

Panasonic

Getting Started

Hybrid IP-PBX

Model No. **KX-TDA30**



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

KX-TDA30: PSMR Software File Version 5.0000 or later

Table of Contents

1	Before Installation	3
1.1	Safety Notices	4
1.2	System Connection Diagram	5
1.3	Unpacking	6
2	Installation	9
2.1	Opening/Closing the Covers	10
2.2	Installing the SD Memory Card	11
2.3	Installing the Optional Service Cards	12
2.4	Installing the Trunk Cards	15
2.5	Installing the Extension Cards (DLC4/DLC8/SLC4/SLC8)	16
2.6	Connecting Extensions	17
2.7	Frame Earth Connection	17
3	Starting the PBX	19
3.1	Starting the PBX	20
4	Customising the PBX	23
4.1	Connecting the PC	24
4.2	Installing the Maintenance Console	25
4.3	Programming the PBX	25
5	Confirming the Connection	31
5.1	Making Calls	32

Section 1

Before Installation

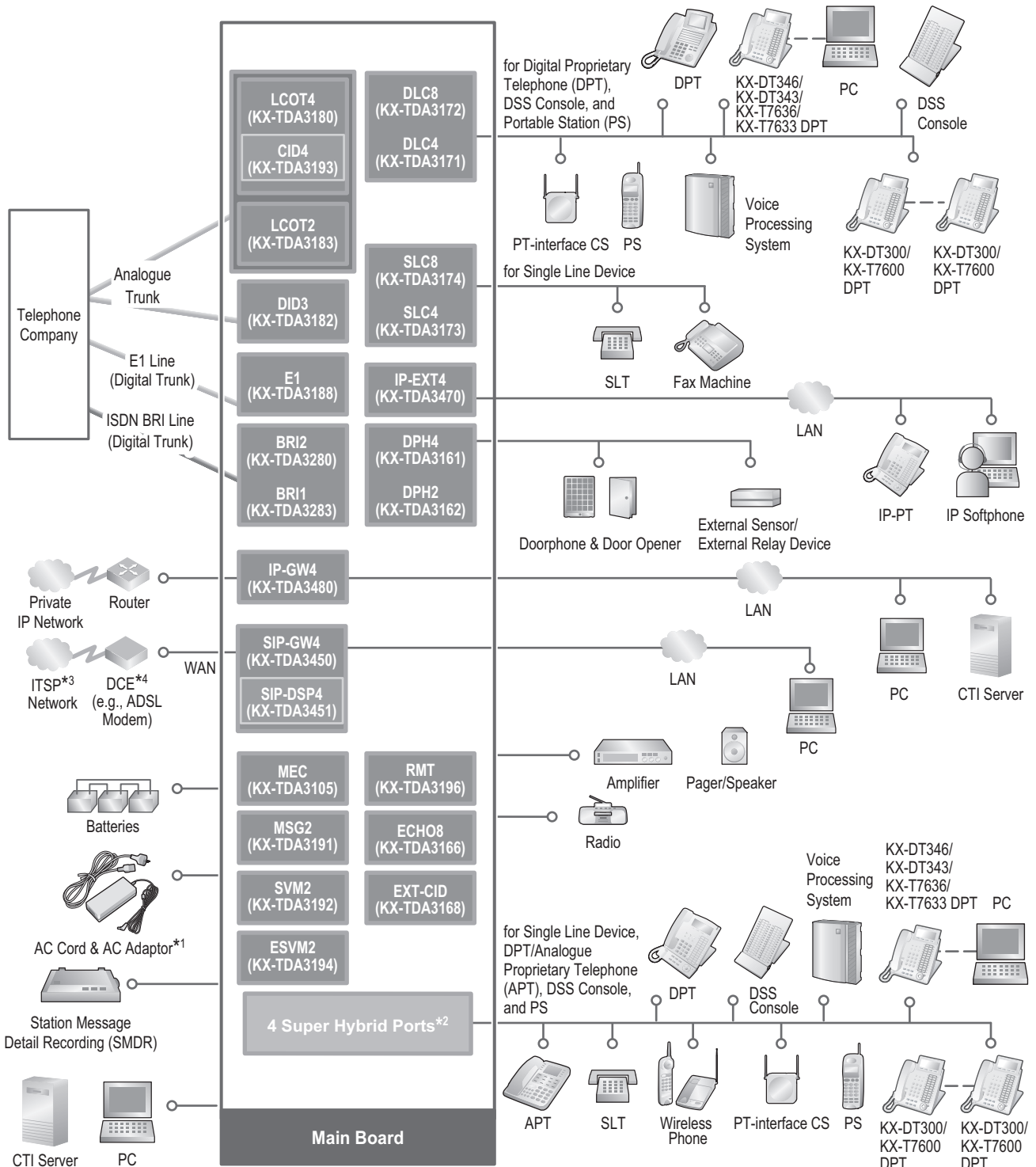
1.1 Safety Notices

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

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

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

1.2 System Connection Diagram



*1 In addition to the supplied AC adaptor, an additional AC adaptor can be connected to the PBX.
 *2 The PBX has 4 Super Hybrid Ports pre-installed.
 *3 ITSP: Internet Telephony Service Provider
 *4 DCE: Data Circuit Terminating Equipment

Note

In this manual, the suffix of each model number (e.g., KX-TDA30NE) is omitted unless necessary.

1.3 Unpacking

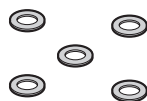
Check the package contents.

Main Unit × 1

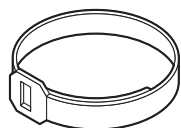
CD-ROM (including manuals, etc.) × 1



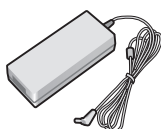
AC Cord^{*1} × 1



Washer × 5



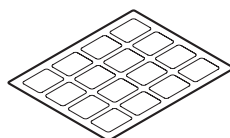
Main Strap × 1



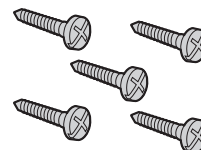
AC Adaptor × 1



Mini Plug (for pager and music source) × 2



Optional Card Label Sheet × 1



Screw × 5



SD Memory Card × 1

^{*1} The type of the AC cord may vary depending on the country/area of use.
KX-TDA30BX is supplied with 2 types of AC cord. Please use whichever is appropriate for the country/area.

Necessary tools (not supplied):

- ✓ Telephone cable for extension connection:

Diameter of cable (\varnothing 0.4 mm to \varnothing 0.6 mm)	Maximum length of cable
\varnothing 0.5 mm	1128 m for SLT
\varnothing 0.5 mm	720 m for KX-DT300/KX-T7600 series
\varnothing 0.5 mm	229 m for other DPT, APT and DSS Console

The maximum length of the cable may vary depending on the type of the cables and installation conditions.

