

New Technical Notes

Macintosh

®

Developer Support

HW 27 - Macintosh 21" Color Display Technical Specifications

Hardware

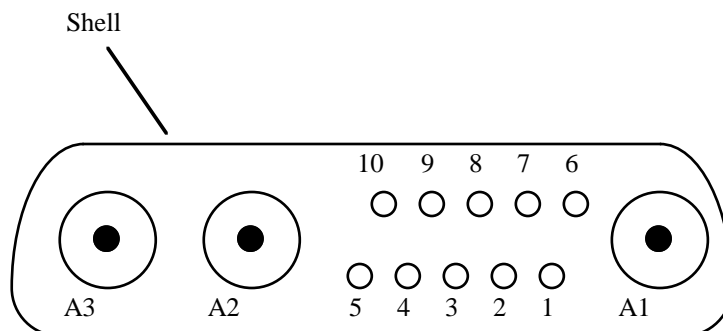
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This Technical Note presents the technical specifications for the Macintosh 21" Color Display with the objective of allowing display board and accelerator board manufacturers to ensure compatibility with this monitor.

Input Connector

The video and synchronization input signals are supplied via a D series size-3 shell with three internal coaxial connectors. The connector at the monitor has ten socket contacts and three coaxial receptacles (male center pin), as shown. The shell is Dartech type FM-13W3S or equivalent. The coaxial receptacles are Dartech type FME1S or equivalent.



<u>Pin</u>	<u>Signal Name</u>
A1	Blue video
A2	Green video
A3	Red video
1	Hsync return
2	Vsync
3	Sense 2
4	Sense ground
5	Csync
6	Hsync
7	Vsync return
8	Sense 1
9	Sense 0
10	Csync return
Shell	Shell ground

Signal input connector as seen from the rear of the monitor.

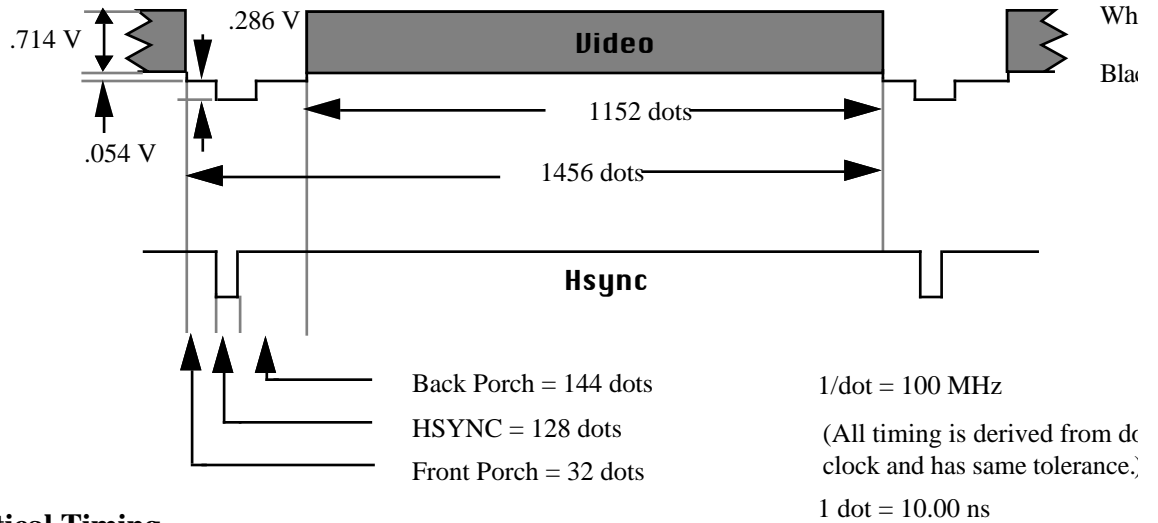
The center conductor of A3 is red video and the outer conductor is red video return. The center conductor of A2 is green video and the outer conductor is green video return. The center conductor of A1 is blue video and the outer conductor is blue video return.

