



Installation

This chapter provides information on the following topics:

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- [Preventing Router Damage](#)
- [Unpacking Your Router](#)
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- [Verifying Installation](#)
- [Where to Go from Here](#)

Safety

Before installing the router, read the following warnings:



Warning

Only trained and qualified personnel should be allowed to install or replace this equipment.



Warning

Read the installation instructions before you connect the system to its power source.



Warning

Before working on a system that has a standby/off switch, turn the power to standby and unplug the power cord.



Warning

Before working on equipment that is connected to power lines, remove jewelry (including rings, necklaces, and watches). Metal objects will heat up when connected to power and ground and can cause serious burns or weld the metal object to the terminals.



Warning

The ISDN connection is regarded as a source of voltage that should be inaccessible to user contact. Do not attempt to tamper with or open any public telephone operator (PTO)-provided equipment or connection hardware. Any hardwired connection (other than by a nonremovable, connect-one-time-only plug) must be made only by PTO staff or suitably trained engineers.



Warning

To avoid electric shock, do not connect safety extra-low voltage (SELV) circuits to telephone-network voltage (TNV) circuits. LAN ports contain SELV circuits, and WAN ports contain TNV circuits. Some LAN and WAN ports both use RJ-45 connectors. Use caution when connecting cables.



Warning

Ultimate disposal of this product should be handled according to all national laws and regulations.



Warning

If the symbol of suitability with an overlaid cross (ⓧ) appears above a port, you must not connect the port to a public network that follows the European Union standards. Connecting the port to this type of public network can cause severe injury or damage your router

European Union Statements

The following statements apply to Cisco 801 routers and Cisco 803 routers sold in the European Union (EU).

Network Termination Point Statement

This product does not contain a “Network Termination Point” (NTP) as defined by ETSI 300 386-2. This product is classified by the manufacturer as “Terminal Equipment.” If you have any additional questions, please contact your local network operator.

ISDN S/T Ports Statement

These ports have not been classified as “directly connected ports” to outside cables as defined by CISPR 24, 1997 by the manufacturer. If you have any additional questions, please contact your local network operator.

Preventing Electrostatic Discharge Damage

Electrostatic discharge (ESD) is a transfer of electrostatic charge between bodies of different electrostatic potentials, such as a person and a piece of electrical equipment. It occurs when electronic components are improperly handled, and it can damage equipment and impair electrical circuitry. Electrostatic discharge is more likely to occur with the combination of synthetic fibers and dry atmosphere.

Always use the following ESD-prevention procedures when removing and replacing components:

1. Connect the chassis to earth ground with a wire that you provide.
2. Wear an ESD-preventive wrist strap that you provide, ensuring that it makes good skin contact.

Connect the clip to an unpainted surface of the chassis frame to safely channel unwanted ESD voltages to ground. To properly guard against ESD damage and shocks, the wrist strap and cord must operate effectively. If no wrist strap is available, ground yourself by touching the metal part of the chassis. Always follow the guidelines in the preceding section, “[Safety](#).”

3. Do not touch any exposed contact pins or connector shells of interface ports that do not have a cable attached.

If cables are connected at one end only, do not touch the exposed pins at the unconnected end of the cable.



Note

This device is intended for use in residential and commercial environments only.



Caution

Periodically check the resistance value of the antistatic strap, which should be between 1 and 10 megohms (Mohms).

Preventing Router Damage

Use the following guidelines when connecting devices to your router:

- Connect the color-coded cables supplied by Cisco Systems to the color-coded ports on the back panel.
- If you must supply your own cable, see the “[Cabling Specifications](#)” section in Appendix B, “[Specifications and Cables](#).” If this appendix does not provide specifications for a particular cable, we strongly recommend ordering the cable from Cisco Systems.
- If the symbol of suitability (☒) appears above a port, you can connect the port directly to a public network that follows the European Union standards.



Warning

If the symbol of suitability with an overlaid cross (☒) appears above a port, you must not connect the port to a public network that follows the European Union standards. Connecting the port to this type of public network can cause severe injury or damage your router.

Unpacking Your Router

[Table 2-1](#) lists the items that come with your router. All these items are in the accessory kit that is inside the box that your router came in. If any of the items is missing or damaged, contact your customer service representative.

Table 2-1 Router Box Contents

• Power cord (black)
• Desktop power supply
• Console cable (light blue)
• DB-9-to-RJ-45 adapter for use with light blue console cable
• ISDN ST cable (orange) (Cisco 801 and 803 routers)
• Ethernet cable (yellow)
• ISDN U or IDSL cable (red) (Cisco 802, 802 IDSL, 804, and 804 IDSL routers)
• RJ-45-to-RJ-11 adapter cable for use with red ISDN U cable
• Product documentation

Preinstallation Activities

Before you begin installing your Cisco 800 series router, perform the following steps:

- Step 1** Order an ISDN BRI line from your telephone service provider. For more information, refer to the *Cisco 800 Series Routers Software Configuration Guide*.
- Step 2** If you have a Cisco 801 or Cisco 803 router, do the following:

- If you are outside of North America, ask your telephone service provider if you must provide an external Network Termination 1 (NT1) and the ISDN U cable that connects the NT1 to the ISDN wall jack. Ask for NT1 vendors if necessary.
 - If you are in North America, ask your telephone service provider for external NT1 vendors. Provide the ISDN U cable that connects the NT1 to the ISDN wall jack.
- Step 3** Be aware of Ethernet, ISDN, and IDSL cable distance limitations. For more information, see the “[Maximum Cable Distances](#)” section in Appendix B, “[Specifications and Cables](#).”
- Step 4** Gather the Ethernet devices to be connected to the router: hub, server, workstation, or PC with 10- or 10/100-Mbps network interface card (NIC).
- Step 5** If you have a Cisco 801 or Cisco 803 router and plan to connect a digital telephone, you must provide an NT1 with two S/T interfaces and one U interface, a telephone cable to connect the telephone (usually this cable is provided with the device), and an ISDN U cable that connects the NT1 to the ISDN wall jack.
- Step 6** If you have a Cisco 803 or Cisco 804 router, gather the devices (such as an analog telephone, fax machine, or modem) that you plan on connecting to the router. You must also provide the telephone cable to connect each device (usually this cable is provided with the device).
- Step 7** If you plan to configure the software using a terminal or PC connected to the router, provide the terminal or PC.

**Caution**

If you are mounting the router on drywall, use three hollow-wall anchors to secure the three 1/8-in. (M3) screws. If the screws are not properly anchored, the strain of the network cable connections could pull the router from the wall. Use the drill bit size that is specified by the hollow-wall anchor manufacturer.

- Step 8** If you plan to use the cable lock feature, you need to provide a Kensington or equivalent locking cable.

