

AccessionIndex: TCD-SCSS-T.20141006.002

Accession Date: 6-Oct-2014

Accession By: Dr.Brian Coghlan

Object name: Apple Macintosh G3 PowerPC with M2924 Colour Display

Vintage: c. 1997

Synopsis: The first desktop Mac to use the PowerPC G3, with 'Outrigger' upgrade chassis. S/N: CK83520ED8X.

Description:

The Apple Mac G3 PowerPC was introduced in late-1997, a direct descendent of the Mac 7500 (1995), 7600 (1996), and 7300 (early-1997) PowerPC models, and the first Macintosh to use the PowerPC G3 (PPC750) microprocessor. It introduced a large Level 2 external cache. From the previous models it retained the unique swing open chassis termed 'Outrigger' by Mac enthusiasts; the entire motherboard is accessible after the hinged drive sleds are opened, allowing for easy upgrades. It is the earliest '4MB Old World ROM' Mac model officially able to boot into Mac OS X. It was also the last desktop Mac to have built-in external serial ports, and it was the last traditional desktop Mac (superseded by the Mac Mini).

It had 266MHz PowerPC 750 (G3) CPU from Motorola, 64 KB L1 cache, 512KB half-speed L2 cache, a 66.83MHz system bus, 32MB PC66 SDRAM, and a standard 4GB ATA hard disk (instead of the SCSI drives used in most previous Apple systems) plus a 24X CD. Despite using ATA drives, the Mac G3 retained an internal 10MB/s SCSI bus, as well as an external DB-25 5MB/s SCSI bus. Each SCSI bus could support a maximum of 7 devices.

It had 1 x ADB port, 2 x mini-DIN-8 RS-422 serial port (printer/modem Geoport, AppleTalk), 1 x DB-25 SCSI port, built-in mono speaker, 16-bit audio input with optional RCA jacks, 16-bit audio output with optional RCA jacks, 10BASE-T Ethernet, optional 56k modem, and a DA-15 Video display port.

The Mac G3 in this collection includes an Apple M3501 Extended Keyboard II & Mouse and an Apple M2924 Multiple Scan 17 Colour Display.

The M2924 Colour Display was introduced in March 1994. It uses a 17" diagonal Trinitron cathode-ray tube (CRT) (16.1" is visible), with 0.26-mm stripe pitch, and a bonded glass screen that includes an antiglare/antistatic multilayer coating. It is quite heavy at 50lbs weight. Overall dimensions are 16.7" H x 15.9" W x 17.8" D. Power consumption is modest at 150 Watts, 513 BTU/hour. It has a universal power supply that will work on 90-132/198-260 Volts, drawing maximum 1.25 Amps. It has automatic degauss at power-on, and manual degauss by turning power switch off, then on (capable of full degauss after monitor is turned off for 20 minutes or more). It sits on a built-in, tilt-and-swivel base.

It can display 640x480, 800x600, 832x624, or 1024x768 resolutions, with vertical refresh at 50 to 150 Hz and horizontal refresh at 29 to 82 kHz, compatible with Macintosh, XGA, VGA, SVGA, and VESA standards. It will work with an Apple Power Macintosh, Macintosh Centris, Macintosh Quadra, or any NuBus compatible Macintosh with a Macintosh Display Card 24AC, Macintosh II family, PowerBooks, Duo and Mini Dock, Macintosh Performa, Macintosh LC, LC II, LC III, and

Macintosh computers with Display Cards 4•8, 8•24, 8•24GC working in 640x480 mode. Other modes are possible with additional adapters. System software version 7.1 or later is needed. The available operating modes are as follows:

Mode	Resolution	Vert Rate	Horiz Rate	DPI
VGA	640x480	59.95 Hz	31.47 kHz	50
Macintosh	640x480	66.7 Hz	35.0 kHz	50
VESA	640x480	75 Hz	37.5 kHz	50
VESA	800x600	75 Hz	46.9 kHz	62
SVGA	800x600	55.98 Hz	35.16 kHz	62
800x600	800x600	60 Hz	37.8 kHz	62
Macintosh	832x624	75 Hz	49.73 kHz	65
Macintosh	1024x768	75 Hz	60.2 kHz	80
1024x768	1024x768	60 Hz	48.3 kHz	80

The connection to the host is via a 15-pin miniature D-type connector. The video red, green, and blue analog signals conform to RS-343A standard, 0.714 V peak to peak, positive going. The sync-on-green is also RS-343A compatible, 0.286 V \pm 10% negative-going during blanking intervals. The separate sync input accepts 1 to 5 V peak-to-peak, negative or positive going, and composite sync also 1 to 5 V peak-to-peak, negative or positive going.

