CHAPTER 3

Installing the Cisco 7000

This chapter includes procedures for rack-mounting and installing the Cisco 7000.

Rack-Mounting the Chassis

To rack-mount the Cisco 7000, which is an option, refer to the configuration note *Cisco 7000 and Cisco 7507 Rack-Mount Kit Installation Instructions* (Document Number 78-1058-xx, where xx is the latest version of the document), which accompanied the rack-mount kit, and which is available on UniverCD or as a printed copy.

Note If you choose *not* to rack-mount the Cisco 7000, continue to the following section "General Installation."

Warning To prevent bodily injury when mounting or servicing this unit in a rack, you must take special precautions to ensure that the system remains stable. The following guidelines are provided to ensure your safety:

- This unit should be mounted at the bottom of the rack if it is the only unit in the rack.
- When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.

For translated versions of this warning, refer to the appendix "Translated Safety Warnings."

General Installation

The chassis should already be in the area where you will install it, and your installation location should already be determined.

When installing the chassis on a table or the floor, ensure that you have planned a clean, safe location for the router and have considered the following:

- The location does not block the chassis intake (front) and exhaust (rear panel) vents.
- Multiple chassis can be placed side by side, but do not stack them.
- Dust accumulates on floors. If you are placing the chassis on the floor, try to find a location with a minimum of dust. Excessive amounts of dust drawn in by the blower will require frequent filter cleaning or replacement.
- A raised platform or sturdy table is a cleaner environment than the floor.
- When you are deciding where to install any equipment, consider future maintenance requirements. Allow at least three or four feet of clearance behind the power supplies for maintenance (installing or replacing power supplies or interface processors).

Warning Two people are required to lift the chassis. Grasp the chassis underneath the lower edge and lift with both hands. To prevent injury, keep your back straight and lift with your legs, not your back. To prevent damage to the chassis and components, never attempt to lift the chassis with the handles on the power supplies or on the interface processors, or by the plastic panels on the front of the chassis. These handles were not designed to support the weight of the chassis. (For translated versions of this warning, refer to the appendix "Translated Safety Warnings.")

Make sure the area in which you will install the chassis is free of debris and dust. Also make sure your path to the area is unobstructed.

On the rear of the chassis, do the following:

Step 1 Check the ejector levers and ensure that the RP, SP (or SSP), and all interface processors are securely installed.

Step 2 Check the captive installation screws on the RP, SP (or SSP), and each interface processor, and tighten any that are loose.

Step 3 Ensure that both power supply bays are empty.

Step 4 *Two people are required to perform this step*. With a person positioned at either side of the chassis, grasp the bottom edge of the chassis with one hand near the front and the other near the back. Slowly lift the chassis in unison. Avoid sudden twists or moves to prevent injury.

Step 5 Place the chassis in a location where the air intake vent on the front of the chassis (the bottom front panel) is not drawing in exhaust air from other equipment.

Step 6 Ensure that you have at least three or four feet of clearance around the rear of the chassis. You will need this space to install the power supplies, perform maintenance on the chassis, and observe LED indications.

Step 7 After you correctly position the chassis, proceed to the next section "Installing the Power Supplies."

Installing the Power Supplies

To install the power supplies, refer to the following documentation:

- For the AC-input power supplies, refer to the configuration note *700-Watt AC-Input Power Supply Installation and Replacement Instructions*, which is available on UniverCD or as a printed copy (Document Number 78-1055-xx, where xx is the latest version of the document).
- For the DC-input power supplies, refer to the configuration note *700-Watt DC-Input Power Supply Installation and Replacement Instructions*, which is available on UniverCD or as a printed copy (Document Number 78-1445-xx, where xx is the latest version of the document).

Note Because of agency compliance and safety issues, mixing AC-input and DC-input power supplies in the same Cisco 7000 is not recommended.

After you install the power supplies, refer to the section "Setting the Boot Jumper on the RP."

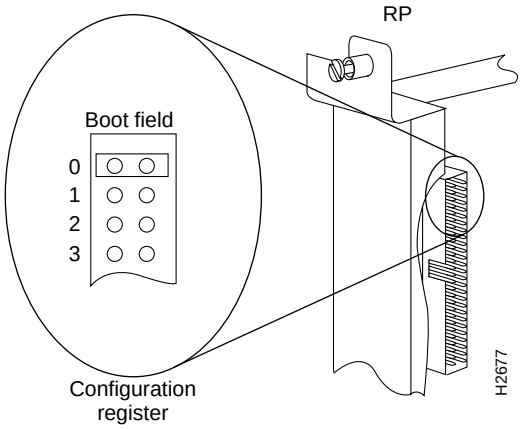
Setting the Boot Jumper on the RP

On the RP (running Cisco IOS releases earlier than Release 10.0), pins (also called *bits*) 0 through 3 on the hardware configuration register form the *boot field.* The boot field specifies a number in binary. When the boot field is set to either 0 or 1 (0-0-0-0 or 0-0-0-1), the system ignores any boot instructions in the configuration file.

Note If your RP is running Release 10.0 or later, or you have an RSP7000 in your Cisco 7000, refer to the section "Software Configuration Register Settings at Startup," in the chapter "Performing a Basic Configuration of the Cisco 7000."

The RP hardware configuration register boot field is shown in Figure 3-1.

Figure 3-1 Configuration Register Boot Field on the RP



When the boot field is set to 0, you must boot the operating system manually by giving a **b** (or **boot**) command to the system bootstrap program or ROM monitor. You can enter the **boot** command only, or include additional boot instructions with the command such as the name of a file stored in Flash memory or a file that you specify for booting from a network server.

If you use the **boot** command without specifying a file or any other boot instructions, the system boots from the read-only memory (ROM) image. Otherwise, you can instruct the system to boot from a specific image such as a Flash file (using the **boot system flash** *filename* command), or boot from a network server by sending broadcast TFTP requests (using the **boot system** *filename* command), or send a direct TFTP request to a specific server (using the **boot system** *filename address* command).

When the boot field is set to 1 (the factory default), the system boots from ROM. Boot field settings of 0 and 1 both override any boot instructions in the system configuration file. If you set the boot field to any bit pattern other than 0 or 1, the system uses the resulting number to form a filename for booting from a network server.

To form the filename, the system starts with *cisco* and links the octal equivalent of the boot field value (jumper setting) and the processor type in the following format: *cisco<jumpervalue>-<processorname>*. The system uses that filename to invoke the system image from ROM or by booting from a network server.

However, if the configuration file contains any boot instructions, the system uses those boot instructions instead of the filename it computed from the jumper settings. You must set the boot field on your RP for the boot functions you require.

For more detailed information on the hardware configuration register or the software configuration register feature, which is available in Cisco Internetwork Operating System (Cisco IOS) Release 10.0 or later, refer to the section "Software Configuration Register Settings at Startup," in the chapter "Performing a Basic Configuration of the Cisco 7000," or to the *Cisco 7000 Hardware Installation and Maintenance* publication, which is available on UniverCD or as a printed copy.