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Macintosh IIcx: Mouse Failure and Memory

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TOPIC -----

I have a Macintosh IIcx with memory expanded to 8MB (four 80ns and four 120ns chips). When I put the 120ns in bank A and the 80ns in bank B, I got an error chime on startup. I swapped the two banks and was able to use the system. Now, I am finding that when I do memory-intensive operations, my mouse freezes. My debugger points to the memory as the problem.

Is my configuration correct--four 80ns 1MB SIMMs in bank A and four 120ns 1MB SIMMs in bank B? Does the speed of the SIMMs determine which bank they go into? Might I have a flawed SIMM? Is the mouse freezing a symptom of reaching the memory limit (that 8MB may still not be enough for my purposes)?

DISCUSSION -----

You wouldn't normally experience a problem using these SIMMs in the IIcx. All of them are at least as fast as the specifications require, and you're not mixing them within a bank (which, technically, is supposed to work, but often does not).

It sounds more like you have a defective SIMM, probably one of the 120ns. The self-test does not check the RAM as extensively as our diagnostics check it. It will try to make sure the lower addresses are good, which are the SIMMs in bank A, so the operating system will work correctly. Because it erred with the 120ns SIMMs in bank A, I would suspect those SIMMs first.

Mouse-freezing can be caused by a variety of things. Basically, mouse movement is controlled by the operating system, completely aside from all other system events. All mouse movements are posted to an event queue, as

are almost all other events, and then the events are processed in order of their occurrence. If a mouse freezes, then the event queue is not being processed. This means the operating system is hung within an event, because the operating system is either within an event or getting the next event.

One such event that causes the system to hang is faulty RAM refreshing or memory I/O, but the most common is disk I/O. In this case, however, we think you're dealing with a RAM problem.

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