13.8 Predialing

#### Description

A display proprietary telephone (PT) user can check and correct the number to be dialed on-hook. The call will be initiated after going off-hook.

#### Conditions

- **Storing the Predialed Number in Personal Speed Dialing**  
The predialed number can be stored in Personal Speed Dialing by pressing the AUTO DIAL/STORE button. (→ 1.16.3 Speed Dialing, Personal) In this case, the extension will enter personal programming mode automatically so that a name can be assigned to the stored number.

#### Operating Manual References

3.1.2 Personal Programming

## 1.13.9 Printing Message

### Description

An extension user can select a message to be output on SMDR. Up to eight messages can be preprogrammed in the Printing Message table, and are available to all extensions connected to the PBX. A message can contain the "%" symbol, which requires a number to be entered in its place when the message is selected at an extension.

Depending on the content of the preprogrammed messages, this feature can be used to record a variety of information, which can be output on SMDR to, for example, a connected PC.

#### [Example]

If message 1 is preprogrammed as "Started work", and message 2 as "Finished work", employees can sign in by selecting message 1 when starting work, and sign out by selecting message 2 when finishing. A connected PC can then be used to generate employee work records.

### Conditions

- Up to seven "%s" can be stored for each message.

### Programming References

#### PC Programming Manual

2.8.8 [2-6-1] Numbering Plan—Main—Features—Printing Message

2.12.9 [6-8] Hotel—Main—SMDR for External Hotel Application 2—Printing Message 1–8

#### PT Programming Manual

None

### Feature Manual References

1.16.1 SMDR (Station Message Detail Recording)

2.1 Capacity of System Resources

### Operating Manual References

1.3.41 Printing Message

## 1.13.10 Privacy Release

### Description

By default, all conversations which take place on CO lines, extension lines and doorphone lines are protected from others interrupting the conversation (**Automatic Privacy**).

Privacy Release allows a proprietary telephone (PT) or portable station (PS) user to suspend Automatic Privacy for an existing CO line call on the S-CO button in order to establish a three-party call.

System programming is required to enable or disable this feature.

### Conditions

- **S-CO Button**  
Any flexible button can be customized as the S-CO button.
- **Privacy Release Time**  
Privacy is released for five seconds to allow the conversation to be joined.
- This feature overrides Data Line Security (→ 1.4.1 Data Line Security) and Executive Busy Override Deny (→ 1.5.3 Executive Busy Override).

### Programming References

#### PC Programming Manual

2.8.17 [2-9] System Options—Option 1—PT Operation—Privacy Release by SCO key

2.10.4 [4-1-4] Wired Extension—Flexible Button—Type

2.10.10 [4-2-3] Portable Station—Flexible Button—Type

2.10.13 [4-3] DSS Console—Flexible Button—Type

#### PT Programming Manual

None

### Feature Manual References

1.6.3 Flexible Buttons

### Operating Manual References

1.3.15 Conference

## 1.13.11 PS Connection

### Description

A Panasonic KX-TD7680 or KX-TD7690 portable station (PS) can be used in place of a proprietary telephone (PT), providing wireless access to PBX features and call handling.

#### 1. Registration

Before a PS can be used, it must be registered with the PBX through system programming and assigned an extension number.

→ 2.7.12 [1-2] Portable Station—PS Registration and De-registration—Registration

→ [690] PS Registration

Because a PS transmits radio waves, it is possible that a PS belonging to a neighboring PBX can be registered to your PBX. To prevent this sort of unauthorized registration, a personal identification number (PIN) can be programmed for this PBX that must be entered on the PS during registration. This PIN, if programmed, is only used during the PS registration process.

→ 2.7.12 [1-2] Portable Station—PS Registration and De-registration—Personal Identification Number

→ [691] PS Termination

Each PS can be registered to more than one PBX if necessary, and registration can be canceled if a PS will no longer be used with one of these PBXs.

→ 2.7.12 [1-2] Portable Station—PS Registration and De-registration—De-registration

→ [692] Personal Identification Number (PIN) for PS Registration

## 2. Connection

There are two ways a PS can be used.

### As an Extension

A PS is assigned its own extension number when it is registered to a PBX. The PS can use this extension number to make and receive calls, just as a wired telephone can. A PS can be a member of an incoming call distribution (ICD) group, can be assigned as the destination for redirected calls, etc., just as a wired telephone can.

A PS can also be a member of a PS ring group (→ 1.13.14 PS Ring Group). A PS ring group is a way for several PSs to be notified of an incoming call simultaneously, but does not offer all of the features provided by an ICD group. (→ 1.9.1 ICD GROUP FEATURES)

### In Wireless XDP Parallel Mode

A PS can share an extension number with a wired telephone, allowing extension users to use their PSs when they are away from their desks to answer or make calls as if they were using their wired telephones. (→ 1.20.3 Wireless XDP Parallel Mode)

## 3. PS Interaction with CS

Each PS communicates with the PBX wirelessly through a cell station (CS). Each CS is connected to the PBX and sends and receives radio waves to and from different PSs within its range, using different channels for different PSs. Each CS has three channels, i.e., up to three calls (conversations) can be handled simultaneously by one CS.

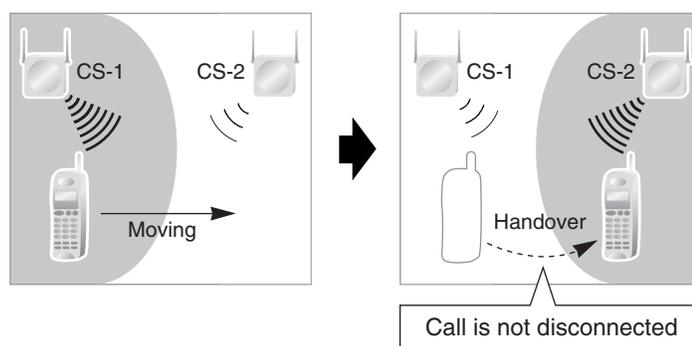
A PS must be within range of a CS in order to be used, however, multiple CSs can be used with the same PBX to offer a greater area of wireless coverage. Additionally, a PS does not need to be used with a specific CS; any PS can communicate with any CS provided the PS is registered to the PBX, and provided the CS has at least one channel available.

### Handover

If a PS is within range of more than one CS, the PS will communicate with the CS which has the greatest signal strength and an available channel. When a PS user moves out of range of one CS and moves in range of another CS, the PS will "hand over" its communications to the new CS. Handover is possible when:

- a) The PS is on an intercom call or on a call with an outside party. (The call will not be disconnected during the handover.)
- b) A call is ringing at the PS. (The call will continue to ring after the handover.)
- c) The PS is in idle status (i.e., waiting to receive calls).

### [Example of Handover]



## 1.13 P

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Handover is not possible when the PS is:

- a) Not within range of another CS.
- b) Within range of another CS but that CS is busy.
- c) Screening a call via Live Call Screening (LCS) or recording a call via Two-way Record (→ 1.19.4 Voice Mail DPT (Digital) Integration)
- d) Paging other extensions. (→ 1.13.1 Paging)
- e) On a doorphone call.
- f) Dialing digits to make a CO line call.

### Conditions

- If every CS that a PS is in range of is busy when that PS is called, the call will not be connected and the caller will hear a busy tone.
- A PS can only be assigned an extension number of 4 digits or less.

### Installation Manual References

2.7 Connection of 2.4 GHz Portable Stations

### Programming References

#### PC Programming Manual

2.7.12 [1-2] Portable Station

#### PT Programming Manual

[690] PS Registration

[691] PS Termination

[692] Personal Identification Number (PIN) for PS Registration

### Feature Manual References

1.6.4 Flexible Numbering/Fixed Numbering

## 1.13.12 PS Directory

### Description

A portable station (PS) user can make a call or access PBX features using information stored in the PS and PBX.

Refer to the Operating Instructions supplied with your PS for available directories and usage.

Directory Type	Description	Programming
PS Dialing Directory	A list of names and telephone numbers. Used to make a call to one of the stored parties.	Stored in the PS by the PS user.

Directory Type	Description	Programming
<b>Quick Dialing</b>	A list of frequently dialed feature numbers as well as names and telephone numbers. Used to quickly access one of the stored features, or quickly make a call to one of the stored parties.	Stored in the PS by the PS user.
<b>System Speed Dialing Directory</b>	A system-wide list of names and telephone numbers. Used to make a call to one of the stored parties.	Stored in the PBX.
<b>PBX Extension Dialing Directory</b>	A system-wide list of extension names. Used to make a call to one of the stored extensions.	Stored in the PBX.

## Programming References

### PC Programming Manual

#### 2.12.1 [6-1] System Speed Dial

→Name

→CO Line Access Number + Telephone Number

#### 2.10.1 [4-1-1] Wired Extension—Extension Settings—Main—Extension Name

#### 2.10.8 [4-2-1] Portable Station—Extension Settings—Main—Extension Name

### PT Programming Manual

[001] System Speed Dialing Number

[002] System Speed Dialing Name

[004] Extension Name

## 1.13.13 PS Feature Buttons

### Description

Although a portable station (PS) does not feature as many buttons as a proprietary telephone (PT), a PS can be customized to give a PS user access to PBX features, just as the flexible buttons on a PT can be customized. (→ 1.6.3 Flexible Buttons)

## 1.13.14 PS Ring Group

### Description

A PS ring group is a way for several portable stations (PSs) to be notified of an incoming call simultaneously, while using only one channel of a cell station (CS).

Normally when a PS receives a call, one channel of a CS is used to ring the PS (→ 1.13.11 PS Connection). If several PSs are members of an incoming call distribution (ICD) group, the available channels of a CS will become busy just by ringing each PS. Assigning a group of PSs to a PS ring group alleviates this strain on the CS because only one channel is needed to ring a PS ring group's members.

PS ring group members and related parameters are assigned through system programming, as explained below.

- a) **Floating Extension Number:** When this number is called, all PSs in the group ring.

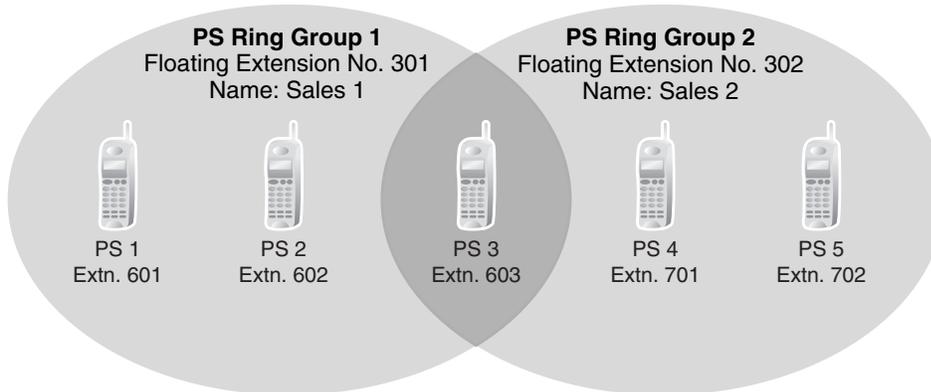
- b) **Group Name:** Can be displayed on a ringing PS to indicate that the incoming CO line call is a group call, and not a call directed to the PS's extension number. This is only available when Incoming CO Line Call Information Display is set to "Called Number".
- c) **Incoming CO Line Call Information Display:** Determines which information is shown on the PS display when a group call is received. Select "Caller ID" to display the caller's telephone number or name, or "Called Number" to display the name of the PS ring group which is receiving the call.
- d) **Member PSs:** Select each PS that will be a member of the corresponding PS ring group. Note that a PS can belong to more than one PS ring group.

[Programming Example: PS Ring Group]

	PS Ring Group 1	PS Ring Group 2	PS Ring Group 3
<b>Floating Extension No.</b>	301	302	303
<b>Group Name</b>	Sales 1	Sales 2	Customer Service
<b>Incoming CO Line Information Display</b>	Caller ID	Called Number	Caller ID
PS 1	✓		
PS 2	✓		
PS 3	✓	✓	
PS 4		✓	
PS 5		✓	
PS 6			✓
PS 7			✓
PS 8			✓

✓ PS Ring Group Member

[Example of PS Ring Groups 1 and 2]



**Explanation:**

**PS Ring Group 1**

PS 1, PS 2, and PS 3 will ring simultaneously when a call is directed to floating extension number 301, and, in the case of a CO line call, will display the Caller ID information for the call. These PSs will ring individually when a call is directed to their assigned extension numbers (programming not shown here).

**PS Ring Group 2**

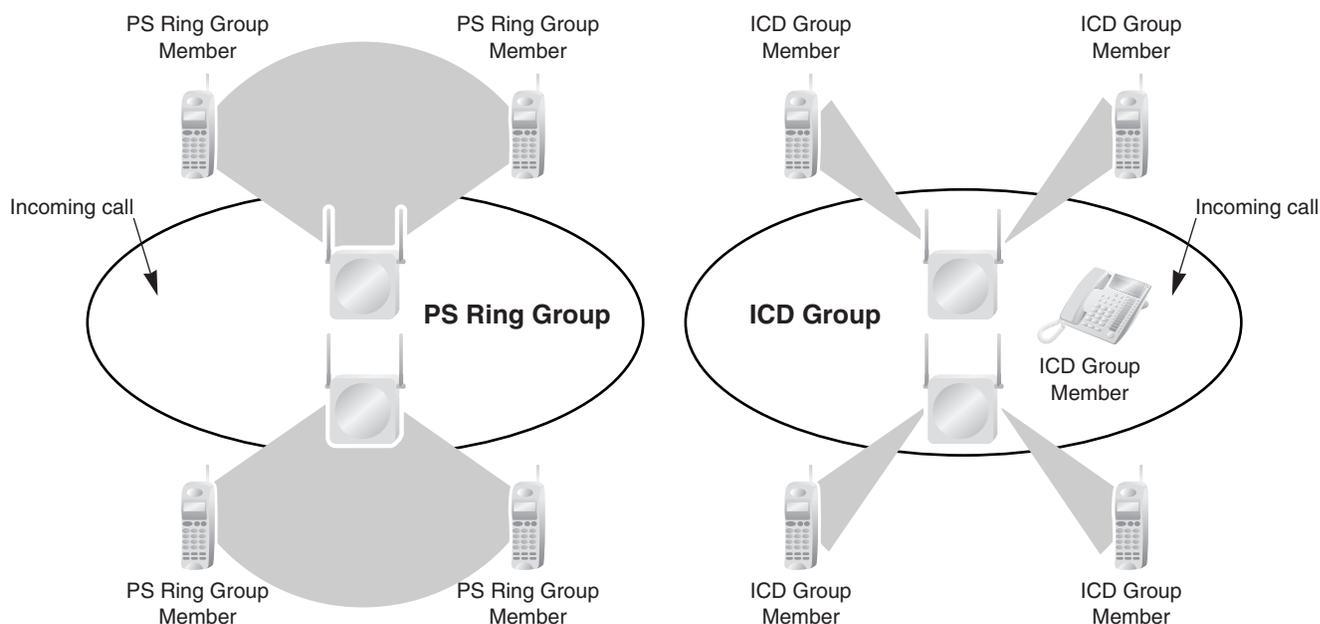
PS 3, PS 4, and PS 5 will ring simultaneously when a call is directed to floating extension number 302, and, in the case of a CO line call, will display "Sales 2". These PSs will ring individually when a call is directed to their assigned extension numbers (programming not shown here).

## ICD Groups vs. PS Ring Groups

Assigning PSs to either an ICD group or a PS ring group will allow multiple PSs to receive group calls simultaneously. The differences between the two are highlighted below:

Features	PS Ring Group	ICD Group
Members can ring simultaneously when a call is received	✓	✓
Calls can be distributed to member extensions using different methods		✓
The CS is less likely to be busy; ringing all member PSs uses only one CS channel	✓	
Members can log-in, log-out, and use Wrap-up time, ICD Group button		✓
Both PTs and PSs can belong to the same group		✓
Each member can belong to more than one group	✓	✓
Calls can wait in a queue if they cannot be answered		✓

### [Example of CS Channels Used for PS Ring Group Calls and ICD Group Calls]



### Explanation:

The PS ring group has four members which are in range of two different CSs. When a call arrives, each CS uses one channel to ring all member PSs within its range.

The ICD group has one proprietary telephone (PT) member, as well as four PS members which are in range of two different CSs. When a call arrives, each CS uses both of its channels to ring each of the member PSs within its range.

### Conditions

- A maximum of 32 PS ring groups can be programmed.
- Each member of a PS ring group must be a PS, but each member does not need to be in range of the same CS. When a call is directed to a PS ring group, all CSs connected to the PBX will try to ring members of the group.
- PS ring groups do not have Log-in or Log-out features. There is no way for a PS to log-in to or log-out from a PS ring group.
- A PS ring group may be assigned as a member of an ICD group, but the PS ring group cannot log-in to or log-out from an ICD group. The PS ring group (and therefore its members) will always be logged-in.
- When a PS is assigned to a PS ring group, the following settings are used if it receives a call directly, but are disregarded when it receives a group call:
  - a) Delayed Ringing (All PSs will ring simultaneously.)
  - b) The incoming call display preference assigned to the PS through system programming.
  - c) Features set on the PS, such as Call Forwarding (FWD). Note, however, that if a PS user has set Do Not Disturb (DND), that PS will not ring for group calls either.
- When a call is directed to a PS ring group, the PBX will try to ring the group's members regardless of whether or not they are already on another call. If all members of a PS ring group are busy when the group is called, their PSs will not ring but the caller will hear a ringback tone.
- A PS ring group will only ring one call at a time on its member PSs. If a PS ring group is ringing one call when another call is directed to the group, the group will appear busy to the caller. If a call is directed to a specific PS within the group in this situation and the PS is available to answer calls, the PS will ring as usual.
- If a PS in a PS ring group has set the DND feature for CO line calls, the PS will not ring for CO line calls as well as intercom calls directed to the group.
- **Compatible PS**  
A Panasonic KX-TD7680 and KX-TD7690 can be assigned to PS ring groups.

### Programming References

#### PC Programming Manual

2.9.9 [3-5-1] Incoming Call Distribution Group—Group Settings—Main—Distribution Method

2.9.21 [3-9] PS Ring Group

2.9.22 [3-9] PS Ring Group—Member List

#### PT Programming Manual

[620] Incoming Call Distribution Group Member

### Feature Manual References

1.4.8 DND (Do Not Disturb)

1.9.1 ICD GROUP FEATURES

2.1 Capacity of System Resources

## 1.13.15 PT Programming

### Description

A proprietary telephone (PT) can be used to customize the settings of the PBX or of an extension, using the following programming features:

Programming Type	Description	Example	Authorized Programmer
<b>Personal Programming</b>	Used by an extension user to customize the extension's settings.	PT Display Language, Call Waiting Tone, etc.	Extension user
<b>System Programming</b>	Used by an authorized party to customize the PBX.	Intercept Destination, ARS Mode, Date and Time, etc.	Authorized administrator or extension user
<b>Manager Programming</b>	Used by an extension assigned as a manager to customize the current state of an extension, or to grant special privileges temporarily to an extension user.	Switching the current time mode, Remote Extension Dial Lock, Remote PIN Clear, etc.	Extension assigned as a manager

### Conditions

- Class of Service (COS) programming determines the level of programming an extension user is authorized to perform:
  - System programming and personal programming
  - Personal programming only
  - No programming may be performed
- The extension which is connected to the lowest numbered port on the card installed in the lowest numbered slot can perform both personal programming and system programming regardless of the extension's COS.
- COS programming determines which extensions are manager extensions and can therefore perform manager programming.
- During programming, the PT is considered to be busy and will not receive calls.
- Only one system programming (including PC programming) or manager programming session is permitted at a time, i.e., these two programming features cannot be performed simultaneously by two users. However, personal programming can be performed simultaneously by an unlimited number of users.
- **System Programming Password Level**  
To access system programming, a valid password must be entered. For more details, see Section 1.13.3 Password Security.
- **Personal Programming Data Reset**  
A PT user can return settings made through personal programming (Preferred Line Assignment, Live Call Screening Mode, etc.) to their default settings all at once.

### Programming References

#### PC Programming Manual

2.8.11 [2-7-1] Class of Service—COS Settings—Extension Feature—Programming Mode Level

2.16.1 [10-1] Main—Password

## 1.13 P

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- System Password - PT Programming—Prog \*\* : User Level
- System Password - PT Programming—Prog \*# : Administrator Level
- Manager Password - PT Programming—Prog \*1

### **PT Programming Manual**

2.1 PT Programming

[516] Programming Mode Limitation

### **Feature Manual References**

1.3.16 COS (Class of Service)

1.11.1 Manager Features

2.1 Capacity of System Resources

### **Operating Manual References**

3.1 Personal Programming

3.2 Manager Programming

3.3 System Programming

## 1.14 Q

### 1.14.1 Quick Dialing

#### Description

An extension user can make a call or access a feature easily. This is enabled by storing the number (extension number, telephone number, or feature number etc.) for Quick Dialing.

Quick Dialing is convenient in situations such as the following:

- Room service calls in a hotel
- Calling your company's headquarters via the public network. Extension users can think of the Quick Dialing number as an extension number.

#### [Programming Example: Quick Dialing]

Location No.	Quick Dialing No.	Desired Number
Quick Dialing 01	110	9110 (CO Line Call)
Quick Dialing 02	5	3016 (Room Service)
Quick Dialing 03	2011	90123456789 (Headquarters)

#### Conditions

- Quick Dialing numbers follow the flexible numbering plan.  
(→ 1.6.4 Flexible Numbering/Fixed Numbering)

#### Programming References

##### PC Programming Manual

2.8.9 [2-6-2] Numbering Plan—Quick Dial

##### PT Programming Manual

None

#### Feature Manual References

2.1 Capacity of System Resources

#### Operating Manual References

1.3.43 Quick Dialing

## 1.14.2 Quick Setup

### Description

Basic PBX parameters can be programmed the first time the PBX is accessed with a PC using the KX-TAW848 Maintenance Console software.

