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Panasonic Telephone Systems

Panasonic KX-TD308

Panasonic KX-TD308, KXTD308, TD308, T7420, T7425, T7431, T7433, T7436, T7220, T7230, T7235, T7250, T7130, T7020, T7030, T7050, T7055

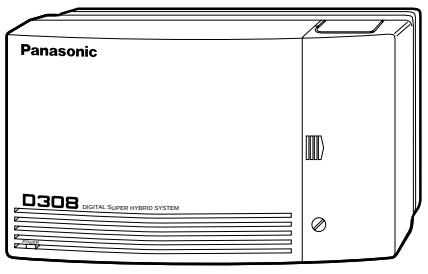
Digital Super Hybrid System

INSTALLATION MANUAL

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

MODEL

KX-TD308



Thank you for purchasing this Panasonic Model
KX-TD308, Digital Super Hybrid System.

System Components

	Model	Description
Service Unit	KX-TD308	Digital Super Hybrid System (Main Unit)
Telephone	KX-T7420	Digital proprietary telephone
	KX-T7425	Digital proprietary telephone
	KX-T7431	Digital proprietary telephone with 1-line display
	KX-T7433	Digital proprietary telephone with 3-line display
	KX-T7436	Digital proprietary telephone with 6-line display
	KX-T7220	Digital proprietary telephone
	KX-T7230	Digital proprietary telephone with 2-line display
	KX-T7235	Digital proprietary telephone with 6-line display
	KX-T7250	Digital proprietary telephone
	KX-T7130	Proprietary telephone with display
	KX-T7020	Proprietary telephone
	KX-T7030	Proprietary telephone with display
	KX-T7050	Proprietary telephone
	KX-T7055	Proprietary telephone
Optional Equipment	KX-TD30870	4-SLT Extension Expansion Card
	KX-TD30891	Caller ID / DISA / FAX Detection Card
	KX-T30865	Doorphone

System Components Table

Attention

- Keep the unit away from heating appliances and electrical noise generating devices such as fluorescent lamps, motors and televisions. These noise sources can interfere with the performance of the Digital Super Hybrid System.
- This unit should be kept free of dust, moisture, high temperature (more than 40˚C / 104˚F) and vibration, and should not be exposed to direct sunlight.
- Never attempt to insert wires, pins, etc. into the vents or other holes of this unit.
- If there is any trouble, disconnect the unit from the telephone line. Plug the telephone directly into the telephone line. If the telephone operates properly, do not reconnect the unit to the line until the trouble has been repaired. If the telephone does not operate properly, chances are that the trouble is in the telephone system, and not in the unit.
- Do not use benzine, thinner, or the like, or any abrasive powder to clean the cabinet. Wipe it with a soft cloth.

WARNING

THIS UNIT MAY ONLY BE INSTALLED AND SERVICED BY QUALIFIED SERVICE PERSONNEL.

WHEN A FAILURE OCCURS WHICH RESULTS IN THE INTERNAL PARTS BECOMING ACCESSIBLE, DISCONNECT THE POWER SUPPLY CORD IMMEDIATELY AND RETURN THIS UNIT TO YOUR DEALER.

DISCONNECT THE TELECOM CONNECTION BEFORE DISCONNECTING THE POWER CONNECTION PRIOR TO RELOCATING THE EQUIPMENT, AND RECONNECT THE POWER FIRST.

THIS UNIT IS EQUIPPED WITH AN EARTHING CONTACT PLUG. FOR SAFETY REASONS THIS PLUG MUST ONLY BE CONNECTED TO AN EARTHING CONTACT SOCKET WHICH HAS BEEN INSTALLED ACCORDING TO REGULATIONS.

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

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

Attention

CAUTION

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer.
Dispose of used batteries according to the manufacturer's instructions.

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

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

The serial number of this product may be found on the label affixed to the bottom of the unit. You should note the model number and the serial number of this unit in the space provided and retain this book as a permanent record of your purchase to aid in identification in the event of theft.

MODEL NO.: _____

SERIAL NO.: _____

For your future reference

DATE OF PURCHASE _____

NAME OF DEALER _____

DEALER'S ADDRESS _____

Important Safety Instructions

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

1. Read and understand all instructions.
2. Follow all warnings and instructions marked on the product.
3. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this product near water, for example, near a bathtub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool.
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Slots and openings in the cabinet and the back or bottom are provided for ventilation, to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on the bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your dealer or local power company.
8. This product is equipped with a three wire grounding type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug.
9. Do not allow anything to rest on the power cord. Do not locate this product where the cord will be abused by people walking on it.

Important Safety Instructions

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

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

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

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

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

B. If liquid has been spilled into the product.

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

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

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

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

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

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

SAVE THESE INSTRUCTIONS

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

1. Notification to the Telephone Company

Customers, before connecting terminal equipment to the telephone network, shall upon request of the Telephone Company, inform the Telephone Company of the particular line(s) to which such connection is made, the F.C.C. registration number (see the label on the bottom of the unit) and ringer equivalence number (REN) of the registered terminal equipment.
The REN is useful in determining the quantity of devices you may connect to your telephone line and still have all of those devices ring when your telephone number is called. In most, but not all areas, the sum of the REN's of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to your line, as determined by the REN, you should contact your local telephone company to determine the maximum REN for your calling area.

2. Connection to Telephone Line

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

3. Incidence of Harm to the Telephone Lines

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

(a) Promptly notify the customer of such temporary discontinuance of service.
(b) Afford the customer the opportunity to correct the situation which gave rise to the temporary discontinuance.
(c) Inform the customer of the right to bring a complaint to the Federal Communication Commission pursuant to the procedures set out in Subpart E of Part 68 of FCC Telephone Equipment Rules.

4. Compatibility of the Telephone Network and Terminal Equipment

(a) Availability of telephone interface information.

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

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

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

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

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

Notify the Telephone Company

Installation must be performed by a qualified professional installer.

Before connecting this equipment to any telephone, call the telephone company and inform them of the following:

- Telephone numbers to which the system will be connected
- Make ..... Panasonic
- Model KX-TD308
- FCC Registration No. ..... found on the bottom of the unit
- Ringer Equivalence No. 0.4B
- Facility Interface Code 02LS2
- Service Order Code 9.0F
- Required Network Interface Jack ..... RJ 14 C

Note :

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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

Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this device.

When programming emergency numbers and/or making test calls to emergency numbers:

1. Remain on the line and briefly explain to the dispatcher the reason for the call before hanging up.
2. Perform such activities in the off-peak hours, such as early morning hours or late evenings.

Introduction

This Installation Manual provides technical information for the Panasonic Digital Super Hybrid System, KX-TD308. It is designed to serve as an overall technical reference for the system and includes a description of the system, its hardware and software, features and services and environmental requirements.

This manual contains the following sections:

Section 1, System Outline.
Provides general information on the system including system capacity and specifications.

Section 2, Installation.
Contains the basic system installation and wiring instructions, as well as how to install the optional cards and units.

Section 3, Features.
Describes all the basic, optional and programmable features in alphabetical order. It also provides information about the programming required, conditions, connection references, related features and operation for every feature.

Section 4, System Programming.
Provides step-by-step programming instructions for a proprietary telephone.

Section 5, List.
Lists tone/ring tone and default values of system programming.

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

NOTE
The following documents may be used in conjunction with this manual:

- User Manual for KX-TD308 System, DIGITAL Proprietary Telephones and Standard Telephones.
- Programming Tables
  The programming tables are designed to be used as a hard copy reference for entering user-programmed data.

Contents

Section 1 System Outline

1.1 System Highlights 1-2
1.2 Basic System Construction 1-4
1.3 Proprietary Telephones 1-5
1.4 Options 1-6
1.4.1 4-SLT Extension Expansion Card (KX-TD30870) 1-6
1.4.2 Caller ID / DISA / FAX Detection Card (KX-TD30891) 1-6
1.5 Specifications 1-7
1.5.1 General Description 1-7
1.5.2 Characteristics 1-8
1.5.3 System Capacity 1-9

Section 2 Installation

2.1 Before Installation 2-2
2.2 Installation of the Main Unit 2-4
2.2.1 Unpacking 2-4
2.2.2 Location of Interfaces 2-4
2.2.3 Wall Mounting 2-5
2.2.4 Opening Front Cover 2-6
2.2.5 Frame Ground Connection 2-7
2.3 Connection 2-8
2.3.1 System Connection Diagram 2-8
2.3.2 Outside Line Connection 2-9
2.3.3 Extension Connection 2-12
2.3.4 Telephone Connection 2-15
2.3.5 Polarity Sensitive Telephone Connection 2-20
2.3.6 External Pager (Paging Equipment) Connection 2-21
2.3.7 External Music Source Connection 2-22
2.3.8 Printer and PC Connection 2-23
2.4 Installation of Optional Cards 2-26
2.4.1 Location of Optional Cards 2-26
2.4.2 4-SLT Extension Expansion Card / Caller ID/DISA/FAX Detection Card Installation 2-27
2.4.3 Doorphone and Door Opener Connection 2-29
2.5 Auxiliary Connection for Power Failure Transfer 2-31
2.6 Closing the Front Cover 2-32
2.7 Starting the System for the First Time 2-33
2.8 System Restart 2-34
2.9 System Data Clear 2-35

Contents

Section 3 Features

A	Absent Message Capability	3-2
	Account Code Entry	3-3
	Alternate Calling – Ring / Voice	3-4
	Answering, Direct Outside Line	3-5
	Automatic Callback Busy (Camp-On)	3-5
	Automatic Configuration	3-6
	Automatic Hold by CO Button	3-6
	Automatic Route Selection (ARS)	3-7
	Automatic Station Release	3-12
B	Background Music (BGM)	3-13
	Background Music (BGM) – External	3-14
	Bilingual Display	3-15
	Busy Lamp Field	3-15
	Busy Station Signaling (BSS)	3-16
	Button, Direct Station Selection (DSS)	3-17
	Button, Flexible	3-18
	Button, Loop-CO (L-CO)	3-20
	Button, Single-CO (S-CO)	3-21
	Buttons on Proprietary Telephones	3-22
C	Caller ID	3-25
	CALL FORWARDING FEATURES – SUMMARY	3-27
	Call Forwarding – All Calls	3-27
	Call Forwarding – Busy	3-28
	Call Forwarding – Busy / No Answer	3-29
	Call Forwarding – Follow Me	3-30
	Call Forwarding – No Answer	3-30
	Call Forwarding – to Outside Line	3-31
	Call Hold – Intercom	3-33
	Call Hold – Outside Line	3-34
	Call Hold, Exclusive – Intercom	3-35
	Call Hold, Exclusive – Outside Line	3-36
	Call Hold Retrieve – Intercom	3-36
	Call Hold Retrieve – Outside Line	3-37
	Calling Party Control (CPC) Signal Detection	3-38
	Call Log, Incoming	3-39
	Call Park	3-41
	Call Pickup, Directed	3-42
	Call Pickup, Group	3-42
	Call Pickup, Outside Line	3-43
	Call Pickup Deny	3-43

Contents

	Call Splitting	3-44
	CALL TRANSFER FEATURES – SUMMARY	3-45
	Call Transfer, Screened – to Extension	3-45
	Call Transfer, Screened – to Outside Line	3-46
	Call Transfer, Unscreened – to Extension	3-47
	Call Waiting	3-48
	Call Waiting from Central Office	3-49
	Class of Service (COS)	3-50
	Conference	3-51
	Conference, Unattended	3-52
	Confirmation Tone	3-53
	Consultation Hold	3-55
D	Data Line Security	3-56
	Delayed Ringing → Ringing, Delayed	3-131
	Dial Tone, Distinctive	3-57
	Dial Type Selection	3-58
	Direct In Lines (DIL)	3-59
	Direct Inward System Access (DISA)	3-60
	Direct Station Selection (DSS) Button → Button, Direct Station Selection (DSS)	3-17
	Directed Call Pickup → Call Pickup, Directed	3-42
	Display, Call Information	3-62
	Display, in Idle	3-63
	Display, Self-Extension Number	3-63
	Display Contrast Adjustment	3-64
	Do Not Disturb (DND)	3-65
	Do Not Disturb (DND) Override	3-66
	Door Opener	3-67
	Doorphone Call	3-68
E	Electronic Station Lockout	3-69
	Emergency Call	3-70
	End-to-End DTMF Signaling (Tone Through)	3-71
	Exclusive Hold → Call Hold, Exclusive – Intercom / Outside Line	3-35 / 36
	Executive Busy Override – Extension	3-72
	Executive Busy Override – Outside Line	3-73
	Extension Group	3-74
	External Feature Access	3-75
	EXtra Device Port (XDP)	3-76
F	Facsimile Detection	3-77
	Flash	3-78
	Flexible Button → Button, Flexible	3-18

Contents

	Flexible Numbering	3-79
	Floating Station	3-82
	Full One-Touch Dialing	3-83
G	Group Call Pickup → Call Pickup, Group	3-42
H	Handset / Headset Selection	3-84
	Handset Microphone Mute	3-84
	Handsfree Answerback	3-85
	Handsfree Operation	3-86
	Hold Recall	3-87
	Host PBX Access	3-88
I	Intercept Routing	3-89
	Intercom Calling	3-90
L	Last Number Redial → Redial, Last Number	3-127
	LED Indication, Intercom	3-91
	LED Indication, Outside Line	3-92
	Limited Call Duration	3-93
	Line Access, Automatic	3-94
	Line Access, Direct	3-95
	Line Access, Individual	3-96
	Line Preference – Incoming (No Line / Prime Line / Ringing Line)	3-97
	Line Preference – Outgoing (Idle Line / No Line / Prime Line)	3-98
	Live Call Screening (LCS)	3-99
	Lockout	3-100
	Log-In / Log-Out	3-101
	Loop-CO (L-CO) Button → Button, Loop-CO (L-CO)	3-20
M	Manager Extension	3-102
	Message Waiting	3-103
	Microphone Mute	3-104
	Mixed Station Capacities	3-104
	Music on Hold	3-105
N	Night Service	3-106
O	Off-Hook Call Announcement (OHCA)	3-107
	Off-Hook Monitor	3-108
	One-Touch Dialing	3-109
	One-Touch Transfer by DSS Button	3-110
	Operator	3-111
	Operator Call	3-112
	Outgoing Message (OGM)	3-113
	Outside Line Connection Assignment	3-114
	Outside Line Connection Assignment – Outgoing	3-114

Contents

P PAGING FEATURES – SUMMARY 3-115
Paging – All 3-115
Paging – External 3-116
Paging – Group 3-117
Paralleled Telephone 3-118
Pause Insertion, Automatic 3-119
Phantom Extension 3-120
Pickup Dialing 3-121
Power Failure Restart 3-122
Power Failure Transfer 3-123
Privacy, Automatic 3-124
Privacy Release 3-124
Pulse to Tone Conversion 3-125
Q Quick Dialing 3-126
R Redial, Last Number 3-127
Redial, Saved Number 3-128
Remote Station Lock Control 3-129
Reverse Circuit 3-129
Ring Group 3-130
Ringing, Delayed 3-131
Ringing, Discriminating 3-132
Ringing Tone Selection for CO Buttons 3-133
S Saved Number Redial → Redial, Saved Number 3-128
Screened Call Transfer – to Extension
→ Call Transfer, Screened – to Extension 3-45
Screened Call Transfer – to Outside Line
→ Call Transfer, Screened – to Outside Line 3-46
Secret Dialing 3-134
Single-CO (S-CO) Button → Button, Single-CO (S-CO) 3-21
Special Display Features 3-135
Call Directory 3-135
Call Forwarding / Do Not Disturb 3-136
Call Log, Outgoing 3-136
System Feature Access Menu 3-137
Station Feature Clear 3-138
Station Hunting 3-139
Station Message Detail Recording (SMDR) 3-140
Station Programming 3-143
Station Programming Data Default Set 3-144
Station Speed Dialing 3-145
System Data Default Set 3-146

Contents

	System Programming with Personal Computer	3-147
	System Programming with Proprietary Telephone	3-148
	System Speed Dialing	3-149
	System Working Report	3-150
T	Time-Out, Variable	3-152
	Timed Reminder	3-154
	Timed Reminder, Remote (Wake-Up Call)	3-155
	Toll Restriction	3-156
	Toll Restriction for Special Carrier Access	3-162
	Toll Restriction Override by Account Code Entry	3-162
	Toll Restriction Override for System Speed Dialing	3-164
	Trunk (Outside Line) Answer From Any Station (TAFAS)	3-165
	Two-Way Recording into Voice Mail	3-166
U	Unattended Conference → Conference, Unattended	3-52
	Uniform Call Distribution (UCD)	3-167
	Unscreened Call Transfer – to Extension → Call Transfer, Unscreened – to Extension	3-47
	User Programming (Manager Programming)	3-169
V	Voice Mail Integration	3-170
	Voice Mail Integration for Digital Proprietary Telephones	3-176
	Volume Control – Speaker / Handset Receiver / Headset / Ringer	3-177
W	Walking COS	3-178
	Whisper OHCA	3-179

Section 4 System Programming

4.1	**General Programming Instructions**	**4-2**
4.1.1	Using Proprietary Telephones	4-3
4.1.2	Programming Methods	4-7
4.1.3	Entering Characters	4-9
4.1.4	User Programming	4-13
4.1.5	Programming Example	4-14
4.2	**Manager Programming**	**4-16**
[000]	Date and Time Set	4-16
[001]	System Speed Dialing Number Set	4-18
[002]	System Speed Dialing Name Set	4-20
[003]	Extension Number Set	4-21
[004]	Extension Name Set	4-23
[005]	Flexible CO Button Assignment	4-24
[006]	Operator / Manager Extension Assignment	4-26
[008]	Absent Messages	4-27
[009]	Quick Dial Number Set	4-28

Contents

4.3 System Programming 4-30
[100] Flexible Numbering 4-30
[101] Day / Night Service Switching Mode 4-34
[102] Day / Night Service Starting Time 4-35
[103] Automatic Access Outside Line Assignment 4-37
[105] Account Codes 4-38
[106] Station Hunting Type 4-39
[107] System Password 4-41
[108] Automatic Hold by CO / DSS Button 4-42
[110] Caller ID Code Set 4-43
[111] Caller ID Name Set 4-44
[113] VM Status DTMF Set 4-45
[114] VM Command DTMF Set 4-47
[116] ROM Version Display 4-49
[117] Voice Mail Number Assignment 4-50
[118] Voice Mail Extension Number Assignment 4-51
[119] Voice Mail Extension Group Assignment 4-52
[120] User Password 4-53
[121] Walking COS Password 4-54
[124] Phantom Extension Number Assignment 4-55
[125] Area Code Assignment 4-56
[126] Caller ID Modification for Local Call 4-57
[127] Caller ID Modification for Long Distance Call 4-58
[128] Internal Caller ID Extension Assignment 4-59
[129] Facsimile Transmission Extension 4-60
[148] Off-Hook Monitor 4-61
4.4 Timer Programming 4-62
[200] Hold Recall Time 4-62
[201] Transfer Recall Time 4-63
[202] Call Forwarding – No Answer Time 4-64
[203] Intercept Time 4-65
[204] Pickup Dial Waiting Time 4-66
[205] Extension-to-Outside Line Call Duration Time 4-67
[206] Outside-to-Outside Line Call Duration Time 4-68
[207] First Digit Time 4-69
[208] Inter Digit Time 4-70
[211] Dial Start Time 4-71
[212] Call Duration Count Start Time 4-72
[213] DISA Delayed Answer Time 4-73
[216] Message Waiting Ring Interval Time 4-74
[217] Timed Reminder Alarm Ring Time 4-75

Contents

[218] DISA AA Wait Time 4-76
[219] Call Park Recall Time 4-77
4.5 TRS / ARS Programming 4-78
[300] TRS Override for System Speed Dialing 4-78
[301]–[305] TRS Denied Code Entry for Levels 2 through 6 4-79
[306]–[310] TRS Excepted Code Entry for Levels 2 through 6 4-80
[311] Special Carrier Access Codes 4-81
[312] ARS Mode 4-82
[313] ARS Time 4-83
[314]–[321] ARS Leading Digit Entry for Plans 1 through 8 4-85
[322]–[329] ARS Routing Plans 1 through 8 4-87
[330] ARS Modify Removed Digit 4-89
[331] ARS Modify Added Number 4-90
[332] Extra Entry Table Selection 4-91
[333] TRS Entry Code Assignment for Extra Table 4-92
[334] Emergency Dial Number Set 4-93
4.6 Outside Line Programming 4-94
[400] Outside Line Connection Assignment 4-94
[402] Dial Mode Selection 4-95
[403] Pulse Speed Selection 4-97
[404] DTMF Time 4-98
[405] CPC Signal Detection Incoming Set 4-99
[406] Caller ID Assignment 4-100
[407]–[408] DIL 1:1 Extension — Day / Night 4-101
[409]–[410] Intercept Extension — Day / Night 4-102
[411] Host PBX Access Codes 4-103
[412] Pause Time 4-105
[413] Flash Time 4-106
[414] Disconnect Time 4-107
[415] CPC Signal Detection Outgoing Set 4-108
[416] Reverse Circuit Assignment 4-109
[417] Outside Line Name Assignment 4-110
4.7 COS Programming 4-111
[500]–[501] Toll Restriction Level — Day / Night 4-111
[502] Extension-to-Outside Line Call Duration Limit 4-112
[503] Call Transfer to Outside Line 4-113
[504] Call Forwarding to Outside Line 4-114
[505] Executive Busy Override 4-115
[506] Executive Busy Override Deny 4-116
[507] Do Not Disturb Override 4-117
[508] Account Code Entry Mode 4-118
[509] Off-Hook Call Announcement (OHCA) 4-119

Contents

4.8 Extension Programming 4-120
[600] EXtra Device Port 4-120
[601] Class of Service 4-121
[602] Extension Group Assignment 4-122
[603]–[604] DIL 1:N Extension and Delayed Ringing — Day / Night 4-123
[605]–[606] Outgoing Permitted Outside Line Assignment — Day / Night 4-125
[607]–[608] Doorphone Ringing Assignment — Day / Night 4-127
[609] Voice Mail Access Codes 4-128
[610] Live Call Screening Recording Mode Assignment 4-129
4.9 Resource Programming 4-130
[800] SMDR Incoming / Outgoing Call Log Printout 4-130
[801] SMDR Format 4-131
[802] System Data Printout 4-132
[803] Music Source Use 4-134
[804] External Pager BGM 4-135
[805] External Pager Confirmation Tone 4-136
[806] Serial Interface (RS-232C) Parameters 4-137
[813] Floating Number Assignment 4-139
[815] DISA Built-in Auto Attendant 4-141
4.10 Optional Programming 4-142
[900] System Data Clear 4-142
[990] System Additional Information 4-143
[991] COS Additional Information 4-151

Section 5 List
5.1 Tone / Ring Tone 5-2
5.2 Default Values 5-4

Section 6 Troubleshooting
6.1 Troubleshooting 6-2
6.1.1 Installation 6-2
6.1.2 Connection 6-3
6.1.3 Operation 6-4
6.1.4 Using the Reset Button 6-5

Section 1
System Outline

This section provides general information on the system, including system capacity and specifications.

1.1 System Highlights

System Capacity

	Basic System	Module Expansion
Outside line	**3**	**—**
Extension	**8**	**—**
XDP	**4**	**4**

EXtra Device Port (XDP)

Four extension jacks in the KX-TD308 support the connection of a digital proprietary telephone and a single line device. The two devices per jack have different extension numbers and are treated as two completely different extensions.

Paralleled Telephone Connection

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

Super Hybrid System

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

Digital Proprietary Telephones (DPT)

The system supports nine different models of digital proprietary telephones which cover the range from a monitor set to a large display handsfree version.

Programming System

The system is programmed from a proprietary telephone.

Voice Mail Integration

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

Automatic Route Selection (ARS)

Automatically selects the pre-programmed least expensive route for outgoing toll calls.

1.1 System Highlights

Caller ID

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

Trunk (Outside Line) Answer From Any Station (TAFAS)

Ringing occurs over the external paging system; call can be answered from any station.

Remote Station Lock Control

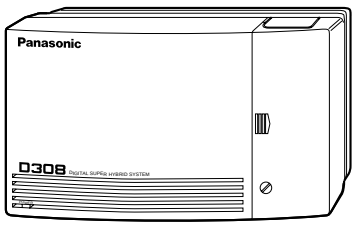
Allows an operator to lock an extension so that outgoing calls cannot be made.

Uniform Call Distribution (UCD)

Allows incoming calls to be distributed uniformly to a specific group of extensions.

1.2 Basic System Construction

The KX-TD308 Digital Super Hybrid System has a basic capacity of three outside lines and eight extensions. It is capable of supporting Panasonic digital and analog proprietary telephone, and single line devices such as standard telephones and fax machines. To expand its capabilities the system can be equipped with optional components or customer-supplied peripherals such as external speaker and external music source (e.g., radio).



1.3 Proprietary Telephones

The following Panasonic proprietary telephones are available with this system.

Proprietary Telephone	Description
KX-T7420	Digital, speakerphone, 12 Flexible CO
KX-T7425	Digital, speakerphone, 24 Flexible CO
KX-T7431	Digital, 1-line display, speakerphone, 12 Flexible CO
KX-T7433	Digital, 3-line display, speakerphone, 24 Flexible CO
KX-T7436	Digital, 6-line display, speakerphone, 24 Flexible CO
KX-T7220	Digital, speakerphone, 24 Flexible CO
KX-T7230	Digital, 2-line display, speakerphone, 24 Flexible CO
KX-T7235	Digital, 6-line display, speakerphone, 12 Flexible CO
KX-T7250	Digital, monitor, 6 Flexible CO
KX-T7130	1-line display, speakerphone, 12 Flexible CO, 12 PF
KX-T7020	Speakerphone, 12 Flexible CO, 4 PF
KX-T7030	1-line display, speakerphone, 12 Flexible CO, 4 PF
KX-T7050	Monitor, 12 Flexible CO, 4 PF
KX-T7055	Monitor, 3 Flexible CO, 3 PF

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

1.4 Options

1.4.1 4-SLT Extension Expansion Card (KX-TD30870)

Adds four eXtra Device Port extensions to jacks 5 through 8, for a maximum of eight digital extensions plus eight single line device extensions. The basic configuration already supports digital proprietary telephones on jacks 5 through 8.

1.4.2 Caller ID / DISA / FAX Detection Card (KX-TD30891)

This card supports the following:

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

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

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

1.5 Specifications

1.5.1 General Description

System Capacity

Outside lines	3 max.
Extensions	8 max. (12 max. with eXtra Device Port, 16 max. with eXtra Device Port and 4-SLT Extension Expansion Card)

Control Method

CPU: 8 bit CPU
Control ROM: 768 KB, Control RAM 128 KB

Switching

Non Blocking PCM Time Sharing Switch

Power Supplies

Primary	120 VAC, 60 Hz (0.7 A)
Secondary	Circuit Volt: +5V, +15V, +30V

Dialing

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

Connector

Outside lines	6-pin Modular Connector (RJ25C)
Extensions/Doorphone	50-pin (Amphenol 57JE series or the equivalent)
Pager/Music Source	EIAJ RC-6701 A plug (two-conductor ø 2.5mm in diameter)

Extension Connection Cable

Standard telephones	1 pair wire (T, R)
KX-T7420, KX-T7425, KX-T7431, KX-T7433, KX-T7436, KX-T7220, KX-T7230, KX-T7235, KX-T7250	1 pair wire (D1, D2) or 2 pair wire (T, R, D1, D2)
KX-T7130, KX-T7020, KX-T7030, KX-T7050, KX-T7055	2 pair wire (T, R, D1, D2)

SMDR (Station Message Detail Recording)

Interface	Serial Interface (RS-232C) (D-SUB, 9-pin)
Output Equipment	Printer
Detail Recording	Date, Time, Extension Number, Outside Line Number, Dialed Number, Call Duration, Account Code, Caller ID, Ring Duration, Timed Reminder

1.5 Specifications

1.5.2 Characteristics

Station Loop Limit

KX-T7420 / KX-T7425 / KX-T7431 / KX-T7433 / KX-T7436 / KX-T7220 / KX-T7230 / KX-T7235 / KX-T7250 / KX-T7020 / KX-T7030 / KX-T7050 / KX-T7055 / KX-T7130 .....40 ohms
Standard Telephone.....600 ohms including set
Doorphone.....20 ohms

Minimum Leakage Resistance

15,000 ohms

Maximum Number of Station Instruments per Line

1 for KX-T7420, KX-T7425, KX-T7431, KX-T7433, KX-T7436, KX-T7220, KX-T7230, KX-T7235, KX-T7250, KX-T7130, KX-T7020, KX-T7030, KX-T7050, KX-T7055 or standard telephone
2 by Parallel or eXtra Device Port Connection of a proprietary telephone and a standard telephone

Ring Voltage

80 Vrms at 25 Hz depending on the Ringing Load

Central Office Loop Limit

1,600 ohms max.

Environmental Requirements

0 – 40 °C / 32 – 104 °F, 10 – 90% relative humidity

Hookswitch Flash Timing Range

204 – 1,000 milliseconds

1.5 Specifications

1.5.3 System Capacity

Lines, Cards, Station Equipment

Item	Max. Quantity
Service Units	1
Outside Lines	3
Extension Jacks	8
Station Terminals	16
4-SLT Extension Expansion Card	1
Caller ID/DISA/FAX Detection Card	1
Doorphone	1
Door Opener	1
External Pager	1
External Music Source	1

System Data

Item	Max. Quantity	
Operators	2	
System Speed Dialing	100	
One-Touch Dialing	24	per extension (proprietary telephone)
Station Speed Dialing	10	per extension
Call Park areas	10	
Absent Messages	9	
Toll Restriction Levels	8	
Extension Groups	8	
Class of Service levels	8	
Message Waitings	16	
UCD Groups	8	

Section 2
Installation

This section contains the basic system installation and wiring instructions, as well as how to install the optional cards and units.

2.1 Before Installation

Please read the following notes concerning installation and connection before installing the system and terminal equipment.

Safety Installation Instructions

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

1. Never install telephone wiring during a lightning storm.
2. Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
3. Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
4. Use caution when installing or modifying telephone lines.

Installation Precautions

This system is designed for wall mounting only. Avoid installing in the following places. (Doing so may result in malfunction, noise, or discoloration.)

