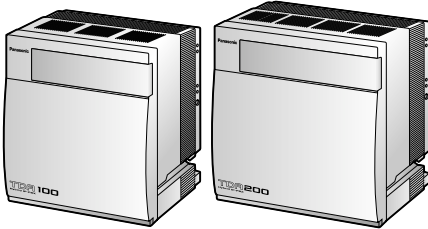


# Panasonic

Hybrid IP-PBX

Getting Started

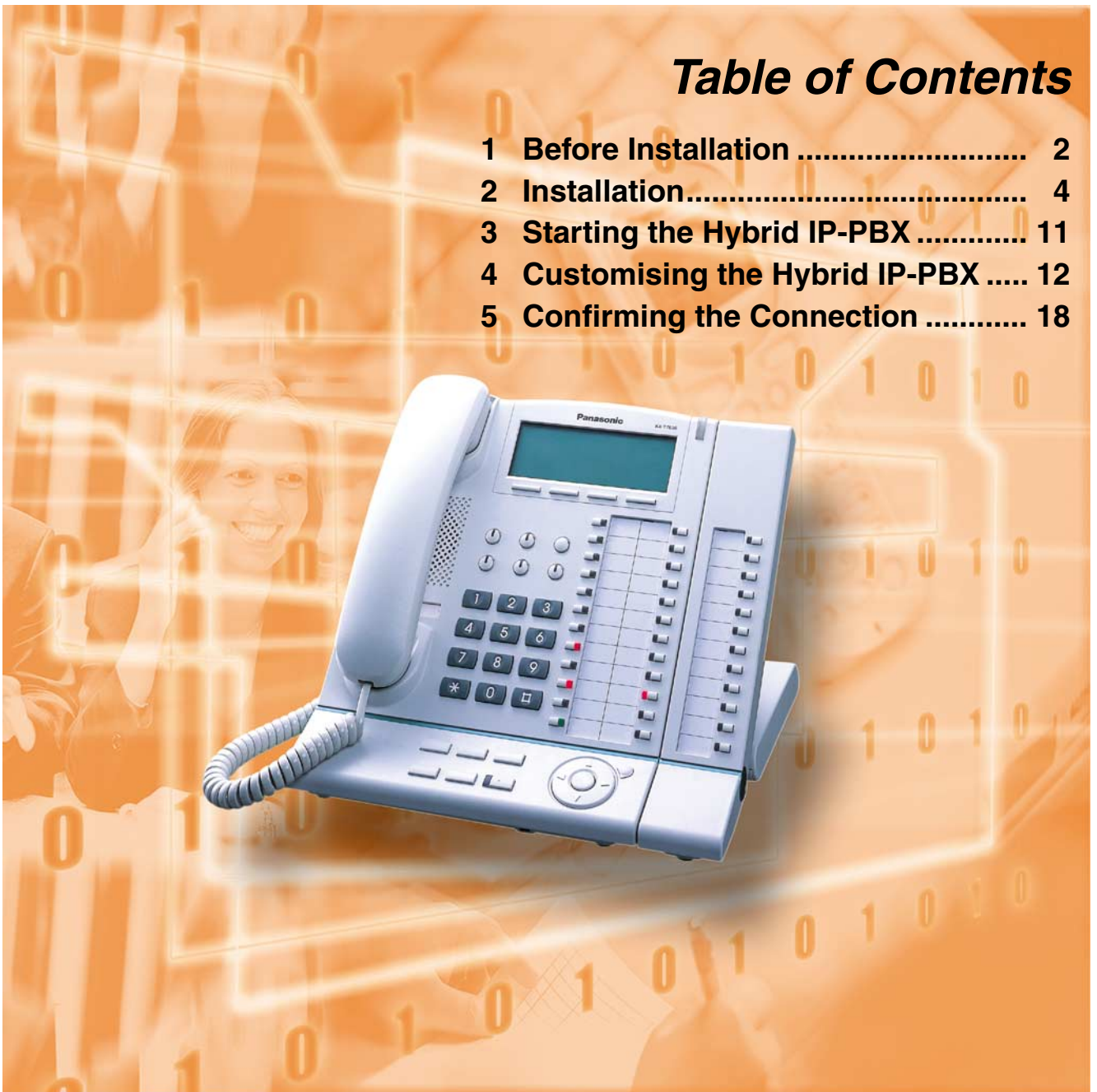


KX-TDA100

Model KX-TDA200

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3	Starting the Hybrid IP-PBX .....	11
4	Customising the Hybrid IP-PBX .....	12
5	Confirming the Connection .....	18

