

Chapter 4 Installing MX⁴

Installations

MasterConsole MX⁴ can be installed to control 8 or 16 computers in a one-tier installation with 4 simultaneous users. To expand computer capacity, the MX⁴ can be cascaded with other MasterConsole units to create a two-tier installation that controls up to 256 computers.



Figure 16 One-Tier Configuration

One-Tier Installation

In a one-tier installation, only computers are connected to a single MX⁴ unit (Figure 16). Complete the following steps for a one-tier installation:

1. Shut down and power off all computers to be connected to the MX⁴.
2. Install a user console to the MX⁴.
 - Plug the 25-pin connector of a user console cable (CCPnnF) into one of the four user ports on the MX⁴ back panel (Figure 17 and Figure 18).
 - Plug a user console (keyboard, monitor, and mouse) into the connectors at the other end of the user cable.
3. Power on the MX⁴ unit.
 - The MX⁴ will go through the start-up test. (See Start-Up Display on page 28.)
 - The Login Menu will be displayed on the monitor.
 - Enter *usera* in the user name field of the Login Menu, and press **<Enter>**. The Selection Menu will be displayed. (See page 5.)

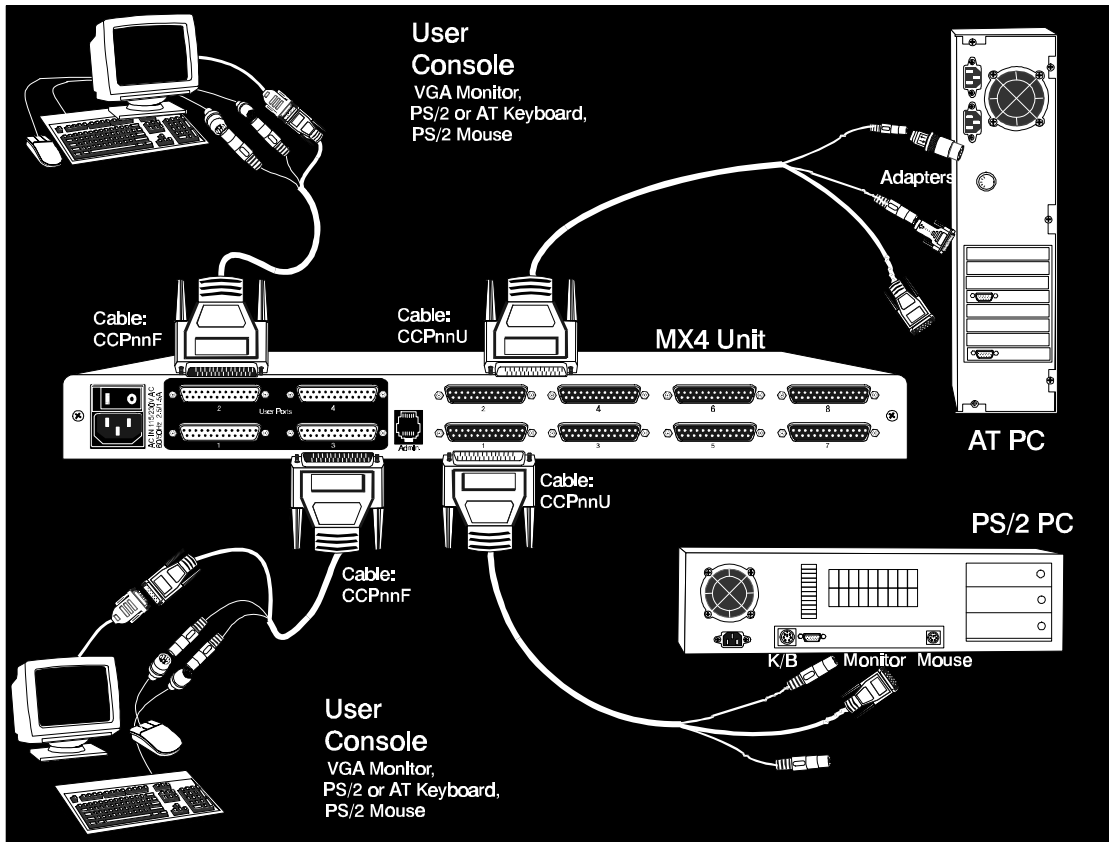


Figure 17 One-Tier Installation Cabling Details

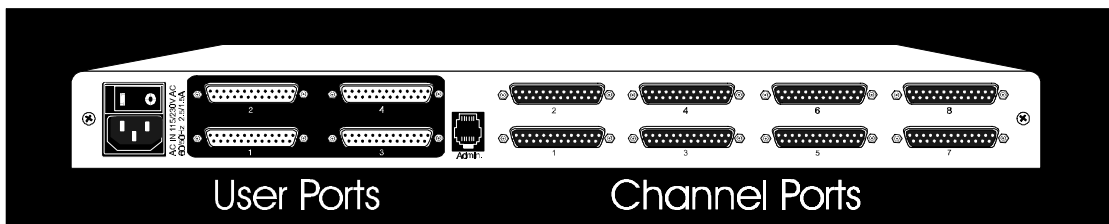


Figure 18 MX⁴ Back Panel

4. Connecting a computer to the MX⁴

- Using a Universal Cable Kit (CCPnnU), plug the 25-pin connector into one of the numbered channels on the MX⁴ back panel.
- Plug the cable's other connectors into the computer's keyboard, monitor, and mouse ports. Use supplied adapters for AT-style computers if needed (Figure 17 and Figure 19).
