

## **Macintosh: Power Supply Test Procedure (11/95)**

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TOPIC -----

Can you supply us with the proper procedure to test the output voltages on the power supply used in the following Macintosh Computers?

Macintosh IIvi, Macintosh IIvx, Centris 650, Quadra 650, Quadra 700, and the Power Macintosh 7100.

DISCUSSION -----

The following information pertains to the supply used in all of the Macintosh models you listed.

To identify the proper pins, refer to the numbers printed at the four corners of the power supply connector on the motherboard. Or, with the power supply removed from the chassis look at the connector on the power supply with the following orientation.

### Begin\_Graphic

+			 					+
	PWR	Supply						
			Cor	ne	ect	.01	<u>-</u>	
			6	7	8	9	10	
			1	2	3	4	5	

Pin	Signal
1	+12 Volts
2	+5 Volts
3	+5 Volts
4	+5 Volts
5	Ground

6	Ground	
7	Ground	
8	-12 Volts	
9	/PFW	Power Fail Warning Line
10	+5_TRKL	+ 5 Volts Trickle

#### End\_Graphic

The Power Fail Warning Line and + 5 Volts Trickle are used when turning the system on and when disabling the power supply when errors are detected in the supply voltages.

Here is how to check the voltages on the power supply when removed from the computer. The method described below is not supported by Apple as a way to troubleshoot power problems. You should instead replace the power supply module when needed.

# Unsupported Testing Procedure

Place a jumper from pin 10 to pin 9, this supplies the +5 trickle voltage, pin 10, to the power fail warning line at pin 9.

You can measure the voltage at each of the connector pins while pins 9 and 10 are jumped together. To shut-off the supply after the measurements are completed, remove the jumper from pins 9 and 10.

In normal operation the logic board when instructed to startup places a +5VDC trickle on pin 9. After the power supply starts the trickle voltage is removed and pin 9 monitors the +5VDC main output line, pins 2,3 or 4. This is all handled by the motherboard of the computer.

For the purpose of measuring the power supplies voltages while not connected to the logic board, shorting pins 10 to 9 for a short period of time is OK.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

### CAUTION:

DO NOT use the power supply with pins 10 and 9 shorted together for an extended length of time. Do so defeats the safety feature of the Power Fail Warning Line (pin 9).

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

The measurements should fall within this range.

### Begin\_Table

```
+5V +4.90V to +5.25 Vdc
+5V_TRKL +4.75V to +5.25 Vdc
+12V +11.50V to +12.80 Vdc
-12V -13.20V to -10.80 Vdc
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