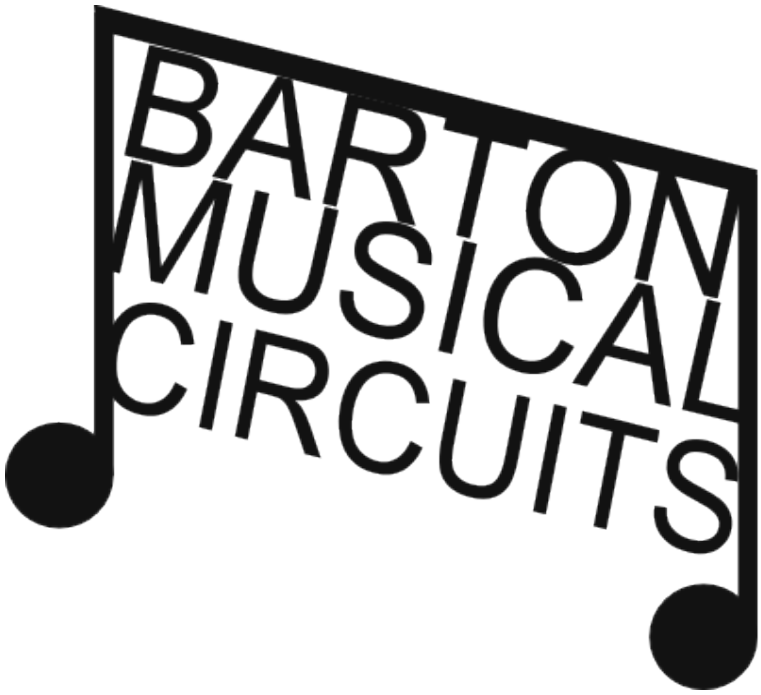

BMC067. Quad Voltage Inverter

If you have any questions, or need help trouble shooting, please e-mail
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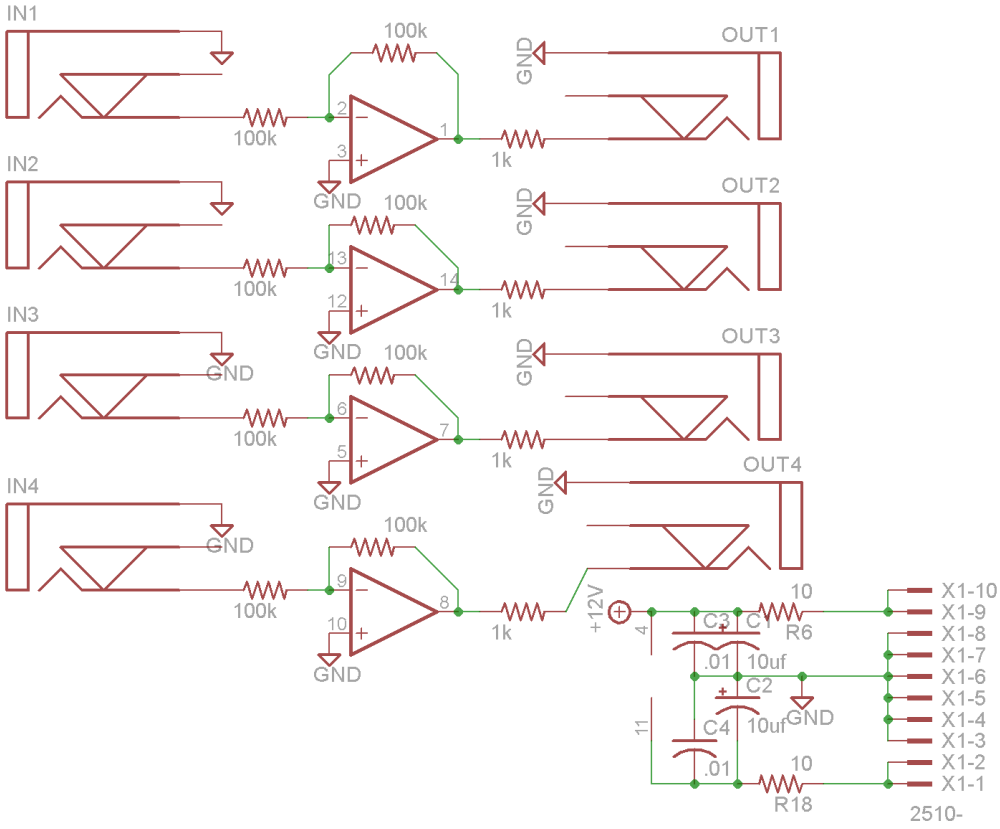
I. What it Does

A voltage inverter makes positive voltages into equivalent negative voltages and vice-versa. So a +2.1V input voltage will produce a -2.1V output. It can be useful for turning an LFO signal into two signal 180 degrees out of phase with each other or creating negative versions of CV signals from envelope generators.



II. Schematic

Above is the schematic for this module. Each of the four channels is identical. The tip of an input jack connects to an op-amp wired as an inverting amplifier with a gain of 1. The output of each amplifier is connected to an output jack by a 1K resistor for current limiting.

In the bottom right are the power connections. The +/-12V lines are filtered by a 10 ohm resistor and 10uf capacitor and additional .01uf capacitors are placed next to the power pins of the TL074 quad op-amp.

III Construction
A.PARTS LIST

SEMICONDUCTORS

Name/Value	QTY	Notes
TL074	1	14 Pin DIP

RESISTORS

Name/Value	QTY	Notes
10 ohms	2	All resistors 1/4W metal film except potentiometers
1K	4	
100K	8	

CAPACITORS

Name/Value	QTY	Notes
.1uf	2	cheap ceramic disc. Value not critical.
10uf	2	Electrolytic, 16V or higher rating.

OTHER

Name/Value	QTY	Notes
14 pin DIP socket	1	
Power connecter	1	Right angle 2x5 2.54mm, like this.
Jacks	8	PCB is designed around these jacks: PJ-323M

B. THE BOARD

The PCB is 97mm x 33mm. The jacks are spaced 12.7mm apart (.5 inch). Below are images of the PCB with and without traces present, and photos of a completed module. The image of the PCB with traces does not show connections to ground.