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Apple 13 and 14 Color Displays Compared to VGA Monitors

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TOPIC -----

This article describes the main differences between VGA monitors and Apple's 13-inch and 14-inch color displays: the AppleColor Hi-Resolution RGB Monitor and the Macintosh Color Display.

DISCUSSION -----

There are several variations of VGA monitors, but they all operate on newer MS-DOS computers that support the VGA standard.

The Apple displays you mention have a standard screen resolution of 640 by 480 pixels. There are, however, significant differences between the operational specifications of the Apple Monitors and VGA Monitors.

Refresh rate

VGA monitors	60 hz (actually 59.94 hz)
Apple displays	66.7 hz

Refresh rate is the number of times per second (or cycles) that a complete new screen is written. The Apple displays have a faster refresh rate than VGA monitors. This helps to produce an essentially flicker-free screen. In addition to looking better, it reduces eye strain that accompanies the 60hz rate of the typical VGA monitor.

Bandwidth

VGA monitors	18 to 24 Mhz
Apple displays	30.24 Mhz

Monitor bandwidth is the major factor that determines the amount of video "detail" that is displayed on the screen. It is a direct function of the monitor hardware, and cannot be changed. Given the bandwidth specifications listed above, the Apple Monitors provide a superior video image when displaying highly detailed graphics.

CRT Flatness

The surface of the CRT screen of the Apple Monitors is considerably flatter than that of VGA monitors.

Flatter screens are easier to read, which makes using the Apple displays more pleasant than the comparable VGA monitor.

Dot pitch

VGA monitors from 0.29 to 0.39 mm
Apple displays 0.26 mm

Dot pitch is the distance between CRT pixels. As the dot pitch gets smaller, the display becomes sharper. Dot pitch in the 0.29 to 0.39 mm range produce an increasingly grainy look as the dot pitch value approaches 0.39 mm. The Apple displays' smaller dot pitch provides a sharper and cleaner appearance than a VGA monitor.

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