Reference Guide

Mac Plus

Four SIMM sockets in two banks of two each. Standard 150ns SIMMs or faster. No virtual memory*, no 32–bit addressing.

Standard Memory: Uses 256K and 1MB SIMMs. Up to 4MB can be installed using four 1MB SIMMs. Other common configurations are 1, 2 and 2.5MB. To add RAM to a Mac Plus you need to cut the R8 resistor on the motherboard. If you want to run System 7, you should probably install all 4MB of RAM.

Virtual Memory: The 68000 CPU in the Mac Plus has no Memory Management Unit (which is required to run virtual memory). If you add a 68030 accelerator, this will contain a built–in MMU, but System 7 VM will still not work. Use Connectix Compact Virtual 3.0 to create 16MB of virtual memory on the accelerated Mac Plus. Compact Virtual always uses 24–bit addressing, so 32–bit compatibility is not required. It will work on System 6 or 7.

High Memory: To use more than 4MB of physical RAM you need to install a 68030 accelerator and Connectix Compact Virtual 3.0. On most accelerators you can then install four 4MB SIMMs for a total of 16MB of application memory. Some boards will also allow you to use motherboard RAM as a RAM disk but it cannot be used as application memory.

* Virtual memory can only be used on these machines when both a 68030–based accelerator board and Connectix's Compact Virtual are installed.

Mac SE

Four SIMM sockets in two banks of two each. Standard 150ns SIMMs or faster. No virtual memory*, no 32–bit addressing. The SE can be upgraded to an SE/30 (see "SE/30"). *Virtual memory can only be used on these machines when both a 68030–based accelerator board and Connectix's Compact Virtual are installed.

Standard Memory: Uses 256K and 1MB SIMMs. Up to 4MB can be installed using four 1MB SIMMs. Other common configurations are 1, 2 and 2.5MB. To add RAM to an early SE you need to cut the R35 resistor on the motherboard. For later SE's you need to move a jumper (2MB) or remove the jumper (2.5 or 4MB). On the early SE's, Bank A is the one toward the back (slots 1 and 2). On the later SE's, Bank A is the one toward the front (slots 3 and 4). If you want to run System 7, you should probably install all 4MB of RAM.

Virtual Memory: The 68000 CPU in the Mac SE has no Memory Management Unit

(which is required to run virtual memory). If you add a 68030 accelerator, this will contain a built–in MMU, but System 7 VM will still not work. Use Connectix Compact Virtual 3.0 to create 16MB of virtual memory on the accelerated Mac SE. Compact Virtual always uses 24–bit addressing, so 32–bit compatibility is not required. It will work on System 6 or 7.

High Memory: To use more than 4MB of physical RAM you need to install a 68030 accelerator and Connectix Compact Virtual 3.0. On most accelerators you can then install four 4MB SIMMs to have a total of 16MB of application memory. Some accelerator boards will also then allow you to use any motherboard RAM as a RAM disk but this cannot be used as application memory.

* Virtual memory can only be used on these machines when both a 68030–based accelerator board and Connectix's Compact Virtual are installed.

Mac Classic

1MB soldered on and a special expansion socket. Standard 120ns SIMMs or faster. No virtual memory,* no 32–bit addressing. Can be upgraded to a Classic II (see "Classic II"). * Virtual memory can only be used on these machines when both a 68030–based accelerator board and Connectix's Compact Virtual are installed.

Standard Memory: The socket can be filled with a special adapter card. The Apple version of this card comes with 1MB of RAM and sockets to hold two more standard 256K or 1MB SIMMs. These last two sockets are a bank; they must both be filled or both be empty. The built–in memory is 150ns RAM, but added memory must be 120ns or faster. A total of 4MB can be installed using 1MB SIMMs. To add RAM to a Classic you usually need to move a jumper on the adapter card, (depending on which manufacturer's card you use). If you want to run System 7, you should probably install all 4MB of RAM.