There are front panel controls for power and reset, and control buttons for brightness and contrast. Additional controls are available using the command button to adjust horizontal and vertical shift, horizontal and vertical size, rotation, horizontal and vertical convergence, and colour temperature. It has two Apple Desktop Bus (ADB) I/O ports in the front of the base and one ADB pass-through port at the rear of the base, one input and one pass-through microphone port and one input and one pass-through headphone/speaker port at the front of the base.

Environmental specifications are: *Temperature*: operating: 50°F–104°F (10°C–40°C), storage: 32°F–140°F (0°C–60°C), shipping: -4°F–140°F (-40°C–60°C). *Altitude*: operating: to 10,000 ft. (1,067 m), shipping: to 35,000 ft. (3,048 m). *Humidity (non-condensing)*: operating: 10–80% max, storage: 5–90% max, shipping: 5–95% max. The power savings features conform to the Energy Star Program of the US E.P.A.

The display is controlled by a microprocessor. The advice is to always save EEPROM settings before replacing the microprocessor board, otherwise there may be data loss or corruption, as if settings are lost before they can be written to the new EEPROM, the display cannot be repaired, and the whole display will need to be replaced.

Accession Index	Object with Identification
TCD-SCSS-T.20141006.002.01	Apple Mac G3 PowerPC. S/N: CK83520ED8X, M3501 Keyboard
TCD-SCSS-T.20141006.002.02	Apple M3501 Extended Keyboard II & Mouse. S/N: AL3054B4M3501B
TCD-SCSS-T.20141006.002.03	Apple M2924 Colour Display. S/N: S14120E91XX



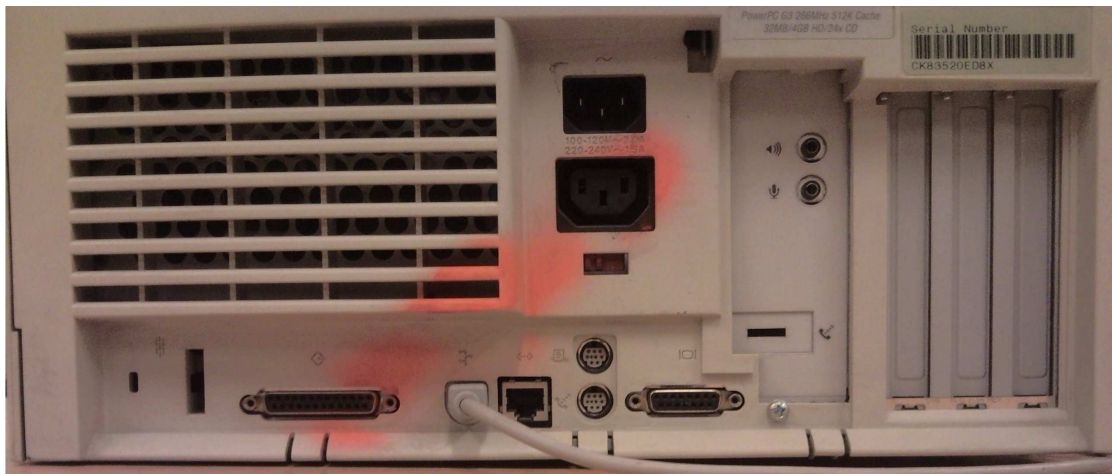
Figure 1: Apple Mac G3 PowerPC front three-quarter view