- ✓ An RS-232C or USB cable for PC connection
- ✓ Connectors (RJ45/RJ11)^{*1} for trunk and extension connections

^{*1} The connector type may be RJ45 or RJ11 depending on the country/area.

Note

Use a twisted pair cable for the RJ45 or RJ11 connector.

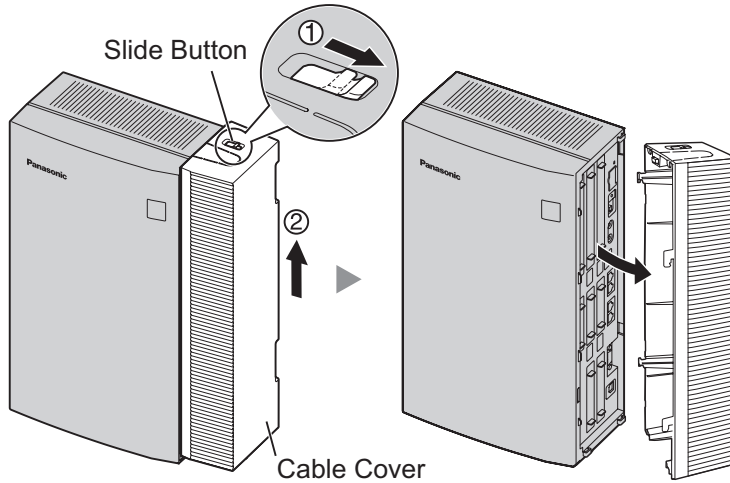
Section 2

Installation

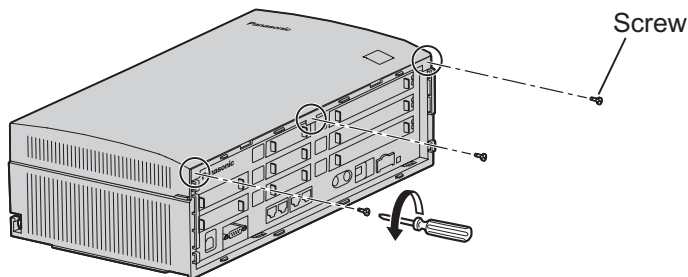
2.1 Opening/Closing the Covers

Opening the Covers

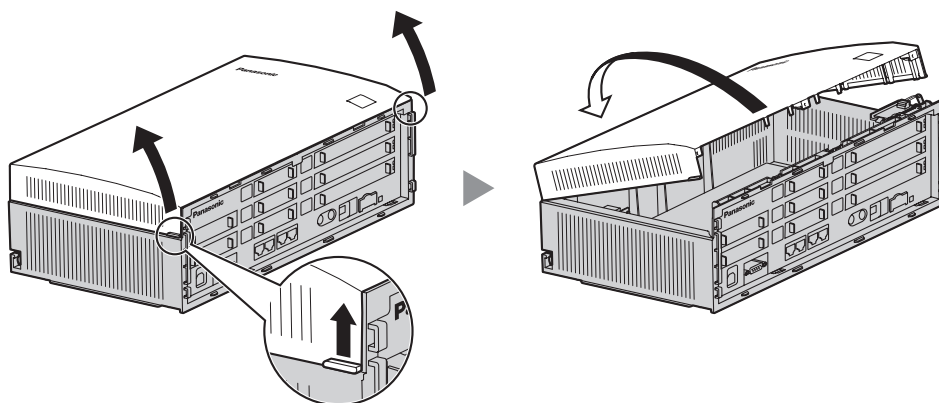
1. Pull the slide button to the right and, holding it, slide the cable cover upwards. Then turn the cable cover slightly to remove it.



2. Remove the three screws.

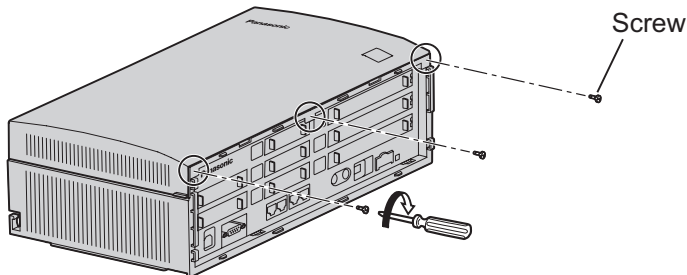


3. Holding the protrusions on both sides of the front cover, swing the cover open.

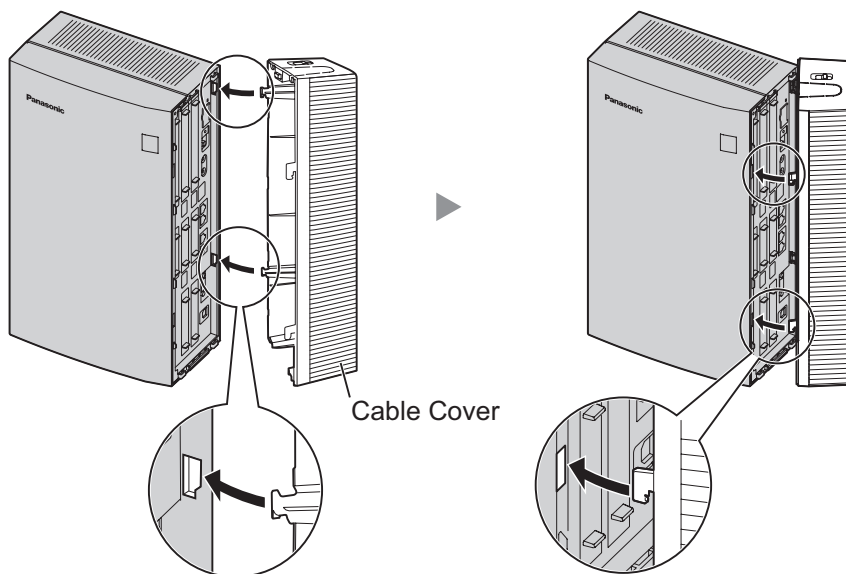


Closing the Covers

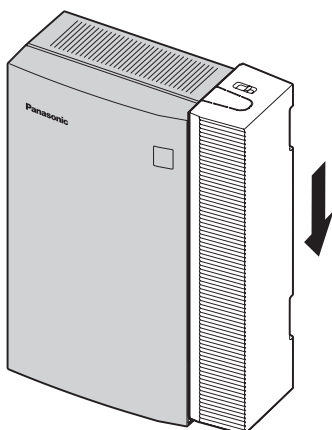
1. Close the front cover, then tighten the three screws.



2. Attach the rear hooks on the cable cover to the main unit, then swing the cable cover closed so that the front hooks fit in place.



