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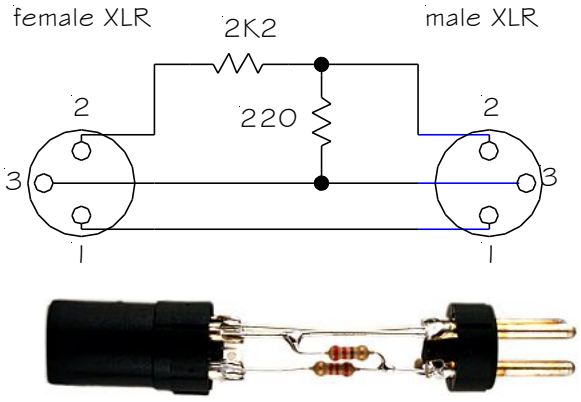
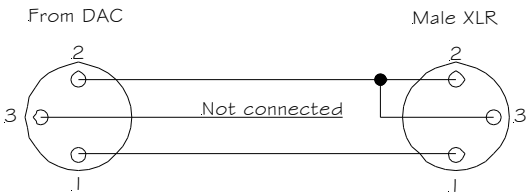
MP32 Setup guide

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

Always unplug 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.	Jumpers setting	Install jumper JMP1 if needed by your output transformer.
2.	Short circuit check	Do a basic short circuit check with your digital multimeter (DMM) set to Ohms : • Between Test point TP1 (GND) and TP2 (V+). • Between Test point TP1 (GND) and TP3 (V-). In both cases you should get several hundred of kilo-Ohms. If it is not the case, find out and fix the short before applying power.
3.	Test setup	At this point, you need an assembled and wired SKMP case, with a DIO2 board fitted. Install your MP32 in a free slot. Do not secure it yet with nuts. Connect a flat cable between the DIO2 and the MP73 board (look at the "SKMP assembly guide"). Disconnect all other micpre's by removing their flat cable. Connect the PSL1 or PSL2 power supply leaving the mains plug disconnected. Make sure A1 and A2 (DOA's) are not installed on your MP32 board .
4.	General power check	Plug in power and check that the 3 LEDs on the power supply unit are lighting normally. If one or more LED is staying off or is lighting too low or too bright, immediately plug off power and start checking your board. Plug off power.
5.	Positive rail check	Set your DMM to DC Volts on a 30 V scale and connect it between TP1 (GND) and TP2 (V+). Use test hooks and be careful not to create shortcuts. Plug in power. Check that you get a positive voltage and that it changes when you turn P4. Plug off power.
6.	Negative rail check	Connect your DMM between TP1 (GND) and TP3 (V-). Plug in power. Check that you get a negative voltage and that it changes when you turn P5. Plug off power.
7.	Voltage setup without charge	If everything is correct, you can now adjust the positive and negative voltages to values that fit your DOA's. Set them 1-2 volts below the wanted value. You will adjust them to the final value in the next step, when the rails are charged by the DOA. SK25 : ±18V SK47, SK99 : ±24V Other DOA's : check in the manufacturer datasheet Plug off power.
8.	Voltage setup with charge	Insert the DOA's : A1 and A2. Plug in power. Check both voltages again and adjust to the final value. Plug off power.

Step		Description
9.	Sound check	Connect the input and output XLR wires to the board terminals. Plug in a dynamic microphone to the input XLR. 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. Set Gain switch to Low, gain knob to minimum, 48V to Off. Plug in power. Slowly turning up the gain knob, check that your micpre is working. Check the Pad and Phase switches. Make the same test with a static microphone, with the 48V switch set to On. Plug off power. Set the 48V switch to Off.
10.	DI check	Plug the board's flat cable to connector CN1 or CN2 on the DI02 board if it is not the case yet. Insert an instrument jack into the corresponding front panel jack socket. Plug in power. You should hear your instrument when playing. Plug off power.
11.	Clip LED setup	Warning : Do not forget to set your 48V phantom switch to OFF. Connect a 1KHz sine source to the input. 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 your DMM to the DAC output. Adjust the software output level in order to get around 0.5VAC. Connect this output your micpre input. Set the gain knob to minimum and the Gain switch to Low gain. the micpre output is still connected to your monitoring system. Plug in power. The important point here is that we are going to bring the micpre to clipping but we don't want to clip in the monitoring chain. Check with your Vu meters. If the micpre output signal is too hot for your monitoring input, you will have to build a pad, look at next step. Listen to the sine tone and slowly increase the gain until you hear the clipping. It is pretty easy to hear when the new harmonics break into the sound. Back off slightly until you hear no clipping at all. Lower by 3dB the signal level in the software. You can choose a different margin like 4.5 or 6dB. Adjust trimmer P3 to the point where the red LED just starts lighting up while turning clockwise. Plug off power.

Step		Description
12.	Output pad	This is only needed if your monitoring setup clips before the micpre. Use one female and one male XLR plugs and wire 2 resistors as shown. Insert the pad between the micpre output and your monitoring system. Go back to step 11. 
13.	Low frequency CMR	Use a 40Hz sine source. You can download a sample here. Adjust the output level in the software to get about 2.5VAC on the DAC output. Connect this source to your micpre input with a modified XLR cable that will drive it in common mode. the micpre output is still connected to your monitoring system. Plug in power.  Increase the mic preamp gain until you hear the low frequency tone. You will probably have to rise the gain in your monitoring system because the output signal is quite low. Adjust the P1 trimmer until the tone is at minimum level. You must find the null point from which the signal increases in both directions. Increase the listening gain when you get closer to this point.
14.	Congratulations	You're done !