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Software

FPU™

68LC040 CPU Bug Information

68LC040 CPU Chip Bug

The 68LC040 CPU chip has a bug in it which prevents many FPU applications from working properly with SoftwareFPU. The bug is confirmed by Motorola and listed as bug E4 on revision 4 of the official Motorola 68LC040 errata sheet. Unfortunately there is no way for SoftwareFPU to work-around this bug. If you have SoftwareFPU installed on a 68LC040 Macintosh, you will have to test each FPU application you use to see whether it will work on your Macintosh. If the application crashes, it is probably due to the 68LC040 CPU chip bug. To verify the cause of the crash, test the same application on a regular 68040 Macintosh. If the application operates correctly on a 68040 Macintosh, the CPU bug is causing the application to crash on your 68LC040 Macintosh. If the application crashes on a 68040 Macintosh, the CPU bug is not the cause of the 68LC040 crash.

If your FPU application crashes with SoftwareFPU because of the 68LC040 CPU bug, your options are:

• Replace the application with a version that does not require an FPU, if available.

• Replace the 68LC040 CPU in your Macintosh with a 68040 CPU that contains a hardware FPU. Sonnet Technologies (800/786-6260, http://www.sonnettech.com/) sells user-installable 68040 upgrade kits for desktop Macintoshes and offers an upgrade service for PowerBooks.

• Install a PowerPC upgrade card in your computer. FPU applications work properly with SoftwareFPU on PowerPC Macintoshes.