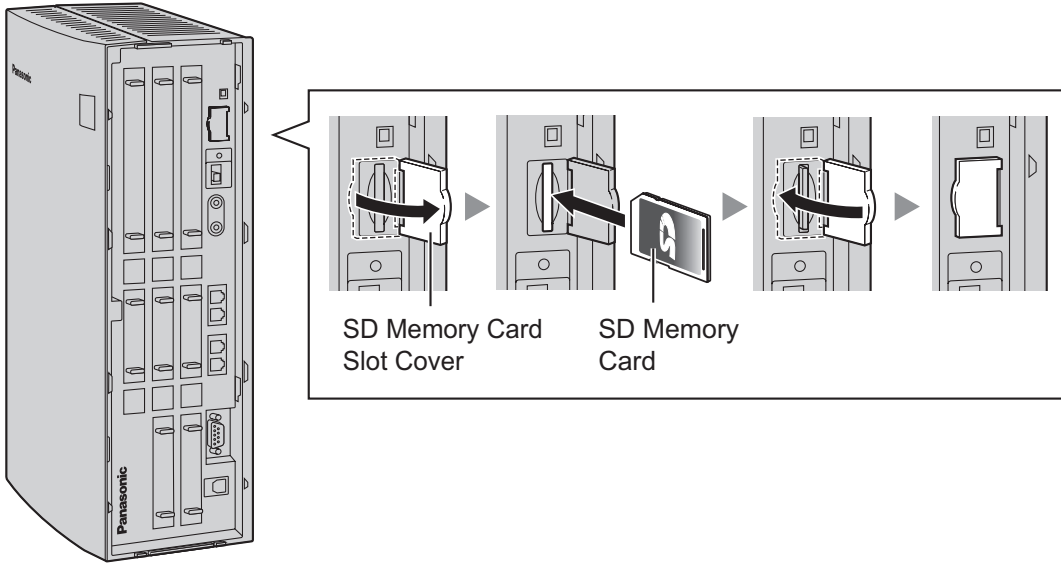
3. Slide the cable cover down until it locks.



2.2 Installing the SD Memory Card

The SD Memory Card contains software for all the processes of the PBX and all the customer data.

The SD Memory Card must be inserted before startup.

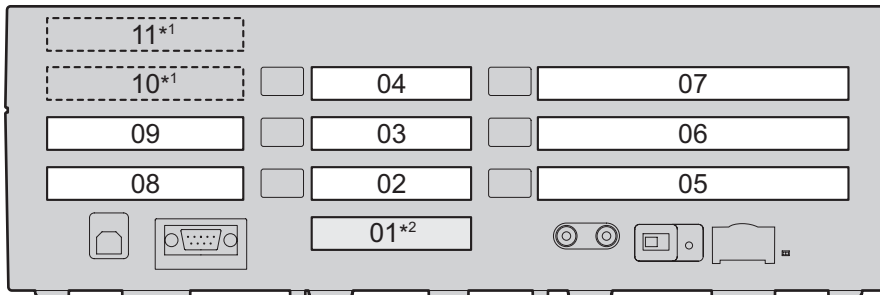


CAUTION

Do not remove the SD Memory Card while power is supplied to the PBX. Doing so may cause the PBX to fail to start when you try to restart the system.

2.3 Installing the Optional Service Cards

Slot Position



^{*1} Slots 10 and 11 accept only cards which do not have external ports. Therefore, these slots do not have removable cover plates.
^{*2} Slot 01 contains the pre-installed Super Hybrid Ports. No optional service card can be installed.

Slot Restrictions

The following table shows the slot restrictions. "✓" indicates that the slot supports the optional service card.

Card		Slot Number									
Type	Max	02	03	04	05	06	07	08	09	10	11
LCOT4	3	✓	✓	✓							
LCOT2	3	✓	✓	✓							

Card		Slot Number									
Type	Max	02	03	04	05	06	07	08	09	10	11
DID3	2	✓	✓	✓							
BRI2	3	✓	✓	✓							
BRI1	3	✓	✓	✓							
DLC4	1 ¹	✓	✓	✓							
SLC4		✓	✓	✓							
E1	1				✓	✓	✓				
SIP-GW4	1	2			✓	✓	✓				
IP-GW4	1				✓	✓	✓				
IP-EXT4	1				✓	✓	✓				
DLC8	2 ²				✓	✓	✓				
SLC8					✓	✓	✓				
DPH4	1 ³							✓	✓		
DPH2								✓	✓		
ECHO8	1							✓	✓	✓	✓
EXT-CID	1							✓	✓	✓	✓
MSG2	2	4						✓	✓	✓	✓
SVM2	2							✓	✓	✓	✓
ESVM2	4							✓	✓	✓	✓

¹ Only one of either the DLC4 or SLC4 card can be installed.

² A maximum of two DLC8 cards, two SLC8 cards, or one of each card can be installed.

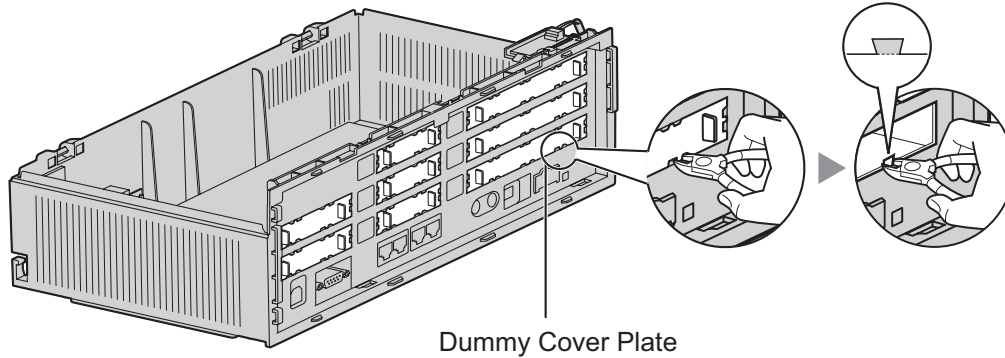
³ Only one of either the DPH4 or DPH2 card can be installed.

CAUTION

To protect the main board from static electricity, do not touch parts on the main board or on the optional service cards. To discharge static electricity, touch ground or wear an earthing strap.

Installing the Trunk/Extension Cards

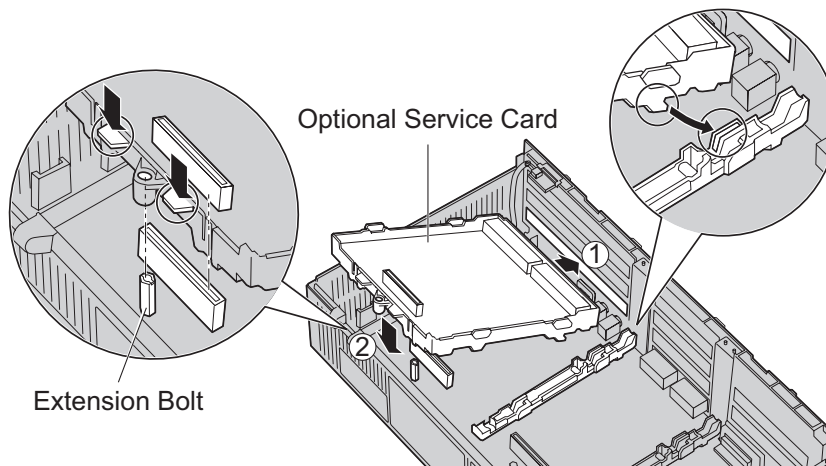
1. Before installing the optional service cards, cut and remove the appropriate dummy cover plates from the main unit.