When the PBX is accessed with the Installer Level Programmer Code and default password (→ 1.13.3 Password Security), for the first time (i.e., accessed after the PBX's settings have been initialized or when the PBX's settings are still set to their default values), Quick Setup will launch automatically. From here the following basic parameters can be programmed as desired:

Item	Parameter	Description
<b>Date &amp; Time Set</b>	Year/Month/Date/ Hour/Minute	The date and time set on the PC can be used by default.
<b>System Password for Installer</b>	4–10 characters	Enter the system password for installer (→ 1.13.3 Password Security).
<b>Operator &amp; Manager</b>	Extension Number	Assign a PBX operator. (→ 1.12.3 Operator Features) This extension will be the operator for all time modes, and is automatically assigned manager status to perform manager operations. (→ 1.11.1 Manager Features)
<b>Flexible Numbering Type</b>	<ol style="list-style-type: none"> <li>1. Pattern 1 (with ✕)</li> <li>2. Pattern 2 (without ✕)</li> </ol>	<p>Select whether or not the prefix "✕" must be entered before dialing feature numbers.</p> <p><b>[Example]</b> Call Pickup feature number</p> <p><b>Pattern 1 (with ✕):</b> ✕41</p> <p><b>Pattern 2 (without ✕):</b> 41</p> <p>Note that certain feature numbers (Line Access numbers, Operator Call, etc.) never need this prefix.</p> <p>For a list of the default flexible numbers, refer to the [Flexible Numbering Table (available while a dial tone is heard)] (→ 1.6.4 Flexible Numbering/Fixed Numbering).</p>
<b>Extension Number</b>	From 101/from 201	Determines the number from which default extension numbers begin.
<b>Operator</b>	0/9	The feature number for Operator Call can be selected.
<b>Local Access</b>	0/1/9	The feature number for Idle Line Access can be selected.
<b>Remote Maintenance Number</b>	Remote Maintenance Dial Number	Enter the complete telephone number of the PBX (including the country code). When necessary, this number will be used to access the PBX from a remote location for maintenance purposes.

Note that the programmable items may vary depending on the version of KX-TAW848 Maintenance Console being used.

## 1.15 R

### 1.15.1 Redial, Last Number

#### Description

Every extension automatically saves the last external telephone number dialed, allowing the same number to be dialed again.

#### Outgoing Call Log

The last five (default) dialed numbers are automatically stored at each portable station (PS). A PS user can redial easily any of the stored numbers.

#### Conditions

- Memorized telephone numbers are replaced by new ones.
- **Interrupt Redial**  
When an outside party or seized CO line is busy, a user can attempt to redial the number by pressing the REDIAL button without going on-hook. This can be performed several times without having to go on-hook.
- It is possible to change the number of outgoing call records that can be stored at each PS through system programming.

#### Programming References

##### PC Programming Manual

2.8.8 [2-6-1] Numbering Plan—Main—Features—Redial

2.8.17 [2-9] System Options—Option 2—Redial—Save Dial After Connection to Redial Memory

##### PT Programming Manual

None

#### Feature Manual References

2.1 Capacity of System Resources

#### Operating Manual References

1.3.44 Redial, Last Number

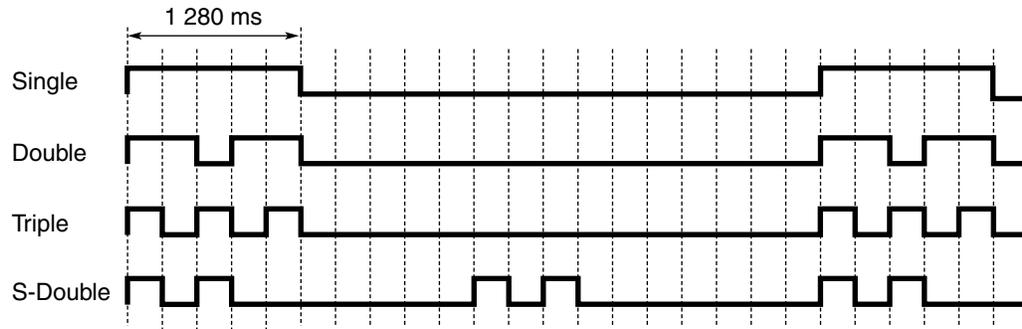
1.4.2 Call Log, Incoming

### 1.15.2 Ring Tone Pattern Selection

#### Description

It is possible to select the type of ring tone pattern that arrives at an extension for each type of incoming call, etc.

## [Ring Tone Patterns]



\*: The duration of a ring tone may vary by country/area.

## [Ring Tone Pattern Table]

The ring tone pattern table is categorized into three parts, each containing a specified number of pattern plans.

The ring tone pattern table is categorized as follows:

- Incoming CO Line Calls: each pattern plan can assign a ring tone pattern for each trunk group.  
→ 2.8.14 [2-8-1] Ring Tone Patterns—Call from CO
- Incoming Doorphone Calls: each pattern plan can assign a ring tone pattern for each doorphone.  
→ 2.8.15 [2-8-2] Ring Tone Patterns—Call from Doorphone
- Others: each pattern plan can assign a ring tone pattern for incoming intercom calls as well as ring tones assigned to certain features (e.g., timed reminder).  
→ 2.8.16 [2-8-3] Ring Tone Patterns—Call from Others

The ring tone patterns that arrive at an extension are determined by the pattern plan that is assigned to that extension through system programming.

## [Programming Example of Ring Tone Pattern Table]

Table No.	Intercom Call/Hold Recall	CO Line Call/Hold Recall			Doorphone Call			Timed Reminder	Call Back	LCS	External Sensor
		TRG1	TRG2	...	Port 1	Port 2	...				
1	Double	Single			Single						
2	Single	Double			Double						
:	:	:	:	:	:	:	:	:	:	:	:

## Programming References

### PC Programming Manual

2.8.14 [2-8-1] Ring Tone Patterns—Call from CO—Ring Tone Pattern Plan 1–8

2.8.15 [2-8-2] Ring Tone Patterns—Call from Doorphone—Ring Tone Pattern Plan 1–8

2.8.16 [2-8-3] Ring Tone Patterns—Call from Others—Extension—Ring Tone Pattern Plan 1–8

2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 1—Ring Pattern Table

2.10.8 [4-2-1] Portable Station—Extension Settings—Option 1—Ring Pattern Table

### PT Programming Manual

None

## Feature Manual References

2.1 Capacity of System Resources

## 1.16 S

### 1.16.1 SMDR (Station Message Detail Recording)

#### Description

Automatically logs detailed information for each extension.

#### 1. SMDR Output Port

The Serial Interface (RS-232C) port can be used to output Station Message Detail Recording (SMDR) data to a PC, printer, etc.

#### 2. SMDR Output Data

The following data can be recorded and sent to the SMDR output port:

- a) CO line call information (incoming/outgoing)
- b) Intercom call information (outgoing)
- c) Log-in/Log-out information
- d) PBX error log (→ 1.10.4 Local Alarm Information)
- e) Hospitality feature information (→ 1.8.4 HOSPITALITY FEATURES)
- f) Printing Message information (→ 1.13.9 Printing Message)

**Memory for SMDR:** A specified number of records (data) can be remembered by the PBX. When memory is full, the oldest data is overwritten by new data.

#### 3. SMDR Format Type and Contents

The following three types of output format can be selected through system programming:

**Pattern A: 80-column text without call charge information**

Date (8 digits)	Time (7)	Ext (4)	CO (2)	Dial Number (25)	Ring (4)	Duration (8)	ACC Code (10)	CD (3)
01/02/02	10:03AM	1200	01	<I>12345678901234567890	5'15	00:00'00		NA
01/02/02	10:07AM	1200	01	<I>	0'05	00:01'05	9876543210	
01/02/02	10:15AM	1200	01	1234567890123456		00:01'05	9876543210	TR
01/02/02	10:30AM	*123	01	1234567890123456		00:01'05	9876543210	
01/02/02	01:07PM	1234	01	<I>ABC COMPANY12345678	0'05	00:01'05	9876543210	
01/02/02	01:07PM	1234	01	<I>Q COMPANY23456789	0'05	00:01'05	9876543210	
01/02/02	01:07PM	1234	01	ABC COMPANY12345678		00:01'05		
01/02/02	01:07PM	1234	01	123.....		00:01'05		
01/02/02	08:33AM	1234		In the office				
01/02/02	01:07PM	1234		LOG IN				
01/02/02	03:35PM	1234		LOG OUT				
01/02/02	03:45PM	1234		EXT1235				
01/02/02	04:00PM	1234		Timed Reminder/Start				
01/02/02	04:01PM	1234		Timed Reminder/No Answer				
01/02/02	04:01PM	1234		Timed Reminder/Answer				
01/02/02	04:05PM	1234		<I>S003				RC
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

**Pattern B: 80-column text with call charge information**

Date (8 digits)	Time (7)	Ext (4)	CO (2)	Dial Number (20)	Duration (8)	Cost (8+2)	ACC Code (10)	CD (3)
01/02/02	10:03AM	1210	01	<I>				NA
01/02/02	10:07AM	2005	01	12345678901234567890	00:00'05	00560.00	EU 9876543210	
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
(1)	(2)	(3)	(4)	(5)	(7)	(10)	(8)	(9)

**120-column text**

Date (8 digits)	Time (7)	Ext (4)	CO (4)	Dial Number (50)	Ring (4)	Duration (8)	Cost (8+3)	ACC Code (10)	CD (3)
01/02/02	10:03AM	1230	0001	123456789012345678901234567890		00:00'05	00560.00	EUR 9876543210	TR
01/02/02	10:07AM	1230	0001	<I>ABC COMPANY123456789012345	0'05	00:00'05		9876543210	TR
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(10)	(8)	(9)

**[Explanation]**

The following table explains the types of data logged by SMDR. Each description below refers to data indicated above by the numbers in the parentheses.

Number in the Pattern	Data	Description
(1)	Date	Shows the date of the call.
(2)	Time	Shows the end time of a call as hour/minute/AM or PM.
(3)	Ext (Extension)	Shows the extension number, floating extension number, etc., which was engaged in the call. Also shows the following codes: <b>Dxxx</b> : Outgoing CO line call from a doorphone (xxx=doorphone number) (→ 1.4.10 Doorphone Call) <b>*xxx</b> : Verified call (xxx=verification code) (→ 1.19.1 Verification Code Entry)
(4)	CO	Shows the CO line number used for the call. For patterns A and B, "00" will be shown for CO line numbers over hundred.
(5)	Dial Number	<p><b>[CO Line Call]</b>  <b>Outgoing CO Line Call</b>  Shows the dialed telephone number.  Digits shown are as follows:  <b>0 through 9, *, #</b>  <b>P</b>: Pause  <b>F</b>: External Feature Access (EFA) signal  <b>=</b>: Host PBX Access code (→ 1.8.5 Host PBX Access Code (Access Code to the Telephone Company from a Host PBX))  <b>.</b> (<b>dot</b>): Secret dialing</p> <p>–: Transferred call  If the transfer destination extension enters additional digits, those digits will be added after "-".</p> <p><b>Incoming CO Line Call</b>  Shows &lt;l&gt; + the caller's identification name/number.</p> <p><b>[Outgoing Intercom Call]</b>  Shows the dialed extension number followed by "EXT".</p> <p><b>[Log-in/Log-out]</b>  Shows the Log-in or Log-out status.</p> <p><b>[Timed Reminder]</b>  Shows the status of a timed reminder, either "Start", "No Answer", or "Answer". (→ 1.17.3 Timed Reminder)</p> <p><b>[Printing Message]</b>  Shows the selected message. (→ 1.13.9 Printing Message)</p> <p><b>[Sensor Call]</b>  Shows calls from an external sensor as follows:  &lt;l&gt; S + sensor number. (→ 1.5.9 External Sensor)</p>

Number in the Pattern	Data	Description
(6)	<b>Ring</b>	Shows the ring duration before the call was answered in minutes/seconds.
(7)	<b>Duration</b>	Shows the duration of the CO line call in hours/minutes/seconds.
(8)	<b>Acc Code (Account Code)</b>	Shows the account code appended to the call. (→ 1.1.2 Account Code Entry)
(9)	<b>CD (Condition Code)</b>	Shows other call information using the following codes:  <b>TR:</b> Transfer <b>FW:</b> Call Forwarding (FWD) to CO line <b>DO:</b> Call using Direct Inward System Access (DISA) <b>RM:</b> Remote maintenance (modem) (→ 1.13.5 PC Programming) <b>NA:</b> Not answered call <b>RC:</b> Received call <b>AN:</b> Answered call <b>VR:</b> Received call with Call Waiting Caller ID (Visual Caller ID) <b>VA:</b> Answered call with Call Waiting Caller ID (Visual Caller ID)
(10)	<b>Cost</b>	Shows the call charge. This is not available if your telephone company does not provide a call charge reporting service.

The following data can be controlled through system programming to adjust whether (or how) they are printed or displayed by SMDR  
**[Programmable Items]**

Item	Description
<b>Outgoing CO line call</b>	Controls whether outgoing CO line calls are shown. This setting is common throughout the PBX. COS programming is also required. → 2.16.1 [10-1] Main—SMDR—Print Information—Outgoing Call → [804] SMDR Outgoing Call Printing
<b>Incoming CO line call</b>	Controls whether incoming CO line calls are shown. → 2.16.1 [10-1] Main—SMDR—Print Information—Incoming Call → [805] SMDR Incoming Call Printing
<b>Outgoing intercom call</b>	Controls whether outgoing intercom calls are recorded. → 2.16.1 [10-1] Main—SMDR—Print Information—Intercom Call
<b>Log-in/Log-out status</b>	Controls whether the Log-in/Log-out status of extensions is recorded. → 2.16.1 [10-1] Main—SMDR—Print Information—Log-in / Log-out
<b>ARS dial</b>	Controls whether the user-dialed number or the ARS-modified number is shown. The Host PBX Access code ("=" followed by the access code) can be shown (as supplementary information) only when the modified number is selected in this setting. (→ 1.1.3 ARS (Automatic Route Selection)) → 2.16.1 [10-1] Main—SMDR Options—SMDR Options—ARS Dial

Item	Description
<b>Caller's identification</b>	Controls whether the caller's identification number, name, number and name, or nothing is shown. If "none" is selected, <l> will not be shown. → 2.16.1 [10-1] Main—SMDR Options—SMDR Options—Caller ID Number & Name
<b>Secret dialing</b>	Controls the display of secret dialing, when ARS dial above, is set to show ARS-modified numbers. If enabled, numbers dialed secretly will be shown as dots. If ARS dial is set to show the user-dialed numbers, secretly dialed numbers are always shown as dots in SMDR, regardless of this setting. → 2.16.1 [10-1] Main—SMDR Options—SMDR Options—Secret Dial
<b>Date order</b>	Controls the date format (MM-DD-YY, DD-MM-YY, YY-MM-DD, YY-DD-MM) → 2.16.1 [10-1] Main—SMDR—SMDR Format—Date Format
<b>Received call</b>	Controls whether the time of receiving an incoming CO line call is shown. → 2.16.1 [10-1] Main—SMDR Options—SMDR Options—Condition Code "RC/VR" Print
<b>Answered call</b>	Controls whether the time of answering an incoming CO line call is shown. → 2.16.1 [10-1] Main—SMDR Options—SMDR Options—Condition Code "AN/VA" Print
<b>Timed Reminder call</b>	Controls whether Timed Reminder calls are shown. (→ 1.17.3 Timed Reminder) → 2.16.1 [10-1] Main—SMDR—SMDR for External Hotel Application 1—Timed Reminder (Wake-up Call)
<b>Printing Message</b>	Specifies the messages that can be selected from an extension. (→ 1.13.9 Printing Message) → 2.12.9 [6-8] Hotel—Main—SMDR for External Hotel Application 2—Printing Message 1–8
<b>Time format</b>	Controls whether time is displayed in 12-hour or 24-hour format. → 2.16.1 [10-1] Main—SMDR—SMDR Format—Time Format (12H / 24H)

## Conditions

- **SMDR Format**

The following SMDR format parameters can be set through system programming in order to match the paper size being used by the printer:

**a) Page Length:** determines the number of lines per page.

→ 2.16.1 [10-1] Main—SMDR—SMDR Format—Page Length (Number of Lines)

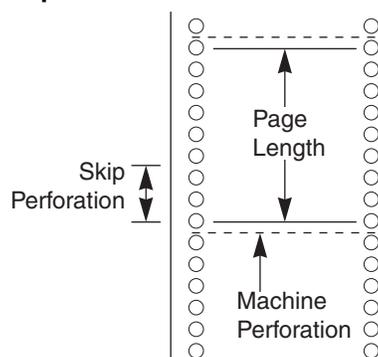
→ [802] SMDR Page Length

**b) Skip Perforation:** determines the number of lines to be skipped at the end of every page.

→ 2.16.1 [10-1] Main—SMDR—SMDR Format—Blank Footer Length (Number of Lines)

→ [803] SMDR Skip Perforation

The page length should be at least four lines longer than the skip perforation length.

**Explanation:**

- SMDR data is not deleted even if the PBX is reset.
- If the PBX is reset during a conversation, the call will not be logged by SMDR.
- The following calls are regarded as two separated calls in the SMDR:
  - Calls before and after the flash/recall/EFA signal is manually sent during a conversation
  - CO-to-CO line calls by Call Transfer, FWD or DISA (each is logged as both an "incoming call" and an "outgoing call")
- The PBX waits for a preprogrammed time period after the end of dialing before starting the SMDR timer for outgoing CO line calls. When the PBX has sent out all dialed digits to the telephone company and this timer expires, the PBX begins measuring the duration of the call. A display proprietary telephone (PT) shows the elapsed time of the call. The starting time and the total duration of the call are logged by SMDR.
  - 2.8.4 [2-3] Timers & Counters—Dial / IRNA / Recall / Tone—Dial—Analog CO Call Duration Start
  - [208] Call Duration Count Starting Time for LCOT
- **Serial Interface (RS-232C) Parameters**

The following communication parameters can be assigned for the Serial Interface (RS-232C port).

  - a) New Line Code:** Select the code appropriate for the PC or printer. If the PC or printer automatically feeds lines with carriage return, select "CR". If not, select "CR+LF".
    - 2.16.1 [10-1] Main—RS-232C—Communication—NL Code
    - [800] RS-232C Parameter—New Line Code
  - b) Baud Rate:** Baud rate indicates the transmission speed of data from the PBX to the PC or printer.
    - 2.16.1 [10-1] Main—RS-232C—Communication—Baud Rate
    - [800] RS-232C Parameter—Baud Rate
  - c) Word Length:** Word length indicates how many bits compose each character.
    - 2.16.1 [10-1] Main—RS-232C—Communication—Word Length
    - [800] RS-232C Parameter—Word Length
  - d) Parity Bit:** Parity bit indicates what type of parity is used to detect errors in the string of bits composing a character. Make an appropriate selection depending on the requirements of the PC or printer.
    - 2.16.1 [10-1] Main—RS-232C—Communication—Parity Bit
    - [800] RS-232C Parameter—Parity Bit
  - e) Stop Bit Length:** Stop bit indicates the end of a bit string which composes a character. Select an appropriate value depending on the requirements of the PC or printer.
    - 2.16.1 [10-1] Main—RS-232C—Communication—Stop Bit
    - [800] RS-232C Parameter—Stop Bit Length
- If a call is transferred to an ICD group using Automatic Transfer, the condition code "TR" will not be recorded on SMDR (→ 1.3.8 Call Transfer).

- **Host PBX Access Code**  
The dialed number including the Host PBX Access code will be recorded on SMDR only if the modified number setting is selected in the ARS setting for SMDR.
- When a Host PBX Access code is assigned to a trunk group, calls to extensions of the host PBX are not recorded on SMDR.
- A Host PBX Access Code can be used to record only long distance calls on SMDR when a CO line port is connected directly to the telephone company (not a host PBX). This is allowed when the long distance code (e.g., "0") is assigned as the Host PBX Access code. All local calls (e.g., calls that do not require a "0" to be dialed first) are treated as extensions of the telephone company and do not get recorded on SMDR, because in this case this PBX recognizes the telephone company as the host PBX. Therefore, only long distance calls are recorded on SMDR.

## Installation Manual References

2.9.1 Connection of Peripherals

## Programming References

### PC Programming Manual

- 2.8.4 [2-3] Timers & Counters—Dial / IRNA / Recall / Tone—Dial—Analog CO Call Duration Start
- 2.8.11 [2-7-1] Class of Service—COS Settings—CO & SMDR—Outgoing CO Call Printout (SMDR)
- 2.12.9 [6-8] Hotel—Main—SMDR for External Hotel Application 2—Printing Message 1–8
- 2.16.1 [10-1] Main
  - SMDR
  - SMDR Options
  - RS-232C—Communication—Baud Rate
  - RS-232C—Communication—NL Code
  - RS-232C—Communication—Word Length
  - RS-232C—Communication—Parity Bit
  - RS-232C—Communication—Stop Bit

### PT Programming Manual

- [800] RS-232C Parameter—New Line Code
- [800] RS-232C Parameter—Baud Rate
- [800] RS-232C Parameter—Word Length
- [800] RS-232C Parameter—Parity Bit
- [800] RS-232C Parameter—Stop Bit Length
- [802] SMDR Page Length
- [803] SMDR Skip Perforation
- [804] SMDR Outgoing Call Printing
- [805] SMDR Incoming Call Printing

## Feature Manual References

- 1.3.8 Call Transfer
- 1.3.16 COS (Class of Service)
- 1.4.6 DISA (Direct Inward System Access)
- 1.8.5 Host PBX Access Code (Access Code to the Telephone Company from a Host PBX)

- 1.9.3 ICD Group Features—Log-in/Log-out
- 2.1 Capacity of System Resources

## 1.16.2 Special Carrier Access Code

### Description

If the PBX has access to multiple telephone companies, a Special Carrier Access code assigned through system programming is required every time a CO line call is made without using ARS.

A pause of a preprogrammed length will be automatically inserted between the user-dialed Special Carrier Access code and the subsequent digits. (→ 1.13.4 Pause Insertion)

### Conditions

- **TRS**  
Toll Restriction (TRS) checks only the dialed telephone number excluding the Special Carrier Access code. (→ 1.17.5 TRS (Toll Restriction))
- **ARS**  
A pause is not automatically inserted between the user-dialed access code and the subsequent digits when ARS mode is enabled. (1.1.3 ARS (Automatic Route Selection))
- **If this PBX is installed behind an existing host PBX:**  
A Special Carrier Access code and a Host PBX Access code should be assigned separately—these codes cannot be assigned together as one code. (→ 1.8.5 Host PBX Access Code (Access Code to the Telephone Company from a Host PBX))

### Programming References

#### PC Programming Manual

2.13.3 [7-3] Special Carrier Code

#### PT Programming Manual

[303] Special Carrier Access Code

### Feature Manual References

- 1.1.3 ARS (Automatic Route Selection)
- 2.1 Capacity of System Resources

## 1.16.3 Speed Dialing, Personal

### Description

An extension user can make calls using abbreviated dialing for frequently dialed numbers which are stored in the extension's Personal Speed Dialing.

Personal Speed Dialing is also known as Station Speed Dialing.

