CHAPTER 3

Installing the Router/Hub

When the router card and hub card are configured according to your specifications, you can install the chassis in a 19-inch rack, or place it on a desktop. This chapter explains how to prepare the hub for rack-mount and desktop usage, and how to connect a PC or terminal to the console port and communicate with the hub.

Cisco 2517 and Cisco 2519 router/hubs are shipped from the factory ready to use in the following configuration:

- Router card installed with the jumpers set to the following defaults:
  - COM port set to COM 4, IRQ 3
  - AUX/CON port jumpers set to AUX
  - Shared memory base address set to $D0000

  If you need to change any of these default settings, see the appendix “Router Card Maintenance.”
- Token Ring hub port card installed with the switches and jumpers set to the following defaults:
  - Ring speed set to 16 Mbps
  - Port 1 set to lobe mode
  - Isolate mode off
  - Cisco 2519 Ring In and Ring Out ports set to repeater mode
  - Port impedance set to 100 ohms
- Management card installed. There are no hardware options set with switches or jumpers.

Warning Before working on the router/hub, turn OFF the power and unplug the power cord. Do not touch the power supply when the power cord is connected. Line voltages are present within the power supply even when the power switch is OFF and the power cord is connected. Do not work on the system or connect or disconnect cables during periods of lightning activity. Translated versions of this warning are in the appendix "Translated Safety Warnings."

Rack-Mounting the Router/Hub

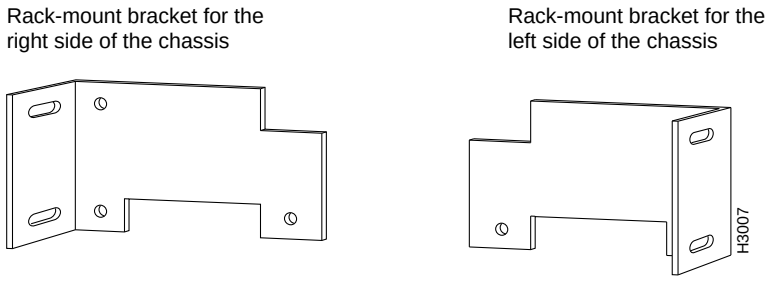
The Cisco router/hub is designed to be rack-mounted in a wiring closet or data processing environment, or placed on a desktop.

Attaching the Rack-Mount Brackets

Cisco 2517 and Cisco 2519 router/hubs include two brackets you use to mount the chassis in a 19-inch rack. Perform the following steps to attach the rack-mount brackets:

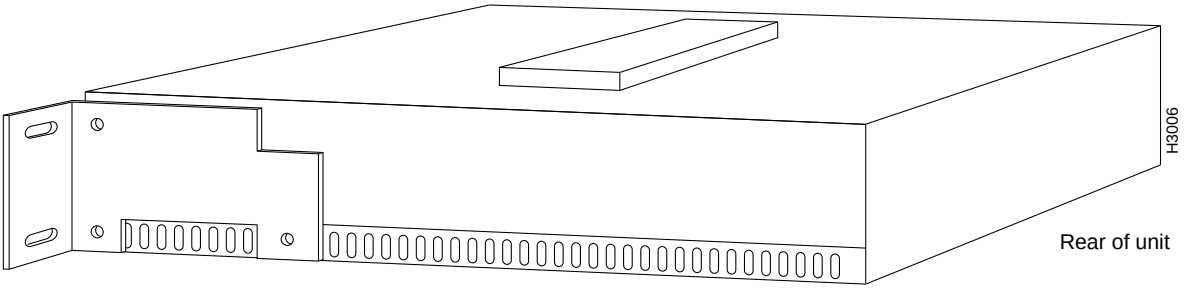
Step 1 Remove the rack-mount brackets and screws from the plastic bag and identify the left and right brackets. (See Figure 3-1.)

Figure 3-1 Rack-Mount Brackets



Step 2 Attach the rack-mount brackets to both sides of the chassis. Use the screws provided with the brackets. (See Figure 3-2.)

Figure 3-2 Rack-Mount Bracket Attached to a Cisco 2517 or Cisco 2519



The router/hub is now ready to be mounted in a 19-inch rack.

Note You must supply the screws used to attach the chassis to a 19-inch rack.