Installing Your Router

To install the Cisco 800 series routers, you need to perform the following tasks in the following order:

1. Connect the Ethernet devices to the router.
2. Connect the ISDN or IDSL line to the router.
3. If you have a Cisco 801 or Cisco 803 router, connect an optional digital telephone.
4. If you have a Cisco 803 or Cisco 804 router, connect an optional analog telephone, fax, or modem.
5. Connect a terminal or PC to the router (for software configuration using the command-line interface [CLI] or for troubleshooting).
6. Connect the router to the power source.
7. Mount your router.
8. Verify the router installation.

Connecting Ethernet Devices

Table 2-2 lists the Ethernet devices you can connect to the router, connections for each device, and the settings of the router HUB/NO HUB or TO HUB/TO PC button (the default setting is IN).

Table 2-2 Connecting Ethernet Devices

Network Device Connected to Router	Router Port	Ethernet Cable Type ¹	Router HUB/NO HUB, TO HUB/TO PC Button Setting	Network Device Button Setting ²
Hub with equivalent to router HUB/NO HUB button	Cisco 801 and 802 routers: Ethernet port Cisco 803 and 804 routers: Ethernet port Ø	Straight-through	IN	MDI (IN)
Hub with equivalent to router HUB/NO HUB button	Cisco 801 and 802 routers: Ethernet port Cisco 803 and 804 routers: Ethernet port Ø	Straight-through	OUT	MDI-X (OUT)
Hub with equivalent to router TO HUB/TO PC button	Cisco 802 IDSL router: Ethernet port Cisco 804 IDSL router: Ethernet port 1	Straight-through	IN	MDI (IN)
Hub with equivalent to router TO HUB/TO PC button	Cisco 802 IDSL router: Ethernet port Cisco 804 IDSL router: Ethernet port 1	Straight-through	OUT	MDI (OUT)
Hub with equivalent to router HUB/NO HUB button	Cisco 803 and 804 routers: Ethernet ports 1, 2, 3	Straight-through	N/A ³	MDI (IN)
Hub with equivalent to router TO HUB/TO PC button	Cisco 804 IDSL router: Ethernet ports 2, 3, 4	Straight-through	N/A ⁴	MDI (IN)
Hub without equivalent to router HUB/NO HUB button	Cisco 801 and 802 routers: Ethernet port Cisco 803 and 804 routers: Ethernet port Ø	Straight-through	OUT	MDI-X (OUT)
Hub without equivalent to router TO HUB/TO PC button	Cisco 802 IDSL router: Ethernet port Cisco 804 IDSL router: Ethernet port 1	Straight-through	OUT	MDI-X (OUT)
Hub without equivalent to router HUB/NO HUB button	Cisco 803 and 804 routers: Ethernet ports 1, 2, 3	Crossover	N/A ³	MDI-X (OUT)
Hub without equivalent to router TO HUB/TO PC button	Cisco 804 IDSL router: Ethernet ports 2, 3, 4	Crossover	N/A ⁴	MDI-X (OUT)

Table 2-2 Connecting Ethernet Devices (continued)

Network Device Connected to Router	Router Port	Ethernet Cable Type¹	Router HUB/NO HUB, TO HUB/TO PC Button Setting	Network Device Button Setting²
Server, PC, or workstation	Cisco 801 and 802 routers: Ethernet port Cisco 803 and 804 routers: Ethernet port Ø	Straight-through	OUT	N/A
Server, PC, or workstation	Cisco 802 IDSL router: Ethernet port Cisco 804 IDSL router: Ethernet port 1	Straight-through	OUT	N/A
Server, PC, or workstation	Cisco 803 and 804 routers: Ethernet ports 1, 2, 3	Straight-through	N/A ³	N/A
Server, PC, or workstation	Cisco 804 IDSL router: Ethernet ports 2, 3, 4	Straight-through	N/A ⁴	N/A

1. Cisco provides a yellow straight-through cable. You provide crossover or additional straight-through cables. For details on cables, refer to Appendix B, "Specifications and Cables."
2. Hub vendors choose different names for the button controlling cable selections. This table uses the Cisco 1528 Micro Hub 10/100 with an MDI/MDI-X button as an example. Determine the button name and setting for your particular hub. Refer to your hub documentation for details.
3. On Cisco 803 and Cisco 804 routers, the HUB/NO HUB button affects only Ethernet port Ø.
4. On Cisco 804 IDSL routers, the TO HUB/TO PC button affects only Ethernet port 1.

Connecting Hubs

If you have a Cisco 803, 804, or 804 IDSL router, you can connect as many as four hubs.

Before connecting a hub, see [Table 2-2](#), and do the following:

- Choose Ethernet cables.
- On the router, set the HUB/NO HUB or TO HUB/TO PC button.
- On the hub, set the HUB/NO HUB button or its equivalent.

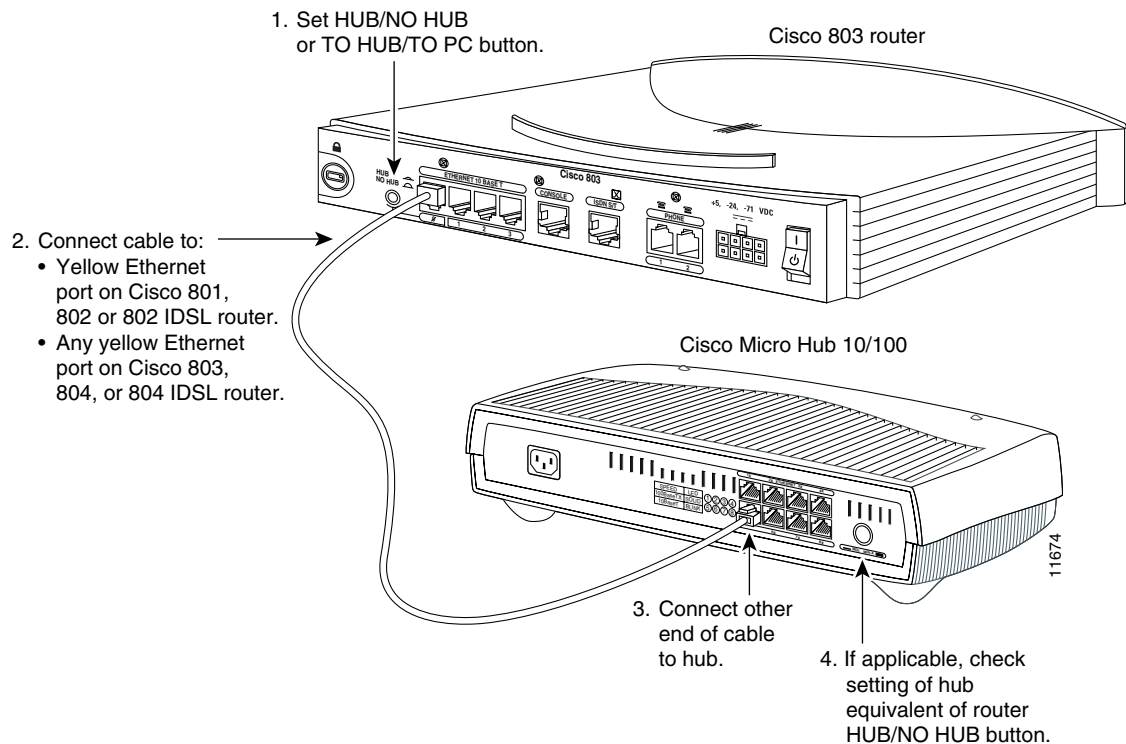
Follow the steps in [Figure 2-1](#) to connect a hub to a Cisco 800 series ISDN or IDSL router. This figure shows a Cisco 803 router with four Ethernet ports.