### Conditions

- Any number, such as a telephone number or feature number, can be stored in Speed Dialing. A name can be assigned to each Personal Speed Dialing number through personal programming, and also to each System Speed Dialing number.
- **Call Directory—Speed Dialing**  
Display proprietary telephone (PT) users can make a call by selecting a stored name shown on the display.
- **Display Lock**  
An extension user can lock the Personal Speed Dialing number display to prevent the numbers from being viewed at any extension through personal programming (Display Lock). In this case, the Incoming/Outgoing Call Log displays and the SVM Log display are also locked, and the voice messages in the user's message box cannot be played back. An extension personal identification number (PIN) is required to use this feature. (→ 1.5.6 Extension PIN (Personal Identification Number))

### Programming References

#### PC Programming Manual

2.8.8 [2-6-1] Numbering Plan—Main—Features

→ System Speed Dialing / Personal Speed Dialing

→ Personal Speed Dialing - Programming

2.10.3 [4-1-3] Wired Extension—Speed Dial

#### PT Programming Manual

None

### Feature Manual References

2.1 Capacity of System Resources

### Operating Manual References

1.3.45 Speed Dialing, Personal

1.4.2 Call Log, Incoming

1.4.1 Directories

3.1.2 Personal Programming

3.3 System Programming

## 1.16.4 Speed Dialing, System

### Description

An extension user can make calls using abbreviated dialing for frequently dialed numbers which are stored in the PBX as System Speed Dialing numbers.

### Conditions

- Any number, such as a telephone number or feature number, can be stored in Speed Dialing. A name can be assigned to each Personal Speed Dialing number through personal programming, and also to each System Speed Dialing number.

- **Call Directory—Speed Dialing**  
A KX-T7737 analog proprietary telephone (APT) user can make a call by selecting a stored name shown on the display.
- **TRS Override by System Speed Dialing**  
It is possible to override Toll Restriction (TRS) when dialing a number using System Speed Dialing. (→ 1.17.5 TRS (Toll Restriction))
- **System Speed Dialing Display by AUTO DIAL/STORE Button**  
Pressing the AUTO DIAL/STORE button on a KX-T7737 while on-hook can display the System Speed Dialing Directory.

## Programming References

### PC Programming Manual

- 2.8.8 [2-6-1] Numbering Plan—Main—Features—System Speed Dialing / Personal Speed Dialing
- 2.8.11 [2-7-1] Class of Service—COS Settings—TRS—TRS Level for System Speed Dialing
- 2.10.3 [4-1-3] Wired Extension—Speed Dial
- 2.12.1 [6-1] System Speed Dial
- 2.12.6 [6-6] Tenant—System Speed Dial

### PT Programming Manual

- [001] System Speed Dialing Number
- [002] System Speed Dialing Name
- [509] TRS Level for System Speed Dialing

## Feature Manual References

- 2.1 Capacity of System Resources

## Operating Manual References

- 1.3.46 Speed Dialing, System
- 1.4.2 Call Log, Incoming
  - 1.4.1 Directories
- 3.1.2 Personal Programming
- 3.3 System Programming

## 1.16.5 SVM (Simplified Voice Message)

### Description

Installing an optional Simplified Voice Message (SVM) card in the PBX allows the PBX to provide answering machine features.

#### Features for an extension user with a message box:

An extension user can record a personal greeting message to greet a caller and ask him to leave a voice message. The user can also play back and clear greeting messages and the voice messages left by callers.

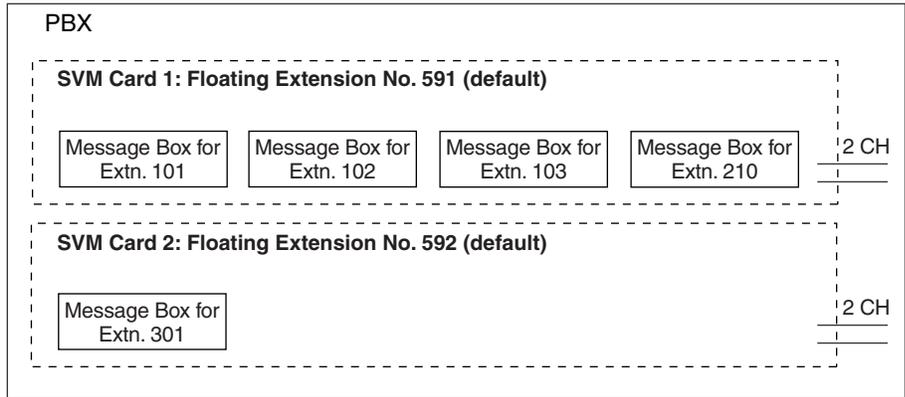
#### Feature for a caller:

A caller can leave a voice message after hearing the greeting message.

Up to two SVM cards can be installed in the PBX. Each card is assigned a floating extension number (default: 591 for SVM card 1, and 592 for SVM card 2). A card has two channels, allowing two users to access a single card at the same time.

When an extension is assigned to an SVM card through system programming, a message box is created for that extension. This message box is used to store greeting messages and voice messages for the extension. Each proprietary telephone (PT), single line telephone (SLT), and portable station (PS) can be assigned its own message box.

**[Example]**



### Message Recording Limit

Up to 125 messages (greeting messages and voice messages for extensions) with a maximum total recording time of 60 minutes (default) can be recorded per card. This memory is shared between the message boxes of all extensions assigned to that card. The recording quality, which can be selected through system programming, determines the total recording time as follows:

Recording Quality	Recording Time
High	about 40 minutes
Middle (default)	about 60 minutes
Low	about 120 minutes

If the sum length of all recorded voice messages exceeds 90 % of total space on the SVM card, or 115 or more voice messages have been recorded on the card, the display informs all extension users belonging to that card that the card is almost full. Users will hear dial tone 3 when going off-hook.

### Floating Extension No. and Destination

An extension user can set incoming calls to be redirected to his message box on the SVM card when he cannot answer them. The user can set the floating extension number of the SVM card as the destination for redirected calls. Then, the SVM card answers redirected calls, plays back the relevant greeting message, and records a voice message. Incoming calls can be redirected to an SVM card by the following methods:

- Call Forwarding (FWD) (→ 1.6.6 FWD (Call Forwarding))
- Intercept Routing—No Answer/Busy/DND (→ 1.9.9 Intercept Routing)

**[Programming Example for Intercept Routing]**

Extension No.	Assigned SVM Card No.	Intercept Destination			
		Day	Lunch	Break	Night
101	1	102	591	591	591
102	1	103	591	591	591
301 (Operator)	2	–	–	–	591

**In this example:**

If a call is received at extension 101 and cannot be answered:

- a) In day mode: the call will be redirected to extension 102.
- b) In lunch/break/night mode: the call will be redirected to the SVM card, and a voice message will be recorded to the message box.

If a call is received at extension 301 (operator), the call will only be redirected to the SVM card in night mode. If both FWD and Intercept Routing features are set for an extension, the FWD setting has priority. So, for example, it is possible for extension 101 to temporarily set FWD settings from his extension to forward calls to an SVM card even during day mode.

**Greeting Message for Each Time Mode**

When a call is redirected to the SVM card, the caller hears the designated greeting message. In addition to the normal greeting message, an extension user can record a different greeting message for each time mode (day/lunch/break/night) (→ 1.17.4 Time Service).

**[Recording Example]**

- Normal Greeting Message: "You have reached John. I am sorry I cannot take your call right now. Please leave a message."
- Greeting Message for lunch mode: "You have reached John. I am sorry I am out for lunch right now. Please leave a message."

If both the greeting message for a certain time mode and the normal greeting message have been recorded, callers will hear the greeting message for that time mode. However, if no greeting message has been recorded for a certain time mode, the normal greeting message will be played instead.

If neither the normal greeting message nor the greeting message for a certain time mode have been recorded, incoming calls will not be redirected to the SVM card in that time mode. For example, if a greeting message has only been recorded for night mode, and no normal greeting message has been recorded, incoming calls can only be redirected to an SVM card in night mode. No incoming calls will be redirected to the SVM card in day/lunch/break mode.

**Direct Recording**

An extension user can leave a voice message directly in the message box of an extension. In this case, the target extension will not ring. It is also possible to transfer a caller directly to the message box of an extension.

**Message Notification**

If a new voice message has been left in a message box, and distinctive dial tones are enabled, the user will hear dial tone 4 when going off-hook. If a message box contains only voice messages that have previously been listened to, dial tone 2 is heard instead. In addition, if the user's telephone has a Message button or Message/Ringer Lamp, the corresponding button or lamp will light when a voice message has been left. Pressing the lit button while on-hook shows the caller's information.

### SVM Log

When a caller leaves a voice message on an SVM card, the following information is also recorded (as available):

- a. Caller's Name
- b. Caller's Telephone Number
- c. Time recording started
- d. Voice Message Status
  - "New" is displayed for voice messages which have not previously been listened to.
  - "Old" is displayed for voice messages which have previously been listened to.

This information can be viewed with the display of a PT or PS.

Please note that the information shown on the display may vary depending on the information that was received and the type of telephone used.

### Checking Voice Messages Left by Callers

When an extension user accesses his message box, the most recent unplayed voice message is played first. When one voice message finishes playing, the next most recent voice message will begin playing automatically. After the last voice message in a message box has finished playing, the voice messages will begin playing from the most recent voice message again. When all voice messages have been played this time, the extension user will hear dial tone 4, and the line will be disconnected automatically.

### SVM Remote Access from CO Line

An extension user can remotely access his message box through a CO line by calling his own extension and using the Walking COS feature. This allows the user to, for example, check the voice messages left in his message box when he is out of the office.

### Accessing the Message Box of Another Extension

An extension user can access the message box of another extension by using the Walking COS feature to, for example, record a greeting message in a message box for an Incoming Call Distribution (ICD) Group as described below.

In addition, if the user's telephone has a Message button for another extension, the user can easily access the message box of that extension and listen to the voice messages left by callers.

### Message Box for Incoming Call Distribution (ICD) Group

When a call is redirected to an SVM card from an ICD Group using Intercept Routing—Overflow (→ 1.9.4 ICD Group Features—Overflow) or Call Forwarding (FWD), the greeting message for the first extension assigned to that ICD Group will be played, and the voice message from the caller will be recorded in that extension's message box.

A virtual PS can be assigned as the first extension of the ICD Group. This provides the ICD Group with a dedicated message box that is not shared with an actual extension. (→ 1.19.2 Virtual PS)

## Conditions

### [General]

- **Hardware Requirement:** An SVM card
- The maximum number of voice messages (not including greeting messages) that can be recorded for an extension can be set between 1 and 100 through system programming. (Default: 10)
- The Message button or Message/Ringer Lamp will light when an incoming call is answered by the SVM card. However, if a message is not left by the caller, the light will turn off when the call has ended.

- It is not possible to back up the SVM Log, recorded voice messages or greeting messages. If the PBX is initialized, all this information is cleared.
- When the card to which an extension belongs is changed through system programming, all the recorded voice messages and greeting messages for the extension will be cleared.
- The voice messages for an extension will be cleared when the extension is checked out using the Hospitality feature (→ 1.8.4 HOSPITALITY FEATURES). However, greeting messages will not be cleared.
- An extension is able to receive calls even while a voice message is being recorded in that extension's message box.
- If an extension user tries to access a card that two users are already accessing, the user will hear a busy tone.
- If an extension user tries to clear a voice message shown on the display while the message box is already in use, the extension user will hear a notification tone.
- Voice message recording will stop when:
  - a) a caller hangs up.
  - b) the recording time for the voice message reaches the preprogrammed limit. (Default: 120 seconds)
  - c) the recording space for the SVM card reaches the limit.
 In cases b) and c), the caller will hear a notification tone, and the line will be disconnected.
- New voice messages cannot be recorded in a message box when:
  - a) the total recording time or number of voice messages for the SVM card exceeds the limit.
  - b) the number of voice messages for an extension exceeds the limit.
  - c) the destination of a call has been changed more than once.
  - d) the desired message box is already in use by another user.
  - e) a call is received at an ICD Group, and the message box of the first extension assigned to that group is not available, or no extension is assigned as the first member of the group.
- **Display Lock**  
A display PT user can lock the SVM Log display to prevent the user's information from being viewed and voice messages from being played back at any extension through personal programming (Display Lock). In this case, the Incoming/Outgoing Call Log displays and the Personal Speed Dialing number display are also locked. An extension personal identification number (PIN) (→ 1.5.6 Extension PIN (Personal Identification Number)) is required to lock/unlock the display.
- **Accessing the Message Box of Another Extension**  
Listening to voice messages left by callers using a Message button for another extension is available only when voice messages have been left in the message box.

### [Recording Greeting Messages]

- If an extension user tries to record a new greeting message to his message box when the card is already full, the user will hear a reorder tone.
- It is not recommended to record music when creating a greeting message.

### [SVM Remote Access from CO Line]

- Whether Walking COS is available or not can be set through system programming. If the PBX uses analog CO lines without CPC service (→ 1.3.17 CPC (Calling Party Control) Signal Detection), it is strongly recommended to prohibit Walking COS access. If an extension user who is accessing his message box through an analog line goes on-hook while the voice messages are being played, the line will remain connected until all voice messages finish playing. This is because a reorder tone cannot be detected from an analog line while playing voice messages.

- The first digit of the Walking COS feature number must be entered before the greeting message finishes playing.
- When accessing SVM from a CO line, it is possible to change message boxes (e.g., to leave a message in another user's message box after listening to one's own messages). However, a user can only access the message boxes of other extensions assigned to the same SVM card. For example, if the user accesses a message box belonging to SVM card 1 first, then the user can only access the message boxes of other extensions belonging to SVM card 1. If the user tries to access the message box of another extension belonging to a different card, the user will hear a reorder tone. While a reorder tone is heard, it is possible to retry another call by pressing "✖".

### Installation Manual References

2.5.4 SVM2 Card (KX-TDA5192)

### Programming References

#### PC Programming Manual

2.4.2 Tool—Simplified Voice Message—Delete All Recordings

2.4.3 Tool—Simplified Voice Message—Check Current Usage

2.8.4 [2-3] Timers & Counters—Miscellaneous

→ SVM—Recording Time

→ SVM—Dial Tone Continuous Time

2.8.8 [2-6-1] Numbering Plan—Main—Features—Simplified Voice Message Access

2.9.1 [3-1-1] Trunk Group—TRG Settings—Tone Detection

→ Simplified Voice Message Tone Detection—Silence

→ Simplified Voice Message Tone Detection—Continuous

→ Simplified Voice Message Tone Detection—Cyclic

2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 6—Display Lock / SVM Lock

2.10.7 [4-1-6] Wired Extension—Simplified Voice Message

2.10.8 [4-2-1] Portable Station—Extension Settings—Option 6—SVM Lock

2.10.12 [4-2-4] Portable Station—Simplified Voice Message

2.11.3 [5-3-1] Voice Message—DISA System

→ Recording Mode

→ Remote Access

2.11.5 [5-3-3] Voice Message—SVM

#### PT Programming Manual

None

### Feature Manual References

1.4.3 Dial Tone

1.20.1 Walking COS

2.1 Capacity of System Resources

### Operating Manual References

1.3.47 SVM (Simplified Voice Message)

### 3.1.2 Personal Programming

# 1.17 T

## 1.17.1 TAFAS (Trunk Answer From Any Station)

### Description

A ring tone is sent through an external pager (loudspeaker) when an incoming call is received. Any extension user can answer the call.

### Conditions

- **Hardware Requirement:** A user-supplied external pager
- **Floating Extension Number**  
A floating extension number can be assigned to an external pager (default: 600). An external pager is accessed by dialing its floating extension number.
- **Pager Volume**  
It is possible to change the volume level of an external pager through system programming.

### Installation Manual References

2.9.1 Connection of Peripherals

### Programming References

#### PC Programming Manual

2.8.8 [2-6-1] Numbering Plan—Main—Features—TAFAS Answer

2.8.19 [2-11-1] Audio Gain—Paging/MOH—Paging—EPG (External Pager)

2.11.2 [5-2] External Pager

#### PT Programming Manual

[700] External Pager Floating Extension Number

### Operating Manual References

1.3.48 TAFAS (Trunk Answer From Any Station)

## 1.17.2 Tenant Service

### Description

Tenant service is a cost-effective method of providing PBX services to different offices or companies located in the same building, while using only one PBX.

#### 1. Tenant Configuration

##### 1.1. Tenant Members

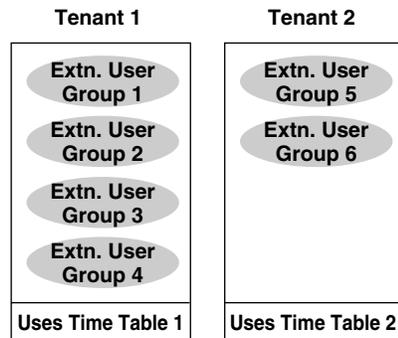
Extensions are assigned to a tenant indirectly; they are assigned to extension user groups, and these extension user groups are assigned to tenants. An extension can belong to only one

extension user group and an extension user group can belong to only one tenant, therefore an extension can belong to only one tenant. (→ 1.7.1 GROUP FEATURES)

## 1.2. Time Service

Time modes are used by many PBX features to determine how they will function during different times of day (→ 1.17.4 Time Service). The start and end times of each time mode (day/lunch/break/night) for each day of the week are programmed in a Time Table. Each Time Table has a number which corresponds to the tenant number of the tenant it serves. (Tenant 1 uses Time Table 1, etc.)

### [Example of Tenant Configuration]



## 2. System Management

Each of the following system management items can be assigned to each tenant.

- a) **Tenant Operator:** Determines the destination for calls directed to the tenant's operator. If no operator is designated, the PBX operator will serve as the tenant's operator. (→ 1.12.3 Operator Features)  
→ 2.12.6 [6-6] Tenant—Operator (Extension Number)
- b) **ARS Mode:** Determines under which circumstances Automatic Route Selection (ARS) operates for calls made by the tenant's extensions — either when a call is made using the Idle Line Access method, or when any CO Line Access method is used. (→ 1.3.11 CO Line Access). The ARS mode for each tenant can also be programmed to be the same ARS mode assigned to the entire PBX, or turned off. (→ 1.1.3 ARS (Automatic Route Selection))  
→ 2.12.6 [6-6] Tenant—ARS Mode
- c) **Audio Source for Music on Hold:** Determines the audio source for the Music on Hold heard by the tenant's callers. Either a tone or a specific background music (BGM) number can be used. The audio source for each tenant can also be programmed to use the same audio source used for Music on Hold assigned to the entire PBX. (→ 1.11.4 Music on Hold)  
→ 2.12.6 [6-6] Tenant—Music On Hold

## 3. Call Blocking

Through Class of Service (COS) programming, it is possible to:

1. Prevent extensions of one tenant from calling extensions of another tenant. (Tenant-to-Tenant Call Block)
2. Limit the trunk groups which can be used by the extensions of each tenant. (External Call Block)

### 3.1. Tenant-to-Tenant Call Block

Using Internal Call Block, certain features, such as making intercom calls, can be restricted based on the COS assigned to extensions. (→ 1.9.12 Internal Call Block) Well-planned COS programming can prevent extensions of one tenant from:

- Calling an extension or doorphone which belongs to another tenant
- Picking up calls ringing at extensions belonging to another tenant (→ 1.3.6 Call Pickup)
- Retrieving calls being held by another tenant (→ 1.3.2 Call Hold)

**[Programming Example: Internal Call Block]**

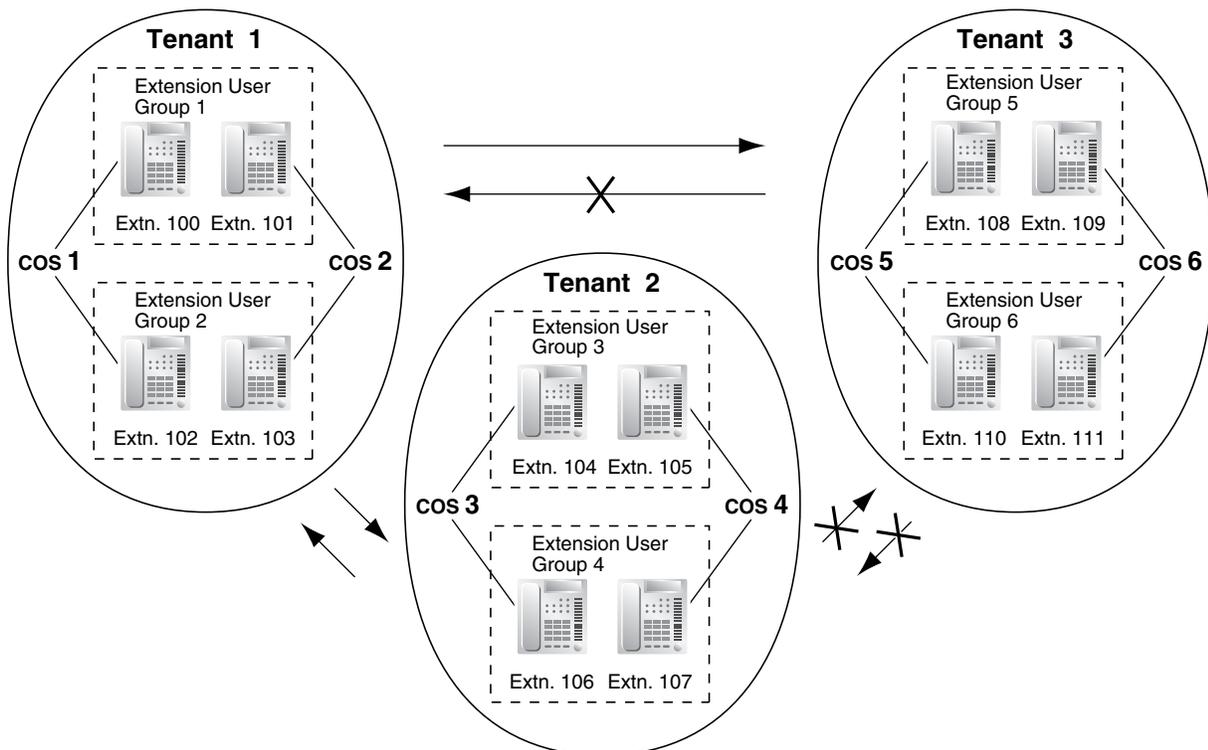
Caller	Called Party					
	COS 1	COS 2	COS 3	COS 4	COS 5	COS 6
COS 1						
COS 2						
COS 3					Block	Block
COS 4					Block	Block
COS 5	Block	Block	Block	Block		
COS 6	Block	Block	Block	Block		

**In this example:**

Internal Call Block is employed to block calls between certain tenants.

Each extension in a tenant is assigned a COS that is not assigned to extensions which belong to another tenant.

