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Quadra 800, 900 & 950: Frequently Asked Questions (11/95)

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TOPIC -----

This article contains the answers to frequently asked questions (FAQ) about high end Quadra computers, including the Macintosh Quadra 800, 900 and 950.

Questions in this FAQ
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1) What is an enabler and do I need one?

2) What are the expansion options for the high end Macintosh Quadra computers?

3) How do I upgrade the memory on my Macintosh Quadra 800, 900, or 950 computer?

4) What is an FPU, and does my computer have one?

5) What is 32-bit addressing and when does it need to be active?

6) What is "resetting the PRAM"? Do I need to do this often?

7) Rebuilding the desktop file; what is it and why would I need to do it?

DISCUSSION -----

1) Question: What is an enabler and why do I need one?

Answer: Rather than create a new version of the system software each time a new computer is released, Apple Computer created the system enabler. These enablers contain system software code specific to a particular Macintosh computer. Enablers provide older system software with the information necessary to properly run on a newly released Macintosh.

The Macintosh Quadra 800, 900 and 950 computers do not require an enabler when using System 7.5 or later.

The Macintosh Quadra 900 and 950 computers do not require an enabler when using System 7.1.

If you are using System 7.1 on a Quadra 800, you will require System Enabler 040.

2) Question: What are the expansion options for the high end Macintosh Quadra computers?

Answer: On the high end Macintosh Quadra computers, Apple provided several expansion options such as a processor-direct slot (PDS), as well as NuBus slots on each of these computers.

The PDS allows expansion cards to have direct access to the processor. Numerous PDS cards are available; video, network and accelerator cards have implemented a PDS design

NOTE: Because different Macintosh computers use different processors, there are several implementations of the processor-direct slot. Not all PDS cards are compatible with the different PDS types. To ensure compatibility, contact the manufacturer of the PDS card.

NuBus is a standard designed by Texas Instruments. It features self-configuration and bus-mastering on a 32 data-bit card. Bus-mastering means a card can take control of the bus, which allows for multi-processor computing. The card self configures using on-board ROM (Read Only Memory).

The card slot is a one-piece socket connector with two rows for pins. The card has a plug connector with pins that plug into the socket. This slot type is not compatible with any other slot standard.

Here are the expansion slots available on the Macintosh Quadra 800, 900 and 950 computers:

• Macintosh Quadra 800:
Support for two internal SCSI devices, such as a CD-ROM, DAT drive, or SCSI hard disk drive (several capacities available). Three internal NuBus expansion slots. One 68040 PDS provides access to the CPU for highest possible performance.

• Macintosh Quadra 900:
Support for up to three internal SCSI devices, such as a CD-ROM, DAT drive, or SCSI hard disk drive (several capacities available). Five internal NuBus expansion slots. One 68040 PDS provides access to the CPU for highest-possible performance.

• Macintosh Quadra 950:
Support for four internal SCSI devices, such as a CD-ROM, DAT drive, or SCSI hard disk drive (several capacities available). Five internal NuBus expansion slots. One 68040 PDS provides access to the CPU for highest possible performance.

3) Question: How do I upgrade the memory on my Macintosh Quadra 800, 900, or 950 computer?

Answer:

Begin_Table

System	RAM Soldered on Board	Number of SIMM Slots	Possible SIMM Sizes	Physical RAM Configs(MB)	Speed	Notes
Quadra 800*	8	4	4MB,8MB,16MB, 32MB	8,12,16,20, 24,28,32,36,40, 44,48,52,56,60, 64,68,72,76,80, 84,88,92,96,104, 108,112,120,136	60ns	3,11, 12,13
Quadra 900*	0	16	1MB,4MB	4,8,12,16,20 24,28,32,36 40,48,52,64	80ns	3
Quadra 950	0	16	1MB,4MB	4,8,12,16,20 24,28,32,36 40,48,52,64	80ns	3

* Product no longer being produced by Apple.

End_Table

NOTES:

3. These systems have 32-bit-clean ROMs. Computers with 32-bit-clean ROMs can take advantage of more than 8MB of physical RAM under System 7.

11. These systems use 32-bit wide, 72-pin SIMMs (fast-paged mode) not previously used in Macintosh computers.

12. The Centris 650, and Quadra 800 use "memory interleaving" which occurs when SIMM pairs are used (for example: two 8MB SIMMs). This allows the memory subsystem to perform certain operations faster. Basically, it allows the memory subsystem to write to the same memory address in different banks of memory before incrementing the address. Depending on how memory intensive the application, this can improve performance 5 to 10%.

13. The Centris/Quadra 610, Centris/Quadra 650, and Quadra 800 have flexible memory systems, meaning that any supported SIMM size can go into any SIMM socket in any order, and they can run with partially populated banks. They don't support 1MB, 2MB, or 64MB 72-pin SIMMs.

4) Question: What is an FPU, and does my computer have one?

Answer: Floating-point Units (FPUs or math coprocessors), such as the 68881/68882, offer the greatest benefit in applications that tend to be very floating-point (arithmetic) intensive. The specific types of applications that benefit most from an FPU are those that process large amounts of floating-point instructions for precision, and will utilize an FPU extensively. Examples are CAD/CAM, 3-D modeling, scientific applications, and financial applications.