- Power on the connected computer.
- On the Selection Menu, the line displaying the channel to which the new computer has been connected will turn green.
- Use the <↑> and <↓> keys to select the channel, and press <Enter>.

- You will now be able to operate the computer just as if the keyboard, monitor, and mouse were connected directly.

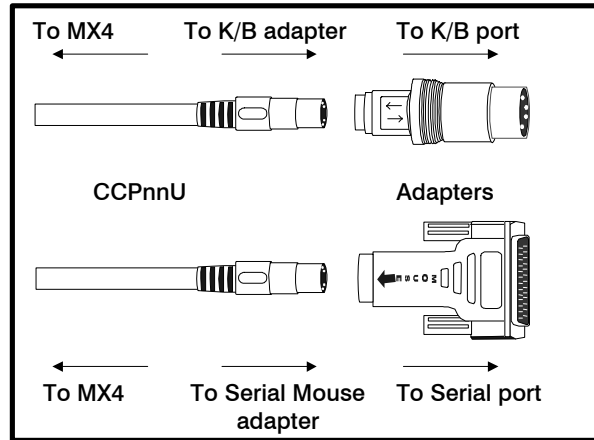


Figure 19 K/B Mouse Adapters for PS/2 to AT

- Repeat steps 2 and 4 to connect the remaining user consoles and computers to the MX⁴.

Two-Tier Installation

In a two-tier installation, it is assumed that the base or first-tier unit is a MasterConsole MX⁴. Any device such as a computer or MasterConsole unit—second-tier unit—can be connected to any MX⁴ channel.

Only computers may be connected to the channels of a second-tier MasterConsole (Figure 20 and Figure 21).

Install Base Unit—First-Tier—MasterConsole MX⁴

- Follow the One-Tier installation procedure to set up the base MX⁴ with the following exceptions:
 - Reserve one channel for each MasterConsole model II S, II X, and P unit, which you wish to cascade as a second-tier unit.
 - Reserve 1–4 consecutive channels for each MX⁴ unit, which will be cascaded as a second-tier unit. A second-tier MX⁴ can have 1, 2, 3, or 4 paths from the base MX⁴.
 - Power off the base MX⁴ unit, and begin the procedure to connect second-tier MasterConsole(s) to the base unit (described below).
- If computers have already been connected to the base MX⁴ unit, you do not have to shut down the computers; even when powered off, the MX⁴'s keyboard/mouse keep-alive feature continues performing keyboard/mouse emulation on attached computers.