Caution

Always connect the yellow cable or an Ethernet cable to the yellow ports on the router. Do not connect the cable to an ISDN S/T or U port, to an IDSL port, or to an NT1. Connecting the cable to the wrong port or NT1 can damage your router.

Figure 2-1 Connecting a Hub



To verify your hub connection, verify that one of the following LEDs is on after you have completed the router installation:

- LINK LED on the Cisco 801, 802, or 802 IDSL back panel.
- LKØ, LK1, LK2, or LK3 LED on the Cisco 803 or Cisco 804 front panel.
- ETHERNET 1, 2, 3, or 4 LED on the Cisco 804 IDSL front panel.

If the LED is not on, see [Table 3-2](#) in Chapter 3, “Troubleshooting.”

Connecting a Server, PC, or Workstation

Before connecting the server, PC, or workstation, refer to [Table 2-2](#) to determine how to set the router HUB/NO HUB or TO HUB/TO PC button. Ensure that your device has a 10- or 10/100-Mbps NIC.

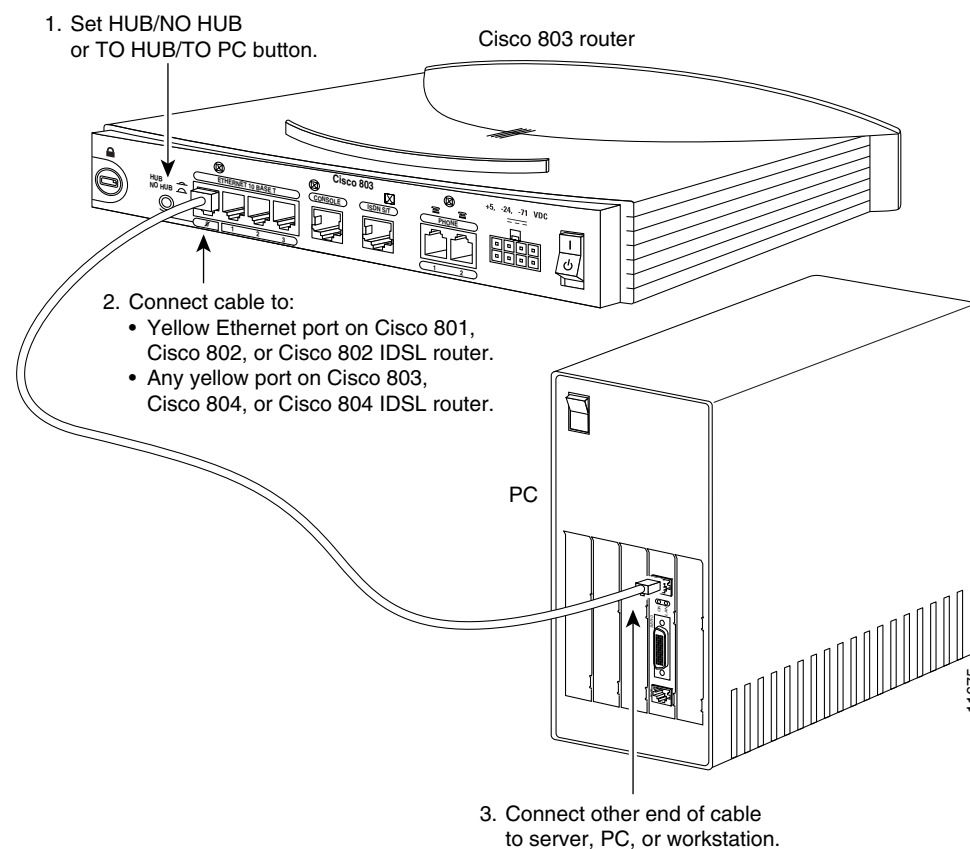
To connect one of these devices to a Cisco 800 series ISDN or IDSL router, follow the steps in [Figure 2-2](#).



Caution

Always connect the yellow cable or an Ethernet cable to the yellow ports on the router. Do not connect the cable to an ISDN S/T or U port, to an IDSL port, or to an NT1. Connecting the cable to the wrong port or NT1 can damage your router.

Figure 2-2 Connecting a Server, PC, or Workstation



To verify your connection, verify that one of the following LEDs is on after you have completed router installation:

- LINK LED on the Cisco 801, 802, or 802 IDSL back panel.
- LKØ, LK1, LK2, or LK3 LED on the Cisco 803 or Cisco 804 front panel.
- ETHERNET 1, 2, 3, or 4 LED on the Cisco 804 IDSL front panel.

If the LED is not on, see [Table 3-2](#) in Chapter 3, “Troubleshooting.”

Connecting an ISDN Line

The procedure to connect an ISDN line depends on the router and in some cases your location. The following sections describe the following procedures:

- [Connecting an ISDN Line to Cisco 801 and Cisco 803 Routers](#)
- [Connecting an ISDN Line to Cisco 802 and Cisco 804 Routers](#)

Connecting an ISDN Line to Cisco 801 and Cisco 803 Routers

Outside of North America, you might need to provide an external NT1 device and the ISDN U cable that connects the NT1 to the ISDN wall jack. Contact your telephone service provider to supply the following information:

- Whether you must supply an external NT1 and the ISDN U cable.
- If necessary, the names of NT1 vendors.

In North America, you must provide an external NT1 and the ISDN U cable that connects the NT1 to the ISDN wall jack. Contact your telephone service provider for a list of NT1 vendors.

To connect an ISDN line to a Cisco 801 or Cisco 803 router without an external NT1, follow the steps in [Figure 2-3 on page 2-11](#).

To connect an ISDN line to a Cisco 801 or Cisco 803 router with an external NT1, follow the steps in [Figure 2-4 on page 2-11](#).



