

1. Turn on power to the console (PC, Macintosh, or UNIX workstation) that is directly connected to the system via the RS-232 terminal port on the SRP I/O module.
2. To power on the router, turn on the power switches located on the power input module in the rear of the router.
3. Monitor the LEDs on the front of the SRP module(s) to verify that the system is booting properly. See *E-Series Installation and User Guide*.
4. Configure the router as shown below. Text you enter literally is shown in **bold**. Variables for which you substitute specific values are shown in *italics*.



This is a summary of safety warnings. For a complete list of warnings for this router, see *E-Series Installation and Use Guide* at [www.juniper.net/techpubs/hardware/](http://www.juniper.net/techpubs/hardware/)

- Only trained and qualified personnel should install or replace the router.
- Perform only the procedures illustrated on this poster or described in the *E-Series Installation and User Guide*. Other services should be performed by authorized service personnel only.
- Before installing the router, read the guidelines in the "Installation Guidelines and Requirements" chapter of the *E-Series Installation and User Guide* to make sure that the site meets power, environmental, and clearance requirements for the router.
- The recommended maximum ambient temperature is 50° C (122° F). The internal temperature of the rack should be considered for safe operation.
- Remove jewelry (including rings, necklaces, and watches) before working on equipment that is connected to power lines. Metal objects heat up when connected to power and ground and can cause serious burns or become welded to the terminals.
- Do not insert any metal object, such as a screwdriver, into an open slot or the backplane. Doing so may cause electric shock and serious burns.
- Evaluate the overall loading of the branch circuit before you install any equipment into a rack.
- Three people are required to install the E-series router in a rack: two to lift the system into position and one to screw it to the rack. The system is extremely heavy.
- Connect the E-series router or rack to ground (earth), and ensure that a reliable grounding path is maintained in the rack.
- When installing the router, the ground (earth) connection must always be made first and disconnected last.
- Do not work on the router or connect or disconnect cables during lightning activity.
- Before servicing the E-series router, turn off the power.
- Before powering on the E-series router, remove power from the DC circuit by deactivating the circuit breaker on the panel board that services the DC circuit.
- **ERX-310 (AC Model):** This unit has more than one power-supply cord. Disconnect two power cords BEFORE servicing to avoid electric shock.
- Failure to observe these safety warnings could result in serious physical injury.

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For technical support, contact Juniper Networks at [support@juniper.net](mailto:support@juniper.net), or at 1-888-314-JTAC (within the United States) or 408-745-9500 (from outside the United States).