CAUTION

For safety reasons, smooth the cut edges after removing the dummy cover plates.

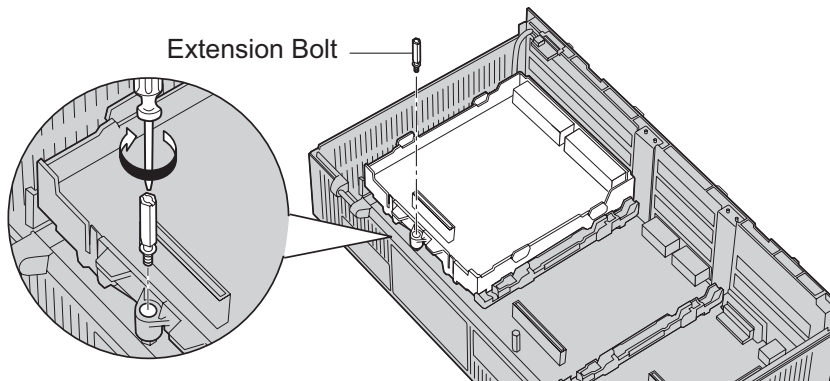
2. Position the card in the open slot, making sure that the tabs on the both sides of the card fit into place. Then, holding the card firmly in place, lower the rear end so that the hole of the card fits over the extension bolt.



CAUTION

When installing the optional service cards, do not put pressure on any parts of the main board. Doing so may result in damage to the PBX.

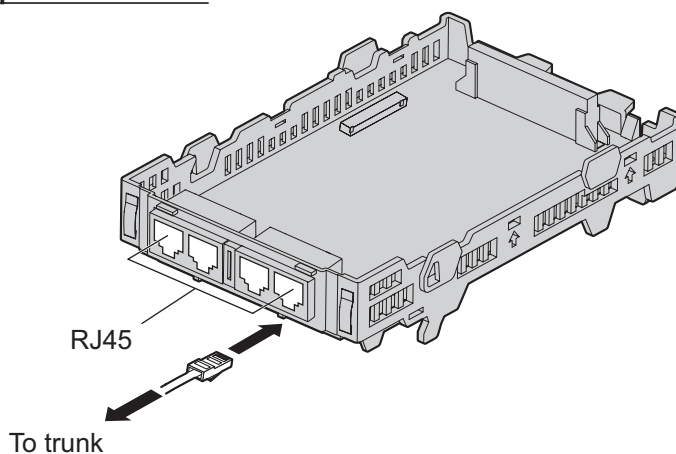
3. Insert the new extension bolt (included with the card) into the hole on the card, and tighten it to secure the card.



2.4 Installing the Trunk Cards

LCOT2/LCOT4 Card

Example: LCOT4 Card



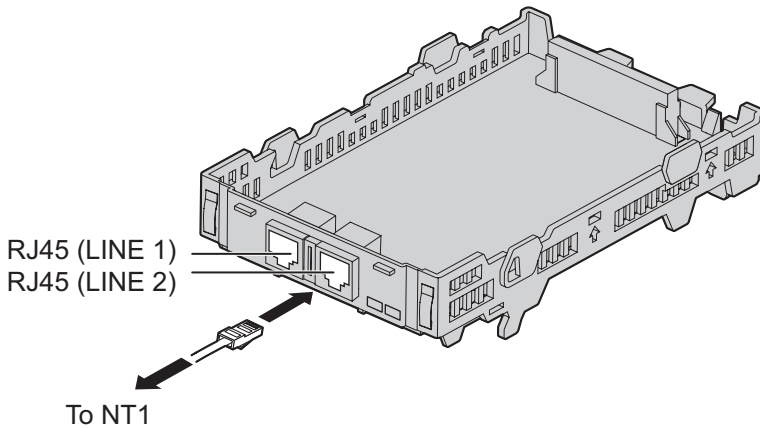
Accessories (included): Extension Bolt × 1, Strap × 1

User-supplied (not included): RJ45 connector (for LCOT2 card), or RJ45 connector or RJ11 connector (for LCOT4 card)¹

¹ The connector type may be RJ45 or RJ11 depending on the country/area.

BRI1/BRI2 Card

Example: BRI2 Card



Accessories (included): Extension Bolt × 1, Strap × 1

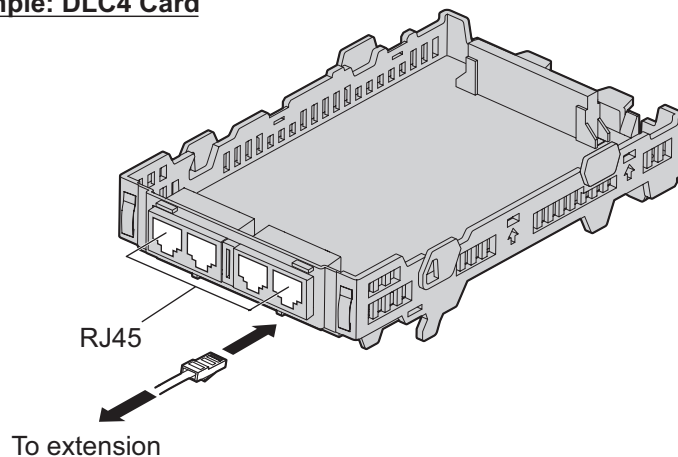
User-supplied (not included): RJ45 connector

Note

- Connect these optional service cards to the trunk through an NT1; do not connect to the U interface of the trunk directly.
- These optional service cards have 100 Ω of terminal resistance. For use in point to multi-point connection, the card must be placed at the end of the bus.