Warning

Network hazardous voltages are present in the ISDN cable. If you detach the ISDN cable, detach the end away from the router first to avoid possible electric shock. Network hazardous voltages also are present on the system card in the area of the ISDN port (RJ-45 connector), regardless of when power is turned to standby.



Warning

Do not work on the system or connect or disconnect cables during periods of lightning activity.



Warning

To reduce the risk of fire, use only No. 26 AWG or larger telecommunications line cord.



Caution

Always connect the orange cable to the orange ISDN S/T port on the router. Do not connect the cable to a yellow Ethernet port. This will damage your router.



Caution

The Cisco 800 series routers do not support the Australian IUT requirement, which specifies that the routers must communicate for 1/2 hour after a power failure. If a power failure occurs, a Cisco 800 series router stops communicating with other devices.

Figure 2-3 Connecting an ISDN Line to Cisco 801 and Cisco 803 Routers (without External NT1)

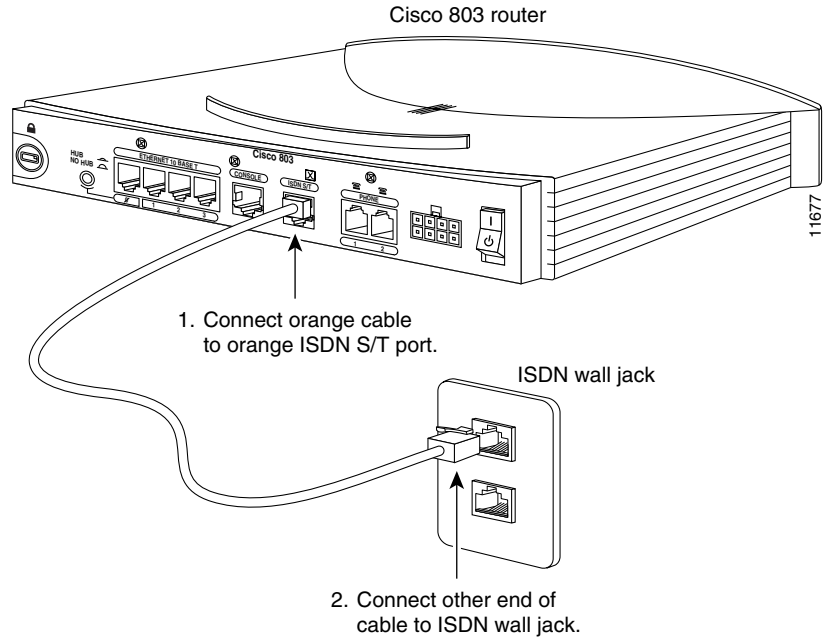
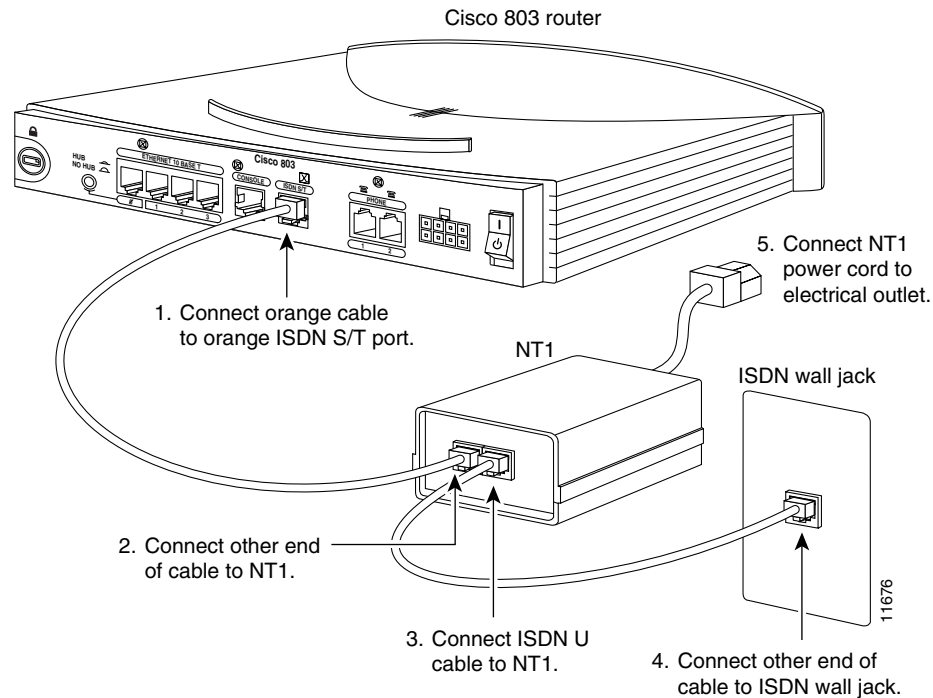


Figure 2-4 Connecting ISDN to Cisco 801 and Cisco 803 Routers (with External NT1)



Connecting an ISDN Line to Cisco 802 and Cisco 804 Routers

To connect an ISDN line to Cisco 802 and Cisco 804 routers, follow the steps in [Figure 2-5](#).

**Warning**

Network hazardous voltages are present in the ISDN cable. If you detach the ISDN cable, detach the end away from the router first to avoid possible electric shock. Network hazardous voltages also are present on the system card in the area of the ISDN port (RJ-45 connector), regardless of when power is turned to standby.

**Warning**

Do not work on the system or connect or disconnect cables during periods of lightning activity.

**Warning**

To reduce the risk of fire, use only No. 26 AWG or larger telecommunications line cord.