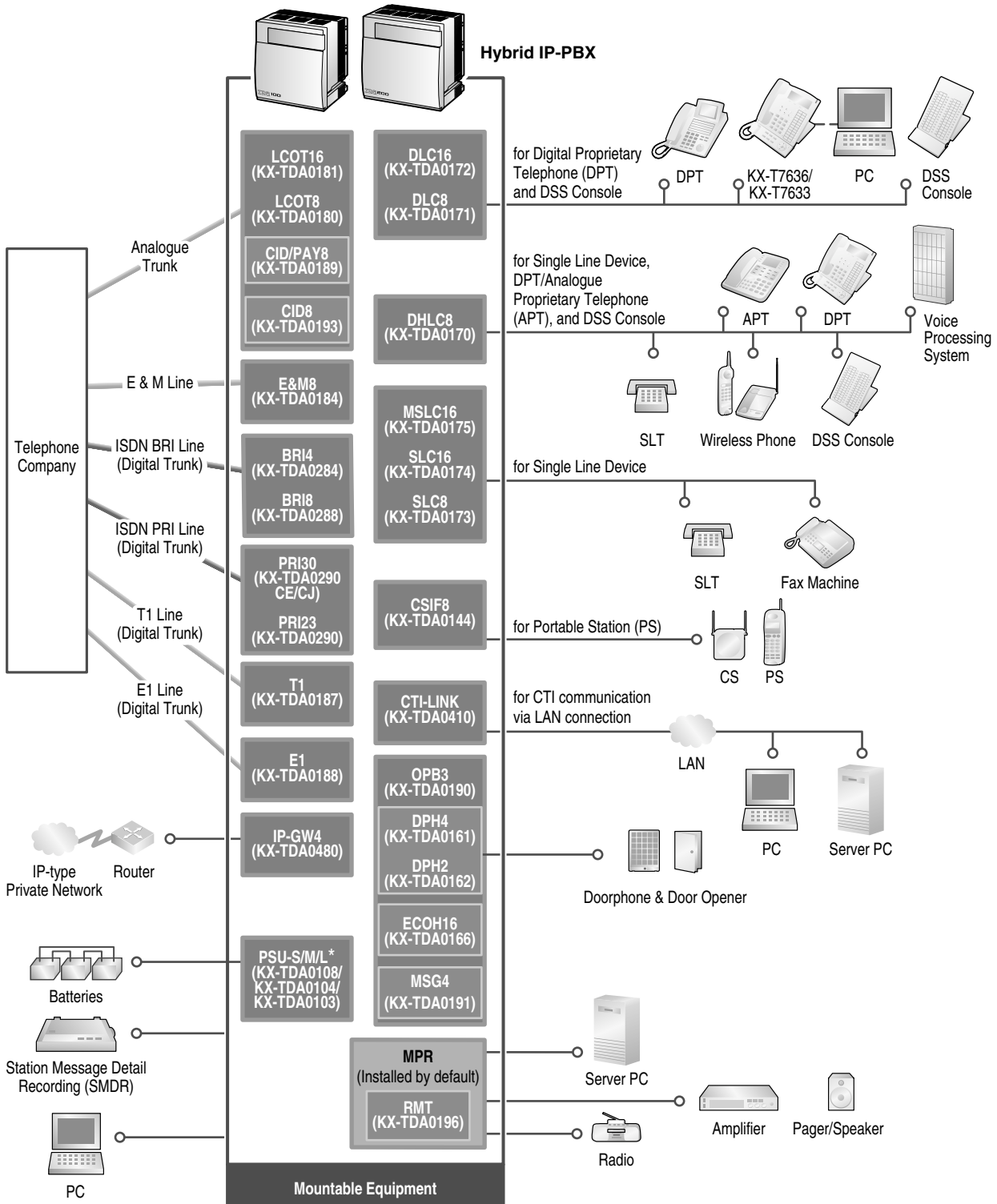


Thank you for purchasing the Panasonic Hybrid IP-PBX, KX-TDA100/KX-TDA200.  
Please read this manual carefully before using this product and save this manual for future use.

KX-TDA100/KX-TDA200: Version 1.0

# 1 Before Installation

## 1.1 System Connection Diagram



\* The KX-TDA100CN and KX-TDA200CN have a power supply unit (PSU-S and PSU-M, respectively) pre-installed.

## 1.2 Unpacking

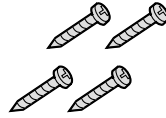
### Check the package contents.

Main Unit × 1

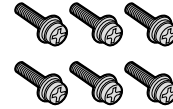
CD-ROM (including manuals, etc.) × 1



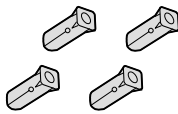
AC Cord\* × 1



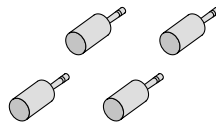
Screw A  
× 3 (KX-TDA100)  
× 4 (KX-TDA200)



Screw B (Black)  
× 2 (KX-TDA100)  
× 6 (KX-TDA200)



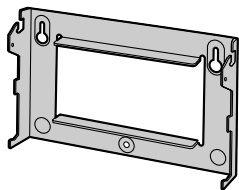
Anchor Plug  
× 3 (KX-TDA100)  
× 4 (KX-TDA200)



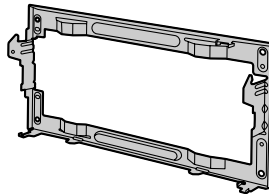
Mini Plug (for pager and  
music source) × 4



SD Memory Card × 1



for KX-TDA100



for KX-TDA200

Metal Bracket × 1

\* The type of the AC cord may vary depending on the country/area of use.  
In Canada, there is no ferrite core attached to the AC cord.

### Necessary tools (not supplied):

- ✓ Telephone cable for extension connection:

Diameter of cable (ø 0.4 mm to ø 0.6 mm)	Maximum length of cable
ø 0.5 mm	1128 m for SLT
ø 0.5 mm	720 m for KX-T7600 series
ø 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.

- ✓ An RS-232C or USB connector for PC connection
- ✓ Connectors (Amphenol/RJ45/BNC) for trunk and extension connections

#### Notes

- Use a shielded twisted pair cable for the Amphenol connector.
- Use a twisted pair cable for the RJ45 connector.

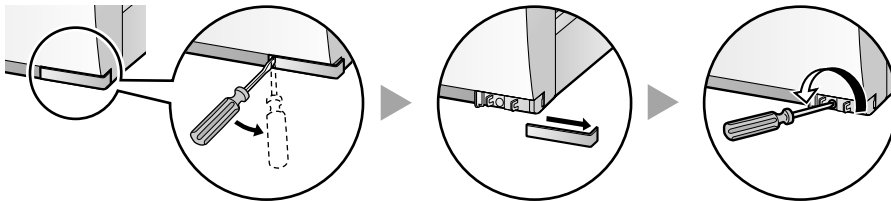
---

## 2 Installation

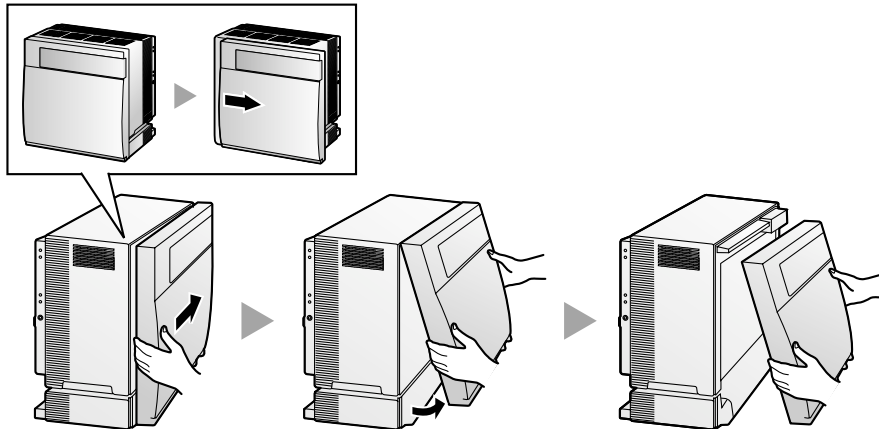
### 2.1 Opening/Closing the Front Cover

#### Opening the Front Cover

1. Insert a flathead screwdriver into the opening (on the left of the screw cover) and unlatch the screw cover. Turn the screw anticlockwise to loosen.