- Extensions in Tenant 1 are either COS 1 or 2. They can make calls to extensions in Tenants 1, 2, and 3.
- Extensions in Tenant 2 are either COS 3 or 4. They can make calls to extensions in Tenants 1 and 2, but not 3.
- Extensions in Tenant 3 are either COS 5 or 6. They can make calls to other extensions in Tenant 3 only.



### 3.2. External Call Block

If multiple tenants are using the PBX, the External Call Block feature should be programmed to control which COS numbers are allowed to access which trunk groups. By preventing certain COS numbers from accessing certain trunk groups, each tenant can be given its own trunk groups which no other tenant can access.

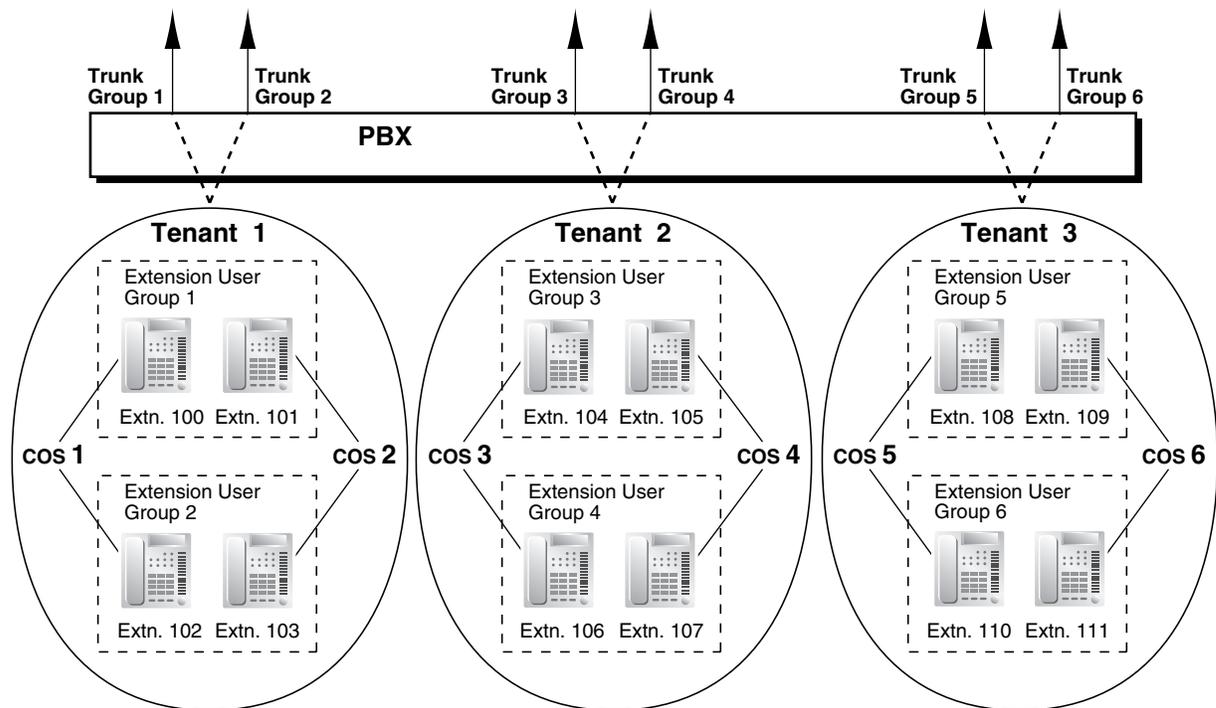
#### [Programming Example: External Call Block]

COS	Trunk Group 1	Trunk Group 2	Trunk Group 3	Trunk Group 4	Trunk Group 5	Trunk Group 6
COS 1			Block	Block	Block	Block
COS 2			Block	Block	Block	Block
COS 3	Block	Block			Block	Block
COS 4	Block	Block			Block	Block
COS 5	Block	Block	Block	Block		
COS 6	Block	Block	Block	Block		

#### In this example:

External Call Block is employed to prevent tenants from accessing all trunk groups except the ones designated to them. Each extension in a tenant is assigned a COS that is not assigned to extensions which belong to another tenant.

- a) Extensions in Tenant 1 are either COS 1 or 2. They can access trunk groups 1 and 2.
- b) Extensions in Tenant 2 are either COS 3 or 4. They can access trunk groups 3 and 4.
- c) Extensions in Tenant 3 are either COS 5 or 6. They can access trunk groups 5 and 6.



### Conditions

- The following features used by incoming call distribution (ICD) group are determined by the tenant number assigned to them (→ 1.9.1 ICD GROUP FEATURES):

- The Music on Hold heard by a caller while waiting in a queue.
- The Time Table used by the ICD group to determine the current time mode. An overflow destination and Queuing Time Table can be assigned for each time mode.

### Programming References

#### PC Programming Manual

##### 2.8.3 [2-2] Operator & BGM

- PBX Operator—Day, Lunch, Break, Night
- BGM and Music on Hold—Music on Hold

##### 2.8.5 [2-4] Week Table

##### 2.8.7 [2-5] Holiday Table

##### 2.8.12 [2-7-2] Class of Service—External Call Block

##### 2.8.13 [2-7-3] Class of Service—Internal Call Block

##### 2.9.3 [3-2] Extension Group

##### 2.9.9 [3-5-1] Incoming Call Distribution Group—Group Settings—Main—Tenant Number

##### 2.10.1 [4-1-1] Wired Extension—Extension Settings—Main—Extension Group

##### 2.10.8 [4-2-1] Portable Station—Extension Settings—Main—Extension Group

##### 2.11.1 [5-1] Doorphone—Tenant Number

##### 2.11.7 [5-5] External Sensor—Tenant No.

##### 2.12.1 [6-1] System Speed Dial

##### 2.12.6 [6-6] Tenant

##### 2.14 [8] ARS

##### 2.14.6 [8-5] Carrier—Authorization Code for Tenant

##### 2.15.2 [9-2] DIL Table & Port Settings—DIL—Tenant Number

#### PT Programming Manual

##### [001] System Speed Dialing Number

##### [006] Operator Assignment

##### [320] ARS Mode

##### [711] Music on Hold

### Feature Manual References

#### 2.1 Capacity of System Resources

## 1.17.3 Timed Reminder

### Description

An extension can be preset to ring at a certain time, to act as a wake-up call or reminder. This feature can be programmed to activate only once, or daily. If the user answers the alarm call, a prerecorded voice message will be heard. If a message is not assigned, a special dial tone (dial tone 3) will be heard.

Timed reminders can be set in one of two ways:

- By the extension user, from his or her own extension (Timed Reminder).
- Remotely, by the hotel operator (Remote Wake-up Call).

## Conditions

- Be sure that the PBX clock is set to the correct time.
- Only one timed reminder can be set for an extension at a time. Setting a new reminder clears the previous reminder. If both the extension user and the hotel operator set a timed reminder for the same extension, the timed reminder that was set most recently is effective.
- **Programmable Time**  
The Alarm Ringing time, the number of alarm repeat times, and Interval time are programmable through system programming.
- **To use the voice message feature:**  
An MSG card is required and a message must be recorded. An extension assigned as a manager can record messages. (→ 1.12.1 OGM (Outgoing Message)) A different message can be assigned for each time mode (→ 1.17.4 Time Service).

## Installation Manual References

2.5.3 MSG2 Card (KX-TAW84891)

## Programming References

### PC Programming Manual

2.8.4 [2-3] Timers & Counters—DISA / Door / Reminder / U. Conf

- Timed Reminder—Repeat Counter
- Timed Reminder—Interval Time
- Timed Reminder—Alarm Ringing Duration

2.8.8 [2-6-1] Numbering Plan—Main—Features

- Remote Timed Reminder (Remote Wakeup Call)
- Timed Reminder Set / Cancel

2.8.16 [2-8-3] Ring Tone Patterns—Call from Others—Timed Reminder—Ring Tone Pattern Plan 1–8

2.8.17 [2-9] System Options—Option 1—PT LCD—Time Display

2.11.3 [5-3-1] Voice Message—DISA System—Timed Reminder Message - Day, Lunch, Break, Night

2.16.1 [10-1] Main—SMDR—SMDR for External Hotel Application 1—Timed Reminder (Wake-up Call)

### PT Programming Manual

None

## Feature Manual References

None

## Operating Manual References

1.3.49 Timed Reminder

1.3.56 Wake-up Call

## 1.17.4 Time Service

### Description

Time modes are used by many PBX features to determine how they will function during different times of day. For example, incoming calls can be directed to sales staff during the day and to a Voice Processing System (VPS) at night, extension users can be prohibited from making long distance calls during lunch time, etc.

There are four time modes—day, lunch, break, and night. The start and end times of each time mode are programmed for each day of the week in a Time Table. Each Time Table has a number which corresponds to the tenant it serves, i.e., Tenant 1 uses Time Table 1, etc.

#### 1. Time Service Switching Mode

The current time mode can switch automatically to another time mode at the preprogrammed time assigned in the Time Table. It is possible, however, to switch time modes manually.

Whether time modes are normally switched manually or automatically is determined through system programming. Each tenant is assigned a switching mode.

Time Mode Switching	Description	Condition
<b>Automatic</b>	The current time mode will switch automatically to another time mode at the time programmed in the tenant's Time Table, and can be switched manually by pressing the Time Service button or by dialing the Time Service Switch feature number.	The current time mode (day/lunch/break/night) and the switching mode (automatic/manual) can be switched manually by an extension assigned as a manager, or by an extension whose Class of Service (COS) is authorized.
<b>Manual</b>	The current time mode will switch only when the Time Service button is pressed or when the Time Service Switch feature number is dialed.	

#### 2. Time Table

Each tenant has a Time Table that is used when the tenant is in Automatic Time Service Switching mode. Each Time Table has four basic modes—day, lunch, break, and night—and also provides for multiple "breaks", such as morning breaks and afternoon breaks, and multiple "days", such as the morning shift and the afternoon shift following lunch.

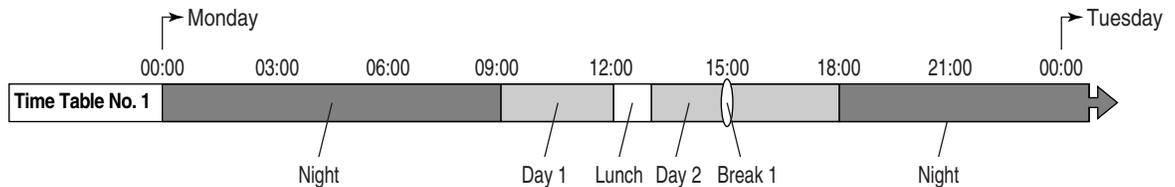
A tenant's Time Table is programmed to control when each time mode starts (and therefore, ends) and can be programmed separately for each day of the week.

Each Time Table has a number which corresponds to the tenant number of the tenant it serves. (Tenant 1 uses Time Table 1, etc.)

**[Programming Example: Time Table]**

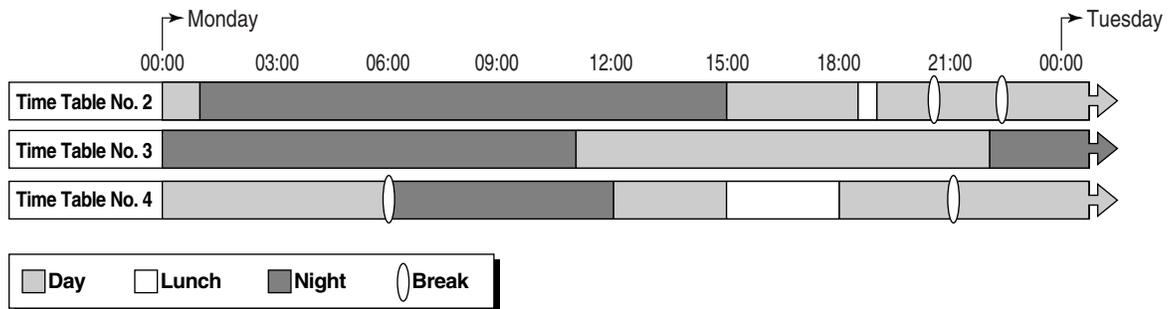
Time Schedule		Time Table No. (Tenant No.)			
		1	2	3	4
MON	Day 1	09:00	15:00	11:00	12:00
	Lunch	12:00	18:30		15:00
	Day 2	13:00	19:00		18:00
	Break 1 start	15:00	20:30		06:00
	Break 1 end	15:15	20:45		
	Break 2 start		22:30		21:00
	Break 2 end		22:45		21:15
	Night	18:00	01:00	22:00	06:15
TUE	Day 1	09:00	15:00	11:00	

**[Visualization of Time Schedule for Tenant 1]**



Note that in this example, the day mode (Day 2) resumes automatically when the break mode (Break 1) ends.

**[Visualization of Time Schedule for Other Tenants]**



Note that time modes can be arranged as they are needed (for example, night mode can occur in the morning and afternoon, if necessary) and not all time modes need to be used in a tenant's time schedule.

Also note that Tenant 4's Break 1 is followed by the night mode because no end time is programmed for the break.

**3. Features Using Time Service**

The following features can be programmed separately for each time mode:

- a) Destination of incoming CO line calls (Direct In Line (DIL)) (→ 1.4.5 DIL (Direct In Line))
- b) Destination of calls handled by Intercept Routing (→ 1.9.9 Intercept Routing)
- c) Destination of calls that are overflowed while waiting in a queue for an available agent of an incoming call distribution (ICD) group (→ 1.9.4 ICD Group Features—Overflow)
- d) Destination of incoming doorphone calls (→ 1.4.10 Doorphone Call)

- e) Destination of Operator Calls (→ 1.12.3 Operator Features)
- f) Toll Restriction (TRS) level of each COS
- g) COS numbers which are permitted/restricted to access certain trunk groups (External Call Block) (→ 1.3.11 CO Line Access)
- h) Outgoing Message (OGM) for Timed Reminder (→ 1.17.3 Timed Reminder)
- i) Queuing Time Table used by an ICD group (→ 1.9.5 ICD Group Features—Queuing)
- j) Intercept time for Intercept Routing—No Answer (→ 1.9.9 Intercept Routing)
- k) Intercept time for DISA Intercept Routing—No Answer (→ 1.4.6 DISA (Direct Inward System Access))

**[Programming Example: DIL Table]**

The DIL Table can be programmed to direct calls to a different destination for each time mode based on the CO line receiving the call. Calls can, for example, be directed to an ICD group during the day mode, or to the Voice Mail (VM) service of a VPS during the lunch and night modes.

Port No. (CO Line No.)	Tenant (Time Table) No.	DIL Destination			
		Day	Lunch	Break	Night
01	1	105	150	105	150
02	2	210	200	210	200

**Explanation:**

A call is received at 20:00 on CO line 01.

1. The call will be handled by Time Table 1.
2. The current time mode is "night" (shown in "Programming Example: Time Table", above).
3. The call is directed to extension 150, which is a floating extension number used by the VPS (programming not shown here).

**4. Holiday Mode**

The PBX can also accommodate 24 different holidays. The start and end date of each holiday can be programmed, and all holidays are assigned a single time mode. For example, if the "night" mode is assigned as the time mode for holidays, and a holiday begins December 31st and ends January 1st, all PBX features will use their "night" settings from 0:00 A.M. on December 31st until 0:00 A.M. on January 1st.

**5. Time Service Button**

A flexible button can be customized as one of the following Time Service buttons:

- a) Day/Night button
- b) Day/Night/Lunch button
- c) Day/Night/Break button
- d) Day/Night/Lunch/Break button

These buttons can be used to switch the current time mode: pressing the Day/Night button will toggle between the day and night modes, for example.

Each Time Service button will display the current time mode using a different light pattern or color, as shown below.

Light Pattern	Current Time Mode
Off	Day
Red on	Night
Green on	Lunch
Slow green flashing	Break
Slow red flashing	Holiday

**Note**

Pressing a Time Service button will change the current time mode only if the COS assigned to the extension is authorized to do so or if the extension is assigned as a manager. All other extension users can press this button on their proprietary telephones (PTs) to display the current time mode.

**Conditions**

- The start times of the following time modes can be specified through PC programming as well as PT programming.
  - Day 1 and 2
  - Lunch
  - Night

The start and end times of the following break modes can be specified through PC programming only.

- Break 1
- Break 2
- Break 3

Note that if an end time is programmed for a break, the day mode will start or resume at this time, as shown previously in "Visualization of Time Schedule for Tenant 1" example. If no end time is programmed, the break will continue until the start of the next time mode, as shown in Time Table 4 in "Visualization of Time Schedule for Other Tenants".

- **Time Service Switching Mode (Automatic/Manual) Button**  
Any flexible button can be customized as the Time Service Switching Mode (Automatic/Manual) button.

**Programming References****PC Programming Manual**

2.8.5 [2-4] Week Table

2.8.7 [2-5] Holiday Table

2.8.8 [2-6-1] Numbering Plan—Main—Features—Time Service (Day / Lunch / Break / Night) Switch

2.8.11 [2-7-1] Class of Service—COS Settings—Extension Feature—Time Service Switch

2.10.4 [4-1-4] Wired Extension—Flexible Button

→ Type

→ Parameter Selection (for Time Service)

→ Parameter Selection (for Time Service - Automatic/Manual)

→ Optional Parameter (Ringing Tone Type Number) (for Time Service)

2.10.10 [4-2-3] Portable Station—Flexible Button

→ Type

→ Parameter Selection (for Time Service)

## 1.17 T

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- Parameter Selection (for Time Service - Automatic / Manual)
- Optional Parameter (or Ringing Tone Type Number) (for Time Service)

### 2.10.13 [4-3] DSS Console—Flexible Button

- Type
- Parameter Selection (for Time Service)
- Parameter Selection (for Time Service - Automatic/Manual)
- Optional Parameter (Ringing Tone Type Number) (for Time Service)

### PT Programming Manual

- [101] Time Service Switching Mode
- [102] Time Service Starting Time
- [514] Time Service Manual Switching

## Feature Manual References

- 1.3.16 COS (Class of Service)
- 1.6.3 Flexible Buttons
- 1.17.2 Tenant Service
- 1.17.5 TRS (Toll Restriction)
- 2.1 Capacity of System Resources

## Operating Manual References

- 1.3.50 Time Service
- 2.1.5 Time Service Mode Control

## 1.17.5 TRS (Toll Restriction)

### Description

Toll Restriction (TRS) can prohibit extension users from making certain CO line calls, based on the Class of Service (COS) assigned to them.

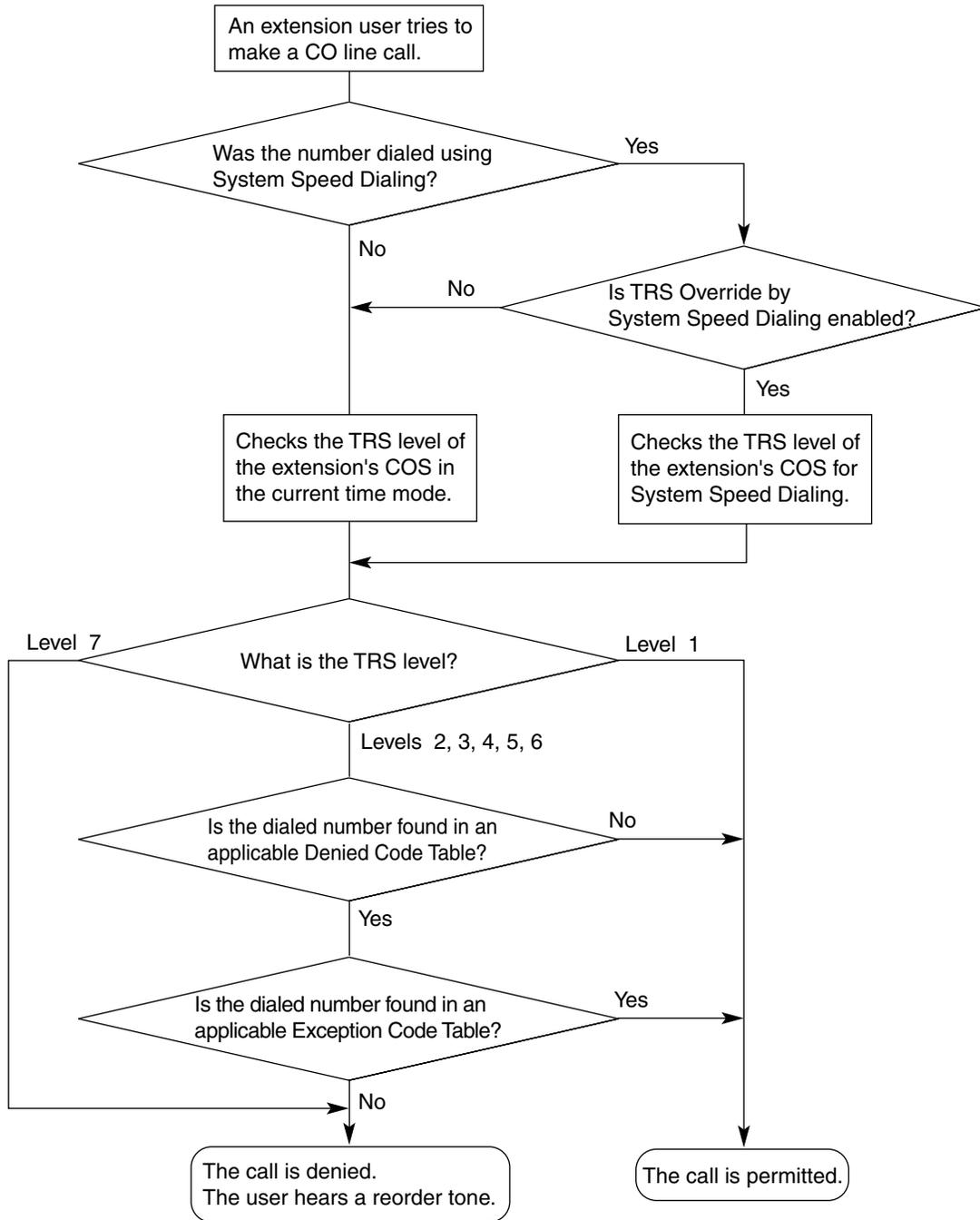
- 2.10.1 [4-1-1] Wired Extension—Extension Settings—Main—COS
- 2.10.8 [4-2-1] Portable Station—Extension Settings—Main—COS
- [602] Class of Service

Each COS is assigned a TRS level for each time mode; level 1 grants the highest level of authorization, allowing all CO line calls to be made, and level 7 grants the lowest level of authorization, prohibiting all CO line calls from being made. TRS levels 2 through 6 are used to restrict calls by combining preprogrammed Denied and Exception Code Tables, explained below.