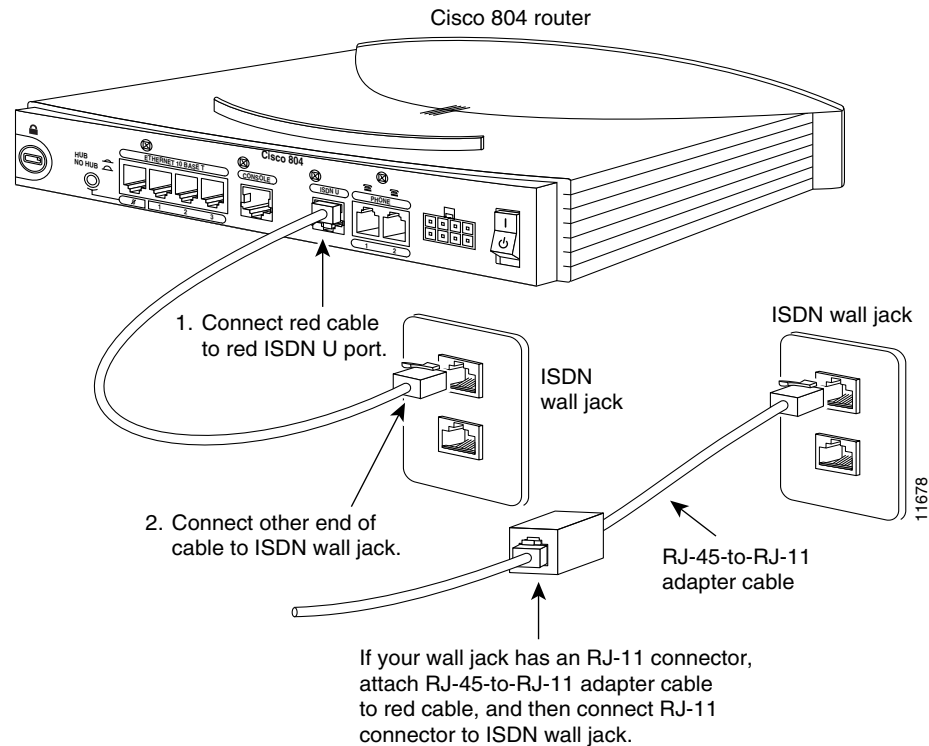
**Caution**

Always connect the red cable to the red ISDN U port on the router. Do not connect the cable to a yellow Ethernet port. This will damage your router.

**Caution**

The Cisco 800 series routers do not support the Australian IUT requirement, which specifies that the routers must communicate for 1/2 hour after a power failure. If a power failure occurs, a Cisco 800 series router stops communicating with other devices.

Figure 2-5 Connecting ISDN to Cisco 802 or Cisco 804 Routers



Connecting an IDSL Line



Warning

Network hazardous voltages are present in the IDSL cable. If you detach the IDSL cable, detach the end away from the router first to avoid possible electric shock. Network hazardous voltages also are present on the system card in the area of the IDSL port (RJ-45 connector), regardless of when power is turned to standby.



Warning

Do not work on the system or connect or disconnect cables during periods of lightning activity.



Warning

To reduce the risk of fire, use only No. 26 AWG or larger telecommunications line cord.



Caution

Always connect the red cable to the red IDSL port on the router. Do not connect the cable to a yellow Ethernet port. This will damage your router.

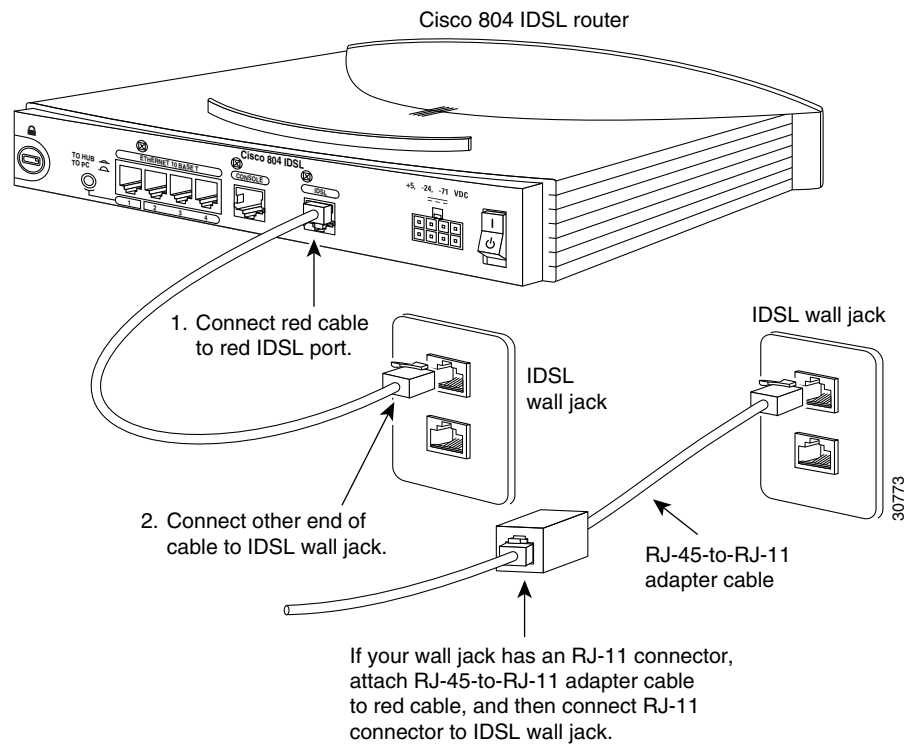


Caution

Cisco 802 IDSL and Cisco 804 IDSL routers do not support the Australian IUT requirement, which specifies that the routers must communicate for 1/2 hour after a power failure. If a power failure occurs, a Cisco 802 IDSL or 804 IDSL router stops communicating with other devices.

To connect an IDSL line to Cisco 802 IDSL and Cisco 804 IDSL routers, follow the steps in [Figure 2-6](#).

Figure 2-6 Connecting the IDSL Cable to Cisco IDSL Routers



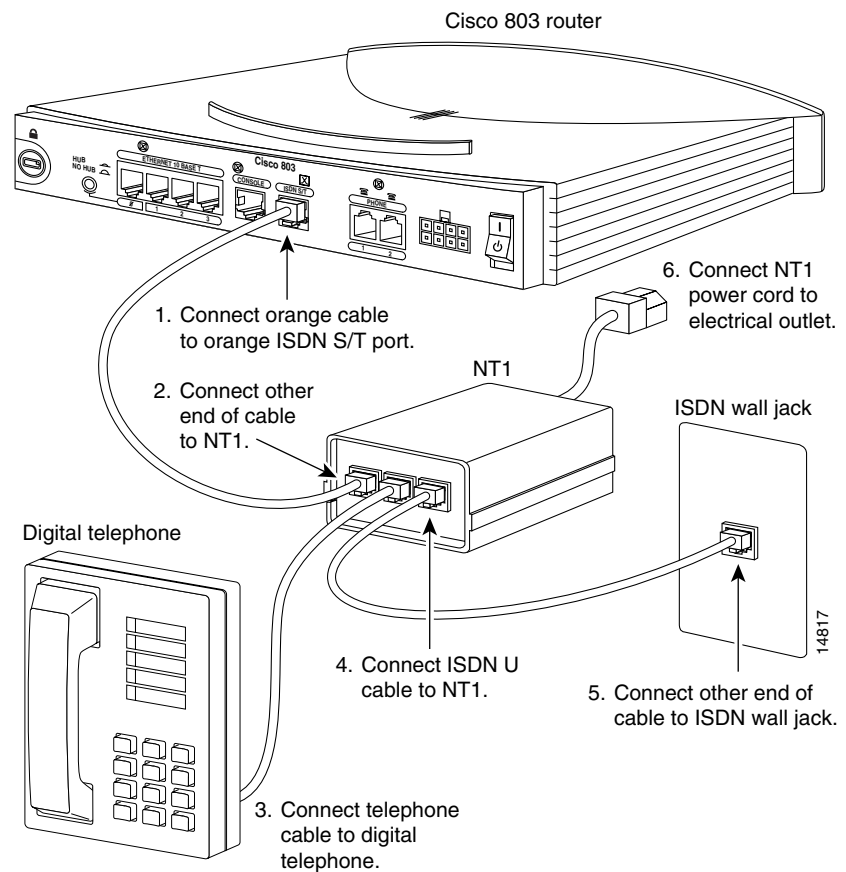
Connecting a Digital Telephone

You can connect a digital telephone, also known as an ISDN telephone, to the ISDN S/T port on Cisco 801 and Cisco 803 routers. This device connects to basic telephone services through the ISDN line.

