



# Tech Info Library

## Macintosh LC: Video Timing

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### TOPIC -----

This article gives the video timing modes for the Macintosh LC.

### DISCUSSION -----

The Macintosh LC supports 3 different timing modes:

- Macintosh 12-inch RGB Display's 512x384
- Macintosh 12-inch RGB Display's 560x384 (generated by Apple IIe card, 4-bit only)
- Macintosh 12-inch Monochrome Display, Macintosh High-Resolution Monochrome, Macintosh High-Resolution RGB (640x480)

In 640x480 mode, Macintosh LC uses the CPU clock (31.3344 MHz) as the pixel clock. This is opposed to the 30.24 MHz clock that is normally specified. This results in 32 extra pixels per scan line. The 640 active pixels are centered in the active video field with 16 black pixels placed on either side. Horizontal and vertical scan rates remain the same. A visual distortion from square pixels will occur, making the pixels 3% too narrow. The Macintosh 12-inch Monochrome display will be able to correct for this distortion, but the current monochrome and RGB monitors will not.

The 560x384x4 Apple IIe mode is selectable only when an Apple IIe card is present. The card is necessary because the 17.234 MHz oscillator required for this video mode is located on the Apple IIe card itself.

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