1. In direct sunlight and hot, cold, or humid places. (Temperature range: 0°C – 40°C / 32°F – 104°F)
2. Sulfuric gases produced in areas where there are thermal springs, etc. may damage the equipment or contacts.
3. Places in which shocks or vibrations are frequent or strong.
4. Dusty places, or places where water or oil may come into contact with the system.
5. Near high-frequency generating devices such as sewing machines or electric welders.
6. On or near computers, telexes, or other office equipment, as well as microwave ovens or air conditioners. (It is preferable not to install the system in the same room with the above equipment.)
7. Install at least 1.8 m (6 feet) away from radios and televisions. (Both the system and Panasonic proprietary telephones)
8. Do not obstruct area around the system (for reasons of maintenance and inspection — be especially careful to allow space for cooling above and at the sides of the system).

Wiring Precautions

Be sure to follow these instructions when wiring the unit:

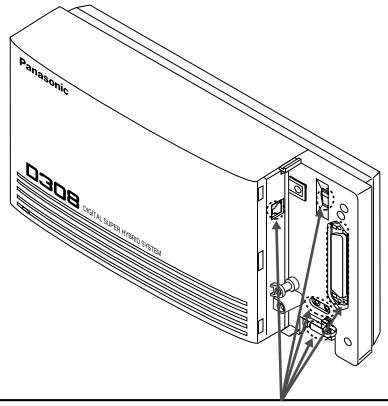
1. Do not wire the telephone cable in parallel with an AC power source, computer, telex, etc. If the cables are run near those wires, shield the cables with metal tubing or use shielded cables and ground the shields.

2.1 Before Installation

2. If cables are run on the floor, use protectors to prevent the wires from being stepped on. Avoid wiring under carpets.
3. Avoid using the same power supply outlet for computers, telexes, and other office equipment. Otherwise, the system operation may be interrupted by the induction noise from such equipment.
4. Please use one pair telephone wire for extension connection of (telephone) equipment such as standard telephones, data terminals, answering machines, computers, voice processing systems, etc., except Panasonic proprietary telephones (e.g. KX-T7433, KX-T7436, KX-T7230, KX-T7235).
5. Unplug the system during wiring. After all of the wiring is completed, plug in the system.
6. Mis-wiring may cause the system to operate improperly. Refer to Section 6.1.1 “Installation” and Section 6.1.2 “Connection”.
7. If an extension does not operate properly, disconnect the telephone from the extension line and then connect again, or turn off the Power Switch of the system and then on again.
8. The system is equipped with a 3-wire grounding type plug. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the purpose of the grounding-type plug.
9. Outside lines should be installed with lightning protectors. For details, refer to Section 2.3.2 “Outside Line Connection – Installing Lightning Protectors”.

Warning:

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



Warning: Static sensitive connectors

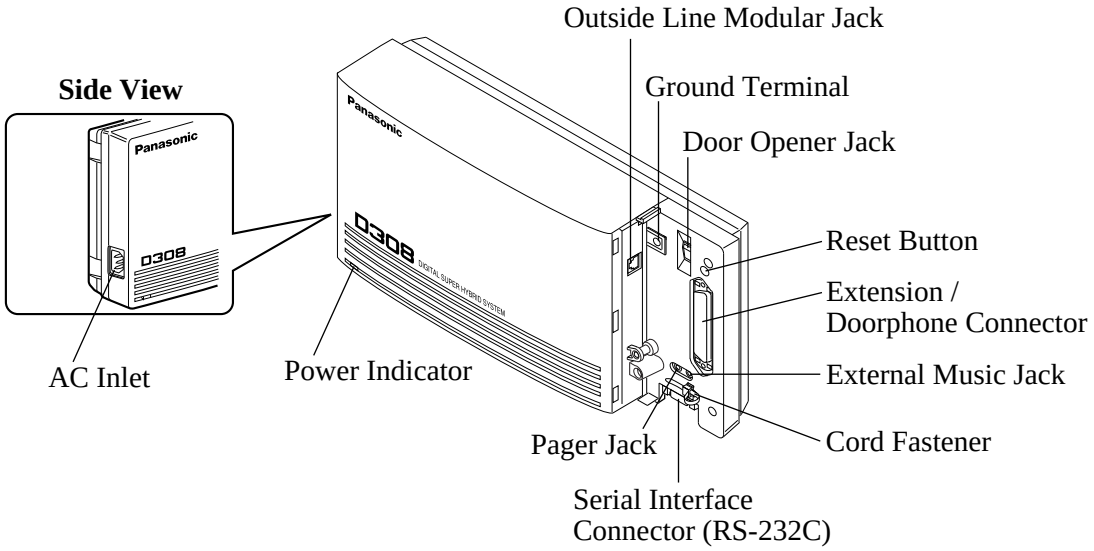
2.2 Installation of the Main Unit

2.2.1 Unpacking

Unpack the box and check the items below:

Main Unit	one
AC Cord	one
Template	one
Screws (Wall Mounting)	three
Screw (Extension Connector)	one
Pager Connector	one
Music Source Connector	one

2.2.2 Location of Interfaces

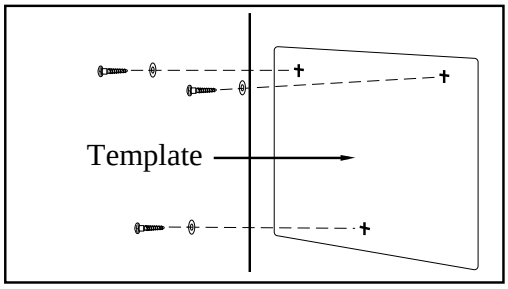


2.2.3 Wall Mounting

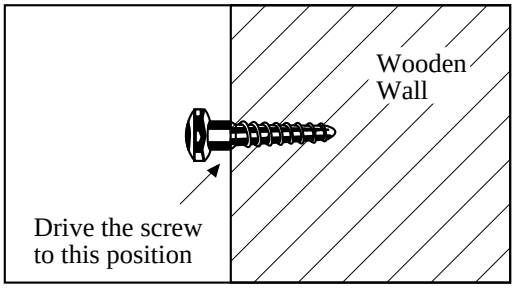
This set is designed for wall mounting only. The wall where the main unit is to be mounted must be able to support the weight of the main unit. If screws other than the ones supplied are used, use screws with the same diameter as the ones enclosed.

Mounting on Wooden Wall

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



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

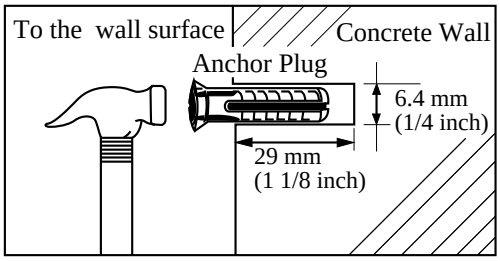


3. Hook the main unit on the screw heads.

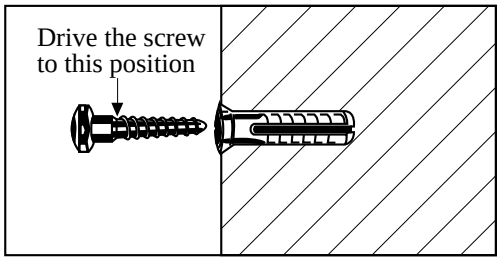
Mounting on Concrete or Mortar Wall

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

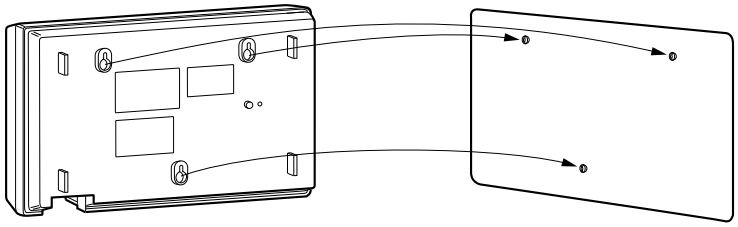
2. Drill holes and drive the anchor plugs (user-supplied) with a hammer, flush to the wall.



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

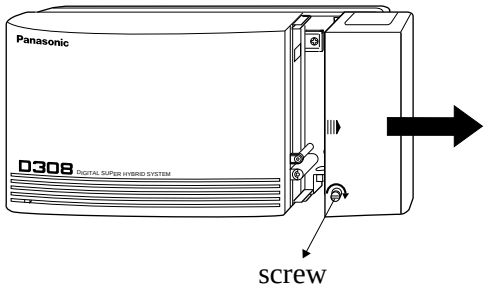


4. Hook the main unit on the screw heads.



2.2.4 Opening Front Cover

1. Loosen the screw.
2. Slide the front cover toward the right while pressing the ⫼ mark.

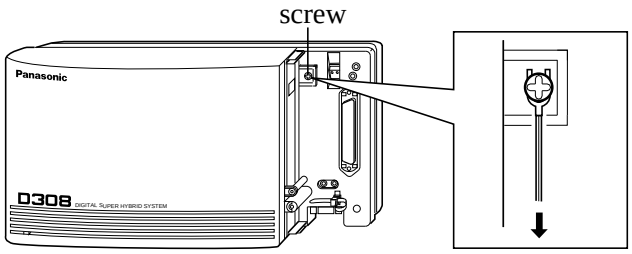


Note The screw cannot be removed from the system.

2.2.5 Frame Ground Connection

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

1. Loosen the screw.
2. Insert the grounding wire.
3. Tighten the screw.
4. Connect the grounding wire to ground.



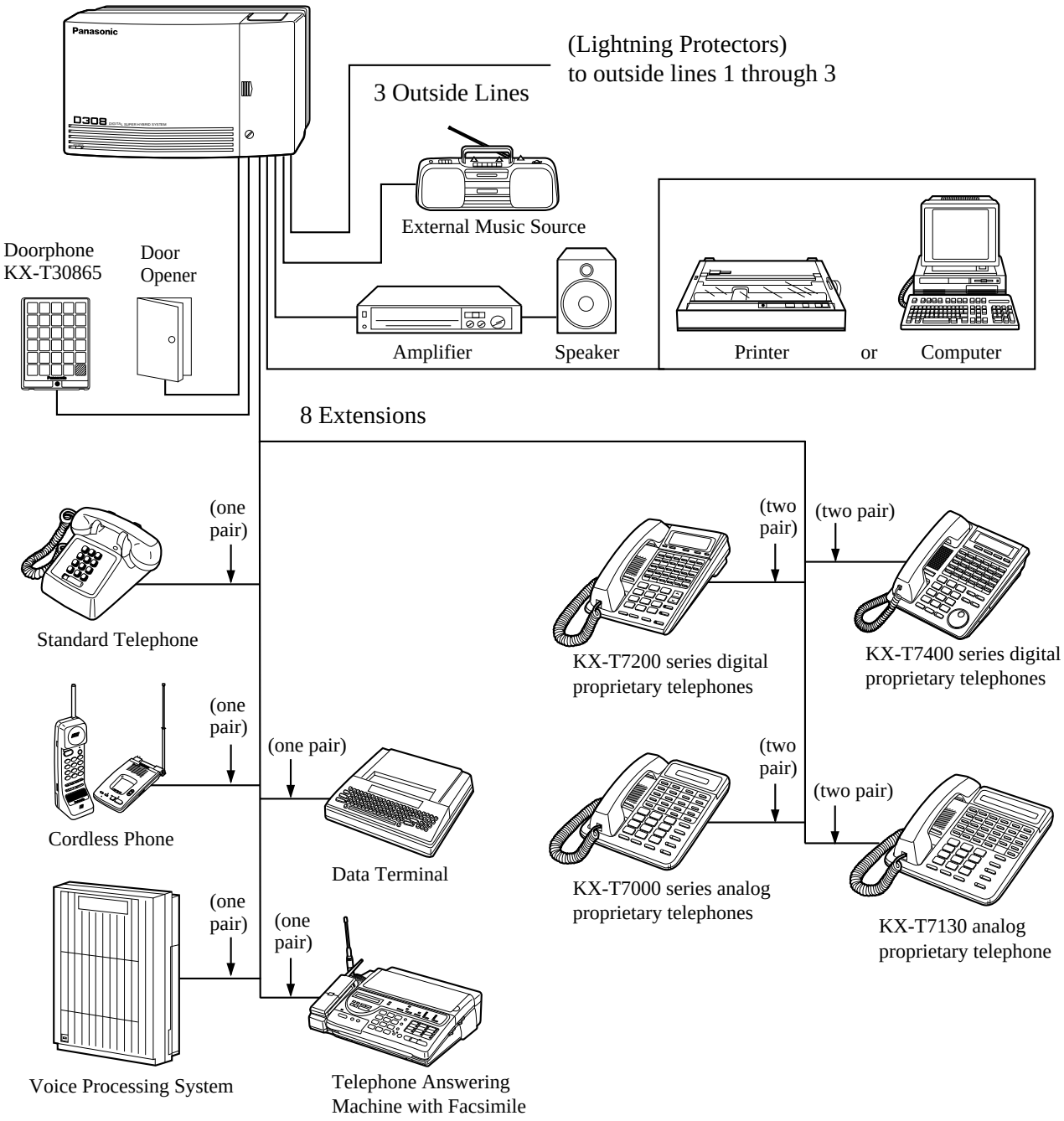
In most of the continental United States, the ground provided by the “Third wire ground” at the commercial power outlet will be satisfactory. However, in a small percentage of cases this ground may be installed incorrectly. Therefore, the following test procedure should be performed.

Test Procedure

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

2.3 Connection

2.3.1 System Connection Diagram



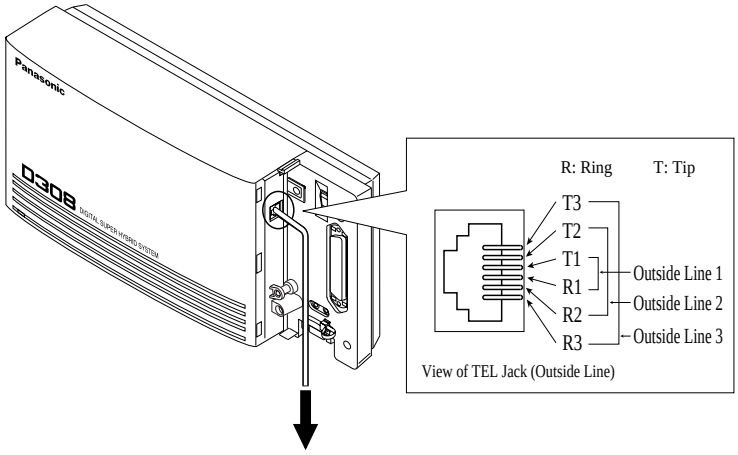
Note

- It is recommended that extension of jack 1 is a display proprietary telephone.
- Parallel connection of telephones is possible. Refer to the Parallel Telephone Connection in Section 2.3.4 “Telephone Connection”.

2.3.2 Outside Line Connection

Connection

1. Insert the modular plugs of the telephone line cords (6-conductor wiring) into the modular jacks on the system.
2. Connect the line cord to the outside line jack and the terminal board or the Central Office jack.



To Terminal Board or
Modular Jacks from
the Central Office

2.3.2 Outside Line Connection

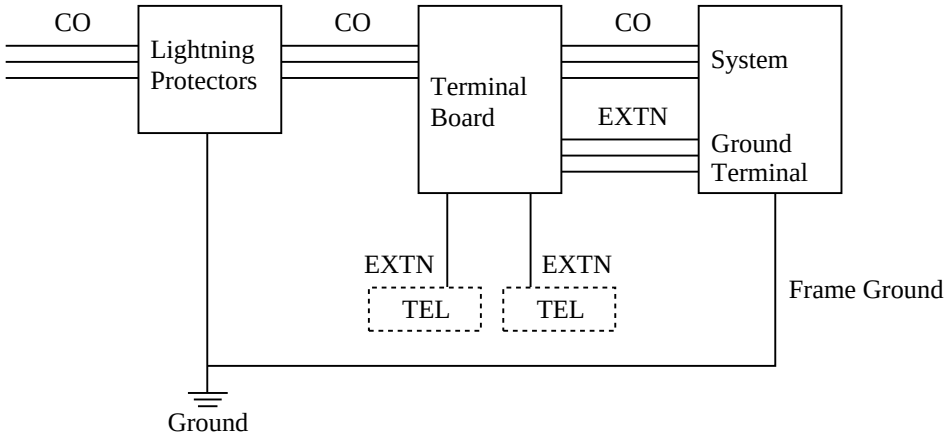
Installing Lightning Protectors

A lightning protector is a device to be installed on an outside line to prevent a dangerous surge from entering the building and damaging equipment.
A dangerous surge can occur if a telephone line comes in contact with a power line. Trouble due to lightning surges has been showing a steady increase with the development of electronic equipment.
In many countries, there are regulations requiring the installation of a lightning protector. A lightning strike to a telephone cable which is 10 m (33 feet) above ground can be as high as 200,000 volts. This system should be installed with lightning protectors. In addition, grounding (connection to earth ground) is very important for the protection of the system.

Recommended lightning protectors

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

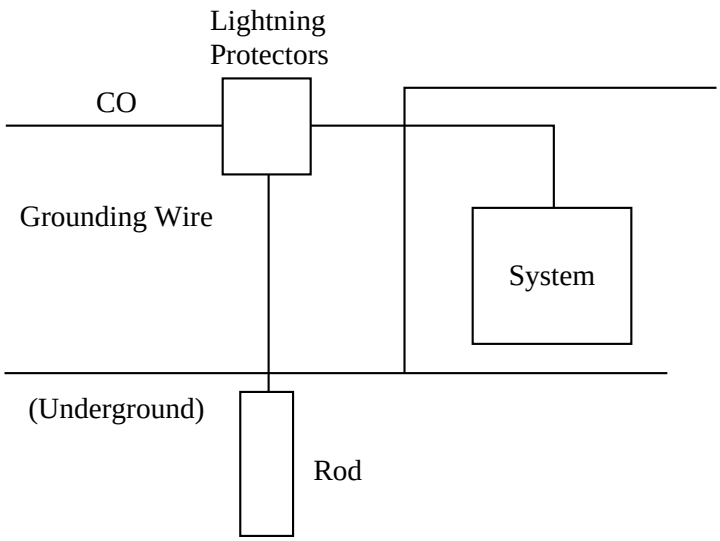
Installation



CO: Central Office (Outside line)
EXTN: Extension line
TEL: Telephone

2.3.2 Outside Line Connection

Installation of an Earth Rod



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

Note
- The above figures are recommendations only.
- The length of earth rod and the required depth depend on the composition of the soil.

2.3.3 Extension Connection

Extension jacks 1 through 4 are for all kinds of telephones. Extension jacks 5 through 8 are only for digital proprietary telephones. To make extension jacks 5 through 8 usable for all kinds of telephones, a 4-SLT Extension Expansion Card (KX-TD30870) must be installed.

Telephone Wiring

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

	Diameter of the line	Max. length
Standard Telephone	22AWG	1798m (5900 feet)
	24AWG	1128m (3700 feet)
	26AWG	698m (2290 feet)
Proprietary Telephone	22AWG	360m (1180 feet)
	24AWG	229m (750 feet)
	26AWG	140m (460 feet)

2 or 4-conductor wiring is required for each extension as listed below. There are four pins for possible connection: “T”, “R”, “D1” and “D2”.

T: Tip D1: Low
R: Ring D2: High

Telephone	Wiring
Standard telephones	1 pair wire (T, R)
Digital proprietary telephone (e.g., KX-T7436, KX-T7235)	1 pair wire (D_1, D_2) or 2 pair wire (D_1, D_2, T, R) for eXtra Device Port
Analog proprietary telephone (e.g., KX-T7030, KX-T7130)	2 pair wire (D_1, D_2, T, R)

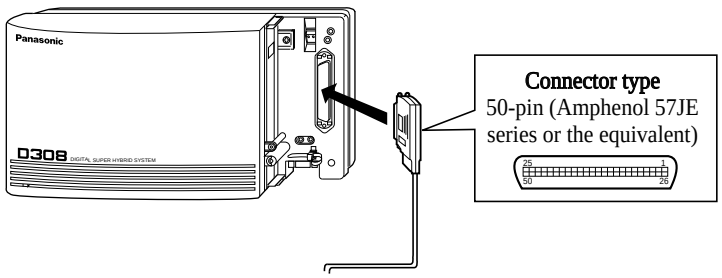
Note

- **If a KX-TD30870 is installed**
  Note the jack numbers for the facsimile and standard telephone which have Caller ID service.
- If a telephone or answering machine with an A-A1 relay is connected to the system, set the
  A-A1 relay switch of the telephone or answering machine to the OFF position.

2.3.3 Extension Connection

Connection

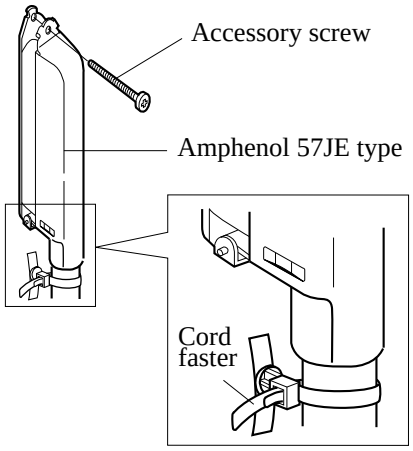
1. Insert the 50-pin connector to the Extension Jack as shown.
2. Connect the wire cords to the appropriate connector pins and the terminal equipment. Refer to the Telephone Wiring and Pin Number Chart (page 2-14).



To the terminal equipment

Note

- To fix the Amphenol 57JE type (screw-attach type 50-pin connector) to the Extension Jack. To attach the Amphenol 57JE type (plug) to the connector, drive the accessory screw into the upper part. Fasten the Amphenol cable with the cord faster.



2.3.3 Extension Connection

Pin Number Chart

Pin no.	Cable Color	EXTN. 1-4	
26	WHT-BLU		T
1	BLU-WHT		R
27	WHT-ORN	Jack	D1
2	ORN-WHT	No.1	D2
28	WHT-GRN		–
3	GRN-WHT		–
29	WHT-BRN		T
4	BRN-WHT		R
30	WHT-SLT	Jack	D1
5	SLT-WHT	No.2	D2
31	RED-BLU		–
6	BLU-RED		–
32	RED-ORN		T
7	ORN-RED		R
33	RED-GRN	Jack	D1
8	GRN-RED	No.3	D2
34	RED-BRN		–
9	BRN-RED		–
35	RED-SLT		T
10	SLT-RED		R
36	BLK-BLU	Jack	D1
11	BLU-BLK	No.4	D2
37	BLK-ORN		–
12	ORN-BLK		–

Pin no.	Cable Color	EXTN. 5-8/Doorphone	
38	BLK-GRN		T
13	GRN-BLK		R
39	BLK-BRN	Jack	D1
14	BRN-BLK	No.5	D2
40	BLK-SLT		–
15	SLT-BLK		–
41	YEL-BLU		T
16	BLU-YEL		R
42	YEL-ORN	Jack	D1
17	ORN-YEL	No.6	D2
43	YEL-GRN		–
18	GRN-YEL		–
44	YEL-BRN		T
19	BRN-YEL		R
45	YEL-SLT	Jack	D1
20	SLT-YEL	No.7	D2
46	VIO-BLU		–
21	BLU-VIO		–
47	VIO-ORN		T
22	ORN-VIO		R
48	VIO-GRN	Jack	D1
23	GRN-VIO	No.8	D2
49	VIO-BRN		–
24	BRN-VIO		–
50	VIO-SLT	Doorphone	T
25	SLT-VIO		R

Note

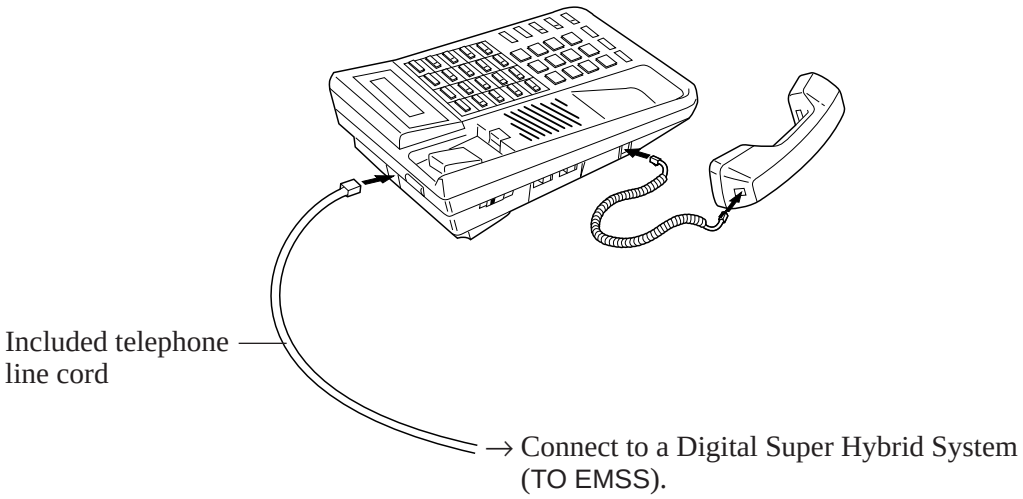
- The shaded pins are only available if a KX-TD30870 4-SLT Extension Expansion Card is installed.

2.3.4 Telephone Connection

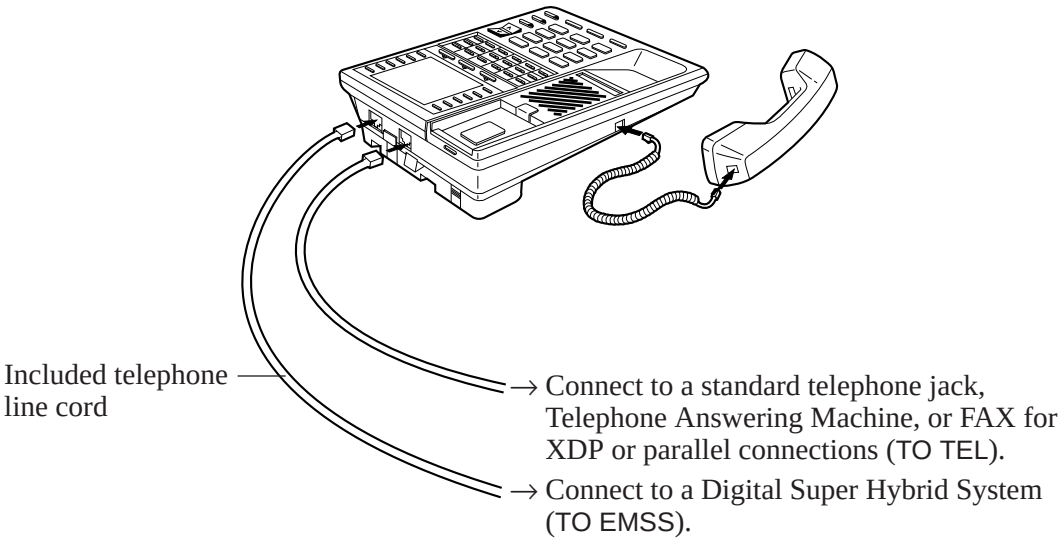
Proprietary Telephone Connection

Connect proprietary telephones as follows:

