Using Non-Apple SIMMs In Macintosh

Article Created: 3 August 1988
Article Last Reviewed: 21 July 1992
Article Last Updated:

TOPIC -----

Many users have asked about the differences between Apple SIMMs and those in other vendors' products -- particularly physical size differences, speed differences, and parity checking.

DISCUSSION -----

Numerous third party vendors offer SIMMs that seem to work fine in the Macintosh. Although we don't specify the technical requirements of third-party SIMMs, many of those suppliers have either obtained Apple's specification or determined our system requirements, designing their chips accordingly.

Many of these vendors may be located by searching in Macintosh periodicals.

IBM is another computer manufacturer that is using SIMMs in their PS2s. Some differences are:

	Parity Checking	Basic Configuration	Speed
IBM	yes	256Kb x 9 1Mb x 9	variable
Apple	no	256Kb x 8 1Mb x 8	120,150ns 120ns

A SIMM that provides for parity checking doesn't EXCLUDE that RAM from being used in a Macintosh. Such SIMMs could be used if all other timing and pinouts were compatible, since the Macintosh will merely ignore that extra line.

Apple engineers have experimented with 2 IBM Model 30 256Kb x 9 SIMMs in a Macintosh Plus, and although the testing has not been extensive, these SIMMs have functioned using routine applications -- Excel, HyperCard,

Microsoft Word, etc. -- and have passed a short and extended memory test.

However, just because these SIMMs appear to work doesn't mean that Apple can endorse the use of "IBM" SIMMs in our systems. IBM suppliers and PS2 third party vendors use differing RAM and designs to meet PS2's requirements, not ours.

Also, "IBM" SIMMs are available in a variety of speeds, including: 80, 100, 120 and 150ns. The 150ns chips should definitely NOT be used in a Macintosh II which requires at least 120ns SIMMs.

SIMM size:

- Apple currently uses surface mount technology (SMT) RAM, but there shouldn't be a problem using DIP through-hole chips. DIP chips tend to stand a little taller than SMT chips; but as long as they aren't so tall that they interfere with other SIMMs, they should work fine.

Another consideration is the height of the board itself: it must not be so tall as to interfere with expansion cards in a Macintosh SE (if any), or the chassis in a Macintosh Plus. However, there ought to be plenty of vertical room in a Macintosh II.

(NOTE: Apple LaserWriter SIMMs are physically and electronically incompatible with Macintosh SIMMs.)

For more information, search under: "SIMMs"

Keywords: <None>

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19960215 11:05:19.00
Tech Info Library Article Number: 3170