

Panasonic

PT Programming Manual

Pure IP-PBX



Model No. **KX-NCP500**
KX-NCP1000



Thank you for purchasing a Panasonic Pure IP-PBX.
Please read this manual carefully before using this product and save this manual for future use.

KX-NCP500/KX-NCP1000: PBMPR Software File Version 2.0000 or later

Introduction

About this Programming Manual

The PT Programming Manual is designed to serve as a reference to programming the Panasonic Pure IP-PBX using a Panasonic proprietary telephone (PT) with display.

The PT Programming Manual is divided into the following sections:

Section 1, Overview

Provides an overview of programming the PBX.

Section 2, PT Programming

Serves as reference operating instructions when using a display PT to program the PBX.

Section 3, Appendix

Provides a list of changes from the previous version of each model.

Feature Programming References

Provides a list of all related PT programming items for each feature.

References Found in the PT Programming Manual

PT Programming Manual References

Related sections of the PT Programming Manual are listed for your reference.

Feature Guide References

The Feature Guide explains what the PBX can do, as well as how to obtain the most of its many features and facilities. Sections from the Feature Guide are listed throughout the PT Programming Manual for your reference.

Links to Other Pages and Manuals

If you are viewing this manual with a PC, certain items are linked to different sections of the PT Programming Manual and other Pure IP-PBX manuals. Click on a link to jump to that section.

Linked items include:

- PT Programming Manual References
- Feature Guide References

Safety Notices

Please observe the safety notices in this manual in order to avoid danger to users or other people, and prevent damage to property.

The notices are classified as follows, according to the severity of injury or damage:

<u>WARNING</u>	This notice means that misuse could result in death or serious injury.
<u>CAUTION</u>	This notice means that misuse could result in injury or damage to property.

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 authorised Panasonic Factory Service Centre.

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 **[190] Main Processing (MPR) Software Version Reference**.
- Some optional service cards, PTs, and features are not available in some areas. Additionally, some optional service cards and features are not available for some PBX models. Please consult your certified Panasonic dealer for more information.
- Product specifications are subject to change without notice.
- Throughout this manual, PT displays and other displays are shown in English. Other languages may be available, depending on the country or area.
- In this manual, the suffix of each model number (e.g., KX-NCP500**NE**) is omitted unless necessary.
- For details about PT programming using the KX-NT400, refer to the Operating Instructions for the KX-NT400.



The KX-NCP500UK/KX-NCP1000UK, KX-NCP500NE/KX-NCP1000NE, and KX-NCP500GR/KX-NCP1000GR are designed to interwork with the:

- Analogue Public Switched Telephone Network (PSTN) of European countries
- Pan-European Integrated Services Digital Network (ISDN) using ISDN basic rate access
- Pan-European Integrated Services Digital Network (ISDN) using ISDN primary rate access
- ONP 2048 kbit/s digital structured leased lines (D2048S)

Panasonic Communications Co., Ltd./Panasonic Communications Company (U.K.) Ltd. declares that this equipment is in compliance with the essential requirements and other relevant provisions of Radio & Telecommunications Terminal Equipment (R&TTE) Directive 1999/5/EC.

Declarations of Conformity for the relevant Panasonic products described in this manual are available for download by visiting:

<http://www.doc.panasonic.de>

Contact to Authorised Representative:
Panasonic Testing Centre
Panasonic Marketing Europe GmbH
Winsbergring 15, 22525 Hamburg, Germany

Table of Contents

1	Overview	9
1.1	Introduction	10
1.1.1	Introduction	10
1.1.2	Password Security	11
1.1.3	Entering Characters	12
2	PT Programming	17
2.1	PT Programming	18
2.1.1	Programming Instructions	18
2.1.2	Maximum Values	21
2.1.3	Basic Programming	22
	[000] Date & Time	22
	[001] System Speed Dialling Number	22
	[002] System Speed Dialling Name	22
	[003] Extension Number	22
	[004] Extension Name	23
	[005] Extension Personal Identification Number (PIN)	23
	[006] Operator Assignment	23
	[007] DSS Console Paired Telephone	23
	[008] Absent Message	24
	[010] Charge Margin	24
	[011] Charge Tax	24
	[012] Charge Rate per Unit	24
2.1.4	System Management Programming	25
	[100] Flexible Numbering	25
	[101] Time Service Switching Mode	25
	[102] Time Service Starting Time	25
	[103] Idle Line Access (Local Access)	26
	[110] System Password for Administrator—for PT Programming	26
	[111] System Password for User—for PT Programming	26
	[112] Manager Password	26
	[120] Verification Code	26
	[121] Verification Code Name	27
	[122] Verification Code Personal Identification Number (PIN)	27
	[123] Verification Code COS Number	27
	[130] Decimal Point Position for Currency	27
	[131] Currency	27
	[190] Main Processing (MPR) Software Version Reference	28
2.1.5	Timer Programming	29
	[200] Hold Recall Time	29
	[201] Transfer Recall Time	29
	[203] Intercept Time	29
	[204] Hot Line Waiting Time	29
	[205] Automatic Redial Repeat Times	29
	[206] Automatic Redial Interval	29
	[207] Door Unlock Time	30
	[208] Call Duration Count Starting Time for LCOT	30
	[209] DISA Delayed Answer Time	30
	[210] DISA Trunk-to-Trunk Call Prolong Time	30
	[211] DISA Intercept Time	30
2.1.6	TRS/Barring/ARS Programming	31
	[300] TRS/Barring Override by System Speed Dialling	31

	[301] TRS/Barring Denied Code	31
	[302] TRS/Barring Exception Code	31
	[303] Special Carrier Access Code	31
	[304] Emergency Number	31
	[320] ARS Mode	31
	[321] ARS Leading Number	32
	[322] ARS Routing Plan Table Number	32
	[325] ARS Exception Number	32
	[330] ARS Routing Plan Time Table	32
	[331–346] ARS Routing Plan Table (1–16)	33
	[350] ARS Carrier Name	33
	[351] ARS Trunk Group for Carrier Access	33
	[352] ARS Removed Number of Digits for Carrier Access	33
	[353] ARS Carrier Access Code	33
2.1.7	Trunk Programming	34
	[400] LCOT/BRI Trunk Connection	34
	[401] LCOT/BRI Trunk Name	34
	[402] LCOT/BRI Trunk Group Number	34
	[409] LCOT/BRI Trunk Number Reference	34
	[410] LCOT Dialling Mode	34
	[411] LCOT Pulse Rate	34
	[412] LCOT DTMF Minimum Duration	35
	[413] LCOT CPC Signal Detection Time—Outgoing	35
	[414] LCOT CPC Signal Detection Time—Incoming	35
	[415] LCOT Reverse Circuit	35
	[416] LCOT Pause Time	35
	[417] LCOT Flash/Recall Time	35
	[418] LCOT Disconnect Time	36
	[420] BRI Network Type	36
	[421] BRI DIL/DDI/MSN Selection	36
	[422] BRI Subscriber Number	36
	[424] BRI Layer 1 Active Mode	36
	[425] BRI Layer 2 Active Mode	36
	[426] BRI Configuration	37
	[427] BRI TEI Mode	37
	[450] DIL 1:1 Destination	37
	[451] DID Number	37
	[452] DID Name	37
	[453] DID Destination	38
	[471] Host PBX Access Code	38
	[472] Extension-to-Trunk Call Duration	38
	[473] Trunk-to-Trunk Call Duration	38
	[475] DISA Silence Detection	38
	[476] DISA Continuous Signal Detection	39
	[477] DISA Cyclic Signal Detection	39
	[490] Caller ID Signal Type	39
	[491] Pay Tone Signal Type	39
2.1.8	COS Programming	40
	[500] Trunk Group Number	40
	[501] TRS/Barring Level	40
	[502] Trunk Call Duration Limitation	40
	[503] Call Transfer to Trunk	40
	[504] Call Forwarding to Trunk	40
	[505] Executive Busy Override	41
	[506] Executive Busy Override Deny	41

Table of Contents

	[507] DND Override	41
	[508] Account Code Mode	41
	[509] TRS/Barring Level for System Speed Dialling	41
	[510] TRS/Barring Level for Extension Dial Lock	41
	[511] Manager Assignment	41
	[512] Permission for Door Open Access	42
	[514] Time Service Manual Switching	42
	[515] Wireless XDP Parallel Mode for Paired Telephone	42
	[516] Programming Mode Limitation	42
2.1.9	Extension Programming	43
	[600] EXtra Device Port (XDP) Mode	43
	[601] Terminal Device Assignment	43
	[602] Class of Service	43
	[603] Extension User Group	43
	[604] Extension Intercept Destination	43
	[605] Call Forwarding—No Answer Time	44
	[606] CLIP/COLP Number	44
	[620] Incoming Call Distribution Group Member	44
	[621] Incoming Call Distribution Group Delayed Ringing	44
	[622] Incoming Call Distribution Group Floating Extension Number	44
	[623] Incoming Call Distribution Group Name	45
	[624] Incoming Call Distribution Group Distribution Method	45
	[625] Destination for Overflow Time Expiration	45
	[626] Overflow Time	45
	[627] Destination When All Busy	45
	[628] Queuing Call Capacity	46
	[629] Queuing Hurry-up Level	46
	[630] Queuing Time Table	46
	[631] Sequences in Queuing Time Table	46
	[632] Maximum Number of Agents	46
	[640] Extension User Groups of a Paging Group	47
	[641] External Pagers of a Paging Group	47
	[650] Extension User Groups of a Pickup Group	47
	[660] VM Group Floating Extension Number	47
	[680] Idle Extension Hunting Type	48
	[681] Idle Extension Hunting Group Member	48
	[690] PS Registration	48
	[691] PS Termination	48
	[692] Personal Identification Number (PIN) for PS Registration	49
	[699] CS Status Reference	49
2.1.10	Resource/Interface Programming	50
	[700] External Pager Floating Extension Number	50
	[710] Music Source Selection for BGM	50
	[711] Music on Hold	50
	[712] Music for Transfer	50
	[720] Doorphone Call Destination	50
	[729] Doorphone Number Reference	50
	[730] Outgoing Message (OGM) Floating Extension Number	51
	[731] Outgoing Message (OGM) Name	51
	[732] DISA Security Mode	51
2.1.11	SMDR & Maintenance Programming	52
	[800] RS-232C Parameter—New Line Code	52
	[800] RS-232C Parameter—Baud Rate	52
	[800] RS-232C Parameter—Word Length	52
	[800] RS-232C Parameter—Parity Bit	52

[800] RS-232C Parameter—Stop Bit Length	52
[801] External Modem Control	52
[802] SMDR Page Length	53
[803] SMDR Skip Perforation	53
[804] SMDR Outgoing Call Printing	53
[805] SMDR Incoming Call Printing	53
[810] Remote Programming	53
[811] Modem Floating Extension Number	53
[812] ISDN Remote Floating Extension Number	53
2.1.12 Card Programming	54
[900] Slot Card Type Reference	54
[901] Slot Card Deletion	54
[902] Slot Card Reset	54
[910] OPB3 Option Card Type Reference	54
[911] OPB3 Option Card Deletion	54
3 Appendix	55
3.1 Revision History	56
3.1.1 KX-NCP500/KX-NCP1000 PBMPR Software File Version 2.0xxx	56
Feature Programming References	57

Section 1

Overview

This section provides an overview of programming the PBX.

1.1 Introduction

1.1.1 Introduction

These programming instructions are designed to serve as an overall system programming reference for the Panasonic Pure IP-PBX. Each feature in the PBX has default settings that can be changed to customise the PBX to your requirements. These settings control the functions of the PBX, and changing them is referred to as "system programming".

Only one person can perform system programming at a time. Any other users trying to enter system programming mode will be denied access.

Ways to Programme

There are two programming methods:

- **PC (Personal Computer) Programming**
All features and settings of the PBX can be programmed through PC programming with Maintenance Console. Installing and starting the Maintenance Console is described in the Installation Manual.
- **PT (Proprietary Telephone) Programming**
A subset of the features and settings of the PBX can be programmed using a PT. PT programming is described in Section 2.1 PT Programming. An extension user can perform system programming by entering three-digit programming numbers with a PT.

1.1.2 Password Security

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
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.	4–10 digits
System Password (PT) for Administrator	Used to access administrator-level PT programming. All PT programming settings are available.	

CAUTION

To the Administrator or Installer regarding the system password

1. Please provide all system passwords to the customer.
2. To avoid unauthorised 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 programme 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 unauthorised access. For a list of numbers and characters that can be used in system passwords, refer to Section 1.1.3 Entering Characters.

1.1.3 Entering Characters

The following characters can be used when storing a name, message, or other text entry data using a PT. The tables below show you the characters available by pushing each button a specific number of times.