■ **Analog Proprietary Telephone**

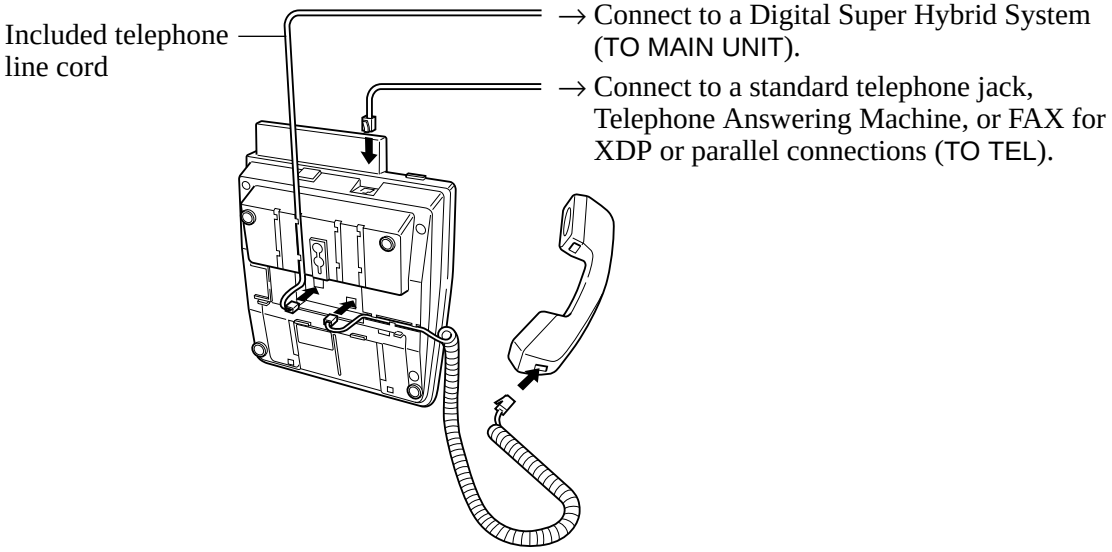


■ **KX-T7200 Series Digital Proprietary Telephone**



2.3.4 Telephone Connection

■ **KX-T7400 Series Digital Proprietary Telephone**

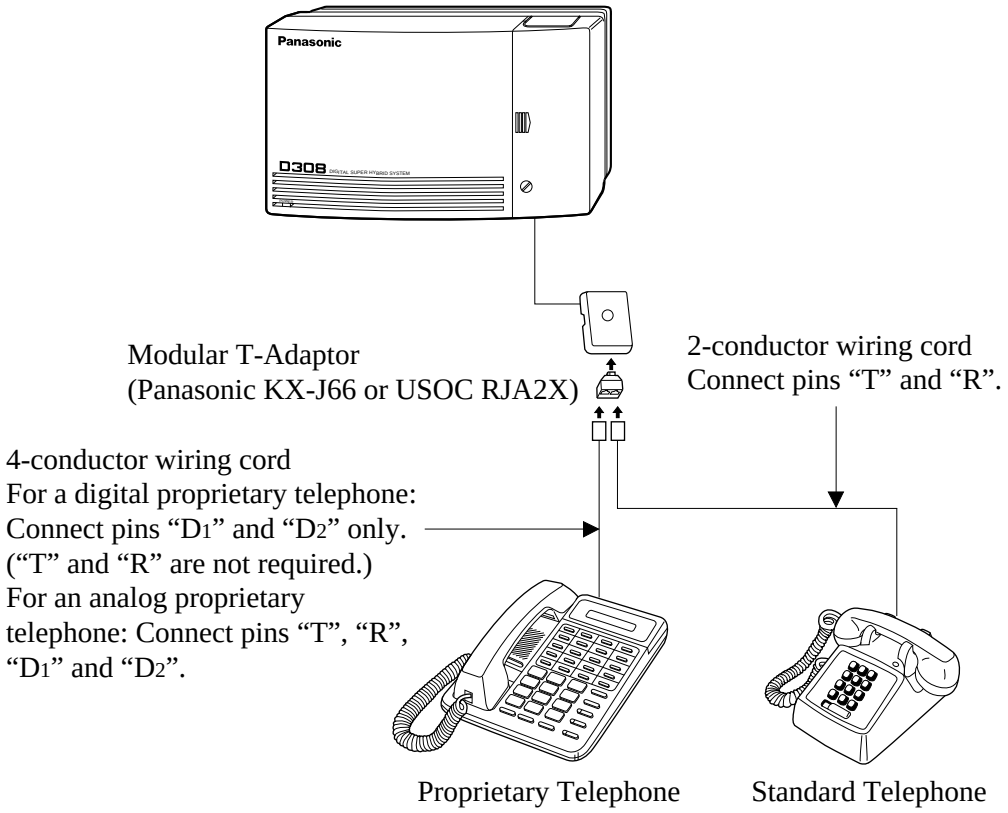


2.3.4 Telephone Connection

Parallel Telephone Connection

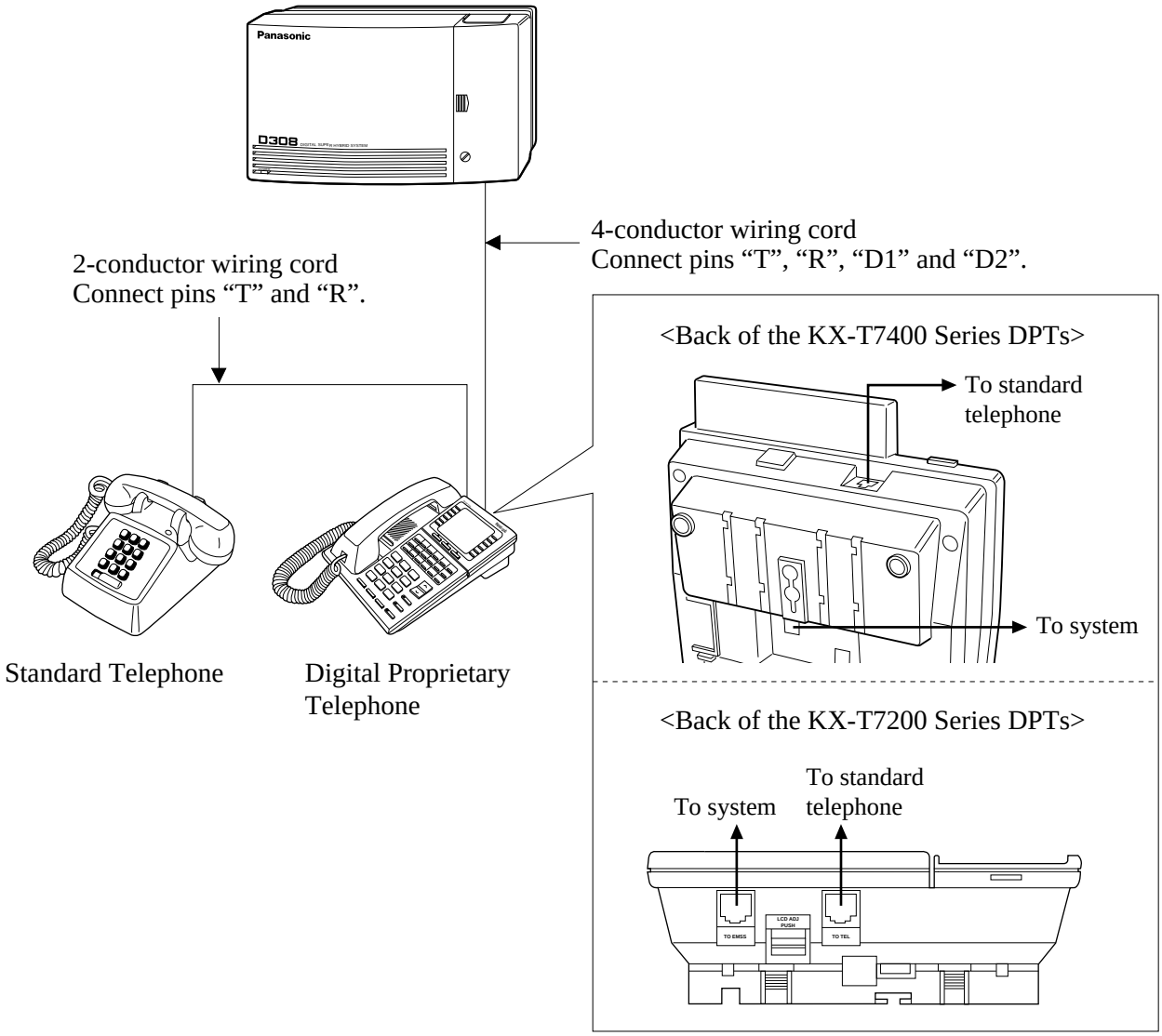
Any standard telephone can be connected in parallel with a proprietary telephone as follows:

Method 1: Using a Modular T-Adaptor



2.3.4 Telephone Connection

Method 2: For Digital Proprietary Telephones only



Note

- Not only a standard telephone but a single line device such as an answering machine, a facsimile or a modem (personal computer) etc. can be connected in parallel with a proprietary telephone.
- If a standard telephone with a Caller ID feature is connected in parallel, the Caller ID feature will not function.

Feature References

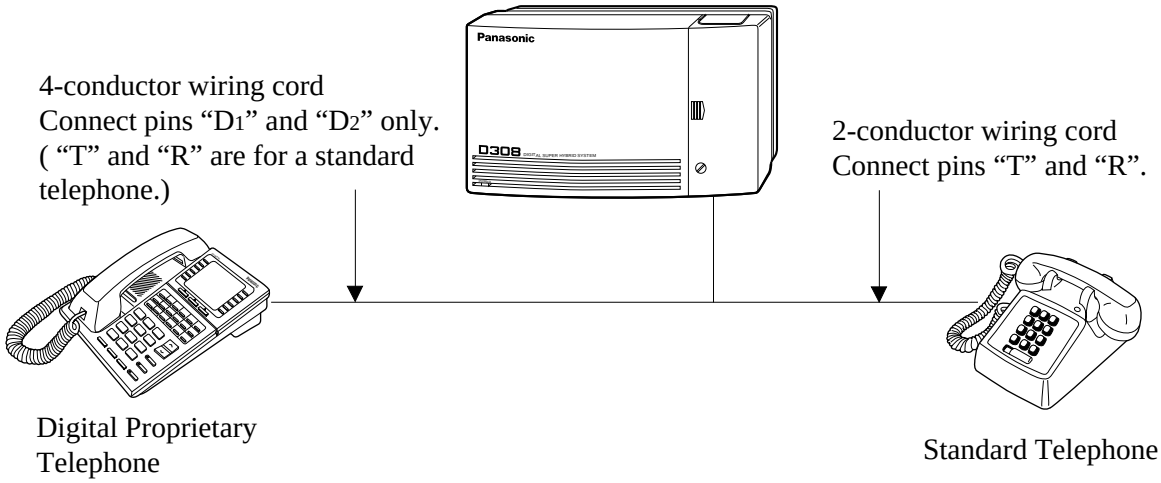
Section 3, Features
Paralleled Telephone

2.3.4 Telephone Connection

EXtra Device Port (XDP) Connection

A digital proprietary telephone and a standard telephone can be connected to the same extension jack yet have different extension numbers (eXtra Device Port feature). System Programming is required for this jack.

Method 1



Method 2

Section 2.3.4 "Telephone Connection, Paralleled Telephone Connection, Method 2: for Digital Proprietary Telephone only" is also available for XDP connection.

Programming References

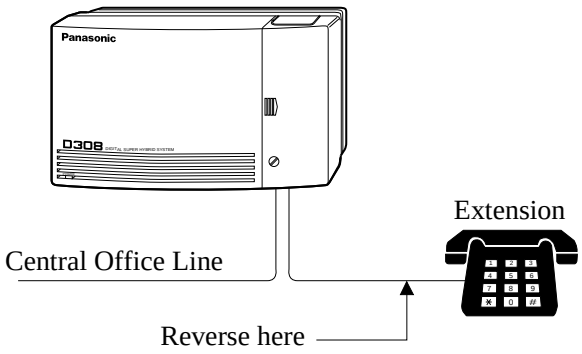
Section 4, System Programming
[600] EXtra Device Port

Feature References

Section 3, Features
EXtra Device Port (XDP)

2.3.5 Polarity Sensitive Telephone Connection

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



1. Complete all the required extension wiring.

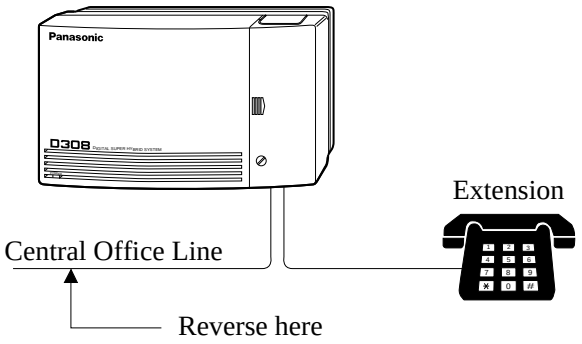
2. Confirm that dialing can be done from all the extensions using a touch-tone telephone.
If dialing fails, the polarity between the extension and the system must be reversed.

3. Reverse as shown.

4. Unplug the system.

5. Connect all outside lines.

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



7. Reverse as shown.

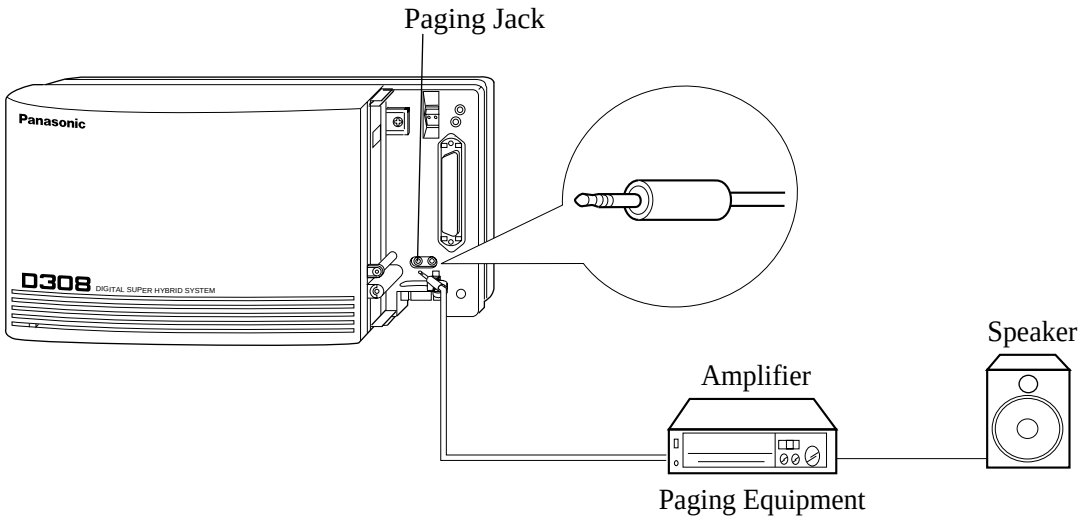
8. Every time an extension telephone is replaced, repeat the above procedure.

2.3.6 External Pager (Paging Equipment) Connection

One external pager (user-supplied) can be connected to the KX-TD308 as illustrated below.

Use an EIAJ RC-6701 A plug (two-conductor, ø 2.5mm in diameter).

• Output impedance: 600 Ω
Maximum length of the cable
AWG 18 – 22: Under 10 m (33 feet)



Note • To adjust the sound level of the pager, use the volume control on the amplifier.

Programming References

Section 4, System Programming
[804] External Pager BGM
[805] External Pager Confirmation Tone

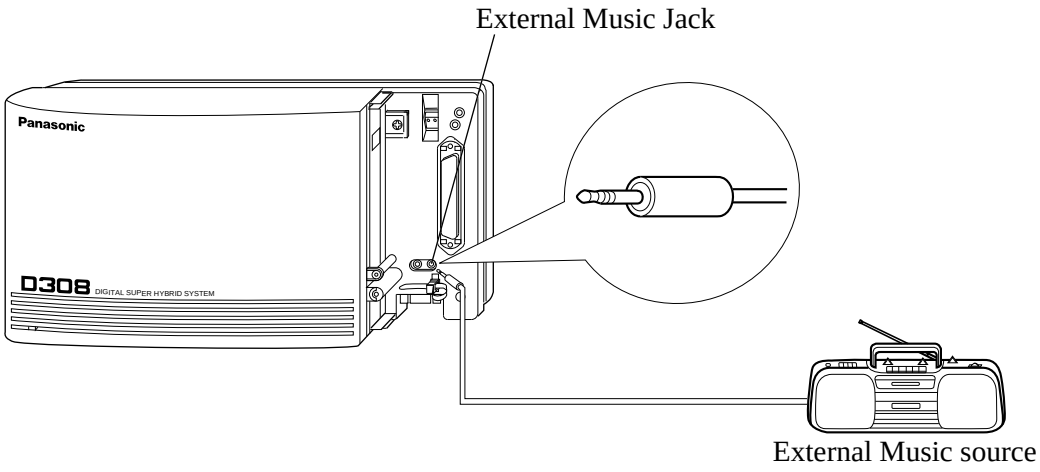
Feature References

Section 3, Features
Background Music (BGM) – External Paging – External
Paging – All
Trunk (Outside Line) Answer From Any Station

2.3.7 External Music Source Connection

One music source such as a radio (user-supplied) can be connected to the KX-TD308 as illustrated below.

Insert the plug to the earphone / headphone jack on the external music source.
Use an EIAJ RC-6701 A plug (two-conductor, ø 2.5mm in diameter).
• Input impedance: 8 Ω
Maximum length of the cable
AWG 18 – 22: Under 10 m (33 feet)



Note
- System Programming of music sources used for Music on Hold and Background Music is required.
- To adjust the sound level of the Music on Hold, use the volume control on the external music source.

Programming References

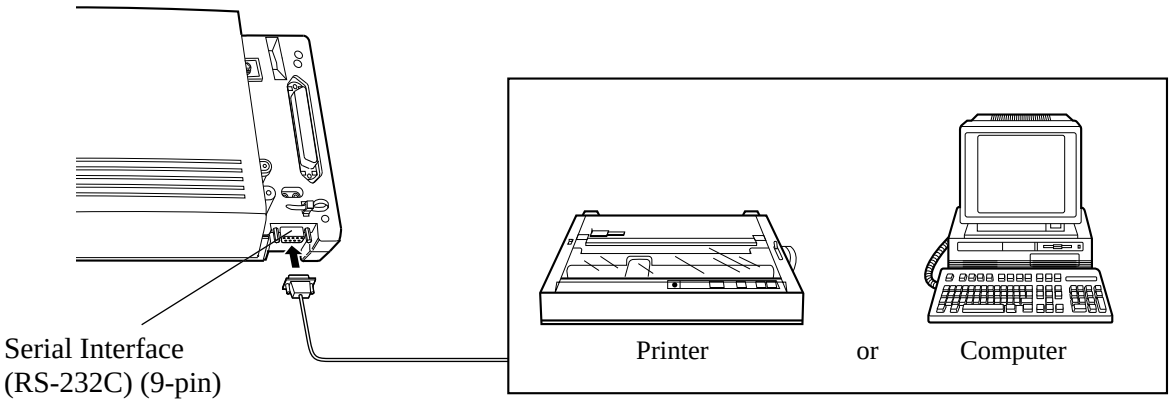
Section 4, System Programming
[803] Music Source Use
[990] System Additional Information, Field (20)

Feature References

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

2.3.8 Printer and PC Connection

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



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

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

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

2.3.8 Printer and PC Connection

Connection Chart for Printer / IBM Personal Computer with KX-TD308

If you connect a printer or an IBM-PC with a 9-pin cable, follow the chart below.

System — **9-pin Cable Printer/IBM-PC**

Circuit type (EIA)	Signal name	Pin no.		Pin no.	Signal name	Circuit type (EIA)
BB	RXD	2		2	RXD	BB
BA CD	TXD DTR*	3 4		3 4	TXD DTR	BA CD
AB CC	SG DSR	5 6		5 6	SG DSR	AB CC
CA CB	RTS* CTS	7 8		7 8	RTS CTS	CA CB

* RTS (7-pin) and DTR (4-pin) are connected on the board.

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

System — **25-pin Cable Printer/PC**

Circuit type (EIA)	Signal name	Pin no.		Pin no.	Signal name	Circuit type (EIA)
BB	RXD	2		1 3	FG RXD	AA BB
BA CD	TXD DTR	3 4		2	TXD	BA
AB CC	SG DSR	5 6		20 7	DTR SG	CD AB
CA CB	RTS CTS	7 8		5 6 8	CTS DSR DCD	CB CC CF

2.3.8 Printer and PC Connection

Serial Interface (RS-232C) Signals

Frame Ground: FG
Connects to the unit frame and the earth ground conductor of the AC power cord.

Transmitted Data: SD (TXD) .....(output)
Conveys signals from the unit to the printer. A "Mark" condition is held unless data or BREAK signals are being transmitted.

Received Data: RD (RXD).....(input)
Conveys signals from the printer.

Request to Send: RS (RTS).....(output)
This lead is held ON whenever DR (DSR) is ON.

Clear To Send: CS (CTS).....(input)
An ON condition of circuit CS (CTS) indicates that the printer is ready to receive data from the unit. The unit does not attempt to transfer data or receive data when circuit CS (CTS) is OFF.

Data Set Ready: DR (DSR).....(input)
An ON condition of circuit DR (DSR) indicates the printer is ready. Circuit DR (DSR) ON does not indicate that communication has been established with the printer.

Signal Ground: SG
Connects to the DC ground of the unit for all interface signal.

Data Terminal Ready: ER (DTR) .....(output)
This signal line is turned ON by the unit to indicate that it is ON LINE. Circuit ER (DTR) ON does not indicate that communication has been established with the printer. It is switched OFF when the unit is OFF LINE.

Data Carrier Detect: CD (DCD) .....(input)
The ON condition is an indication to data terminal (DTE) that the carrier signal is being received.

Programming References

Section 4, System Programming
[800] SMDR Incoming/Outgoing Call Log Printout
[801] SMDR Format
[802] System Data Printout
[806] Serial Interface (RS-232C) Parameters

Feature References

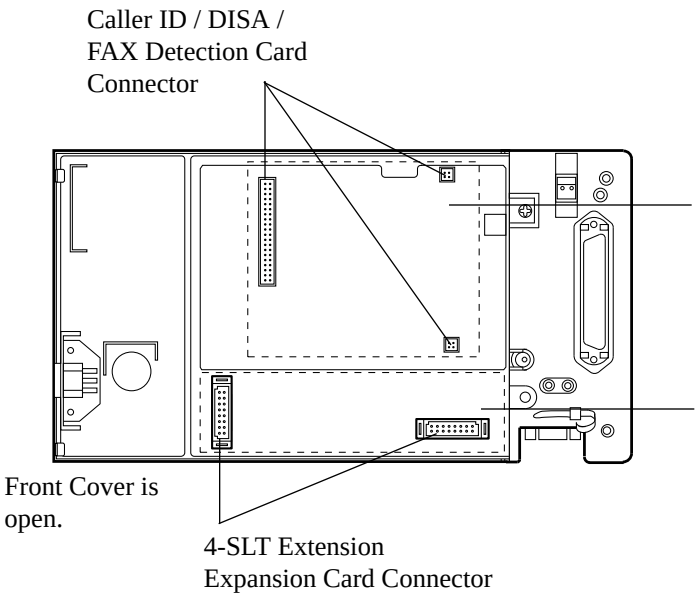
Section 3, Features
Station Message Detail Recording (SMDR)

2.4 Installation of Optional Cards

2.4.1 Location of Optional Cards

The location of the optional cards is shown below.

Precaution To protect the printed circuit boards (P-boards) from static electricity, do not touch parts on the P-boards in the main unit and on the optional cards.



Install **Caller ID / DISA / FAX Detection Card, KX-TD30891**.
This card enables the Caller ID, DISA and FAX Detection features.

Install **4-SLT Extension Expansion Card, KX-TD30870**.
This card adds four eXtra Device Port extensions, for a maximum of eight digital extensions plus eight single line device extensions.

2.4.2 4-SLT Extension Expansion Card / Caller ID/DISA/FAX Detection Card Installation

One 4-SLT Extension Expansion Card (KX-TD30870) and one Caller ID / DISA / FAX Detection Card (KX-TD30891) can be installed to the system.

4-SLT Extension Expansion Card adds four eXtra Device Port extensions to jacks 5 through 8, for a maximum of eight digital extensions plus eight single line device extensions. The basic configuration already supports digital proprietary telephones on jacks 5 through 8.

Caller ID / DISA / FAX Detection Card supports the following.

Caller ID: Receives the Caller ID Service from the Central Office.

A specified standard telephone with Caller ID service can display the information. Display proprietary telephones can display caller's information which has been stored in the system according to the Caller ID service.

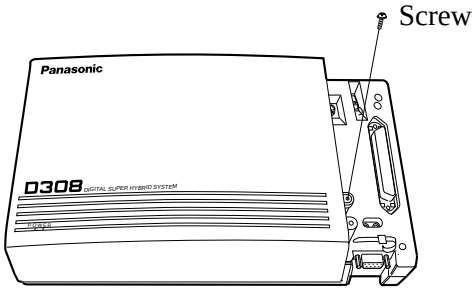
Direct Inward System Access (DISA):

One of the system features. An outgoing message greets the external caller and gives information so that the caller can access the extensions directly.

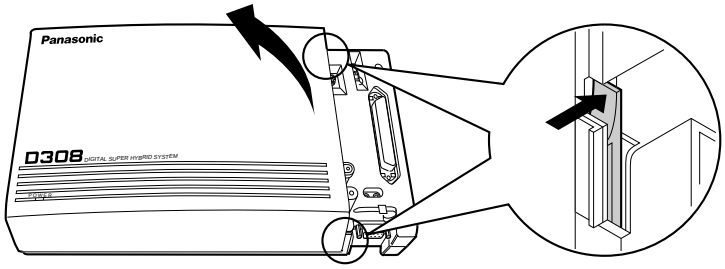
Facsimile detection:

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

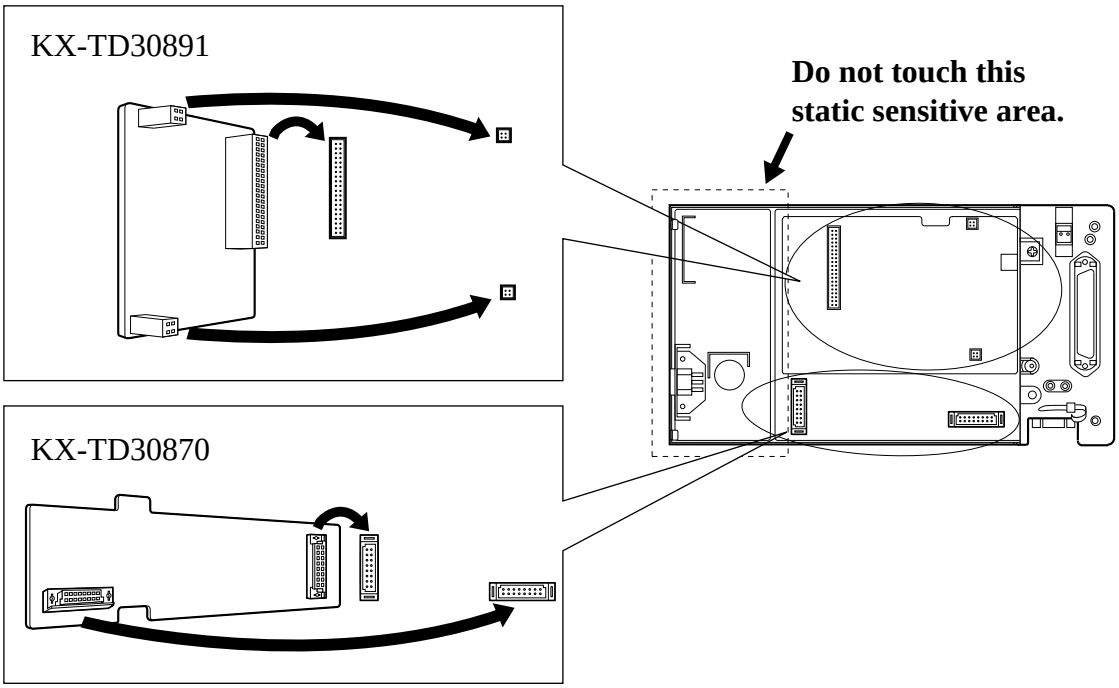
1. Loosen the screw.



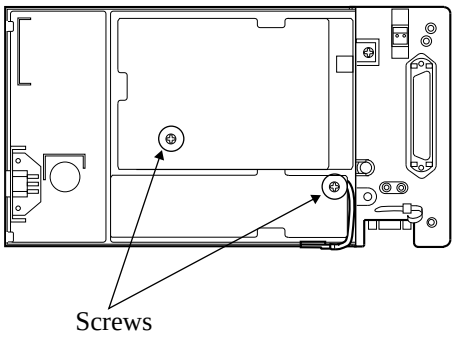
2. Remove the cover by pressing both tabs and lifting up.



3. Attach the optional card to the marked connector.



4. Tighten the screws.



5. Replace the cover.

2.4.3 Doorphone and Door Opener Connection

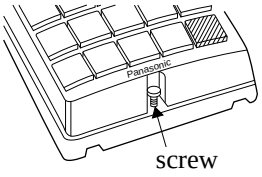
One doorphone (KX-T30865) and one door opener (user-supplied) can be installed.

The maximum cable length

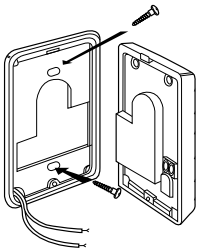
The maximum length of the doorphone and door opener line cord which connects to the system is as follows:

	Diameter of the line	Max. length
Doorphone	22AWG	180m (590 feet)
	24AWG	113m (370 feet)
	26AWG	70m (230 feet)
Door Opener	22AWG	180m (590 feet)

Installing the Doorphone



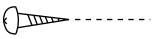
1. Loosen the screw to separate the doorphone into two halves.



2. Install the base cover to the wall with two screws.

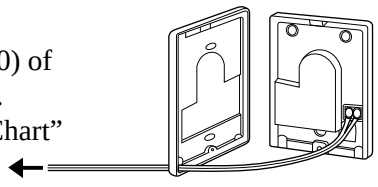
Note Two kinds of screws are included. Please choose the appropriate one depending on your wall type:

Type 1: When the doorphone plate has been fixed to the wall.


Type 2: When you wish to install the doorphone directly to the wall.

3. Connect the wires to the screws located in the front cover.

Connect the wires to the pins (no.25 and 50) of the extension connector. (See the “Pin Number Chart” on page 2-14.)

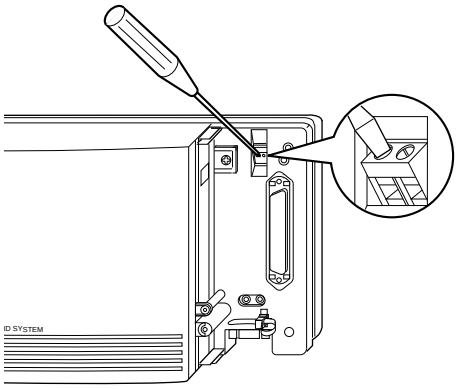


4. Secure both halves together and re-install the screw.

2.4.3 Doorphone and Door Opener Connection

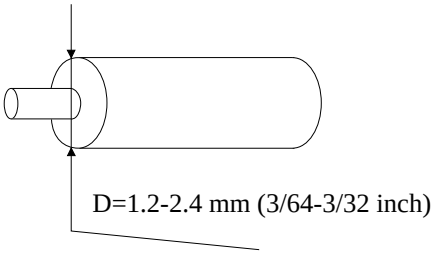
Connecting Door Openers

1. Loosen the screws on the terminal strip.



2. Insert the wires coming from the door opener into the holes and tighten the screws.

Note
- We recommend using UL1015 twisted wire or the equivalent for wiring.
- The wire should be between 1.2 and 2.4 mm (3/64 - 3/22 inch) in diameter including the coating.



Programming References

Section 4, System Programming
[607]–[608] Doorphone Ringing Assignment — Day / Night

Feature References

Section 3, Features
Door Opener
Doorphone Call

2.5 Auxiliary Connection for Power Failure Transfer

Power Failure Transfer connects a specific standard telephone to a selected outside line in the event of system power failure, as follows:

Outside Line 1 – Extension (T, R) Jack 1
Connection of outside line 1 and the respective extension require no auxiliary connection.

Note

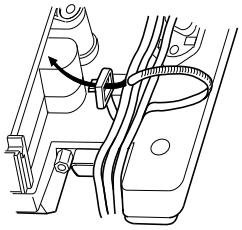
- In the event of a power failure, system memory is protected by a factory-provided lithium battery. There is no memory loss except the memories of Camp-on, Saved Number Redial, Last Number Redial, Call Park and Message Waiting.
- The system changes the current connection to this connection automatically when the power supply stops.
- If DC power is available from backup batteries if AC power fails, the system does not change the current connection to the above connection.

Feature References

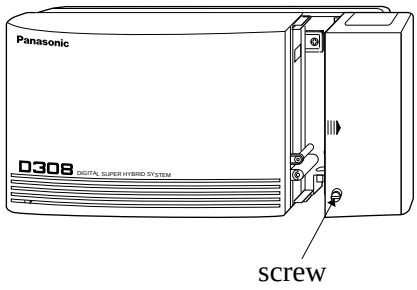
Section 3, Features
Power Failure Transfer

2.6 Closing the Front Cover

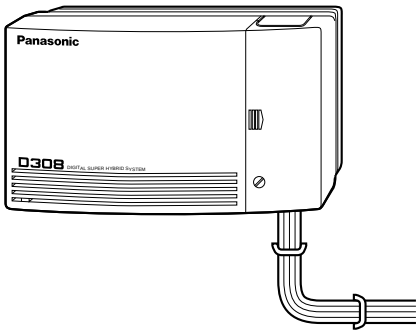
1. Fasten all the cables and cords with the cord fastener.



2. Replace the cover and tighten the screw.



3. Tie together all of the connected cords and attach them to the wall so that the cords cannot be pulled out of the system.