2.5 Installing the Extension Cards (DLC4/DLC8/SLC4/SLC8)

Example: DLC4 Card



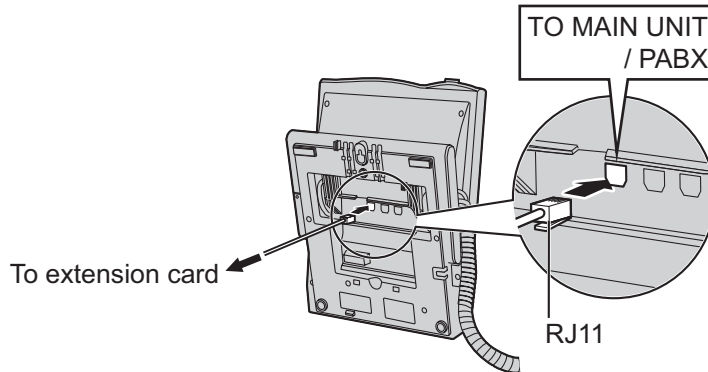
Accessories (included): Extension Bolt × 1, Strap × 1

User-supplied (not included): RJ45 connector or RJ11 connector^{*1}

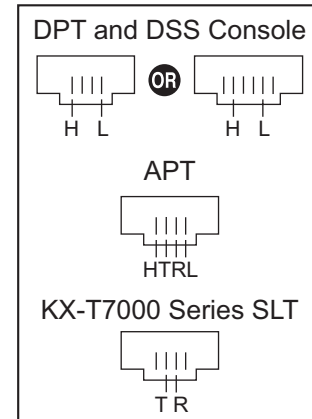
^{*1} The connector type may be RJ45 or RJ11 depending on the country/area.

2.6 Connecting Extensions

Example: KX-T7600 Series DPT

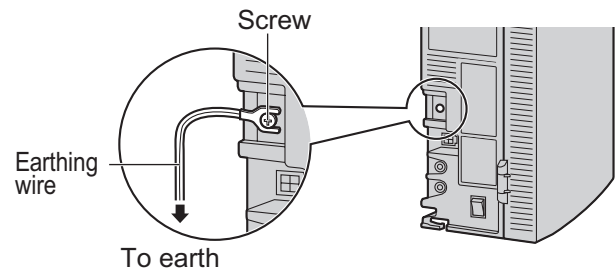


Pin Assignments



2.7 Frame Earth Connection

1. Loosen the screw.
2. Insert an earthing wire (user-supplied).
3. Tighten the screw.
4. Connect the earthing wire to earth.



WARNING

- Connect the frame of the PBX to earth.
- Proper earthing (connection to earth) is very important to protect the PBX from the bad effects of external noise or to reduce the risk to the user of electrocution in the case of a lightning strike.

CAUTION

- For earthing wire, green-and-yellow insulation is required, and the cross-sectional area of the conductor must be more than 0.75 mm² or 18 AWG.
- The earthing wire of the AC cable has an effect against external noise and lightning strikes, but it may not be enough to protect the PBX. A permanent connection between earth and the earth terminal of the PBX must be made.

Section 3

Starting the PBX

3.1 Starting the PBX

CAUTION

- Before touching the System Initialise Switch, discharge static electricity by touching ground or wearing an earthing strap.
- Once you have started the PBX and if you unplug the PBX, do not perform the following procedures to start the PBX again. Otherwise, your programmed data will be cleared.
- The power supply cord is used as the main disconnect device. Ensure that the AC outlet is located near the equipment and is easily accessible.

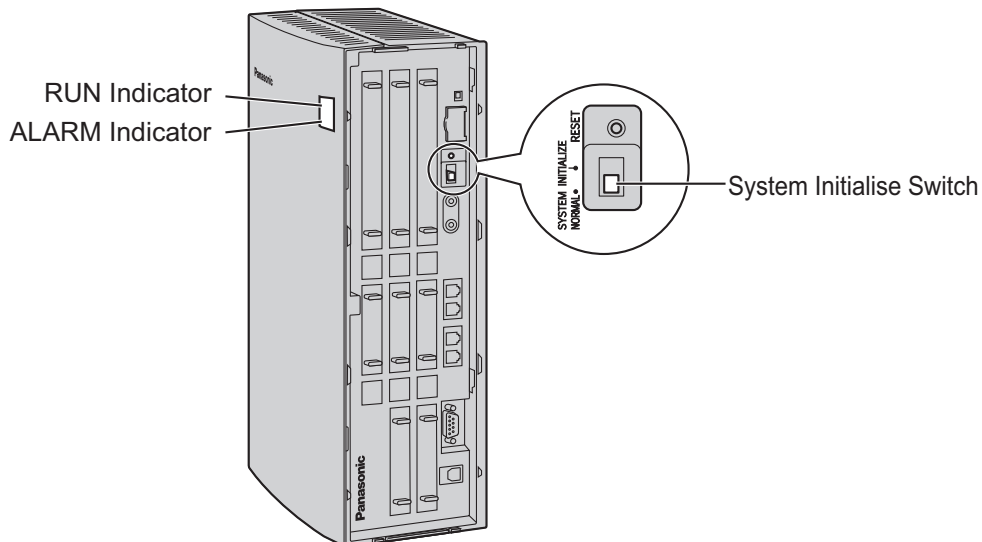
Notice

The SD Memory Card must be inserted in the SD Memory Card slot of the main board before startup.

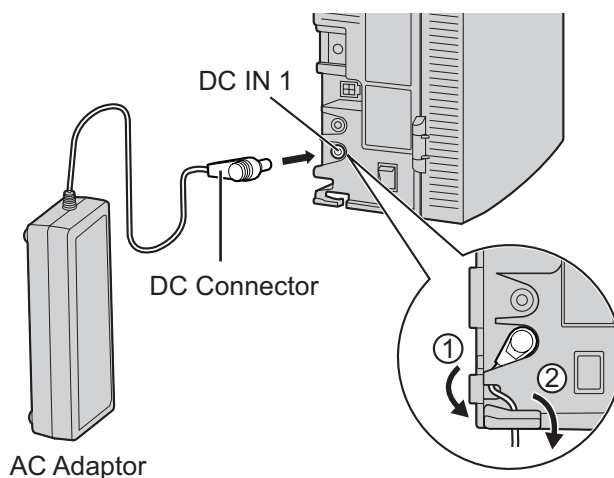
Note

The PBX will continue to be powered even if the power switch is turned "OFF".