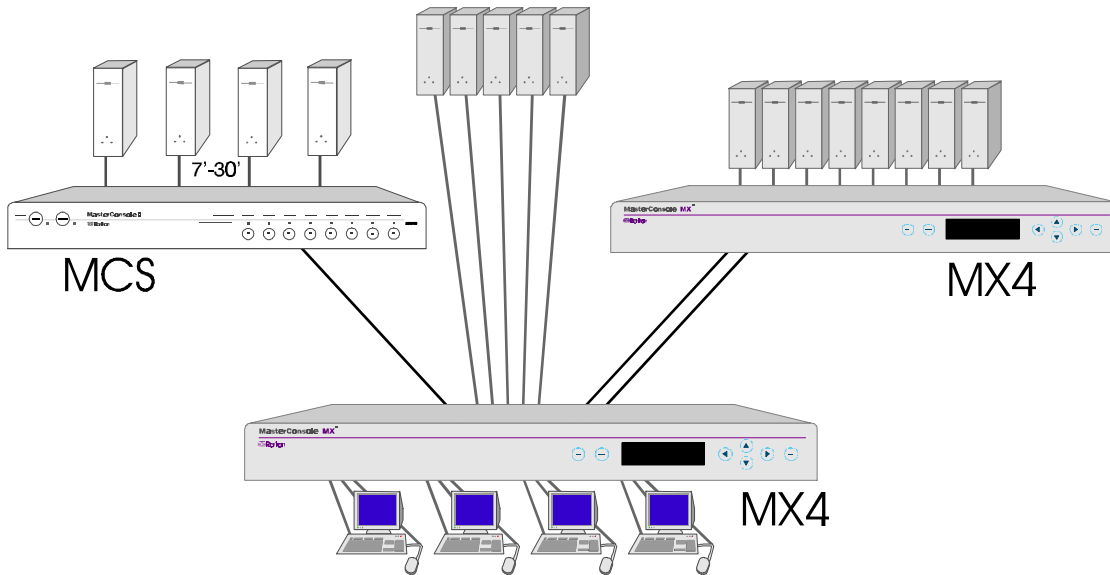


Figure 20 Two-Tier Configuration

Connecting Second-Tier MasterConsole(s) to the Base Unit

Power off all MasterConsole units before connecting them to the base MX⁴. Depending on the model, select one of the following procedures to install a second-tier MasterConsole. Then perform the appropriate channel configuration from the Administration Menu described in the next section. It is recommended that channel configuration be performed incrementally after each second-tier installation.

Connecting a MasterConsole MX⁴ Unit for Second-Tier Operation:

1. Using a cascading cable (CCPnnE), plug the DB25 connector (female) into one of the 4 user ports of the second-tier MX⁴.
 2. Plug the cable's other DB25 connector (male) into the first of up to 4 consecutive channels reserved on the base MX⁴ unit.
 3. Repeat steps 1 and 2 to connect the remaining user ports to the channels reserved on the base MX⁴.
 4. Power on the second-tier MX⁴.
 5. From the front panel, follow the Set Tier procedure (page 30) to set those user ports to second-tier status as indicated by the T on the front panel LCD display.
 6. Power on the base MX⁴ units, and perform channel configuration from the Administration Menu, described in Channel Configuration for Two-Tier Installation (page 23).
- ☞ To guarantee correct operation, always power on the second-tier MX⁴ before the base unit.

Connecting a MasterConsole II C, X or S Unit for Second-Tier Operation

1. To program the MasterConsole II unit as a second tier, while powering on, presses the Channel #2 button on the front panel and hold for 3 seconds. This sets the local user port of the MasterConsole II unit to second-tier status. For X models, you may use the user port out for the second-tier connection instead—by pressing and holding the Channel #3 button.
2. When the MasterConsole II unit is programmed as a second tier, the LED on the far right of the unit's front panel (RMT/2ND for X models and 2ND for C and S models) will be lit continuously.
3. Power off the unit.

Using a CCPnnU cable, plug the keyboard, monitor, and mouse connectors of the cable to the keyboard, monitor, and mouse ports on the second-tier MasterConsole II.

–OR–

If you choose to use the user port of a MasterConsole II X model for second-tier connection, connect an RKVM module to the X model with a CVnn cable. Using a CCPnnU cable, plug the keyboard, monitor, and mouse connectors of the cable to the keyboard, monitor, and mouse ports of the RKVM module.

4. Plug the DB25 connector (male) on the other end of the CCPnnU cable into the channel reserved on the back panel of the base MX⁴.
5. Power on both the base MX⁴ and the second-tier MasterConsole II units, and perform channel configuration with the Administration Menu described in Channel Configuration for Two-Tier Installation (page 23).

