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Macintosh Quadra 950: Connectors

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TOPIC -----

This article discusses the Macintosh Quadra 950's:

- microphone and Mic In connectors
- audio Line In connectors
- sound out connector and speaker
- Ethernet connector

DISCUSSION -----

Microphone and Mic In Connector

The Macintosh Quadra 950 computer includes a microphone, and a Mic In connector in the back. The microphone is similar to the one provided with the Macintosh IIsi and LC, but it has a longer cable to allow it to reach the floor-standing case.

Audio Line In Connectors

The audio Line In connectors are standard phono connectors intended for users who wish to use the computer to sample line-level devices such as home stereo systems. The signals from the Line In connectors are internally mixed to a single (monophonic) audio signal; that signal is combined with the input from the Mic In connector and then sent to the sound input circuit.

Note: Even though there are two Line-In connectors, the stereo channels are mixed into a single monophonic signal; therefore stereo information is lost. For the user's convenience, the computer has two connectors so that an external mixer isn't needed when connecting the computer to the most common type of consumer audio equipment.

Sound Out Connector and Speaker

The Sound Out connector on the Quadra 950 computer is similar to the one on the Macintosh II and has the same electrical characteristics. The audio amplifier for the internal speaker is more powerful than those on other

Macintosh, models so that it can drive the speaker at higher sound levels (approximately 2 watts per channel compared to .25 watts per channel on the Macintosh II). The higher levels are required because the computer is normally on the floor and thus farther from the user.

Ethernet Connector

The Ethernet implementation on the Quadra 950 is the same as on The Quadra 900. Ethernet is implemented using the National SONIC Ethernet controller chip. This device includes an IEEE 802.3 encoder/decoder (ENDEC), media access control (MAC) unit, separate 32-byte send and receive FIFOs, and DMA controller in one device. SONIC is housed in a 132-pin PQFP package. The Ethernet global address (which provides a unique 48-bit identity for each CPU built) is provided by a small ROM.

The SONIC controller includes DMA capability. It will request the bus and transfer data between its internal registers and main memory.

The Ethernet connector on the Quadra 950 computer is the Apple AUI (AAUI) connector, which accepts any FriendlyNet adapter. There is a different FriendlyNet adapter for each of the different kinds of Ethernet standard cable:

- The AUI (thick) cable
- CheaperNet (thin) cable
- 10BASE-T (twisted pair) cable

The speed of the I/O bus has been improved to 25 MHz over the 16 MHz of the Quadra 900. This speed increase can improve Ethernet throughput by 20%.
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