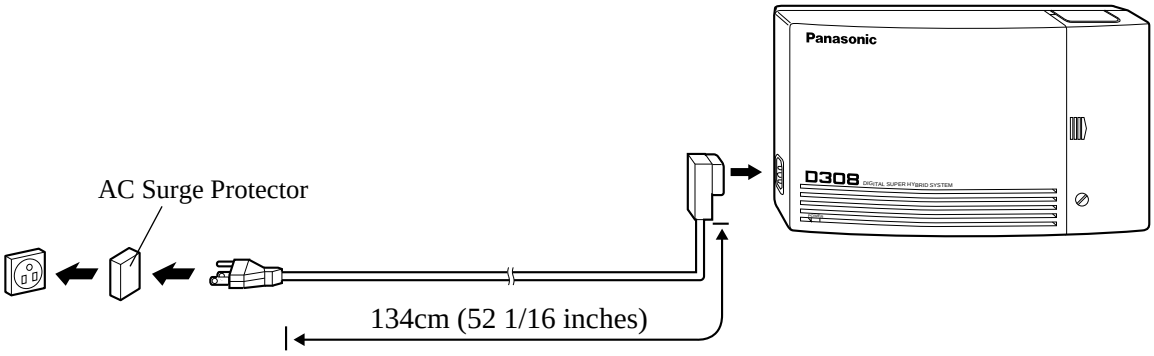


2.7 Starting the System for the First Time

Plug the AC cord into the system AC Inlet and an AC outlet. (The power indicator lights.)

Avoid using the same AC outlet for office equipment and this system. Use a dedicated AC outlet only.

CAUTION: The power supply cord is used as the main disconnect device, ensure that the socket-outlet is located/installed near the equipment and is easily accessible.



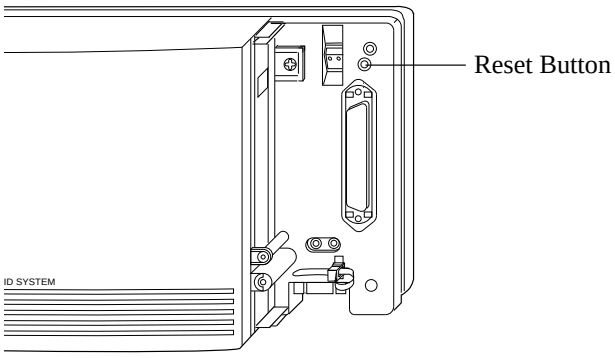
2.8 System Restart

After starting the system, if the system does not operate properly, restart the system.
Before restarting the system, try the system feature again to confirm whether there definitely is a problem or not.
System Restart causes the following:

1. Camp-on is cleared.
2. Calls on Hold are terminated.
3. Calls on Exclusive Hold are terminated.
4. Calls in progress are terminated.
5. Call Park is cleared.

Other data is not cleared by System Restart.

1. Press the Reset Button with a pointed tool.



Notice If the system still does not operate properly, please see Section 6.1.4 “Using the Reset Button”.

2.9 System Data Clear

After storing or changing the system programming data, it is possible to clear your programming data stored in the system, if required. The system will restart with the default setting.

1. Restart the system using program [900] “System Data Clear”.

Programming References

Section 4, System Programming
[900] System Data Clear

Section 3
Features

This section describes every basic, optional, and programmable feature in alphabetical order. It also provides information about the conditions, connection references, programming required, related features, and operation for every feature.

Absent Message Capability

Description

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

Conditions

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

Programming References

Section 4, System Programming
[008] Absent Messages
[100] Flexible Numbering, Absent message

Feature References

None

Operation References —User Manual

DPT Features, Standard Telephone Features
Absent Message Capability

Account Code Entry

Description

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

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

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

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

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

Conditions

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

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
[100] Flexible Numbering, Account code entry
[105] Account Codes
[508] Account Code Entry Mode
[990] System Additional Information, Fields (3), (46)
Station Programming.....User Manual
Flexible Button Assignment – Account Button

Feature References

Section 3, Features
Toll Restriction Override by Account Code Entry

Operation References —User Manual

DPT Features, Standard Telephone Features
Account Code Entry

Alternate Calling – Ring / Voice

Description

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

Conditions

Standard telephone users receive calls with Ring-Calling only.

Programming References

Station Programming.....User Manual
Intercom Alert Assignment

Feature References

Section 3, Features
Handsfree Answerback

Operation References —User Manual

DPT Features, Standard Telephone Features
Alternate Calling — Ring / Voice

Answering, Direct Outside Line

Description

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

Conditions

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

Programming References

No programming required.

Feature References

Section 3, Features
Outside Line Connection Assignment

Operation References —User Manual

DPT Features
Answering, Direct Outside Line

Automatic Callback Busy (Camp-On)

Description

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

Automatic Callback – Extension
If the caller answers the callback ringing, the called extension automatically starts ringing.

Automatic Callback – Outside Line
If the caller answers the callback ringing, the line is automatically selected to allow the user to make an outside call.

Conditions

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

Programming References

Section 4, System Programming
[100] Flexible Numbering, Automatic callback busy cancel

Feature References

None

Operation References —User Manual

DPT Features, Standard Telephone Features
Automatic Callback Busy (Camp-On)

Automatic Configuration†

Description

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

Conditions

- The data is transmitted to the VPS via the lowest jack port.
- If your VPS is a Panasonic KX-TVS series and KX-TD308 cannot be selected in the PBX type setup menu, select “KX-TD816” and follow the steps for a KX-TD816.

Programming References

No programming required.

Feature References

None

Operation References

Not applicable.

Automatic Hold by CO Button

Description

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

Conditions

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

Programming References

Section 4, System Programming
[108] Automatic Hold by CO / DSS Button

Feature References

None

Operation References

Not applicable.

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

Automatic Route Selection (ARS)

Description

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

Conditions

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

Programming References

Section 4, System Programming

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

Programming Example

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

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

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

Example: Program Address [314] Leading Digit Table 1

Location	Entry
01	1234567890
02	
•	
•	
•	
100	

Table 1

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

Carrier E — Outside Line 1
Carrier F — Outside Line 2
Carrier G — Outside Line 3

Then check the fee charged by each carrier:

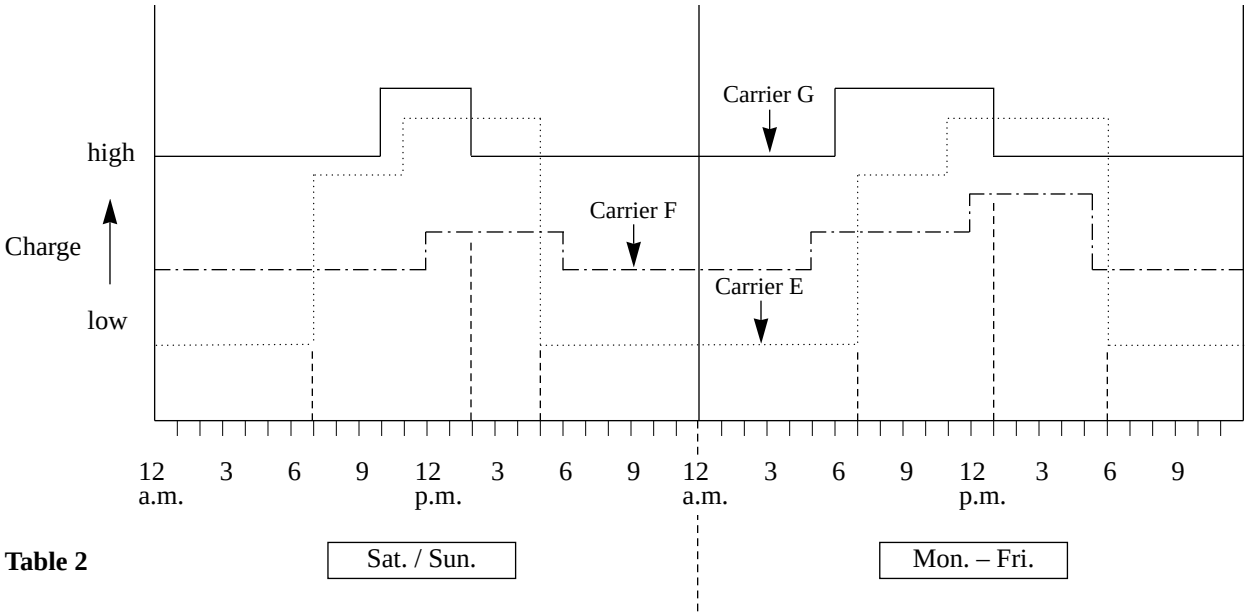


Table 2

As shown in Table 2, the least costly route varies with the day of the week and the time of day. To select the least expensive line at a certain time, split the day into three zones as follows:

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

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

Example: Program Address [313] ARS Time Table

Sat. / Sun.		Mon. – Fri.	
Time Zones	Entry	Time Zones	Entry
Time–A	7:00 a.m.	Time–A	7:00 a.m.
Time–B	2:00 p.m.	Time–B	1:00 p.m.
Time–C	5:00 p.m.	Time–C	6:00 p.m.
Time–D	Disable	Time–D	Disable

← Enter the starting time of each zone. If a zone is not necessary, select “Disable”.

Table 3

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

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

Table 4

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

Example: Program [322] Route Plan Table 1

	Time –A		Time –B		Time –C		Time –D	
	CO	Modify	CO	Modify	CO	Modify	CO	Modify
Priority 1	2	2	2	2	1	1		
Priority 2	1	1	3	3	2	2		
Priority 3	3	3	1	1	3	3		

Table 5

CO: Outside Line
Modify: Modification Table Number

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

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

Table 6

According to Table 6, enter the Access Codes in the respective Modification Tables using programs [330] "ARS Modify Removed Digit" and [331] "ARS Modify Added Number" as follows:

Example: Program [330] Digit Modification Tables

Modification Table 1

Remove	0
Add	10333

Modification Table 2

Remove	0
Add	10555

Modification Table 3

Remove	0
Add	10666

← Enter the number of digits to be deleted.

← Enter the digits to be added.

If Modification Table 1 is applied, the user-dialed number "9-1-234-567-8910" is modified to "9-10333-1-234-567-8910" to access the least expensive Carrier E.
Similarly, if Modification Table 2 is applied, it is modified to "9-10555-1-234-567-8910" to access Carrier F.
Use the "Removed Digit" program when it is necessary to delete some leading digits from the user-dialed number. For example, if the user manually dials a Carrier Access Code but the carrier is not the least expensive, modification is required. For example, to delete "10333" from the beginning of the user-dialed number and add "10555", enter "5" in the "Removed Digit" program. Enter "10555" in the "Added Number" program. When "9-10333-1-234-567-8910" is dialed,

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

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

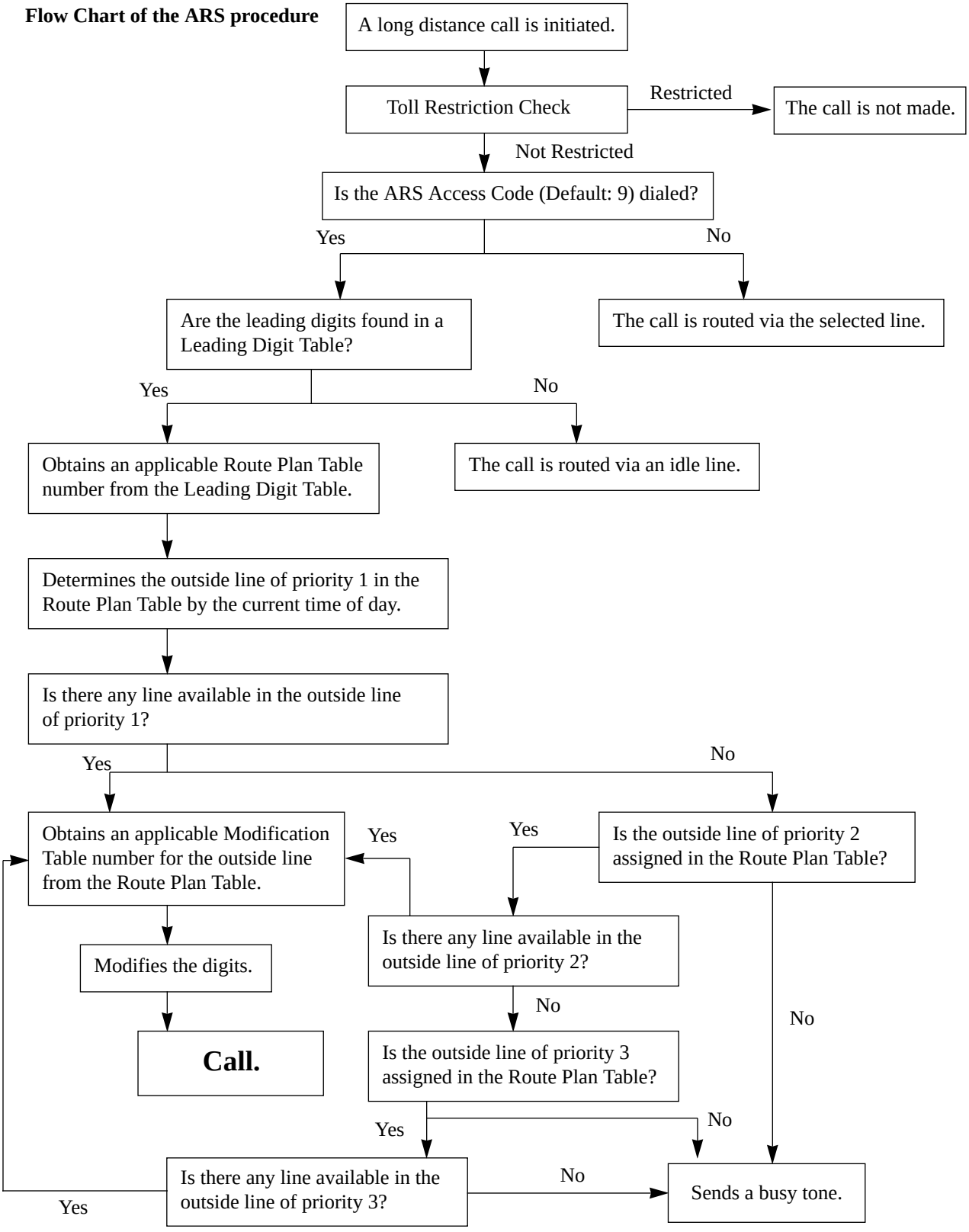
Feature References

Section 3, Features
Line Access, Automatic

Operation References —User Manual

DPT Features, Standard Telephone Features
Outward Dialing – Line Access, Automatic

Flow Chart of the ARS procedure



Automatic Station Release

Description

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

Conditions

This function works in the following cases:
When making a call
(1)The first digit has not been dialed within 10 seconds.
(2)After a digit is dialed, the next one is not dialed within five seconds (Intercom call only).

Programming References

Section 4, System Programming
[207] First Digit Time
[208] Inter Digit Time

Feature References

None

Operation References

Not applicable.

Background Music (BGM)

Description

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

Conditions

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

Connection References

Section 2, Installation
2.3.7 External Music Source Connection

Programming References

Section 4, System Programming
[803] Music Source Use
[990] System Additional Information, Field (20)

Feature References

Section 3, Features
Music on Hold

Operation References —User Manual

DPT Features
Background Music (BGM)

Background Music (BGM) – External

Description

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

Conditions

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

Connection References

Section 2, Installation
2.3.6 External Pager (Paging Equipment) Connection
2.3.7 External Music Source Connection

Programming References

Section 4, System Programming
[100] Flexible Numbering, Background music – external
[803] Music Source Use
[804] External Pager BGM
[990] System Additional Information, Field (20)

Feature References

Section 3, Features
Background Music (BGM)

Operation References —User Manual

Operator / Manager Service Features
Background Music (BGM) — External

Bilingual Display

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

Conditions None

Programming References

Station Programming.....User Manual
Bilingual Display Selection

Feature References None

Operation References Not applicable.

Busy Lamp Field

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

Conditions

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

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
Station Programming.....User Manual
Flexible Button Assignment – Direct Station Selection (DSS) Button

Feature References

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

Operation References Not applicable.

Busy Station Signaling (BSS)

Description

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

Conditions

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

Programming References

No programming required.

Feature References

Section 3, Features

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

Operation References —User Manual

DPT Features, Standard Telephone Features

Busy Station Signaling (BSS)

Button, Direct Station Selection (DSS)

Description

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

Conditions

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

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
[108] Automatic Hold by CO / DSS Button
Station Programming.....User Manual
Flexible Button Assignment – Direct Station Selection (DSS) Button

Feature References

Section 3, Features
Busy Lamp Field
One-Touch Transfer by DSS Button

Operation References —User Manual

Basic Operation
Making Calls
DPT Features
Call Transfer – to Extension

Button, Flexible

Description

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

- Flexible CO buttons
- Programmable Feature (PF) buttons

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

Features to be assigned \ Button	CO (APT / DPT)	PF (APT)
Direct Station Selection (DSS)	✔	
Single-CO	✔	
Live Call Screening†	✔	
Live Call Screening Cancel†	✔	
Log-In / Log-Out	✔	
Loop-CO	✔	
Message Waiting	✔	
Phantom Extension	✔	
Two-Way Record†	✔	
Two-Way Transfer†	✔	
Account Code Entry	✔	✔
Conference	✔	✔
FWD/DND	✔	✔
One-Touch Dialing	✔	✔
Saved Number Redial	✔	✔
Voice Mail Transfer	✔	✔

"✔" indicates that the feature is available.

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

Conditions

- An outside line can only appear on one Single-CO button of any given telephone. A station can only appear on one DSS button of any given telephone.
- Incoming and outgoing calls on the line are shown on the button in the following priority.
  Single-CO > Loop-CO

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
Station Programming.....User Manual
Flexible Button Assignment

Feature References

Section 3, Features
Buttons on Proprietary Telephones

Operation References

Not applicable.

Button, Loop-CO (L-CO)

Description

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

Conditions

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

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
[400] Outside Line Connection Assignment
[603]–[604] DIL 1:N Extension and Delayed Ringing — Day / Night
[605]–[606] Outgoing Permitted Outside Line Assignment — Day / Night
Station Programming.....User Manual
Flexible Button Assignment – Loop-CO (L-CO) Button
Ringing Tone Selection for CO Buttons

Feature References

Section 3, Features

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

Operation References —User Manual

Basic Operation

Making Calls	Receiving Calls

DPT Features
Outward Dialing – Line Access, Automatic

Button, Single-CO (S-CO)

Description

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

Conditions

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

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
[400] Outside Line Connection Assignment
[603]–[604] DIL 1:N Extension and Delayed Ringing — Day / Night
[605]–[606] Outgoing Permitted Outside Line Assignment — Day / Night
Station Programming.....User Manual
Flexible Button Assignment – Single-CO (S-CO) Button
Ringing Tone Selection for CO Buttons

Feature References

Section 3, Features

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

Operation References —User Manual

Basic Operation

Making Calls	Receiving Calls

DPT Features
Outward Dialing – Line Access, Individual

Buttons on Proprietary Telephones

Description

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

KX-T Proprietary Telephones:

Buttons	7020	7030	7050	7055	7130	7220	7230	7235	7250	7420	7425	7431	7433	7436
AUTO ANSWER / MUTE †	✔	✔			✔	✔	✔	✔		✔	✔	✔	✔	✔
AUTO DIAL / STORE †	✔	✔	✔	✔ !	✔	✔	✔	✔	✔ !	✔	✔	✔	✔	✔
CO † *	✔ (12)	✔ (12)	✔ (12)	✔ (3)	✔ (12)	✔ (24)	✔ (24)	✔ (12)	✔ (6)	✔ (12)	✔ (24)	✔ (12)	✔ (24)	✔ (24)
CONF †	✔	✔	✔ !	✔ !	✔	✔	✔	✔		✔	✔	✔	✔	✔
FLASH	✔	✔	✔	✔	✔	✔	✔	✔	✔					
FLASH/RCL										✔	✔	✔	✔	✔
Function								✔ (10)						✔ (10)
FWD / DND †	✔	✔			✔	✔	✔	✔		✔	✔	✔	✔	✔
HOLD	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
INTERCOM †	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Jog Dial										✔	✔	✔	✔	✔
MESSAGE †	✔	✔	✔		✔	✔	✔	✔		✔	✔	✔	✔	✔
MODE												✔		
MONITOR			✔ †	✔					✔					
PAUSE	✔	✔	✔	✔	✔		✔	✔		✔	✔	✔	✔	✔
PF (Programmable Feature)	✔ (4)	✔ (4)	✔ (4)	✔ (3)	✔ (12)									
PROGRAM						✔	✔	✔	✔	✔	✔	✔	✔	✔
REDIAL	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
SAVE					✔									
SELECT												✔		
SHIFT †							✔	✔					✔	✔
Soft							✔ (3)	✔ (3)					✔ (3)	✔ (3)
SP-PHONE †	✔	✔			✔	✔	✔	✔		✔	✔	✔	✔	✔
TRANSFER	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
VOLUME						✔	✔	✔	✔					

✔ : The button is provided on the designated telephones.
† : The button is provided with an LED (Light Emitting Diode).
* : The buttons which can be changed to function as a feature button are called flexible buttons.
! : The button is provided without an LED.
(x) : Shows the number of buttons only if multiple buttons are provided.

The functions of the listed buttons are described below:
AUTO ANSWER / MUTE: This dual function button is used for extension auto-answer and microphone mute during a conversation.
AUTO DIAL / STORE: Used for System Speed Dialing and storing program changes.
CO (Central Office line): Can make or receive an outside call or can be re-assigned to a different CO or to various feature buttons.

CONF (Conference): Used to establish a three-party conference.
FLASH or FLASH/RCL: Allows you to disconnect the current call and originate another call without hanging up (Flash). Sends a flash signal to the Central Office or host PBX to access their features (External Feature Access).
Function: Used to perform the displayed function / operation.
FWD / DND (Call Forwarding / Do Not Disturb): Used to program Call Forwarding, set Do Not Disturb.
HOLD: Used to place a call on hold.
INTERCOM: Used to make or receive intercom calls.
Jog Dial: Used to adjust the ringer, speaker, handset and headset volume and the display contrast. With the KX-T7431, KX-T7433 and KX-T7436, it can also be used to select data from the Call Directory and the System Feature Access Menu on the display.
MESSAGE: Used to send a message or display current message.
MODE: Used to shift the display in order to access various features.
MONITOR: Used for a handsfree operation.
PAUSE: Inserts a pause in a speed dial number. With an analog proprietary telephone, it is used as the PROGRAM button.
PF (Programmable Feature): This flexible button can be programmed to be a One-Touch Dialing, FWD / DND, SAVE, Account, CONF (Conference) or Voice Mail Transfer button, as desired.
PROGRAM: Used to enter / exit the Programming mode. With the KX-T7220 and KX-T7250, it can also be used as the PAUSE button.
REDIAL: Used for Last Number Redial.
SAVE: Used to store a dialed telephone number for Saved Number Redial.
SELECT: Used to select the displayed function or to call for the displayed phone number.
SHIFT: Used to access the second level of Soft button function.
Soft: Pressing a Soft button performs the function / operation appearing on the bottom line of the display.
SP-PHONE (Speakerphone): Used for a handsfree operation. Pressing the button causes the telephone to switch between handset and handsfree operation.
TRANSFER: Transfers a call to another extension or external destination.
VOLUME: Used to adjust the ringer, speaker, handset and headset volume and the display contrast.

Conditions

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

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
Station Programming.....User Manual
Flexible Button Assignment

Feature References

None

Operation References

Refer to respective operating instructions.
—User Manual

Caller ID

Description

Provides the display proprietary telephone user with a caller's information, such as his / her name and telephone number, on the outside line assigned to receive Caller ID service calls. Additionally, a special standard telephone, which has a Caller ID feature, can receive the Caller ID service from the Central Office and display the caller's information (Internal Caller ID).

Conditions

- Up to 100 Caller ID entry numbers can be stored in a table called "Caller ID Table" in the system. Each entry can consist of a caller's telephone number and name.
- If neither the telephone number nor the name is stored in the Caller ID Table, the number sent from Caller ID service is displayed.
- If the network provides a single message, the system searches for the name from the number in the Caller ID Table and displays both of them.
- It is required to assign the outside lines which a Caller ID service is offered by a Central Office.
- It is required to assign the extension to have the Internal Caller ID service.
- A display digital proprietary telephone (KX-T7433, KX-T7436, KX-T7230 or KX-T7235) user can record call information received by Caller ID (Call Log, Incoming feature).
- An analog proprietary telephone will show either the name or the number. To alternate the display, press the ✳ key.
- If an outside line name is assigned, the user can select the initial display, Caller ID, or outside line name by Station Programming.
- An optional Caller ID / DISA / FAX Detection Card must be installed for the system.
- If a standard telephone with a Caller ID feature is connected in parallel, the Caller ID feature will not function.

Connection References

Section 2, Installation

2.4.2 4-SLT Extension Expansion Card / Caller ID/DISA/FAX Detection Card Installation

Programming References

Section 4, System Programming

[110] Caller ID Code Set
[111] Caller ID Name Set
[125] Area Code Assignment
[126] Caller ID Modification for Local Call
[127] Caller ID Modification for Long Distance Call
[128] Internal Caller ID Extension Assignment

[406] Caller ID Assignment
[417] Outside Line Name Assignment
[990] System Additional Information, Field (30)
Station Programming.....User Manual
Initial Display Selection

Feature References

Section 3, Features
Call Log, Incoming

Operation References —User Manual

Special Display Features
Call Log, Incoming

CALL FORWARDING FEATURES – SUMMARY

Description

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

Call Forwarding – All Calls
Call Forwarding – Busy
Call Forwarding – Busy / No Answer
Call Forwarding – Follow Me
Call Forwarding – No Answer
Call Forwarding – to Outside Line

Call Forwarding – All Calls

Description

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

Conditions

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

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
[100] Flexible Numbering, Call forwarding / do not disturb
Station Programming.....User Manual
Flexible Button Assignment – FWD/DND Button

Feature References None

Operation References —User Manual **DPT Features, Standard Telephone Features**
Call Forwarding — All Calls

Call Forwarding – Busy

Description

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

Conditions

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

Programming References

Section 4, System Programming
[005] Flexible Button Assignment
[100] Flexible Numbering, Call forwarding / do not disturb
Station Programming.....User Manual
Flexible Button Assignment – FWD/DND Button

Feature References None

Operation References —User Manual **DPT Features, Standard Telephone Features**
Call Forwarding — Busy

Call Forwarding – Busy / No Answer

Description

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

Conditions

- Types of calls which are forwarded by this function are:
  - Outside calls – Direct In Lines (DIL) 1:1; Direct Inward System Access (DISA); Intercept Routing
  - Intercom calls – Extension; Transfer
- This function operates the same way as Call Forwarding – Busy and Call Forwarding – No Answer.
- There can only be one stage of Call Forwarding if a call is forwarded to a station which is also in Call Forwarding. In this case, Station Hunting is activated for the forwarded call.
- Although calls are forwarded, Message Waiting is not. The MESSAGE button indicator is lit on the originally called extension.
- If an extension in Call Forwarding is also in a Hunt group, a call directed to the extension is forwarded. Station Hunting still applies for calls directed to other extensions in the Hunt group.
- Both the Call Forwarding and Do Not Disturb (DND) functions can be set at the same time, but cannot work at the same time.
- Pressing the FWD/DND button while on-hook allows the user to enable or disable the Call Forwarding or DND function. If the user sets both functions, alternating the mode is also available by pressing the FWD/DND button.
- A Floating Station cannot be programmed as the forwarded destination.

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
[100] Flexible Numbering, Call forwarding / do not disturb
[202] Call Forwarding – No Answer Time
Station Programming.....User Manual
Flexible Button Assignment – FWD/DND Button

Feature References

Section 3, Features
Call Forwarding – Busy
Call Forwarding – No Answer

Operation References —User Manual

DPT Features, Standard Telephone Features
Call Forwarding — Busy / No Answer

Call Forwarding – Follow Me

Description

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

Conditions

- Same as the conditions of Call Forwarding – All Calls.
- It is programmable to enable or disable this feature on a Class of Service basis.

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
[100] Flexible Numbering, Call forwarding / do not disturb
[991] COS Additional Information, Field (2)
Station Programming.....User Manual
Flexible Button Assignment – FWD / DND Button

Feature References

Section 3, Features
Call Forwarding – All Calls

Operation References —User Manual

DPT Features, Standard Telephone Features
Call Forwarding — Follow Me

Call Forwarding – No Answer

Description

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

Conditions

- Types of calls which are forwarded by this function are:
  Outside calls – Direct In Lines (DIL) 1:1; Direct Inward System Access (DISA); Intercept Routing
  Intercom calls – Extension; Transfer
- This function operates if an incoming call is not answered in a specific period of time. Therefore, this function also applies if your extension is busy and cannot answer the incoming call within the time.
- There can only be one stage of Call Forwarding if a call is forwarded to a station which is also in Call Forwarding. In this case, Station Hunting is activated for the forwarded call.
- Although calls are forwarded, Message Waiting is not. The MESSAGE button indicator is lit on the originally called extension.
- If an extension in Call Forwarding is also in a Hunt group, a call directed to the extension is forwarded. Station Hunting still applies for calls directed to other extensions in the Hunt group.

- Both the Call Forwarding and Do Not Disturb (DND) functions can be set at the same time, but cannot work at the same time.
- Pressing the FWD/DND button while on-hook allows the user to enable or disable the Call Forwarding or DND function. If the user sets both functions, alternating the mode is also available by pressing the FWD/DND button.
- A Floating Station cannot be programmed as the forwarded destination.

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
[100] Flexible Numbering, Call forwarding / do not disturb
[202] Call Forwarding – No Answer Time
Station Programming.....User Manual
Flexible Button Assignment – FWD/DND Button

Feature References

None

Operation References —User Manual

DPT Features, Standard Telephone Features
Call Forwarding — No Answer

Call Forwarding – to Outside Line

Description

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

Conditions

- Types of calls which are forwarded by this function are:
  Outside calls – Direct In Lines (DIL) 1:1;
  Direct Inward System Access (DISA)
  Intercom calls – Extension; Transfer
- The forwarding extension's Toll Restriction, Automatic Route Selection (ARS) and Account Code Entry requirements still apply.
- Although calls are forwarded, Message Waiting is not. The MESSAGE button indicator is lit on the originally called extension.
- If an extension in Call Forwarding is also in a Hunt group a call directed to the extension is forwarded. Station Hunting still applies for calls directed to other extensions in the Hunt group.
- Both the Call Forwarding and Do Not Disturb (DND) functions can be set at the same time, but cannot work at the same time.
- Pressing the FWD/DND button while on-hook allows the user to enable or disable the Call Forwarding or DND function. If the user sets both functions, alternating the mode is also available by pressing the FWD/DND button.