1. Slide the System Initialise Switch to the "SYSTEM INITIALIZE" position.

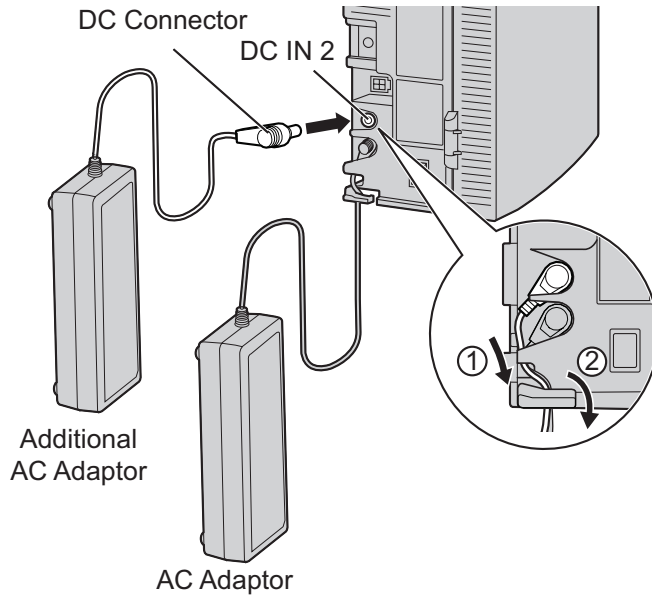


2. Plug the DC connector of the AC adaptor into DC IN 1.

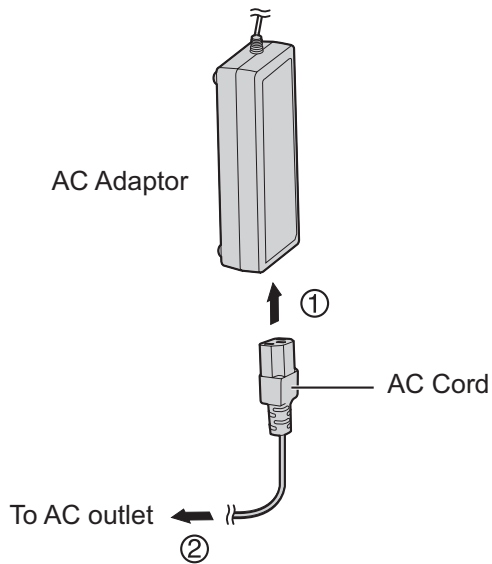


Note

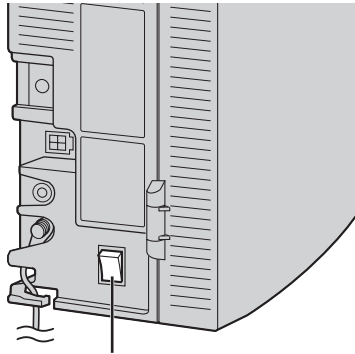
- The AC adaptor supplied with the PBX must be connected to DC IN 1. If an AC adaptor is connected only to DC IN 2, the PBX will not start.
- If you need to connect an additional AC adaptor, plug the DC connector of the additional AC adaptor into DC IN 2.



3. Plug the AC cord into the AC adaptor, and then plug the other end into an AC outlet.



4. Turn on the power switch. The RUN indicator will flash.



Power Switch

Note

- For safety reasons, follow the procedures as indicated when turning on the PBX.
 - For safety reasons, do not stretch, bend, or pinch the AC cord and the DC cable of the AC adaptor.
5. While the RUN indicator is flashing, slide the System Initialise Switch back to the "NORMAL" position. Depending on the configuration, initialisation takes about 1 min to 3 min. If successfully executed, the RUN indicator will stop flashing and stay lit.

All data will be cleared and the PBX will be initialised to the default values. The DPTs should show the time as 01:00.

IMPORTANT

Use only the AC adaptor (Panasonic PSLP1244/Panasonic PSLP1434) and AC cord supplied with the PBX, or the Additional AC Adaptor (KX-A236).

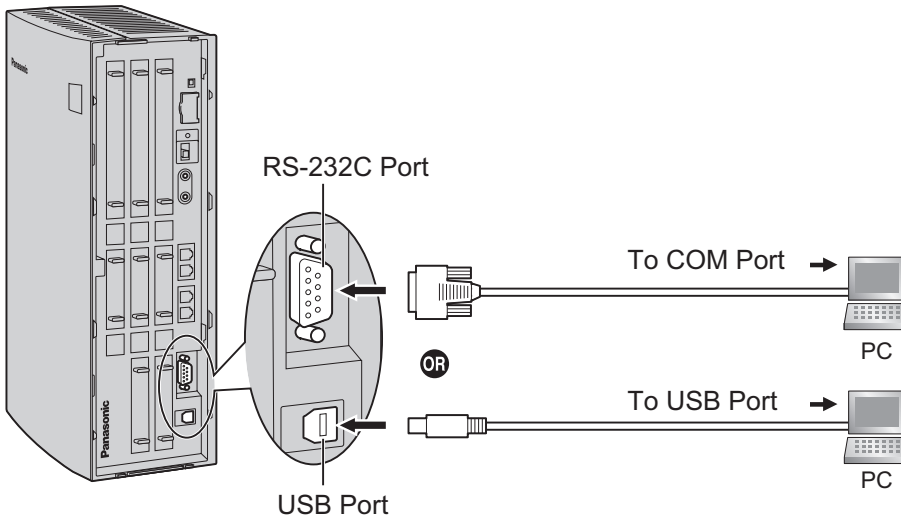
Section 4

Customising the PBX

4.1 Connecting the PC

The Maintenance Console serves as an overall system programming tool for the PBX. The Maintenance Console's Quick Setup lets you easily configure the PBX to receive intercom and trunk calls, as well as apply basic settings such as time and date. To programme the PBX, connect it to the PC with serial interface.

Serial Interface Connection



RS-232C (Cross Cable)
Pin Assignments

RS-232C Port		COM Port
Pin No.		Pin No.
2	↔	2
3	↔	3
4	↔	4
5	↔	5
6	↔	6
7	↔	7
8	↔	8

CAUTION

When connecting a PC to the PBX via the RS-232C port, it is necessary to keep the following in mind to protect the system:

1. Make sure that both connector cases (frame ground) of the RS-232C cross cable (shielded cable)/USB cable are conductive. If they are not conductive, make sure that both connector cases of the cable are firmly connected.
2. If this is not possible, connect the frame of the PBX to the frame of the PC using an earthing wire in order to prevent difference in the electrical potentials.

4.2 Installing the Maintenance Console

For the system requirements of the PC (e.g., operating system, hardware specifications), refer to "3.3.1 Installing and Starting the Maintenance Console" in the Installation Manual.

Note

- Make sure to install and use the latest version of the Maintenance Console.
- To connect the PC to the PBX via USB, the KX-TDA USB driver must be installed. Follow the instructions of the wizard to install the KX-TDA USB driver. When the PBX is first connected to the PC via USB, you may be asked to select the appropriate USB driver. Browse for and select the KX-TDA USB driver that was installed previously.
- The contents and design of the software are subject to change without notice.
- Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation.

1. Copy the setup file of the Maintenance Console to your PC.
2. Double-click the setup file to run the installer.
3. Follow the on-screen instructions provided by the installation wizard.