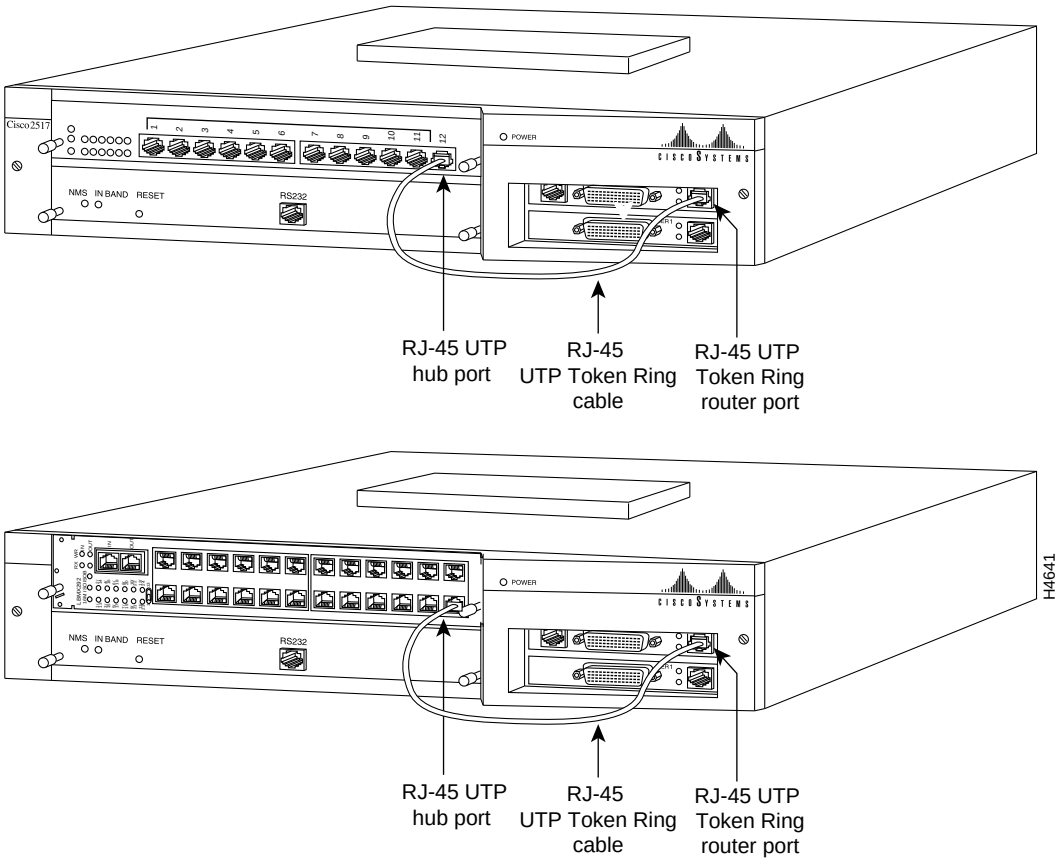
Attaching the Rubber Feet to the Chassis

Cisco 2517 and Cisco 2519 router/hubs are shipped with four rubber “feet” that attach to the bottom four corners of the chassis. If you plan to place the chassis on a desktop, make sure you attach the feet before using the router/hub.

Connecting the Router Card to the Hub Port Card

The Token Ring port on the router card connects to port 12 on the Cisco 2517 hub port card, or port 23 on the Cisco 2519 hub port card. Use the RJ-45 cable provided with the router/hub. (See Figure 3-3.)

Figure 3-3 Connecting the Router Card to the Hub Port Card



Connecting a Terminal or PC to the Router/Hub Console Port

The management card contains an EIA/TIA-232 console port where you attach a terminal or PC, and then configure the SNMP agent and router card. This section provides instructions for connecting the terminal or PC.

Perform the following steps to attach a terminal or PC to the management card console port:

Step 1 Locate the blue EIA/TIA-232 RJ-45-to-DB-25F cable shipped with the Cisco router/hub.

Caution Use only the cable supplied with the management card. Do *not* use a Token Ring RJ-45 cable, and do *not* use a console cable designed for the router card AUX port.

Step 2 Attach the RJ-45 connector to the console port of the management card, and attach the other end to the serial port on the terminal or PC.

Step 3 Make sure the serial port settings on the terminal or PC are set to 9600, N, 8, 1.

Step 4 If you are using a dumb terminal, set it to VT-100 emulation. If you are using a PC, use ANSI terminal emulation.