- Class of Service programming determines the extensions that are able to perform this function.
- If an extension is limited by the program [502] “Extension-to-Outside Line Call Duration Limit” according to its Class of Service, the extension is unable to forward an outside call to an outside line.
- If a call between an extension and an outside party is established by this feature, the duration of the call period can be restricted depending on the setting of the system timer. If a call between two outside parties is established by this feature, the duration of the call is determined by another system timer. An alarm tone is generated to both outside parties 15 seconds before the time-out. The call is disconnected at the time-out.

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
[100] Flexible Numbering, Call forwarding / do not disturb
[205] Extension-to-Outside Line Call Duration Time
[206] Outside-to-Outside Line Call Duration Time
[502] Extension-to-Outside Line Call Duration Limit
[504] Call Forwarding to Outside Line
Station Programming.....User Manual
Flexible Button Assignment – FWD/DND Button

Feature References

Section 3, Features
Limited Call Duration

Operation References —User Manual

DPT Features, Standard Telephone Features
Call Forwarding — to Outside Line

Call Hold – Intercom

Description

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

Conditions

- Only one intercom call can be placed on hold at each telephone at one time (up to ten calls in the system – Call Park). With a proprietary telephone, outside calls and one intercom call can be placed on hold at the same time. With a standard telephone, either one outside or intercom call can be held.
- If a call on hold is not retrieved within a specific period of time, Hold Recall is emitted.
- Music is sent to the party on hold, if available (Music on Hold).

Programming References

Section 4, System Programming
[100] Flexible Numbering, Call hold
[200] Hold Recall Time

Feature References

Section 3, Features
Call Park
Hold Recall
Music on Hold

Operation References —User Manual

DPT Features, Standard Telephone Features
Call Hold

Call Hold – Outside Line

Description

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

Conditions

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

Programming References

Section 4, System Programming
[100] Flexible Numbering, Call hold
[200] Hold Recall Time

Feature References

Section 3, Features
Hold Recall
Music on Hold

Operation References —User Manual

DPT Features, Standard Telephone Features
Call Hold

Call Hold, Exclusive – Intercom

Description

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

Conditions

- Only one intercom call can be placed on Call Hold or Exclusive Call Hold at a time.
- If a call on hold is not retrieved in a specific period of time, Hold Recall is emitted. After Hold Recall is emitted, the held call can be retrieved from any extension.
- Music is sent to the party on hold, if available (Music on Hold).

Programming References

Section 4, System Programming
[200] Hold Recall Time

Feature References

Section 3, Features
Hold Recall
Music on Hold

Operation References
—User Manual

DPT Features
Call Hold, Exclusive

Call Hold, Exclusive – Outside Line

Description

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

Conditions

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

Programming References

Section 4, System Programming
[200] Hold Recall Time

Feature References

Section 3, Features
Hold Recall
Music on Hold

Operation References —User Manual

DPT Features
Call Hold, Exclusive

Call Hold Retrieve – Intercom

Description

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

Conditions

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

Programming References

Section 4, System Programming
[100] Flexible Numbering, Call hold retrieve – intercom
[990] System Additional Information, Field (16)

Feature References

Section 3, Features
Call Hold – Intercom

Operation References —User Manual

DPT Features, Standard Telephone Features
Call Hold Retrieve

Call Hold Retrieve – Outside Line

Description

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

Conditions

A confirmation tone is sent to the user when the hold is retrieved by entering the feature number. Eliminating the tone is programmable.

Programming References

Section 4, System Programming
[100] Flexible Numbering, Call hold retrieve – outside line
[990] System Additional Information, Field (16)

Feature References

Section 3, Features
Call Hold – Outside Line

Operation References —User Manual

DPT Features, Standard Telephone Features
Call Hold Retrieve

Calling Party Control (CPC) Signal Detection

Description

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

Conditions

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

Programming References

Section 4, System Programming

[405] CPC Signal Detection Incoming Set
[415] CPC Signal Detection Outgoing Set
[991] COS Additional Information, Field (1)

Feature References

None

Operation References

Not applicable.

Call Log, Incoming

Description

If the display digital proprietary telephone (DPT: KX-T7433, KX-T7436, KX-T7230 or KX-T7235) user cannot answer a call, the telephone automatically records the caller's information. The user can also record the caller's information manually, even after answering the call. Moreover, the user can call back the caller by checking the call log. This is available if a telephone receives incoming outside calls with a Caller ID service. A maximum of 15 calls per telephone can be logged.
The displayed information is as follows:

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

Conditions

- It is necessary to assign your area code first before you use the Caller ID feature.
- The call is registered at the time DPT finishes ringing. If a call is directed to multiple DPTs, the call is registered at the DPT that has the smallest jack number of the ringing DPTs. However, if the telephone which is connected to the smallest jack is not a DPT, the call is not registered.
- Information is also recorded even if a transferred call (unscreened) is not answered.
- When the call log is full (i.e. 15 calls are stored), the user can select to overwrite the data, replacing the oldest call with the newest one at his / her extension (Call Log, Incoming).
- The telephone user can lock the display of the unit so that incoming call information is not shown on the display. The operator can cancel the lock in case the user forgets the lock code.

- The system automatically modifies the incoming caller's number in a pre-programmed way for local or long distance calls. The modified number will be recorded for calling back. There are ten locations for area codes (program [125]) which are correspond to that of modified numbers for local call (program [126]).
  <Preparation example>
  [125] "Area Code Assignment" : 201
  [126] "Caller ID Modification for Local Call" :
  delete – 3 digits, add – blank
  [127] "Caller ID Modification for Long Distance Call" :
  delete – 0 digit, add – 1

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

Connection References

Section 2, Installation
2.4.2 4-SLT Extension Expansion Card / Caller ID/DISA/FAX Detection Card Installation

Programming References

Section 4, System Programming
[100] Flexible Numbering, Call log, incoming / Call log lock, incoming
[110] Caller ID Code Set
[111] Caller ID Name Set
[125] Area Code Assignment
[126] Caller ID Modification for Local Call
[127] Caller ID Modification for Long Distance Call
[406] Caller ID Assignment
[417] Outside Line Name Assignment

Feature References

Section 3, Features
Caller ID

Operation Reference —User Manual

Operator / Manager Service Features
Call Log Lock Control, Incoming
Special Display Features
Call Log, Incoming
Call Log Lock, Incoming

Call Park

Description

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

Conditions

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

Programming References

Section 4, System Programming
[100] Flexible Numbering, Call park / call park retrieve
[219] Call Park Recall Time
[990] System Additional Information, Field (16)

Feature References

None

Operation References —User Manual

DPT Features, Standard Telephone Features
Call Park

Call Pickup, Directed

Description

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

Conditions

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

Programming References

Section 4, System Programming
[100] Flexible Numbering, Call pickup, directed
[990] System Additional Information, Field (16)

Feature References

None

Operation References —User Manual

DPT Features, Standard Telephone Features
Call Pickup, Directed

Call Pickup, Group

Description

Allows an extension user to answer a call that is ringing at another telephone, if the call is ringing within the user's extension group.

Conditions

- The user can pick up an incoming outside, intercom, or doorphone call.
- The priority of Group Call Pickup is as follows:
  Outside call > Transferred call > Extension call > Doorphone call
- Group Call Pickup starts with the lowest jack number.
- A confirmation tone is sent to the user when the call is picked up. Eliminating the tone is programmable.

Programming References

Section 4, System Programming
[100] Flexible Numbering, Call pickup, group
[990] System Additional Information, Field (16)

Feature References

None

Operation References —User Manual

DPT Features, Standard Telephone Features
Call Pickup, Group

Call Pickup, Outside Line

Description

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

Conditions

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

Programming References

Section 4, System Programming
[100] Flexible Numbering, Call pickup, outside line
[990] System Additional Information, Field (16)

Feature References

None

Operation References —User Manual

DPT Features, Standard Telephone Features
Call Pickup, Outside Line

Call Pickup Deny

Description

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

Conditions

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

Programming References

Section 4, System Programming
[100] Flexible Numbering, Call pickup deny

Feature References

Section 3, Features
Call Pickup, Directed
Call Pickup, Group
Call Pickup, Outside Line

Operation References —User Manual

DPT Features, Standard Telephone Features
Call Pickup Deny

Call Splitting

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

Conditions Call Splitting is impossible during Doorphone Call or Paging.

Programming References
No programming required.

Feature References None

Operation References **DPT Features, Standard Telephone Features**
—User Manual Call Splitting

CALL TRANSFER FEATURES – SUMMARY

Description

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

Call Transfer, Screened – to Extension
Call Transfer, Screened – to Outside Line
Call Transfer, Unscreened – to Extension

Call Transfer, Screened – to Extension

Description

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

Conditions

- The destination extension must have a CO button which is common to the outside line in use by the transferring party.

Programming References

Section 4, System Programming
[990] System Additional Information, Field (1)

Feature References

None

Operation Reference —User Manual

DPT Features, Standard Telephone Features
Call Transfer — to Extension

Call Transfer, Screened – to Outside Line

Description

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

Conditions

- Class of Service programming determines the extensions that are able to perform this.
- If a call between two external parties is established by this feature, the duration of the call period is restricted by a system timer. Hold Recall is generated to the extension who transferred the call 50 seconds before the time-out. Also Hold Alarm tone is generated to both outside parties 15 seconds before the time-out. The call is disconnected at the time-out unless the extension restores the conference.

Programming References

Section 4, System Programming
[205] Extension-to-Outside Line Call Duration Time
[206] Outside-to-Outside Line Call Duration Time
[502] Extension-to-Outside Line Call Duration Limit
[503] Call Transfer to Outside Line
[990] System Additional Information, Field (1)

Feature References

Section 3, Features
Hold Recall

Operation Reference —User Manual

DPT Features, Standard Telephone Features
Call Transfer — to Outside Line

Call Transfer, Unscreened – to Extension

Description

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

Conditions

- If the destination party does not answer within the transfer recall time, the call will return to the user or Operator 1. You can select either one by system programming.
- This function is possible when the destination is sending ringback or busy tone. If the destination is busy, Camp-On Transfer occurs.
- The ringing signal pattern follows the regular ringing pattern depending on the party being transferred: outside or extension call ringing.
- If music on hold is enabled, music is sent to the caller while being transferred. It is system-programmable whether to send ringback tone or music on hold to the caller by program [990], Field (1).
- The destination extension must have a CO button which is common to the outside line in use by the transferring party.

Programming References

Section 4, System Programming
[201] Transfer Recall Time
[990] System Additional Information, Fields (1), (11)

Feature References

None

Operation References —User Manual

DPT Features, Standard Telephone Features
Call Transfer — to Extension

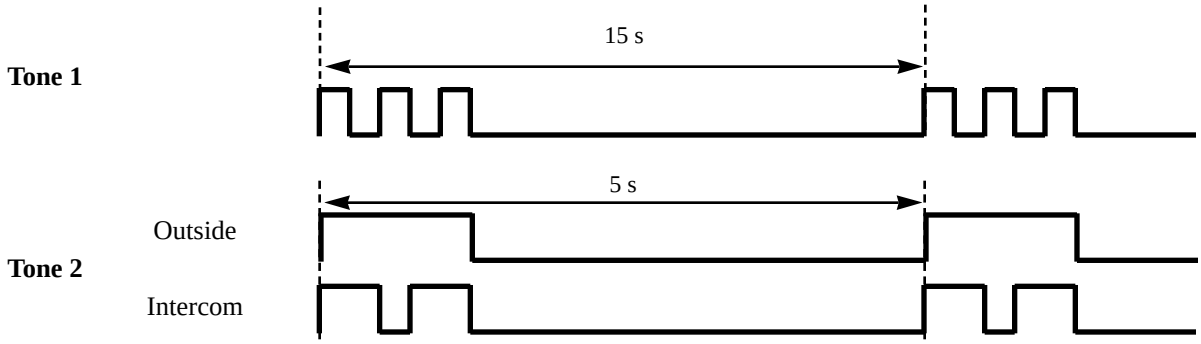
Call Waiting

Description

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

Conditions

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



Programming References

Section 4, System Programming
[100] Flexible Numbering, Call waiting / OHCA / whisper OHCA
Station Programming.....User Manual
Call Waiting Tone Type Assignment

Feature References

Section 3, Features
Busy Station Signaling (BSS)

Operation References —User Manual

DPT Features, Standard Telephone Features
Call Waiting

Call Waiting from Central Office

Description

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

Conditions

None

Programming References

No programming required.

Feature References

None

Operation References
—User Manual

DPT Features, Standard Telephone Features
Call Waiting from Central Office

Class of Service (COS)

Description

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

Conditions

- The programmable items are shown below:
  - (1) Outgoing call restriction level (Day mode / Night mode) – 1 through 8
  - (2) Restriction of outside call duration
  - (3) Transfers a call to an outside party
  - (4) Forwards a call to an outside party
  - (5) Executive Busy Override
  - (6) Executive Busy Override Deny
  - (7) Overrides Do Not Disturb of the called extension
  - (8) Account Code Entry operation – verified - all calls / verified - toll restriction override / option
  - (9) Off-Hook Call Announcement (OHCA)
  - (10) The number of permitted dialing digits during an outside call
  - (11) Call Forwarding – Follow Me
- The extension user can use all of the COS functions of their own extension at another extension by entering a working COS password (Walking COS).

Programming References

Section 4, System Programming

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

Feature References

Section 3, Features

Walking COS

Operation References

Not applicable.

Conference

Description

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

Conditions

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

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
[990] System Additional Information, Field (13)
Station Programming.....User Manual
Flexible Button Assignment – Conference (CONF) Button

Feature References

Section 3, Features
Conference, Unattended

Operation References —User Manual

DPT Features, Standard Telephone Features
Conference

Conference, Unattended

Description

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

Conditions

- An Unattended Conference can be established when the extension is allowed to transfer a call to an outside line.
- The duration of an unattended conference is restricted by a system timer. Hold Recall results to the extension user who left the conference 50 seconds before the time-out. An alarm tone is generated to both outside parties 15 seconds before the time-out. The call is disconnected at the time-out unless the extension returns to the call.

Programming References

Section 4, System Programming

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

Feature References

Section 3, Features

Conference
Hold Recall
Limited Call Duration

Operation References —User Manual

DPT Features

Conference, Unattended

Confirmation Tone

Description

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

Confirmation tone 1:

(a) Indicates that the new setting differs from the previous setting.
(b) Set or cancel the Electronic Station Lockout.

Confirmation tone 2:

(a) Indicates that the new setting is identical to the previous setting.
(b) In addition, sent when various features are successfully performed or accessed. (e.g. Call Hold; Automatic Callback Busy)
(c) Sent when accessing external paging equipment. (e.g. Paging – All; Paging – External) Confirmation tone from external pagers can be enabled or disabled.

Confirmation tone 3:

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

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

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

Confirmation tone 4:
Sent when moving from a two-party call to a three-party call, and vice versa. (These are caused by Executive Busy Override, Conference, or Privacy Release.) It is possible to eliminate this tone by System Programming.

Conditions

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

Programming References

Section 4, System Programming
[805] External Pager Confirmation Tone
[990] System Additional Information, Fields (13), (16)

Feature References

None

Operation References

Not applicable.

Consultation Hold

Description

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

Conditions

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

Programming References

Section 4, System Programming

[201] Transfer Recall Time

[990] System Additional Information, Fields (2), (5)

Feature References

Section 3, Features

Call Splitting

Call Transfer, Screened – to Extension

Call Transfer, Screened – to Outside Line

Call Transfer, Unscreened

Conference

Conference, Unattended

Music on Hold

Operation References

Not applicable.

Data Line Security

Description

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

Conditions

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

Programming References

Section 4, System Programming
[100] Flexible Numbering, Data line security

Feature References

None

Operation References —User Manual

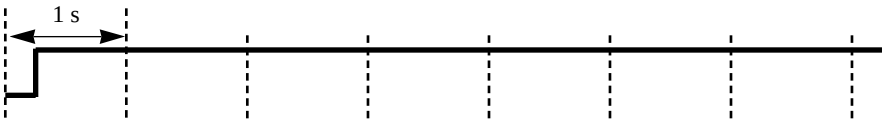
DPT Features, Standard Telephone Features
Data Line Security

Dial Tone, Distinctive

Description

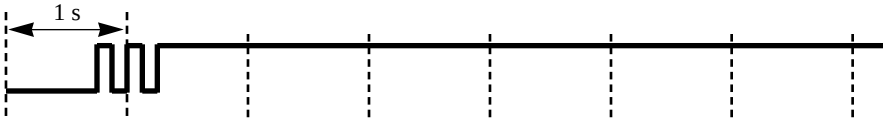
Four types of dial tone patterns are available to give information about features activated on the telephone set.

Dial tone 1: Normal dial tone. None of the features listed below are activated.



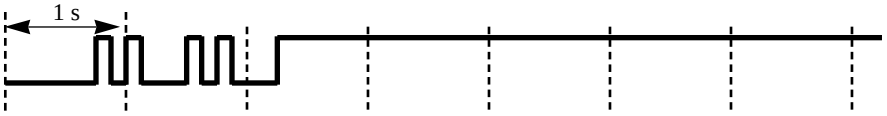
Dial tone 2: Emitted when any one of the features below are set.

Absent Message Capability
Background Music (BGM) (for proprietary telephones only)
Call Forwarding
Call Pickup Deny
Call Waiting
Data Line Security
Do Not Disturb (DND)
Electronic Station Lockout
Executive Busy Override Deny
Pickup Dialing
Timed Reminder



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

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



Conditions

None

Programming References

No programming required.

Feature References

None

Operation References

Not applicable.

Dial Type Selection

Description

Allows you to select the desired dialing mode for each outside line regardless of originating call extension (rotary or tone).
There are three dialing modes available:

DTMF (Dual Tone Multi-Frequency) Mode
The dialing signal from an extension, either tone or rotary, is converted to tone dialing. DTMF signals are transmitted to the outside line.

Pulse Dial (Rotary) Mode
The dialing signal from an extension, either tone or rotary, is converted to rotary dialing. Rotary pulses are transmitted to the outside line.

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

Conditions

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

Programming References

Section 4, System Programming
[402] Dial Mode Selection
[403] Pulse Speed Selection
[404] DTMF Time
[990] System Additional Information, Fields (17), (21)

Feature References

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

Operation References

Not applicable.

Direct In Lines (DIL)

Description

Enables an incoming outside call to go directly to one or more answering points.
DIL 1:1 puts an incoming outside call to a single destination. Assignable destinations are: (1) extension; (2) external pager; (3) DISA (Direct Inward System Access) message; (4) extension group; or (5) phantom extension. This outside line can be used by multiple extension users to make calls.
DIL 1:N puts an incoming outside call to multiple destinations. Assignable destinations are extensions only. This outside line can be used by multiple extension users to make and receive calls.
Both DIL 1:1 and 1:N can have different destinations for day and night modes (Night Service).

Conditions

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

Programming References

Section 4, System Programming
[407]–[408] DIL 1:1 Extension — Day / Night
[603]–[604] DIL 1:N Extension and Delayed Ringing — Day / Night

Feature References

None

Operation References

Not applicable.

Direct Inward System Access (DISA)

Description

External callers can call extensions in the system. An outgoing message greets the caller and gives information about how to access an extension.
An outgoing message can be recorded by the operator or manager.
External callers can also call extensions using a pre-assigned one digit number (DISA built-in auto attendant number).

Conditions

- The following items are required for the DISA feature:
  (1) An optional Caller ID / DISA / FAX Detection Card must be installed.
  (2) The Floating Station number of the DISA message should be assigned as the DIL 1:1 destination. This assigns the DISA line and the message accessed by external callers.
  (3) The DISA message should be recorded by the operator or manager.
- A DISA call is answered after a ringback tone is returned to the caller after the DISA Delayed Answer Time expires. The caller can dial during the message.
- The floating number of a DISA message may be selected as the destination of Intercept Routing.
- This system can store up to nine programmable DISA built-in auto attendant numbers. Each number must be one digit.
- The DISA built-in auto attendant number may be the same as the first digit of other numbers (extension number, floating number, etc.). To avoid confusion, the system waits for the second digit for a preprogrammed amount of time (default: 1 second). If the timer expires, the system assumes that the first digit is a DISA built-in auto attendant number.
- The outgoing message time is 16 seconds.

Connection References

Section 2, Installation
2.4.2 4-SLT Extension Expansion Card / Caller ID/DISA/FAX Detective Card Installation

Programming References

Section 4, System Programming
To enable DISA feature
[100] Flexible Numbering, Outgoing message
[405] CPC Signal Detection Incoming Set
[407]–[408] DIL 1:1 Extension — Day / Night
[415] CPC Signal Detection Outgoing Set

[815] DISA Built-in Auto Attendant
[990] System Additional Information, Field (34)
To set DISA timer values
[213] DISA Delayed Answer Time
[218] DISA AA Wait Time
To enable the Intercept Routing feature
[203] Intercept Time
[409]–[410] Intercept Extension — Day / Night

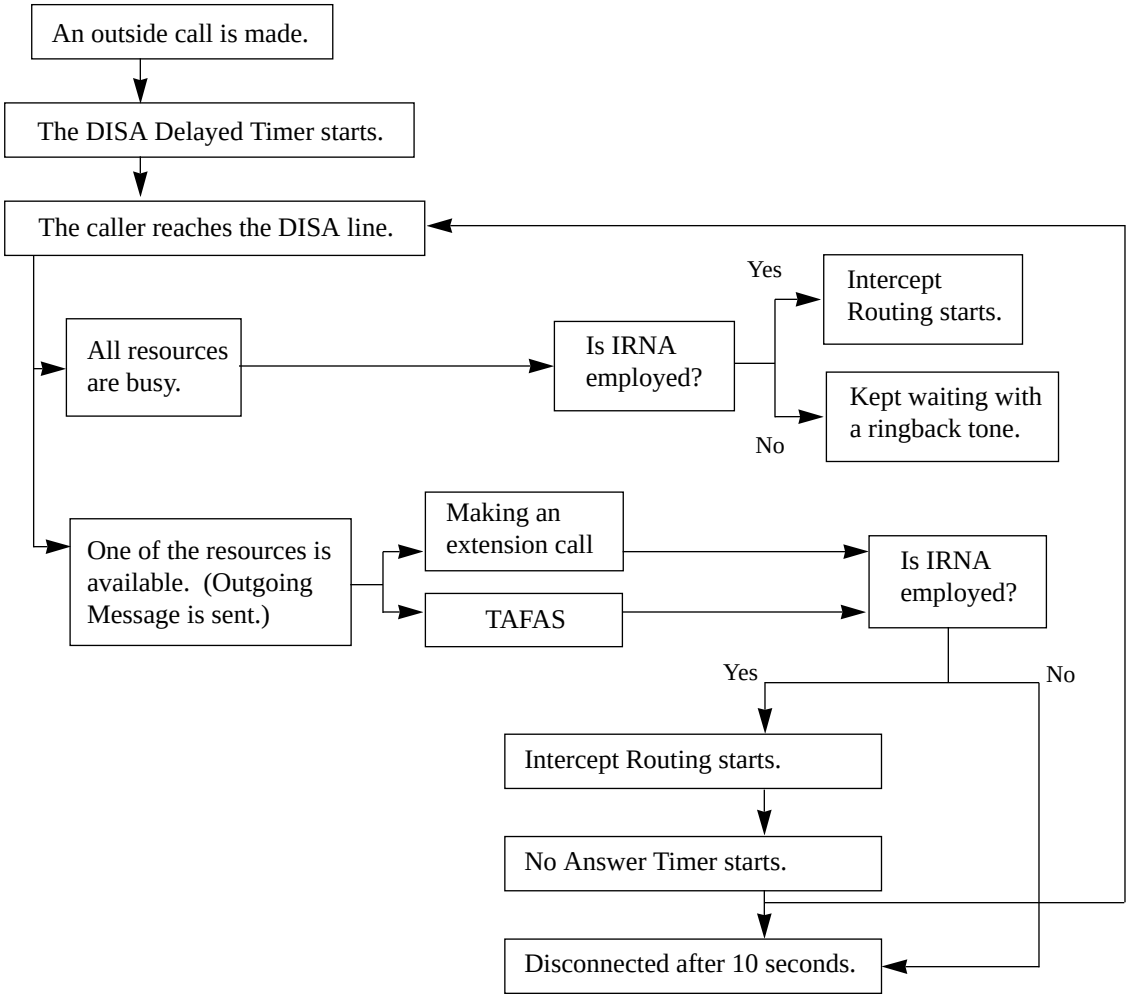
Feature References

Section 3, Features
Intercept Routing
Outgoing Message (OGM)

Operation References —User Manual

DPT Features, Standard Telephone Features
Direct Inward System Access (DISA)

Flow chart of possible cases and results for DISA calls



Display, Call Information

Description

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

Extension number and name
These are shown when calling or when called by an extension user and during an established intercom call.
A display example: **12: Smith**

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

Number or name of the caller
These are shown if the Caller ID feature is available.
Display examples: **CO 3: 1234567890**
CO 3: Panasonic

Outside Line number and name
This is shown when receiving an outside call.
A display example: **CO 3: AB COMPANY**

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

Conditions

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

Programming References

Section 4, System Programming
[003] Extension Number Set
[004] Extension Name Set
[212] Call Duration Count Start Time
[417] Outside Line Name Assignment

Feature References

Section 3, Features
Caller ID

Operation References

Not applicable.

Display, in Idle

Description

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

Conditions

- There are two display types:
  Display example 1: Day of the week, Month, Day, Time (AM / PM)

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

  Display example 2: self-extension number, name

  ```
  12: Tony Viola
  ```

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

Programming References

Section 4, System Programming
[000] Date and Time Set

Feature References

None

Operation References —User Manual

Appendix
Display Examples

Display, Self-Extension Number

Description

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

Conditions

Display example
If the jack number is 02 and the extension number is 12:

```
Jack2<=>EXT12
```

Programming References

Station Programming.....User Manual
Self-Extension Number Confirmation

Feature References

None

Operation References

Not applicable.

Display Contrast Adjustment

Description

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

Conditions

The adjusting method depends on the type of proprietary telephone (PT) you have.

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

Programming References

Configuration.....User Manual
Initial Setting for KX-T7400 Series
Initial Setting for KX-T7200 Series

Feature References

None

Operation References

Not applicable.

Do Not Disturb (DND)

Description

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

Conditions

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

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
[100] Flexible Numbering, Call forwarding / do not disturb
Station Programming.....User Manual
Flexible Button Assignment – FWD/DND Button

Feature References

Section 3, Features
Do Not Disturb (DND) Override

Operation References
—User Manual

DPT Features, Standard Telephone Features
Do Not Disturb (DND)

Do Not Disturb (DND) Override

Description

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

Conditions

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

Programming References

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

Feature References

Section 3, Features
Do Not Disturb (DND)

Operation References —User Manual

DPT Features, Standard Telephone Features
Do Not Disturb (DND) Override

Door Opener

Description

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

Conditions

- It is necessary to install a user-supplied door opener on each door to be opened. One door opener can be installed.
- The door opener will open the door even if a doorphone is not installed.

Connection References

Section 2, Installation
2.4.3 Doorphone and Door Opener Connection

Programming References

Section 4, System Programming
[100] Flexible Numbering, Door opener
[607]–[608] Doorphone Ringing Assignment — Day / Night

Feature References

Section 3, Features
Doorphone Call

Operation References —User Manual

DPT Features, Standard Telephone Features
Doorphone Call

Doorphone Call

Description

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

Conditions

- One doorphone can be installed.
- It is necessary to program the extensions that can receive calls from each doorphone during day and night mode.
- If no extension user answers an incoming doorphone call within 30 seconds, the call stops ringing and is canceled.
- While engaged on a doorphone call, any extension user can open the door from the telephone to let the visitor in (Door Opener). This requires a user-supplied door opener.
- If the doorphone call is placed on hold, the Music on Hold is not available.

Connection References

Section 2, Installation
2.4.3 Doorphone and Door Opener Connection

Programming References

Section 4, System Programming
[100] Flexible Numbering, Doorphone call
[607]–[608] Doorphone Ringing Assignment — Day / Night

Feature References

Section 3, Features
Door Opener

Operation References —User Manual

DPT Features, Standard Telephone Features
Doorphone Call

Electronic Station Lockout

Description

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

Conditions

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

Programming References

Section 4, System Programming
[100] Flexible Numbering, Electronic station lockout

Feature References

Section 3, Features
Remote Station Lock Control

Operation References —User Manual

DPT Features, Standard Telephone Features
Electronic Station Lockout

Emergency Call

Description

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

Conditions

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

Programming References

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

Feature References

None

Operation Reference —User Manual

DPT Features, Standard Telephone Features
Emergency Call

End-to-End DTMF Signaling (Tone Through)

Description

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

Conditions

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

Programming References

No programming required.

Feature References

Section 3, Features

Dial Type Selection — Pulse to Tone Conversion

Operation References

Not applicable.

Executive Busy Override – Extension

Description

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

Conditions

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

Programming References

Section 4, System Programming

[100] Flexible Numbering, Executive busy override deny
[505] Executive Busy Override
[506] Executive Busy Override Deny
[990] System Additional Information, Field (13)

Feature References

Section 3, Features

Conference

Operation References —User Manual

DPT Features, Standard Telephone Features

Executive Busy Override — Extension

Executive Busy Override – Outside Line

Description

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

Conditions

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

Programming References

Section 4, System Programming

[100] Flexible Numbering, Executive busy override deny
[505] Executive Busy Override
[506] Executive Busy Override Deny
[990] System Additional Information, Field (13)

Feature References

Section 3, Features

Conference

Operation References —User Manual

DPT Features

Executive Busy Override — Outside Line

Extension Group

Description

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

Conditions

- Every extension should belong to an extension group but cannot belong to more than one group.
- A floating number can be assigned to each extension group.

Programming References

Section 4, System Programming

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

Feature References

Section 3, Features

Call Pickup, Group
Paging – Group
Station Hunting

Operation References

Not applicable.

External Feature Access

Description

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

Conditions

- This feature is effective only during an outside call. However if the FLASH feature (Disconnection signal) is activated by System Programming, this feature does not work.
- The flash time must be assigned as required by the Centrex, host PBX or outside line.
- With a proprietary telephone, the FLASH or FLASH/RCL button or the feature number is used to perform this function. With a standard telephone, the feature number cannot be used when the user already has a Consultation Hold.
- During outside calls, a FLASH stored in System Speed Dialing, Station Speed Dialing or One-Touch Dialing functions as External Feature Access, not as Flash.

Programming References

Section 4, System Programming
[100] Flexible Numbering, External feature access
[413] Flash Time
[990] System Additional Information, Field (3)

Feature References

Section 3, Features

Flash	Host PBX Access

Operation References —User Manual

DPT Features, Standard Telephone Features
External Feature Access

EXtra Device Port (XDP)

Description

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

Conditions

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

Connection References

Section 2, Installation
2.3.4 Telephone Connection

Programming References

Section 4, System Programming
[600] EXtra Device Port

Feature References

Section 3, Features
Paralleled Telephone

Operation References

Not applicable.