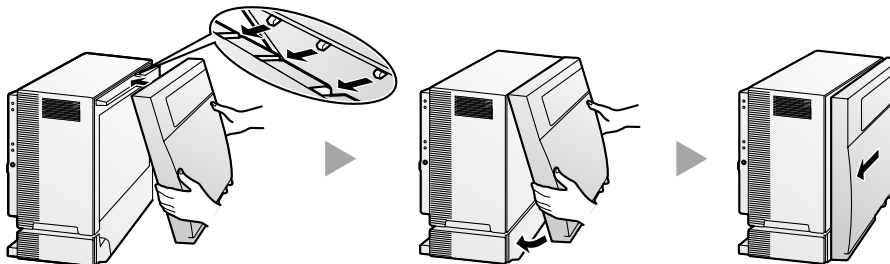


2. Slide the front cover to the right until it stops, then lift the front cover.

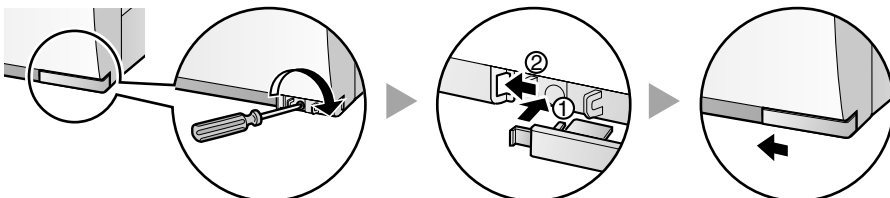


#### Closing the Front Cover

1. Hook the front cover onto the cabinet (line up the protrusions on the cover with the receptacles on the cabinet), then slide the front cover to the left until it locks.



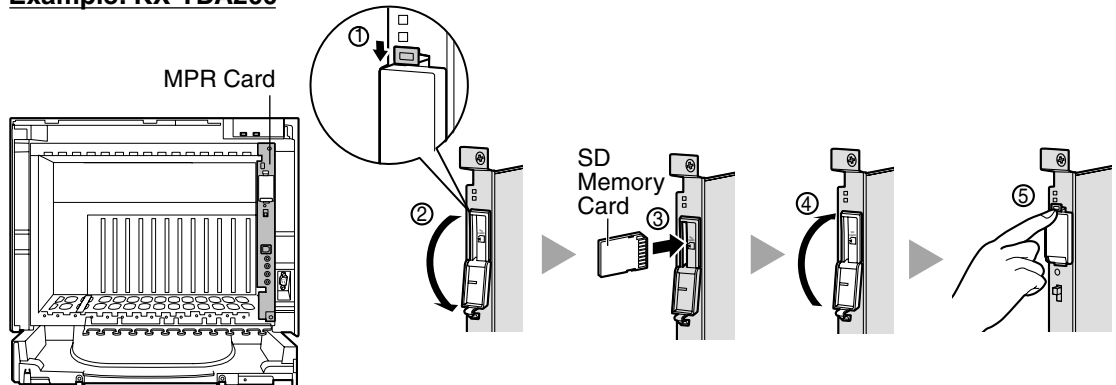
2. Turn the screw clockwise to tighten, then secure the screw cover.



## 2.2 Inserting the SD Memory Card to the MPR Card

SD Memory Card contains software for all processes of the Hybrid IP-PBX and all customer data. **SD Memory Card must be inserted before start up.**

**Example: KX-TDA200**



### CAUTION

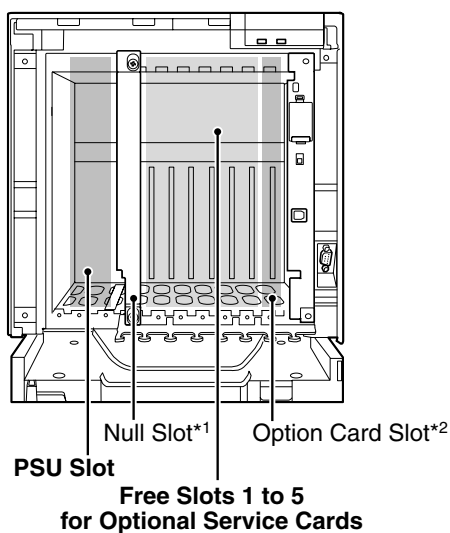
Do not remove the SD Memory Card during the operation of the Hybrid IP-PBX. Removing the SD Memory Card during operation may cause damage to the SD Memory Card, or result in loss of data.

## 2.3 Installing the Option Units

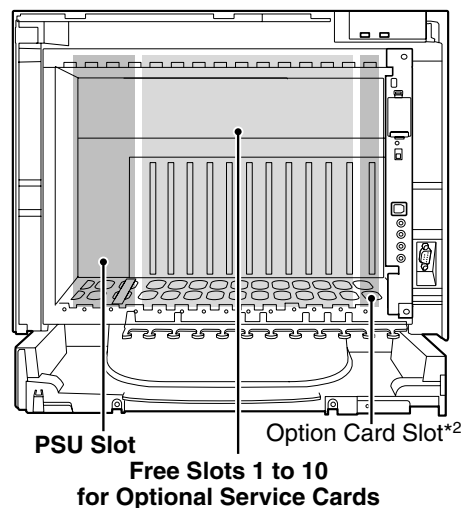
### Slot Condition

Install the power supply unit (PSU) into the left-most slot, and optional service cards into free slots.

**KX-TDA100**



**KX-TDA200**



\*1 Null slot is not available for any optional service card.

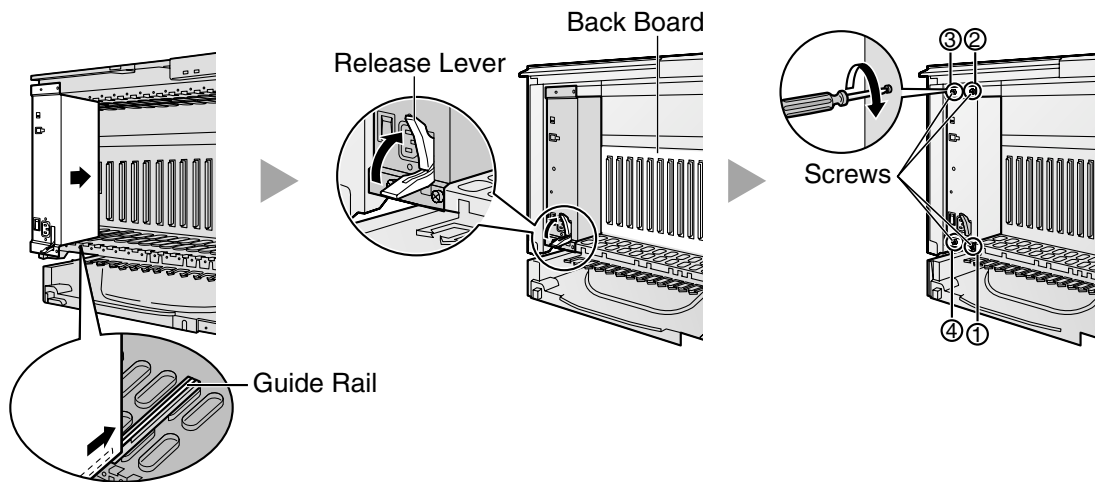
\*2 Option slot is reserved for OPB3 or CTI-LINK card.

## CAUTION

To protect the back board from static electricity, do not touch parts on the back board in the main unit, PSU, and on the optional service cards. To discharge static, touch ground or wear an earthing strap. Make sure the screws are tightened for secure earthing.