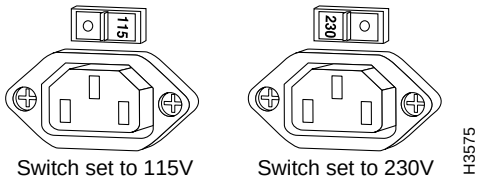
Warning This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that a fuse or circuit breaker no larger than 120 VAC, 15A U.S. (240 VAC, 10A international) is used on the phase conductors (all current-carrying conductors). Translated versions of this warning are in the appendix "Translated Safety Warnings."

Warning The device is designed to work with TN power systems. Translated versions of this warning are in the appendix "Translated Safety Warnings."

Warning This equipment is intended to be grounded. Ensure that the host is connected to earth ground during normal use. Translated versions of this warning are in the appendix "Translated Safety Warnings."

Caution Some versions of the Cisco 2517 and Cisco 2519 do not have auto-switching power supplies. Before applying power to the router/hub, make sure the input voltage selection switch on the power supply is set to the correct voltage for your area. (See Figure 3-4.)

Figure 3-4 Power Supply Input Voltage Selection Switch



Step 5 If applicable, remove the voltage warning label from the AC connector at the rear of the router/hub, and plug in the shielded AC power cable.

Step 6 Apply power to the router/hub. Wait approximately two minutes for the system to initialize and complete the self-tests.

Step 7 After the SNMP manager starts, press **Ctrl-E** to exit to the console prompt, <<C>>.

Note If **Ctrl-E** has no effect, the console may have timed out. Type **hellottt** to reactivate the console, then type **Ctrl-E** to escape to the console.

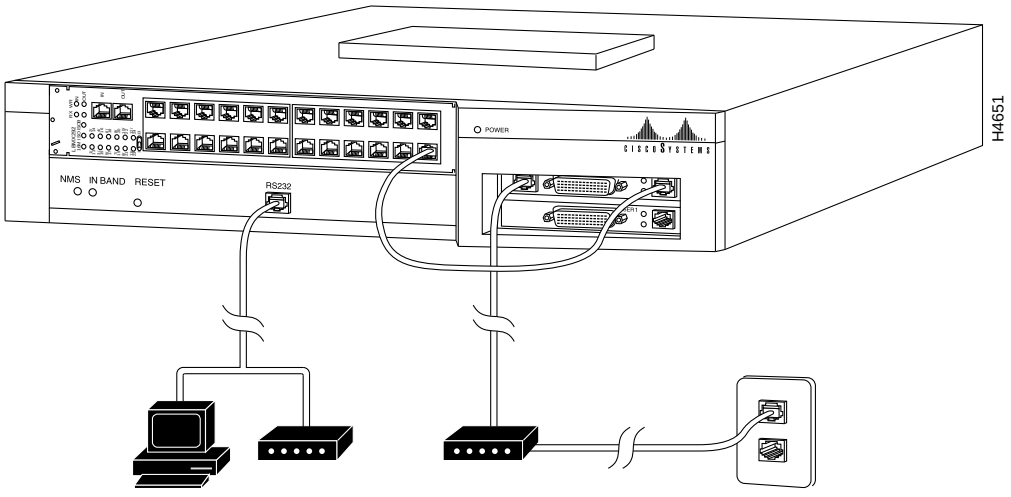
You can now begin configuring the router card or modify the SNMP agent. See the chapter "Configuring the Router Card" for more information. Table 3-1 lists commonly used DOS commands on the Cisco 2517 or Cisco 2519.

Table 3-1 DOS Commands Used in the Router/Hub

Key Sequence or Command	Action
Ctrl-E	Stops the SNMP agent and displays the <<C>> prompt.
Ctrl-Q	Exits the router program
hellottt	Wakes up the SNMP agent
agent	Restarts the SNMP agent
router	Connects to the router card

You can also connect a console, modem, or terminal server to the auxiliary port on the router card. Figure 3-5 shows additional ways to communicate with the router card or management card console port.