Virtual Memory: The 68000 CPU in the Classic has no Memory Management Unit (which is required to run virtual memory). If you add a 68030 accelerator, this will contain a built–in MMU, but System 7 VM will still not work. Use Connectix Compact Virtual 3.0 to create 16MB of virtual memory on the accelerated Classic. Compact Virtual always uses 24–bit addressing, so 32–bit compatibility is not required. It will work on System 6 or 7.

High Memory: To use more than 4MB of physical RAM you need to install a 68030 accelerator and Connectix Compact Virtual 3.0. On most accelerators you can then install four 4MB SIMMs to have a total of 16MB of application memory. Some accelerator boards will also then allow you to use any motherboard RAM as a RAM disk but this cannot be used as application memory.

Mac Classic II, Performa 200

2MB soldered on, two SIMM sockets in one bank. Standard 120ns SIMMs or faster. Virtual memory, limited 32–bit addressing.

Standard Memory: A total of 4MB can be installed using 2 additional 1MB SIMMs. Surprisingly, the Classic II and Performa 200 do not support 256K SIMMs. So, low memory configurations are limited to either 2 or 4MB. If you want to run System 7, you should probably install all 4MB of RAM.

Virtual Memory: The 68030 CPU in the Classic II and Performa 200 has a built–in Memory Management Unit. Therefore, they both can run virtual memory without requiring any additional hardware. In 24–bit mode, they can address up to 13MB of VM, and in 32–bit mode, they can address up to 1024MB.

Many Classic II and Performa 200 systems have 40MB hard drives. For these systems we recommend Virtual 3.0 because the DiskSaver option reduces the hard drive space required to run virtual memory by the amount of physical RAM installed.

High Memory: Up to 10MB can be installed using 4MB SIMMs. To use it all as application memory you must turn on 32–bit addressing (System 7). This is the upper limit. 8MB or 16MB SIMMs will only be recognized as 4MB SIMMs and are not recommended.

The Classic II and Performa 200 are different from the other Compact Macs, having ROM software more like the Modular Macs. Up to 8MB of memory can be addressed in 24–bit mode on the Classic II and Performa 200, while only 4MB can be addressed on the Plus, SE, or Classic. They both support 32–bit addressing, though physical RAM is still limited to 10MB.

If you put a total of 10MB of RAM (adding two 4MB SIMMs) in a Classic II or Performa 200 running System 7 with 32–bit addressing On, you would have 10MB of application memory. Turning 32–bit addressing Off would reduce this to 8MB. By contrast, if you install a memory card holding two 4MB SIMMs on a Classic (for a total of 10MB), you would only have 4MB of application memory and 32–bit addressing would not be available at all. You would have to use Compact Virtual and an accelerator in this case.

Mac Color Classic

4MB of RAM soldered on. One bank of two SIMM sockets. 100ns standard SIMMs or faster. Virtual memory, limited 32–bit addressing, video RAM.

Standard Memory: The SIMM bank may either be empty, or filled with two SIMMs, which must be of the same size. The Color Classic does not support 256K or 512K SIMMs. Low memory configurations of 4 or 6MB are possible.

Virtual Memory: The 68030 CPU in the LC II and Performa 400 has a built–in Memory Management Unit. Therefore, they can run virtual memory without additional hardware. In 24–bit mode the LC II and Performa 400 can use up to 14MB of Connectix Virtual, or 13MB of System 7 VM. In 32–bit mode they can use up to 1024 MB of virtual memory (or the amount of available hard drive space.) When performance is critical, or hard drive space is limited, we recommend Virtual 3.0.

High Memory: Maximum of 10MB. The ROMs support standard 32–bit addressing, but are specially configured to support a maximum of 10MB of RAM. To address this 10MB you must either use System 7 32–bit addressing.

Video RAM: 256K soldered on. One expansion slot is available for a maximum of 512K video RAM.