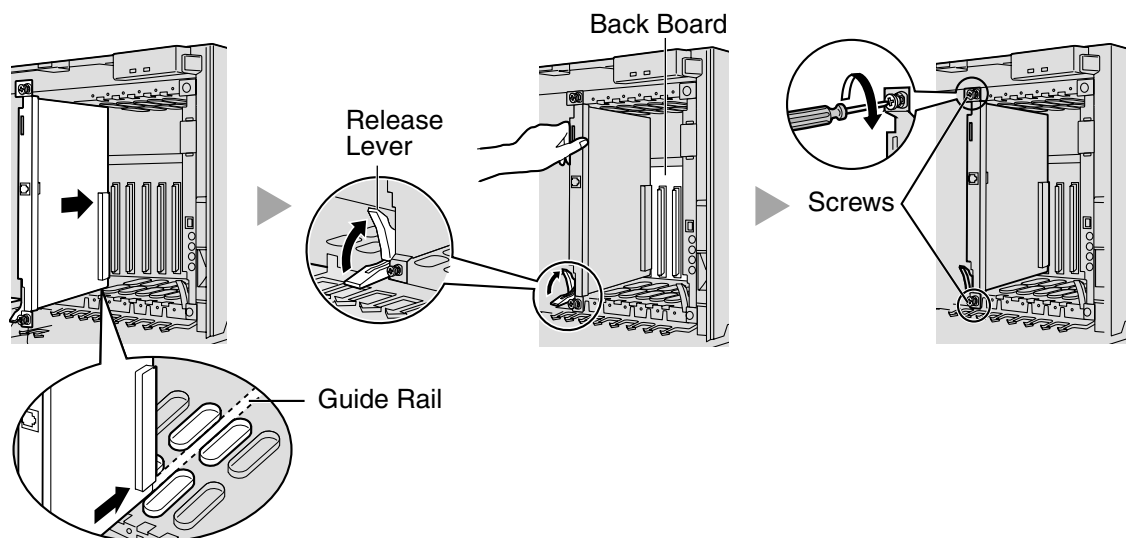
## Installing the Power Supply Unit

1. Insert the PSU along the guide rails.
2. Push the release lever in the direction of the arrow so that the PSU is made to engage with the connector on the back board securely.
3. Turn the 4 screws clockwise, in the order indicated by the numbers 1 to 4, to fix the PSU.



## Installing the Trunk/Extension Cards

1. Insert the card along the guide rails.
2. Holding the card as shown, push the release lever in the direction of the arrow so that the card is made to engage with the connector on the back board securely.
3. Turn the 2 screws clockwise to fix the cards.



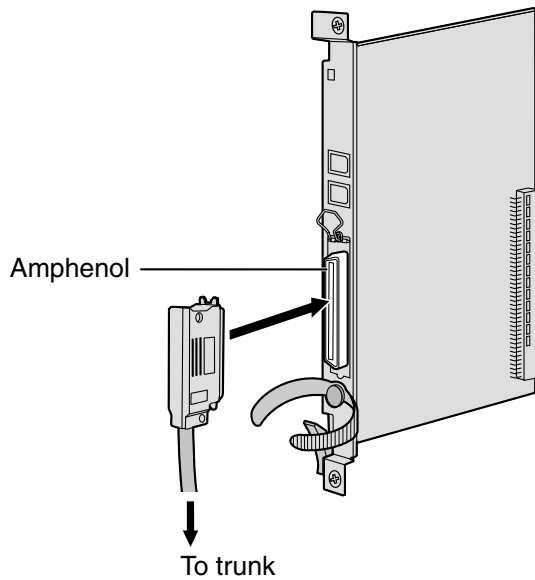
---

Be sure to cover each slot in which no optional service card is installed by using a Blank Slot Cover. For details, refer to "Covering the Blank Slots" in "2.2.7 Installing/Removing the Optional Service Cards" of the Installation Manual.

## 2.4 Installing the Trunk Cards

### LCOT8/LCOT16 Card

**Example: LCOT16 Card**

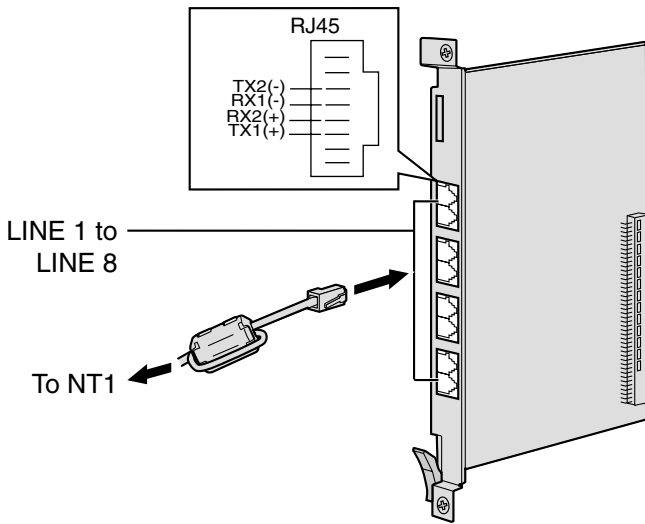


**Accessory (included):** screws × 2

**User-supplied (not included):** Amphenol connector

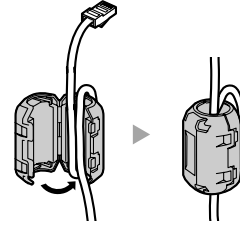
## BRI4/BRI8 Card

### Example: BRI8 Card

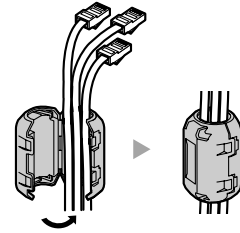


### To attach the ferrite core

When using 1 or 2 cables:



When using 3 or 4 cables:



- For every 4 cables, use 1 ferrite core; a ferrite core holds a maximum of 4 cables.
- Attach the ferrite core as close to the card's connector as possible.

**Accessory (included):** ferrite core(s) × 1 (BRI4 card) or 2 (BRI8 card)

**User-supplied (not included):** RJ45 connector

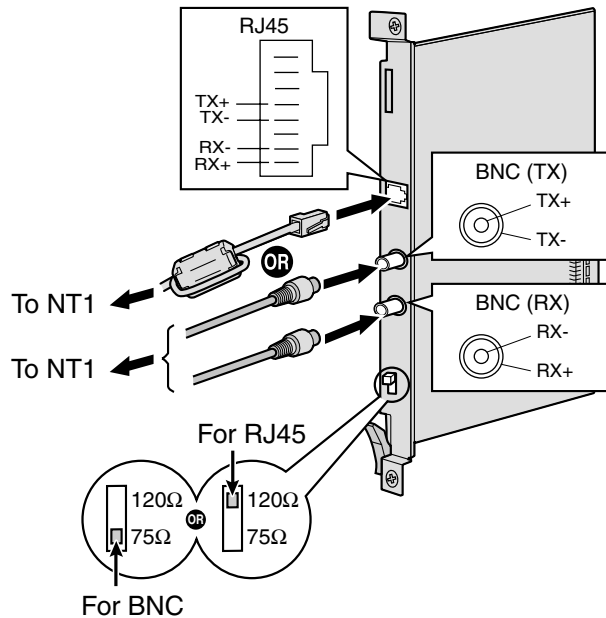
### Notes

- LINE 5 to LINE 8 are for BRI8 card only.
- Connect these optional service cards to the trunk through NT1; do not connect to the trunk directly.
- These optional service cards have 100  $\Omega$  of terminal resistance. For use of point to multi-point connection, the cards must be placed at the end of the bus.
- When connecting the RJ45 connector, attach the included ferrite core.