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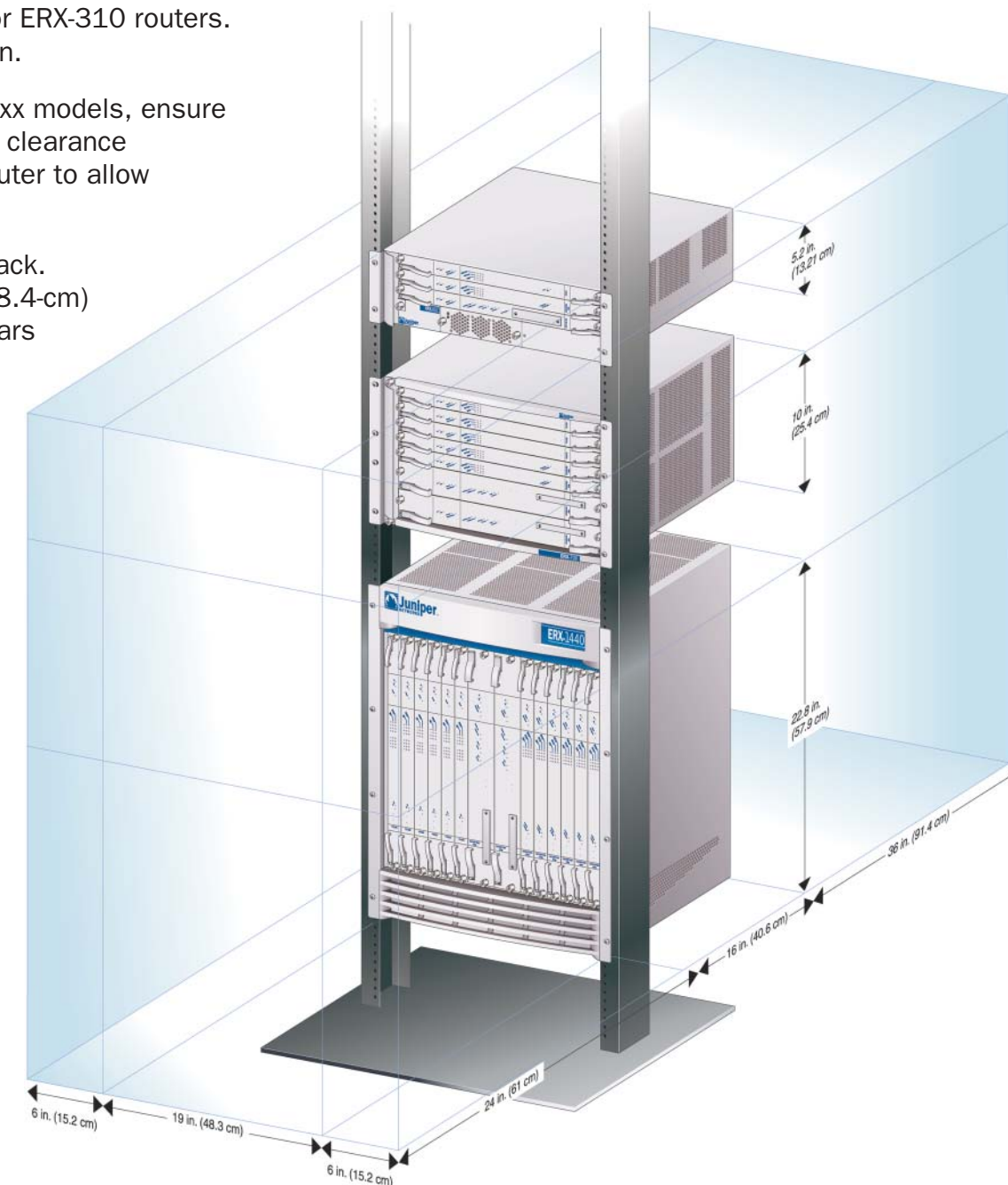