Each COS can also have a separate TRS level applicable to calls made using System Speed Dialing.

A TRS check is applied each time a dialed number is sent to a CO line after an extension user goes off-hook and seizes a line.

[Flowchart]



**Denied Code Tables**

Denied Code Tables are preprogrammed lists containing the first few digits (leading number) of telephone numbers which may not be called. All outgoing CO line calls made by TRS level 2 through 6 users are compared to at least one Denied Code Table, and when the leading number of a dialed telephone number (not including the CO Line Access number) matches an entry found in the applicable table, the call is denied. There are five Denied Code Tables. Each table applies to a corresponding TRS level as well as the level(s) preceding it, as explained below.

## Exception Code Tables

Exception Code Tables are preprogrammed lists of leading digits or complete telephone numbers which are checked against every dialed number prohibited by a Denied Code Table. When a user dials a number prohibited by a Denied Code Table, it is compared to at least one Exception Code Table. If the dialed number matches an entry found in the applicable Exception Code Table, the call is permitted.

There are five Exception Code Tables. Each table applies to a corresponding TRS level as well as the level(s) preceding it, as explained below.

## TRS Override by System Speed Dialing

When TRS Override by System Speed Dialing is enabled for the PBX, each COS has an additional TRS level applicable only to calls made using System Speed Dialing.

→ 2.8.11 [2-7-1] Class of Service—COS Settings—TRS—TRS Level for System Speed Dialing

→ [300] TRS Override by System Speed Dialing

This allows extension users to use System Speed Dialing to make CO line calls which are normally prohibited by the TRS level of their assigned COS. If, for example, a user's TRS level is 7, that user normally cannot make any CO line calls. However, if the same user's TRS level for System Speed Dialing is level 1, the user can make a CO line call to any number stored in System Speed Dialing.

## TRS Level

The TRS level is determined by the telephone codes set in the Denied Code Tables and Exception Code Tables.

As shown in the table below, the Denied Code Tables for the higher levels are applied to all levels below it, and the Exception Code Tables for the lower levels are applied to all levels above it.

	Denied Code Tables <sup>*1</sup>	Exception Code Tables <sup>*2</sup>
Level 1	Not Programmable	Not Programmable
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 through 4	Tables for Levels 4 through 6
Level 5	Tables for Levels 2 through 5	Tables for Levels 5 through 6
Level 6	Tables for Levels 2 through 6	Table for Level 6
Level 7	Not Programmable	Not Programmable

\*1: → 2.13.1 [7-1] Denied Code—Denied Code Tables—Level 2—Level 6

→ [301] TRS Denied Code

\*2: → 2.13.2 [7-2] Exception Code—Exception Code Tables—Level 2—Level 6

→ [302] TRS Exception Code

**[Usage Example]** Using this method, certain outgoing CO line calls (e.g., international/cellular phone/long distance) can be restricted as in the example below:

	Restricted	Allowed
Level 1	No restriction	

	Restricted	Allowed
Level 2 (Boss)	<ul style="list-style-type: none"> <li>International Calls</li> </ul>	<ul style="list-style-type: none"> <li>Countries where Clients are Located</li> <li>Cellular Phone Calls</li> <li>Long Distance Calls</li> <li>Local Calls</li> </ul>
Level 3 (Secretary)	<ul style="list-style-type: none"> <li>International Calls</li> <li>Cellular Phone Calls</li> </ul>	<ul style="list-style-type: none"> <li>Boss's Cellular Phone</li> <li>Long Distance Calls</li> <li>Local Calls</li> </ul>
Level 4 (Operator)	<ul style="list-style-type: none"> <li>International Calls</li> <li>Cellular Phone Calls</li> <li>Long Distance Calls</li> </ul>	<ul style="list-style-type: none"> <li>Local Calls</li> </ul>
:	:	:

In this example, a level 1 user can make any CO line calls. A level 2 user can make international calls to the countries where clients are located, and can also make cellular phone/long distance/local calls. A level 3 user cannot make international/cellular phone calls apart from to the boss's cellular phone, but can make long distance/local calls. A level 4 user cannot make any international/cellular phone/long distance calls, but can make local calls.

To set TRS as in the example above, it is necessary to program the Denied Code and Exception Code Tables as follows:

	Denied Code Tables		Exception Code Tables	
Level 1	Not Programmable		Not Programmable	
Level 2	011	Leading number to deny international calls	011xx	Leading number for countries to be allowed
Level 3	1123755	Leading number to deny cellular phone calls	1123755 xxxx	Boss's cellular phone number
Level 4	1	Leading number to deny long distance calls	—	Not required
:	:		:	

**[Programming Example: COS Settings]**

COS	TRS Level <sup>*1</sup>				TRS Level for System Speed Dialing <sup>*2</sup>
	Day	Lunch	Break	Night	
1	1	1	1	6	1
2	2	2	2	6	1

\*1: → 2.8.11 [2-7-1] Class of Service—COS Settings—TRS—TRS Level—Day, Lunch, Break, Night  
→ [501] TRS Level

## 1.17 T

- \*2: → 2.13.5 [7-5] Miscellaneous—TRS Override by System Speed Dialing  
→ [509] TRS Level for System Speed Dialing

### TRS Settings for Each Level

Through system programming, it is possible to select a different method of TRS. With this method, each level has its own separate set of denied codes and exception codes, which are only applied to that level.

→ 2.13.5 [7-5] Miscellaneous—TRS Table Mode for Level N (N=2\_6)

	Denied Code Tables*1	Exception Code Tables*2
Level 1	Not Programmable	Not Programmable
Level 2	Table for Level 2	Table for Level 2
Level 3	Table for Level 3	Table for Level 3
Level 4	Table for Level 4	Table for Level 4
Level 5	Table for Level 5	Table for Level 5
Level 6	Table for Level 6	Table for Level 6
Level 7	Not Programmable	Not Programmable

- \*1: → 2.13.1 [7-1] Denied Code—Denied Code Tables—Level 2–Level 6  
→ [301] TRS Denied Code

- \*2: → 2.13.2 [7-2] Exception Code—Exception Code Tables—Level 2–Level 6  
→ [302] TRS Exception Code

**[Usage Example]** Using this method, it is possible to restrict certain CO line calls (e.g., international/cellular phone/long distance) on a department basis, as follows:

	Restricted	Allowed
Level 1	No restriction	
Level 2 (Engineering)	<ul style="list-style-type: none"> <li>International Calls</li> </ul>	<ul style="list-style-type: none"> <li>Country where Factory is Located</li> <li>Cellular Phone Calls</li> <li>Long Distance Calls</li> <li>Local Calls</li> </ul>
Level 3 (Overseas Sales)	<ul style="list-style-type: none"> <li>Cellular Phone Calls</li> </ul>	<ul style="list-style-type: none"> <li>Company Cellular Phone</li> <li>International Calls</li> <li>Long Distance Calls</li> <li>Local Calls</li> </ul>
Level 4 (Accounting)	<ul style="list-style-type: none"> <li>International Calls</li> <li>Long Distance Calls</li> </ul>	<ul style="list-style-type: none"> <li>Cities where Clients are Located</li> <li>Cellular Phone Calls</li> <li>Local Calls</li> </ul>
:	:	:

In this example, a level 1 user can make any CO line calls. A level 2 user can only make international calls to the country where the factory is located, and can also make cellular phone/long distance/local calls. A level 3 user can only make cellular phone calls to the company cellular phone, and can also make any international/long distance/local calls. A level 4 user cannot make any international calls or most long distance calls, but can make long distance calls to cities where clients are located, cellular phone calls and

local calls.

To set TRS as in the example above, it is necessary to program the Denied Code and Exception Code Tables as follows:

	Denied Code Tables		Exception Code Tables	
Level 1	Not Programmable		Not Programmable	
Level 2	011	Leading number to deny international calls	011xx	Leading number for country to be allowed
Level 3	1123755	Leading number to deny cellular phone calls	1123755 xxxx	Number for cellular phones to be allowed
Level 4	011	Leading number to deny international and long distance calls	1315	Long distance numbers for states/cities to be allowed, and leading number of cellular phones
			1530	
	1		1123755	
:	:		:	

## Conditions

### **WARNING**

The software contained in the TRS feature to allow user access to the network must be upgraded to recognize newly established network area codes and exchange codes as they are placed into service.

Failure to upgrade the on-premise PBXs or peripheral equipment to recognize the new codes as they are established will restrict the customer and the users of the PBX from gaining access to the network and to these codes.

**KEEP THE SOFTWARE UP TO DATE WITH THE LATEST DATA.**

- TRS checks are performed for all calls made by:
  - Any CO line access (Idle Line Access, Trunk Group Access, S-CO Line Access)
  - Automatic Route Selection (ARS)
- The PBX can also be programmed to perform a TRS check for numbers that contain non-digits (\* or #). By default, the PBX ignores ("No Check") any non-digits that are dialed, which is useful in preventing unauthorized calls which could possibly be made using certain telephone company exchanges.
  - 2.13.5 [7-5] Miscellaneous—TRS Check for dial "\* #"
- TRS can also be programmed to check digits that are dialed after External Feature Access, such as when trying to transfer a call to an outside party. (→ 1.5.1 EFA (External Feature Access))
  - 2.13.5 [7-5] Miscellaneous—TRS Check after EFA
- **Host PBX Access Code/Special Carrier Access Code**

TRS checks can be carried out on telephone numbers dialed using a Host PBX Access code (→ 1.8.5 Host PBX Access Code (Access Code to the Telephone Company from a Host PBX)) or Special Carrier Access code (→ 1.16.2 Special Carrier Access Code).

Access Code Type	Access Code is stored in the PBX		Access Code is not stored in the PBX
	Access Code is dialed	Access Code is not dialed	
<b>Host PBX Access Code</b>	TRS ignores the code and checks the remaining digits.	Number dialed is not a CO line call, so TRS does not check the number.	TRS checks the entire number.
<b>Special Carrier Access Code</b>	TRS ignores the code and checks the remaining digits.	TRS checks the entire number.	TRS checks the entire number.

- **ARS**  
If ARS is applied to a dialed number, TRS will check the user-dialed number, not the modified number produced by ARS. You do not need to program ARS-modified numbers in any of the TRS Tables. Additionally, when using ARS, TRS will ignore the Host PBX Access code or Special Carrier Access code.
- **Dialing Digit Restriction during Conversation**  
TRS can also limit the number of digits which may be dialed by an extension user while the user is engaged on a received CO line call. If the number of dialed digits exceeds the limit, the line will be disconnected.  
→ 2.13.5 [7-5] Miscellaneous—Dial Digits Limitation After Answering—Dial Digits
- It is possible to select through system programming whether the CO line is disconnected when the Inter-digit time expires without the TRS check being completed.  
→ 2.13.5 [7-5] Miscellaneous—Mode when Dial Time-out before TRS Check
  - If no disconnection is chosen, the TRS check will also be performed after the Inter-digit time expires.
  - If disconnection is chosen, the line will be disconnected when the CO line Inter-digit time expires. This also prevents EFA from being used.

This setting applies to all CO lines.
- When one of the following features is used, the TRS level of the extension can be temporarily changed. If two or more of these features are used simultaneously (Dial Tone Transfer is used while the extension is locked, for example), the TRS level of the feature with the highest priority is applied for the duration of the call. The numbers below (1 through 4) indicate the priority of each feature, with 1 having the highest priority, and 4 having the lowest.
  - 1) Dial Tone Transfer (→ 1.4.4 Dial Tone Transfer)
  - 2) TRS Override by System Speed Dialing
  - 3) Verification Code Entry/Walking COS (→ 1.19.1 Verification Code Entry, → 1.20.1 Walking COS)
  - 4) Extension Dial Lock (→ 1.5.4 Extension Dial Lock)

## Programming References

### PC Programming Manual

2.8.11 [2-7-1] Class of Service—COS Settings—TRS

→ TRS Level—Day, Lunch, Break, Night

→ TRS Level for System Speed Dialing

2.10.1 [4-1-1] Wired Extension—Extension Settings—Main—COS

2.10.4 [4-1-4] Wired Extension—Flexible Button

→ Type

- Parameter Selection (for TRS Level Change)
- 2.10.8 [4-2-1] Portable Station—Extension Settings—Main—COS
- 2.10.10 [4-2-3] Portable Station—Flexible Button
  - Type
  - Parameter Selection (for TRS Level Change)
- 2.10.13 [4-3] DSS Console—Flexible Button
  - Type
  - Parameter Selection (for TRS Level Change)

- 2.13.1 [7-1] Denied Code
- 2.13.2 [7-2] Exception Code
- 2.13.3 [7-3] Special Carrier Code
- 2.13.5 [7-5] Miscellaneous

### **PT Programming Manual**

- [300] TRS Override by System Speed Dialing
- [301] TRS Denied Code
- [302] TRS Exception Code
- [501] TRS Level
- [509] TRS Level for System Speed Dialing
- [602] Class of Service

## **Feature Manual References**

- 1.1.3 ARS (Automatic Route Selection)
- 1.3.11 CO Line Access
- 1.3.16 COS (Class of Service)
- 1.16.4 Speed Dialing, System
- 1.17.4 Time Service
- 2.1 Capacity of System Resources

## 1.18 U

### 1.18.1 Upgrading the Software

#### Description

It is possible to upload software from a PC to the PBX to upgrade the following:

Data File	Storing Area
Main Processing (MPR) software data	Operating system data area on the Main Board of the KX-TAW848.
Default system programming data for each country/area	Country/area data area on the Main Board.
Language data for PT display	Each language data area on the Main Board. There are two types: <b>Type 1:</b> Proprietary Telephone (PT) display except for PT system programming (→ 1.13.15 PT Programming) (five languages max.) <b>Type 2:</b> PT system programming data (one language max.)
Cell Station (CS) software data	Flash ROM on the CS.

#### Conditions

- The software version of the Main Board can be confirmed through system programming.

#### Programming References

##### PC Programming Manual

None

##### PT Programming Manual

[190] Main Processing (MPR) Software Version Reference

## 1.19 V

### 1.19.1 Verification Code Entry

#### Description

An extension user can enter a verification code when calling from his own or any other extension, to change the Toll Restriction (TRS) level (→ 1.17.5 TRS (Toll Restriction)) or to identify the call for accounting and billing purposes. A verification code personal identification number (PIN) is required to use this feature.

#### Conditions

##### **WARNING**

**There is a risk that fraudulent telephone calls will be made if a third party discovers a personal identification number (PIN) (verification code PIN or extension PIN) of the PBX. The cost of such calls will be billed to the owner/renter of the PBX. To protect the PBX from this kind of fraudulent use, we strongly recommend:**

- a) **Keeping PINs secret.**
  - b) **Selecting complex, random PINs that cannot be easily guessed.**
  - c) **Changing PINs regularly.**
- When a CO line call is made using Verification Code Entry:
    - the Class of Service of the specified extension is applied (→ 1.3.16 COS (Class of Service))
    - the Itemized Billing code of the specified extension is applied (→ 1.1.3 ARS (Automatic Route Selection))
    - \* + verification code is recorded on SMDR as the call originator, instead of the extension number of the actual extension used (→ 1.16.1 SMDR (Station Message Detail Recording)).
  - **Verification Code Entry through DISA**  
This feature is also available through DISA. (→ 1.4.6 DISA (Direct Inward System Access))
  - **Verification Code PIN**  
A verification code PIN must be assigned for each verification code through system programming or through manager programming.
  - **Verification Code PIN Lock**  
If the wrong PIN is entered three times, the line will be disconnected. If the wrong PIN is entered a preprogrammed number of times successively, the PIN for the verification code will be locked. Only an extension assigned as the manager can unlock it. In this case, the PIN will be unlocked and cleared.

##### **[Example of Verification Codes and Their Programming]**

Location	Code* <sup>1</sup>	Name* <sup>2</sup>	PIN* <sup>3</sup>	COS* <sup>4</sup>	Itemized Billing Code for ARS* <sup>5</sup>
0001	1111	Tom Smith	1234	1	2323
0002	2222	John White	9876543210	3	4545
:	:	:	:	:	:

\*1: → 2.12.3 [6-3] Verification Code—Verification Code  
→ [120] Verification Code

## 1.19 V

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- \*2: → 2.12.3 [6-3] Verification Code—User Name  
→ [121] Verification Code Name
- \*3: → 2.12.3 [6-3] Verification Code—Verification Code PIN  
→ [122] Verification Code Personal Identification Number (PIN)
- \*4: → 2.12.3 [6-3] Verification Code—COS Number  
→ [123] Verification Code COS Number
- \*5 → 2.12.3 [6-3] Verification Code—Itemized Billing Code for ARS

### Programming References

#### PC Programming Manual

- 2.8.4 [2-3] Timers & Counters—Miscellaneous—Extension PIN—Lock Counter
- 2.8.8 [2-6-1] Numbering Plan—Main—Features—User Remote Operation / Walking COS / Verification Code
- 2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 2—ARS Itemized Code
- 2.10.8 [4-2-1] Portable Station—Extension Settings—Option 2—ARS Itemized Code
- 2.12.3 [6-3] Verification Code

#### PT Programming Manual

- [120] Verification Code
- [121] Verification Code Name
- [122] Verification Code Personal Identification Number (PIN)
- [123] Verification Code COS Number

### Feature Manual References

- 1.1.3 ARS (Automatic Route Selection)
- 1.3.16 COS (Class of Service)
- 1.11.1 Manager Features
- 2.1 Capacity of System Resources

### Operating Manual References

- 1.3.51 Verification Code Entry
- 3.2.2 Manager Programming

## 1.19.2 Virtual PS

### Description

An extension number can be assigned for a portable station (PS) without registering the PS unit itself. This is known as temporary registration. If a forward destination is then assigned for this PS, all calls to that extension number will be forwarded to the assigned destination.

The following features use this method:

Feature	Description & Reference
<b>Automatic Fax Transfer</b>	A virtual PS can be used to forward fax calls to a fax machine.  → 1.1.6 Automatic Fax Transfer
<b>Simplified Voice Message</b>	Registering a virtual PS as the first extension of an ICD Group provides the ICD Group with a dedicated message box that is not shared with an actual extension.  → 1.16.5 SVM (Simplified Voice Message)

## Programming References

### PC Programming Manual

2.7.12 [1-2] Portable Station—PS Registration and De-registration

### PT Programming Manual

[690] PS Registration

## Feature Manual References

1.6.6 FWD (Call Forwarding)

## 1.19.3 Voice Mail (VM) Group

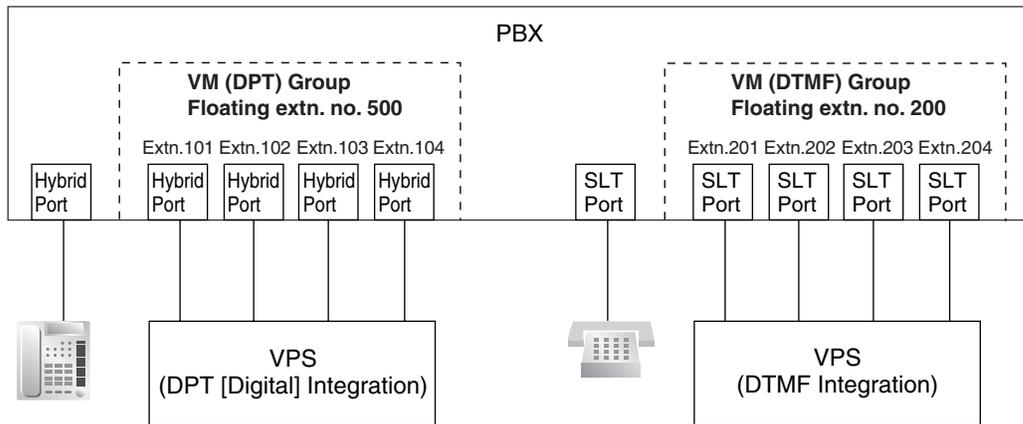
### Description

A VPS can be connected to extension ports of the PBX. The extension ports make a group, called a VM group. This group has a floating extension number. The VM group can be the destination for redirected calls and incoming calls. When receiving a call, the VPS can greet the caller offering them the option to leave a message or dial a number to reach the desired party. The VPS can record the message for each extension and leave notification on the corresponding extension, if the called extension is not able to answer calls.

#### 1. VM Group Type

Type	Description
<b>VM (DTMF) Group</b>	A group of SLT ports which use the Voice Mail DTMF Integration features. A maximum of 2 groups can be assigned.
<b>VM (DPT) Group</b>	A group of APT or hybrid ports which use the Voice Mail DPT (Digital) Integration features. One VM (DPT) group can be assigned. A maximum of 4 ports (eight channels) of the VPS can form a group.

[Example]



**VM (DTMF) Group Assignment:**

The VPS is connected to the SLT ports of the PBX. These SLT ports, as well as VM (DTMF) Group settings, must be configured to allow DTMF Integration, as shown in the following [Programming Example of Extension Port] and [Programming Example of VM (DTMF) Group].

**VM (DPT) Group Assignment:**

The VPS is connected to the APT or hybrid ports of the PBX. These ports, as well as VM (DPT) group settings, must be configured to allow DPT (Digital) Integration, as shown in the following [Programming Example of Extension Port] and [Programming Example of VM (DPT) Group].

[Programming Example of Extension Port]

Slot	Port	Port Type	Extn. No.	PT Property	
				Type*1	Port No. of VPS*2
1	1	S-Hybrid	101	VM (DPT)	1
1	2	S-Hybrid	102	VM (DPT)	2
-----					
4	1	SLT	201	Not assignable	Not assignable
4	2	SLT	202	Not assignable	Not assignable
-----					
5	1	SLT	301	Not assignable	Not assignable
5	2	SLT	302	Not assignable	Not assignable

VM (DPT) Group

VM (DTMF) Group 1

VM (DTMF) Group 2

\*1: → 2.7.4 [1-1] Slot—Extension Port—DPT Type—Type (for Hybrid port)

→ [601] Terminal Device Assignment

\*2: → 2.7.4 [1-1] Slot—Extension Port—DPT Type—VM Port No. (for Hybrid port)

**[Programming Example of VM (DTMF) Group]**

VM (DTMF) Group No.	Floating Extension No.	Group Name	Service Mode	Extension No. of Port Connected to VPS Port		
				1	2	3
1	200	Company B	AA	201	202	203
2	300	Company C	VM	301	302	303

→ 2.9.19 [3-8-2] VM(DTMF) Group—Group Settings

**[Programming Example of VM (DPT) Group]**

Floating Extension No.*1	Group Name*2
500	Company A

\*1: → 2.9.16 [3-7-2] VM(DPT) Group—Unit Settings—Floating Extension No.