To connect a digital telephone, follow the steps in [Figure 2-7](#). You must provide the following equipment:

- NT1 with two S/T interfaces and one U interface.
- Telephone cable to connect digital telephone. (This cable is usually provided with the telephone.)
- ISDN U cable that connects the NT1 to the ISDN wall jack.

Figure 2-7 Connecting Digital Telephone to Cisco 801 and Cisco 803 Routers



Connecting an Analog Telephone, Fax, or Modem

If you have Cisco 803 or Cisco 804 routers, you can connect two devices, such as an analog touch-tone telephone, fax machine, or modem. Each device is connected to basic telephone services through the ISDN line.

To connect an analog telephone, fax machine, or modem, follow the steps in [Figure 2-8](#). You must provide the telephone cable to connect each device. The telephone cable is usually provided with the device.

The gray PHONE 1 and PHONE 2 ports are RJ-11 connectors. If you are outside of North America, you must buy and attach adapters that allow your telephones, faxes, or modems to be connected to these RJ-11 connectors. In some countries, these adapters need additional electronics to convert the

telephones, faxes, or modems to work properly with the router phone ports. For example, in the United Kingdom, you must buy an adapter that also provides a *master socket*, which causes incoming calls to ring the connected devices. For information on recommended master sockets, see [Table 2-3](#).

**Warning**

This equipment contains a ring signal generator (ringer), which is a source of hazardous voltage. Do not touch the RJ-11 (phone) port wires (conductors), the conductors of a cable connected to the RJ-11 port, or the associated circuit-board when the ringer is active. The ringer is activated (indicated by a clicking sound) by an incoming call.

**Caution**

Do not connect the router telephone ports to the telephone wall jack. These ports are not meant for direct connection to a public network. This connection can damage your router.

Figure 2-8 Connecting an Analog Telephone, Fax, or Modem to Cisco 803 and Cisco 804 Routers

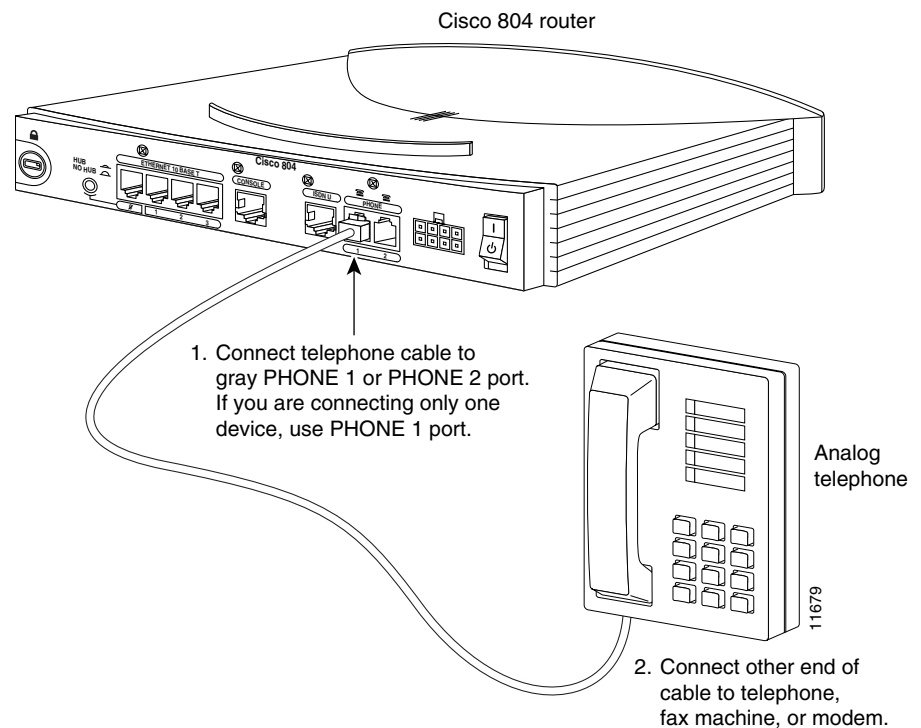


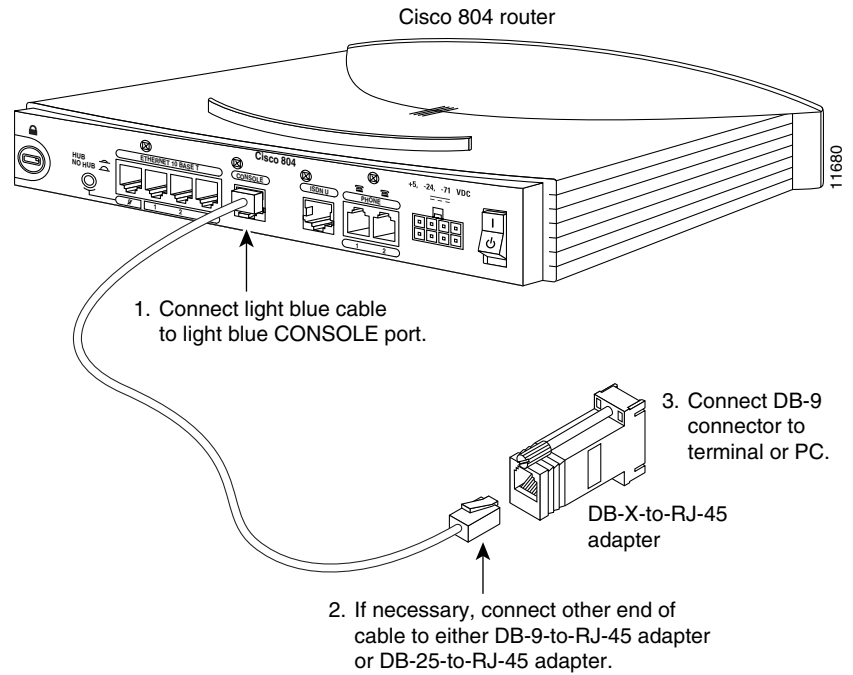
Table 2-3 Recommended Vendors for United Kingdom Master Sockets

Vendor Name	Product Name	For More Information
RS Components	Avro Pacific Telephone Ring Adapter (part number 303-2000)	http://www.rswww.com/
Tandy	Export Adapter (part number 2797057)	http://www.tandy.co.uk/

Connecting a Terminal or PC

You can connect either a terminal or a PC from which you can configure the software via the CLI or troubleshoot. To connect a terminal or PC, follow the steps in [Figure 2-9](#).

