

Serial Cables

This appendix provides information about serial cables, which connect peripheral devices to the serial ports on the Serial Parallel Controller patch panel. You can purchase ready-made cables or make them yourself.

Serial Cable Types

Two types of serial cables are described in this appendix:

- Modem cables—page 41
- Null modem cables—page 42

This appendix also provides information about unrecognized cables (page 44).

Modem Cables

If you are connecting a Hayes-compatible modem to your system using the Serial Parallel Controller card, you must obtain a modem cable with a male connector for the modem end and a male connector for the patch panel end. You can connect the modem cable to any of the eight serial ports on your patch panel. You can obtain the correct cable from most computer dealers or computer supplies stores.

In a serial modem cable, the pins in the connectors are wired *straight through*. This means that the pins function identically on the two connectors at both ends of the cable.

Data Terminal Equipment (DTE) typically includes terminals, personal computers, and workstations. Modems are a good example of Data Communications Equipment (DCE).

A modem cable connects a modem to your patch panel. Since DTE and DCE devices send and receive through different pins, their signals will not *collide*.

FIGURE B-1 shows the wiring of a serial modem cable that enables the Serial Parallel Controller card to communicate with a Hayes-compatible modem. If you obtain a serial cable wired like the one shown, it will properly connect your patch panel and a Hayes-compatible modem. For the signal names of the pins, see "Patch Panel Pinouts" on page 10.

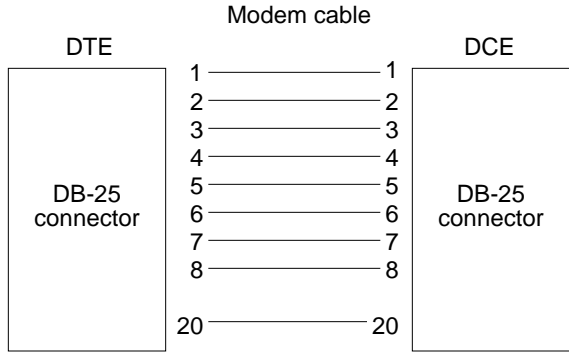


FIGURE B-1 DTE to DCE Connection

Null Modem Cables

Null modem cables are another type of serial cable. However, these cable wires are not attached to the pins in the connectors in the same way as a modem cable. Terminals and printers use a null modem cable.

If you cannot purchase a ready-made null modem cable, you can make one by connecting a *null modem converter* to a modem cable, as the following figure shows. The end that connects to your patch panel must be male. The gender of the connector at the other end of the cable depends on the peripheral device you are connecting to your patch panel.

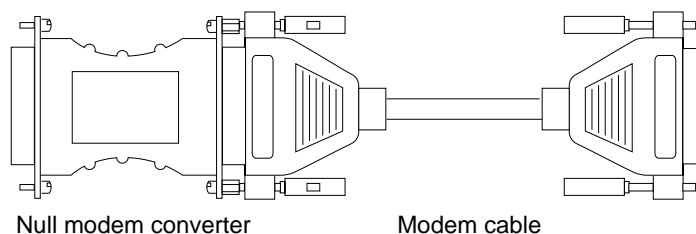


FIGURE B-2 An Assembled Null Modem Cable

The serial null modem cable is designed for devices that send and receive data on the same pins. Terminals and printers are DTE devices, they both expect to send data on pin 2 and receive it on pin 3. Because both devices are trying to send and receive on the same wire, these wires must be *crossed*.

If you are making your own null modem cable, you must connect the wire from pin 2 on the system unit end of the cable to pin 3 on the device end, and connect the wire from pin 3 on the system unit end of the cable to pin 2 on the device end. FIGURE B-3 shows the proper way to wire your cable.

A null modem cable also disables certain features of a peripheral device by “*jumpering*” wire(s) from one pin to another pin on the same connector. FIGURE B-3 shows pins 5 and 6 jumpered, and then connected to pin 20. Also, pins 4 and 8 are wired to each other. A cable wired like the one in this figure will connect your patch panel and a Wyse-compatible terminal.

If you have some other type of device, you will need to consult the manual for the device to determine whether “*jumpering*” is necessary and which pins are involved. For the signal names of the pins, see “Patch Panel Pinouts” on page 10.

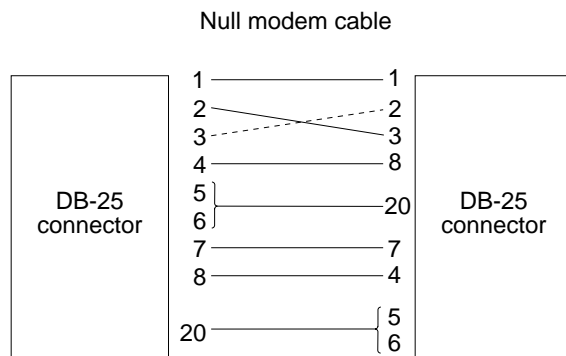


FIGURE B-3 Null Modem Cable

Unrecognized Cables

If the Serial Parallel Controller device driver recognizes a peripheral device, you can define it to your system. For the Serial Parallel Controller card to communicate with devices not supported by the Serial Parallel Controller device driver, you must inform your system about them by using the methods described in the *System Administration Guide*, which is shipped with the Solaris documentation.

But first, you must select a serial cable that enables your card and the peripheral device to communicate. Because each device is different, there is no general rule for selecting or creating a serial cable. To obtain the correct cable, you will need to know which serial port pins are active. The manual for your terminal, modem, or printer should specify the active pins and the type of signal that is sent or received on each pin. It should also specify the type of cable that is required.

Also see “Patch Panel Pinouts” on page 10, which identifies the active pins on the serial ports of your patch panel. Active pins are highlighted and the type of signal for each active pin is labeled.

▼ To Cable an Unrecognized Device

1. Make sure the device is a serial device.

Peripheral devices are cabled to the serial ports on your patch panel. This applies only to serial devices.

2. Determine whether the device is DCE or DTE.

The manual or your dealer should have this information. Modems are generally DCE devices; most terminals and printers are DTE devices.

3. If the device is DCE, use a modem cable.

Begin by trying the cables with the pin configuration specified earlier in this appendix. These cables work with most devices.

4. If the device is DTE, use a null modem cable.

Begin by trying the cables with the pin configuration specified earlier in this appendix. These cables work with most devices.

If these typical cable specifications do not work, see the manual for your peripheral device to determine which pins are active. Also see “Patch Panel Pinouts” on page 10 to determine which pins are active for the serial ports on your patch panel.

You must wire the cable connectors according to the needs of both the peripheral device and the serial port on your patch panel. You might have to experiment to find a successful compromise.