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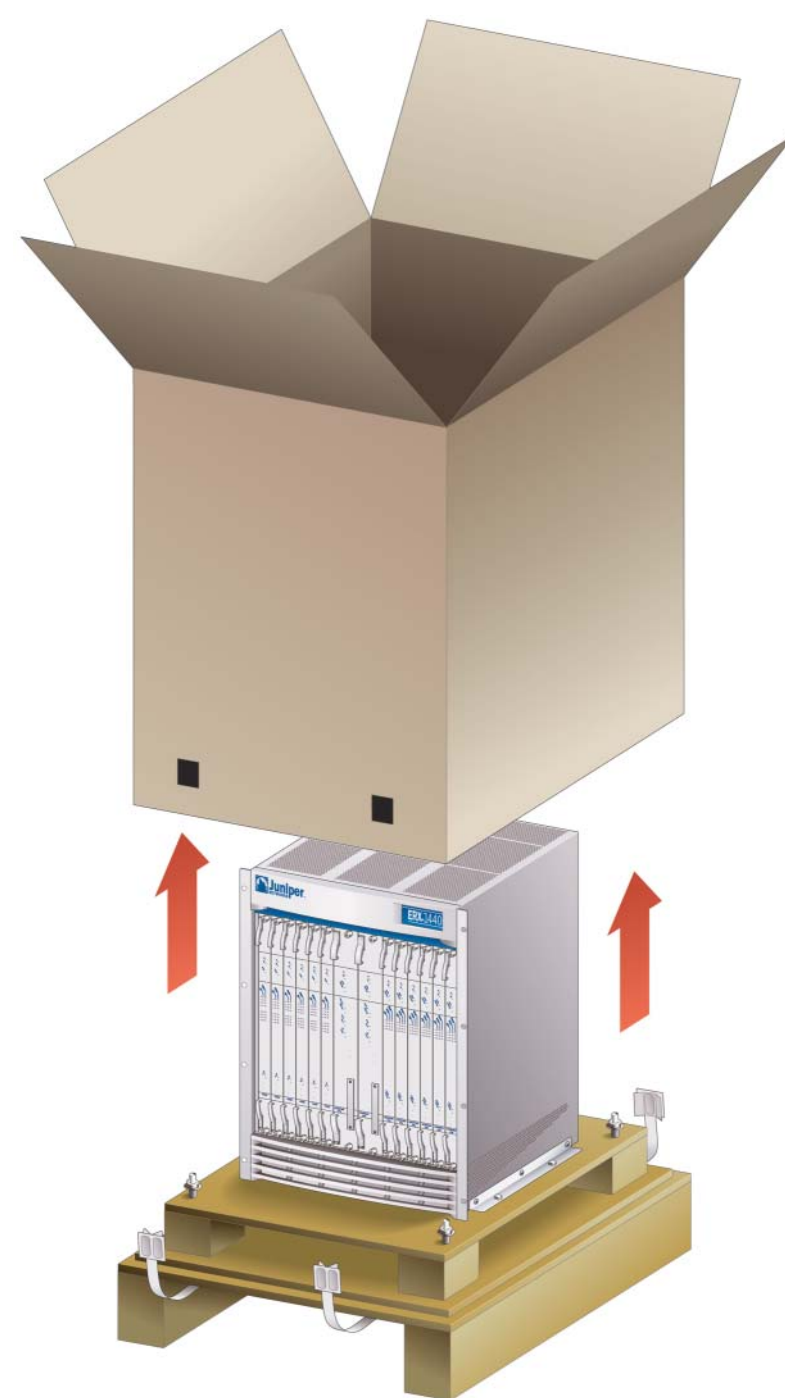
## Check Rack Space Requirements

