**TABLE 7-2** Pin Connections for Twisted-Pair Cable

| Pin | Function | EIA/TIA 568A | EIA/TIA568B AT&T 258A |
|---|---|---|---|
| 1 | Transmit + | White/Green | White/orange wire |
| 2 | Transmit – | Green | Orange wire |
| 3 | Receive + | White/Orange | White/green wire |
| 4 | Unused | Blue | Blue wire |
| 5 | Unused | White/Blue | White/blue wire |
| 6 | Receive – | Orange | Green wire |
| 7 | Unused | White/Brown | White/brown wire |
| 8 | Unused | Brown | Brown wire |

Ethernet only uses two of the four pairs, connected to Pins 1, 2, 3, and 6. One pair transmits data; the other receives data. The only difference between the two wiring standards is which pair transmits and which receives. In the EIA/TIA 568A standard, the green pair is used for transmit, and the orange pair is used for receive. In the EIA/TIA 568B and AT&T 258A standards, the orange pair is used for transmit and the green pair for receive.

Don't be tempted to just connect Pins 1, 2, 3, and 6. Connect all four pairs as indicated in Table 7-2.

# RJ-45 connectors

RJ-45 connectors for twisted-pair cables aren't too difficult to attach if you have the right crimping tool. The only trick is making sure that you attach each wire to the correct pin and then press the tool hard enough to ensure a good connection.

Here's the procedure for attaching an RJ-45 connector:

1. **Cut the end of the cable to the desired length.**

   Make sure that you make a square cut — not a diagonal cut.

2. **Insert the cable into the stripper portion of the crimp tool so that the end of the cable is against the stop.**

   Squeeze the handles and slowly pull out the cable, keeping it square. This strips off the correct length of outer insulation without puncturing the insulation on the inner wires.