



# Tech Info Library

## EtherTalk: History and User's Guide (3/95)

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TOPIC -----

This article discusses the history of the EtherTalk card, EtherTalk software, and their various revisions.

DISCUSSION -----

Apple Computer introduced the EtherTalk Interface Card (now called EtherTalk NB card) and EtherTalk 1.0 software for the Macintosh II in August of 1987. Since that time, the card and software have gone through many revisions. This article describes the revisions and shows which cards and software to use on various Macintosh computers.

HISTORY

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1987

EtherTalk card revisions A through D

EtherTalk 1.0 and 1.1 software

March 1988

EtherTalk card revision J

The revision J card fixed a rare data corruption problem that occurred when the EtherTalk Interface card retransmitted a packet that originally had encountered a collision. The data corruption manifested itself as changed characters in documents being printed or filed on an AppleShare server. This problem only occurred in heavily loaded networks, with large numbers of active nodes, intensive use of network resources, and dissimilar types of computer equipment.

The revision J upgrade also included a fix to an incompatibility problem with some co-processor and memory expansion NuBus cards that access memory in the \$xxxFxxx range. This problem is very unlikely to occur since most NuBus cards have their declaration ROM in this address range.

A free upgrade program to revision J was offered from May through October 1988. Some service providers extended the upgrade program on a case-by-case basis.

(Note: Some of the pre- revision J cards that were reworked were marked with revision letters G through J in order to differentiate the original version of the card. [Revision A cards became G; revision B cards became H; etc.] Revision G through J are functionally equivalent.)

July 1988

EtherTalk 1.2 software

EtherTalk 1.2 was a software workaround for an obscure hardware problem in the EtherTalk card that caused an AppleShare server on Ethernet to crash. It also fixed an obscure bug in the software that would cause the card to send packets to a non-existent node and eventually crash.

January 1989

EtherTalk card revision K

The revision K card fixed an incompatibility between earlier EtherTalk cards and the Macintosh IIcx. The problems occurred because the capacitance of a six-slot NuBus Macintosh was factored into the timing mechanism of the EtherTalk card, and was inappropriate for a three-slot Macintosh. The problem was most likely to occur when only one card was present. (This would be the case for routers and servers where no video card was necessary because they were monitored remotely, using Timbuktu for example.)

Symptoms of the problem are intermittent and include:

- system fails to boot
- system errors
- exceedingly poor network performance

No upgrade program to revision K was offered.

June 1989

EtherTalk 2.0 software

EtherTalk 2.0 offers support for AppleTalk Phase 2, including reduced broadcast traffic, extended addressing, and better router selection. EtherTalk 2.0 packets are in the 802.3 format, while EtherTalk 1.0 packets were in the Ethernet format. EtherTalk 2.0 nodes don't see EtherTalk 1.0 nodes, unless a router is setup to run both versions of the software. (See LAN Minds training for more information.)

A customer can ask their Apple Systems Engineer for the EtherTalk 2.0 software or they can send in the form located in the Upgrade and Update Programs folder under the Apple Programs icon on AppleLink. (As of this writing, the form says it expires on March 1, 1990, but that will be changed. Note that a customer who sends in the form after March 1990 will receive EtherTalk 2.0.2, described below.)

October 1989

## EtherTalk 2.0.1 software

EtherTalk 2.0.1 software offers better performance, especially on the Macintosh IICx and IICI. The EtherTalk 2.0.1 software includes additional NOPs (no operations) in the .ENET driver in the System File, in order to synchronize the timing of the card with the timing of the faster Macintosh IICx and IICI. The EtherTalk2.0 file that a user sees in the System Folder was not changed.

(Note: It is difficult for a customer to make sure she is using the correct version of EtherTalk software, since only the .ENET driver changed names and version number.)

December 1989

### EtherTalk card Revision L

The Revision L card is a new layout of the original card (with new ROMs), removing the cuts and jumpers that were necessary for the previous upgrades. Because the card is a new layout, no upgrade program has been offered from J and K.

From the A/UX side, Rev L is required because the Macintosh IIIfx is so much faster that the larger (64K) buffers are needed to keep up with the machine. Also, there were a number of NuBus interface details fixed in Rev L that the Macintosh IIIfx needs. Only the A/UX drivers take advantage of the extra memory.

March 1990

### EtherTalk 2.0.2 software

EtherTalk 2.0.2 software offers better performance, especially on the Macintosh IIIfx. The only change to the software is that some more NOPs were added to the .ENET driver, which is installed in the System File. The EtherTalk2.0 file that a user sees in the System Folder was not changed. A customer should use the utility (mentioned above) from Technical Communications to make sure they are using the correct .ENET driver.

When a customer uses the System 6.0.5 Network Installer diskette, the new 2.0.2 .ENET driver is automatically installed, regardless of the EtherTalk installer diskette used.

Customers who upgrade to the Macintosh IIIfx will be told to be sure to use the System 6.0.5 Network Installer diskette to re-install EtherTalk software.

## ETHERTALK COMPATIBILITY

	Macintosh II or IIX	Macintosh IICx or IICI	Macintosh IIIfx
hardware	Rev J, K, or L	Rev K or L (Rev L on IICI)	Rev K, L or M

with on-board video)

software EtherTalk 2.0.1 or	EtherTalk 2.0.1 or	EtherTalk 2.0.2
EtherTalk 2.0.2	EtherTalk 2.0.2	

(Note: There is a remaining bug that affects Macintosh IIci owners who use EtherTalk 2.0.1 or 2.0.2 software and the EtherTalk revision K card. Ethernet performance is adversely affected when a user starts up the Macintosh IIci in 2 bit [4 colors] or more, using on-board video. To work around this problem, the user can use a revision L card, or not use on-board video [i.e. use a video card], or use only black-and-white video.)

(Another Note: EtherTalk 2.0.x should be used in AppleTalk Phase 2 installations only. For customers who have not upgraded to Phase 2 yet, EtherTalk 1.2 is provided in a folder called Previous Version on all EtherTalk 2.x diskettes. Use the installer to install EtherTalk 2.0.x, but then drag the EtherTalk file in the Previous Version folder into the System Folder on your startup disk. This will insure that you have the correct .ENET driver in your System File, but the Phase 1 version of EtherTalk in your System Folder. See the EtherTalk NB User's Guide for details.)

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