- Use a two-post, four-post, or Telco-type rack. Do not use an enclosed rack for ERX-7xx models or ERX-310 routers. It does not provide adequate ventilation.
- If you use an enclosed rack for ERX-14xx models, ensure that there is a minimum of 3 inches of clearance between the inner side wall and the router to allow adequate airflow.
- The router fits in a 19-inch (48.3-cm) rack. You can install a router in a 23-inch (58.4-cm) rack if you use the 23-inch mounting ears available from Juniper Networks.
- You can install up to three ERX-14xx models in a single 84-inch (213.4-cm) rack. A fully loaded rack with three ERX-14xx models must structurally support 300 lb (136 kg).
- If you install an ERX-310 router or an ERX-7xx model above an ERX-14xx model in the same rack, you must install a plenum above the ERX-14xx model so that air can circulate between the systems. This plenum is available from Juniper Networks.



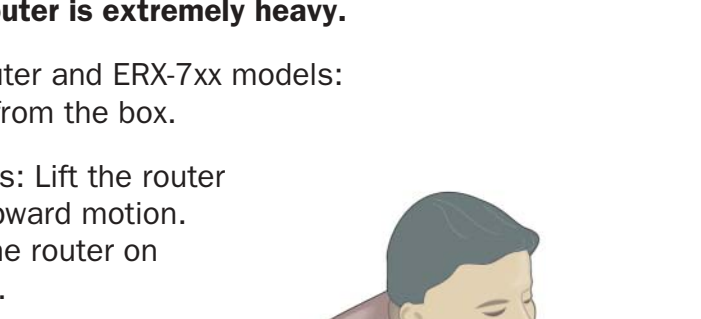
## Unpack the Router

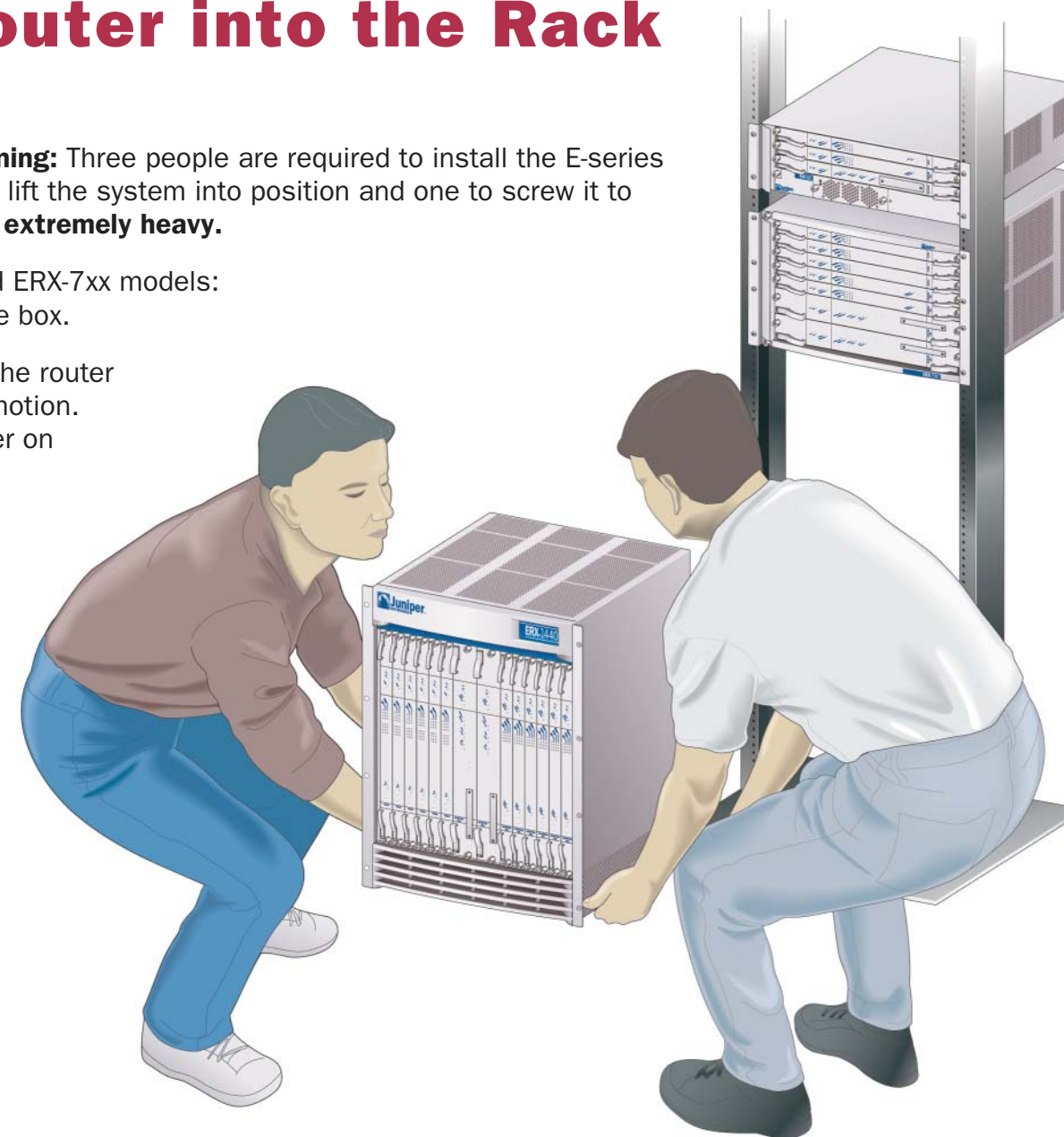
- Unpack the router near the rack where you plan to install it.
- Cut the straps, open the carton, and remove the box of accessories from the top of the router.
- For an ERX-14xx model, unlock the plastic clips on the side of the box, and remove only the carton from the skid.
- For an ERX-14xx model, remove the L-brackets from the router and from the skid.
- Check the router and accessories against the packing slip to be sure you received all items.



