



# About This Manual

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This section discusses the objectives, intended audience, and organization of this hardware installation and maintenance publication, and defines the conventions used to convey instructions and noteworthy information.

## Document Objectives

This publication contains two kinds of procedures: specific procedures for preparing your site and network equipment for the initial hardware installation of the router, and procedures you may need in the future to modify or upgrade your system. It will guide you through the initial site preparation, hardware installation, and startup of your new router. After you install the hardware, you will use the appropriate companion publications to configure your system. The maintenance chapter provides maintenance requirements and guidelines for the general care and upkeep of your new router. All additions or upgrades to the router hardware, software, or microcode (firmware) that you order from the factory are accompanied by configuration notes that provide product-specific installation instructions and up-to-date product information.

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## Audience

Setting up and maintaining a network requires the knowledge and expertise of people with a variety of skills. In many cases, the people responsible for installing and maintaining hardware and wiring are not the ones who configure the software and administer the network. This publication provides information specific to installing and maintaining the router hardware. To use this publication, you should be familiar with electronic circuitry and wiring practices, and preferably have experience as an electronic or electromechanical technician. Although this document provides brief descriptions and examples of a few software configuration and display commands, it is not a reference for software. For comprehensive descriptions and examples of software configuration commands and the procedures for implementing them, refer to the related software configuration and reference documentation.

## Document Organization

The organization of this publication follows a recommended linear installation sequence: starting with Chapter 1, “Product Overview,” and continuing through Chapter 3, “Installing the Router.” You will refer to Chapter 4, “Troubleshooting,” only if you experience problems with the initial hardware installation or startup. Use the maintenance information in Chapter 5, “Maintenance,” whenever you add, upgrade, or rearrange system components.

This publication also includes some information that you may not need at initial installation, but is useful when upgrading or adding components to the system. Additional reference information is included in the appendixes. Following is a brief description of each chapter:

- Chapter 1, “Product Overview,” describes the physical properties of the router chassis, components, and interface options. It also provides brief functional descriptions of the primary system features.
- Chapter 2, “Preparing for Installation,” is a preparatory section that describes site requirements, safety considerations, tools required, optional and required network connection equipment, unpacking checklists, and procedures you should perform *before* actual installation. This chapter contains descriptions and illustrations of all types of network interface cables, connectors, and interface devices that you may need for your network connections, so you can use this chapter as a reference.
- Chapter 3, “Installing the Router,” provides instructions for rack mounting the router, installing power supplies, connecting the external network interface cables, and starting the system. After your system successfully initializes, you will proceed to the related software documentation to configure the interfaces. If the system fails to initialize successfully, you will proceed to Chapter 4 to troubleshoot the problem.
- Chapter 4, “Troubleshooting the Installation,” provides troubleshooting guidelines for the initial hardware installation and suggests steps to help you quickly isolate the source and resolve the problem.
- Chapter 5, “Maintenance,” provides procedures for replacing the system components, for adding new components, and for upgrading or modify the existing components.
- Appendix A, “Cabling Specifications,” lists pin signals for the network interface cables you will need and provides cable assembly drawings for the serial port adapter cables.
- Appendix B, “Reading LED Indicators,” describes the various states and indications of the LEDs on the chassis front panel, route processor (RP), switch processor (SP), and the various interface processors. This information is of limited use at initial system startup because the interfaces are not yet configured, and most of the LEDs are not functional (although they may light). This information is provided for your reference, to be used after the interfaces have been configured and brought on line.
- Appendix C, “Industry Standard Wiring Plans,” lists the telephone industry color-code scheme for 25-pair wires including the pin numbers

## Document Conventions

This publication uses the following conventions:

- The symbol ^ represents the key labeled *Control*.  
For example, the key combination ^z means hold down the *Control* key while you press the z key.
- Cross references to additional or related information within this publication specify the title (in quotes) of the section that contains the information. For example, refer to “Document Conventions.”

Command descriptions use these conventions:

- Examples that contain system prompts denote interactive sessions, indicating the commands that you should enter at the prompt. The system prompt indicates the current level of the EXEC command interpreter. For example, the prompt `router>` indicates that you should be at the *user* level, and the prompt `router#` indicates that you should be at the *privileged* level. Access to the privileged level usually requires a password. Refer to the related software configuration and reference documentation for additional information.
- Commands and keywords are in **boldface** font.
- Arguments for which you supply values are in *italic* font.
- Elements in square brackets ([ ]) are optional.
- Alternative but required keywords are grouped in braces ( { } ) and separated by vertical bars ( | ).

Examples use these conventions:

- Terminal sessions and sample console screen displays are in *screen* font.
- Information you enter is in **boldface screen** font.
- Nonprinting characters, such as passwords, are in angle brackets (< >).
- Default responses to system prompts are in square brackets ([ ]).
- Exclamation points (!) at the beginning of a line indicate a comment line.



**Caution** Means *reader be careful*. You are capable of doing something that might result in equipment damage or loss of data.

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**Note** Means *reader take note*. Notes contain helpful suggestions or references to materials not contained in this manual.

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**Timesaver** Means *the described action saves time*. You can save time by performing the action described in the paragraph.



**Warning** Means *danger*. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and standard practices for preventing accidents. Chapter 2 provides general safety considerations and specific guidelines for safely installing the Cisco 7000 router.