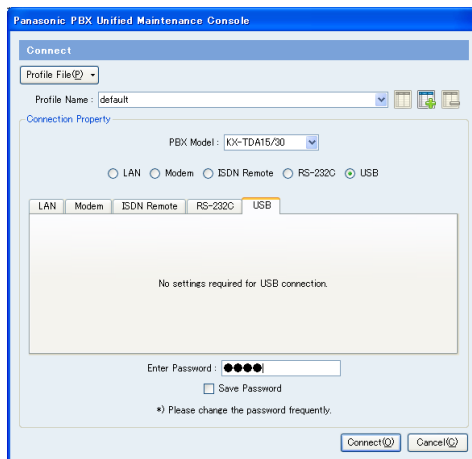
4.3 Programming the PBX

Starting the Maintenance Console and Assigning the Basic Items (Quick Setup)

When you start the Maintenance Console with the Installer Level Programmer Code and connect to the PBX for the first time after initialisation (with the factory default setting), Quick Setup will launch automatically. During Quick Setup, you will set up the basic items. For details about the basic items, refer to "2.3.4 Quick Setup" in the Feature Guide.

1. Connect the PC to the PBX with a USB cable or RS-232C cross cable.
2. Start the Maintenance Console from the Start menu.
3. "Information before programming" appears.
 - a. Carefully read this important additional information, which includes updates to this and other manuals.
 - b. Click **OK** to close this window.
4.
 - a. Enter the Installer Level Programmer Code (default: **INSTALLER**).
 - b. Click **OK**.
5. Click **Connect**.

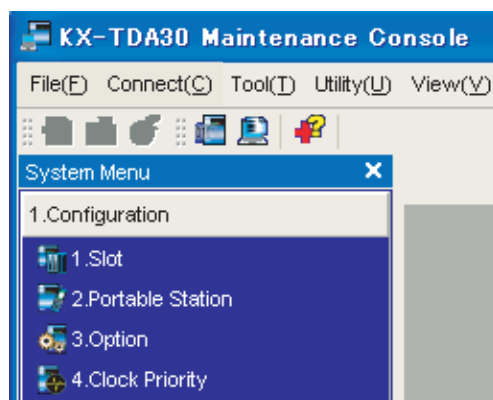




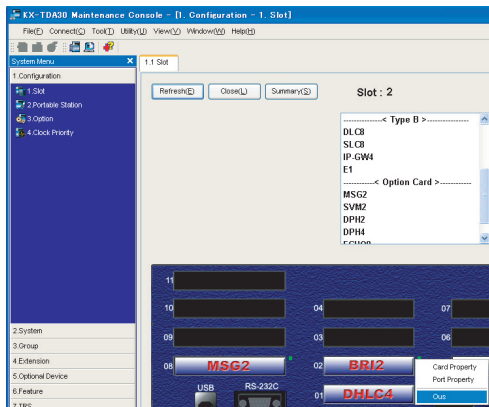
6.
 - a. Select **KX-TDA15/30** from **PBX Model**.
 - b. Select the **USB** or **RS-232C** tab, depending on the serial interface connection with the PBX.
 - c. Enter the system password for installer (default: **1234**).
 - d. Click **Connect**.

7. **When country/area data do not match:**
 - a. Click **OK** to replace the country/area data of the PBX. Replacement may take several minutes to complete.
 - b. Follow the procedure described in "Section 3 Starting the PBX" and restart the PBX.
 - c. Repeat step 5 to reconnect the Maintenance Console to the PBX.
8. Follow the instructions of the Quick Setup wizard and assign the basic items (Quick Setup).

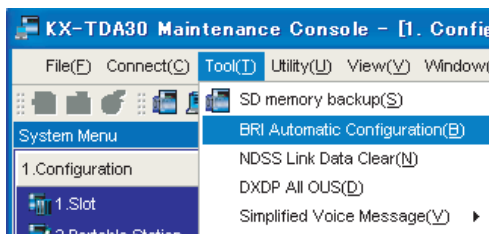
The system menu appears. You may now begin programming the PBX.



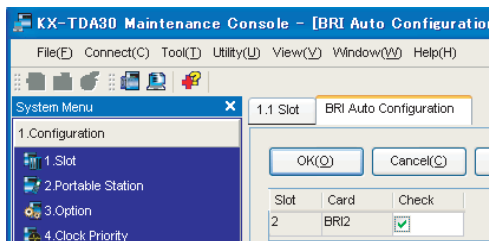
Assigning the BRI Setting (Automatic Configuration)



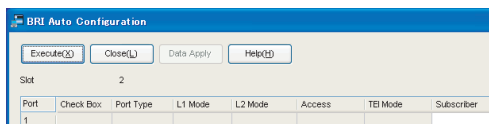
1.
 - a. Under **Configuration**, click **Slot**.
 - b. Move the mouse pointer over the BRI card. A menu will be shown under the mouse pointer.
 - c. Click **Out** to set the card to out-of-service status.



2. Click **Tool** → **BRI Automatic Configuration** from the menu bar.



3.
 - a. Click **Check** to turn on the BRI card.
 - b. Click **OK**.

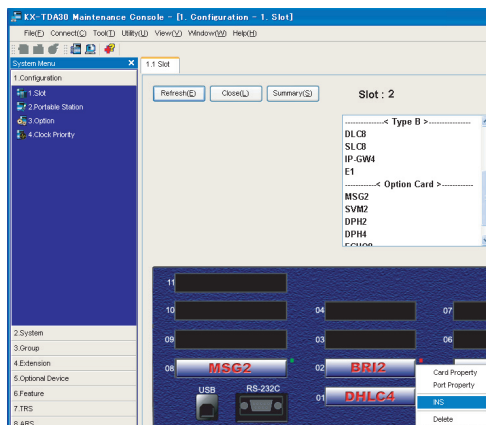


4.
 - a. Enter the subscriber number for the desired ports in **Subscriber**.
 - b. Click **Execute**.

Note

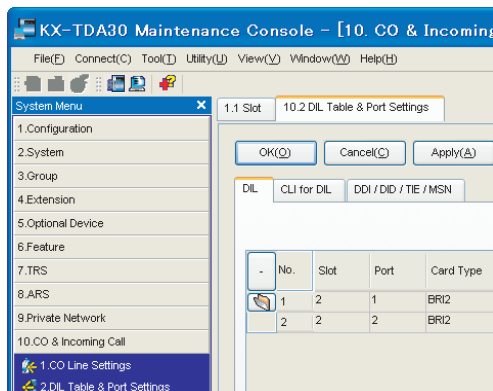
Network settings are automatically set.

- c. Click **Check Box** of the desired ports.
- d. Click **Data Apply**.
- e. Click **Close**.



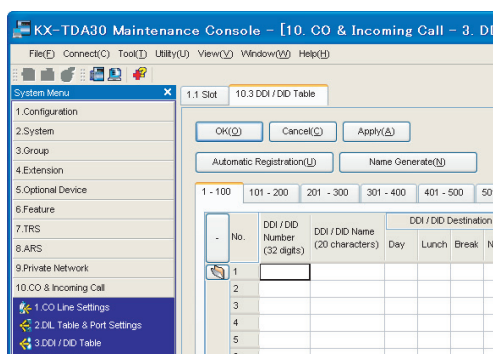
5.
 - a. Under **Configuration**, click **Slot**.
 - b. Move the mouse pointer over the BRI card, then click **INS** to set the card to in-service status.