Table 1 (Standard mode)

Times Buttons	1	2	3	4	5	6	7	8	9
1	!	?	"	1					
2	A	B	C	a	b	c	2		
3	D	E	F	d	e	f	3		
4	G	H	I	g	h	i	4		
5	J	K	L	j	k	l	5		
6	M	N	O	m	n	o	6		
7	P	Q	R	S	p	q	r	s	7
8	T	U	V	t	u	v	8		
9	W	X	Y	Z	w	x	y	z	9
0	(space)	.	,	'	:	;	0		
*	/	+	-	=	<	>	*		
#	\$	%	&	@	()	€	£	#

Table 1 (Standard mode for RU model)

Times Buttons	1	2	3	4	5	6	7	8	9
1	!	?	"	1					
2	A	B	C	a	b	c	2		
3	D	E	F	d	e	f	3		
4	G	H	I	g	h	i	4		
5	J	K	L	j	k	l	5		
6	M	N	O	m	n	o	6		
7	P	Q	R	S	p	q	r	s	7
8	T	U	V	t	u	v	8		
9	W	X	Y	Z	w	x	y	z	9
0	(space)	.	,	'	:	;	0		
*	/	+	-	=	<	>	*		
#	\$	%	&	@	()	■	■	#

Table 2 (Option mode)

Times Buttons	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	!	?	"	ä	ö	ü	1								
2	A	B	C	a	b	c	À	Á	Â	Ã	Ä	Å	Æ	Ç	2
3	D	E	F	d	e	f	Ð	È	É	Ê	Ë	3			
4	G	H	I	g	h	i	Ì	Í	Î	Ï	4				
5	J	K	L	j	k	l	5								
6	M	N	O	m	n	o	Ñ	Ò	Ó	Ô	Õ	Ö	Ø	Œ	6
7	P	Q	R	S	p	q	r	s	Š	ß	7				
8	T	U	V	t	u	v	Û	Ú	Û	Ü	8				
9	W	X	Y	Z	w	x	y	z	Ý	Ž	9				
0	(space)	.	,	'	:	;	0								
*	/	+	-	=	<	>	*								
#	\$	%	&	@	()	€	£	#						

Table 2 (Option mode for CE model)

Times Buttons	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	!	?	"	ä	ö	ü	1								
2	A	B	C	a	b	c	Á	Â	Ã	Ä	Å	Ć	Ç	Č	2
3	D	E	F	d	e	f	Ď	Ð	É	Ě	Ë	ě	3		
4	G	H	I	g	h	i	Í	Î	4						
5	J	K	L	j	k	l	Ĺ	5							
6	M	N	O	m	n	o	Ň	Ñ	Ó	Ô	Õ	Ö	6		
7	P	Q	R	S	p	q	r	s	Ř	Ř	Š	Ś	Ş	ß	7
8	T	U	V	t	u	v	Ť	Ť	ú	Ú	Ú	Ü	8		
9	W	X	Y	Z	w	x	y	z	Ž	Ž	Ž	Ý	9		
0	(space)	.	,	'	:	;	0								
*	/	+	-	=	<	>	*								
#	\$	%	&	@	()	€	£	#						

1.1.3 Entering Characters

Table 2 (Option mode for GR model)

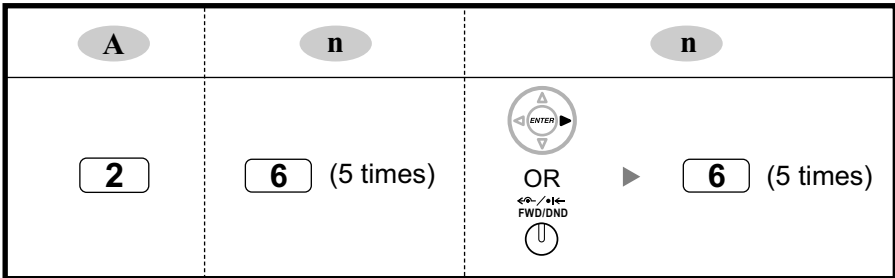
Times Buttons	1	2	3	4	5	6	7	8	9
1	!	?	"	1					
2	A	B	Г	2					
3	Δ	E	Z	3					
4	H	Θ	I	4					
5	K	Λ	M	5					
6	N	Ξ	O	6					
7	Π	P	Σ	7					
8	T	Υ	Φ	8					
9	X	Ψ	Ω	9					
0	(space)	.	,	'	:	;	0		
*	/	+	-	=	<	>	*		
#	\$	%	&	@	()	€	£	#

Table 2 (Option mode for RU model)

Times Buttons	1	2	3	4	5	6	7	8	9	10	11
1	A	Б	В	!	?	"	1				
2	Г	Д	Е	Ё	2						
3	Ж	З	И	Й	3						
4	К	Л	М	4							
5	Н	О	П	5							
6	Р	С	Т	6							
7	У	Ф	Х	7							
8	Ц	Ч	Ш	8							
9	Щ	Ъ	Ы	Ь	9						
0	Э	Ю	Я	(space)	.	,	'	:	;	0	
*	/	+	-	=	<	>	Г	€	І	İ	*
#	\$	%	&	@	()	€	І	Ÿ	#	

[Example of Entering Characters]

To enter "Ann":



Note

- To erase the character on the cursor, press CLEAR.
- To move the cursor to the left, press ←.
- To move the cursor to the right, press →. When entering two or more characters that use the same button consecutively (e.g. "G" and "I"), you must press this button or the FWD/DND button after entering the first character.
- If SELECT is pressed, the characters for each button will be displayed in reverse order.
- To toggle between Table 1 and Table 2 when using the KX-NT300/KX-DT300/KX-T7600 series, press the leftmost soft button.

1.1.3 Entering Characters

Section 2

PT Programming

This section serves as reference operating instructions when using a display PT to program the PBX.

2.1 PT Programming

2.1.1 Programming Instructions

Required Telephone/Extension










PBX settings can be customised through system programming by using a proprietary telephone (PT) with a multiline display, such as the KX-NT343 or KX-NT346. To access system programming, the Class of Service (COS) assigned to the PT's extension must be programmed to allow system programming, or the PT must be connected to the lowest-numbered port on the card installed in the lowest-numbered slot.

Only one system programming session can be performed at a time. This means that only one user can access system programming at a time, whether through a PT or PC.

For a list of characters that can be entered during system programming, see Section 1.1.3 Entering Characters.

Buttons and Functions

Fixed Buttons			Function
KX-NT300/KX-DT300	KX-T7600	KX-T7200/KX-T7400/ KX-T7500 ^{*1}	
			PREVIOUS
			NEXT
			(Page up)
			(Page down)
			ENTER
		—	Back to Previous Menu (CANCEL)
			SHIFT
			PROGRAM
			END
			SELECT

Fixed Buttons			Function
KX-NT300/KX-DT300	KX-T7600	KX-T7200/KX-T7400/ KX-T7500 ^{*1}	
			FLASH
			CLEAR
			SECRET

*1 The buttons shown in this column are from the KX-T7400 series.

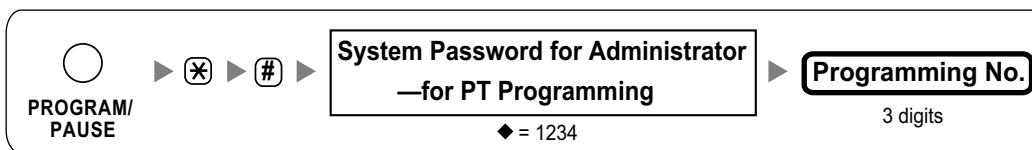
Entering System Programming Mode

Using a PT to perform system programming allows an authorised extension user to set a wide range of PBX features and parameters.

There are two levels of system programming that can be performed with a PT: administrator-level programming and user-level programming.

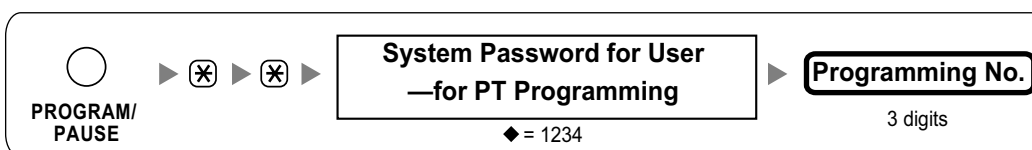
Administrator Level:

Allows the programming of all settings accessible through PT programming.



User Level:

Allows the programming of limited settings as permitted through PC programming.



Note

◆ means default value throughout this manual.

Programming Structure

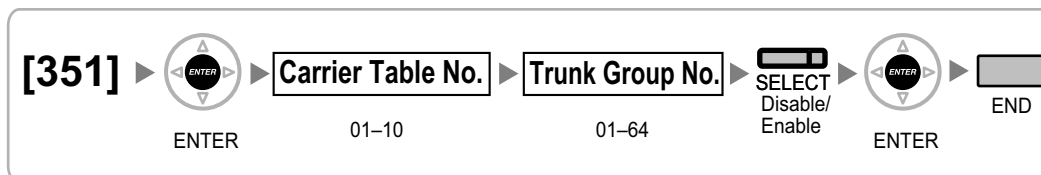
Programming Number	Programming Group Title	Description
[0XX]	Basic Programming	Frequently used programming steps
[1XX]	System Management Programming	Global system parameters
[2XX]	Timer Programming	System timers

2.1.1 Programming Instructions

Programming Number	Programming Group Title	Description
[3XX]	TRS/Barring/ARS Programming	TRS/Barring and Automatic Route Selection (ARS) programming
[4XX]	Trunk Programming	Trunk, trunk group, and BRI line settings
[5XX]	COS Programming	Class of Service parameters
[6XX]	Extension Programming	Extension feature settings
[7XX]	Resource/Interface Programming	PBX interface and external device settings
[8XX]	SMDR & Maintenance Programming	Station Message Detail Recording (SMDR) and maintenance feature settings
[9XX]	Card Programming	Used to display the cards currently installed in the PBX, or to delete a card from system programming before physically removing it.

2.1.2 Maximum Values

Throughout this manual, maximum entry values are shown for each programming item, as shown in the example below.



However, please note that slot and port entry values are not listed within each programming item. These values vary depending on the model of PBX and the card type installed, as shown below.

Available Slot Entry Values

PBX Model	Free Slot Number	Supported Cards
KX-NCP500	01-05	All cards
KX-NCP1000	01-07	

Enter slot numbers as two-digit numbers (e.g. "04" for slot 4).

Available Port Entry Values

Card Type	Port Number	Related Programming
BRI2	01-02	[400] [409] [42x] [450]
DHLC4	01-04	[600] [601]
DLC8	01-08	
DLC16	01-16	
DPH2	11-32 ^{*1}	[72x]
DPH4	11-34 ^{*1}	
LCOT4	01-04	[400] [409] [41x] [450]

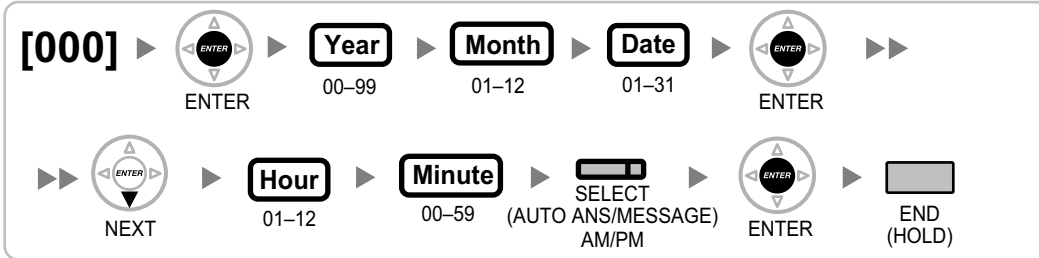
Enter values as two-digit numbers (e.g. "04" for port 4).

^{*1} Enter card number and port number as single-digit numbers (e.g. "34" for card 3, port 4).