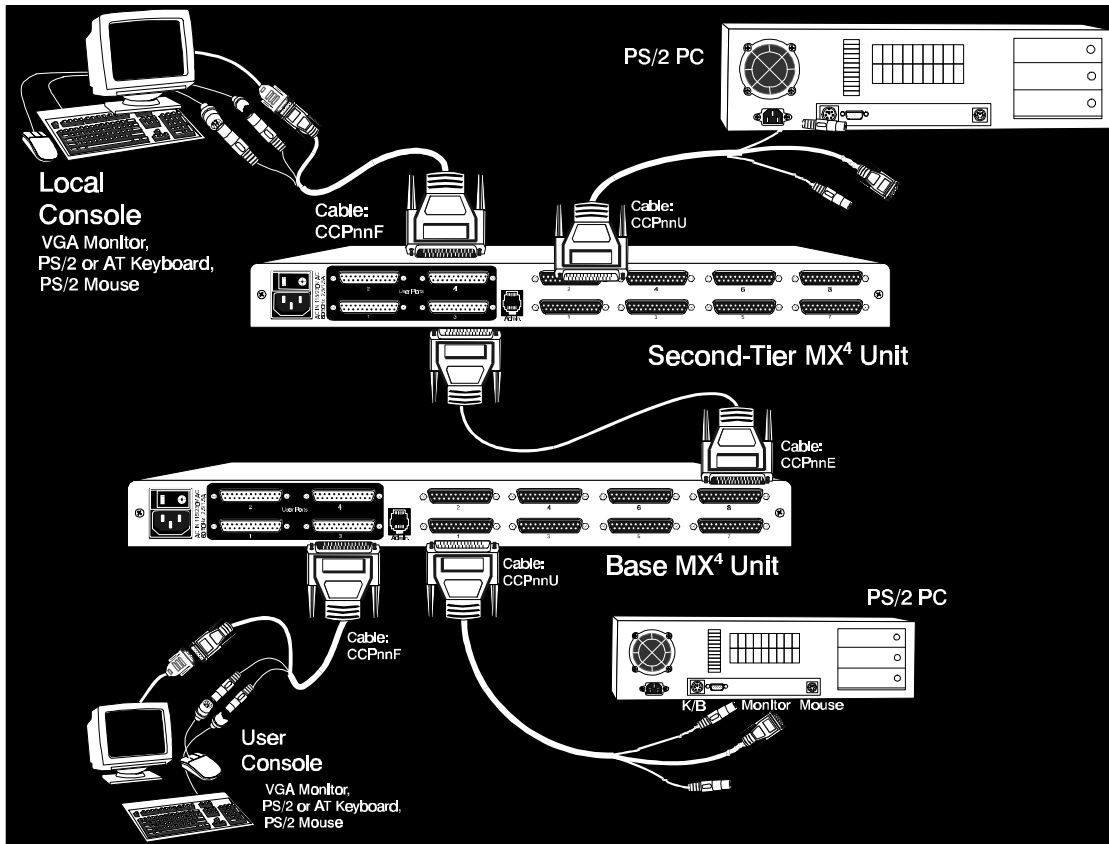


Figure 21 Two-Tier Installation Cabling Details

Connecting a MasterConsole P Model for Second-Tier Operation

1. Using a CCPnnU cable, plug the keyboard, monitor, and mouse connectors of the cable into the keyboard, monitor, and mouse ports of the second-tier MasterConsole P unit.
 2. Plug the DB25 connector (male) on the other end of the CCPnnU cable into the channel reserved on the base MX⁴ back panel.
 3. Power on both the base MX⁴ and the second-tier MasterConsole P units, and perform channel configuration with the Administration Menu described in Channel Configuration for Two-Tier Configuration (page 23).
- ☞ All second-tier MasterConsole P models must be MasterView ready. To determine whether your P model is MasterView ready, check the white label on the bottom of the unit. Locate the unit's firmware version: MDSP-*nnn*. If the firmware version is MDSP-1AC or higher (e.g., MDSP-1AD.), the unit is MasterView ready.
 - ☞ If your MasterConsole P model is rack mounted, call Raritan Technical Support with the unit's serial number located on the back of the unit.

- ☞ MasterConsole P models that are not MasterView ready must be upgraded before they can be connected in second-tier configurations with MX⁴ units. Call Raritan Technical Support for details.