Assigning the Incoming Trunk Call Destination



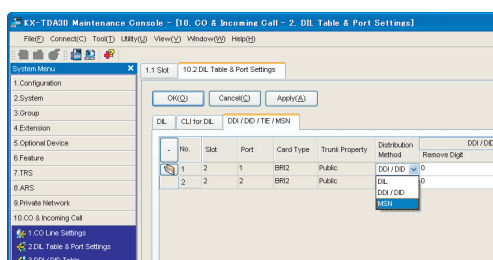
For analogue trunk users (DIL Setting):

1. Under **CO & Incoming Call**, click **DIL Table & Port Settings**.
2. Confirm that the **DIL** tab is selected.
3. Configure the settings as required.
4. Click **OK**.



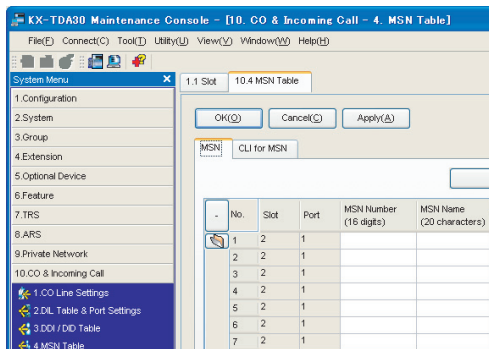
For ISDN trunk users (DDI Setting):

1. Under **CO & Incoming Call**, click **DDI / DID Table**.
2. Configure the settings as required.
3. Click **OK**.



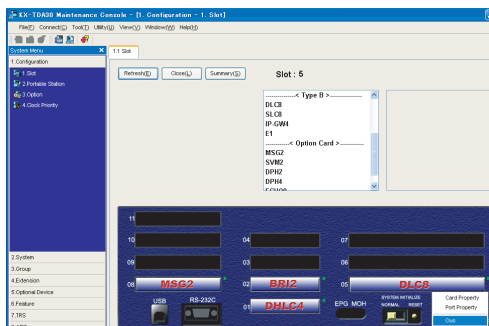
For ISDN trunk users (MSN Setting):

1. Under **CO & Incoming Call**, click **DIL Table & Port Settings**.
2. Click the **DDI / DID / TIE / MSN** tab.
3. Set the **Distribution Method** of the desired ports to **MSN**.
4. Click **OK**.

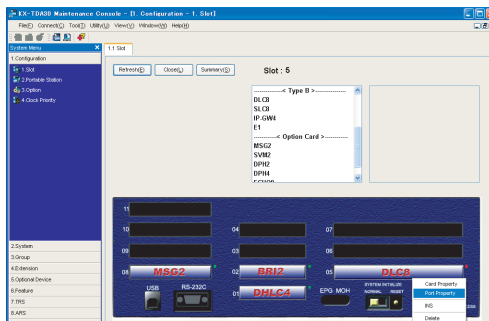


5. Click **MSN Table**.
6. Click the **MSN** tab.
7. Configure the settings as required.
8. Click **OK**.

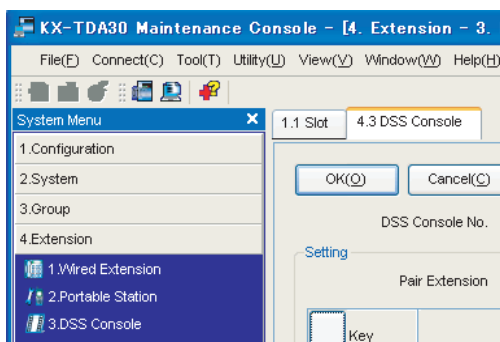
Setting an Extension Port to Use a DSS Console



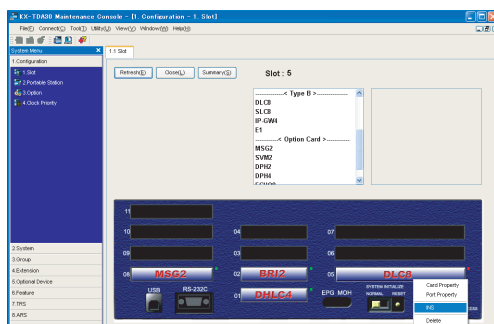
1. Under **Configuration**, click **Slot**.
2. Move the mouse pointer over the desired extension card to display the menu of options.
3. Click **Out** to set the card to out-of-service status.



4. Move the mouse pointer over the card again, then click **Port Property**.
5. For **DPT Type**, set the **Type** to **DSS** and assign the **Location No.**
6. Click **OK**.



7. Under **Extension**, click **DSS Console**.
8. Select the desired pair extension number from **Pair Extension**.
9. Assign features to flexible buttons as required.
10. Click **OK**.



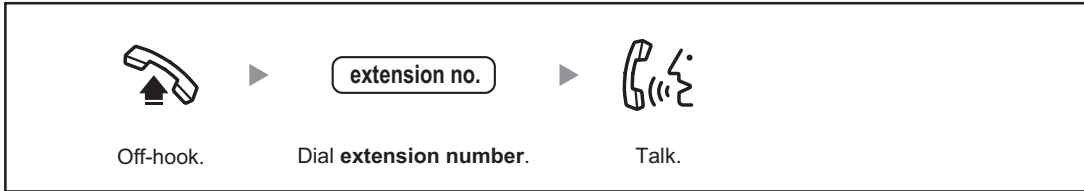
11. Under **Configuration**, click **Slot**.
12. Move the mouse pointer over the card to display the menu of options.
13. Click **INS** to set the card to in-service status.
14. Click **Close**.

Section 5

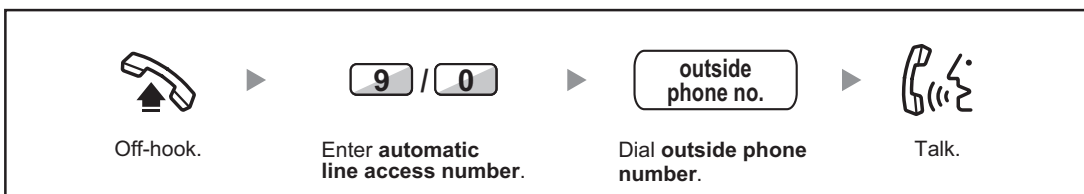
Confirming the Connection

5.1 Making Calls

To call another extension



To call an outside party





The KX-TDA30E, KX-TDA30NE, KX-TDA30GR, and KX-TDA30CE are designed to interwork with the:

- Analogue Public Switched Telephone Network (PSTN) of European countries
- Pan-European Integrated Services Digital Network (ISDN) using ISDN basic rate access

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

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

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

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

Panasonic Communications Co., Ltd.

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

Copyright:

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

© Panasonic Communications Co., Ltd. 2003