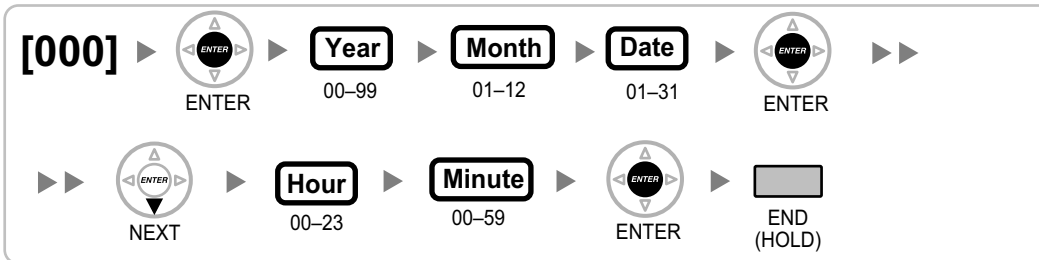
2.1.3 Basic Programming

[000] Date & Time

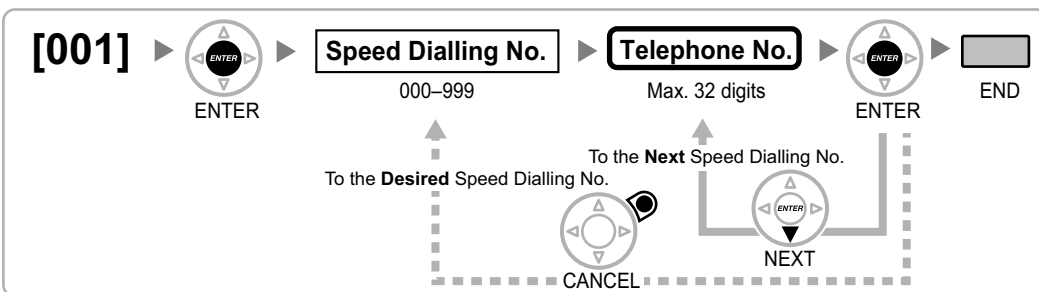
[In 12-hour Format]



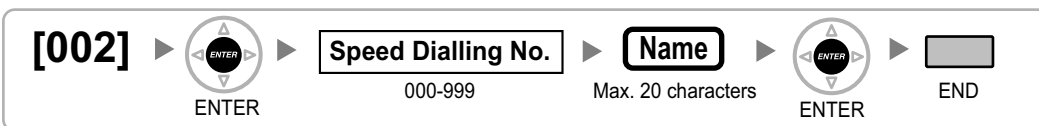
[In 24-hour Format]



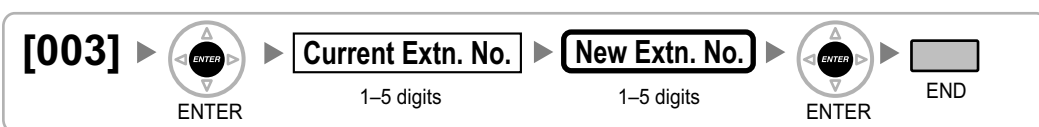
[001] System Speed Dialling Number



[002] System Speed Dialling Name

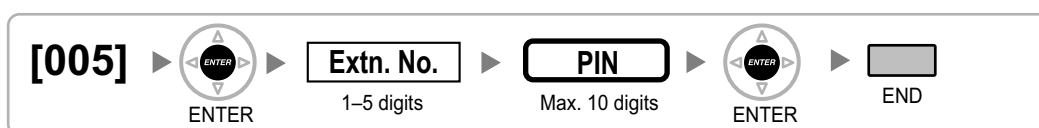


[003] Extension Number



Note

If PC Phone, PC Console, or a CTI application is running on a PC connected to an extension whose extension number is to be programmed/modified, quit the application first.

[004] Extension Name**[005] Extension Personal Identification Number (PIN)****CAUTION**

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:

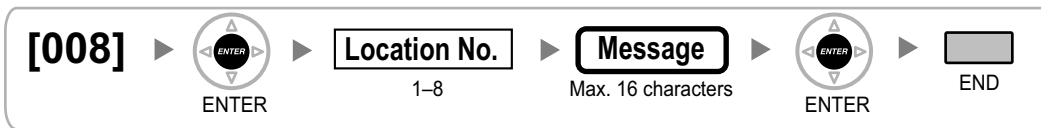
- Keeping PINs secret.
- Selecting complex, random PINs that cannot be easily guessed.
- Changing PINs frequently.

[006] Operator Assignment**[007] DSS Console Paired Telephone****Note**

This programme is only available after the port connected to the DSS Console is assigned as "DSS Console" in [601] Terminal Device Assignment.

Note that if one or more SDN buttons have been set at the DSS Console, they must be deleted before this setting can be changed.

[008] Absent Message



[010] Charge Margin



[011] Charge Tax

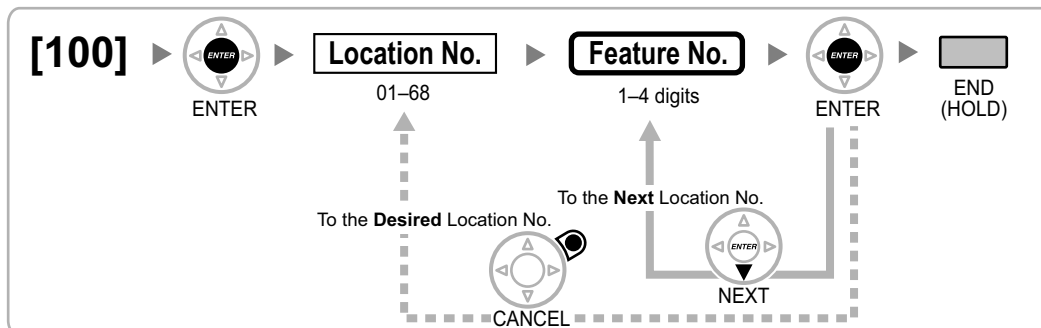


[012] Charge Rate per Unit



2.1.4 System Management Programming

[100] Flexible Numbering

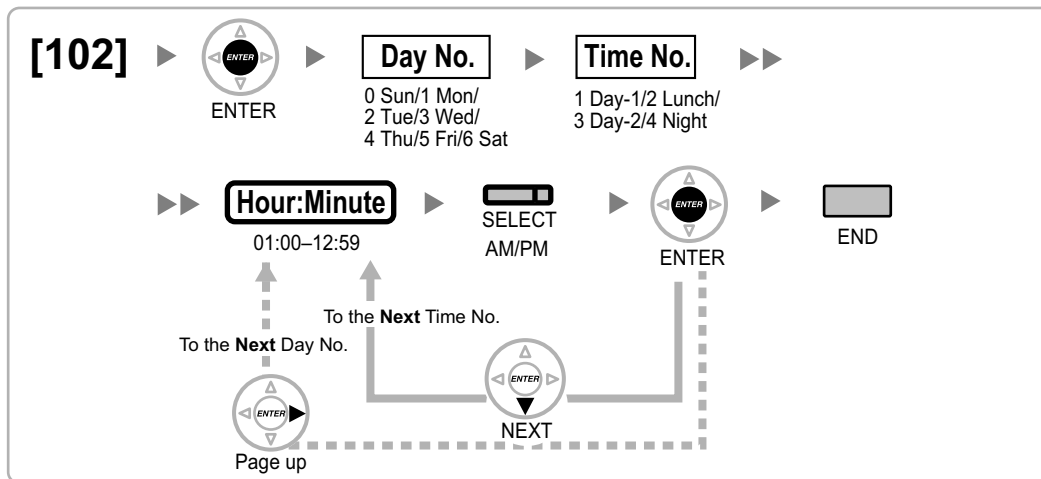


[101] Time Service Switching Mode

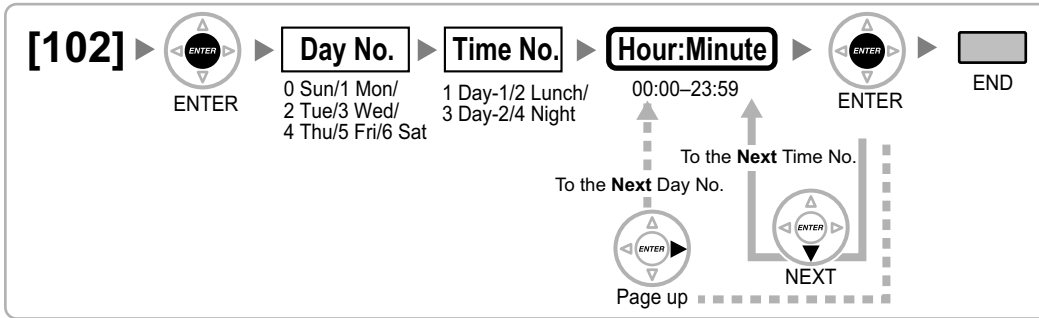


[102] Time Service Starting Time

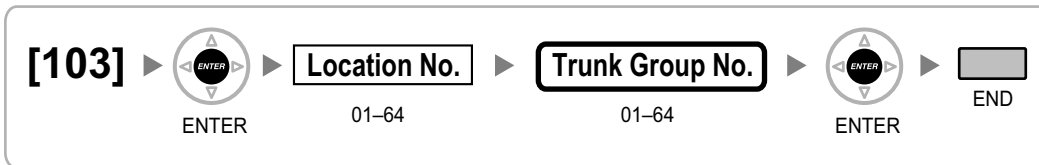
[In 12-hour Format]



[In 24-hour Format]



[103] Idle Line Access (Local Access)



[110] System Password for Administrator—for PT Programming



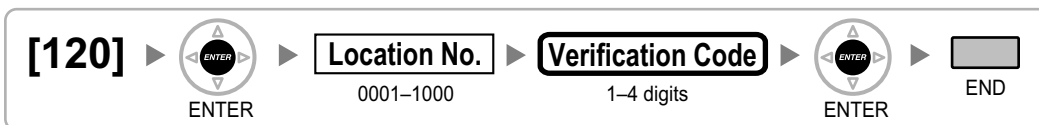
[111] System Password for User—for PT Programming

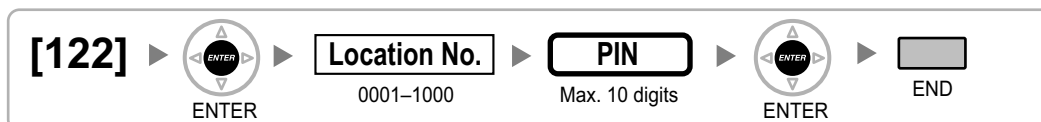


[112] Manager Password



[120] Verification Code



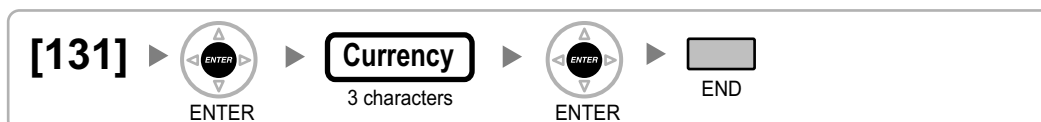
[121] Verification Code Name**[122] Verification Code Personal Identification Number (PIN)****CAUTION**

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:

- Keeping PINs secret.
- Selecting complex, random PINs that cannot be easily guessed.
- Changing PINs frequently.

[123] Verification Code COS Number**[130] Decimal Point Position for Currency****[131] Currency**

[190] Main Processing (MPR) Software Version Reference



2.1.5 Timer Programming

[200] Hold Recall Time



[201] Transfer Recall Time



[203] Intercept Time



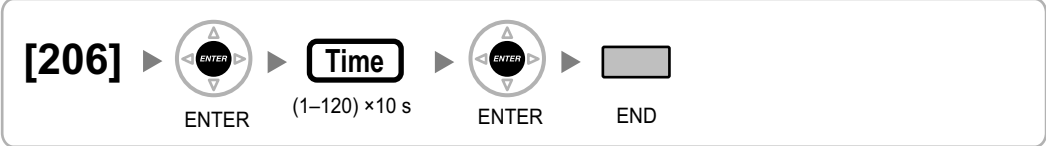
[204] Hot Line Waiting Time



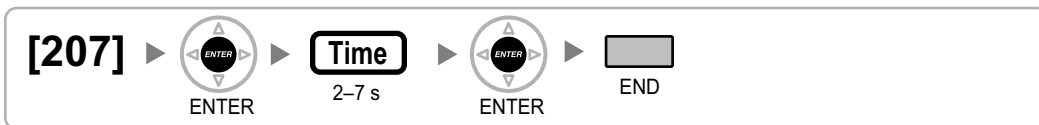
[205] Automatic Redial Repeat Times



[206] Automatic Redial Interval



[207] Door Unlock Time



[208] Call Duration Count Starting Time for LCOT



[209] DISA Delayed Answer Time



[210] DISA Trunk-to-Trunk Call Prolong Time

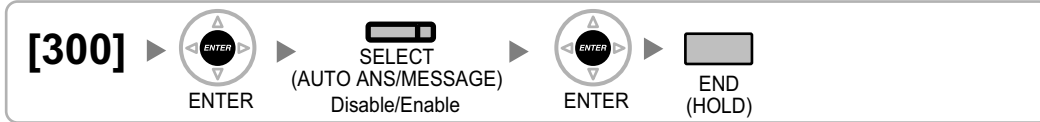


[211] DISA Intercept Time

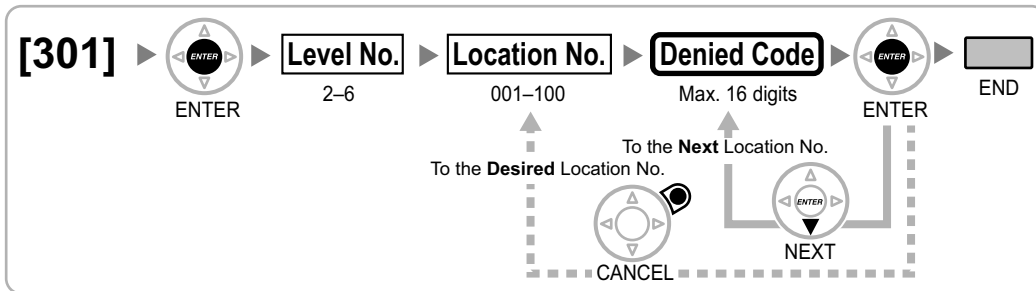


2.1.6 TRS/Barring/ARS Programming

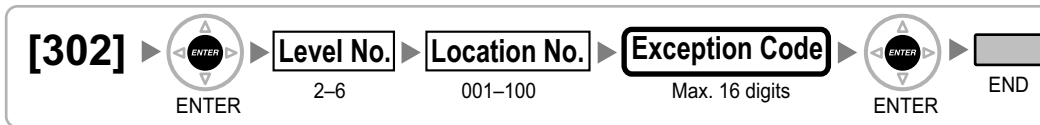
[300] TRS/Barring Override by System Speed Dialling



