

## Many Dropped Packets

When a network (or several devices on a network) drops a high percentage of packets, the display will show traces with many black marks. View the display by percent drops to see if some devices are significantly worse than others.

Since MacPing tests for packet loss directly, it can show individual devices (or entire network segments) that are experiencing trouble. On LocalTalk, packet loss over 2.5% indicates trouble. Ethernet (ThinNet, 10Base-T, or ThickNet) uses higher quality cabling—its packet drop rates should be well under 1%. Dial-up links (such as ARA) may have higher loss if the telephone line is “noisy.”

Here are some suggestions for diagnosing packet loss problems:

- When a single device is worse than the others, consider that its network connection might be loose or defective. Check its termination. If possible, try replacing the connector or network interface card. Test the failing device continuously by clicking on its name, and try wiggling the wires, connectors, etc.
- When several devices are significantly worse than the others on the network, think about the characteristics they have in common: Are they geographically near each other? Are they on the same repeater or bridge port? Are all terminators installed properly?
- If all devices are equally bad, the network connection of the Macintosh running MacPing might be faulty. Run MacPing from another device to see if you can determine where the problem lies.
- Compare the percent loss between short and long echo packets. If there's a noisy link in the path, long packets will show a higher error rate, since they are more likely to be garbled. In these cases, try replacing connectors, swapping computers, and checking terminators.
- Certain packet-loss problems are data-sensitive. Use the Custom Echo probe type to enter data that may cause failures. (At least one Ethernet chip is prone to fail with data consisting of a long sequence of \$00 data bytes followed by a \$FF byte.)