Facsimile Detection

Description

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

Conditions

- It is required to assign the extension which can receive the facsimile data by System Programming.
- An optional Caller ID / DISA / FAX Detection Card must be installed.

Connection References

Section 2, Installation

2.4.2 4-SLT Extension Expansion Card / Caller ID/DISA/FAX Detection Card Installation

Programming References

Section 4, System Programming

[129] Facsimile Transmission Extension

Feature References

Section 3, Features

Direct Inward System Access (DISA)

Operation References

None

Flash

Description

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

Conditions

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

Programming References

Section 4, System Programming
[414] Disconnect Time
[990] System Additional Information, Fields (3), (39)

Feature References

Section 3, Features
External Feature Access

Operation References —User Manual

DPT Features
Flash

Flexible Numbering

Description

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

Flexible Feature Numbers

NUMBER	FEATURE	DEFAULT
01	1st hundred extension block	1
02	2nd hundred extension block	2
03 – 16	3rd through 16th hundred extension block	None
17	Operator call	0
18	Automatic line access / ARS	9
19	Outside line access	8
20	System speed dialing	✳
21	Station speed dialing	3✳
22	Station speed dialing programming	30
23	Doorphone call	31
24	Paging – external	32
25	Paging – external answer / TAFAS answer	42
26	Paging – group	33
27	Paging – group answer	43
28	Call pickup, outside line	4✳
29	Call pickup, group	40
30	Call pickup, directed	41
31	Call hold	50
32	Call hold retrieve – intercom	51
33	Call hold retrieve – outside line	53
34	Last number redial	#
35	Call park / call park retrieve	52
36	Account code entry	49
37	Door opener	55
38	External feature access	6
39	Station feature clear	790
40	Message waiting	70
41	Outgoing message	36

Flexible Feature Numbers (contd)

NUMBER	FEATURE	DEFAULT
42	Call forwarding / do not disturb	710
43	Call pickup deny	720
44	Data line security	730
45	Call waiting / OHCA / whisper OHCA	731
46	Executive busy override deny	733
47	Pickup dialing	74
48	Absent message	750
49	Timed reminder	76
50	Electronic station lockout	77
51	Night service mode	78
52	Parallel telephone mode	39
53	Background music – external	35
54†	LCS password	799
55	Call log, incoming	56
56	Call log lock, incoming	57
57	Timed reminder, remote	7 ✳
58	Log-in / log-out	45
59	Automatic callback busy cancel	46
60	Walking COS	47
61	Reserved	None
62	System working report	794
63 – 70	Quick dial location numbers 1-8	None
71	Reserved	None

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

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

Fixed Feature Numbers

FEATURE	DEFAULT
While busy tone is heard	
Automatic Callback Busy	6
Busy Station Signaling (BSS)	1
Executive Busy Override	2
Off-Hook Call Announcement (OHCA) / Whisper OHCA	1
While Do Not Disturb tone is heard	
Do Not Disturb Override	1
While calling or talking	
Account Code Delimiter	# / 99
Alternate Calling – Ring / Voice	✳
Conference	3
Door Open	5
Pulse to Tone Conversion	✳ #
When the set is on-hook	
Background music on / off	1
Day / night mode display	#
Date and time display / self-extension number and name display switching	✳

Conditions

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

Programming References

Section 4, System Programming
[003] Extension Number Set
[100] Flexible Numbering

Feature References

None

Operation References

Not applicable.

Floating Station

Description

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

(1) External paging instruments: used for Trunk (Outside Line) Answer From Any Station (TAFAS) feature.
One FN is available.
The FN can be assigned as:
a) Direct In Lines (DIL) 1:1 destination
b) Direct Inward System Access (DISA) destination
c) Intercept Routing destination

(2) Extension groups: used for Station Hunting feature.
Eight FNs are available.
The FN can be assigned as:
a) DIL 1:1 destination
b) DISA destination
c) Intercept Routing destination
d) Intercom call destination

(3) DISA messages: used for DISA feature.
One FN is available.
The FN can be assigned as:
a) DIL 1:1 destination
b) Intercept Routing destination

Conditions

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

Connection References

Section 2, Installation

2.4.2 4-SLT Extension Expansion Card / Caller ID/DISA/FAX Detection Card Installation

Programming References

Section 4, System Programming

[100] Flexible Numbering, 1st through 16th hundred extension blocks
[813] Floating Number Assignment

Feature References

None

Operation References

Not applicable.

Full One-Touch Dialing

Description

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

Conditions

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

Programming References

Station Programming.....User Manual
Full One-Touch Dialing Assignment

Feature References

Section 3, Features

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

Operation References —User Manual

DPT Features
Full One-Touch Dialing

Handset / Headset Selection

Description

The system supports the use of headsets on proprietary telephones.

Conditions

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

Connection References

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

Programming References

Station Programming.....User Manual
Handset/Headset Selection

Feature References

None

Operation References

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

Handset Microphone Mute

Description

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

Conditions

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

Programming References

No programming required.

Feature References

None

Operation References —User Manual

DPT Features
Handset Microphone Mute

Handsfree Answerback

Description

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

Conditions

- Handsfree answerback mode is set or canceled by pressing the AUTO ANSWER button.
- This feature does not work for calls from outside parties or doorphone calls.
- Handsfree Answerback set on a telephone overrides the Ring / Voice Intercom Alerting mode preset on the telephone; Handsfree conversation mode is established as soon as a confirmation tone is sent.

Programming Reference

No programming required.

Feature References

Section 3, Features
Alternate Calling – Ring / Voice

Operation References —User Manual

DPT Features
Handsfree Answerback

Handsfree Operation

Description

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

Conditions

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

Programming References

No programming required.

Feature References

Section 3, Features
Full One-Touch Dialing

Operation References
—User Manual

DPT Features
Handsfree Operation

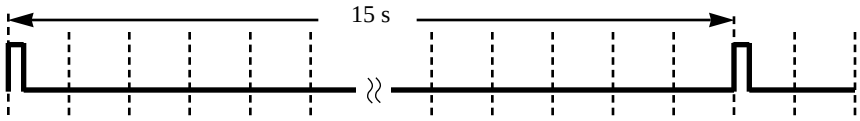
Hold Recall

Description

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

Conditions

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



Programming References

Section 4, System Programming

[200] Hold Recall Time

Feature References

Section 3, Features

Call Hold – Intercom
Call Hold – Outside Line
Call Hold, Exclusive – Intercom
Call Hold, Exclusive – Outside Line

Operation References

Not applicable.

Host PBX Access

Description

The system may be installed behind an existing host PBX. This is performed by connecting a line from the host to an outside line in the Digital Super Hybrid System.

Conditions

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

Programming References

Section 4, System Programming

[411] Host PBX Access Codes

[412] Pause Time

Feature References

Section 3, Features

External Feature Access

Pause Insertion, Automatic

Operation References

Not applicable.

Intercept Routing

Description

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

Conditions

- Intercept Routing applies to Direct In Lines (DIL) 1:1, DIL 1:N, Direct Inward System Access (DISA), Trunk (Outside Line) Answer From Any Station (TAFAS), Call Forwarding, and Station Hunting.
- The final destination of intercepted calls must be programmed for day and night modes. There are six possible destinations.
  1) An extension
  2) An external pager
  3) A DISA outgoing message
  4) An extension group
  5) A phantom extension
  6) A voice mail extension
- If the destination is in Do Not Disturb mode, Do Not Disturb does not function and the call is sent.

Programming References

Section 4, System Programming
[203] Intercept Time
[409]–[410] Intercept Extension — Day / Night

Feature References

None

Operation References

Not applicable.

Intercom Calling

Description

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

Conditions

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

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

Programming References

Section 4, System Programming
[003] Extension Number Set
[004] Extension Name Set
[005] Flexible CO Button Assignment
[100] Flexible Numbering, 1st through 16th hundred extension blocks
Station Programming.....User Manual
Flexible Button Assignment – Direct Station Selection (DSS) Button

Feature References

Section 3, Features

Busy Lamp Field	Button, Direct Station Selection (DSS)

Operation References —User Manual

DPT Features, Standard Telephone Features
Intercom Calling

LED Indication, Intercom

Description

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

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

Conditions

None

Programming References

No programming required.

Feature References

Section 3, Features
Busy Lamp Field

Operation References

Not applicable.

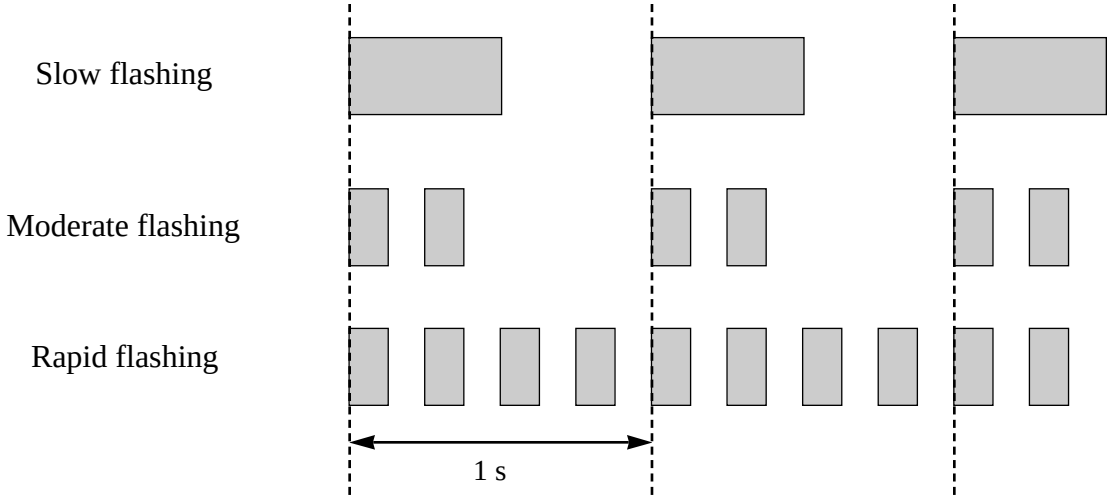
LED Indication, Outside Line

Description

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

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

Flashing light patterns



Conditions

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

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
Station Programming.....User Manual
Flexible Button Assignment – Loop-CO (L-CO) Button, Single-CO (S-CO) Button

Feature References **Section 3, Features**
Button, Loop-CO (L-CO) Button, Single-CO (S-CO)

Operation References Not applicable.

Limited Call Duration

Description

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

Conditions

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

Programming References

Section 4, System Programming
[205] Extension-to-Outside Line Call Duration Time
[502] Extension-to-Outside Line Call Duration Limit
[990] System Additional Information, Field (12)

Feature References **Section 3, Features**
Call Forwarding – to Outside Line Conference, Unattended
Call Transfer, Screened – to Outside Line

Operation References Not applicable.

Line Access, Automatic

Description

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

Conditions

- This feature functions with Automatic Route Selection (ARS), if ARS is activated. If so, the least expensive route is automatically selected.
- Each extension is subject to System Programming items for outside lines available to access.
- The outside line hunting sequence is determined by System Programming.
- This feature requires a CO button (Loop-CO or Single-CO) assignment on a proprietary telephone (PT). Dialing the line access code selects a CO button on a PT according to the priority:
  Single-CO > Loop-CO (on a hunted outside line)
- If Idle Line Preference – Outgoing is set on the telephone, the user can access an idle line only by going off-hook.
- The system waits for a programmed time before dialing after an outside line is seized.

Programming References

Section 4, System Programming

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

Feature References

Section 3, Features

Outside Line Connection Assignment – Outgoing

Operation References —User Manual

DPT Features, Standard Telephone Features

Outward Dialing – Line Access, Automatic

Line Access, Direct

Description

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

Conditions

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

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
[211] Dial Start Time
[400] Outside Line Connection Assignment
[605]–[606] Outgoing Permitted Outside Line Assignment — Day / Night
Station Programming.....User Manual
Flexible Button Assignment – Loop-CO (L-CO) Button, Single-CO (S-CO) Button

Feature References

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

Operation References —User Manual

DPT Features
Outward Dialing – Line Access, Automatic / Line Access, Individual

Line Access, Individual

Description

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

Conditions

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

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
[211] Dial Start Time
[400] Outside Line Connection Assignment
[605]–[606] Outgoing Permitted Outside Line Assignment — Day / Night
Station Programming.....User Manual
Flexible Button Assignment – Single-CO (S-CO) Button

Feature References

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

Operation References —User Manual

DPT Features
Outward Dialing – Line Access, Individual

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

Description

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

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

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

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

Conditions

- Setting a new line preference feature cancels the previous setting.
- If Prime Line Preference is selected and an incoming call arrives from a line other than the prime line, it cannot be answered just by going off-hook. The Prime Line should be assigned to the Single-CO button.
- If Ringing Line Preference is selected, going off-hook does not answer a line programmed for “no ring” even though there is an incoming call. Going off-hook during the delay time does not answer a line programmed for “delayed ringing”.
- A standard telephone is always set to Ringing Line Preference and cannot be changed.

Programming References

Station Programming.....User Manual
Preferred Line Assignment – Incoming

Feature References

None

Operation References
—User Manual

Basic Operation
Receiving Calls

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

Description

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

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

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

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

Conditions

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

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
[103] Automatic Access Outside Line Assignment
[400] Outside Line Connection Assignment
[605]–[606] Outgoing Permitted Outside Line Assignment — Day / Night
Station Programming.....User Manual
Flexible Button Assignment – Loop-CO (L-CO) Button,
Single-CO (S-CO) Button
Preferred Line Assignment – Outgoing

Feature References

Section 3, Features
Outside Line Connection Assignment – Outgoing

Operation References —User Manual

Basic Operation
Making Calls

Live Call Screening (LCS)†

Description

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

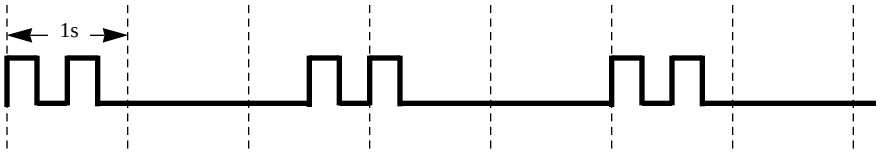
Hands-free Mode

The voice mailbox is monitored through the built-in speaker of the proprietary telephone.

Private Mode

The proprietary telephone emits an alert tone when callers are connected to the voice mailbox. To monitor the call, the user goes off hook with the handset or speakerphone.

Alert Tone



To intercept the call in either Hands-Free or Private mode, press the LCS button.

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

Conditions

- When the extension user is having a conversation, a call waiting tone is sent. The user can put the existing call on hold before accessing LCS.
- A flexible CO and DSS (Direct Station Selection) button can be assigned as a Live Call Screening button.
- To prevent unauthorized monitoring, a three-digit password must be set by the LCS user. If the user forgets their password, it can be cleared by the operator or manager.
- Each extension can be programmed to either close the mailbox or keep recording the conversation after the call is intercepted.

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

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
[610] Live Call Screening Recording Mode Assignment
Station Programming.....User Manual
Flexible Button Assignment — Live Call Screening (LCS) Button
Live Call Screening (LCS) Cancel Button
Live Call Screening Mode Set

Feature References

None

Operation References —User Manual

DPT Features
Live Call Screening (LCS)

Lockout

Description

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

Conditions

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

Programming References

No programming required.

Feature References

None

Operation References —User Manual

DPT Features, Standard Telephone Features
Lockout

Log-In / Log-Out

Description

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

Conditions

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

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

Programming References

Section 4, System Programming
[100] Flexible Numbering, Log-in / log-out
Station Programming.....User Manual
Flexible Button Assignment – Log-In / Log-Out Button

Feature References

Section 3, Features
Station Hunting
Uniform Call Distribution (UCD)
Ring Group

Operation References —User Manual

DPT Features, Standard Telephone Features
Log-In / Log-Out

Manager Extension

Description

One extension in the system can be assigned as the system manager. This extension can perform System Programming and the following manager services:

- Clearing the Call Log Lock
- Clearing the Live Call Screening Password
- Printing / clearing the System Working Report
- Recording and playing outgoing messages
- Switching Day / Night mode manually
- Setting / canceling / confirming the Timed Reminder (Wake-up Call) remotely
- Setting / clearing the Remote Station Lock
- Setting the Background Music – External on and off

Conditions

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

Programming References

Section 4, System Programming
[006] Operator / Manager Extension Assignment

Feature References

None

Operation References —User Manual

Operator / Manager Service Features

Message Waiting

Description

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

Conditions

- For a proprietary telephone which does not have a MESSAGE button, a flexible CO button can be assigned as the MESSAGE button either by System or Station Programming.
- For standard telephone users, the message waiting ring tone can be sent to notify the user. The message waiting ring interval time is programmable by System Programming (default: 0=no ring).
- Canceling a message can be performed from the sending extension or from the receiving extension.
- The system supports a maximum of 16 simultaneous messages.
- Messages are always left on the original extension. They can not be sent to a Call Forwarding or Station Hunting destination.
- The message waiting ring type can be changed in program [990], Field (40).

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
[100] Flexible Numbering, Message waiting
[216] Message Waiting Ring Interval Time
[990] System Additional Information Fields (9), (40)
Station Programming.....User Manual
Flexible Button Assignment – Message Waiting (MESSAGE) Button

Feature References

Section 3, Features

Dial Tone, Distinctive	Voice Mail Integration

Operation References —User Manual

DPT Features, Standard Telephone Features

Message Waiting	Voice Mail Integration

Microphone Mute

Description

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

Conditions

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

Programming References

No programming required.

Feature References

None

Operation References —User Manual

DPT Features
Microphone Mute

Mixed Station Capacities

Description

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

Conditions

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

Connection References

Section 2, Installation
2.3.3 Extension Connection

Programming References

No programming required.

Feature References

None

Operation References

Not applicable.

Music on Hold

Description

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

Conditions

- Operations such as Call Hold, Exclusive Call Hold or Consultation Hold generates Music on Hold. In case of Call Transfer, it is possible to assign either Music on Hold or ringback tone is generated.
- It is necessary to connect a user-supplied external music source such as a radio to the system. One external music source can be connected to the system.
- The music source is used for Music on Hold and/or BGM. It is also possible to disable the Music on Hold and/or BGM.

Connection References

Section 2, Installation
2.3.7 External Music Source Connection

Programming References

Section 4, System Programming
[803] Music Source Use
[990] System Additional Information, Fields (1), (20)

Feature References

Section 3, Features
Background Music (BGM)

Operation References

Not applicable.

Night Service

Description

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

Switching the Day / Night Mode

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

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

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

Conditions

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

[407]–[408] DIL 1:1 Extension — Day / Night
[409]–[410] Intercept Extension — Day / Night
[500]–[501] Toll Restriction Level — Day / Night
[603]–[604] DIL 1:N Extension and Delayed Ringing — Day / Night
[605]–[606] Outgoing Permitted Outside Line Assignment — Day / Night
[607]–[608] Doorphone Ringing Assignment — Day / Night

Programming References

Section 4, System Programming

[100] Flexible Numbering, Night service mode
[101] Day / Night Service Switching Mode
[102] Day / Night Service Starting Time

Feature References

None

Operation References —User Manual

DPT Features, Standard Telephone Features

Night Service

Operator / Manager Service Features

Night Service On / Off

Off-Hook Call Announcement (OHCA)

Description

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

Conditions

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

Programming References

Section 4, System Programming

[100] Flexible Numbering, Call waiting / OHCA / whisper OHCA

[509] Off-Hook Call Announcement (OHCA)

Feature References

Section 3, Features

Busy Station Signaling (BSS)

Call Waiting

Whisper OHCA

Operation References —User Manual

DPT Features

Off-Hook Call Announcement (OHCA)

Off-Hook Monitor

Description

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

Conditions

This is effective with a handset conversation.

Programming References

Section 4, System Programming
[148] Off-Hook Monitor

Feature References

None

Operation References
—User Manual

DPT Features
Off-Hook Monitor

One-Touch Dialing

Description

One-Touch Dialing offers the proprietary telephone (PT) user one-touch access to a desired party or system feature. This is activated by storing an extension number, telephone number or a feature number (up to 16-digits) in an One-Touch Dialing button. The number of buttons available depends on the type of PT. One-Touch Dialing buttons can be programmed to flexible buttons: CO, DSS (Direct Station Selection) or PF (Programmable Feature).

Conditions

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

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
Station Programming.....User Manual
Flexible Button Assignment – One-Touch Dialing Button
Full One-Touch Dialing Assignment

Feature References

Section 3, Features
Full One-Touch Dialing

Operation References —User Manual

DPT Features
One-Touch Dialing

One-Touch Transfer by DSS Button

Description

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

Conditions

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

Programming References

Section 4, System Programming
[108] Automatic Hold by CO / DSS Button

Feature References

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

Operation References —User Manual

DPT Features
Call Transfer — to Extension

Operator

Description

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

- Clearing the Call Log Lock
- Clearing the Live Call Screening Password
- Printing / clearing the System Working Report
- Recording and playing outgoing messages
- Switching Day / Night mode manually
- Setting / canceling / confirming the Timed Reminder (Wake-up Call) remotely
- Setting / clearing the Remote Station Lock
- Setting the Background Music – External on and off

Conditions

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

Programming References

Section 4, System Programming
[006] Operator / Manager Extension Assignment
[100] Flexible Numbering, Operator call
[990] System Additional Information, Field (11)

Feature References

None

Operation References —User Manual

Operator / Manager Service Features

Operator Call

Description

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

Conditions

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

Programming References

Section 4, System Programming
[006] Operator / Manager Extension Assignment
[100] Flexible Numbering, Operator call
[990] System Additional Information, Field (44)

Feature References

None

Operation References —User Manual

DPT Features, Standard Telephone Features
Operator Call

Outgoing Message (OGM)

Description

Allows the extension assigned as an operator or manager to record an outgoing voice message. This message is played when a caller accesses the DISA feature.
After recording the message, the operator or manager can also play it back for confirmation.

Conditions

- A Caller ID / DISA / FAX Detection Card is required to program the OGM.
- The maximum recording time for OGM is 16 seconds.

Connection References

Section 2, Installation
2.4.2 4-SLT Extension Expansion Card / Caller ID/DISA/FAX Detection Card Installation

Programming References

Section 4, System Programming
[100] Flexible Numbering, Outgoing message
[990] System Additional Information, Field (34)

Feature References

Section 3, Features
Direct Inward System Access (DISA)

Operation References —User Manual

Operator / Manager Service Features
Outgoing Message (OGM)

Outside Line Connection Assignment

Description

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

Conditions

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

Programming References

Section 4, System Programming
[400] Outside Line Connection Assignment

Feature References

None

Operation References

Not applicable.

Outside Line Connection Assignment – Outgoing

Description

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

Conditions

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

Programming References

Section 4, System Programming
[605]–[606] Outgoing Permitted Outside Line Assignment — Day / Night

Feature References

None

Operation References

Not applicable.

PAGING FEATURES – SUMMARY

Description

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

Paging features are classified as follows:

Paging – All
Paging – External
Paging – Group

Paging – All

Description

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

Conditions

- A confirmation tone is sent to extensions, when the page is made or answered. Eliminating the tone is programmable.
- A confirmation tone is sent from external pagers, before the voice announcement. Eliminating the tone is programmable.
- A ringing or busy extension cannot receive a page.

Connection References

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

Programming References

Section 4, System Programming
[100] Flexible Numbering, Paging – external, Paging – external answer / TAFAS answer, Paging – group, Paging – group answer
[805] External Pager Confirmation Tone
[990] System Additional Information, Field (16)

Feature References

None

Operation References —User Manual

DPT Features, Standard Telephone Features
Paging — All
Paging and Transfer
Paging — ANSWER

Paging – External

Description

Allows you to make a voice announcement using external paging devices (external pagers). One pager can be connected. Any telephone user can answer your Paging – External.

Conditions

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

Connection References

Section 2, Installation

2.3.6 External Pager (Paging Equipment) Connection

Programming References

Section 4, System Programming

[100] Flexible Numbering, Paging – external, Paging – external answer / TAFAS answer
[805] External Pager Confirmation Tone
[990] System Additional Information, Field (16)

Feature References

None

Operation References —User Manual

DPT Features, Standard Telephone Features

Paging — External
Paging — ANSWER
Paging and Transfer

Paging – Group

Description

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

Conditions

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

Programming References

Section 4, System Programming

[100] Flexible Numbering, Paging – group, Paging – group answer

[990] System Additional Information, Field (16)

Feature References

Section 3, Features

Extension Group

Operation References —User Manual

DPT Features, Standard Telephone Features

Paging — Group

Paging — ANSWER

Paging and Transfer

Paralleled Telephone

Description

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

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

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

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

Conditions

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

Connection References

Section 2, Installation

2.3.4 Telephone Connection

Programming References

Section 4, System Programming
[100] Flexible Numbering, Parallel telephone mode

Feature References

Section 3, Features
EXtra Device Port (XDP)

Operation References —User Manual

DPT Features, Standard Telephone Features
Paralleled Telephone Connection

Pause Insertion, Automatic

Description

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

Conditions

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

Programming References

Section 4, System Programming
[100] Flexible Numbering, Automatic line access / ARS, Outside line access
[311] Special Carrier Access Codes
[411] Host PBX Access Codes
[412] Pause Time

Feature References

Section 3, Features
Host PBX Access
Toll Restriction

Operation References

Not applicable.

Phantom Extension

Description

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

Conditions

- Types of calls whose destination can be the phantom extension are:
  Outside calls – Direct In Lines (DIL) 1:1;
  Direct Inward System Access (DISA);
  Intercept Routing – No Answer (IRNA)
  Intercom calls – Extension; Transfer
- You can call the phantom extension by pressing the Phantom Extension button or by dialing the phantom extension number. If several extensions have the same phantom extension number, they will ring simultaneously.
- A phantom number must be assigned by System Programming before assigning the Phantom Extension button by Station Programming.
- There is a maximum of 16 phantom numbers. Each number has two to four digits, consisting of numbers **0 through 9**.
- The phantom number cannot be used for feature settings such as Call Forwarding.
- The lighting patterns and statuses of the Phantom Extension button are shown below.

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

- A DSS (Direct Station Selection) button can be assigned as the Phantom Extension button so that the operator can use the button for transferring a call.

Programming References

Section 4, System Programming
[124] Phantom Extension Number Assignment
Station Programming.....User Manual
Flexible Button Assignment – Phantom Extension Button

Feature References

None

Operation References —User Manual

DPT Features
Phantom Extension

Pickup Dialing

Description

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

Conditions

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

Programming References

Section 4, System Programming
[100] Flexible Numbering, Pickup dialing
[204] Pickup Dial Waiting Time

Feature References

None

Operation References —User Manual

DPT Features, Standard Telephone Features
Pickup Dialing (Hot Line)

Power Failure Restart

Description

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

Conditions

- In the event of a power failure, system memory is protected by a factory-provided lithium battery. There is no memory loss except the memories of Camp-On and Call Park.

Programming References

No programming required.

Feature References

None

Operation References

Not applicable.

Power Failure Transfer

Description

If a power failure should happen, or during a system-off-line state, a specific extension telephone instrument is automatically connected to a specific outside line. This provides outside line conversation between the following extension and outside line:

CO 1 is connected to extension jack number 1

A standard telephone can work in case of a power failure. Connect a standard telephone to the above extension jack.

Conditions

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

Connection References

Section 2, Installation

2.3.2 Outside Line Connection
2.3.3 Extension Connection
2.5 Auxiliary Connection for Power Failure Transfer

Programming References

No programming required.

Feature References

Section 3, Features

Power Failure Restart

Operation References

Not applicable.

Privacy, Automatic

Description

By default all conversations established on outside lines, extension lines and doorphone lines have privacy activated.

Conditions

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

Programming References

No programming required.

Feature References

Section 3, Features

Executive Busy Override – Outside Line

Executive Busy Override – Extension

Privacy Release

Operation References

Not applicable.

Privacy Release

Description

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

Conditions

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

Programming References

Section 4, System Programming

[990] System Additional Information, Field (13)

Feature References

Section 3, Features

Privacy, Automatic

Operation References —User Manual

DPT Features

Privacy Release

Pulse to Tone Conversion

Description

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

Conditions

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

Programming References

Section 4, System Programming
[402] Dial Mode Selection

Feature References

Section 3, Features
Dial Type Selection

Operation References —User Manual

DPT Features, Standard Telephone Features
Pulse to Tone Conversion

Quick Dialing

Description

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

Conditions

- Up to eight quick dial numbers can be stored.
- For example, Quick Dialing is convenient for room service calls in a hotel.
- You must assign a feature number first in program [100] “Flexible Numbering”, and then a quick dial number in program [009] “Quick Dial Number Set” in order for Quick Dialing to be effective.
  Example: If you want to assign the extension number 101 in quick dial number 3;
  1) Change or clear the feature numbers which have “3” in the first digit in program [100].
  2) Assign “3” in the selection number 63 (Quick dial location number 1) in program [100].
  3) Assign “11” in location number 1 (the same location number as the quick dial location number 1 in program [100]) in program [009].

  Now you can dial quick dial number 3 to call extension 11.

Programming References

Section 4, System Programming
[009] Quick Dial Number Set
[100] Flexible Numbering, Quick dial location numbers 1-8

Feature References

None

Operation Reference —User Manual

DPT Features, Standard Telephone Features
Quick Dialing

Redial, Last Number

Description

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

Conditions

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

Programming References

Section 4, System Programming
[100] Flexible Numbering, Last number redial

Feature References

None

Operation References —User Manual

DPT Features, Standard Telephone Features
Redial, Last Number

Redial, Saved Number

Description

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

Conditions

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

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
Station Programming.....User Manual
Flexible Button Assignment – SAVE Button

Feature References

Section 3, Features
Button, Flexible

Operation References
—User Manual

DPT Features
Redial, Saved Number

Remote Station Lock Control

Description

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

Conditions

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

Programming References

No programming required.

Feature References

Section 3, Features
Electronic Station Lockout

Operation References —User Manual

Operator / Manager Service Features
Remote Station Lock Control

Reverse Circuit

Description

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

Programming References

Section 4, System Programming
[416] Reverse Circuit Assignment

Feature References

None

Operation References

Not applicable.

Ring Group

Description

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

Conditions

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

Programming References

Section 4, System Programming

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

Feature References

Section 3, Features

Floating Station
Station Hunting

Operation References

Not applicable.

Ringing, Delayed

Description

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

Conditions

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

Programming References

Section 4, System Programming
[603]–[604] DIL 1:N Extension and Delayed Ringing — Day / Night

Feature References

Section 3, Features
Direct In Lines (DIL)

Operation References

Not applicable.