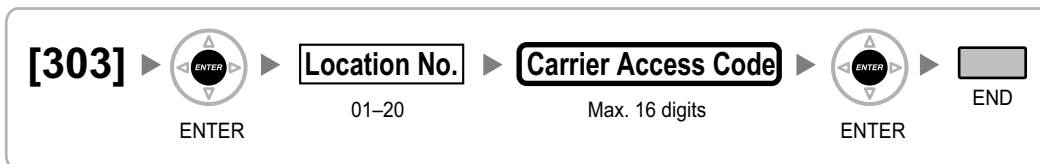
[301] TRS/Barring Denied Code



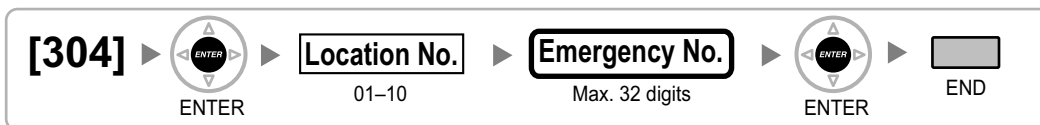
[302] TRS/Barring Exception Code



[303] Special Carrier Access Code



[304] Emergency Number



[320] ARS Mode



[321] ARS Leading Number



[322] ARS Routing Plan Table Number

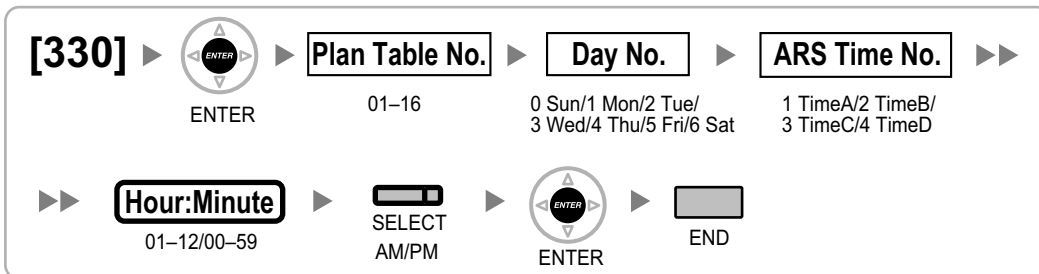


[325] ARS Exception Number

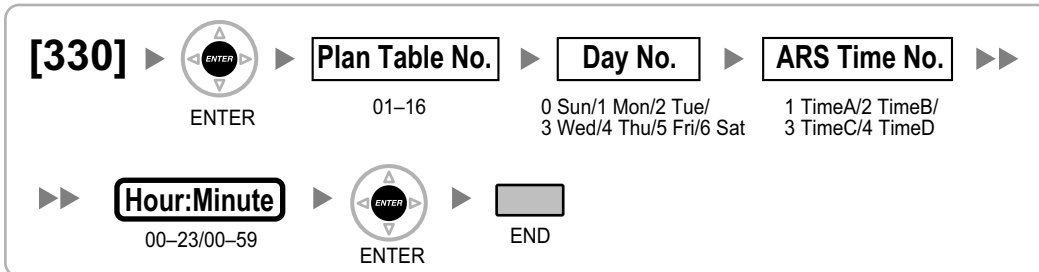


[330] ARS Routing Plan Time Table

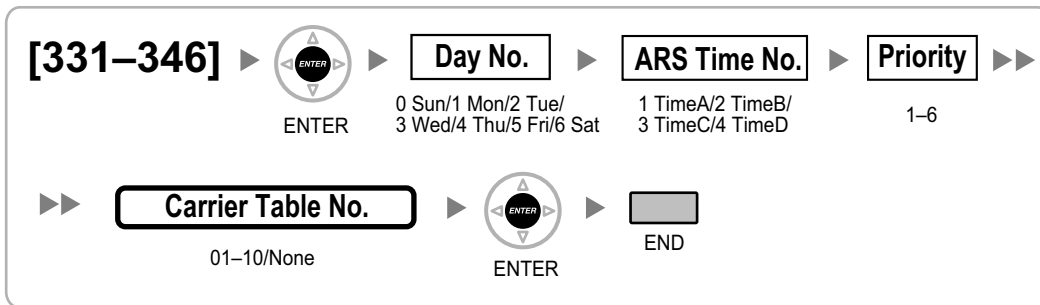
[In 12-hour Format]



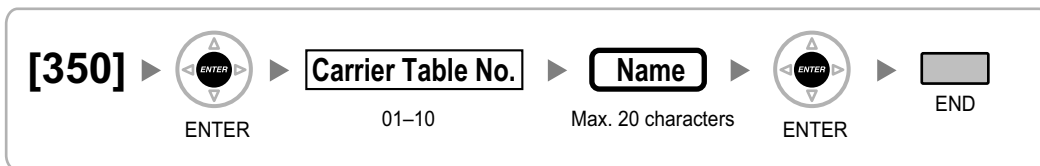
[In 24-hour Format]



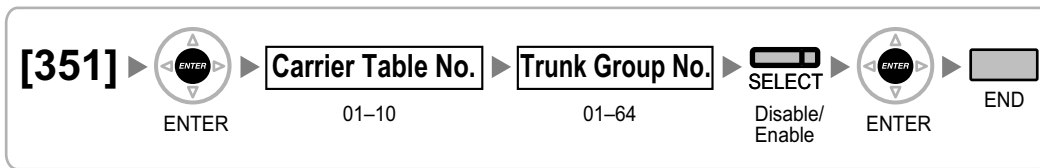
[331–346] ARS Routing Plan Table (1–16)



[350] ARS Carrier Name



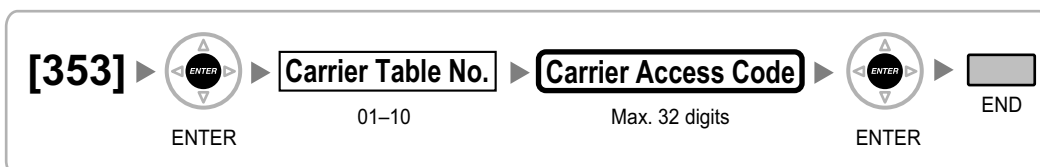
[351] ARS Trunk Group for Carrier Access



[352] ARS Removed Number of Digits for Carrier Access

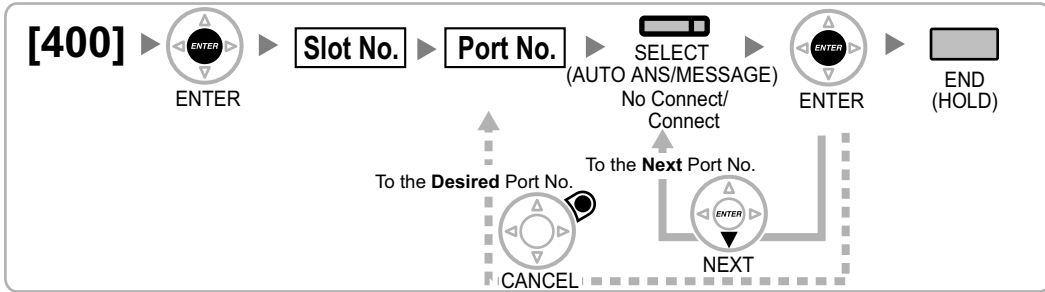


[353] ARS Carrier Access Code



2.1.7 Trunk Programming

[400] LCOT/BRI Trunk Connection



[401] LCOT/BRI Trunk Name



[402] LCOT/BRI Trunk Group Number



[409] LCOT/BRI Trunk Number Reference

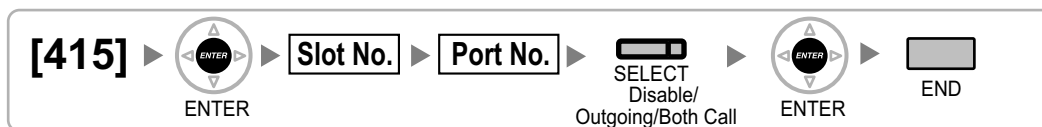
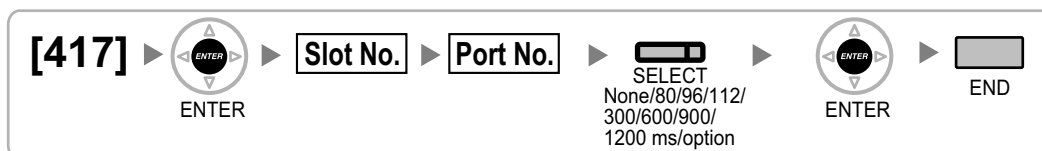


[410] LCOT Dialling Mode



[411] LCOT Pulse Rate



[412] LCOT DTMF Minimum Duration**[413] LCOT CPC Signal Detection Time—Outgoing****[414] LCOT CPC Signal Detection Time—Incoming****[415] LCOT Reverse Circuit****[416] LCOT Pause Time****[417] LCOT Flash/Recall Time**

[418] LCOT Disconnect Time



[420] BRI Network Type



[421] BRI DIL/DDI/MSN Selection



[422] BRI Subscriber Number



[424] BRI Layer 1 Active Mode



Note

After changing this setting, perform [902] Slot Card Reset to enable the new setting.

[425] BRI Layer 2 Active Mode



Note

After changing this setting, perform [902] Slot Card Reset to enable the new setting.

[426] BRI Configuration



Note

After changing this setting, perform [902] Slot Card Reset to enable the new setting.

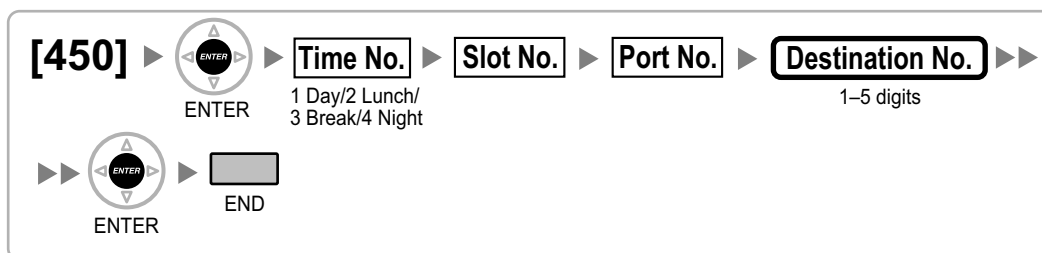
[427] BRI TEI Mode



Note

After changing this setting, perform [902] Slot Card Reset to enable the new setting.