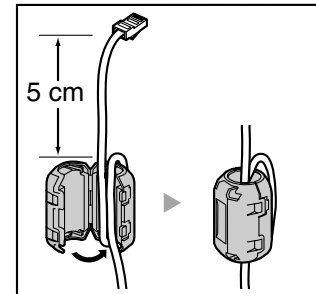


## PRI30/PRI23 Card

### Example: PRI30 Card



To attach the ferrite core



**Accessory (included):** ferrite core × 1

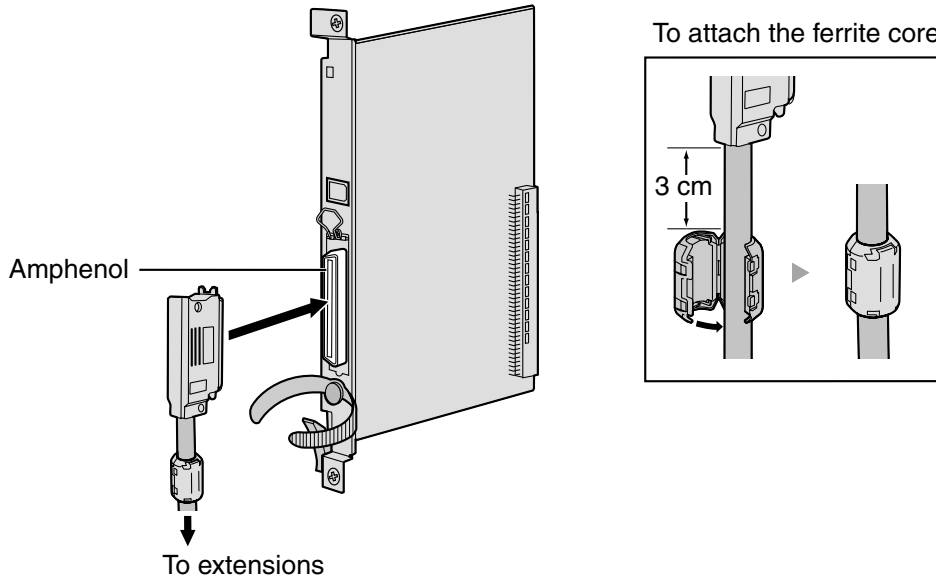
**User-supplied (not included):** RJ45 or BNC connectors

### Notes

- In some countries/areas, the PRI30 card must not be connected to the Public Switched Telephone Network.
- Connect these optional service cards to the trunk through NT1; do not connect to the trunk directly.
- Use only 1 type of connector (RJ45 or BNC) for connection of PRI30 card; RJ45 and BNC cannot be used simultaneously. Set the termination switch to 120 Ω (default) or 75 Ω for connector type to be used.
- When connecting the RJ45 connector, attach the included ferrite core (except in Canada, where the ferrite core is not necessarily be attached).

## 2.5 Installing the Extension Cards (DLC8/DLC16/DHLC8/MSLC16/SLC8/SLC16)

### Example: DHLC8 Card



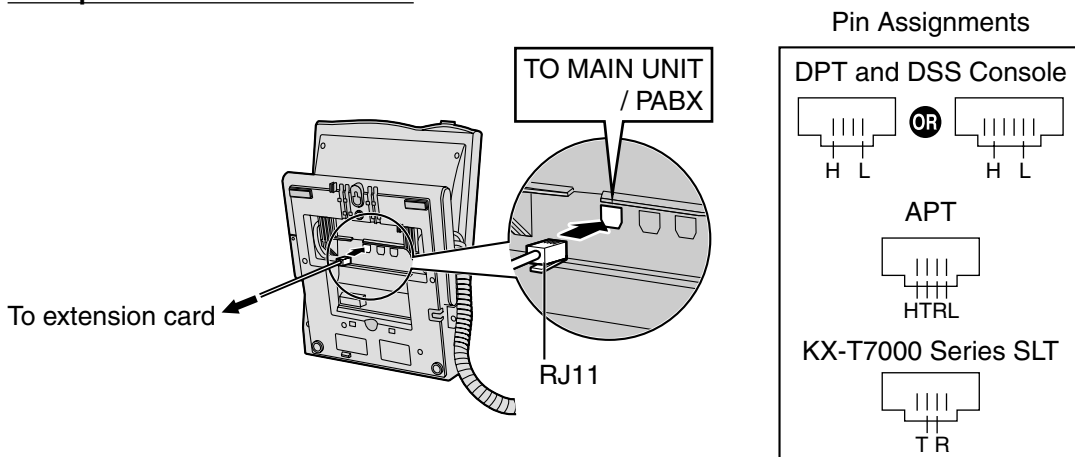
**Accessory (included):** screws × 2, ferrite core × 1  
**User-supplied (not included):** Amphenol connector

#### Note

Attach the included ferrite core to the cable.

## 2.6 Connecting Extensions

### Example: KX-T7600 Series DPT



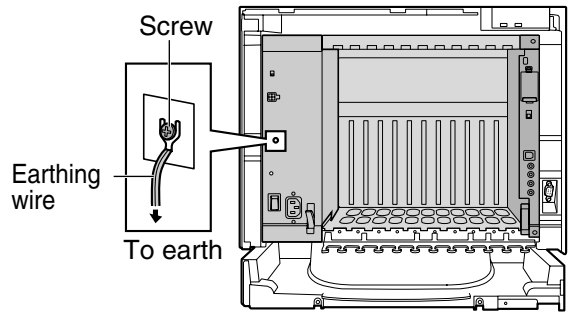
## 2.7 Frame Earth Connection

### **IMPORTANT!**

Connect the frame of the Hybrid IP-PBX to earth.

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

\* For earthing wire, green-and-yellow insulation is required, and the cross-sectional area of the conductor must be more than 0.75 mm<sup>2</sup> or 18 AWG.