Figure 2-9 Connecting Terminal or PC



Connecting the Power Supply

To connect the power supply, follow the steps in [Figure 2-10](#).



Warning

The device is designed to work with TN power systems.



Warning

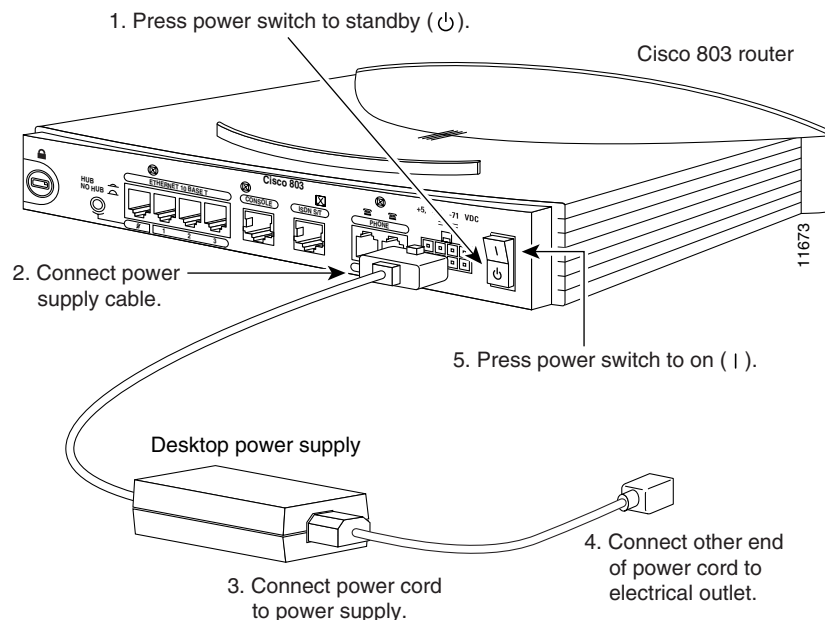
This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that a fuse or circuit breaker no larger than 120 VAC, 15A U.S. (240 VAC, 16A international) is used on the phase conductors (all current-carrying conductors).



Warning

This equipment is intended to be grounded. Ensure that the host is connected to earth ground during normal use.

Figure 2-10 Connecting the Power Supply



Mounting Your Router

You can mount your router on one of the following surfaces:

- Table or other horizontal surface
- Wall or other vertical surface

Mounting on a Table

You can mount your router on a table or other horizontal surface. Use the following guidelines:

- Do not cover or obstruct router vents, which are located on the router sides.
- You can stack a maximum of five routers atop one another.

Mounting on a Wall

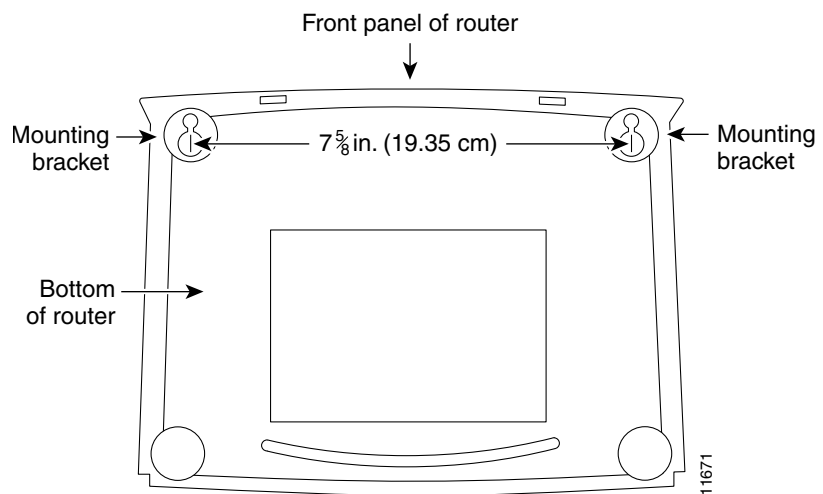
You can mount your router on a wall or other vertical surface by using the molded mounting brackets on the bottom of the router and two number-six, 3/4-in. (M3.5 x 20 mm) screws. You must provide the screws. [Figure 2-11](#) shows the mounting brackets.



Caution

If the wall to which you mount your router is drywall, use two hollow wall-anchors (1/8-in. with 5/16-in. drill bit or M3 with 8-mm drill bit) to secure the screws. If the screws are not properly anchored, the strain of the network cable connections could pull the router from the wall.

Figure 2-11 Wall-Mounting Brackets (Bottom of Router)

