



MP 566 Test guide

Follow the testing procedure in the shown order. If one test fails, find out the problem, correct it then resume.

Always remove power between steps because it is very easy to create a short circuits when moving a DMM probe. And most of the time, short circuits are fatal to the circuits.

Step	Description
	<p>Warning</p> <p>The MP566 generates a 225 Volts voltage to power the tube. This voltage is potentially lethal. Never touch the PCB or any component when it is powered.</p> <p>After powering off, wait 10 seconds before touching the circuits in order to give time to the capacitors to discharge.</p>
1.	<p>Short circuit check</p> <p>Do a basic short circuit check with your digital multimeter (DMM) set to Ohms :</p> <ul style="list-style-type: none"> • Between Test points GND and V+. • Between Test points GND and V-. <p>In both cases you should get several kilo-Ohms. If it is not the case, find out and fix the short before applying power.</p>
2.	<p>Test setup</p> <p>Insert the tube into the socket.</p> <p>If you own an XT500, 500 series module connector extender, plug the MP566 into your XT500 or...</p> <p>If you own a 501 500 series module host, remove the case from the back panel and plug the MP566 into your 501 or...</p> <p>Remove all other modules from your 500 rack or Lunchbox, attach the 566 PCB to its frame/front panel and insert into the leftmost slot.</p>
3.	<p>High voltage check</p> <p>Set your DMM to DC Volts on a minimum 300 V scale and connect it between the 0V (black probe) and TP2 (red probe) test pins. Use test grips and be careful not to create any short circuit.</p> <p>Power on and check that you get a positive voltage around +225V.</p>
4.	<p>Low voltage check</p> <p>Connect your DMM to TP8 (red probe).</p> <p>After 30 seconds, when the tube warms up, you should get a negative voltage somewhere between -3.8V and -5V, depending on your lunchbox voltage.</p>
5.	<p>Signal check</p> <p>Set the "IN" (P1) and "OUT" (P2) potentiometers to minimum, Gain switch to "Low"</p> <p>Connect a 1 VAC, 1 KHz sine source to the input.</p> <p>You can use your multitrack software loop playing a sine tone like the one that is downloadable from the "Downloads & Useful links" section on our website. Route the signal to a DAC and connect the DAC output to the MP566 input. Set your DMM to AC Volts and adjust the software output level in order to get around 1 VAC between pin 2 & pin 3 of the input XLR.</p> <p>Connect your DMM between 0V and TP4.</p> <p>Power On. The LED should stay off.</p> <p>Turn potentiometer P1 (IN) to the maximum. The LED turns green.</p> <p>Raise potentiometer P2 (OUT) until the LED turns red. You should read about 7 volts AC on the DMM.</p>
6.	<p>Sound check</p> <p>This is done after soldering the output transformer.</p> <p>Plug in a dynamic microphone to the input XLR.</p>



Step		Description
		<p>Connect the output to your monitoring system. It can be a headphone amplifier or it can go through one of your ADC inputs if you run a software studio.</p> <p>Set gain switch to Mid, "IN" knob to maximum, "OUT" knob to minimum, POL switch to left, 48V to Off.</p> <p>Plug in power and wait a few second for the tube to heat up.</p> <p>Slowly turning up the "OUT" knob, check that your micpre is working. Check the 3 switch gain positions, the phase switch, the "IN" knob.</p> <p>Make the same test with a static microphone, with the 48V switch set to On.</p>
7.	DI check	<p>Insert an instrument jack into the front panel jack socket.</p> <p>Plug in power.</p> <p>You should hear your instrument when playing. The "IN" knob as no action on the DI input.</p>
8.	Congratulations	You're done !