[450] DIL 1:1 Destination



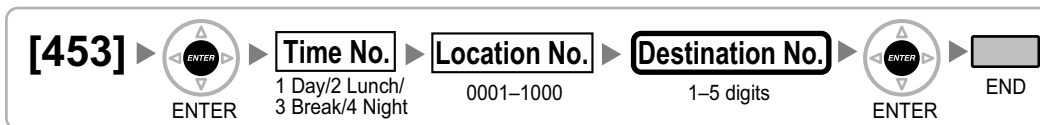
[451] DID Number



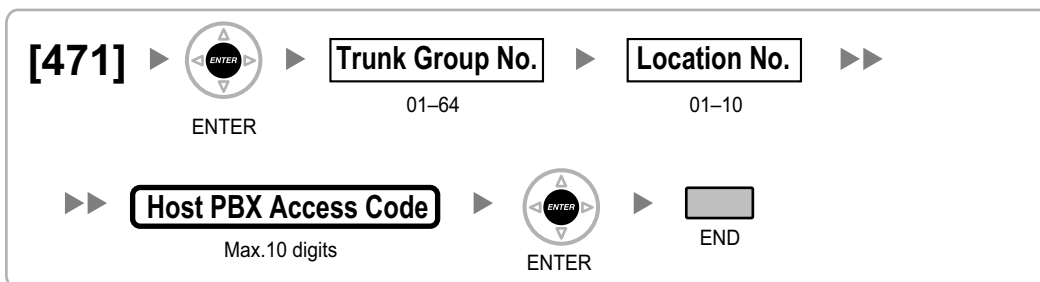
[452] DID Name



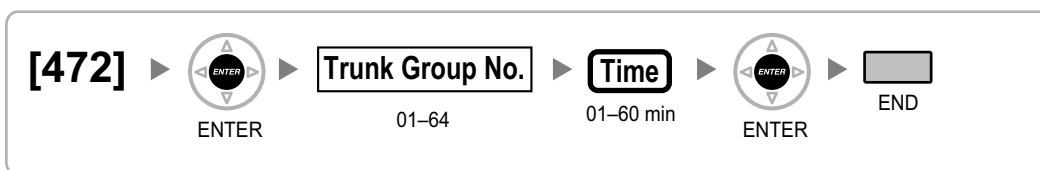
[453] DID Destination



[471] Host PBX Access Code



[472] Extension-to-Trunk Call Duration



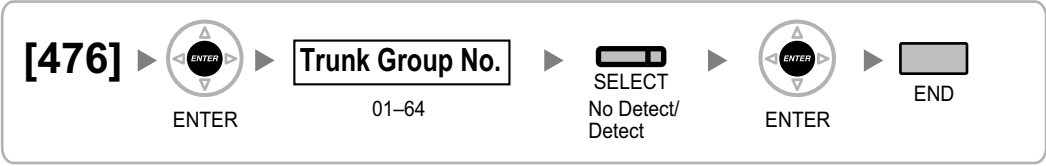
[473] Trunk-to-Trunk Call Duration



[475] DISA Silence Detection



[476] DISA Continuous Signal Detection



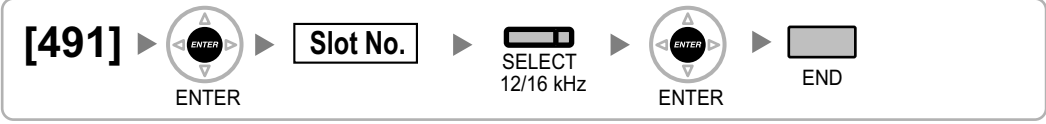
[477] DISA Cyclic Signal Detection



[490] Caller ID Signal Type

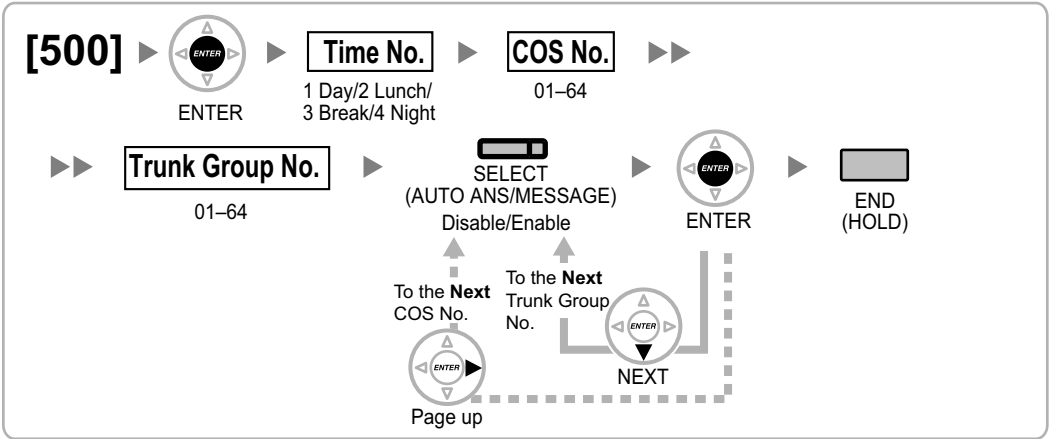


[491] Pay Tone Signal Type

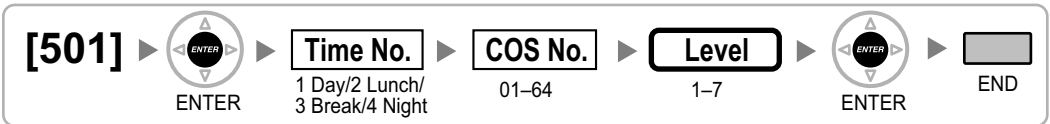


2.1.8 COS Programming

[500] Trunk Group Number



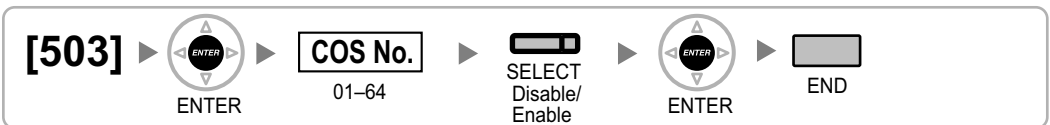
[501] TRS/Barring Level



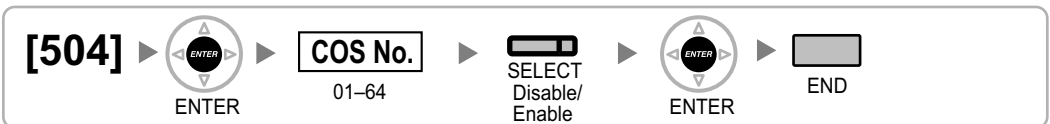
[502] Trunk Call Duration Limitation

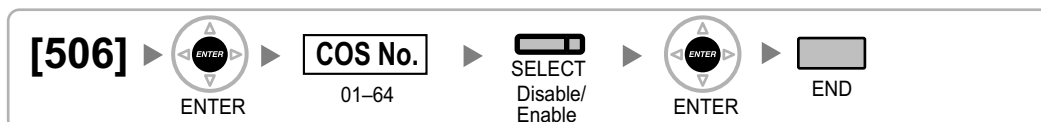
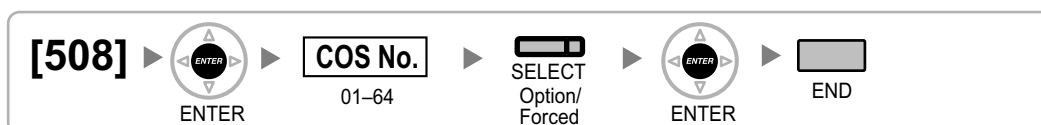


[503] Call Transfer to Trunk

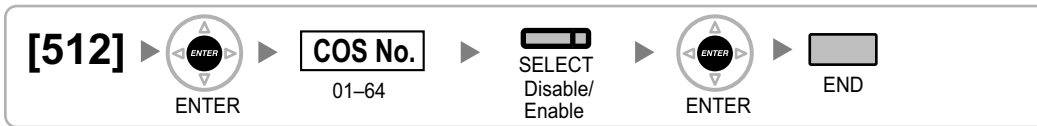


[504] Call Forwarding to Trunk



[505] Executive Busy Override**[506] Executive Busy Override Deny****[507] DND Override****[508] Account Code Mode****[509] TRS/Barring Level for System Speed Dialling****[510] TRS/Barring Level for Extension Dial Lock****[511] Manager Assignment**

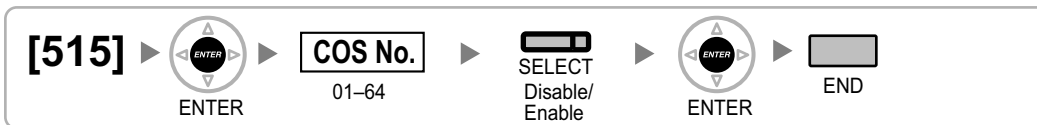
[512] Permission for Door Open Access



[514] Time Service Manual Switching



[515] Wireless XDP Parallel Mode for Paired Telephone

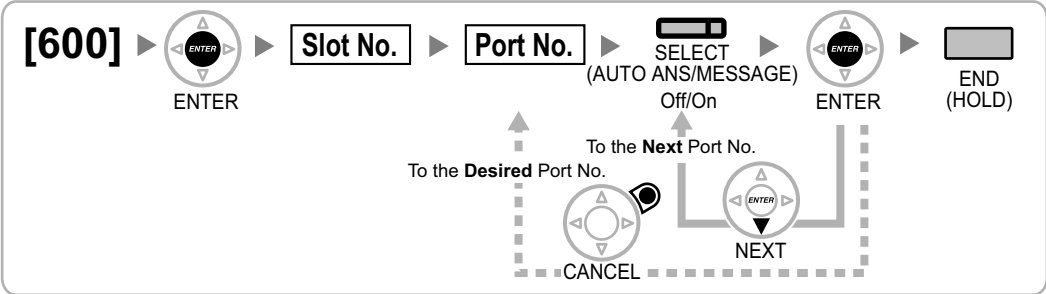


[516] Programming Mode Limitation

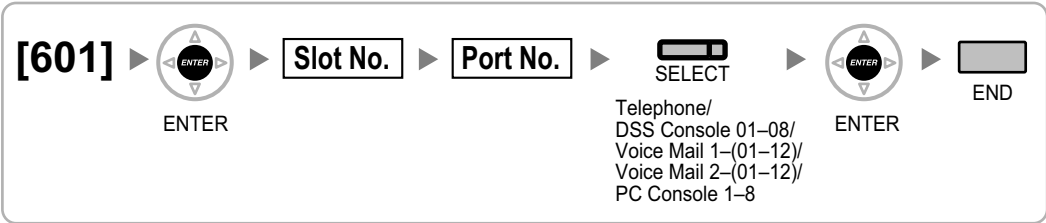


2.1.9 Extension Programming

[600] EXtra Device Port (XDP) Mode



[601] Terminal Device Assignment



Note

When changing the type of a port for which one or more SDN buttons are set (except when changing between PC Console and Telephone), all SDN buttons customised for that device will be deleted.

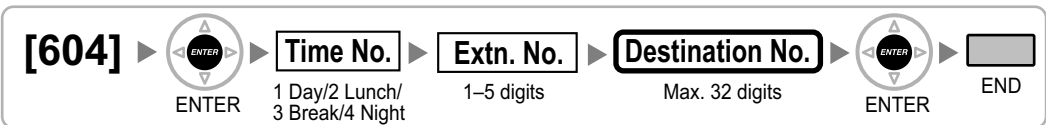
[602] Class of Service



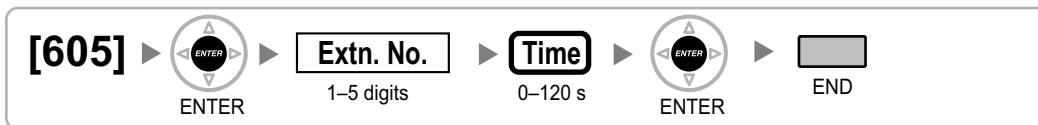
[603] Extension User Group



[604] Extension Intercept Destination



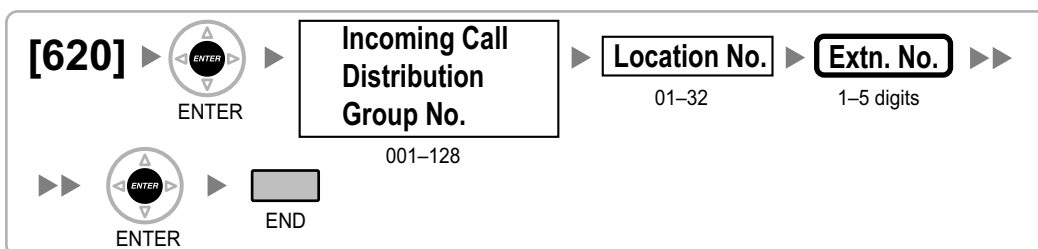
[605] Call Forwarding—No Answer Time



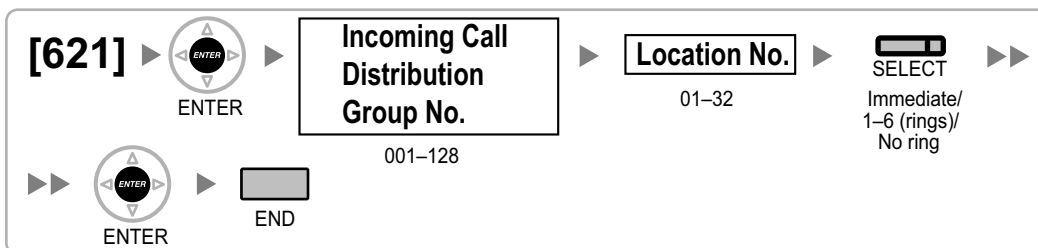
[606] CLIP/COLP Number



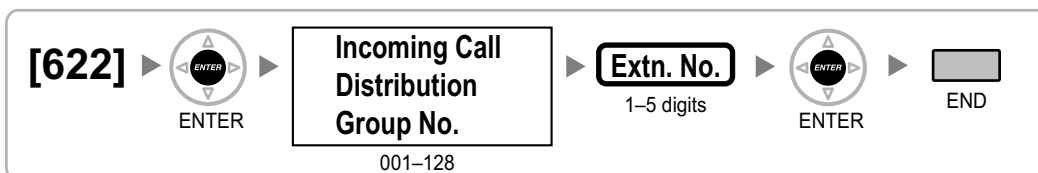
[620] Incoming Call Distribution Group Member