→ [660] VM Group Floating Extension Number

\*2: → 2.9.16 [3-7-2] VM(DPT) Group—Unit Settings—Group Name

**2. Incoming Calls to VM Group**

When incoming calls are received at the floating extension number of the VM group, calls will hunt starting at the lowest VM port number. In this case, the FWD and DND settings (→ 1.4.8 DND (Do Not Disturb), → 1.6.6 FWD (Call Forwarding)) for each extension port are disregarded.

It is programmable whether the calls queue when all extension ports in the group are busy through system programming. If the queuing is disabled through system programming, the call will be redirected to the destination, assigned on the trunk group which receives the call, by the Intercept Routing feature.

**Conditions**

- It is possible to call an extension (extension port) in a VM group directly. If the calls are routed directly to the extension in the group, it is possible to enable some features (e.g., FWD, Idle Extension Hunting) on the extension in the group.  
The Voice Mail DTMF/DPT (Digital) Integration (e.g., command transmit) is also available on the extension.
- **One-touch Voice Mail Feature Access**  
It is possible to assign a One-touch Dialing button for direct access to a Voice Mail feature. (→ 1.12.2 One-touch Dialing) For example, to access a mailbox (mailbox number 123) of the VPS (extension number 165) directly, assign "**165#6123**" to a One-touch Dialing button. When pressing this button, the outgoing message (OGM) of the mailbox will be heard.
- All ports in a VM (DPT) group must be connected to either the same HLC or PLC card, or to the pre-installed hybrid ports.

**Programming References****PC Programming Manual**

## 2.7.4 [1-1] Slot—Extension Port

→ DPT Type—Type (for Hybrid port)

→ DPT Type—VM Unit No. (for Hybrid port)

→ DPT Type—VM Port No. (for Hybrid port)

## 2.9.15 [3-7-1] VM(DPT) Group—System Settings

- 2.9.16 [3-7-2] VM(DPT) Group—Unit Settings
- 2.9.18 [3-8-1] VM(DTMF) Group—System Settings
- 2.9.19 [3-8-2] VM(DTMF) Group—Group Settings

### PT Programming Manual

- [601] Terminal Device Assignment
- [660] VM Group Floating Extension Number

## Feature Manual References

- 1.19.4 Voice Mail DPT (Digital) Integration
- 1.19.5 Voice Mail DTMF Integration
- 2.1 Capacity of System Resources

## 1.19.4 Voice Mail DPT (Digital) Integration

### Description

A Panasonic VPS that supports DPT (Digital) Integration (e.g., the KX-TVP200) can be connected to this PBX in a tightly integrated fashion.

DPT (Digital) Integration features can be used when the VPS is connected through APT or hybrid ports of the PBX.

### Feature Explanation

#### 1. Automatic Configuration—Quick Setup

The PBX informs the VPS of its extension numbers and the floating extension numbers of the incoming call distribution groups so that the VPS can create mailboxes with this data automatically.

#### 2. FWD to a Mailbox of the VPS

If an extension user sets FWD to the VPS, incoming calls are forwarded to the VPS. (→ 1.6.6 FWD (Call Forwarding)) The PBX sends a mailbox number of the forwarding extension to the VPS. Therefore the caller can leave a message in the mailbox of the extension without knowing the mailbox number.

#### 3. Intercept Routing to a Mailbox of the VPS

If an extension user sets Intercept Routing to the VPS, the intercepted CO line calls will be redirected to the VPS. (→ 1.9.9 Intercept Routing) If the "Intercept to Mailbox" setting is enabled through system programming, the PBX sends the mailbox number of the intercepted extension to the VPS.

Therefore the caller can leave a message in the mailbox of the extension without knowing the mailbox number.

→ 2.9.15 [3-7-1] VM(DPT) Group—System Settings—Intercept to Mailbox

#### 4. Transferring to a Mailbox of the VPS

An extension user can transfer a call to a mailbox of the VPS so that the caller can leave a message in the mailbox of the desired extension. (→ 1.3.8 Call Transfer) The extension user should use the Voice Mail (VM) Transfer button, when transferring a call to the mailbox of the VPS. When the extension user presses this button and enters the desired extension number, the PBX will transfer the call to the VM group and dial the mailbox number of the desired extension number with the required command (after the VPS answers the call). Therefore the caller can leave a message without knowing the mailbox number.

#### 5. Transfer Recall to a Mailbox of the VPS

If a call is transferred to an extension via the Automated Attendant (AA) service of the VPS and the call is not answered within a preprogrammed Transfer Recall time, the PBX sends the mailbox number of

the transfer destination extension to the VPS. Therefore the caller can leave a message in the mailbox of the extension without knowing the mailbox number. The "Transfer Recall to Mailbox" setting should be enabled through system programming to use this feature.

→ 2.8.4 [2-3] Timers & Counters—Dial / IRNA / Recall / Tone—Recall—Transfer Recall

→ 2.9.15 [3-7-1] VM(DPT) Group—System Settings—Transfer Recall to Mailbox

→ [201] Transfer Recall Time

## 6. Listening to a Recorded Message (Direct Mailbox Access)

If the VPS receives a message, the VPS will set the Message Waiting feature (e.g., turning on the Message button light on the corresponding telephone as notification. (→ 1.11.3 Message Waiting) Thereby, the VPS notifies the extension user that there is a message waiting in his mailbox. When the Message button light turns on, pressing the button allows the extension user to play back the messages stored in his mailbox without dialing such as a mailbox.

When the extension user dials an extension number of the VM (DPT) extension port or the floating extension number of the VM (DPT) group from his extension, he can listen to the messages stored in his mailbox without dialing his mailbox number (Direct Mailbox Access). It is possible to disable this feature by COS programming on the VPS.

## 7. VPS CO Line Service & Automatic Time Mode Notification for Incoming Call\*

Multiple tenants can share a single VPS; each tenant does not require a dedicated VPS port. If the destination of the incoming CO line call is a VM (DPT) group, the PBX sends the VPS trunk group number and time mode (day/lunch/break/night) of the tenant (→ 1.17.4 Time Service) assigned for the call to the VPS. Therefore the VPS can send the assigned message (company greeting) to the caller. Corresponding VPS trunk group number and tenant number are determined by the setting of each CO line port.

2.15.2 [9-2] DIL Table & Port Settings—DIL

→Tenant Number

→VM Trunk Group

**[Example]**

Each location number can have its VPS trunk group number (message number) and tenant number.

**[DIL Programming Example]**

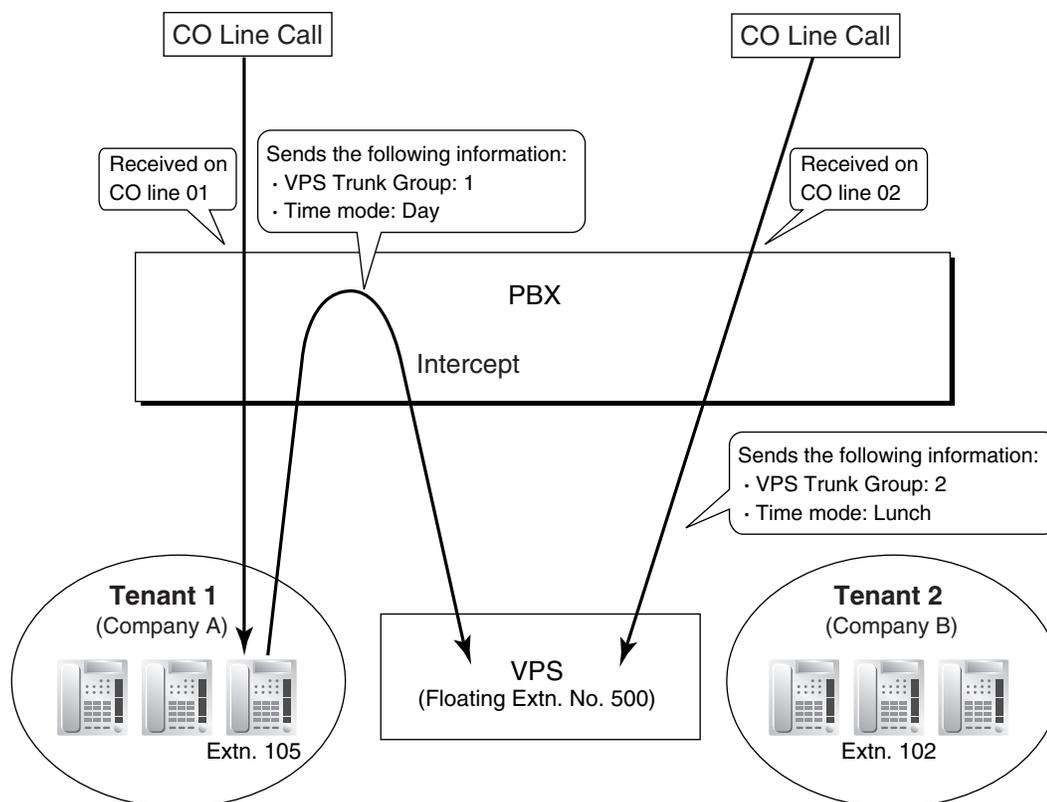
Port No. (CO Line No.)	DIL Destination				VPS Trunk Group No.	Tenant No.
	Day	Lunch	Break	Night		
01	105	100	105	100	1	1
02	102	100	102	100	2	2
:	:	:	:	:	:	:

**[VPS Programming—Programming Example of Trunk Group Assignment]**

Trunk Group No.		Company Greeting No.	Incoming Call Service	..
1	Day	1	Custom Service 11	..
	Lunch	2	Custom Service 29	..
	Break	3	Custom Service 31	..
	Night	4	Custom Service 12	..
2	Day	5	Custom Service 21	..
	Lunch	6	Custom Service 15	..
	Break	7	Custom Service 42	..
	Night	8	Custom Service 30	..
:	:	:	:	..

**Explanation:**

A CO line call handled by DIL distribution reaches a VM (DPT) group directly or by the Intercept Routing feature. According to the [DIL Programming Example] and [VPS Programming—Programming Example of Trunk Group Assignment], a caller will hear a corresponding company greeting of the VPS. Time mode (day/lunch/break/night) of the preprogrammed tenant is applied to the DIL destination and company greeting number.



### 8. Caller's Identification Notification to the VPS

When receiving a CO line call, the PBX sends the caller's identification number/name to the VPS.

### 9. Status Notification to the VPS

After the call is redirected by the VPS, the PBX sends the status of the redirected extension (e.g., busy) to the VPS.

### 10. Paging by the VPS

The VPS can perform the Paging feature using the recorded message. (→ 1.13.1 Paging)

### 11. Live Call Screening (LCS)

A PT or PS user can monitor his own mailbox while a caller is leaving a message and, if desired, answer the call by pressing the LCS button. When the caller is leaving a message in the mailbox, monitoring can be carried out in two ways: each PT user can choose which through personal programming (Live Call Screening Mode Set). PS users cannot choose the way: only Private mode is available for them.

**Hands-free mode:** The user can monitor the call automatically through the built-in speaker.

**Private mode:** The user will hear a warning tone. To monitor the call, the user goes off-hook with the handset, MONITOR button, or SP-PHONE button. However, PS users cannot monitor the call with the speakerphone.

→ 2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 4—LCS Answer Mode

### 12. Two-way Recording into the VPS

A PT user can record a conversation into his own mailbox or another mailbox, while talking on the phone.

The Two-way Record button is used to record into one's own mailbox. The Two-way Transfer button is used to record into someone else's mailbox.

#### Note

Before recording a Two-way telephone conversation, you should inform the other party that the conversation will be recorded.

### 13. VPS Data Control by the PBX\*

The date and time settings of the VPS are controlled by the PBX.

### 14. Remote FWD Setting by the VM\*

Extension FWD settings can be programmed using the VPS.

\*: This feature may not be supported depending on the software version of the VPS.

## Conditions

### [General]

- **Voice Mail (VM) Transfer Button**

A flexible button can be customized as the Voice Mail (VM) Transfer button with the floating extension number of the VM group as the parameter.

Note that when a user transfers a call to the VPS with the VM Transfer button, any caller ID information associated with the original call is not passed to the VPS.

- Extensions that will have a mailbox using a VM in DPT integration must have extension numbers of 2 to 4 digits.

### [Live Call Screening (LCS)]

- If an SLT is connected in parallel to a PT, and if LCS is activated for the PT in Private mode, both the PT and SLT can be used to monitor calls while in idle status. The SLT will ring to indicate a message is being recorded. The call can be monitored with the SLT by going off-hook. To intercept the call, press Flash/Recall button or flash the hookswitch. (→ 1.13.2 Paralleled Telephone)
- **LCS Button**  
A flexible button can be customized as the LCS button.
- **Extension Personal Identification Number (PIN)**  
To prevent unauthorized monitoring, it is recommended the LCS user assign an extension PIN. This PIN will be required when setting LCS. (→ 1.5.6 Extension PIN (Personal Identification Number)) If the user forgets the PIN, it can be cleared by an extension assigned as the manager.
- Each extension can be programmed to either end recording or continue recording the conversation after the call is intercepted, through personal programming (LCS Mode Set [After Answering]).  
→ 2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 4—LCS Recording Mode  
→ 2.10.8 [4-2-1] Portable Station—Extension Settings—Option 4—LCS Recording Mode
- To use the LCS feature on a PS in Wireless XDP Parallel Mode, LCS can only be turned on or off from the wired telephone. In Wireless XDP Parallel Mode, setting LCS on/off from the PS has no effect. (→ 1.20.3 Wireless XDP Parallel Mode)

### [Two-way Recording into the VPS]

- **Two-way Record/Two-way Transfer Button**  
A flexible button can be customized as the Two-way Record or the Two-way Transfer button. An extension number can be assigned to the Two-way Transfer button so that it can be used as a one-touch record button for the mailbox of the specified extension. (**One-touch Two-way Transfer Button**).
- When all of the VPS ports are busy:
  - a) Pressing the Two-way Record button sends a warning tone
  - b) Pressing the Two-way Transfer button followed by an extension number sends a warning tone.

**[Transferring to a Mailbox of the VPS]**

- When transferring a CO line call to a mailbox of the VPS, users should use the VM Transfer button. If using a standard Transfer button, users must dial "#6" after accessing the VPS, and confirm that the desired mailbox has been reached, before going on hook to complete the transfer.

**Programming References****PC Programming Manual**

2.8.4 [2-3] Timers & Counters—Dial / IRNA / Recall / Tone—Recall—Transfer Recall

2.9.15 [3-7-1] VM(DPT) Group—System Settings

2.9.16 [3-7-2] VM(DPT) Group—Unit Settings

2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 4

→ LCS Recording Mode

→ LCS Answer Mode

2.10.4 [4-1-4] Wired Extension—Flexible Button

→ Type

→ Ext. No. / Floating Ext. No. (for Two-way Record)

→ Ext. No. / Floating Ext. No. (for Two-way Transfer)

→ Ext. No. / Floating Ext. No. (for Voice Mail Transfer)

→ Ext No. of Mailbox (for Two-way Transfer)

2.10.8 [4-2-1] Portable Station—Extension Settings—Option 4—LCS Recording Mode

2.10.10 [4-2-3] Portable Station—Flexible Button

→ Type

→ Ext. No. / Floating Ext. No. (for Two-way Record)

→ Ext. No. / Floating Ext. No. (for Two-way Transfer)

→ Ext. No. / Floating Ext. No. (for Voice Mail Transfer)

→ Ext No. of Mailbox (for Two-way Transfer)

2.10.13 [4-3] DSS Console—Flexible Button

→ Type

→ Ext. No. / Floating Ext. No. (for Two-way Record)

→ Ext. No. / Floating Ext. No. (for Two-way Transfer)

→ Ext. No. / Floating Ext. No. (for Voice Mail Transfer)

→ Ext. No. of Mailbox (for Two-way Transfer)

2.11.1 [5-1] Doorphone—VM Trunk Group Number

2.15.2 [9-2] DIL Table & Port Settings—DIL

→ Tenant Number

→ VM Trunk Group

**PT Programming Manual**

[201] Transfer Recall Time

**Feature Manual References**

1.6.3 Flexible Buttons

1.6.4 Flexible Numbering/Fixed Numbering

1.19.3 Voice Mail (VM) Group

### Operating Manual References

- 1.3.53 Voice Mail Features—LCS (Live Call Screening)
- 1.3.54 Voice Mail Features—Two-way Record
- 1.3.55 Voice Mail Features—Voice Mail Integration
- 3.1.2 Personal Programming
- 3.2.2 Manager Programming

## 1.19.5 Voice Mail DTMF Integration

### Description

The PBX and the VPS connected to the PBX can transmit commands using DTMF signals to each other. The PBX sends preprogrammed commands using DTMF to the VPS automatically to change the answering service between Voice Mail (VM) service mode and Automated Attendant (AA) service mode or to inform the extension status (e.g., busy). The VPS sends the commands to the PBX like an SLT. The following answering services and features are available:

#### 1. Voice Mail (VM) Service Mode

When a caller reaches the VPS, the VPS greets and guides the caller to leave a voice message for a specified mailbox.

##### [Example]

The VPS sends the message to the caller, "Thank you for calling Panasonic. Please enter the mailbox number of the person you wish to leave your message for."

↓

The caller dials the mailbox number. Then, the dialed number is sent to the VPS via the PBX.

↓

The VPS sends the personal greeting to the caller, "You have reached Mike's voice mail. I am sorry I cannot take your call right now. Please leave a message and I will call you back."

↓

The caller leaves a message.

If the call reroutes to the floating extension number of the VM (DTMF) Group or the extension in the VM (DTMF) group by such as the FWD feature, when the VPS answers the call, the PBX will dial the mailbox number of the corresponding group or extension and any other digits required to the VPS automatically using the caller-dialed number (Follow on ID). In this case, the caller can reach a mailbox without knowing the mailbox number.

##### [Available Features for Follow on ID]

- a) FWD to a Mailbox
- b) Intercept Routing to a Mailbox
- c) Call Transfer to a Mailbox
- d) Listening to a Message in a Mailbox

#### 2. Automated Attendant (AA) Service Mode

The VPS greets and guides the caller to the desired extension directly without operator assistance.

### 3. VM → AA Service, AA → VM Service

It is possible to switch the service mode assigned on the VPS port, from the VM service to AA service or vice versa.

## System Explanation

### 1. Service Mode Assignment

Assign the service mode, VM service or AA service, to the VM (DTMF) group to correspond with the assignment of the VPS.

→ 2.9.19 [3-8-2] VM(DTMF) Group—Group Settings—Type

### 2. DTMF Command Assignment

Assign the DTMF command to suit the VPS settings.

2.9.18 [3-8-1] VM(DTMF) Group—System Settings

→ VM DTMF Command—Recording Message

→ VM DTMF Command—Listening Message

→ VM DTMF Command—Switching to AA

→ VM DTMF Command—Switching to VM

	Command (Default)
Switching to VM	#6
Switching to AA	#8
Recording message	H
Listening message	×H

### Note

H = Mailbox Number

### 3. VM Service

#### a) FWD to a Mailbox of the VPS

The PBX sends a mailbox number of the corresponding extension to the VPS when a call is forwarded from an extension to the VPS. Therefore the caller can leave a message for the called extension without knowing the mailbox number.

#### [FWD to the VPS Sequence Selection]

If an extension user sets FWD to the VPS, any incoming call will be forwarded to the VPS. It is also possible to send the AA command, even in the VM service mode, when calls are forwarded so that the caller can be directed to an extension rather than a mailbox. This can be performed by selecting "AA" through system programming.

→ 2.9.18 [3-8-1] VM(DTMF) Group—System Settings—Others—FWD to the VPS Sequence

Parameter	Transmitted Command	
	In AA Service Mode	In VM Service Mode
Answer by Mailbox (Default)	Switching to VM command + Recording message command (#6 + H [H = Mailbox No.]	Recording message command (H [H = Mailbox No.]
AA	Switching to AA command (#8)	Switching to AA command (#8)
None	(DTMF commands are not sent. Work with default of the VPS.)	

**b) Intercept Routing to a Mailbox of the VPS**

The PBX sends a mailbox number of the corresponding extension to the VPS when a CO line call is intercepted from an extension to the VPS. Therefore the caller can leave a message for the called extension without knowing the mailbox number.

**[Intercept Routing to the VPS Sequence Selection]**

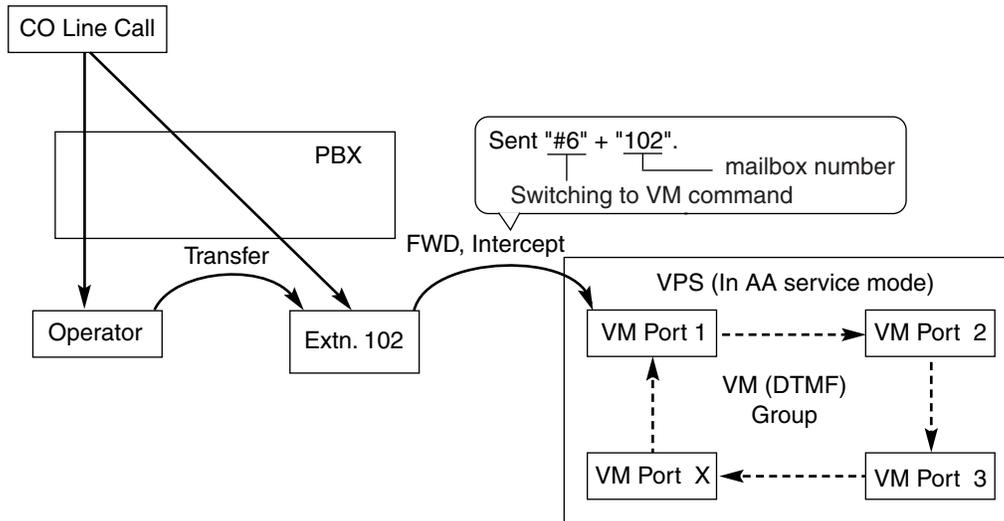
If an extension user sets Intercept Routing to the VPS, the intercepted CO line calls will be redirected to the VPS.

It is also possible to send the AA command, even in the VM service mode, when calls are intercepted so that the caller can be directed to an extension rather than a mailbox. This can be performed by selecting "AA" through system programming.

→ 2.9.18 [3-8-1] VM(DTMF) Group—System Settings—Others—Intercept Routing to the VPS Sequence

Parameter	Transmitted Command	
	In AA Service Mode	In VM Service Mode
<b>Answer by Mailbox</b>	Switching to VM command + Recording message command (#6 + H [H = Mailbox No.])	Recording message command (H [H = Mailbox No.])
<b>AA</b>	Switching to AA command (#8)	Switching to AA command (#8)
<b>None (Default)</b>	(DTMF commands are not sent. Work with default of the VPS.)	