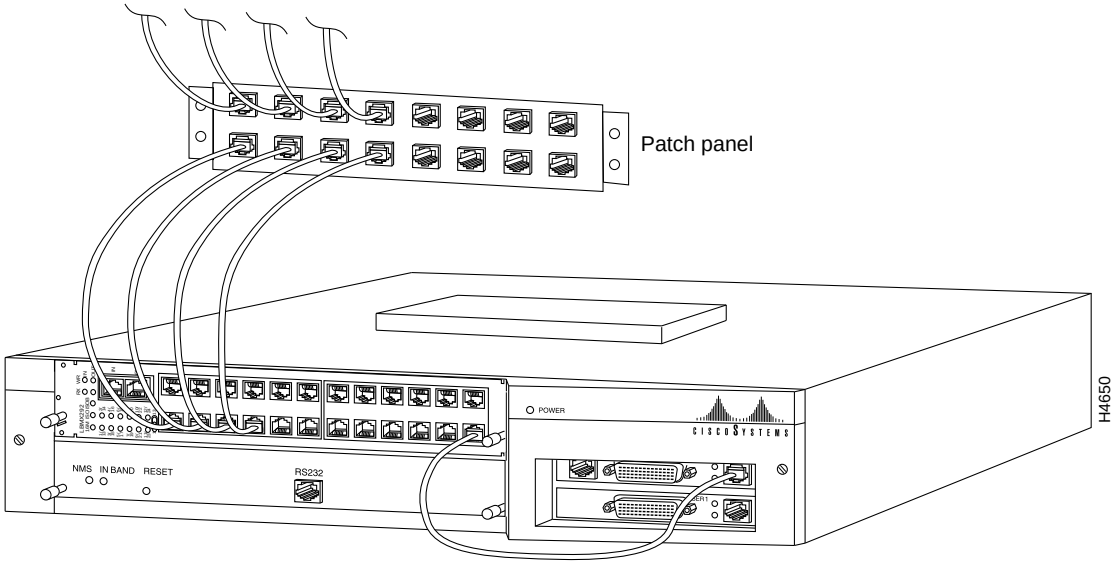
Figure 3-5 Communicating with the Cisco Router/Hub



Cabling the Hub Ports

You can connect up to 11 stations in a Token Ring network to the Cisco 2517 router/hub, and up to 23 stations to a Cisco 2519 router/hub. Figure 3-6 shows the Cisco 2519 ports connected to a patch panel.

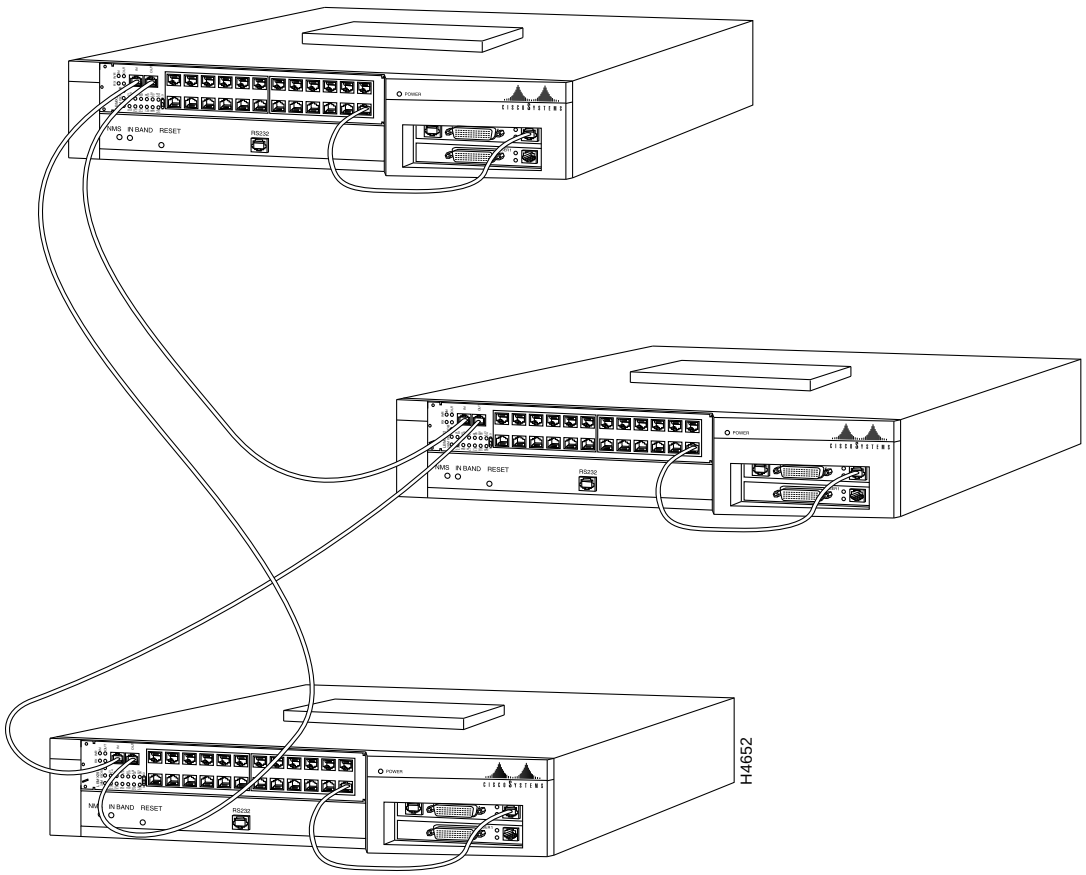
Figure 3-6 Token Ring Hub Ports Connected to a Patch Panel