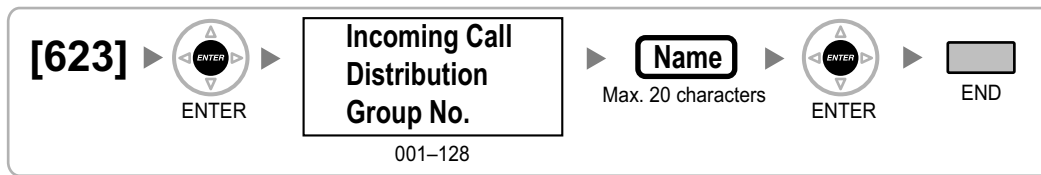
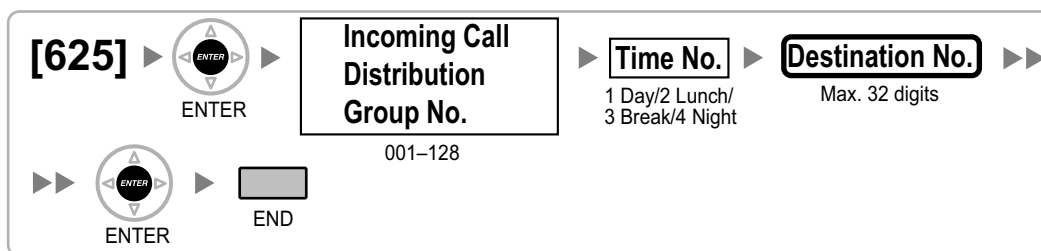
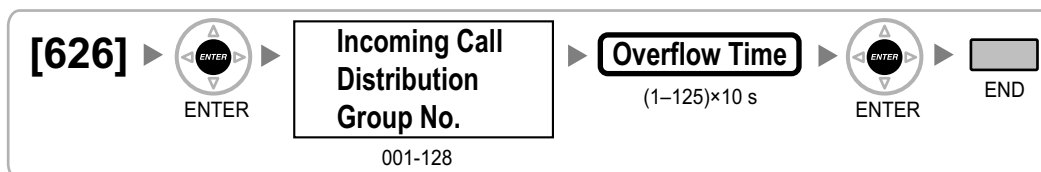
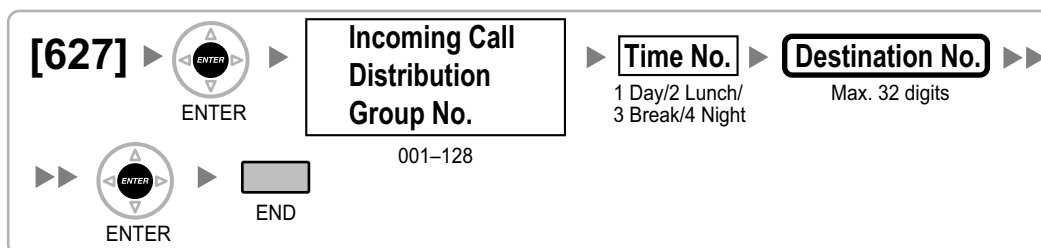


[621] Incoming Call Distribution Group Delayed Ringing

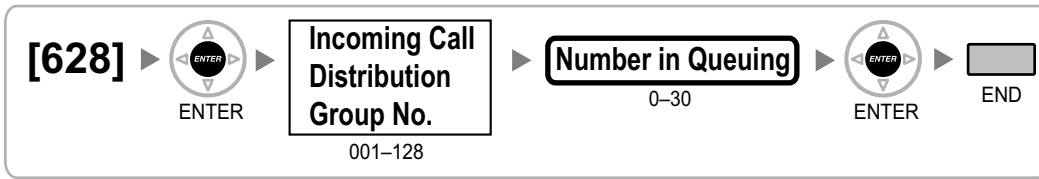


[622] Incoming Call Distribution Group Floating Extension Number

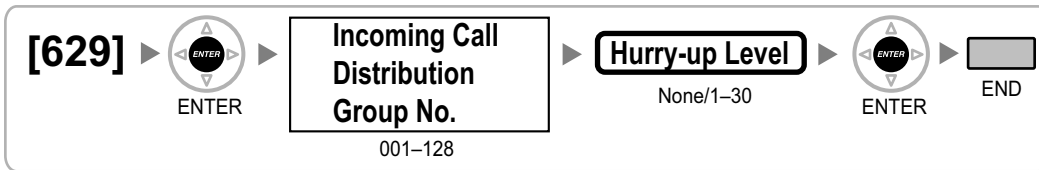


[623] Incoming Call Distribution Group Name**[624] Incoming Call Distribution Group Distribution Method****[625] Destination for Overflow Time Expiration****[626] Overflow Time****[627] Destination When All Busy**

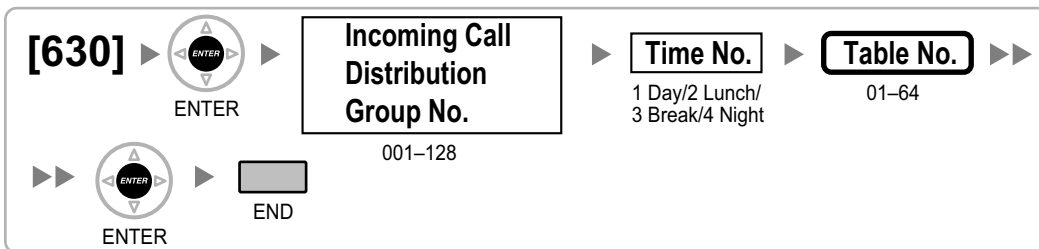
[628] Queuing Call Capacity



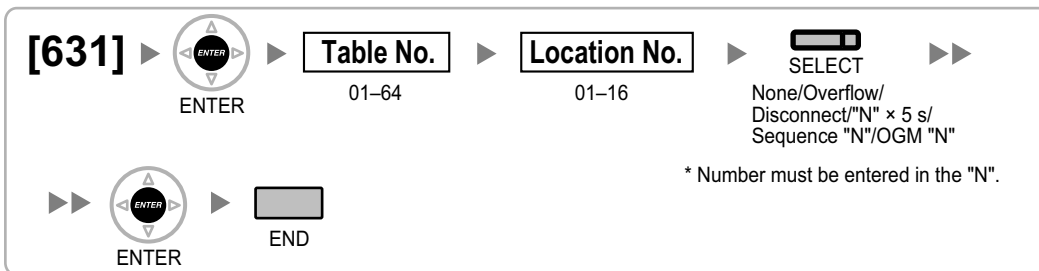
[629] Queuing Hurry-up Level



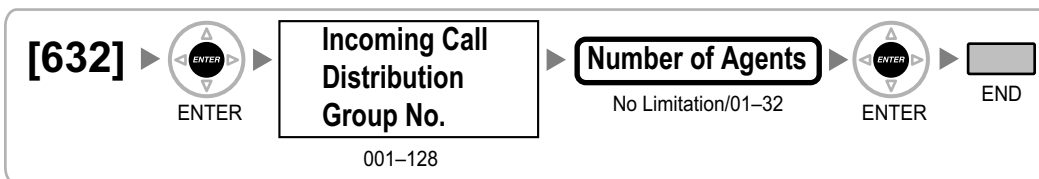
[630] Queuing Time Table



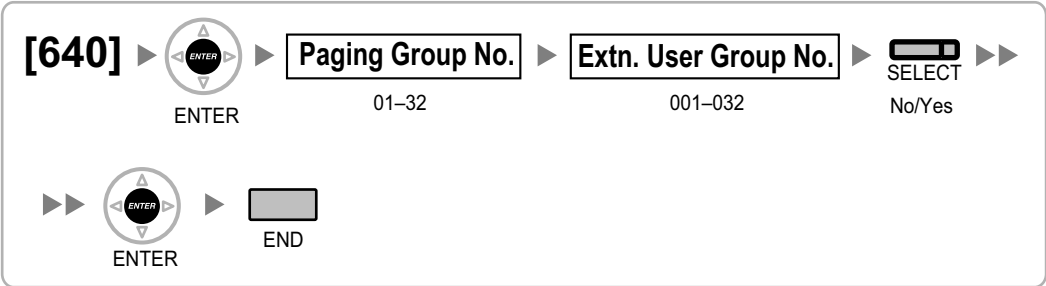
[631] Sequences in Queuing Time Table



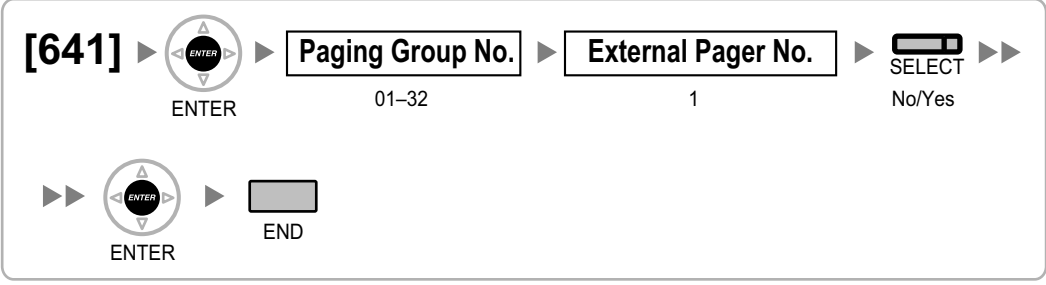
[632] Maximum Number of Agents



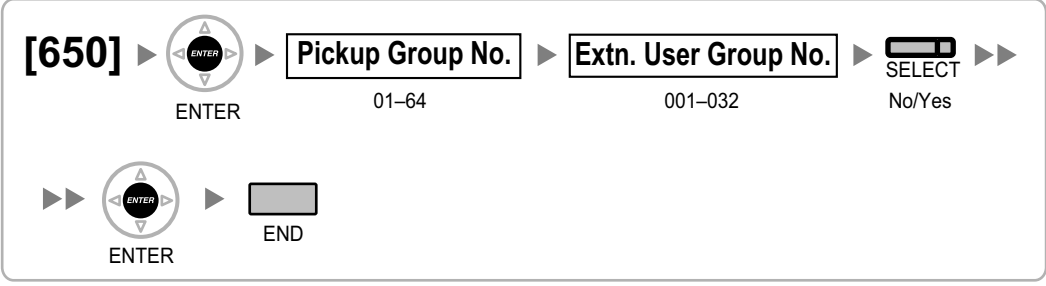
[640] Extension User Groups of a Paging Group



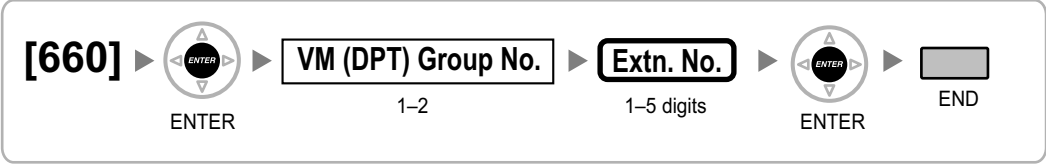
[641] External Pagers of a Paging Group



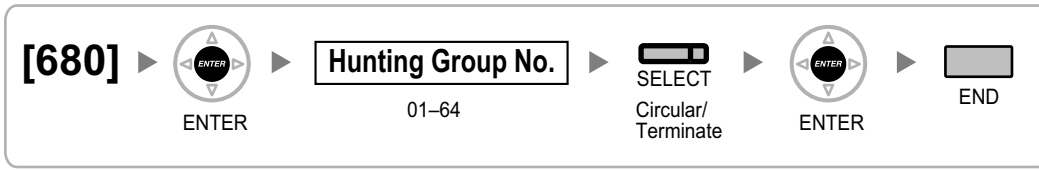
[650] Extension User Groups of a Pickup Group



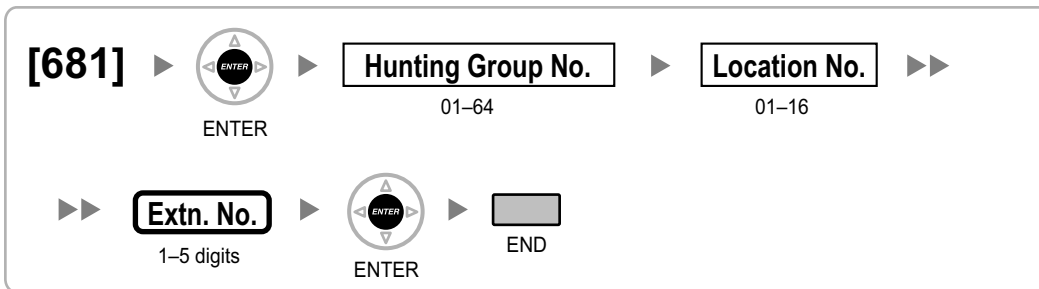
[660] VM Group Floating Extension Number



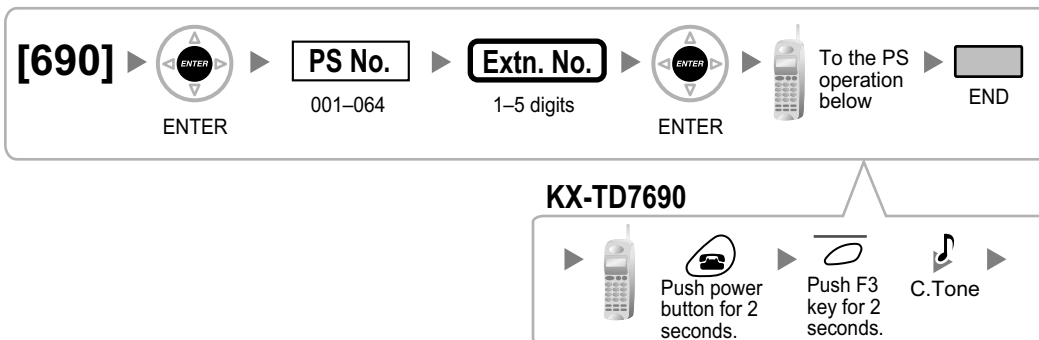
[680] Idle Extension Hunting Type



[681] Idle Extension Hunting Group Member



[690] PS Registration



Note

For details about PS registration, refer to the Quick Installation Guide for the relevant Cell Station (CS).