**[Example of a) & b)]**



**c) Transferring to a Mailbox of the VPS**

An extension user can transfer a call to a mailbox of the VPS so that the caller can leave a message in the mailbox of the desired extension. (→ 1.3.8 Call Transfer) The extension user should use the Voice Mail (VM) Transfer button, when transferring a call to the mailbox of the VPS. When the extension user presses this button and enters the desired extension number, the PBX will transfer the call to the VM group and dial the mailbox number of the desired extension with the required command (after the VPS answers the call). Therefore the caller can leave a message without knowing the mailbox number.

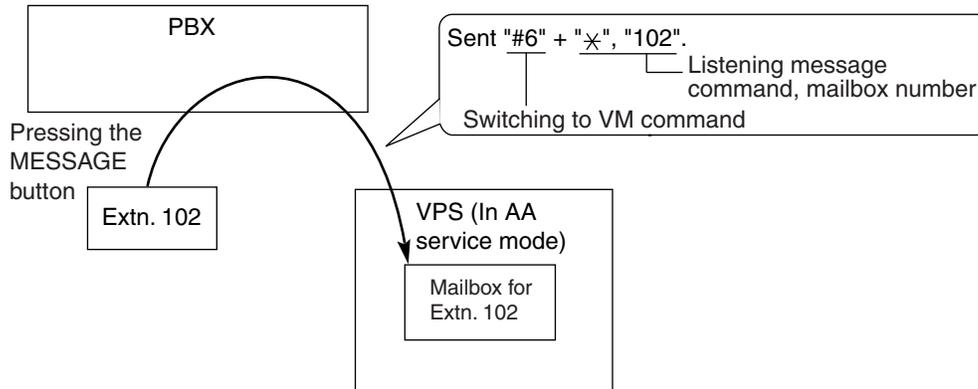
2.10.4 [4-1-4] Wired Extension—Flexible Button

- Type
- Ext. No. / Floating Ext. No. (for Voice Mail Transfer)



Transmitted Command	
In AA Service Mode	In VM Service Mode
Switching to VM command + Listening message command (#6 + *H [H = Mailbox No.])	Listening message command (*H [H = Mailbox No.])

**[Example]**



**4. AA Service**

If the VPS transfers the call using the AA service, the PBX will inform the VPS of the status of the called destination with the preprogrammed DTMF status signal so that the VPS can confirm the status of the extension without listening to the system tones (e.g., ringback tone). Assign the DTMF status signal to suit the VPS settings.

**[DTMF Status Signals and Conditions]**

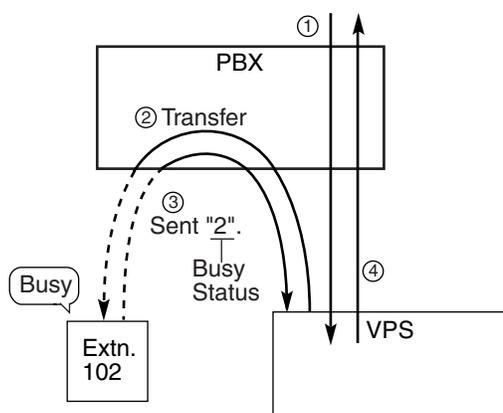
Status	Condition	Default Command
RBT (ringback tone)	The PBX is ringing the corresponding extension.	1
BT (busy tone)	The called extension is busy.	2
ROT (reorder tone)	The dialed number is invalid.	3
DND (DND tone)	The called extension has set DND. (→ 1.4.8 DND (Do Not Disturb))	4
Answer	The called extension has answered the call.	5
FWD VM RBT (FWD to Voice Mail ringback tone)	The called extension has set FWD to VPS and the PBX is calling another port of the VPS.	6
FWD VM BT (FWD to Voice Mail busy tone)	The called extension has set FWD to VPS and all ports of the VPS are busy.	7
FWD EXT RBT (FWD to extension ringback tone)	The PBX is calling an extension other than the one dialed. FWD or Idle Extension Hunting (→ 1.9.7 Idle Extension Hunting) may be assigned by the called extension.	8

Status	Condition	Default Command
Confirm (confirmation tone)	The PBX receives confirmation that the feature has been successfully set or canceled (e.g., Message Waiting) on the extension.	9
Disconnect	The caller has hung up.	#9

#### 2.9.18 [3-8-1] VM(DTMF) Group—System Settings

- VM DTMF Status Signal—Ringback Tone
- VM DTMF Status Signal—Busy Tone
- VM DTMF Status Signal—Reorder Tone
- VM DTMF Status Signal—DND tone
- VM DTMF Status Signal—Answer
- VM DTMF Status Signal—Confirm
- VM DTMF Status Signal—Disconnect
- VM DTMF Status Signal—FWD to VM Ringback Tone
- VM DTMF Status Signal—FWD to VM Busy Tone
- VM DTMF Status Signal—FWD to Extension Ringback Tone

#### [Example]



- ① An incoming call reaches the VPS. The VPS greets the caller: "Thank you for calling Panasonic. If you know the extension number of the person you wish...".
- ② The caller dials the extension number (extn. 102). The VPS will transfer the call to the extension via the PBX.
- ③ If the extension is not available, the PBX sends DTMF status signal of the extension (busy status) to the VPS.
- ④ The VPS receives the DTMF status signal and send the appropriate message to the caller: "Sorry. The extension is busy. Would you like to leave a message...".

## Conditions

- **Voice Mail (VM) Transfer Button**  
A flexible button can be customized as the Voice Mail (VM) Transfer button with the floating extension number of the VM group as the parameter.
- It is possible to assign the time period between when the VPS answers the call and the PBX sends the Follow on ID to the VPS.  
→ 2.9.18 [3-8-1] VM(DTMF) Group—System Settings—Timing—Waiting Time before Sending Follow on ID
- It is possible to assign the time period between when the VPS transfers the call using the AA service to the PBX and the PBX sends the DTMF status signal to the VPS.  
→ 2.9.18 [3-8-1] VM(DTMF) Group—System Settings—Timing—DTMF Length for VM
- It is possible to select whether the mailbox number is the same as the extension number, or the mailbox number is programmable for each extension number and incoming call distribution group (Mailbox Access ID).  
→ 2.9.9 [3-5-1] Incoming Call Distribution Group—Group Settings—Miscellaneous—Programmed

Mailbox No.

→ 2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 1—Programmed Mailbox No.

→ 2.10.8 [4-2-1] Portable Station—Extension Settings—Option 1—Programmed Mailbox No.

- The Inter-digit time for the DTMF command and for DTMF status signal is programmable.  
2.9.18 [3-8-1] VM(DTMF) Group—System Settings
  - Timing—Inter-digit Time
  - Timing—Waiting Time before Sending VM DTMF Status Signal
- Data Line Security is set automatically on the extensions in the VM (DTMF) group to achieve proper recording. (→ 1.4.1 Data Line Security)

## Programming References

### PC Programming Manual

2.8.4 [2-3] Timers & Counters—Miscellaneous—Voice Mail (Caller from VM to CO)—On-hook Wait Time

2.9.9 [3-5-1] Incoming Call Distribution Group—Group Settings—Miscellaneous—Programmed Mailbox No.

2.9.18 [3-8-1] VM(DTMF) Group—System Settings

2.9.19 [3-8-2] VM(DTMF) Group—Group Settings

2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 1—Programmed Mailbox No.

2.10.4 [4-1-4] Wired Extension—Flexible Button

→ Type

→ Ext. No. / Floating Ext. No. (for Voice Mail Transfer)

2.10.8 [4-2-1] Portable Station—Extension Settings—Option 1—Programmed Mailbox No.

2.10.10 [4-2-3] Portable Station—Flexible Button

→ Type

→ Ext. No. / Floating Ext. No. (for Voice Mail Transfer)

2.10.13 [4-3] DSS Console—Flexible Button

→ Type

→ Ext. No. / Floating Ext. No. (for Voice Mail Transfer)

### PT Programming Manual

None

## Feature Manual References

1.3.8 Call Transfer

1.6.3 Flexible Buttons

1.6.6 FWD (Call Forwarding)

1.9.9 Intercept Routing

1.19.3 Voice Mail (VM) Group

## Operating Manual References

1.3.55 Voice Mail Features—Voice Mail Integration

## 1.20 W

### 1.20.1 Walking COS

#### Description

A user can enter his extension number and extension personal identification number (PIN) (→ 1.5.6 Extension PIN (Personal Identification Number)) at another extension, to make the following types of call using his Class of Service, including TRS level, overriding the other extension's Class of Service.

- CO line call
- Intercom call
- External Relay Control (→ 1.5.8 External Relay)

After performing Walking COS, the following features are also available for the specified extension:

- Call Forwarding (FWD)/Do Not Disturb (DND) setting (→ 1.4.8 DND (Do Not Disturb), → 1.6.6 FWD (Call Forwarding))
- Incoming Call Distribution Group Log-in/Log-out (→ 1.9.3 ICD Group Features—Log-in/Log-out)
- Absent Message setting (→ 1.1.1 Absent Message)
- Extension Dial Lock (→ 1.5.4 Extension Dial Lock)
- Time Service—Changing the Time Mode (day/lunch/break/night) (→ 1.17.4 Time Service)

#### Conditions

- When a CO line call is made using Walking COS:
  - the Class of Service of the specified extension is applied (→ 1.3.16 COS (Class of Service))
  - the Itemized Billing code of the specified extension is applied (→ 1.1.3 ARS (Automatic Route Selection))
  - the specified extension number is recorded on SMDR as the call originator, instead of the extension number of the actual extension used (→ 1.16.1 SMDR (Station Message Detail Recording)).
- Walking COS is also available through DISA. (→ 1.4.6 DISA (Direct Inward System Access))
- **Extension PIN**  
An extension personal identification number (PIN) is required to use this feature. (→ 1.5.6 Extension PIN (Personal Identification Number)) If the wrong PIN is entered three times, the line will be disconnected.
- This feature can not be used for extensions which the extension being operated is prevented from calling by Internal Call Block. (→ 1.9.12 Internal Call Block)

#### Programming References

##### PC Programming Manual

2.8.8 [2-6-1] Numbering Plan—Main—Features—User Remote Operation / Walking COS / Verification Code

2.8.11 [2-7-1] Class of Service—COS Settings—Extension Feature—Remote Operation by Other Extension

2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 2—Extension PIN

2.10.8 [4-2-1] Portable Station—Extension Settings—Option 2—Extension PIN

##### PT Programming Manual

## 1.20 W

---

[005] Extension Personal Identification Number (PIN)

### Feature Manual References

1.3.16 COS (Class of Service)

1.4.6 DISA (Direct Inward System Access)

### Operating Manual References

1.3.57 Walking COS

## 1.20.2 Walking Extension

### Description

It is possible for an extension user to trade extension settings with another extension.

When Walking Extension is executed, all extension settings (extension number, Class of Service (COS), One-touch Dialing memory, etc.) of the "old" extension are exchanged with the "new" extension.

This feature is useful when an extension user moves desks, or when an extension user has no permanent desk.

This feature is also known as Walking Station.

### Conditions

- This feature allows extension settings to be switched between PTs and SLTs. Moving between tenants is also possible.
- Incoming calls to your extension will reach you at your new location.
- An extension personal identification number (PIN) is required to use this feature. (→ 1.5.6 Extension PIN (Personal Identification Number))
- If a DSS Console is connected to a PT and the DSS Console is continuously used with the PT after the Walking Extension has been performed, the new extension number of the PT must be assigned as the paired extension through system programming.
- If the Walking Extension feature is performed at the same time that the target extension is being programmed by PC, the Walking Extension feature may not work properly. (→ 1.13.5 PC Programming)

### Programming References

#### PC Programming Manual

2.8.8 [2-6-1] Numbering Plan—Main—Features—Walking Extension

2.10.1 [4-1-1] Wired Extension—Extension Settings—Option 2—Extension PIN

2.10.13 [4-3] DSS Console—Flexible Button—Pair Extension

#### PT Programming Manual

[007] DSS Console Paired Telephone

### Operating Manual References

1.3.58 Walking Extension

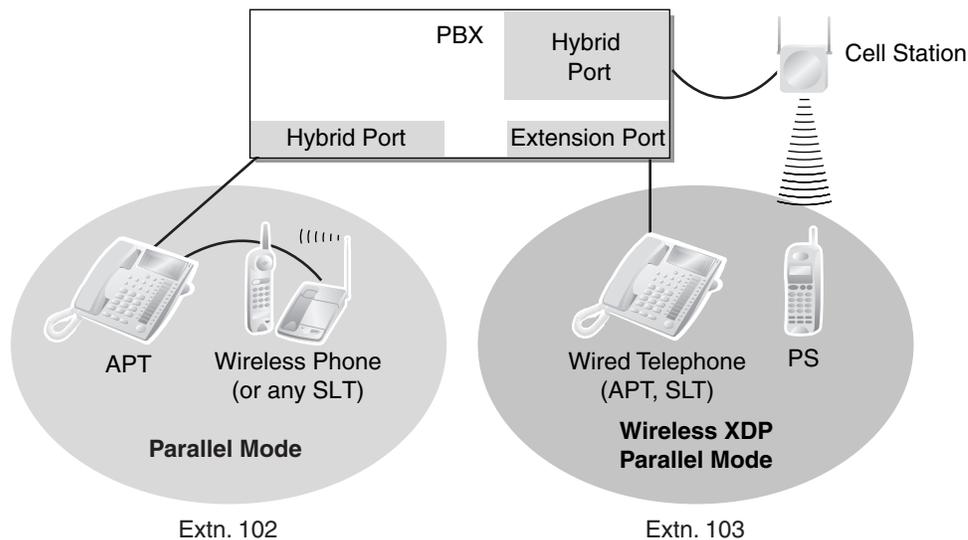
## 1.20.3 Wireless XDP Parallel Mode

### Description

A portable station (PS) can be used in parallel with a wired telephone, i.e., an analog proprietary telephone (APT), or single line telephone (SLT), allowing an extension user to make or receive calls with either the wired telephone or the PS. The PS will use the same extension number as the wired telephone, and many of the wired telephone's extension settings (Call Forwarding [FWD], Class of Service [COS], etc.) are also used by the PS.

In order to use a PS in Wireless XDP Parallel mode, the mode must be turned on using the PS.

### [Example of Wireless XDP Parallel Mode, Parallel Mode]



### Conditions

- Whether or not a PS is allowed to pair itself with a wired telephone is determined by the COS assigned to the extension number of the wired telephone.
- Wireless XDP Parallel mode can be turned on or off using the PS only.
- To switch between the wired telephone and the PS during a conversation, simply go off-hook with the other telephone. Alternatively, to seize a separate line, use another method, such as pressing a CO or INTERCOM button.  
In addition, going off-hook with the other telephone seizes a separate line when the extension is:
  - a) Engaged in a conference call. (→ 1.3.13 Conference, → 1.5.3 Executive Busy Override, → 1.13.10 Privacy Release)
  - b) Screening a call using Live Call Screening (LCS) or when recording a conversation using Two-way Record. (→ 1.19.4 Voice Mail DPT (Digital) Integration)
  - c) Being monitored by another extension. (→ 1.3.4 Call Monitor)
  - d) When the extension has a call on consultation hold. (→ 1.3.15 Consultation Hold)
- When a PS in Wireless XDP Parallel mode is on a call, other extension users cannot perform Executive Busy Override when they call this extension. (→ 1.5.3 Executive Busy Override)
- When a PS is paired with a wired telephone, most of the extension settings assigned to the wired telephone (extension number, extension name, etc.) will be used by the PS, and the PS will use its own extension settings once again when Wireless XDP Parallel mode is canceled. Note, however, that the

following extension settings of the wired telephone are copied to the extension settings of the PS when Wireless XDP Parallel mode is activated, and will remain in effect for the PS after the mode is canceled.

- Call Waiting Setting (→ 1.3.9 Call Waiting Tone)
  - FWD/Do Not Disturb (DND) Setting (→ 1.4.8 DND (Do Not Disturb), → 1.6.6 FWD (Call Forwarding))
  - Call Pickup Deny Setting (→ 1.3.6 Call Pickup)
  - Executive Busy Override Deny Setting (→ 1.5.3 Executive Busy Override)
  - Itemized Billing Code for Automatic Route Selection (ARS) (→ 1.1.3 ARS (Automatic Route Selection))
  - Extension Personal Identification Number (PIN) (→ 1.5.6 Extension PIN (Personal Identification Number))
  - COS Programming (→ 1.3.16 COS (Class of Service))
  - Extension User Group (→ 1.7.1 GROUP FEATURES)
  - Transfer Recall Destination for Call Transfer and Call Park (→ 1.3.5 Call Park, → 1.3.8 Call Transfer)
- The PS will retain its original settings for the following items even when in Wireless XDP Parallel mode. These settings can be set on the wired telephone and PS independently, and the settings can be different.
    - Ring Tone Pattern Table Selection (→ 1.15.2 Ring Tone Pattern Selection)
    - Preferred Line Assignment—Incoming (→ 1.10.2 Line Preference—Incoming)
    - Preferred Line Assignment—Outgoing (→ 1.10.3 Line Preference—Outgoing)
    - Hot Line Setting (→ 1.8.6 Hot Line)
    - Display Language (→ 1.4.7 Display Information)
    - Flexible Button Assignment (→ 1.6.3 Flexible Buttons)
    - Transfer Recall Destination for Call Transfer and Call Park (The setting assigned to the wired telephone will first be copied to the PS's extension settings, then can be changed for the PS if necessary.) (→ 1.3.5 Call Park, → 1.3.8 Call Transfer)

If an extension number is required when changing any PS settings while in Wireless XDP Parallel mode, use the original extension number assigned to the PS, not the extension number of the paired (wired) telephone.

- If the Extension Feature Clear is performed, the corresponding extension data for both the wired telephone and the PS will be cleared. (→ 1.5.5 Extension Feature Clear)
- When a call arrives, both the wired telephone and the PS will ring. However, when one of the following settings is made, only the telephone which was used to make the setting will ring.
  - Automatic Callback Busy (→ 1.1.4 Automatic Callback Busy (Camp-on))
  - Transfer Recall (→ 1.3.8 Call Transfer)
  - Hold Recall (→ 1.3.2 Call Hold)
  - Call Park Recall (→ 1.3.5 Call Park)

## Programming References

### PC Programming Manual

2.7.4 [1-1] Slot—Extension Port—DPT Type—Type (for Hybrid port)

2.7.12 [1-2] Portable Station—PS Registration and De-registration

2.8.8 [2-6-1] Numbering Plan—Main—Features—Wireless XDP Parallel Mode Set / Cancel

2.8.11 [2-7-1] Class of Service—COS Settings—Extension Feature—Accept Wireless XDP Parallel Mode Set by PS

2.10.1 [4-1-1] Wired Extension—Extension Settings—Main—Wireless XDP

**PT Programming Manual**

[515] Wireless XDP Parallel Mode for Paired Telephone

**Feature Manual References**

1.3.16 COS (Class of Service)

1.13.2 Paralleled Telephone

**Operating Manual References**

1.3.59 Wireless XDP Parallel Mode



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***Section 2***  
***Appendix***

## 2.1 Capacity of System Resources

# 2.1 Capacity of System Resources

### System

Item	Capacity
Absent Message—Extension	1 x 16 characters
Absent Message—System	8 x 16 characters
Call Park Zone	100
Conference	3-8 parties per conference (32 parties total)
COS	64
Extension number	1-5 digits (2-4 digits for extensions which have a VM [DPT] mailbox)
Extension Personal Identification Number (PIN)	10 digits, 1 entry/extension
Host PBX Access Code	10 digits, 10 entries/trunk group
Number of Characters of Name	20
Printing message	8
Queuing Time Table	64
Ring Tone Pattern Plan	8
Simultaneous Programmers	Unlimited
SMDR Call Storage	200 calls
Special Carrier Access Code	16 digits, 20 entries
Tenant	8
Time Service Holiday	24
Verification Code	4 digits, 1000 entries
Verification Code Personal Identification Number (PIN)	10 digits, 1000 entries

### Dialing

Item	Capacity
Emergency Call	32 digits, 10 entries
Hot Line	32 digits
Personal Speed Dialing	32 digits, 10 entries/extn.
Quick Dialing	4 digits, 80 entries
Redial	32 digits
System Speed Dialing	32 digits, 1000 entries

### Groups

Item	Capacity
Call Pickup Group	64
Idle Extension Hunting Group	64 (16 extensions/group)
Incoming Call Distribution Group	128 (32 extensions/group)
Paging Group	32
PS Ring Group	32
Trunk Group	64
VM (DPT) Group	1 group x 4 ports (8 channels)
VM (DTMF) Group	2 groups x 24 channels

### TRS

Item	Capacity
TRS Level	7
TRS Denied Code	16 digits, 100 entries/level
TRS Exception Code	16 digits, 100 entries/level

### ARS

Item	Capacity
Routing Plan Table	16 entries
Leading Number Table	16 digits, 1000 entries
Leading Number Exception Table	16 digits, 200 entries
ARS Carrier	10
Itemized Billing Code	10 digits
Authorization Code	10 digits

### Call Log and Message Waiting

Item	Capacity
Outgoing Call Log—PS	100 records/extn. 140 records/system
Incoming Call Log—PT	100 records/extn. 480 records/system
Incoming Call Log—PS + Incoming Call Distribution Group	100 records/extn. or group Total 2048 records/system
Message Waiting—PS + Incoming Call Distribution Group	256

## 2.1 Capacity of System Resources

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Item	Capacity
Message Waiting—PT + SLT	256

### Voice Message

Item	Capacity
Outgoing Message (OGM)	32
OGM Total Recording Time	8 minutes
Simplified Voice Message (SVM)	125 messages/card
SVM Total Recording Time	40, 60, or 120 minutes (depending on the recording quality)

