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Macintosh: About this Macintosh vs. Actual RAM Installed (4/95)

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TOPIC -----

I have a Macintosh with 24MB of RAM installed but when I look in the About this Macintosh, it shows I have 24,576K installed. I don't have virtual memory enabled or RAM Doubler installed.

Where did the 576k of extra memory come from?

DISCUSSION -----

The discrepancy arises in the translation from base 2, which the computer uses, to base 10 which people use. In base 10 the easiest number to deal with divide easily by 10 such as 100, 1000, 10,000 etc. In base two the easiest number to deal with differ such as 128, 256, 1024 etc.

A thousand bytes, commonly called a kilobyte, is not exactly a 1000 bytes (base 10) but rather 1,024 bytes (base 2). Likewise a million bytes, commonly called a megabyte, is not 1000 kilobytes (base 10) but 1,024 kilobytes (base 2).

As the amount of RAM installed increases the differences between the two numbers compounds as the table below shows:

MB	=	Kilobytes
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1MB	=	1,024
2MB	=	2,048
3MB	=	3,096
...	=	...
16MB	=	16,384
20MB	=	20,480
24MB	=	24,576

Multiplying the number or megabytes of RAM installed by 1,024 gives the total kilobytes of RAM shown in the About this Macintosh window.

Keywords: <None>

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