[691] PS Termination



[692] Personal Identification Number (PIN) for PS Registration



[699] CS Status Reference



2.1.10 Resource/Interface Programming

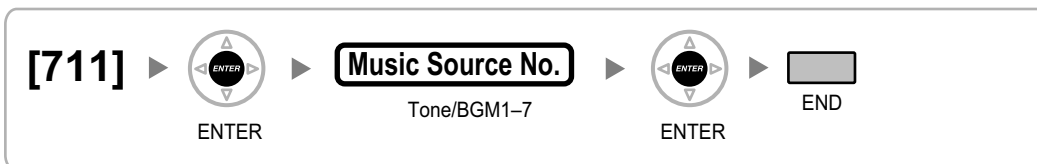
[700] External Pager Floating Extension Number



[710] Music Source Selection for BGM



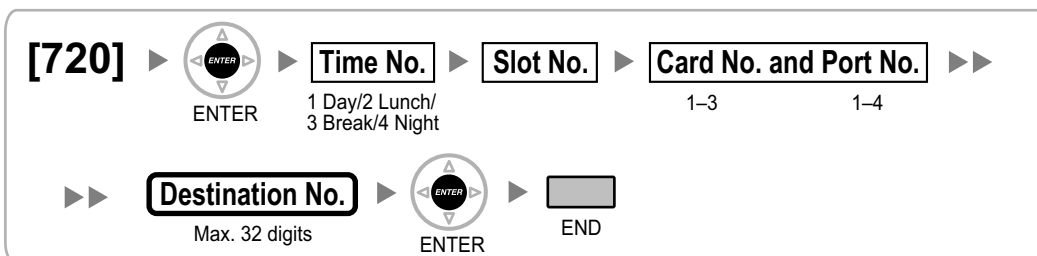
[711] Music on Hold



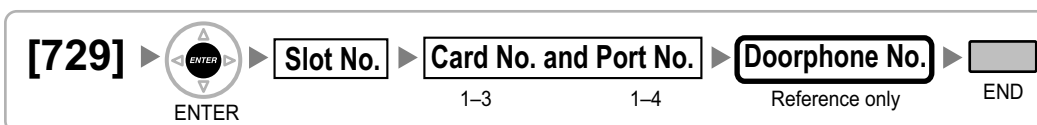
[712] Music for Transfer



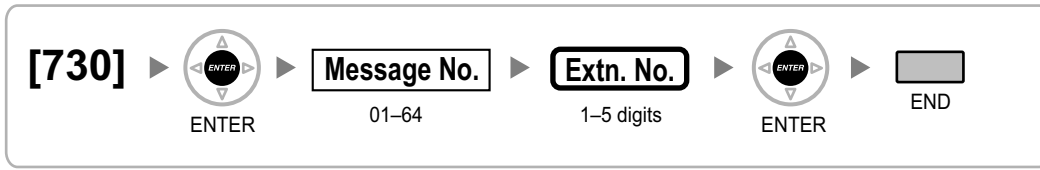
[720] Doorphone Call Destination



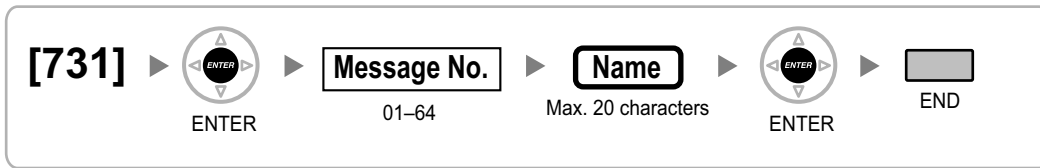
[729] Doorphone Number Reference



[730] Outgoing Message (OGM) Floating Extension Number



[731] Outgoing Message (OGM) Name

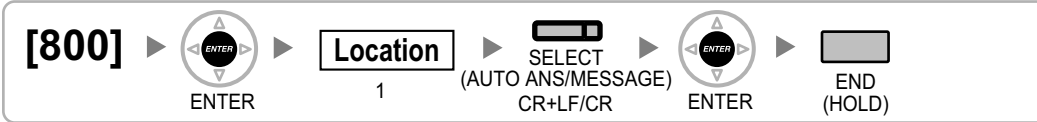


[732] DISA Security Mode

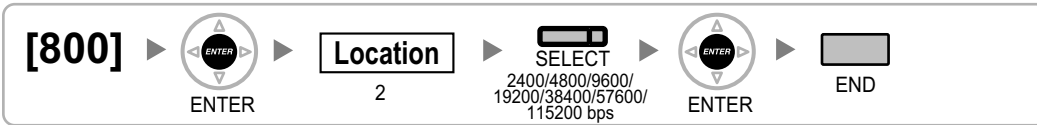


2.1.11 SMDR & Maintenance Programming

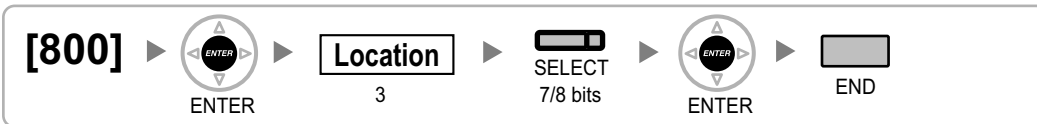
[800] RS-232C Parameter—New Line Code



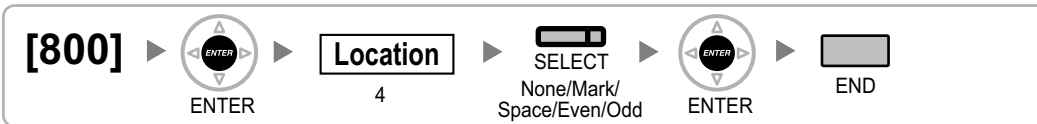
[800] RS-232C Parameter—Baud Rate



[800] RS-232C Parameter—Word Length



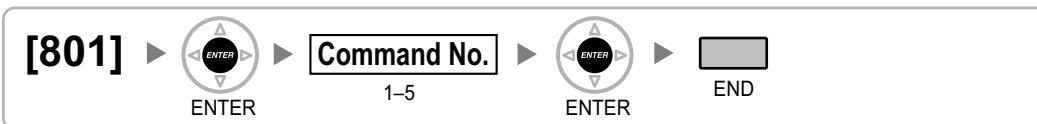
[800] RS-232C Parameter—Parity Bit

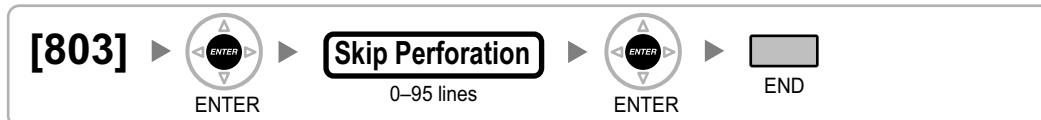
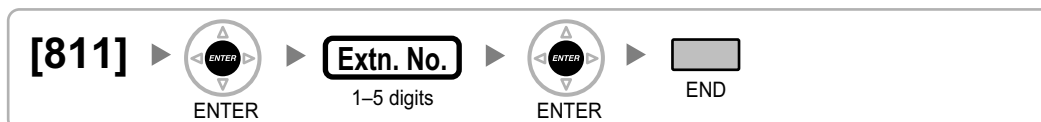
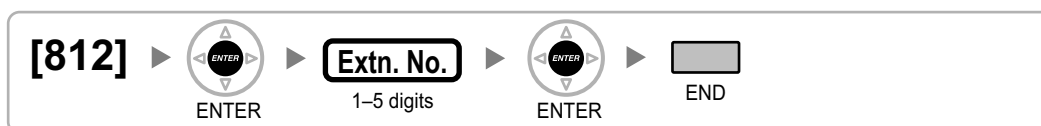


[800] RS-232C Parameter—Stop Bit Length



[801] External Modem Control



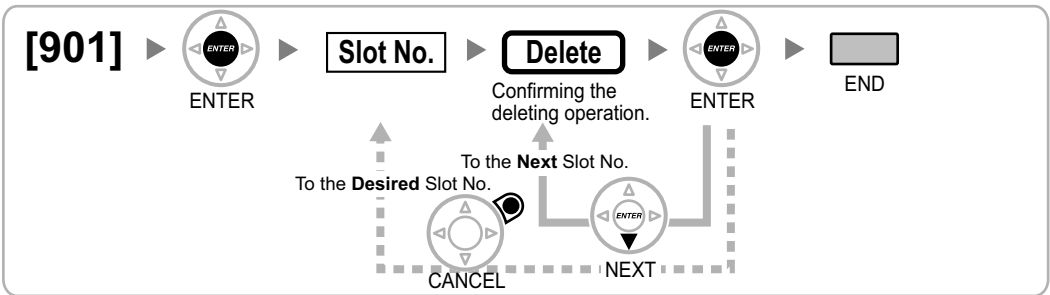
[802] SMDR Page Length**[803] SMDR Skip Perforation****[804] SMDR Outgoing Call Printing****[805] SMDR Incoming Call Printing****[810] Remote Programming****[811] Modem Floating Extension Number****[812] ISDN Remote Floating Extension Number**

2.1.12 Card Programming

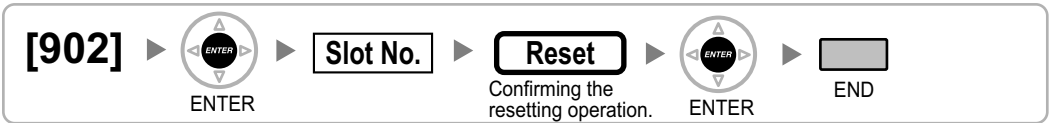
[900] Slot Card Type Reference



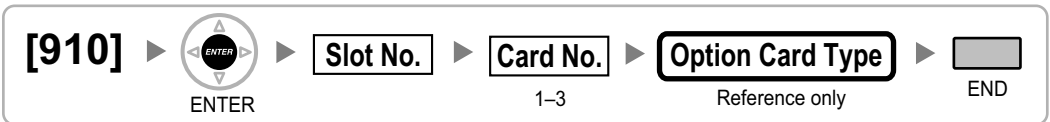
[901] Slot Card Deletion



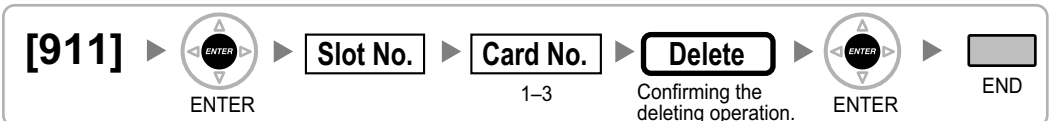
[902] Slot Card Reset



[910] OPB3 Option Card Type Reference



[911] OPB3 Option Card Deletion



Section 3

Appendix

3.1 Revision History

3.1.1 KX-NCP500/KX-NCP1000 PBMPR Software File Version 2.0xxx

Changed Contents

- 2.1.9 Extension Programming
[690] PS Registration
- 2.1.10 Resource/Interface Programming
[711] Music on Hold

Feature Programming References

Absent Message

- [008] Absent Message

Feature Guide References

1.19.2 Absent Message

Account Code Entry

- [508] Account Code Mode

Feature Guide References

1.5.4.3 Account Code Entry

Automatic Route Selection (ARS)

- [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 Guide References

1.10.1 Automatic Route Selection (ARS)

Call Charge Services

- [010] Charge Margin
- [011] Charge Tax
- [012] Charge Rate per Unit
- [130] Decimal Point Position for Currency
- [131] Currency
- [491] Pay Tone Signal Type

Feature Guide References

1.26.3 Call Charge Services

Call Forwarding (FWD)

- [472] Extension-to-Trunk Call Duration
- [473] Trunk-to-Trunk Call Duration
- [504] Call Forwarding to Trunk
- [605] Call Forwarding—No Answer Time

Feature Guide References

1.3.1.2 Call Forwarding (FWD)

Call Hold

- [200] Hold Recall Time

Feature Guide References

1.13.1 Call Hold

Call Pickup

- [650] Extension User Groups of a Pickup Group

Feature Guide References

1.4.1.3 Call Pickup

Call Transfer

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

Feature Guide References

1.12.1 Call Transfer

Caller ID

- [001] System Speed Dialling Number
- [002] System Speed Dialling Name
- [490] Caller ID Signal Type