Figure 2: Apple Mac G3 PowerPC front view



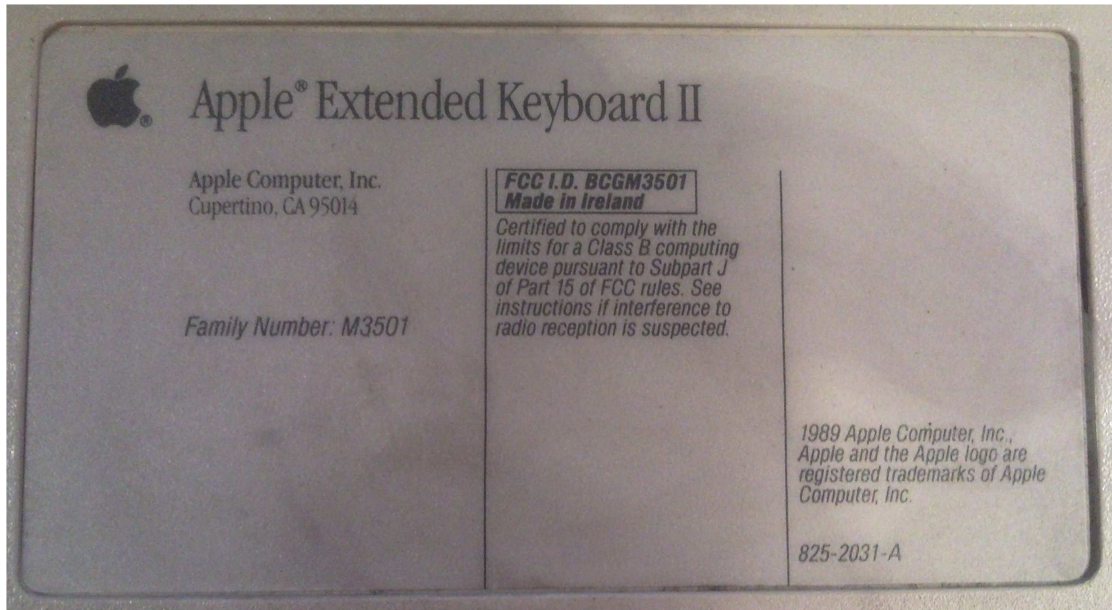
Figure 3: Apple Mac G3 PowerPC top rear view