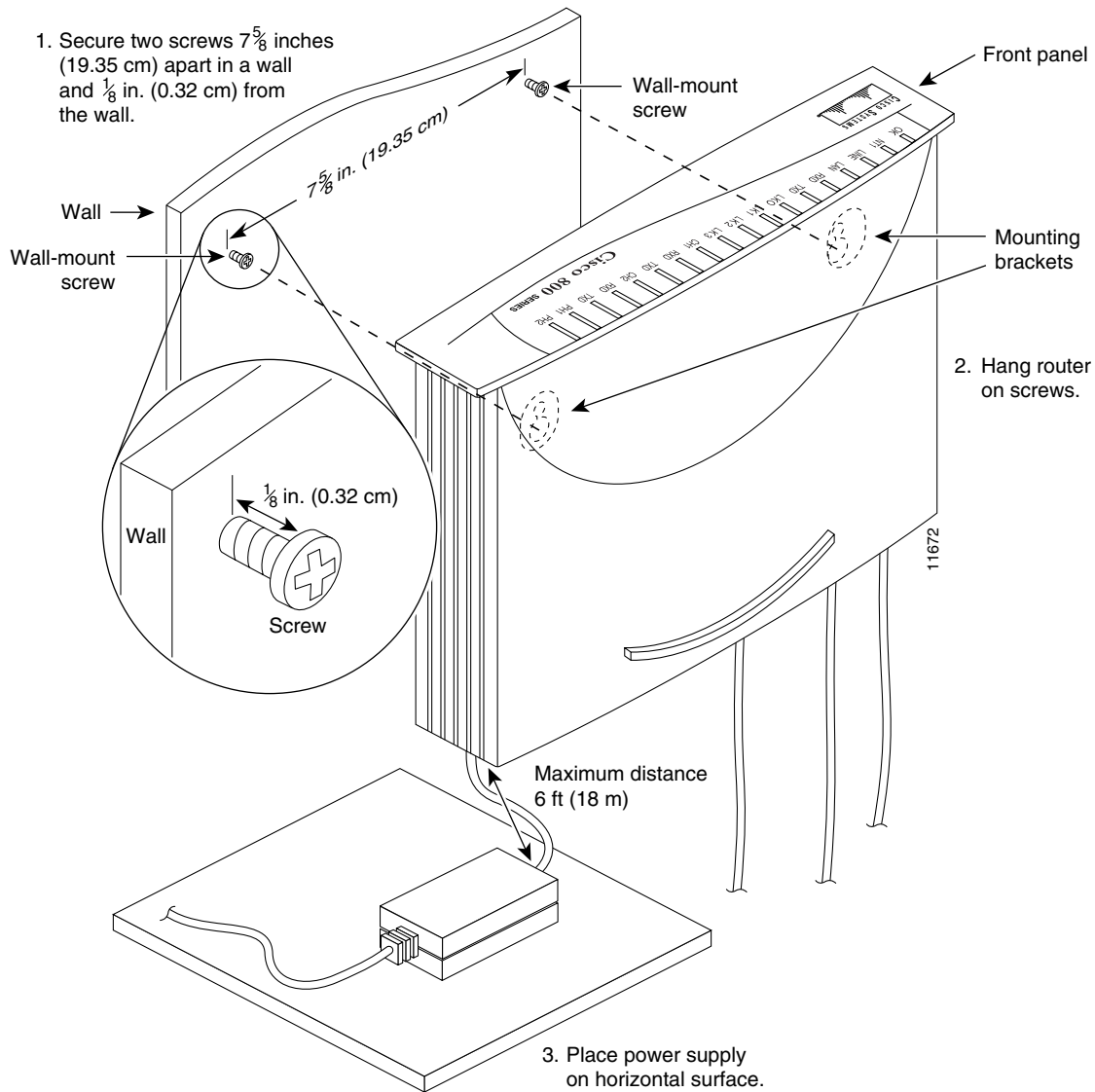


When mounting the router, the following conditions must be met:

- Because you will use the LEDs as status and problem indicators, the LEDs on the front panel must face upward and be easily visible.
- The back panel must face downward to reduce strain on the cable connections.
- The power supply must rest on a horizontal surface such as the floor or a table. If the power supply is not supported, it might place strain on the power supply cable and cause it to disconnect from the connector on the router back panel.

To mount the router, follow the steps in [Figure 2-12](#). The last page of this manual provides a template for measuring the distance between the screws.

Figure 2-12 Mounting Router on Wall



Verifying Installation

Verify the cable connections (links) by checking the LEDs listed in [Table 2-4](#). If the LEDs are not on, see Chapter 3, “[Troubleshooting](#).”

The LINK LED is on the back panel of Cisco 801 and Cisco 802 routers.

Table 2-4 Verifying Installation

Power/Link	LEDs To Check	Normal Patterns
Power	OK	On
To hub, server, PC, or workstation	<ul style="list-style-type: none"> • Cisco 801, 802, and 802 IDSL routers: LINK, LAN, LAN RXD, and LAN TXD • Cisco 803 and Cisco 804 routers: LKØ, LK1, LK2, LK3, LAN, LAN RXD, and LAN TXD • Cisco 804 IDSL router: ETHERNET LAN, RXD, TXD, 1, 2, 3, and 4 	<ul style="list-style-type: none"> • LINK, LKØ, LK1, LK2, LK3, ETHERNET 1, 2, 3, 4, LAN: On. LAN is on when indicated Ethernet port sends or receives a packet. • LAN RXD: blinking when an Ethernet port receives a packet. • LAN TXD: blinking when an Ethernet port sends a packet.
To ISDN network using ISDN S/T port	LINE, CH1, CH1 RXD, CH1 TXD, CH2, CH2 RXD, and CH2 TXD	<ul style="list-style-type: none"> • LINE, CH1, and CH2: On. CH1 or CH2 is on when the router has an active voice or data connection. • CH1 RXD, CH2 RXD: Blinking when indicated ISDN B channel receives a packet. • CH1 TXD, CH2 TXD: Blinking when indicated ISDN B channel sends a packet.
To ISDN network using ISDN U port	NT1, LINE, CH1, CH1 RXD, CH1 TXD, CH2, CH2 RXD, and CH2 TXD	<ul style="list-style-type: none"> • NT1, LINE, CH1, and CH2: On. CH1 or CH2 is on when the router has an active voice or data connection. • CH1 RXD, CH2 RXD: Blinking when indicated ISDN B channel receives a packet. • CH1 TXD, CH2 TXD: Blinking when indicated ISDN B channel sends a packet.
To IDSL network using IDSL port	NT1, LINE, CH1, CH1 RXD, CH1 TXD, CH2, CH2 RXD, and CH2 TXD	<ul style="list-style-type: none"> • NT1, LINE, CH1, and CH2: On. CH1 or CH2 is on when the router has an active data connection and the line speed is 64 kbps. CH1 and CH2 are both on when the router has an active data connection and the line speed is 128 or 144 kbps. • CH1 RXD, CH2 RXD: Blinking when indicated ISDN B channel receives a packet. • CH1 TXD, CH2 TXD: Blinking when indicated ISDN B channel sends a packet.

Table 2-4 Verifying Installation (continued)

Power/Link	LEDs To Check	Normal Patterns
To digital telephone	LINE, CH1, CH1 RXD, CH1 TXD, CH2, CH2 RXD, and CH2 TXD	<ul style="list-style-type: none"> • LINE, CH1, and CH2: On. CH1 or CH2 is on when the router has an active voice connection. • CH1 RXD, CH2 RXD: Blinking when indicated ISDN B channel receives a packet. • CH1 TXD, CH2 TXD: Blinking when indicated ISDN B channel sends a packet.
To analog telephone, fax, or modem	PH1 and PH2 ¹	On when telephone, fax, or modem is in use.

1. You can also pick up the handset and listen for a dial tone.

Where to Go from Here

You have completed the hardware installation and are ready to configure the software. Cisco strongly recommends that inexperienced network administrators use the Cisco 800 Fast Step application. Use the Cisco 800 Fast Step CD-ROM and online help. If you are an experienced network administrator and want to use the CLI to configure the software, refer to the *Cisco 800 Series Routers Software Configuration Guide*.