## Install the Router into the Rack

- Warning** **Heavy Equipment Warning:** Three people are required to install the E-series router in a rack: two to lift the system into position and one to screw it to the rack. **The router is extremely heavy.**

  - For the ERX-310 router and ERX-7xx models: Remove the router from the box.
  - For ERX-14xx models: Lift the router off the skid in an upward motion. Try not to scratch the router on the skid's hex bolts.
  - Position the E-series router into the rack, and align holes on the router's flange with holes in the rack.
  - While two people hold the E-series router in position, a third person inserts and tightens the screws, beginning with the screws at the bottom of the unit.



## Install Modules


If your router was shipped with modules preinstalled, skip ahead to Step 5. Make sure any empty slots are covered with blank panels before operating the router. In the ERX-14xx models, modules mount vertically. In the ERX-310 router and ERX-7xx models, modules mount horizontally.

- Connect the antistatic wrist strap to the ESD grounding jack on your E-series router.
- Make sure that the ejectors are in the open position.
- Position the module in the chassis by placing it between the guides of the selected slot, and slide the module until it stops. The module stops sliding when the ejectors make contact with the chassis.
- Simultaneously depress both ejectors, and exert forward pressure on the module.
- Tighten the module's captive screws using a Phillips screwdriver. Turn both screws several times before tightening them completely to allow the module to sit correctly.



## Connect Cables

## Power Module

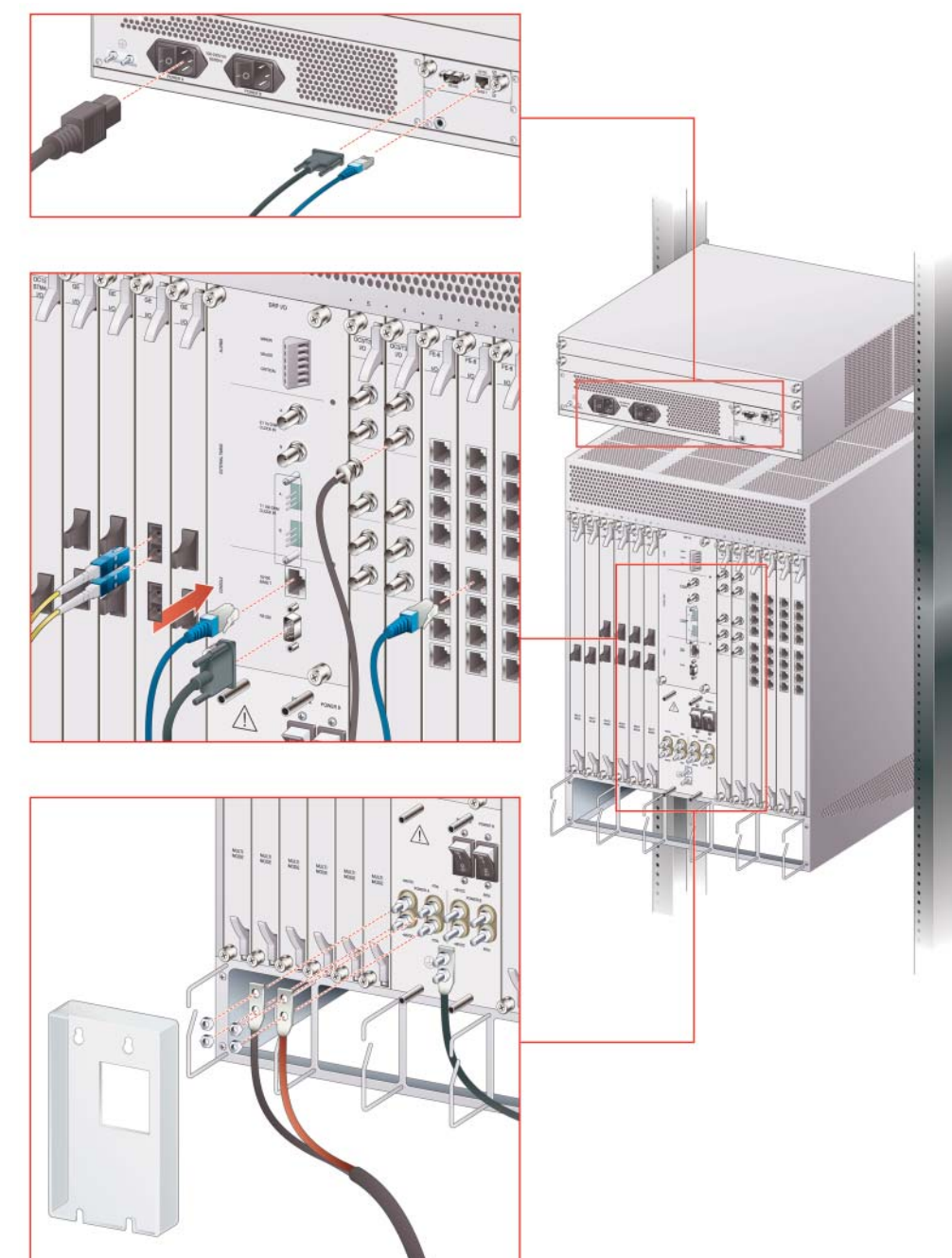
-  **Warning:** Be sure the power source is turned off and the E-series router is turned off when you are performing this task.