Ringing, Discriminating

Description

Allows the extension user to identify the incoming call by the ringing pattern. (See Section 5.1 “Tone / Ring Tone”.)

Conditions

- When there are multiple incoming calls and the extension goes from off-hook to on-hook, the calls are rung according to the following priority:
  - <1> Consultation Hold Recall
  - <2> An incoming call from a line in which the Prime Line Preference – Incoming function has been set (with a proprietary telephone only)
  - <3> Call Waiting
  - <4> Incoming calls; Hold Recall; Transfer Recall; Unattended Conference Recall
- If multiple incoming calls arrive at an on-hook extension simultaneously, priority as to which calls should be rung is generally on a “first-come, first-serve” basis. In the case of proprietary telephones (PT), however, when the Prime Line Preference – Incoming function has been set, this line takes precedence.
- Incoming TAFAS (Trunk (Outside Line) Answer From Any Station) calls can be identified by ringing signals sent out from the external pager. The ringing pattern is the same as the outside calls.
- The digital PT user can select a desired tone frequency for each CO button.

Programming References

No programming required.

Feature References

Section 3, Features
Ringing Tone Selection for CO Buttons

Operation References

Not applicable.

Ringing Tone Selection for CO Buttons

Description

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

Conditions

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

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
Station Programming.....User Manual
Ringing Tone Selection for CO Buttons

Feature References

None

Operation References

Not applicable.

Secret Dialing

Description

Allows an extension user to conceal all or part of a registered telephone number that normally appears on the display. The user can hide Station Speed Dialing (KX-T7431, KX-T7433, KX-T7436 and KX-T7235 only), System Speed Dialing or One-Touch Dialing numbers assigned to flexible buttons. When a display telephone user makes a call to the telephone number that is set to Secret Dialing, all or part of the number does not appear on the display.

Conditions

- When storing a number, press the INTERCOM button at the beginning and the end of the number to be concealed.
- You can conceal one or more parts of a telephone number.
- The concealed part will be printed out by Station Message Detail Recording (SMDR).

Programming References

Section 4, System Programming
[001] System Speed Dialing Number Set
Station Programming.....User Manual
Flexible Button Assignment – One-Touch Dialing Button

Feature References

Section 3, Features
One-Touch Dialing System Speed Dialing
Special Display Features
– Call Directory – Station Speed Dialing

Operation References —User Manual

DPT Features
Secret Dialing

Special Display Features

The KX-T7431, KX-T7433, KX-T7436 and KX-T7235 feature a display that allow the user to originate calls or to access system facilities with ease. The display prompts the user with information related to the desired feature.
Examples of this special function are shown below:

Call Directory (Extension Dialing / Station Speed Dialing / System Speed Dialing)
Call Forwarding / Do Not Disturb
Call Log, Outgoing
System Feature Access Menu

Call Directory

Description

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

Extension Dialing: Provides a display of extension names and numbers. System Programming of extension numbers and names is required.
Station Speed Dialing: Provides a display of names and numbers stored in One-Touch Dialing.
System Speed Dialing: Provides a display of names stored in System Speed Dialing. System Programming of numbers and names is required.

Conditions

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

Programming References

Section 4, System Programming
[001] System Speed Dialing Number Set
[002] System Speed Dialing Name Set
[003] Extension Number Set
[004] Extension Name Set
[100] Flexible Numbering, 1st through 16th hundred extension blocks
[990] System Additional Information, Field (19)
Station Programming.....User Manual
Station Speed Dialing Number / Name Assignment (KX-T7431 / KX-T7433 / KX-T7436 / KX-T7235 only)

Feature References **Section 3, Features**
One-Touch Dialing System Speed Dialing

Operation References **Special Display Features**
—User Manual KX-T7235 Display Features – Call Directory
KX-T7431 / KX-T7433 / KX-T7436 Display Features – Call Directory

Call Forwarding / Do Not Disturb

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

Conditions None

Programming References
No programming required.

Feature References **Section 3, Features**
Call Forwarding Do Not Disturb (DND)

Operation References **Special Display Features**
—User Manual Call Forwarding / Do Not Disturb

Call Log, Outgoing

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

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

Programming References
No programming required.

Feature References None

Operation References **Special Display Features**
—User Manual Call Log, Outgoing

System Feature Access Menu

Description

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

Conditions

- The features available are:
  - Absent Message Capability
  - Automatic Callback Busy (Camp-On) (cancel)
  - Call Park
  - Call Pickup (access / deny)
  - Call Log, Incoming
  - Call Log Lock, Incoming
  - Data Line Security
  - Door Opener
  - Doorphone Call
  - Electronic Station Lockout
  - Executive Busy Override Deny
  - Live Call Screening (LCS) (password set)
  - Log-In / Log-Out
  - Message Waiting
  - Paging (access / answer)
  - Paralleled Telephone
  - Pickup Dialing (Hot Line)
  - Station Feature Clear
  - Timed Reminder
  - Walking COS
- In addition to the features above, the operator and manager can display the following features:
  - Background Music (BGM) – External
  - Night Service
  - Outgoing Message
  - Timed Reminder, Remote (Wake-Up Call)

Programming References

No programming required.

Feature References

None

Operation References —User Manual

Special Display Features

KX-T7235 Display Features – System Feature Access Menu

KX-T7431 / KX-T7433 / KX-T7436 Display Features – System Feature Access Menu

Station Feature Clear

Description

Allows the extension user to cancel the functions set on the user's own telephone. The following functions will be canceled by this feature:

- Absent Message Capability – The message set on the telephone
- Automatic Callback Busy (Camp-On)
- Background Music that has been turned on
- Call Forwarding
- Call Log, Incoming – Over-stored mode
- Call Pickup Deny
- Call Waiting enabled
- Data Line Security
- Do Not Disturb (DND)
- Executive Busy Override Deny
- Log-Out status
- Message Waiting – All the messages that have been left by other extension users
- Off-Hook Call Announcement (OHCA)
- Paralleled Telephone enabled
- Pickup Dialing
- Timed Reminder
- Whisper OHCA

Conditions

None

Programming References

Section 4, System Programming
[100] Flexible Numbering, Station feature clear

Feature References

None

Operation References —User Manual

DPT Features, Standard Telephone Features
Station Feature Clear

Station Hunting

Description

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

Circular hunting: The extensions are searched until an idle one is found, regardless of the jack number.

Termination hunting: The extensions are searched until reaching the extension which has the highest jack number in the group.

Voice Mail (VM) hunting: All the VM ports are searched until an idle one is found to permit VM Service.

Automated Attendant (AA) hunting: All the AA ports are searched until an idle one is found to permit AA Service.

Ring Group hunting: All the extensions in the ring group ring simultaneously.

Uniform Call Distribution (UCD) hunting: Successive calls go to a different extension each time a call is received. Extensions are hunted in a circular way.

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

Conditions

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

Programming References

Section 4, System Programming
[106] Station Hunting Type
[602] Extension Group Assignment

Feature References

Section 3, Features

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

Operation References

Not applicable.

Station Message Detail Recording (SMDR)

Description

Station Message Detail Recording (SMDR) automatically records detailed call information for outside calls. A printer connected to the Serial Interface (RS-232C) port can be used to print incoming and outgoing outside calls as well as print a hard copy of System Programming. To print out a record of System Programming items that have been assigned, use program [802] "System Data Printout". To print the call records, use program [800] "SMDR Incoming / Outgoing Call Log Printout", which allows you to print out the following records:

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

An example of a call record printout:

Date	Time	Ext	CO	Dial Number	Ring	Duration	Acc code	CD
06/24/97	10:03AM	11	1	123456789012345678901234 5		00:05'12	1234567890	
06/24/97	10:07AM	13	2	<I>		00:00'56		
06/24/97	10:08AM	14	1	<I>		00:00'20	431211	
06/24/97	10:08AM	15	1	<I>		00:10'01	431211	TR
06/24/97	10:09AM	18	1	10222P1-202-346-7890		00:09'18	001	FW
06/24/97	10:10AM	13	2	<I>		00:01'24		
06/24/97	10:11AM	18	1	<I>		00:00'24		
06/24/97	10:11AM	18	2	0924312111		00:03'02		
06/24/97	10:20AM	12	3	<I>4312111		00:21'46		
.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

Explanation

(1) Date : shows the date of the call as Month / Day / Year.
(2) Time : shows the end time of a call as Hour / Minute / AM or PM.
(3) Ext : shows the extension number, floating number, etc., which was engaged in the call.
(4) CO : shows the outside line number used for the call.

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

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

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

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

(9) CD (Condition Code): shows call handling type with the following codes:
TR: Transfer
FW: Call Forwarding to Outside Line
RC: Received an incoming call
AN: Answered an incoming call
NA: Unanswered an incoming call

Conditions

- Connect a printer to the Serial Interface (RS-232C) connector of the main unit. After connecting a printer, do not press the RETURN key, if provided on the printer, for 10 seconds.
- When programmed for outgoing toll calls only, printing occurs only for calls which start with the numbers stored in any Denied Code Table from levels 2 to 6. If Automatic Route Selection (ARS) is employed, the modified number is checked against these tables.
- This system can store information of up to 100 calls. If more calls are originated or received, previous records are deleted starting with the oldest one.
- It is possible to select the SMDR format for an incoming call with Caller ID, the caller's number only or caller's number and name, by program [990], Field (41).
- It is possible to select whether the SMDR prints out received incoming calls (RC) and answered incoming calls (AN) information by program [990], Field (42).
- This data is not deleted when you reset the system.
- If the system clock is not set by System Programming or if the calendar IC is out of order, the date and time will not be printed out.
- If the FLASH signal is manually sent during a conversation, the call record is printed and a new record is started.

Connection References

Section 2, Installation
2.3.8 Printer and PC Connection

Programming References

Section 4, System Programming
[000] Date and Time Set
[212] Call Duration Count Start Time
[800] SMDR Incoming / Outgoing Call Log Printout
[801] SMDR Format
[802] System Data Printout
[806]–[807] Serial Interface (RS-232C) Parameters
[990] System Additional Information, Fields (41), (42)

Feature References

None

Operation References

Not applicable.

Station Programming

Description

Allows the proprietary telephone (PT) user to customize the extension to their needs. The following programming items are available:
For the PT (KX-T7420; KX-T7425; KX-T7431; KX-T7433; KX-T7436; KX-T7220; KX-T7230; KX-T7235; KX-T7250; KX-T7130; KX-T7020; KX-T7030; KX-T7050)
- Call Waiting Tone Type Assignment
- Flexible Button Assignment
- Full One-Touch Dialing Assignment
- Intercom Alert Assignment
- Preferred Line Assignment – Incoming / Outgoing
- Station Programming Data Default Set

For digital PT (KX-T7420; KX-T7425; KX-T7431; KX-T7433; KX-T7436; KX-T7220; KX-T7230; KX-T7235; KX-T7250) only,
- Handset / Headset Selection
- Live Call Screening Mode Set
- Ringing Tone Selection for CO Buttons

For display PT (KX-T7431; KX-T7433; KX-T7436; KX-T7230; KX-T7235; KX-T7130; KX-T7030) only,
- Bilingual Display Selection
- Initial Display Selection
- Self-Extension Number Confirmation

For digital display PT (KX-T7431; KX-T7433; KX-T7436; KX-T7235) only,
- Station Speed Dialing Number / Name Assignment

For the operator and manager's extension PT only,
- Call Log Lock Control, Incoming
- Live Call Screening Password Control
- Remote Station Lock Control

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

Conditions

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

Programming References

Station Programming.....User Manual
Operator / Manager Service Features.....User Manual
Call Log Lock Control, Incoming
Live Call Screening Password Control
Remote Station Lock Control

Feature References

None

Operation References Not applicable.

Station Programming Data Default Set

Description

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

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

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

Conditions None

Programming References

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

Feature References

Section 3, Features
Station Programming

Operation References Not applicable.

Station Speed Dialing

Description

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

Conditions

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

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

Programming References

Section 4, System Programming

[100] Flexible Numbering, Station speed dialing, Station speed dialing programming

Feature References

Section 3, Features

One-Touch Dialing

Operation References —User Manual

DPT Features, Standard Telephone Features

Station Speed Dialing

System Data Default Set

Description

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

Conditions

The default setting for each programming item is listed in Section 5.2, “Default Values”.

Programming References

Section 4, System Programming
[900] System Data Clear

Feature References

None

Operation References

Section 2, Installation
2.9 System Data Clear

System Programming with Personal Computer

Description

This system can be programmed and administered using a personal computer. The Serial Interface Manual and its floppy disk are required to perform this feature.

On-Site Programming
By connecting a personal computer (PC) to your system, system programming and maintenance can be performed locally. Connect the PC to the Serial Interface (RS-232C) port provided. The main unit has an Serial Interface (RS-232C) port which can be used for either system administration or Station Message Detail Recording (SMDR).

Conditions

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

Programming References

Section 4, System Programming
[107] System Password

Feature References

Section 3, Features

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

Operation References

Not applicable.

System Programming with Proprietary Telephone

Description

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

(1) An extension that is connected to jack 1.
(2) An extension that is assigned as a manager.

For more information and programming instructions, refer to Section 4, “System Programming”.

Conditions

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

Programming References

Section 4, System Programming
[006] Operator / Manager Extension Assignment
[107] System Password

Feature References

Section 3, Features
System Programming with Personal Computer

Operation References

Not applicable.

System Speed Dialing

Description

This feature supports 100 abbreviated dial numbers that are available to all users. A system speed dial number is dialed out by pressing the AUTO button and a 3-digit code (00 through 99). It is possible to store five hundred 24-digit telephone numbers per system (maximum).

Conditions

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

[For proprietary telephone users only]

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

[For standard telephone users only]

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

Programming References

Section 4, System Programming

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

Feature References

Section 3, Features

Toll Restriction Override for System Speed Dialing

Operation References —User Manual

DPT Features, Standard Telephone Features

System Speed Dialing

System Working Report

Description

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

Recorded contents are as follows:

1. Date of record
   - The date and time when cleared
   - The date and time when printed out
2. Incoming calls
   - The number of incoming calls
   - The number of answered incoming calls
   - The ratio of answered calls to incoming calls

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

   - The average time from receipt of call to answer of the incoming and answered calls
   - The average talk duration of the answered calls
3. Outgoing calls
   - The number of requested accesses
   - The number of successful accesses
   - The ratio of successful accesses to requested accesses

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

   - The average duration of the dialed calls

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

Conditions

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

Connection References

Section 2, Installation
2.3.8 Printer and PC Connection

Programming References

Section 4, System Programming
[100] Flexible Numbering, System working report
[806]–[807] Serial Interface (RS-232C) Parameters

Feature References

Section 3, Features
Station Message Detail Recording (SMDR)

Operation References —User Manual

Operator / Manager Service Features
System Working Report

Time-Out, Variable

Description

Provides timers to control various features or functions. The following timers are programmable:

System Timer Items	Range
Call Forwarding – No Answer Time-Out	1 – 12 rings
Call Park Recall Time	3 – 48 rings
DISA AA Wait Time	1 – 5 s
DISA Delayed Answer Time	0 – 6 rings
Extension-to-Outside Call Duration Time	1 – 64 min
Hold Recall Time	0 – 240 s
Intercept Routing Time-Out	3 – 48 rings
Message Waiting Ring Interval Time	0 – 64 min
Outside Line Dial Starting Time	n×100 ms, n:0 – 40
Outside-to-Outside Line Call Duration Time	1 – 64 min
Pickup Dialing Waiting Time	1 – 5 s
SMDR Duration Count Starting Time	0 – 60 s
Timed Reminder Alarm Ring Time	30 – 240 s
Toll Restriction First Digit Time-Out	5 – 120 s
Toll Restriction Inter-digit Time-Out	5 – 30 s
Transfer Recall Time	0 – 48 rings
Outside Line Timer Items	
CPC Signal Detection Time (Incoming)	Disable / 100 / 200 / 300 / 400 / 500 / 600 ms
Disconnect Time	1.5 / 4.0 s
DTMF Digit Time	80 / 160 ms
Hookswitch Flash Time	Disable / 80 / 96 / 112 / 200 / 300 / 400 / 500 / 600 / 700 / 800 / 900 / 1000 / 1100 / 1200 ms
Pause Time	1.5 / 2.5 / 3.5 / 4.5 s
Extension Timer Items	
Delayed Ringing Count	Disable / Immediate / 1 / 3 / 6 rings / No ring

Voice Mail Integration Timer Items

DTMF Signal Duration	80 / 160 ms
DTMF Signal Waiting Time after VPS Answer	0.5 / 1.0 / 1.5 / 2.0 s
DTMF Signal Waiting Time after VPS calls Extension	0.5 / 1.0 / 1.5 / 2.0 s

Programming References

Section 4, System Programming

[200] Hold Recall Time
[201] Transfer Recall Time
[202] Call Forwarding – No Answer Time
[203] Intercept Time
[204] Pickup Dial Waiting Time
[205] Extension-to-Outside Line Call Duration Time
[206] Outside-to-Outside Line Call Duration Time
[207] First Digit Time
[208] Inter Digit Time
[211] Dial Start Time
[212] Call Duration Count Start Time
[213] DISA Delayed Answer Time
[216] Message Waiting Ring Interval Time
[217] Timed Reminder Alarm Ring Time
[218] DISA AA Wait Time
[219] Call Park Recall Time
[404] DTMF Time
[405] CPC Signal Detection Incoming Set
[412] Pause Time
[413] Flash Time
[414] Disconnect Time
[603]–[604] DIL 1:N Extension and Delayed Ringing — Day / Night
[990] System Additional Information, Fields (6) through (8)

Feature References

None

Operation References

Not applicable.

Timed Reminder

Description

Each telephone can be set to generate an alarm tone at a preset time as a wake up tone or reminder. This feature can be programmed to be active once only or daily.

Conditions

- Be sure that the system clock works.
- Setting a new time clears the preset time.
- The alarm continues for a programmed period of time (default: 30 seconds). To stop it, lift the handset or, with a proprietary telephone, press any button.
- There is no limit for the number of the extensions who can set the Timed Reminder at the same time.
- Station Message Detail Recording (SMDR) automatically records the detailed Timed Reminder information (date, time, extension number, start/no answer). It is programmable to be printed out when the Timed Reminder starts and the alarm is not answered.

Programming References

Section 4, System Programming

[100] Flexible Numbering, Timed reminder
[217] Timed Reminder Alarm Ring Time
[990] System Additional Information, Field (45)

Feature References

None

Operation References—User Manual

DPT Features, Standard Telephone Features
Timed Reminder

Timed Reminder, Remote (Wake-Up Call)

Description

Allows the operator and manager to remotely set, cancel and confirm the wake-up call for an extension.

Conditions

- When either an operator/manager or the extension sets a new time, the pre-set time is cleared.
- There is no limit for the number of the extensions that can set the Timed Reminder at the same time.
- Station Message Detail Recording (SMDR) automatically records the detailed Timed Reminder information (date, time, extension number, start/no answer). It is programmable to be printed out when the Timed Reminder starts and the alarm is not answered. An example of a printed Timed Reminder record is shown below.

Date	Time	Ext	CO	Dial Number	Ring	Duration	Acc code	CD
06/24/96	10:03AM	13		Timed Reminder / Start				
06/24/96	10:04AM	13		Timed Reminder / No Answer				

Programming References

Section 4, System Programming
[100] Flexible Numbering, Timed reminder, remote
[990] System Additional Information, Field (45)

Feature References

Section 3, Features
Timed Reminder

Operation References —User Manual

Operator / Manager Service Features
Timed Reminder, Remote (Wake-Up Call)

Toll Restriction

Description

Toll Restriction is a system programmable feature that, in conjunction with the assigned Class of Service, can prohibit certain extension users from placing unauthorized toll calls.

Every extension is programmed to belong to one of eight Classes of Service. Each Class of Service is programmed to have a toll restriction level for day mode and night mode.

There are eight toll restriction levels available. Toll restriction level 1 is the highest level and the level 8 is the lowest. That is, level 1 allows all toll calls and levels 7 and 8 disallows all toll calls. Levels 2 through 6 are used to restrict calls by combining pre-programmed deny and excepted code tables.

Denied Code Tables
An outgoing outside call made by an extension with a toll restriction level between 2 and 6 is first checked against the selected Denied Code Tables. If the leading digits of the dialed number (not including the line access code) are not found in the table, the call is made. There are five system programs for Denied Code Tables: **[301]-[305] TRS Denied Code Entry for Levels 2 through 6:** Each program is used to make up a Denied Code Table for Levels 2 through 6 respectively.
Complete every table by storing numbers that are to be prohibited. These numbers are defined as denied codes. Each table can store up to 20 denied codes, each consisting of a maximum of ten digits.

Excepted Code Tables
These tables are used to override a programmed denied code. A call denied by the selected Denied Code Tables is checked against the selected Excepted Code Tables, and if a match is found, the call is made.
There are five system programs for these tables:
[306]-[310] TRS Excepted Code Entry for Levels 2 through 6: Each program is used to make up an Excepted Code Table for Levels 2 through 6.
Complete every table by storing numbers that are exceptions to the denied codes. These numbers are defined as excepted codes. Each table can store up to five excepted codes, each consisting of a maximum of ten digits.

Extra Table

100 extra codes can be entered in one of Denied or Excepted Code Table. There is a maximum of either 120 entries for Denied Code Table or 105 entries for Excepted Code Table.

Applicable Denied and Excepted Code Tables depend on the assigned toll restriction level of an extension as follows:

	Denied Code Tables	**Excepted Code Tables**
Level 1	None	None
Level 2	Table for Level 2	Tables for Levels 2 through 6
Level 3	Tables for Levels 2 and 3	Tables for Levels 3 through 6
Level 4	Tables for Levels 2 to 4	Tables for Levels 4 through 6
Level 5	Tables for Levels 2 to 5	Tables for Levels 5 through 6
Level 6	Tables for Levels 2 to 6	Tables for Level 6
Level 7	None	None
Level 8	None	None

[Explanation]

Level 1: allows all calls.

Level 2: denies codes stored in the Denied Code Table for Level 2 except the codes stored in Excepted Code Tables for Levels 2 through 6.

Level 3: denies codes stored in the Denied Code Tables for Levels 2 and 3 except the codes stored in Excepted Code Tables for Levels 3 through 6.

Level 4: denies codes stored in the Denied Code Tables for Levels 2 through 4 except the codes stored in Excepted Code Tables for Levels 4 through 6.

Level 5: denies codes stored in the Denied Code Tables for Levels 2 through 5 except the codes stored in Excepted Code Tables for Levels 5 and 6.

Level 6: denies codes stored in the Denied Code Tables for Levels 2 through 6 except the codes stored in Excepted Code Table for Level 6.

Level 7: allows intercom calls only.

Level 8: allows operator calls only.

Example of Toll Restriction programming

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

1. Determining the application

Determine the dialing numbers that should be denied for levels 2 through 6. (Levels 1, 7 and 8 are fixed and do not require programming.)

[Entry Example]

Level	Denied Code	Excepted Code
2	011	None
3	011 976 1xxx976	None
4	011 976 1xxx976 0	None
5	011 976 1xxx976 0 411 1xxx555	None
6	011 976 1xxx976 0 411 1xxx555 1 x0 x1	911 1911 800 1800

Note: “x” substitutes a digit.

2. Programming

(1) [500]-[501] Toll Restriction Assignment

Assign a toll restriction level to each Class of Service (COS).

[Example]

COS	Level (Day)	Level (Night)
1	1	6
2	2	6
:	:	:
8	8	8

(2) [301]-[305] Denied Code Table Entry
Depending on the application, enter the denied codes in the associated tables. You can use numeric characters and the wild card character "＊".

Level-2 Denied Code Table	
Location	**Code**
01	001
:	
:	
20	

Level-3 Denied Code Table	
Location	**Code**
01	976
02	1＊＊＊976
:	
20	

Level-4 Denied Code Table	
Location	**Code**
01	0
:	
:	
20	

Level-5 Denied Code Table	
Location	**Code**
01	411
02	1＊＊＊555
:	
20	

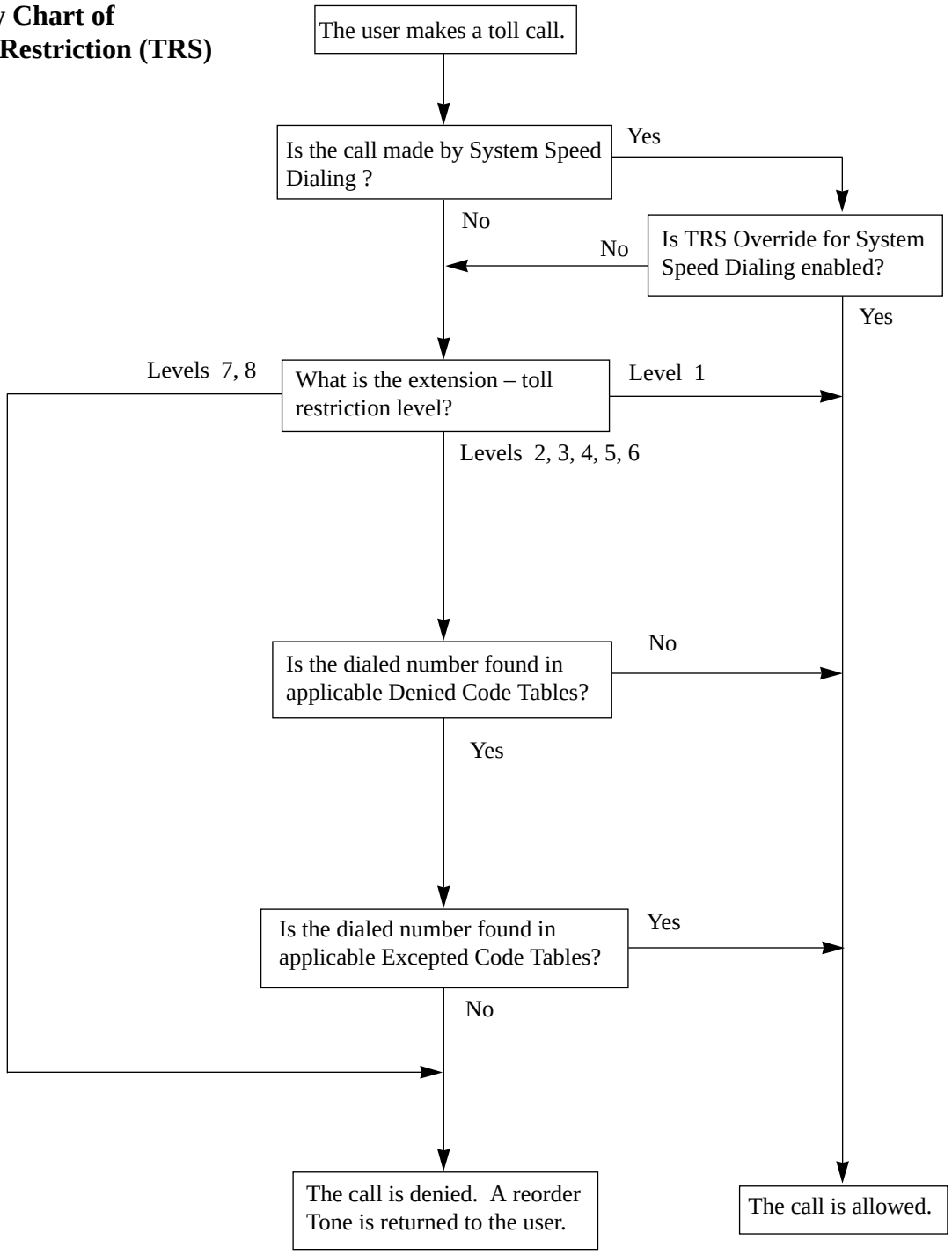
Level-6 Denied Code Table	
Location	**Code**
01	1
02	＊0
03	＊1
:	
20	

(3) [306]-[310] Excepted Code Table Entry
Depending on the application, enter the excepted codes in the associated tables. You can use numeric characters and the wild card character "＊".

Level-6 Excepted Code Table	
Location	**Code**
1	911
2	1911
3	800
4	1800
5	

[Explanation]
If your Toll Restriction Level is 6;
a) You cannot make a call whose toll call number is "201", because the number whose second digit "0" is one of the Denied Codes for Level 6.
b) You can make a call whose toll call number is "800". Though the number whose second digit "0" is one of the Denied Codes for Level 6, the number "800" is one of the Excepted Codes for Level 6. The Excepted Codes override the Denied Codes.

Flow Chart of Toll Restriction (TRS)



Conditions

- Toll restriction checks are applied to the following:
  (1) Automatic Route Selection (ARS)
  (2) Account Code Entry
  (3) Dial Access, Automatic
  (4) Line Access, Individual
  (5) Special Carrier Code Entry
  (6) System Speed Dialing
- Emergency numbers the Police or Fire Department should be stored in Program [334] "Emergency Dial Number Set" so that they are excepted from toll restriction.
- If a stored Host PBX access code or a stored carrier code is found in the dialed number, a toll restriction check starts for the subsequent telephone number.
- Toll restriction for System Speed Dialing can be canceled for the whole system.
- It is programmable whether the "✳" or "#" the user dials is to be checked or not on the Toll Restriction code. This is useful to prevent unauthorized calls which could be possible through certain Central Office exchange systems.
- It is programmable to allow the press of the FLASH or FLASH/RCL button, during an outside call on the extensions in Levels 7 and 8.

Programming References

Section 4, System Programming

[207] First Digit Time
[208] Inter Digit Time
[300] TRS Override for System Speed Dialing
[301]–[305] TRS Denied Code Entry for Levels 2 through 6
[306]–[310] TRS Excepted Code Entry for Levels 2 through 6
[311] Special Carrier Access Codes
[332] Extra Entry Table Selection
[333] TRS Entry Code Assignment for Extra Table
[500]–[501] Toll Restriction Level — Day / Night
[601] Class of Service
[990] System Additional Information, Fields (14), (15)

Feature References

Section 3, Features

Toll Restriction for Special Carrier Access
Toll Restriction Override by Account Code Entry
Toll Restriction Override for System Speed Dialing

Operation References

Not applicable.

Toll Restriction for Special Carrier Access

Description

If your system has access to multiple telephone companies, access to a specific company requires a carrier access code preceding the telephone number. Toll Restriction on these calls is activated by storing the carrier codes (maximum 20). If a stored carrier code is found in the dialed number, a toll restriction check starts for the subsequent telephone number.

Conditions

A carrier access code is followed by Automatic Pause Insertion. It is possible to select the pause time in System Programming.