### Hospitality and Charge Management Features

Item	Capacity
Hotel Operator	4

### Password

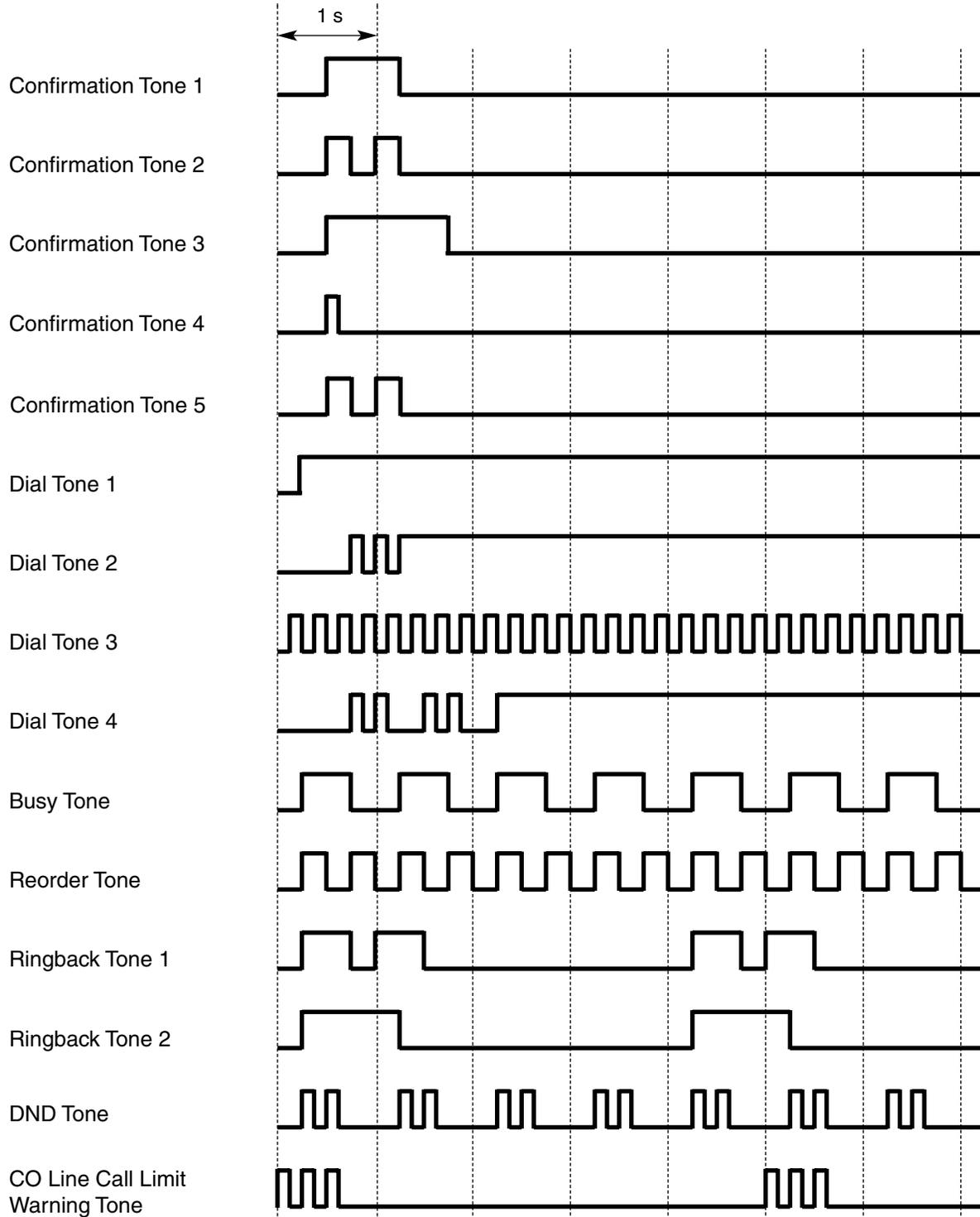
Item	Capacity
System Password for Installer	4 – 10 characters
System Password for Administrator—for PC Programming	4 – 10 characters
System Password for User—for PC Programming	4 – 10 characters
System Password for Administrator—for PT Programming	4 – 10 digits
System Password for User—for PT Programming	4 – 10 digits
Manager Password	4 – 10 digits

### Programmer Code

Item	Capacity
Installer Level Programmer Code	4 – 16 characters
Administrator Level Programmer Code	4 – 16 characters
User Level Programmer Code	0 – 16 characters

## 2.2 Tones/Ring Tones

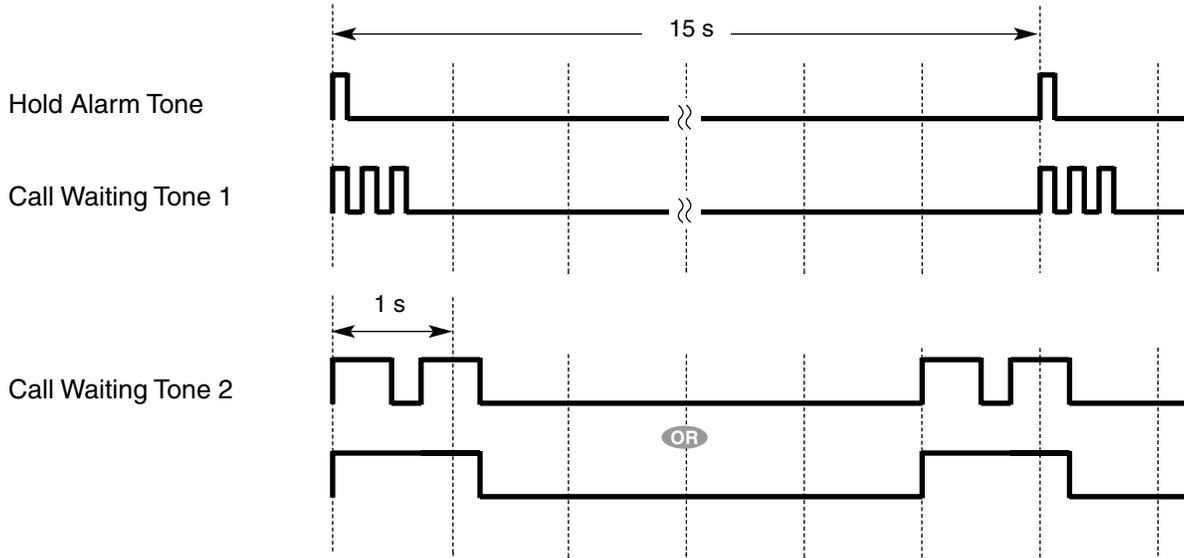
### Tone Patterns (Default)



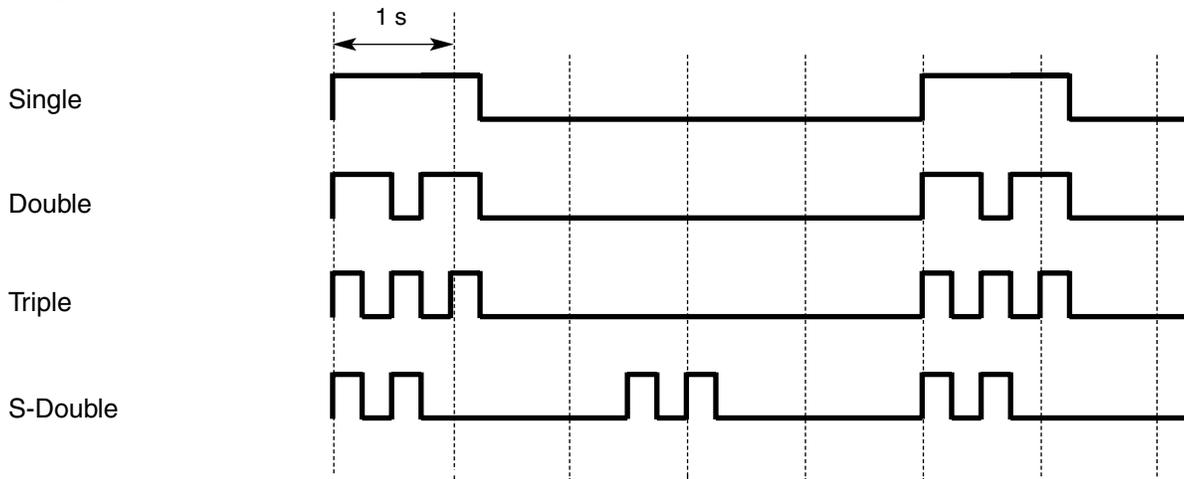
## 2.2 Tones/Ring Tones

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### Tone Patterns (Default)



### Ring Tone Patterns (Default)\*



## 2.3 Revision History

### 2.3.1 PSMPR Software File Version 1.1xxx

#### Changed Contents

- 1.3.6 Call Pickup  
[Directed Call Pickup]
- 1.3.9 Call Waiting Tone  
Call Waiting Caller ID (Visual Caller ID)
- 2.1 Capacity of System Resources
- 1.13.1 Paging  
Paging Group
- 1.13.11 PS Connection  
Handover
- 1.16.1 SMDR (Station Message Detail Recording)  
CD (Condition Code)
- 1.17.4 Time Service  
Features Using Time Service

### 2.3.2 PSMPR Software File Version 2.0xxx

#### New Contents

- 1.5.8 External Relay
- 1.5.9 External Sensor
- 1.8.4 HOSPITALITY FEATURES
- 1.11.1 Manager Features

#### Changed Contents

- 2.1 Capacity of System Resources
- 1.6.4 Flexible Numbering/Fixed Numbering
- 1.15.1 Redial, Last Number
- 1.16.1 SMDR (Station Message Detail Recording)
- 1.17.3 Timed Reminder

## 2.3 Revision History

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- 1.17.5 TRS (Toll Restriction)

### 2.3.3 PSMRP Software File Version 3.0xxx

#### New Contents

- 1.16.5 SVM (Simplified Voice Message)
- 1.19.2 Virtual PS

#### Changed Contents

- 2.1 Capacity of System Resources
- 1.3.13 Conference
- 1.4.6 DISA (Direct Inward System Access)  
End of Call Detection
- 1.6.4 Flexible Numbering/Fixed Numbering
- 1.6.7 FWD/DND Button, Group FWD Button
- 1.9.1 ICD GROUP FEATURES  
ICD Group button
- 1.9.3 ICD Group Features—Log-in/Log-out  
Wrap-up Timer
- 1.8.1 Hands-free Answerback
- 1.10.3 Line Preference—Outgoing
- 1.13.15 PT Programming

### 2.3.4 PSMRP Software File Version 4.0xxx

#### New Contents

- 1.3.9 Call Waiting Tone  
Automatic Call Waiting

#### Changed Contents

- 1.3.3 Call Log, Incoming

- 1.4.6 DISA (Direct Inward System Access)
- 1.9.9 Intercept Routing
- 1.11.4 Music on Hold
- 1.17.5 TRS (Toll Restriction)
- 2.1 Capacity of System Resources

## 2.3 Revision History

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# ***Index***

# Index

- A**
- AA → Automated Attendant 61, 222
  - Absent Message 12
  - Account Code Entry 13
  - Alarm Information, Local 139
  - Alternate Calling—Ring/Voice 133
  - Alternate Receiving/Calling Mode (Ring/Voice) Override 105
  - Alternate Receiving—Ring/Voice 133
  - Appendix 235
  - ARS → Automatic Route Selection 14
  - Authorization Code 19
  - Automated Attendant (AA) 61, 222
  - Automatic Call Hold 30
  - Automatic Call Park 36
  - Automatic Call Waiting 41
  - Automatic Callback Busy (Camp-on) 20
  - Automatic Extension Release 21
  - Automatic Fax Transfer 22
  - Automatic Log-out 118
  - Automatic Privacy 161
  - Automatic Route Selection (ARS) 14
  - Automatic Station Release → Automatic Extension Release 21
  - Automatic Time Adjustment 23
- B**
- Background Music (BGM) 25, 146
  - BGM → Background Music 25, 146
  - BGM—External 25
  - Boss & Secretary feature 96
  - Busy Override Deny, Executive 73
  - Busy Override, Executive 73
  - Buttons, Fixed 82
  - Buttons, Flexible 84
- C**
- Call Directory—Extension Dialing 133
  - Call Directory—Speed Dialing 184, 185
  - Call Forwarding (FWD) 93
  - Call Hold 29
  - Call Hold Retrieve Deny 30
  - Call Hold, Automatic 30
  - Call Log, Incoming 32
  - Call Log, Outgoing 173
  - Call Monitor 34
  - Call Park 36
  - Call Park Recall 36
  - Call Park Retrieve Deny 36
  - Call Pickup 37
  - Call Pickup Group 38, 101
  - Call Pickup, Directed 37
  - Call Splitting 39
  - Call Transfer 39
  - Call Transfer with Announcement 39
  - Call Transfer without Announcement 39
  - Call Transfer—Screened → Call Transfer with Announcement 39
  - Call Transfer—Unscreened → Call Transfer without Announcement 39
  - Call Waiting Caller ID (Visual Caller ID) 41
  - Call Waiting Tone 41
  - Callback Busy, Automatic (Camp-on) 20
- Caller ID 26
- Calling Line Identification (CLI) Distribution 42
  - Calling Line Identification Presentation (CLIP) 26
  - Calling Party Control (CPC) Signal Detection 51
  - Capacity of System Resources 236
  - Carrier Access Code, Special 183
  - Circular Hunting 125
  - Class of Service (COS) 50
  - CLI → Calling Line Identification Distribution 42
  - CO Line Access 44
  - CO Line Call Limitation 46
  - Code Entry, Verified 211
  - Conference 47
  - Confirmation Tone 48
  - Consultation Hold 50
  - COS → Class of Service 50
  - CO-to-CO Line Call Duration 46
  - CPC → Calling Party Control Signal Detection 51
- D**
- Data Line Security 53
  - Delayed Ringing 115
  - Denied Code Tables 203
  - Dial Mode Selection 53
  - Dial Tone 54
  - Dial Tone Transfer 55
  - Dialing Digit Restriction during Conversation 46
  - Dialing, One-touch 150
  - DIL → Direct In Line 57
  - Direct CO Line Access 44
  - Direct In Line (DIL) 57
  - Direct Inward System Access (DISA) 58
  - Direct Recording 187
  - Directed Call Pickup 37
  - Directory, Call—Extension Dialing 133
  - Directory, Call—Speed Dialing 184, 185
  - DISA → Direct Inward System Access 58
  - DISA AA Service → DISA Built-in Automated Attendant Number 61
  - DISA Intercept Routing—Busy 63
  - DISA Intercept Routing—DND 63
  - DISA Intercept Routing—No Answer 63
  - DISA Intercept Routing—No Dial 61
  - DISA Security Mode 62
  - Display Information 67
  - Display Lock 33, 184, 189
  - Distribution, Group Call 114
  - DND → Do Not Disturb 68
  - DND Override 68
  - DND, Paging 68, 153
  - Do Not Disturb (DND) 68
  - Door Open 69
  - Doorphone Call 70
- E**
- EFA → External Feature Access 72
  - Electronic Station Lockout → Extension Dial Lock 74
  - Emergency Call 73
  - Exception Code Tables 204
  - Exclusive Call Hold 29

- Executive Busy Override 73  
 Executive Busy Override Deny 73  
 Extension Dial Lock 74  
 Extension Feature Clear 75  
 Extension PIN (Personal Identification Number) 76  
 Extension PIN Lock 77  
 Extension Port Configuration 78  
 Extension Release, Automatic 21  
 Extension User Group 101  
 Extension-to-CO Line Call Duration 46  
 External Feature Access (EFA) 72  
 External Relay 78  
 External Sensor 79
- F**
- Fax Transfer, Automatic 22  
 Feature Clear, Extension 75  
 Feature Highlights 4  
 Fixed Buttons 82  
 Fixed Numbering 87  
 Flash/Recall/Terminate 83  
 Flexible Buttons 84  
 Flexible Numbering/Fixed Numbering 87  
 Floating Extension 92  
 Floating Station —> Floating Extension 92  
 Full One-touch Dialing 150  
 FWD —> Call Forwarding 93  
 FWD, Multiple 95  
 FWD/DND Button, Group FWD Button 97  
 FWD/DND Setting by Fixed FWD/DND button 98  
 FWD—All Calls 93  
 FWD—Busy 93  
 FWD—Busy/No Answer 93  
 FWD—Follow Me 93  
 FWD—No Answer 93
- G**
- Group Call Distribution 114  
 Group Call Pickup 37  
 GROUP FEATURES 101  
 Group FWD Button Types 98  
 Group, Call Pickup 37, 101  
 Group, Extension User 101  
 Group, Idle Extension Hunting 102, 124  
 Group, Incoming Call Distribution 102  
 Group, Paging 102, 152  
 Group, PS Ring 103  
 Group, Trunk 101  
 Group, Voice Mail (VM) 103, 213
- H**
- Handover 163  
 Handset/Headset Selection —> Headset Operation 106  
 Hands-free Answerback 105  
 Hands-free Operation 106  
 Headset Operation 106  
 Hold Recall 30  
 Hold Retrieve Deny, Call 30  
 Hold, Call 29
- Hold, Exclusive Call 29  
 Host PBX Access Code (Access Code to the Telephone Company from a Host PBX) 107  
 Hot Line 109  
 Hunting, Circular 125  
 Hunting, Idle Extension 124  
 Hunting, Priority 115  
 Hurry-up Transfer —> Manual Queue Redirection 122
- I**
- ICD Group —> Incoming Call Distribution Group 102, 111  
 Idle Extension Hunting 124  
 Idle Extension Hunting Group 102, 124  
 Idle Line Access (Local Access) 44  
 Idle Line Preference 139  
 Incoming Call Distribution Group 102, 111  
 INCOMING CALL FEATURES 126  
 Incoming Call Log 32  
 Intercept Routing 128  
 Intercept Routing, DISA—Busy 63  
 Intercept Routing, DISA—DND 63  
 Intercept Routing, DISA—No Answer 63  
 Intercept Routing, DISA—No Dial 61  
 Intercept Routing—Busy/DND 128  
 Intercept Routing—No Answer (IRNA) 128  
 Intercept Routing—No Destination 132  
 Intercom Call 133  
 Internal Call Block 134  
 Interrupt Redial 173  
 IRNA —> Intercept Routing—No Answer 128  
 Itemized Billing Code 19
- L**
- LCS —> Live Call Screening 219  
 LED Indication 136  
 Line Preference Override 139  
 Line Preference—Incoming 138  
 Line Preference—Outgoing 139  
 Live Call Screening (LCS) 219  
 Local Alarm Information 139  
 Lock, Display 184, 189  
 Lock, Extension Dial 74  
 Lock, Extension PIN 77  
 Lock, Remote Extension Dial 74  
 Log-in/Log-out 117
- M**
- Manager Features 142  
 Manual Queue Redirection 122  
 Message Waiting 145  
 Message, Absent 12  
 Message, Outgoing (OGM) 148  
 Message, Printing 161  
 Modem—On-site/Remote Programming 157  
 Monitor, Call 34  
 Multiple FWD 95  
 Music on Hold 146  
 Music, Background (BGM) 25  
 Mute 147

# Index

---

## N

No Line Preference 138, 139  
Numbering, Flexible/Fixed 87

## O

OGM → Outgoing Message 148  
One-touch Dialing 150  
One-touch Dialing, Full 150  
On-site Programming 157  
Operator Call 151  
Operator Features 151  
Outgoing Call Log 173  
Outgoing Message (OGM) 148  
Overflow 119

## P

Paging 152  
Paging Deny 152  
Paging DND 68, 153  
Paging Group 102, 152  
Paralleled Telephone 154  
Password Security 155  
Pause Insertion 156  
PC Programming 157  
Personal Identification Number (PIN), Extension 76  
Personal Identification Number (PIN), Verification Code 211  
Personal Speed Dialing 183  
Pickup Dialing → Hot Line 109  
Pickup, Group Call 38, 101  
PIN → Extension Personal Identification Number 76  
PIN → Verification Code Personal Identification Number 211  
PIN Lock, Extension 77  
Port Configuration, Extension 78  
Portable Station (PS) Connection 162  
Power Failure Connections 160  
Power Failure Restart 159  
Power Failure Transfer 160  
Predialing 160  
Prime Line Preference 138, 139  
Printing Message 161  
Priority Hunting 115  
Privacy Release 161  
Programming, PC 157  
Programming, PT 169  
PS Connection 162  
PS Directory 164  
PS Feature Buttons 165  
PS Ring Group 103, 165  
PSMPR Software File Version 1.1xxx 241  
PSMPR Software File Version 2.0xxx 241  
PT Programming 169  
Pulse to Tone Conversion 53

## Q

Queue Redirection, Manual 122  
Queuing 121  
Quick Dialing 171  
Quick Setup 172

## R

Recall 83  
Recording into the VPS, Two-way 219  
Recording, Direct 187  
Redial, Interrupt 173  
Redial, Last Number 173  
Relay, External 78  
Remote Extension Dial Lock 74  
Remote Programming 158  
Remote Station Lock Control → Remote Extension Dial Lock 74  
Remote Wake-up Call 196  
Revision History 241  
Ring 115  
Ring Tone Pattern Selection 173  
Ringing Line Preference 138  
Route Selection, Automatic (ARS) 14

## S

S-CO Line Access 44  
Screening, Live Call (LCS) 219  
Security Mode, DISA 62  
Sensor, External 79  
Serial Interface—On-site/Remote Programming 157  
Serial Interface—SMDR 181  
Simplified Voice Message (SVM) 185  
SMDR → Station Message Detail Recording 176  
Software Upgrade 210  
Special Carrier Access Code 183  
Speed Dialing, Personal 183  
Speed Dialing, System 184  
Splitting, Call 39  
Station Hunting → Idle Extension Hunting 124  
Station Message Detail Recording (SMDR) 176  
Station Password Lock → Extension PIN Lock 77  
Station Program Clear → Extension Feature Clear 75  
Station Speed Dialing → Personal Speed Dialing 183  
SVM → Simplified Voice Message 185  
SVM Log 188  
System Speed Dialing 184

## T

TAFAS → Trunk Answer From Any Station 192  
Tenant Service 192  
Tenant-to-Tenant Call Block 193  
Terminate 83  
Terminated Hunting 125  
Time Service 198  
Timed Reminder 196  
Toll Restriction (TRS) 202  
Tone, Call Waiting 41  
Tone, Confirmation 48  
Tone, Dial 54  
Tones/Ring Tones 239  
Transfer Recall 39  
Transfer, Call 39  
TRS → Toll Restriction 202  
TRS Level 204  
TRS Override by System Speed Dialing 204  
Trunk Answer From Any Station (TAFAS) 192

Trunk Group 101  
Trunk Group Access 44  
Two-way Recording into the VPS 219

## U

UCD → Uniform Call Distribution 114  
Unattended Conference 47  
Uniform Call Distribution (UCD) 114  
Upgrading the Software 210

## V

Verification Code Entry 211  
Verification Code Personal Identification Number (PIN) 211  
VIP Call 123  
Virtual PS 212  
Voice Mail (VM) Group 103, 213  
Voice Mail DPT (Digital) Integration 216  
Voice Mail DTMF Integration 222  
Voice Message, Simplified (SVM) 185  
VPS Data Control by the PBX 220

## W

Wake-up Call, Remote 196  
Walking COS 229  
Walking COS—DISA 63  
Walking Extension 230  
Walking Station → Walking Extension 230  
Wireless XDP Parallel Mode 231  
Wrap-up 117

## X

XDP, Wireless 231

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