Connecting the Cisco 2519 to a Token Ring Network

You can connect a Cisco 2519 router/hub to a Token Ring network via the Ring In and Ring Out ports. The Ring In port connects to the Ring Out port of the upstream router/hub, and the Ring Out port connects to the Ring In port of the downstream router/hub. See Figure 3-7.

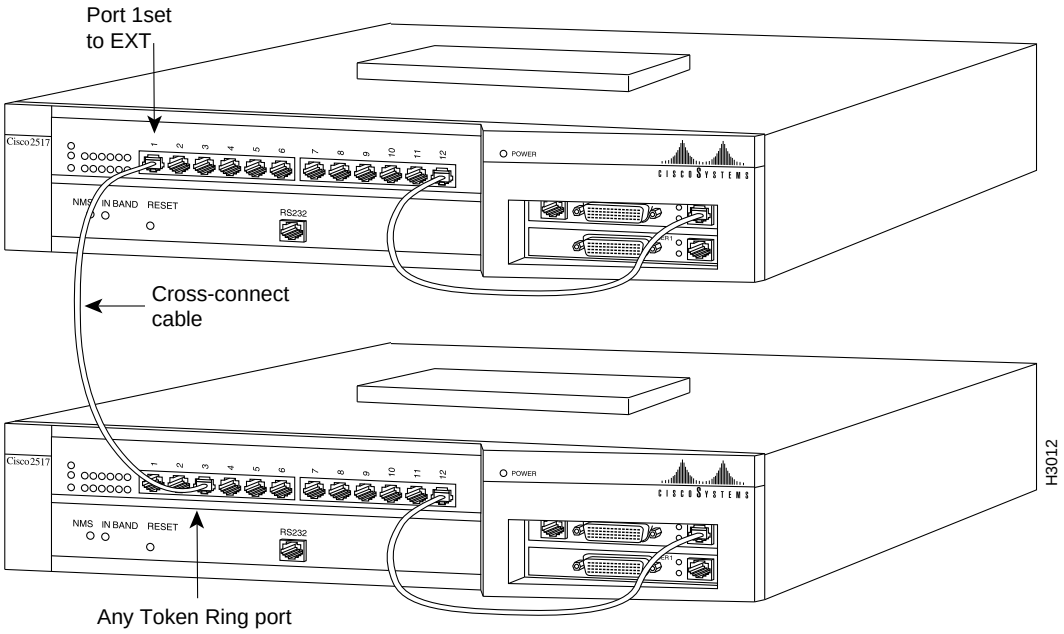
Figure 3-7 Connecting to a Token Ring Network



Cascading Cisco 2517 Router/Hubs

You can add stations to the ring by attaching another Cisco 2517 or Token Ring concentrator to port 1 on the hub card. Port 1 has two mode settings that are configured with the DIP switch (see the appendix “Cisco 2517 and Cisco 2519 Router/hub Maintenance” for switch location and settings). When the port is set to lobe mode, it can be used to connect a station in the ring. When the port is set to EXT mode, it is used to connect another router/hub. In Figure 3-8, the upper Cisco 2517’s port 1 mode setting is EXT, and the lower Cisco 2517’s port 1 mode setting is lobe.

Figure 3-8 Cascading Cisco 2517 Router/Hubs



Note Because of network management limitations, this is not a recommended solution for permanently expanding your network.

Stacking Router/Hubs

The Cisco 2517 and Cisco 2519 have a stack expansion connector terminator on the top of the unit. Removing this terminator allows you to increase the number of ports by connecting up to five stackable expansion units (available from Lanoptics, Inc.).