Programming References

Section 4, System Programming
[311] Special Carrier Access Codes
[412] Pause Time

Feature References

Section 3, Features
Toll Restriction

Operation References

Not applicable.

Toll Restriction Override by Account Code Entry

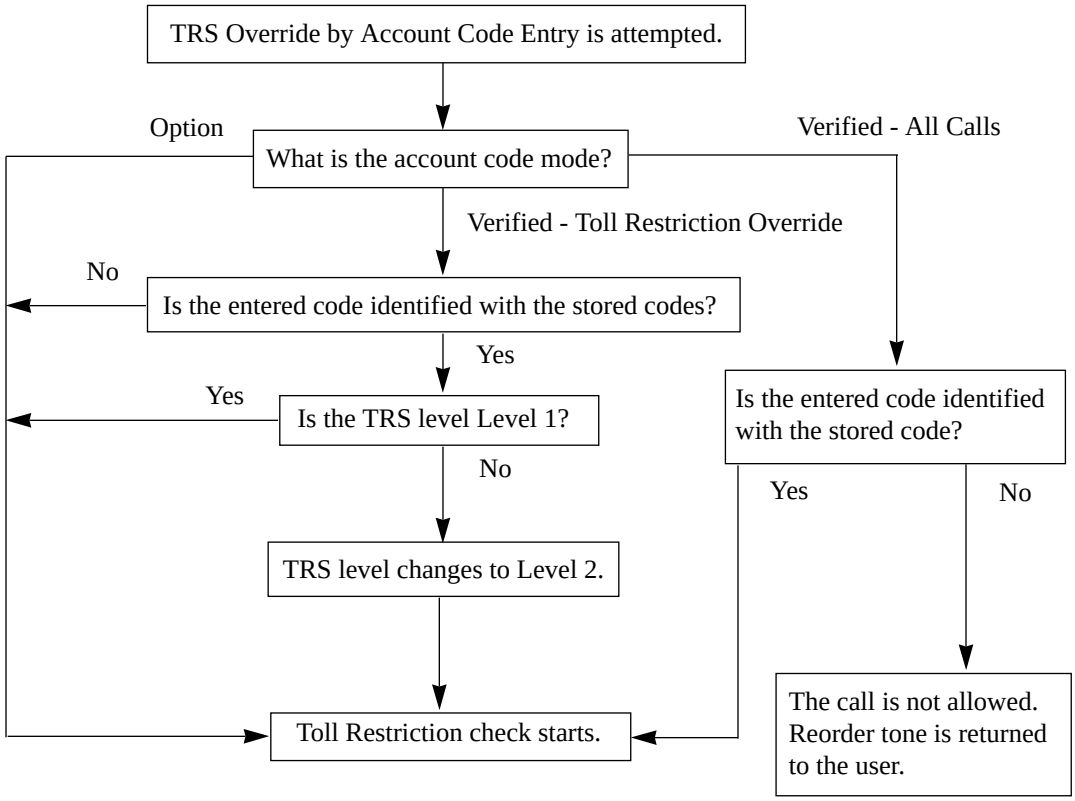
Description

Allows the extension user to override toll restriction temporarily to make a toll call from a toll-restricted telephone. The user can carry out this feature by entering the appropriate account code before dialing the telephone number.

Conditions

- The toll restriction level of the user is set to level 2 by this feature. This can be used by extension users assigned a toll restriction level from 3 through 8. Levels 1 and 2 are not changed.
- A Class of Service which is assigned Account Code Entry – Verified Toll Restriction Override permits the class members to override their toll restrictions.
- Up to 20 account codes can be programmed for Verified Account code operation. These are used for Toll Restriction Override.
- If the user does not enter any account code or enters an invalid account code, an ordinary toll restriction check is done.

Flow Chart of Toll Restriction (TRS) Override by Account Code Entry



Programming References

Section 4, System Programming

[100] Flexible Numbering, Account code entry

[508] Account Code Entry Mode

Feature References

Section 3, Features

Account Code Entry Toll Restriction

Operation References —User Manual

DPT Features, Standard Telephone Features

Toll Restriction Override — Toll Restriction Override by Account Code Entry

Toll Restriction Override for System Speed Dialing

Description

Allows you to cancel Toll Restriction in System Speed Dialing. Normally, calls originated by System Speed Dialing are restricted depending on the extension's toll restriction level. Once this function is activated, it permits all extension users to make System Speed Dialing calls without restrictions.

Conditions

None

Programming References

Section 4, System Programming
[300] TRS Override for System Speed Dialing

Feature References

Section 3, Features
System Speed Dialing Toll Restriction

Operation References —User Manual

DPT Features, Standard Telephone Features
Toll Restriction Override – Toll Restriction Override for System Speed Dialing

Trunk (Outside Line) Answer From Any Station (TAFAS)

Description

A tone signal is sent through the external pager when an incoming outside call is received. Any extension user can answer the call.

Conditions

- Connect a user-supplied external paging device.
- One external pager can be installed.
- A floating number of a pager is programmable.
- TAFAS can be used in the following cases:
  a) The floating number of an external pager is assigned as the Direct In Lines (DIL) 1:1 destination. In this case all incoming calls on the specified line will be signaled.
  b) A DISA (Direct Inward System Access) caller dials the floating number of an external pager.
  c) The floating number of an external pager is assigned as the Intercept Routing destination. In this case incoming calls redirected to the destination will be signaled.
- A confirmation tone is sent to the user before being connected to the caller. Eliminating the tone is programmable.

Connection References

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

Programming References

Section 4, System Programming
[100] Flexible Numbering, Paging – external answer / TAFAS answer
[813] Floating Number Assignment
[990] System Additional Information, Field (16)

Feature References

Section 3, Features
Floating Station

Operation References —User Manual

DPT Features, Standard Telephone Features
Trunk (Outside Line) Answer From Any Station (TAFAS)

Two-Way Recording into Voice Mail†

Description

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

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

Conditions

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

Programming References

Section 4, System Programming
[005] Flexible CO Button Assignment
Station Programming.....User Manual
Flexible Button Assignment — Two-Way Record Button, Two-Way Transfer Button

Feature References

None

Operation References —User Manual

DPT Features
Two-Way Recording into Voice Mail

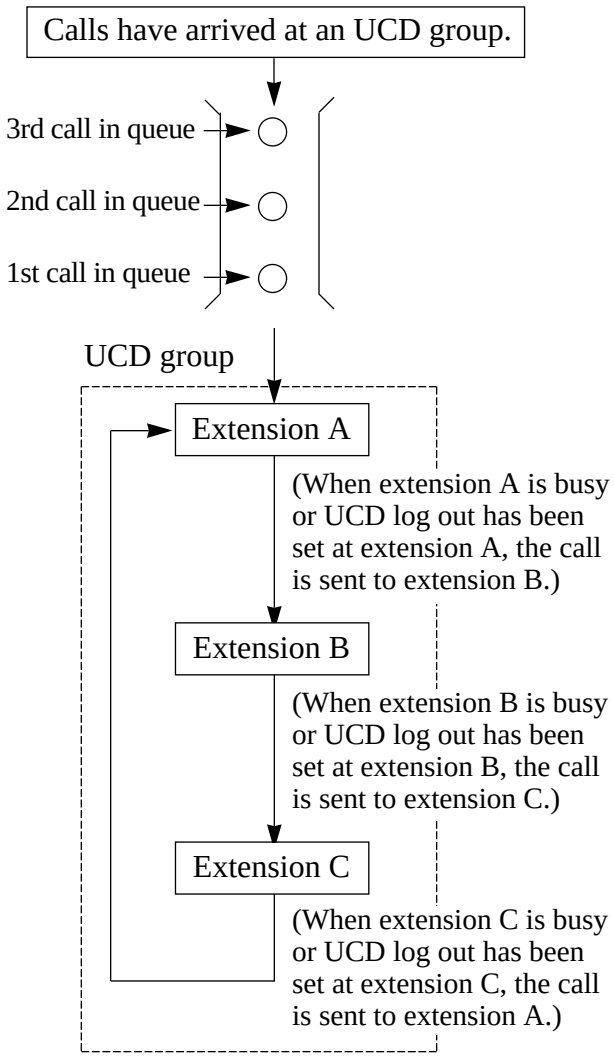
†: Available when the Digital Super Hybrid System is connected to a Digital Proprietary Telephone capable Panasonic Voice Processing System (one that supports digital proprietary telephone integration; e.g. KX-TVS100).

Uniform Call Distribution (UCD)

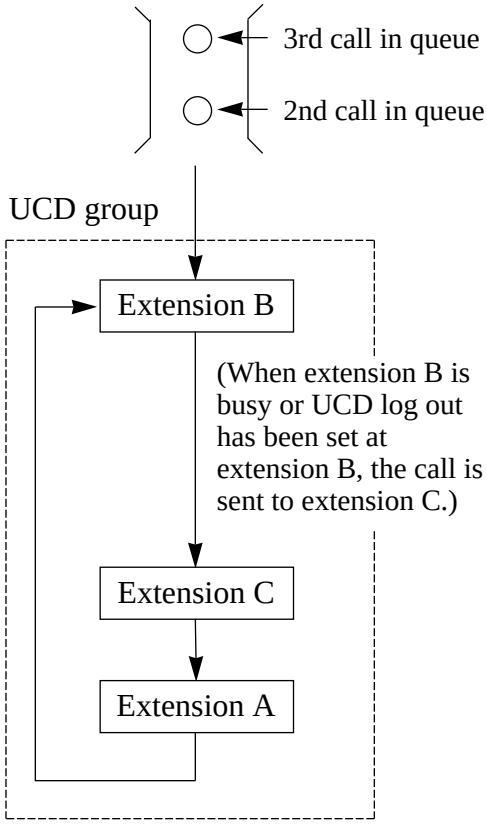
Description

Allows incoming calls to be distributed uniformly to a specific group of extensions called an UCD group. Calls to an UCD group hunt for an idle station in a circular way. This UCD feature is particularly helpful when a certain extension receives a high volume of calls compared with other extensions.
An outline sketch of an UCD is shown below.

(1) When a number of calls have arrived at an UCD group, the 1st call is sent to extension A first.



(2) When the 1st call arrives at extension A, the 2nd call is sent to extension B.



(3) When the 2nd call arrives at extension C, the 3rd call will be sent to extension A.

Conditions

- UCD can be used in the following cases:
  a) The floating number of UCD is assigned as the Direct In Lines (DIL) 1:1 destination.
  b) The floating number of UCD is assigned as the Intercept Routing destination.
  c) The floating number of UCD is dialed from an extension.
  d) The floating number of UCD is dialed from DISA (Direct Inward System Access)
- This feature requires assigning an UCD group in System Programming. An extension cannot belong to two or more UCD groups.
- The floating number can be assigned on an UCD group basis. The UCD group is based on the extension group.
- It is possible to set the log-in or log-out status on an extension basis. An UCD call can be sent to an extension in log-in status within the UCD group, but cannot be sent to extensions in log-out status. If the extension would like to leave the group temporarily, the extension sets the log-out status by the feature number to prevent UCD calls being sent to his/her extension. When the extension re-joins the group, the extension sets the log-in status.
- There should be at least one extension that is in log-in status.

Programming References

Section 4, System Programming
[106] Station Hunting Type
[602] Extension Group Assignment
[813] Floating Number Assignment

Feature Reference

Section 3, Features
Extension Group — Station Hunting
Log-In / Log-Out

Operation References —User Manual

DPT Features, Standard Telephone Features
Uniform Call Distribution (UCD)

User Programming (Manager Programming)

Description User Programming (Manager Programming) can be programmed by the end user. Programs [000] through [009] can be changed by the user.

Conditions None

Programming References

User Programming (Manager Programming).....User Manual

Feature References None

Operation References Not applicable.

Voice Mail Integration

Description

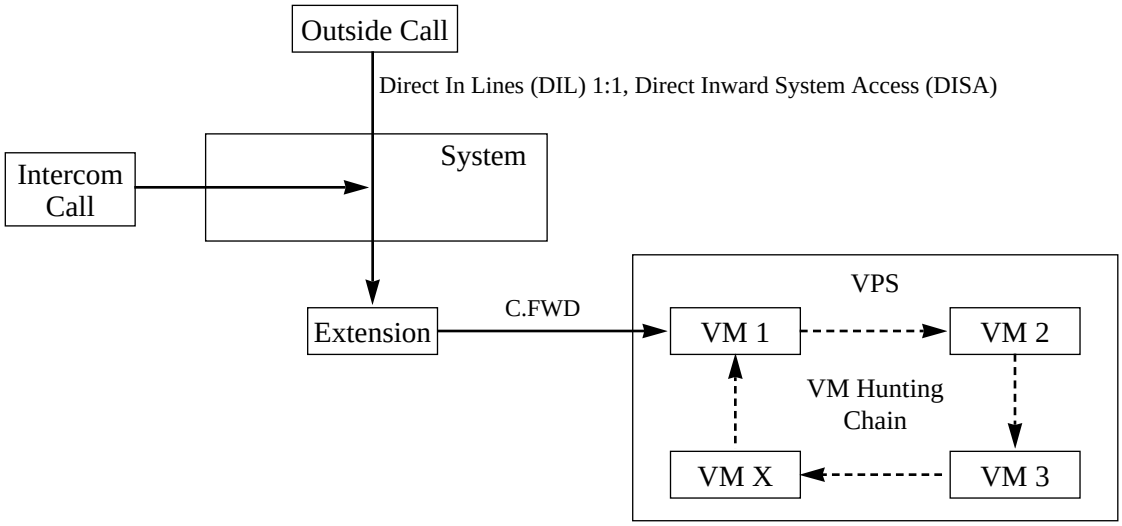
This system can accommodate Voice Processing System (VPS) equipment, which offers the user Voice Mail (VM) and Automated Attendant (AA) Services. If an extension user has set the Call Forwarding destination to the VPS, the calling party will be forwarded to the VPS and can leave a voice message in the mailbox of the extension. When a call is transferred to the VPS by Call Forwarding or Intercept Routing – No Answer (IRNA) features, the mailbox number is sent to the VPS automatically with DTMF (Dual Tone Multi-Frequency) signaling (Follow On ID). Up to twelve extension jacks can be connected to VPS as extensions in the system.

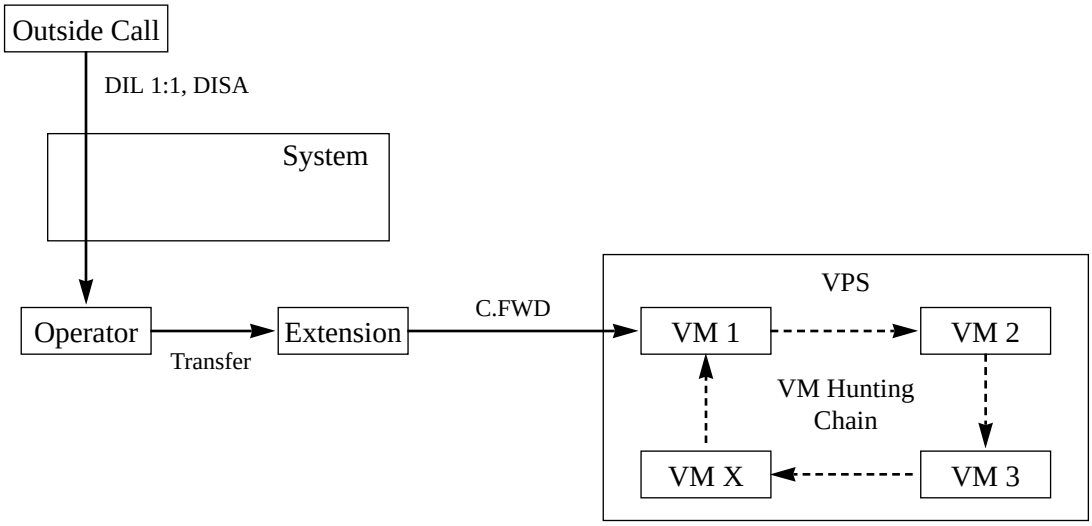
System Explanation

1. Voice Mail Service

1.1 Call Forwarding to VM

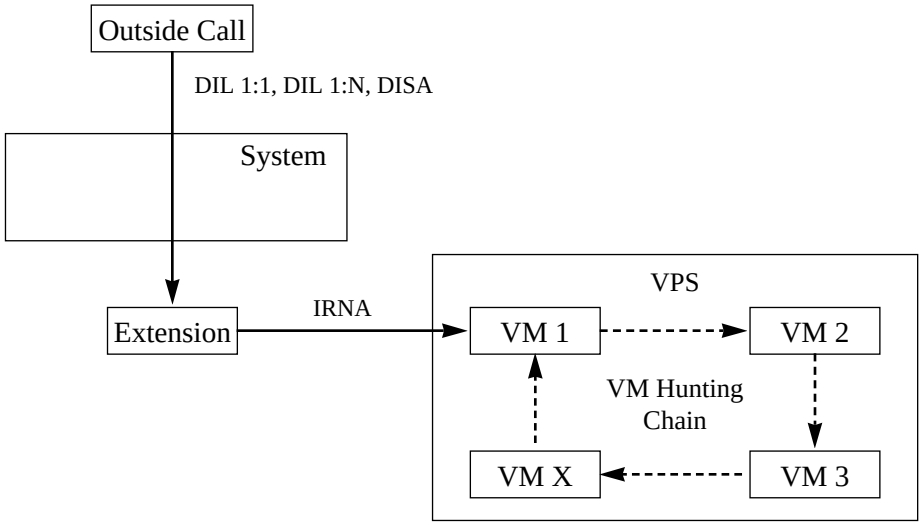
If an extension user sets Call Forwarding (C. FWD) whose destination is the VPS, an incoming call is forwarded to the VPS under the proper conditions. The system sends to the VPS a mailbox number of the corresponding extension at that time. Therefore the calling party can leave his / her message in the mailbox of the desired extension without knowing the mailbox number.





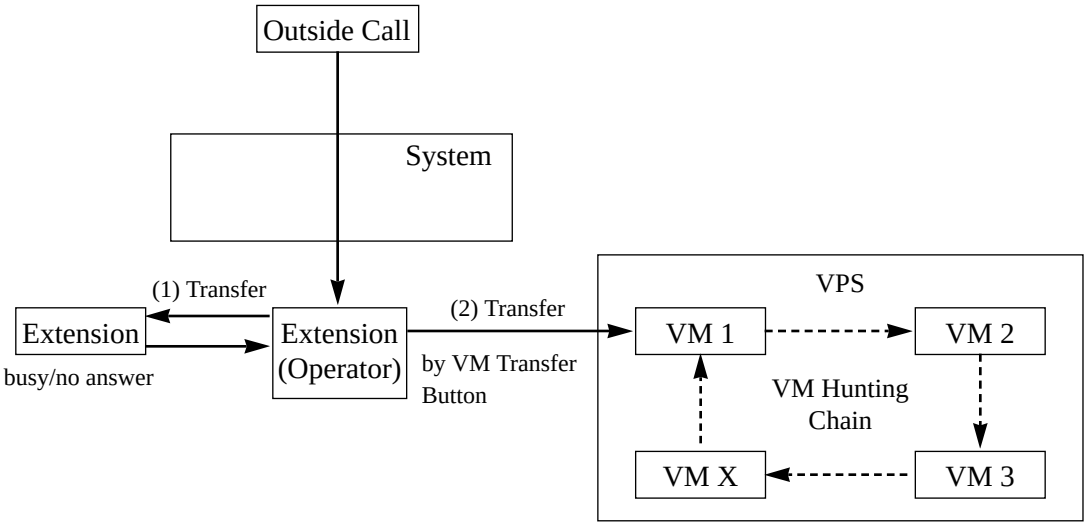
1.2 Intercept Routing to VM

If an outside line is set as Intercept Routing – No Answer (IRNA) whose destination is the VPS, an outside call is forwarded to the VPS under the proper conditions. The system sends to the VPS a mailbox number of the corresponding extension at that time. Therefore the calling party can leave his / her message in the mailbox of the desired extension without knowing the mailbox number.



1.3 Transferring to VM

The extension user can transfer an outside call to the VPS so that calling party can leave his / her message in the mailbox of the desired extension. The extension user should use the Voice Mail (VM) Transfer button, when transferring a call to the VPS. Pressing this button and entering the extension number allows the extension user to transfer the call to the mailbox of the corresponding extension.

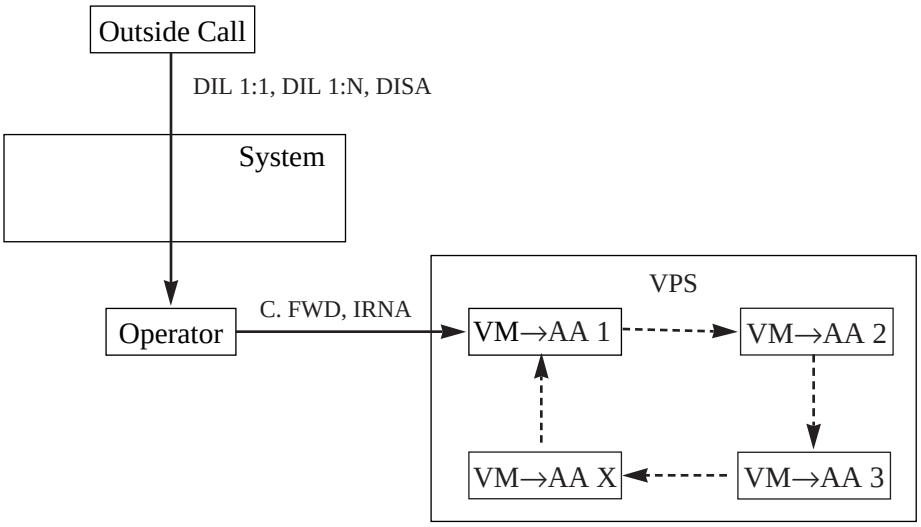


1.4 Changing from VM to Automated Attendant (AA)

The Automated Attendant Service is automatically activated in the following cases:

1) The incoming call is not answered by the operator and IRNA is activated.

2) The operator is assigned as a destination of DIL 1:1 and the operator sets the Call Forwarding to VPS.



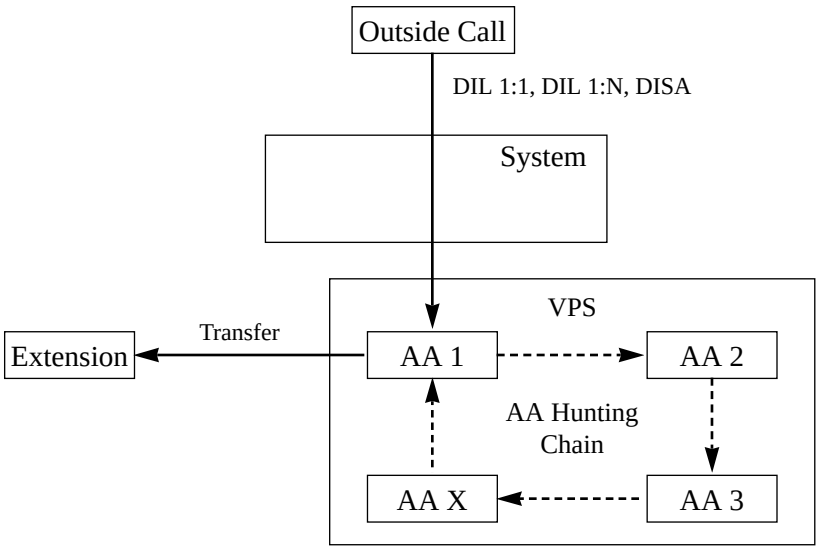
1.5 Listening to a Recorded Message

If the VPS receives a message, the VPS can turn on the MESSAGE button indicator of the corresponding telephone as notification to the user of the telephone. (Panasonic KX-TVS series can do this.) The VPS notifies the extension user that there is a message waiting in his / her mailbox. When the MESSAGE button indicator is lit, pressing the button allows the extension user to play back the stored message.

2. Automated Attendant (AA) Service

2.1 AA to Extension

AA receives and answers an outside call and offers services such as transferring to a specified extension or the corresponding mailbox by the DTMF signaling, which is sent from the calling party.



Conditions

- A VPS can be assigned as the destination of the following features.
  Call Forwarding – All Calls
  Call Forwarding – Busy
  Call Forwarding – Busy / No Answer
  Call Forwarding – No Answer
  Intercept Routing – No Answer
  In these functions, the caller to the extension need not know the mailbox number of the called extension because the code is automatically transmitted to the VPS (Follow On ID function). If a DIL 1:N call is transferred to the VPS by IRNA, your system transmits the mailbox number of the lowest jack number of the receiving extensions.
- A mailbox number is a respective extension number by default. The mailbox number can be changed, only if program [990] “System Additional Information, Field (18)” is set to “free”.
- Pressing the Voice Mail Transfer button and dialing the extension number allows the extension user to transfer to the corresponding mailbox. In this case, Follow On ID function is available.
- The Voice Mail extension should be set to Data Line Security to achieve proper recording.
- The Voice Mail extension can execute the Busy Station Signaling (BSS) function to the ringing extension.

Connection References

Section 2, Installation
2.3.3 Extension Connection

Programming References

Common — **Section 4, System Programming**
[005] Flexible CO Button Assignment
[100] Flexible Numbering, Call forwarding / do not disturb, Message waiting
[113] VM Status DTMF Set
[114] VM Command DTMF Set
[407]–[408] DIL 1:1 Extension — Day / Night
[409]–[410] Intercept Extension — Day / Night
[603]–[604] DIL 1:N Extension and Delayed Ringing — Day / Night
[609] Voice Mail Access Codes
[990] System Additional Information, Fields (6) through (9), (18)
Station Programming.....User Manual
Flexible Button Assignment – MESSAGE Button, Voice Mail (VM) Transfer Button

For VM Service — **Section 4, System Programming**
[106] Station Hunting Type (Select Voice Mail Hunting.)
[990] System Additional Information, Field (35)

For AA Service — **Section 4, System Programming**
[106] Station Hunting Type (Select Automated Attendant Hunting.)
[990] System Additional Information, Fields (24), (36)

Feature References

Section 3, Features

Call Forwarding – All Calls
Call Forwarding – Busy
Call Forwarding – Busy / No Answer
Call Forwarding – No Answer
Intercept Routing
Station Hunting

Operation References —User Manual

DPT Features, Standard Telephone Features
Voice Mail Integration
Voice Mail Transfer

Voice Mail Integration for Digital Proprietary Telephones†

Description

A Digital Proprietary Telephone capable Panasonic Voice Processing System can be connected to a Digital Super Hybrid System (DSHS) in a tightly integrated fashion.
The system sends the Voice Processing System (VPS) data which contains the extension number configuration information and the VPS automatically creates mailboxes with this data (Automatic Configuration — Quick Setup).

Conditions

- A maximum of one VPS can be connected to each DSHS cabinet.
- A maximum of two DSHS jacks can be connected to a digital proprietary telephone capable VPS. Because a digital proprietary telephone connection supports up to two simultaneous voice calls, only one DSHS jack needs to be connected for every two VPS ports.
- Connect the jacks and ports in order. In other words, the lowest number DSHS jack used for VPS connection must be connected to the lowest number VPS port.
- The VPS data is transmitted to the VPS via the lowest jack port.

Programming References

Section 4, System Programming
[117] Voice Mail Number Assignment
[118] Voice Mail Extension Number Assignment
[119] Voice Mail Extension Group Assignment
[610] Live Call Screening Recording Mode Assignment

Feature References

Section 3, Features
Voice mail Integration

Operation References

Not applicable.

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

Volume Control – Speaker / Handset Receiver / Headset / Ringer

Description

Allows the proprietary telephone user to change the following as desired:

Handset receiver volume
Headset volume
Ringer volume
Speaker volume

Conditions

The control method depends on the telephone type:

- With a KX-T7400 series digital proprietary telephone, rotate the Jog Dial in the desired direction to select the desired volume level.
  With a KX-T7200 series digital proprietary telephone, press the volume control button (VOLUME ∧ / ∨ UP / DOWN) to select the desired volume level.
  However the ringer volume of KX-T7420, KX-T7425, KX-T7220 and KX-T7250 is selected with Ringer Volume Selector (OFF / LOW / HIGH).
- With other proprietary telephones, slide the following levers located on the left side of the telephone.

Volume Control	(MIN – MAX)
Handset Headset Volume Selector	(NORMAL / MID / HIGH)
Ringer Volume Selector	(OFF / LOW / HIGH)

Programming References

No programming required.

Feature References

None

Operation References —User Manual

Configuration

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

Walking COS

Description

Allows a user who is not at their own telephone to use all of the Class of Service (COS) functions of their extension. At another extension, the user dials the walking COS password, and for the duration of the call, the COS of the extension is changed to the COS of their own extension.

Conditions

None

Programming References

Section 4, System Programming
[100] Flexible Numbering, Walking COS
[121] Walking COS Password
[601] Class of Service

Feature References

Section 3, Features
Class of Service (COS)

Operation References —User Manual

DPT Features, Standard Telephone Features
Walking COS

Whisper OHCA

Description

When attempting to call a busy extension, Whisper OHCA allows the extension user to notify the busy party through the handset, which will only be heard by the party. Only KX-T7400 series telephone users can send or receive the Whisper OHCA.

Conditions

- Class of Service programming determines which extensions are able to perform this feature.
- You can select receiving Call Waiting tone, Off-Hook Call Announcement (OHCA), Whisper OHCA or none of these at your extension. However, the setting may change depending on each telephone setting or the telephone type as listed below.

Calling party's OHCA COS mode	Called Party's Call Waiting Mode			
	OFF	ON		
	0: Cancel	1: Call Waiting	2: OHCA	3: Whisper OHCA
Disable	Call Waiting disabled	Call Waiting tone	Call Waiting tone	Call Waiting tone
Enable (default)	Call Waiting disabled	Call Waiting tone	OHCA, Call Waiting tone	Whisper OHCA, OHCA, Call Waiting tone

<Example> If the user selects 3 (Whisper OHCA mode);
– If using the KX-T7436 handset.....Whisper OHCA
– If using the KX-T7436 SP-PHONE.....Call Waiting
– Other.....Call Waiting

- The Voice Mail extension can execute only BSS irregardless of the setting.
- If the Whisper OHCA sender does not use a KX-T7400 series telephone, it will work as OHCA. If the receiver does not use a KX-T7400 series telephone, it may not work properly. (E.g. the announcement may be heard by the other party.)

Programming References

Section 4, System Programming
[100] Flexible Numbering, Call waiting / OHCA / whisper OHCA
[509] Off-Hook Call Announcement (OHCA)

Feature References

Section 3, Features
Busy Station Signaling (BSS)
Call Waiting
Off-Hook Call Announcement (OHCA)

Operation References —User Manual

DPT Features
Whisper OHCA

See More Panasonic Manuals