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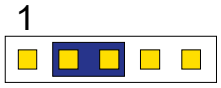
CP5176 Setup guide

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 short circuit when moving a DMM probe. And most of the time, shortcuts are fatal to the circuits.

Step		Description
1.	Test setup	Remove the SK25 discrete op-amp (DOA) if present. Remove the gain reduction meter if present.
2.	Board installation	Plug the CP5176 into your 500 connector Extender , if you own one or… Remove all other modules from you 500 rack or Lunchbox and insert the CP5176 into the leftmost slot.
3.	General power check	Power the rack and check that the front panel green LED lights up when the red push button is depressed (On/Off).
4.	Power voltages check	Set your DMM to DC Volts on a 20 V scale. Connect the black probe to test point 0V. Connect the red probe to test point V+. Check that you get a value between 15 and 16 Volts. Connect the red probe to test point V-. Check that you get a value between -15 and -16 Volts. Connect the red probe to test point TP7. Check that you get precisely -5.5 Volts.
5.	Input signal	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 "Support/Downloads & Useful links" section on our website. Route the signal to an audio output connected to the compressor input. Connect your DMM to this output, between pin 2 and pin 3 of the XLR. The DMM is set to AC Voltage, on a 100 millivolts scale. Adjust the software output level in order to get about 100mVAC. Connect the compressor output to your system monitoring.
6.	Output amp check  *JMP1*	Insert 1 jumper on JMP1 between pins 2-3 Insert the SK25 DOA. Depress the red button (activate compressor) and release the 3 white buttons. Set "input" potentiometer to maximum. Set "out" potentiometer to minimum. Power on and check that you can hear the 1kHz sinus when you increase the "Out" pot. Trimmer **P6** changes the threshold where the FET starts attenuating. Turn anticlockwise until you get the maximum possible output level. After a point, there is no more effect.

Step		Description
7.	FET bias setup	This setting and the one following are important for a good stereo tracking when compressing a stereo signal with two CP5176. Or this purpose, it is necessary to use a good quality voltmeter. Unplug monitoring and connect the voltmeter on the output XLR. Set to AC Volts. "Input" potentiometer on maximum. "Out" potentiometer on maximum. "Ratio" rotary switch to 20. Adjust the sinus signal level to get exactly 13.5VAC on compressor output. It is also possible to play with the "Out" potentiometer but it is generally easier to adjust from software. Leave the compressor warm up and stabilize for 10 minutes. Adjust **P6** clockwise in order to reduce the output voltage to 12 VAC exactly. This sets the FET bias for a -1dB attenuation.
8.	-10dB point setup 1  *JMP3*	Do not change any other parameter. Insert a second jumper on JMP1, in position 4-5 and adjust **P5** in order to reduce the output voltage to 3.8 VAC exactly.
9.	GR meter setup	Do not change any other parameter. After removing power, plug the GR meter into connector CN1. Power on and adjust P7 in order to just light up the 10th green LED (-10dB attenuation), all the other green LEDs being on.
10.	Jumper 1  *JMP3*	Remove the two jumper from JMP3 and insert one jumper pins 1-2. This is the final jumper position for normal compressor operation.
11.	General checking	Send a musical signal to the compressor and monitor the output. Check the action of the bypass switch "Off" that should remove the compressor effect but let the GR meter working. Check the "Input" and "Out" pots action. Check the different ratios. Increasing ratios should increase compression. Check that the "HPF" switch increases the relative level of basses. Check the effect of the "Dist" switch on a pure sine with a low ratio.
12.	Congratulations!	You're done!