- *DC Power Models*

- Cover – Loosen the screws that hold the clear cover on the power input module on the back of the router. Slide the cover off and set it aside.
- Ground – Connect one end of the ground wire to a ground terminal on the router, and connect the other end to an appropriate ground termination lead.
- Power A and B – Loosen the hex nuts from both leads on Power A, and connect a 10-AWG wire to each. Tighten both hex nuts. Attach the opposite end of the wires to the appropriate leads on your power source. If there are two power sources, repeat for Power B.
- Cover – Reposition the cover. Insert and tighten screws.

- *ERX-310 (AC Power)*

- Ground – Connect one end of the ground wire to a ground terminal on the ERX-310 router, and connect the other end to an appropriate ground termination lead.
- Insert the power cord into the AC power IEC receptacle marked Power A.
- Insert the other end of the power cord into an appropriate AC power source.
- Repeat for the other power input module marked Power B, if needed. To provide redundancy, Power A and Power B leads should not terminate at the same power source.



## SRP I/O Module

- **Timing Ports (ERX-14xx and ERX-7xx Models Only)**
  - **E1 CLOCK IN** – Attach a BNC connector to Clock A's connector to Clock A's external timing port, and attach the opposite end into your network's clock source A. Repeat for Clock B if you are using two clock sources.
  - **T1 CLOCK IN** – On Clock A, wrap the "Tip" wire on the pin marked T, the "Ground" wire on the G pin, and the "Ring" wire on the R pin. Attach the opposite ends into your network's clock source A. Repeat for Clock B if you are using two clock sources.
- **RS-232 Serial Port (Direct Connection)**
  - Connect a female DB-9 connector to the router's RS-232 DTE serial port and the opposite end to the device used for a console. If connecting to a PC serial port, use a shielded straight-through cable with a crossover adapter.
  - Run any terminal emulation program—such as the Windows application HyperTerminal—using these settings:
    - bits per second – 9600
    - data bits – 8
    - parity – none
    - stop bits – 1
    - flow control – Xon/Xoff
- **10/100 Base-T Port (Network Connection)**
  - Connect the Ethernet cable to the router's 10/100 Base-T port (RJ-45) to run Telnet from a remote console.
  - Connect the other end of the cable to an Ethernet hub for an out-of-band connection.