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Power Macintosh 6100 Series: Frequently Asked Questions (11/95)

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TOPIC ---

This document contains the answers to frequently asked questions (FAQ) about
Power Macintosh 6100 series computers.

Questions in this FAQ:
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1) What is the difference between native software and conventional software?

2) My computer does not remember sound settings from restart to restart. I
continually have to go back to the Sound control panel and reset the CD input
source.

3) What causes Type 11 errors?

4) Does my Power Macintosh have an FPU (Floating Point Unit/Math coprocessor)? I
see errors that an FPU is not installed.

5) I need to run DOS software on my Power Macintosh 6100 series computer. What
are my options?

6) The microphone from my former Macintosh computer model doesn't work on my
Power Macintosh 6100 series computer. What's wrong?

7) I have an old program that tells me to turn off 32-bit addressing, but I do
not see this as an option in my Memory control panel. Why?

DISCUSSION --

1) Question: What is the difference between native software and conventional
software?

Answer: The Power Macintosh runs in two modes, without any further assistance from the user: it can run "native" software, which is software written for the PowerPC chip, or "conventional" software, which is software written for an older 68000, 68020, 68030, or 68040-based computer. Conventional software is sometimes referred to as "68K" software.

Conventional software runs in an "emulation" mode, which is functionally similar to the 68020 processor. The main differences between the 68020 processor and later processors are: (a) it does not have a PMMU (Paged Memory Management Unit), (b) it does not support the SWAP16 instruction, and (c) it does not support a floating point unit. The first point is necessary because the PowerPC has a newer, better, memory management model. The second point is also addressed by improvements in the PowerPC chip. The third point requires different steps to work around; see the FAQ question below. Conventional software will generally run faster than a 68020, probably between Macintosh IIci and Quadra 605 performance, depending on how many references the software makes to the native "toolbox" in the computer.

As new software is sold, you will find reference to "Fat" applications. These are programs that can be run on either a 68K or Power Macintosh computer without modification. The operating system automatically determines which part to use.

Since "Fat" applications are really two programs in one, many installers will offer either a "Power Macintosh" or "Conventional" install. If you have installed a software billing itself as "Accelerated for Power Macintosh" and, once installed, it does not recognize features which definitely exist, such as an FPU, make sure you have installed the correct version and build. Both versions will run on the Power Macintosh, but only the "native" version will benefit from all the special features of the Power Macintosh.

2) Question: My computer does not remember sound settings from restart to restart. I continually have to go back to the Sound control panel and reset the CD input source.

Answer: If the Sound Preferences file, which stores much of this information, is corrupted, the settings may not be getting saved. To resolve this, open your System Folder, then your Preferences folder. Throw away Sound Preferences, and restart. Try to reproduce the problem.

If you have installed any type of disk compression or disk management software, check to make sure that it is not manipulating any of your Preferences files.

3) Question: What causes Type 11 errors?

Answer: Type 11 errors are typically due to one of a variety of factors:

- Font problems: you are using a bad font.
- RAM problems: you have install bad RAM.
- SCSI chain problems: bad driver or cable.
- Cache SIMM problems (if you have installed one on your Power

. Macintosh computer).
- Incompatible software running in emulation.

For steps on how to troubleshoot such problems, see the referenced Technical
Information Library article.

The online Apple Technical Info Library (go shortcut "TIL") - use the search
string "meaning of error type 11 and power macintosh" to locate the article
"Power Macintosh: Meaning of Error Type 11".

4) Question: Does my Power Macintosh have an FPU? I see errors that an FPU is
not installed.

Answer: All PowerPC chips, which are used on Power Macintosh computers, have a
floating point unit.

You may be seeing the "FPU not installed" error for two reasons:

• You are running "conventional" software in 68K emulation. This operating mode
does not provide access to the computer's floating point unit. Thus, the program
does not work. Certain software "bridges" exist to allow conventional software
access to the PowerPC microprocessor's FPU. See the Redgate Communications area
to search for such products.

• You are using software, in either emulation or native mode, which is simply
failing. Since the PowerPC supports pipelining instructions, a number of errors
are occurring simultaneously. They are eventually percolating out as an "FPU not
installed" error. An error did occur, but it has nothing whatsoever to do with
the need for a floating point unit. You should apply standard troubleshooting
steps to resolve this issue.

5) Question: I need to run DOS software on my Power Macintosh 6100 series
computer. What are my options?

Answer: There are two ways to run DOS software:

• Use Insignia Solutions' SoftWindows emulator. This is a Macintosh application
which emulates a PC DOS/Windows environment. You can get more information, such
as pricing, performance, system requirements, and compatibility information from
Insignia Solutions by calling the company at 800-848-7677.

• You can use the Apple DOS Compatibility Card. This is a hardware solution,
that provides a 486 DX2 processor running at 66 MHz, SoundBlaster support,
alternative video support, and up to 32 MB of on-board memory. This effectively
produces a "dual processor" environment for your computer, in which Macintosh
and DOS applications can run at full processor efficiency, simultaneously.

This card plugs into your single Processor Direct Slot. If you opt to use this
card, you will not be able to use other PDS cards, such as an Apple AV
Technologies Card, without removing this card, first.

The Apple part number for the DOS Compatibility Card is M3581LL/A. You can order one from any Apple-authorized reseller or Apple-authorized service provider, who can also tell you the current price. To find an Apple-authorized reseller or service provider near you, please call 800-538-9696.

6) Question: The microphone from my former Macintosh computer model doesn't work on my Power Macintosh 6100 series computer. What's wrong?

Answer: The microphone used with many early Macintosh computer models is called the Apple Omnidirectional Microphone. It comes with a 1/2" plug. The microphone used with the Performa 600 series computers (as well as all Power Macintosh computers, the Performa 475/6, Performa 6100 series computers, 500 series computers, and Quadra 660AV and 840AV) is called a PlainTalk microphone. It has a 3/4" plug, the extra 1/4" of which is used to reach a power source that attenuates the microphone.

The correct microphone for use with the Power Macintosh 6100 series is the PlainTalk microphone. Our part number is M9060Z/A. You can order this through many Apple-authorized retailers and catalog resellers. Their numbers can be obtained by contacting our 24-hour referral service at 800-538-9696.

For further information on the PlainTalk microphone, consult the online Apple Technical Info Library (go shortcut "TIL"). Use the search string "plaintalk microphone" to locate the article "Macintosh: PlainTalk Audio Port Microphone Support".

7) Question: I have an old program that tells me to turn off 32-bit addressing, but I do not see this as an option in my Memory control panel. Why?

Answer: The Power Macintosh always runs in 32-bit mode. There is no way to turn it off; therefore, there is no switch in the Memory control panel.

Article Change History:
14 Nov 1995 - Added keyword.
07 Nov 1995 - Reviewed for technical accuracy.
02 Nov 1995 - Corrected search string information.

Support Information Services

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