*Figure 4: Apple Mac G3 PowerPC rear view
S/N: CK83520ED8X*



Figure 5: Apple M3501 Keyboard II top front view



*Figure 6: Apple M3501 Keyboard II manufacturing label
S/N: AL3054B4M3501B*



Figure 7: Apple M2924 Colour Display three-quarter view



Figure 8: Apple M2924 Colour Display base view



Figure 9: Apple M2924 Colour Display rear top view



Figure 10: Apple M2924 Colour Display rear view

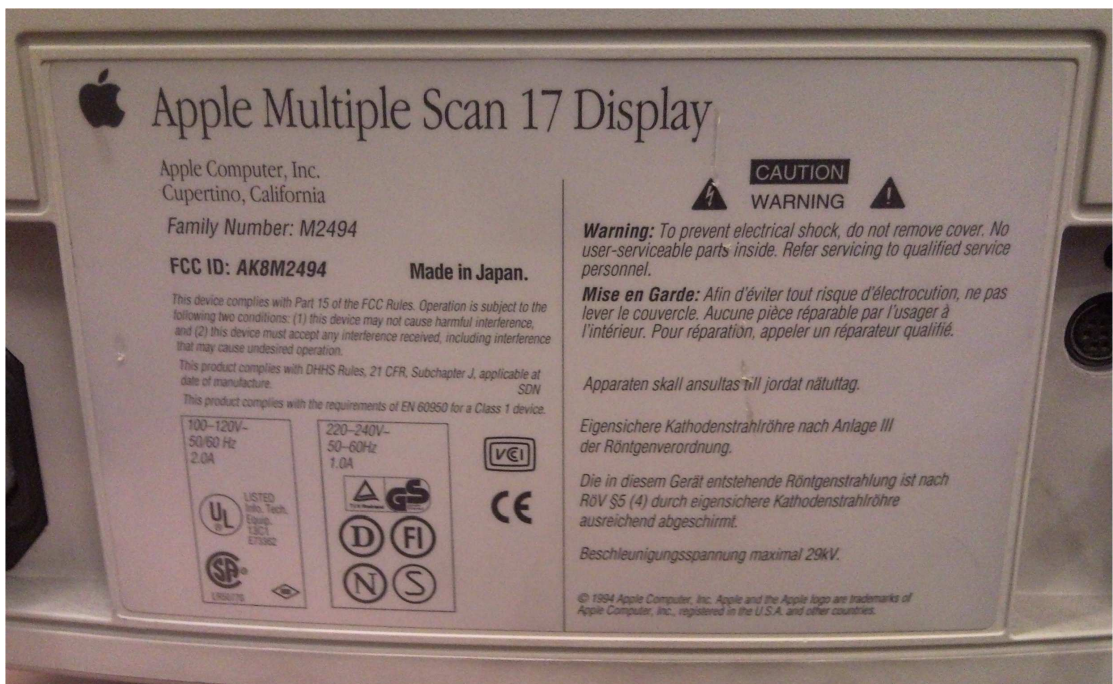


Figure 11: Apple M2924 Colour Display label

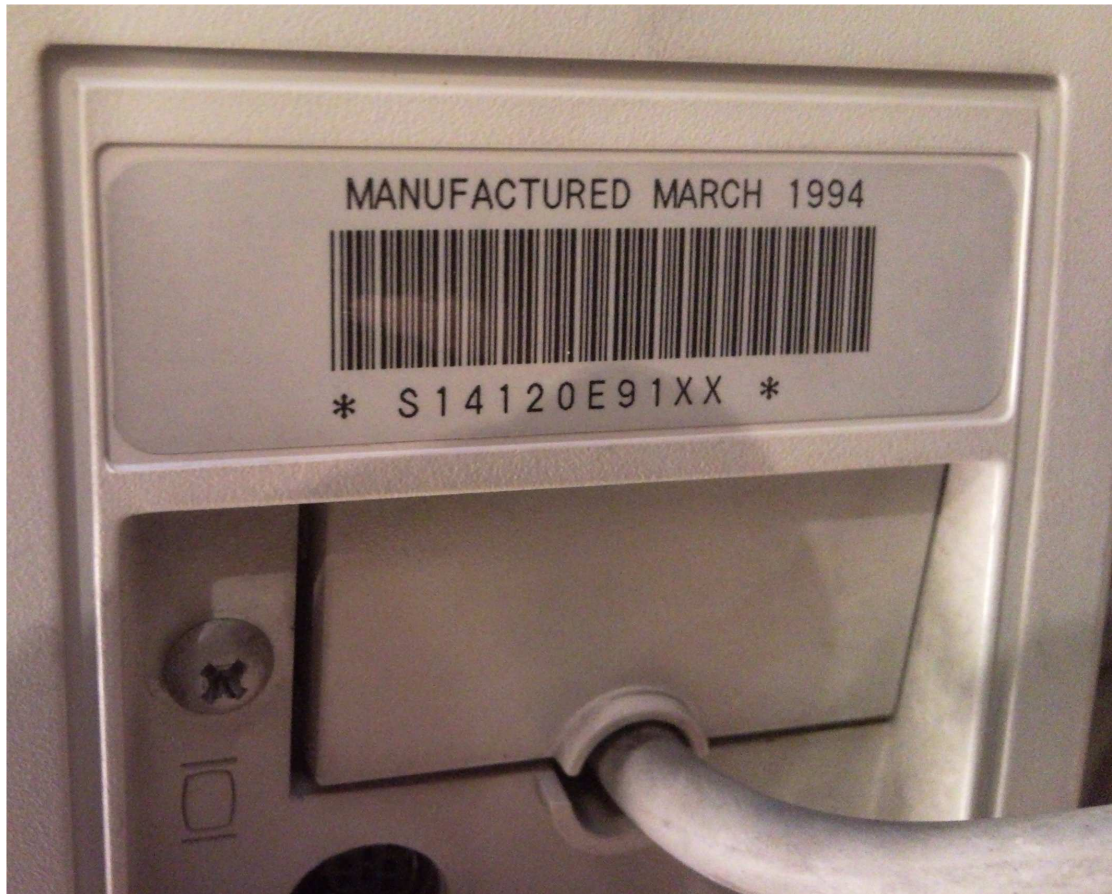


Figure 12: Apple M2924 Colour Display serial number S14120E91XX