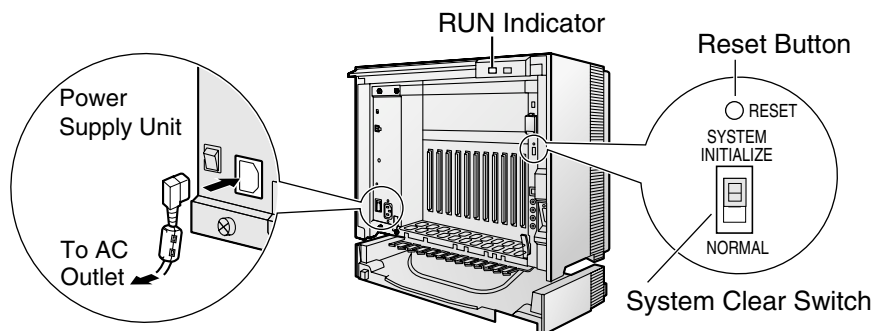


- Proper earthing (connection to earth) is very important to protect the Hybrid IP-PBX from the bad effects of external noise or to reduce the risk to the user of electrocution in the case of lightning strikes.
- The earth wire of the AC cable has an effect against the external noise and lightning strikes, but it may not be enough to protect the Hybrid IP-PBX. A permanent connection between earth and the earth terminal of the Hybrid IP-PBX must be made.

## 3 Starting the Hybrid IP-PBX

### **CAUTION**

- SD Memory Card must be inserted in the SD Memory Card slot of the MPR Card before start up.
  - Before touching the System Clear Switch and the Reset Button, discharge static by touching ground or wearing an earthing strap.
  - Once you have started the Hybrid IP-PBX and if you unplug the Hybrid IP-PBX, do not perform the following procedures to start the Hybrid IP-PBX again. Otherwise, your programmed data will be cleared.
  - The Hybrid IP-PBX will continue to be powered even if the power switch is turned "OFF".
  - **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.**
1. Set the System Clear Switch to the "SYSTEM INITIALIZE" position.



2. Plug the AC power cord into the Hybrid IP-PBX and AC outlet, and turn on the Hybrid IP-PBX.
3. Press the Reset Button with a pointed tool. (The RUN indicator will flash.)
4. While the RUN indicator is flashing (within about 10 s), return the System Clear Switch 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 be kept lit.

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

**Note**

Use only the AC power cord included with the Hybrid IP-PBX for the PSU.

## 4 Customising the Hybrid IP-PBX

KX-TDA Maintenance Console serves as an overall system programming tool for the Hybrid IP-PBX. KX-TDA Maintenance Console's Quick Setup lets you easily configure the Hybrid IP-PBX to receive intercom and trunk calls, as well as apply basic settings such as time and date.

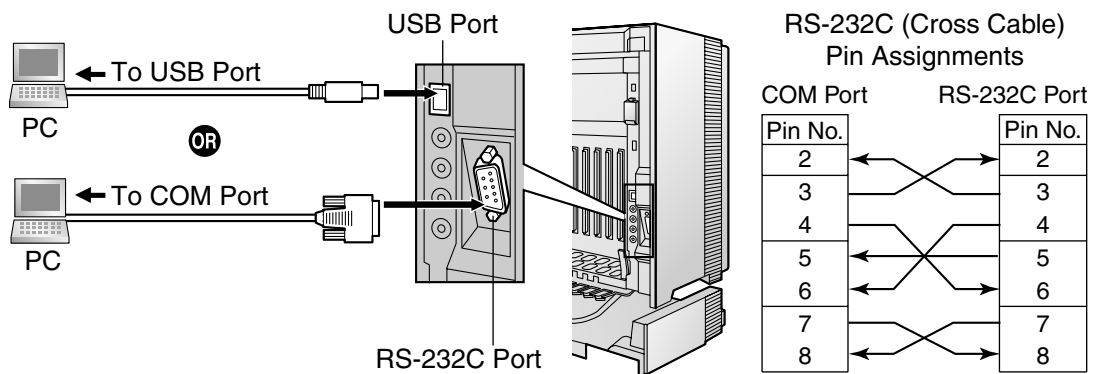
**Note**

The contents and design of the software are subject to change without notice.

### 4.1 Connecting the PC

To programme the Hybrid IP-PBX, connect it to the PC with serial interface.

#### Serial Interface Connection



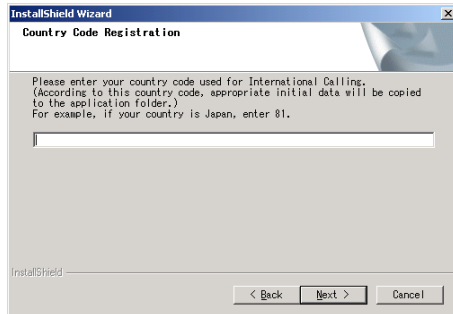
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## 4.2 Installing the KX-TDA Maintenance Console and Selecting Appropriate Country/Area Data

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

### Note

Screen shots reprinted with permission from Microsoft Corporation.



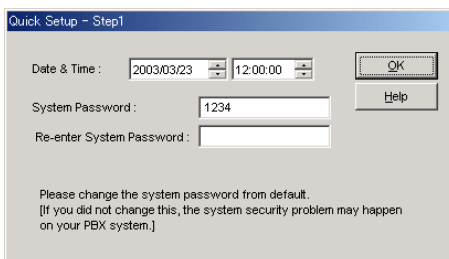
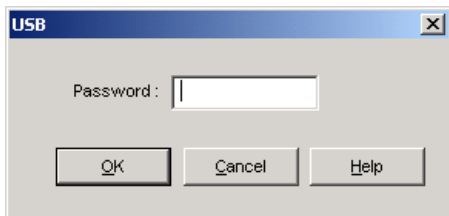
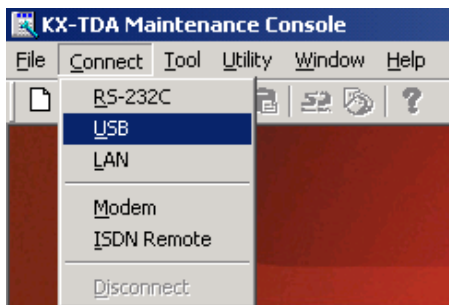
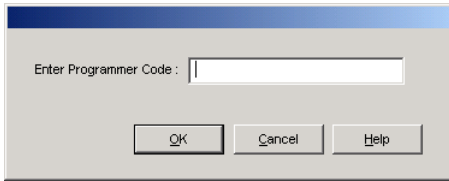
1.
  - a. Save the setup file of the KX-TDA Maintenance Console on your PC.
  - b. Double-click the icon to execute the setup file.
  - c. Follow the instructions of the wizard.
2.
  - a. Type the appropriate **Country Code**. The KX-TDA Maintenance Console will be installed with the appropriate default data for specific country/area.
  - b. Click [Next].
  - c. Follow the instructions of the wizard.
  - d. Click [Finish].
  - e. Click [OK].