Sense 0, Sense 1, and Sense 2 (pins 9, 8, and 3) will be shorted to Sense ground (pin 4) in the monitor, producing the sense line code 000.

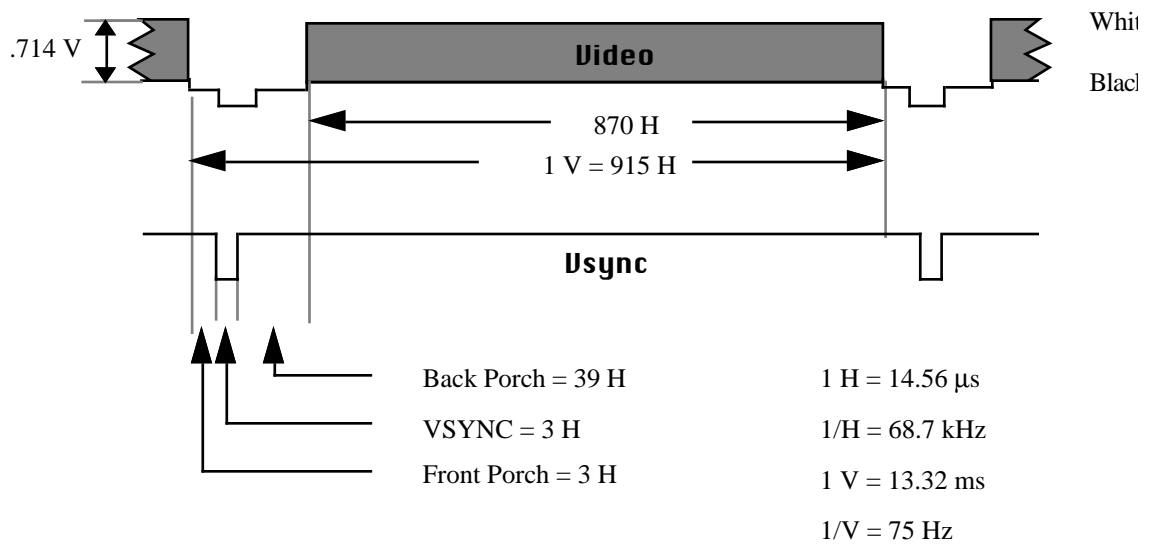
The following lines will be connected together through low impedances at the CPU side: Sense ground, Shell ground, the outer conductors of A1, A2, and A3, and the returns of Hsync, Vsync, and Csync.

Input Signal Timing:

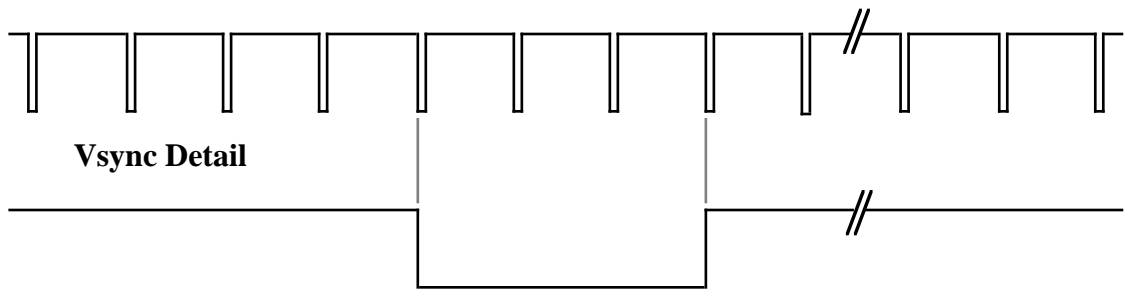
Horizontal Timing



Vertical Timing



Hsync Detail



Note: Voltage levels to comply with EIA RS-343-A. H and Vsync are TTL level signals.

Further Reference:

- *Macintosh 21" Color Display Owner's Guide*
- *Designing Cards and Drivers for the Macintosh Family*, Third Edition