



# Tech Info Library

## ABS Tech Note: AWS29 Running An AWS 95 Without A Monitor (6/94)

Revised: 6/24/94  
Security: Everyone

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TOPIC -----

This article describes running an Apple Workgroup Server (AWS) 95 without a monitor.

DISCUSSION -----

If you want to run an AWS95 without a monitor, you need to convince the system there is a monitor attached. You can do this by building a custom cable which grounds one or more of the monitor ID signals.:

Pin	Signal	Description
1	RED.GND	Red Video Ground
2	RED.VID	Red Video
3	CYSNC~	Composite Sync
4	MON.ID1	Monitor ID, Bit 1 (also known as SENSE0)
5	GRN.VID	Green Video
6	GRN.GND	Green Video Ground
7	MON.ID2	Monitor ID, Bit 2 (also known as SENSE1)
8	nc	(no connection)
9	BLU.VID	Blue Video
10	MON.ID3	Monitor ID, Bit 3 (also known as SENSE2)
11	C&VSYNC.GND	CSYNC & VSYNC Ground
12	VSYNC~	Vertical Sync
13	BLU.GND	Blue Video Ground
14	HSYNC.GND	HSYNC Ground
15	HSYNC~	Horizontal Sync

The AWS95 supports any display, whether from Apple or from another vendor, that meets one of the following specifications: Standard Sense Codes:

Display	Sense pins	Hor-x-Vert	Dot	Vert	Horiz
	10 7 4	Pixels	Clock	Refrsh	Refrsh

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Apple 21" Color	0	0	0	1152 x 870	100	75.00	68.70
Apple Portrait	0	0	1	640 x 870	57.2832	75.00	68.90
12" Apple RGB	0	1	0	512 x 384	15.6672	60.15	24.48
Apple 2-Page							
Monochrome	0	1	1	1152 x 870	100	75.00	68.70
NTSC - Underscan	1	0	0	512 x 384	12.2727	59.94	15.70
NTSC - Overscan	1	0	0	640 x 480	12.2727	59.94	15.70
12" Apple							
Monochrome	1	1	0	640 x 480	30.24	66.70	35.00
13" Apple RGB	1	1	0	640 x 480	30.24	66.70	35.00

Notes: A sense pin value of 0 means that the pin should be grounded to the C&VSYNC.GND signal; a value of 1 means do not connect the pin.

Sense pins 4, 7, and 10 are referred to as SENSE0, SENSE1, and SENSE2 in pinout tables for the video connectors.

To produce a color NTSC signal, an RGB-to-NTSC converter is required.

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