Connecting Computers to Second-Tier MasterConsole(s)

1. For a MasterConsole II C model, S model or X model follow the regular installation instructions detailed in your MasterConsole II manual.
2. For a MasterConsole P model follow the normal installation instructions detailed in your MasterConsole P Model manual.
3. For an MX⁴ model follow step 4 of MX⁴ One-Tier Installation detailed in the (page 17).

Channel Configuration for Two-Tier Installation

After installing a second-tier MasterConsole to a base MX⁴, you must perform channel configuration from the Administration Menu to reconfigure the base MX⁴. As explained in the Administration Menu section of this manual (page 11), you must login with administration privileges to access the administrator functions described here.

1. Press F5 to access the Administration Menu.
2. Select the Channel Configuration submenu, and press **<Enter>**. The Channel Configuration menu will be displayed listing channel ID and channel names (Figure 15).
3. Use the **<↑>** and **<↓>** keys to highlight the channel you reserved for the second-tier MasterConsole during the base MX⁴ installation process.
 - ☞ Up to 4 consecutive paths or channels can be connected a second-tier MX⁴ device. When a channel is selected for a second-tier MX⁴, up to 4 paths are presented for selection. If any of the MasterConsole devices, MX⁴, MCP, MCC, MCS, or MCX, is on any one of the 3 subsequent channels, it will limit the number of paths to be connected to base MX⁴.
4. Press **<C>** to display the Device Configuration screen (Figure 22).
5. From the list of devices, select the appropriate device and press **<Enter>**. A next level of the Device Configuration menu will be displayed (Figure 23).
 - ☞ **For MasterConsole II MCC models select line 2, "MasterConsole MXII-X".**
6. From the list of device sizes, select the appropriate size and press **<Enter>**.
7. If an MX⁴ is being configured as a second tier, an additional menu is displayed to allow you to specify the number of paths to connect to base MX⁴ (Figure 24). From the list of paths available, select the number of paths desired and press **<Enter>**.
8. The display will return to the Channel Configuration menu (Figure 15).
9. Press **<F2>** and confirm that the new MasterConsole device is displayed in purple on the proper channel in the Selection Menu (Figure 3).
10. Select the new MasterConsole device, and press **<Enter>**.

```

Device Configuration
Name: Untitled-001 Type: PC
Connections: 1 Channels: --
Base: Base MX48 Ch.ID: 01
      Device           Abv
- - - - -
1  MasterConsole MX4   MX4
2  MasterConsole MCII-X MCX
3  MasterConsole MCII-S MCS
4  MasterConsole      MCP
▶ 5  PC/No Device      PC
- - - - -
▶ - Current Device Settings
      Help Messages
      Status Line

```

Figure 22 Device Configuration Menu 1

11. The Selection Menu of the new second-tier device will be displayed.

You can edit the second-tier unit name by going back to the Administration Menu and selecting Channel Configuration option and editing the tier names. On MX⁴ units, the tier name can be displayed on the LCD by selecting option 4 on the Administration Menu—Set 2nd Tier Names

12. You have now configured a *second-tier device* on to a base MX⁴. Go back to the Channel Configuration Menu to rename your *second tier device computers* by pressing **F5**. (Figure 15)
13. Select option number 3—Channel Configuration.
14. Using the <↑> and <↓> keys, highlight the *second tier device* you want to edit.
15. Press the G key—on the keyboard—to select this device for channel editing.
16. Edit the name(s) of the computers on the second tier.
17. Enter S to save edit or <esc> to cancel it.
18. Enter Y to save menu or N to re-edit.

```
Device Configuration
Name: Untitled-001 Type: PC
Connections: 1 Channels: --
Base: Base MX48 Ch.ID: 01
Number of Device Channels
- -----
1 8 Channels
▶ 2 16 Channels
- -----
▶ - Current Device Settings
Help Messages
```

Status Line

Figure 23 Device Configuration Menu 2

```
Device Configuration
Name: Untitled-001 Type: PC
Connections: 1 Channels: --
Base: Base MX48 Ch.ID: 01
Number of User Connections
- -----
▶ 1 1 Path
2 2 Paths
3 3 Paths
4 4 Paths
- -----
▶ - Current Device Settings
Help Messages
```

Status Line

Figure 24 Device Configuration Menu 3