The Macintosh Quadra 800, 900 and 950 computers have a built in Floating Point Unit (FPU).

5) Question: What is 32-bit addressing and when does it need to be active?

Answer: With 32-bit addressing, you can install and access more than 8 MB of physical RAM in your Macintosh. This means you can work with very large data files, very large applications, or many applications concurrently. 32-bit addressing is most attractive to Macintosh users working with large memory-intensive problems. While virtually anyone can benefit from the large amount of memory offered by 32-bit addressing, it will immediately benefit database users, color-graphic users, CAD/CAM users, and programmers.

More technically speaking, 32-bit addressing lets most recent Macintosh models access the entire memory range of the microprocessor.

32-bit addressing is fully implemented in the Macintosh Quadra series. If more than 8 MB of RAM is installed, 32-bit addressing should be active in the Memory control panel. If, for example, 16 MB of RAM is installed on a Macintosh Quadra 800 and 32-bit addressing is off in the Memory control panel, the system software will appear to take up most of the available memory. The solution is to activate 32-bit addressing in the Memory control panel.

6) Question: What is "resetting the PRAM"? Do I need to do this often?

Answer: Parameter RAM (PRAM) is used to keep settings for a Macintosh. PRAM keeps track of the date, time, status of serial ports, which printer has been chosen in the Chooser and numerous other settings.

Occasionally, a corrupt setting in PRAM can adversely affect the operation of the computer. Resetting PRAM can sometimes solve these problems.

It is not a requirement to reset PRAM on a regular, or scheduled basis.

To reset PRAM, restart the computer, press and hold the Command, Option, P and R keys simultaneously. Continue to press these keys until you hear the computer's startup chime the second time.

7) Question: Rebuilding the desktop file; what is it and why would I need to do it?

Answer: The Desktop file is an invisible file in the main level of your hard

drive. It is the file that keeps track of all the documents and applications that are on your drive.

For System 6 and earlier the file name is desktop. System 7.0 and later the invisible files are named Desktop DB and Desktop DF.

Occasionally your Desktop file may become too large or may be damaged.

A symptom of a damaged Desktop file is when icons on your desktop appear as "generic" rather than "custom" icons. Rebuilding the Desktop file may eliminate the problem.

The Desktop file manages all icons on a particular hard drive or floppy disk. When you insert a new or customized icon, the Desktop file may not load it or may load a previous version of the icon. To have the special icon appear on the desktop, the Desktop file must be rebuilt to update the Desktop file and register the icon.

Icons change to generic document (blank page with a corner turned down) or application (diamond with a hand) icons for several reasons, including the following:

- Utilities such as compression or security software can alter icons.
- Custom icons become damaged or deleted.
- The Desktop file has been damaged.
- Applications that create files may not assign icons to the files.
- An application that created a file and assigned an icon may no longer be available.
- A file may have lost the bit that indicates a custom icon (this is known as the bundle bit).

If the Desktop file becomes too large, the computer may have difficulty reading it efficiently and speedily. This can cause the Finder to access files more slowly. Rebuilding the Desktop file can clean up old information and speed up Finder access.

You can also make a file-by-file backup of the drive, re-initialize the drive, and then restore the files. This re-groups all the files, de-fragments them, and increases the efficiency of the drive.

To rebuild the desktop using System 7

Follow these steps:

1. Press and hold the Shift key down while starting up the computer.

2. As soon as you see "Welcome to Macintosh Extensions Off", release the Shift key, and press and hold the Command and Option keys.

3. Continue pressing the Command and Option keys until you see a dialog that says "Are you sure you want to rebuild your desktop on your disk? All of your info window comments will be lost," release the keys and click the OK button.

After the desktop has been rebuilt, restart the computer, and all extensions and control panels will be active again.

To rebuild the desktop using System 7.5 or later

Follow these steps:

1. Before you rebuild your desktop, use the Extensions Manager control panel to save a record of the extensions that are currently turned on.
   - Open the Extensions Manager control pane.
   - Open the Sets pop-up menu, and choose Save Set.
   - When the Save Set dialog box opens, type a name for your currently selected extensions (for example, My Extensions). When you close the dialog box, the name of your set is added to the Sets pop-up menu.

2. To turn off all extensions, open the Sets pop-up menu again and choose All Off.

3. To turn on Macintosh Easy Open, find it on the list and click it to put a checkmark beside it.

4. To rebuild the desktop, restart your computer while pressing and holding the Command and Option keys.

5. When you see the dialog that says "Are you sure you want to rebuild your desktop on your disk? All of your info window comments will be lost," release the keys and click the OK button.

6. When the desktop is rebuilt, open the Apple menu and choose Control Panels.

7. Open the Extensions Manager control panel.

8. To turn your extensions back on, open the Sets pop-up menu and choose the name you gave your set of extensions in step 1 (for example, 'My Extensions').

9. Restart your computer to activate the extensions.

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