

## MacPing™ 2.0.4

MacPing examines an AppleTalk® internetwork, watching for devices which don't reliably answer packets addressed to them. This function is similar to Apple's Inter•Poll, except that MacPing's display allows a troubleshooter to monitor more than one device at a time. The name Ping comes from the equivalent facility in the IP world: you send an ICMP Echo packet (a "ping") to an address and use the response time to make measurements about the quality of the network.

The display consists of a series of horizontal traces, one per device on the network, much like a multiple-trace oscilloscope. The testing machine pings (sends a probe packet to) each device: those which always reply have a trace shown by a dotted line. "Dropouts" are displayed as a black spot on the trace. Devices which aren't being tested have no trace.

Every five seconds, MacPing draws a small vertical "tick" on each trace. This shows that polling is in progress, and allows you to estimate the rate of polling. The ticks are not evenly spaced across the screen. The ticks are closer together when:

- Pinging many devices (it takes longer to ping many devices);
- Running MacPing on a slow (Mac Plus, Mac SE) processor.
- Pinging with long packets;
- Many devices fail to respond.

When it begins probing the network, MacPing looks for NBP names (by sending NBP requests for "=:=@\*"). It then broadcasts a short Echo packet to that network, and takes all the responses (NBP names and Echo Replies) to build a list of devices to test. MacPing then begins to probe all these devices. At the end of each cycle, it then sends a probe packet to find the next sequential link address to discover devices that are not already in the list.

The top of the MacPing window shows the following:

Packet type popup: The kind of probe packet to use;  
Zone popup: The zone to test;  
Network popup: The network (within the zone above) to test;  
Number of devices: The number of devices in the list.

The display below the three popups shows the traces for the individual devices. Each device on the network under test has a trace: the trace is identified by its NBP Name and Type, or if no name has been registered, by the device's AppleTalk node number. Selecting one or more names will cause MacPing to test only those selected devices. Shift-Click selects a range of devices; Command-Click selects or de-selects a name. The dividing line between the names and traces is a split bar and can be dragged horizontally to resize the panes.

At the bottom of the screen is a display of the percentage of dropped packets and timing information (in milliseconds.)

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