## 4.3 Programming the Hybrid IP-PBX

### Starting the KX-TDA Maintenance Console and Assigning the Basic Items (Quick Setup)

When you start the KX-TDA Maintenance Console with the Installer Level Programmer Code and connect to the Hybrid IP-PBX for the first time after initialisation (with the factory default setting), Quick Setup will launch automatically. During Quick Setup, you will setup the following basic items:

- Date and Time of the Hybrid IP-PBX. The date and time set on the PC will be used.
- System Password for installer for PC programming.
- Operator extension numbers. Operator extensions for all time modes (day/lunch/break/night) can be assigned.
- Flexible Numbering type to pattern 1 or pattern 2. If pattern 1 (with ✕) is selected, "✕" must prefix all feature numbers (except access numbers) when an extension user wants to use a feature.
- Operator call and Idle Line Access/ARS numbers (0 or 9). The feature numbers for operator call and Idle Line Access/ARS can be selected.
- Remote Maintenance Dial Number. Enter the complete telephone number of the PBX (including the country code). When necessary, this number will be used to access the PBX from a remote location for maintenance purposes.

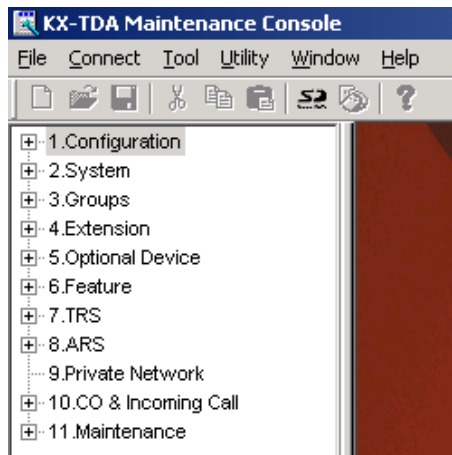


1. Click **"Start"** → **"Programs"** → **"KX-TDA Maintenance Console"** → **"KX-TDA Maintenance Console"**.
2.
  - a. Type the Installer Level Programmer Code (default: **1234**).
  - b. Click [OK].
3. Click **"Connect"** → **"USB"** or **"RS-232C"** from the menu bar, depending on the serial interface connection with the Hybrid IP-PBX.

**Note**

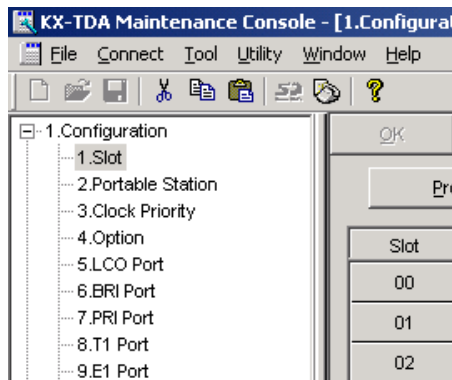
To connect with USB, you need to have installed the KX-TDA USB driver. Follow the instructions of the wizard to install the KX-TDA USB driver.

4.
  - a. Type the system password for installer (default: **1234**).
  - b. Click [OK].
5. **When country/area data do not match:**
  - a. Click [OK] to replace the country/area data of the Hybrid IP-PBX. Replacement may take several minutes to complete.
  - b. Follow the procedure described in "3 Starting the Hybrid IP-PBX" and restart the Hybrid IP-PBX.
  - c. Repeat steps 1 to 4 to restart the KX-TDA Maintenance Console.
6. Follow the instructions of the wizard and assign the basic items (Quick Setup).

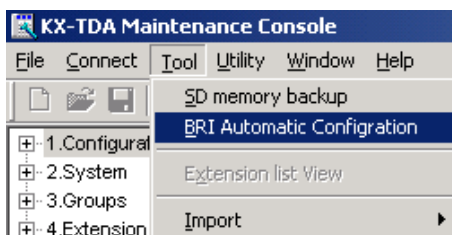


The programme menu appears.

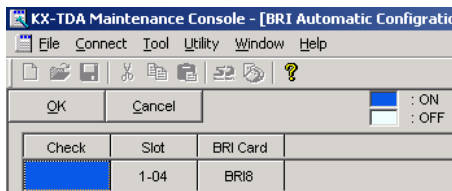
## Assigning the BRI Setting (Automatic Configuration)



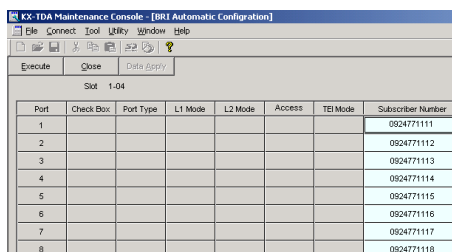
1.
  - a. Double-click "**Configuration**".
  - b. Double-click "**Slot**".
  - c. Change the status of the BRI card to **OUS**.
  - d. Click [OK].



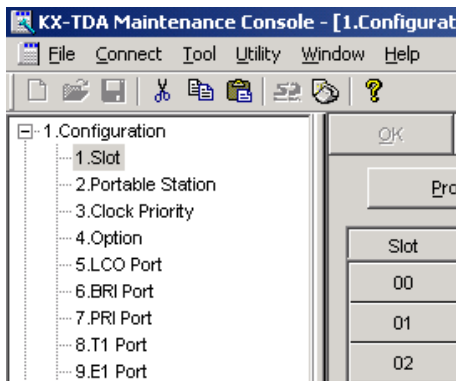
2. Click "**Tool**" → "**BRI Automatic Configuration**" from the menu bar.



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

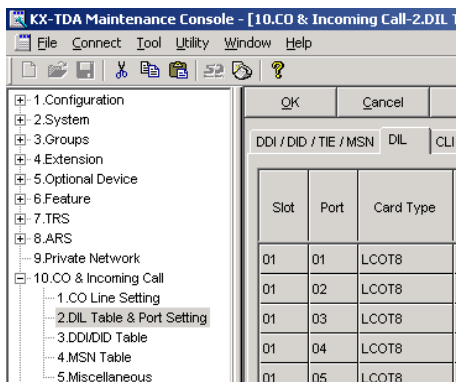


4.
  - a. Type the **Subscriber Number** for the desired ports.
  - b. Click [Execute].  
ISDN line data such as P-P/P-MP, TEI Mode are automatically set.
  - c. Click "**Check Box**" of the desired ports.
  - d. Click [Data Apply].



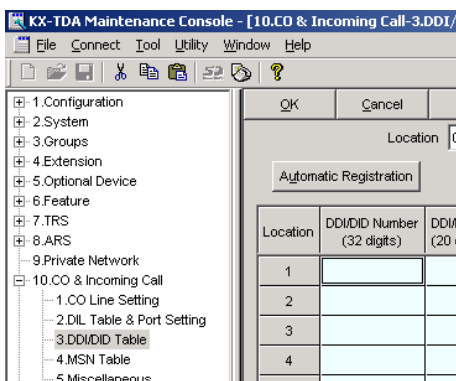
5. a. Double-click "Slot".
- b. Change the status of the BRI card to **INS**.
- c. Click [OK].