Feature Guide References

1.18.1 Caller ID

Calling Line Identification (CLI) Distribution

- [001] System Speed Dialling Number
- [002] System Speed Dialling Name

Feature Guide References

1.1.1.5 Calling Line Identification (CLI) Distribution

Calling Party Control (CPC) Signal Detection

- [413] LCOT CPC Signal Detection Time—Outgoing
- [414] LCOT CPC Signal Detection Time—Incoming

Feature Guide References

1.11.10 Calling Party Control (CPC) Signal Detection

Calling/Connected Line Identification Presentation (CLIP/COLP)

- [003] Extension Number
- [422] BRI Subscriber Number
- [606] CLIP/COLP Number

Feature Guide References

1.21.1.2 Calling/Connected Line Identification Presentation (CLIP/COLP)

Calling/Connected Line Identification Presentation (CLIP/COLP) and Calling/Connected Name Identification Presentation (CNIP/CONP)—by QSIG

- [003] Extension Number

- [004] Extension Name

Feature Guide References

1.30.4.2 Calling/Connected Line Identification Presentation (CLIP/COLP) and Calling/Connected Name Identification Presentation (CNIP/CONP)—by QSIG

Class of Service (COS)

- 2.1.8 COS Programming
- [602] Class of Service

Feature Guide References

2.2.1 Class of Service (COS)

Dial Type Selection

- [410] LCOT Dialling Mode
- [411] LCOT Pulse Rate
- [412] LCOT DTMF Minimum Duration

Feature Guide References

1.5.4.4 Dial Type Selection

Direct In Line (DIL)

- [421] BRI DIL/DDI/MSN Selection
- [450] DIL 1:1 Destination

Feature Guide References

1.1.1.2 Direct In Line (DIL)

Direct Inward Dialling (DID)/Direct Dialling In (DDI)

- [421] BRI DIL/DDI/MSN Selection
- [451] DID Number
- [452] DID Name
- [453] DID Destination

Feature Guide References

1.1.1.3 Direct Inward Dialling (DID)/Direct Dialling In (DDI)

Direct Inward System Access (DISA)

- [209] DISA Delayed Answer Time
- [210] DISA Trunk-to-Trunk 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 Guide References

1.17.6 Direct Inward System Access (DISA)

Display Information

- [130] Decimal Point Position for Currency
- [131] Currency

Feature Guide References

1.20.4 Display Information

Do Not Disturb (DND)

- [507] DND Override

Feature Guide References

1.3.1.3 Do Not Disturb (DND)

Door Open

- [207] Door Unlock Time
- [512] Permission for Door Open Access

Feature Guide References

1.17.2 Door Open

Doorphone Call

- [720] Doorphone Call Destination
- [729] Doorphone Number Reference

Feature Guide References

1.17.1 Doorphone Call

Emergency Call

- [304] Emergency Number

Feature Guide References

1.5.4.2 Emergency Call

Executive Busy Override

- [505] Executive Busy Override
- [506] Executive Busy Override Deny

Feature Guide References

1.8.2 Executive Busy Override

Extension Dial Lock

- [510] TRS/Barring Level for Extension Dial Lock

Feature Guide References

1.9.3 Extension Dial Lock

Extension Personal Identification Number (PIN)

- [005] Extension Personal Identification Number (PIN)

Feature Guide References

1.28.1 Extension Personal Identification Number (PIN)

Extension Port Configuration

- [007] DSS Console Paired Telephone
- [600] EXtra Device Port (XDP) Mode

Feature Guide References

2.1.1 Extension Port Configuration

External Feature Access (EFA)

- [417] LCOT Flash/Recall Time

Feature Guide References

1.11.7 External Feature Access (EFA)

Flash/Recall/Terminate

- [418] LCOT Disconnect Time

Feature Guide References

1.11.6 Flash/Recall/Terminate

Flexible Numbering/Fixed Numbering

- [100] Flexible Numbering

Feature Guide References

2.3.6 Flexible Numbering/Fixed Numbering

Floating Extension

- [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
- [812] ISDN Remote Floating Extension Number

Feature Guide References

2.3.7 Floating Extension

Group Call Distribution

- [621] Incoming Call Distribution Group Delayed Ringing
- [624] Incoming Call Distribution Group Distribution Method
- [632] Maximum Number of Agents

Feature Guide References

1.2.2.2 Group Call Distribution

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

- [471] Host PBX Access Code

Feature Guide References

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

Hot Line

- [204] Hot Line Waiting Time

Feature Guide References

1.6.1.7 Hot Line

Idle Extension Hunting

- [680] Idle Extension Hunting Type
- [681] Idle Extension Hunting Group Member

Feature Guide References

1.2.1 Idle Extension Hunting

Incoming Call Distribution Group Features

- [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 Guide References

1.2.2 Incoming Call Distribution Group Features

Integrated Services Digital Network (ISDN)

- [420] BRI Network Type
- [424] BRI Layer 1 Active Mode
- [425] BRI Layer 2 Active Mode
- [426] BRI Configuration
- [427] BRI TEI Mode

Feature Guide References

1.21.1 Integrated Services Digital Network (ISDN)

Intercept Routing

- [203] Intercept Time
- [604] Extension Intercept Destination

- [625] Destination for Overflow Time Expiration

Feature Guide References

1.1.1.6 Intercept Routing

Intercept Routing—No Destination

- [006] Operator Assignment

Feature Guide References

1.1.1.7 Intercept Routing—No Destination

Intercom Call

- [003] Extension Number
- [004] Extension Name

Feature Guide References

1.5.3 Intercom Call

Internal Call Features

- [720] Doorphone Call Destination

Feature Guide References

1.1.2 Internal Call Features

Last Number Redial

- [205] Automatic Redial Repeat Times
- [206] Automatic Redial Interval

Feature Guide References

1.6.1.4 Last Number Redial

Line Preference—Outgoing

- [103] Idle Line Access (Local Access)
- [500] Trunk Group Number

Feature Guide References

1.5.5.2 Line Preference—Outgoing

Manager Features

- [112] Manager Password
- [511] Manager Assignment

Feature Guide References

2.2.6 Manager Features

Multiple Subscriber Number (MSN) Ringing Service

- [421] BRI DIL/DDI/MSN Selection
- [426] BRI Configuration

Feature Guide References

1.1.1.4 Multiple Subscriber Number (MSN) Ringing Service

Music on Hold

- [710] Music Source Selection for BGM
- [711] Music on Hold

Feature Guide References

1.13.4 Music on Hold

Network Direct Station Selection (NDSS)

- [511] Manager Assignment

Feature Guide References

1.30.5.1 Network Direct Station Selection (NDSS)

Operator Features

- [006] Operator Assignment

Feature Guide References

2.2.5 Operator Features

Outgoing Message (OGM)

- [631] Sequences in Queuing Time Table
- [730] Outgoing Message (OGM) Floating Extension Number

Feature Guide References

1.17.5 Outgoing Message (OGM)

Outside Destinations in Incoming Call Distribution Group

- [620] Incoming Call Distribution Group Member
- [621] Incoming Call Distribution Group Delayed Ringing
- [622] Incoming Call Distribution Group Floating Extension Number
- [624] Incoming Call Distribution Group Distribution Method
- [629] Queuing Hurry-up Level

Feature Guide References

1.2.2.3 Outside Destinations in Incoming Call Distribution Group

Overflow Feature

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

Feature Guide References

1.2.2.6 Overflow Feature

Paging

- [640] Extension User Groups of a Paging Group

- [641] External Pagers of a Paging Group

Feature Guide References

1.15.1 Paging

Paralleled Telephone

- [600] EXtra Device Port (XDP) Mode

Feature Guide References

1.11.9 Paralleled Telephone

Pause Insertion

- [416] LCOT Pause Time

Feature Guide References

1.5.4.7 Pause Insertion

PC Phone/PC Console

- [601] Terminal Device Assignment

Feature Guide References

1.32.2 PC Phone/PC Console

Portable Station (PS) Connection

- [690] PS Registration
- [691] PS Termination
- [692] Personal Identification Number (PIN) for PS Registration

Feature Guide References

1.25.1 Portable Station (PS) Connection

PS Directory

- [001] System Speed Dialling Number
- [002] System Speed Dialling Name
- [004] Extension Name

Feature Guide References

1.25.3 PS Directory

PS Ring Group

- [620] Incoming Call Distribution Group Member

Feature Guide References

1.25.2 PS Ring Group

PS Roaming by Network ICD Group

- [620] Incoming Call Distribution Group Member
- [622] Incoming Call Distribution Group Floating Extension Number
- [624] Incoming Call Distribution Group Distribution Method

Feature Guide References

1.30.6.1 PS Roaming by Network ICD Group

PT Programming

- 2.1 PT Programming
- [516] Programming Mode Limitation

Feature Guide References

2.3.2 PT Programming

Queuing Feature

- [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 Guide References

1.2.2.4 Queuing Feature

Reverse Circuit

- [415] LCOT Reverse Circuit

Feature Guide References

1.5.4.5 Reverse Circuit

Software Upgrading

- [190] Main Processing (MPR) Software Version Reference

Feature Guide References

2.3.8 Software Upgrading

Special Carrier Access Code

- [303] Special Carrier Access Code

Feature Guide References

1.5.4.9 Special Carrier Access Code

Speed Dialling—Personal/System

- [001] System Speed Dialling Number
- [002] System Speed Dialling Name
- [509] TRS/Barring Level for System Speed Dialling

Feature Guide References

1.6.1.5 Speed Dialling—Personal/System

Station Message Detail Recording (SMDR)

- [800] RS-232C Parameter—New Line Code
- [800] RS-232C Parameter—Baud Rate
- [800] RS-232C Parameter—Word Length

Feature Programming References

- [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 Guide References

1.26.1.1 Station Message Detail Recording (SMDR)

Tenant Service

- [001] System Speed Dialling Number
- [006] Operator Assignment
- [320] ARS Mode
- [711] Music on Hold

Feature Guide References

2.2.3 Tenant Service

TIE Line Service

- [453] DID Destination
- [500] Trunk Group Number

Feature Guide References

1.30.1 TIE Line Service

Time Service

- [101] Time Service Switching Mode
- [102] Time Service Starting Time
- [514] Time Service Manual Switching

Feature Guide References

2.2.4 Time Service

Toll Restriction (TRS)/Call Barring (Barring)

- [300] TRS/Barring Override by System Speed Dialling
- [301] TRS/Barring Denied Code
- [302] TRS/Barring Exception Code
- [501] TRS/Barring Level
- [509] TRS/Barring Level for System Speed Dialling
- [602] Class of Service

Feature Guide References

1.9.1 Toll Restriction (TRS)/Call Barring (Barring)

Trunk Access

- [400] LCOT/BRI Trunk Connection
- [401] LCOT/BRI Trunk Name
- [409] LCOT/BRI Trunk Number Reference
- [500] Trunk Group Number

Feature Guide References

1.5.5.3 Trunk Access

Trunk Answer From Any Station (TAFAS)

- [700] External Pager Floating Extension Number

Feature Guide References

1.17.3 Trunk Answer From Any Station (TAFAS)

Trunk Busy Out

- [511] Manager Assignment

Feature Guide References

1.5.4.6 Trunk Busy Out

Trunk Call Limitation

- [472] Extension-to-Trunk Call Duration
- [473] Trunk-to-Trunk Call Duration
- [502] Trunk Call Duration Limitation

Feature Guide References

1.11.8 Trunk Call Limitation

Verification Code Entry

- [120] Verification Code
- [121] Verification Code Name
- [122] Verification Code Personal Identification Number (PIN)
- [123] Verification Code COS Number

Feature Guide References

1.9.6 Verification Code Entry

Virtual PS

- [690] PS Registration

Feature Guide References

1.25.6 Virtual PS

Voice Mail (VM) Group

- [601] Terminal Device Assignment
- [660] VM Group Floating Extension Number

Feature Guide References

1.24.1 Voice Mail (VM) Group

Voice Mail DPT (Digital) Integration

- [201] Transfer Recall Time

Feature Guide References

1.24.3 Voice Mail DPT (Digital) Integration

Walking COS

- [005] Extension Personal Identification Number (PIN)

Feature Guide References

1.9.5 Walking COS

Walking Extension

- [007] DSS Console Paired Telephone

Feature Guide References

1.28.3 Walking Extension Features

Wireless XDP Parallel Mode

- [515] Wireless XDP Parallel Mode for Paired Telephone

Feature Guide References

1.25.5 Wireless XDP Parallel Mode

Panasonic Communications Co., Ltd.

1-62, 4-chome, Minoshima, Hakata-ku, Fukuoka 812-8531, Japan

Copyright:

This material is copyrighted by Panasonic Communications Co., Ltd., and may be reproduced for internal use only. All other reproduction, in whole or in part, is prohibited without the written consent of Panasonic Communications Co., Ltd.

© Panasonic Communications Co., Ltd. 2008