Mac LC

2MB of RAM soldered on. One bank of two SIMM sockets. 120ns standard SIMMs or faster. No 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 LC does not support 256K or 512K SIMMs. Only low memory configurations of 2 or 4MB are possible.

Virtual Memory: Only possible if you add a 68040 accelerator or a 68030 accelerator. The LC is based on the 68020 CPU (see “Mac II Virtual Memory”) but has no socket to hold a PMMU. Accelerated LCs are limited to 10MB virtual memory (see below).

High Memory: Maximum of 10MB. The ROMs support standard 32–bit addressing, but are configured to support a maximum of 10MB of RAM. To address over 8MB (10MB) you must either use System 7 32–bit addressing or System 6 and OPTIMA. Because there is no support for a PMMU, MAXIMA cannot be used. The LC is not a good choice for high memory applications. At least one thride party accelerator card can remove this 10MB limitation.

Video RAM: 256K of 68–pin video RAM is factory–installed in the single SIMM socket which is enough to support 4–bit color on a 13" monitor. Many people remove it to put in a third party 512K SIMM, so that the LC can address 8–bit color on a 13" monitor. The 256K SIMM that is removed can be used as expansion video RAM on a Quadra. LCs shipped after May 13, 1991 have 512K of VRAM installed.

Mac LC II, Performa 400, 405 and 430

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 machines do not support 256K or 512K SIMMs. Low memory configurations of 4 or 6MB are possible.

Virtual Memory: The 68030 CPU in these machines have a built–in Memory Management Unit. Therefore, they can run virtual memory without additional hardware. In 24–bit mode these Macs 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 large

amounts of RAM, use System 7 standard 32–bit addressing. The LC II can use standard 4MB SIMMs, but will not address more memory than 10MB.

Video RAM: There are two versions of the LC II and Performa 400. The one with a 40MB hard drive comes with 256K of 68–pin video RAM factory–installed in the single SIMM socket. This is enough to support 4–bit color on a 13" monitor. Many people remove it to put in a third party 512K SIMM, so that the LC II or Performa 400 can address 8–bit color on a 13" monitor. The 256K SIMM that is removed can be used as expansion video RAM on a Quadra. Those with a 80MB hard drive has 512K installed already. The Performa 405 and 430 also have 512K installed.

Mac LC III, Performa 450

4MB of RAM soldered on. One SIMM socket. 80ns standard SIMMs or faster. Virtual memory, limited 32–bit addressing, video RAM.

Standard Memory: The SIMM bank may either be empty, or filled with one SIMM. The LC III uses a 72-pin SIMM that is different from the standard used in the original LC model. Low memory configurations of 4, 5, 6, or 8MB are possible.

Virtual Memory: The 68030 CPU in the LC III has a built–in Memory Management Unit. Therefore, they can run virtual memory without additional hardware. In 24–bit mode the LC III 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 36MB. The SIMM slot also accepts a 8, 16, or 32MB SIMM. The ROMs support standard 32–bit addressing, but are specially configured to support a maximum of 10MB of RAM. To address large amounts of RAM, use System 7 standard 32–bit addressing.

Video RAM: 512K soldered on. One expansion slot is available for a maximum of 768K video RAM.

Mac LC 520

4MB of RAM soldered on. One SIMM socket with 1 MB installed. 80ns standard SIMMs or faster. Virtual memory, limited 32–bit addressing, video RAM.

Standard Memory: The SIMM bank is shipped with a 1MB SIMM. The 520 uses a 72-pin SIMM that is different from the standard used in the original LC model. Low memory configurations of 4, 5, 6, or 8MB are possible.

Virtual Memory: The 68030 CPU in the 520 has a built–in Memory Management Unit. Therefore, they can run virtual memory without additional hardware. In 24–bit mode the 520 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 36MB. The SIMM slot also accepts a 8, 16, or 32MB SIMM. To address large amounts of RAM, use System 7 standard 32–bit addressing.

Video RAM: The maximum, 768K, video RAM is installed.

Mac Performa 200 (Classic II)

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 Performa 600 (Mac IIvx)

4MB soldered on. One bank of four SIMM sockets. Standard 80ns SIMMs or faster. Virtual memory, 32–bit addressing.

Standard Memory: The bank may either be empty, or filled with four SIMMs which must all be of the same size. Standard memory configurations of 4, 5, or 8MB are possible using no SIMMs, 256K, or 1MB SIMMs in the bank.

Virtual Memory: The 68030 CPU in the Mac IIvx and Performa 600 have a built–in Memory Management Unit. Therefore, they can run virtual memory without requiring any additional hardware. In 24–bit mode, the IIvx and Performa 600 can address up to 13MB of VM, and in 32–bit mode, it can address up to 1024MB. In situations where performance is critical, or hard drive space is limited, we recommend Virtual 3.0.

High Memory: Up to 68MB of physical RAM may be installed on a Mac IIvx and Performa 600 (4MB soldered on to the motherboard plus four 16MB SIMMs). Other common configurations are 16MB (4MB built in plus four 2MB SIMMs) or 20MB (4MB built in plus four 4MB SIMMs). They have 32–bit compatible ROMs, so no additional software is required to address high memory in System 7.

Video RAM: The Performa 600 has two VRAM banks of one slot each. In the standard configuration, one of the banks has 512K of 68–pin VRAM installed in it. This is enough to support 16–bit color on the 12" RGB monitor, or 8–bit color on the 13" or 14" color monitor. This can be expanded up to 1MB by putting another 512K VRAM SIMM in the second bank. This configuration will support 16–bit color on the 13” or 14” color monitor. The 600 only supports 100ns 512K VRAM SIMMs. The Performa 600CD configuration ships with 1MB VRAM installed.