## Assigning the Incoming Trunk Call Destination



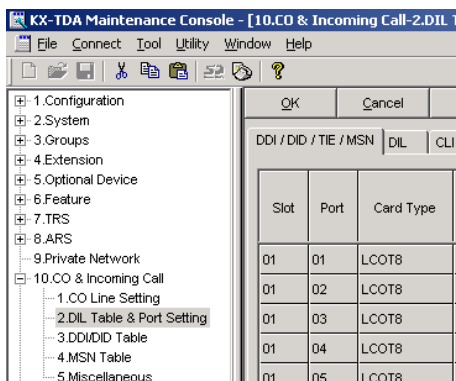
### For analogue trunk user (DIL Setting):

1. Double-click "CO & Incoming Call".
2. Double-click "DIL Table & Port Setting".
3. Click the "DIL" tab.
4. For necessary items, enter the proper numbers and selections.
5. Click [OK].



### For ISDN trunk user (DDI Setting):

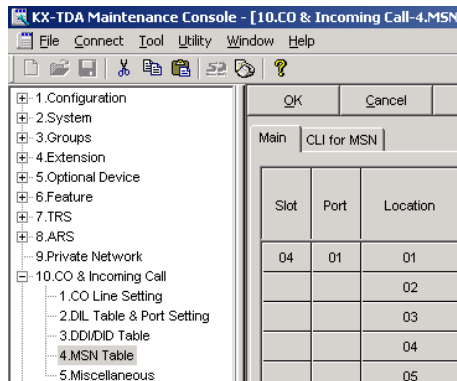
1. Double-click "CO & Incoming Call".
2. Double-click "DDI/DID Table".
3. For necessary items, enter the proper numbers and selections.
4. Click [OK].



### For ISDN trunk user (MSN Setting):

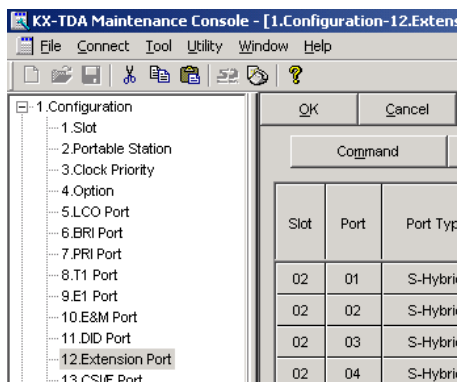
1. Double-click "CO & Incoming Call".
2. Double-click "DIL Table & Port Setting".
3. Click the "DDI / DID / TIE / MSN" tab.
4. Set the "Incoming Type" of the desired ports to "MSN".
5. Click [OK].



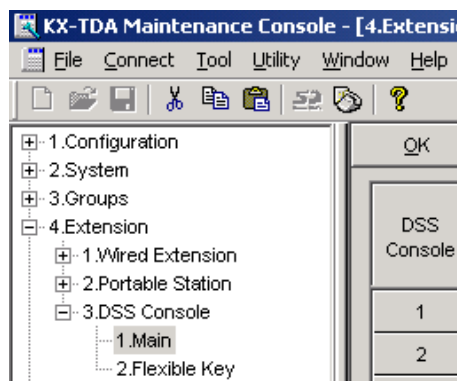


6. Double-click "**MSN Table**".
7. Click the "**Main**" tab.
8. For necessary items, enter the proper numbers and selections.
9. Click [OK].

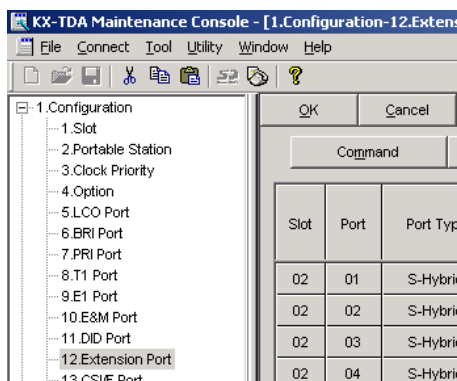
## Setting the Extension Port for Using DSS Console



1. Double-click "**Configuration**".
2. Double-click "**Extension Port**".
3. Change the connection of the desired port to **OUS**.
4. For **DPT Property**, set the **Type** to "**DSS**" and assign the **Location** number.
5. Click [OK].



6. Double-click "**Extension**".
7. Double-click "**DSS Console**".
8. Double-click "**Main**".
9. Type the **Pair Extension Number**.
10. Click [OK].
11. Double-click "**Flexible Key**".
12. For necessary items, enter the proper numbers and selections.
13. Click [OK].



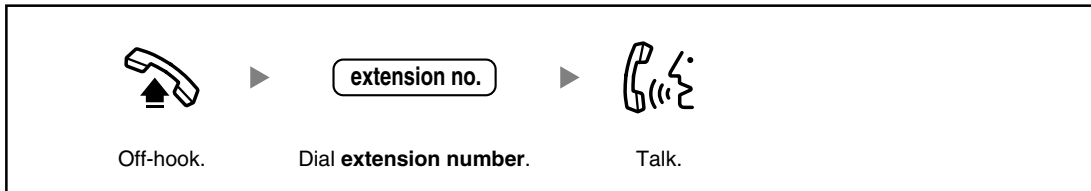
14. Double-click "**Configuration**".
15. Double-click "**Extension Port**".
16. Change the connection of the appropriate port to **INS**.
17. Click [OK].

---

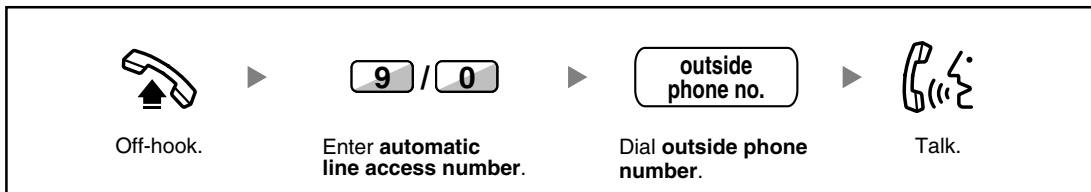
## 5 Confirming the Connection

### 5.1 Making Calls

#### To call another extension



#### To call an outside party







The KX-TDA100E/KX-TDA200E, the KX-TDA100NE/KX-TDA200NE, the KX-TDA100GR/KX-TDA200GR, and the KX-TDA100CE/KX-TDA200CE are designed to interwork with the:

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

We, Panasonic Communications Co., Ltd./Panasonic Communications Company (U.K.) Ltd., declare that this equipment is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. If you want to get a copy of the original Declaration of Conformity of our products which relates to the R&TTE, please contact to our web address:

<http://doc.panasonic-tc.de>

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