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System 7: 24-bit Addressing with More than 8MB of RAM

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Revised:        7/24/91
Security:       Everyone
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Article Change History

08/21/92 - REVIEWED
               • For technical accuracy; edited.

TOPIC ---

How does the Macintosh operating system handle more than 8MB of physical
RAM when it is not using 32-bit addressing?

DISCUSSION --

When a Macintosh is running in 24-bit mode (that is, when System 7's 32-bit
Addressing is turned off or the Macintosh is running System 6.0.x) any
physical memory over 8MB is allocated to the System, provided the Macintosh
can see the memory in the first place, but it's not actually used. Even
though the hardware can see all of the physical RAM, 24-bit addressing
allows the use of only 8MB. You may see a large System allocation when
checking "About this Macintosh" or "About the Finder" and think something
is wrong, when in fact this is the way it should work.

System 7's 32-bit Addressing allows up to 1GB of total memory (including
both physical and virtual memory).

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