



## MC624 Setup guide

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

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

Step	Description
1. Test setup	Insert the Switcher-2 module A1 if not present. Remove all IC's from the sockets if present.
2. Power up test 1	Connect the voltmeter black probe to a GND test pin. Connect the voltmeter red probe to the +16V pin. Connect the 12V power adapter. Switch on and check that you read about +16V. Connect the voltmeter red probe to the -16V pin and check that you read about -16V. Connect the voltmeter red probe to the +5V pin and check that you read about +5V. Connect the voltmeter red probe to the +3.3V pin and check that you read about +3.3V. Power off.
3. Digital test	Insert U14 to U18, U20 and U21. Power on and check that the 7 segment display counts up and down when turning the level encoder. Check that the LED's light up when the switches are depressed.
4. Relays test	Insert U10, U11, U12 and U13. It is preferable to temporarily remove the input 6 jack socket to insert U10. Power on and check that you can hear the relays clicking when moving the level encoder and depressing the switches.
Analog test setup	Insert U1 to U5.
5. Zeroing the op-amps	This can only be done if you have a very good millivoltmeter that is able to display sub millivolt values. If your voltmeter does not have enough resolution, it is safer to leave the JMP1 to JMP8 jumpers out. The OPA134 op-amps have a typical offset of 0.5mV which is already pretty low and the risk would be to make things worse.  If you have a good millivoltmeter: Insert the jumpers JMP1 to JMP8 in the positions marked by a white line. Connect the meter black probe to the GND pin that is the closest to the op-amps and measure the DC voltage on the test pins TP1 to TP4. Zero the DC output voltages with P1 to P4 respectively.
6. Headphone amp test	Insert U6 and U8. Connect the voltmeter red probe to TP9 and check that the DC voltage is very close to 0V (a few millivolts from 0V). Same test on TP10.
7. Functional test	Connect a stereo input signal to "Input 1" XLR and connect monitors to "Output 1" XLR. Press "Input 1" and "Output 1". Check that the signal passes through. Check the level control. Check the sound with headphones. Check the function switches (Mute, mono, etc...) Check inputs 2 to 6 and output 2 to 4.
8. Congratulations!	You're done!