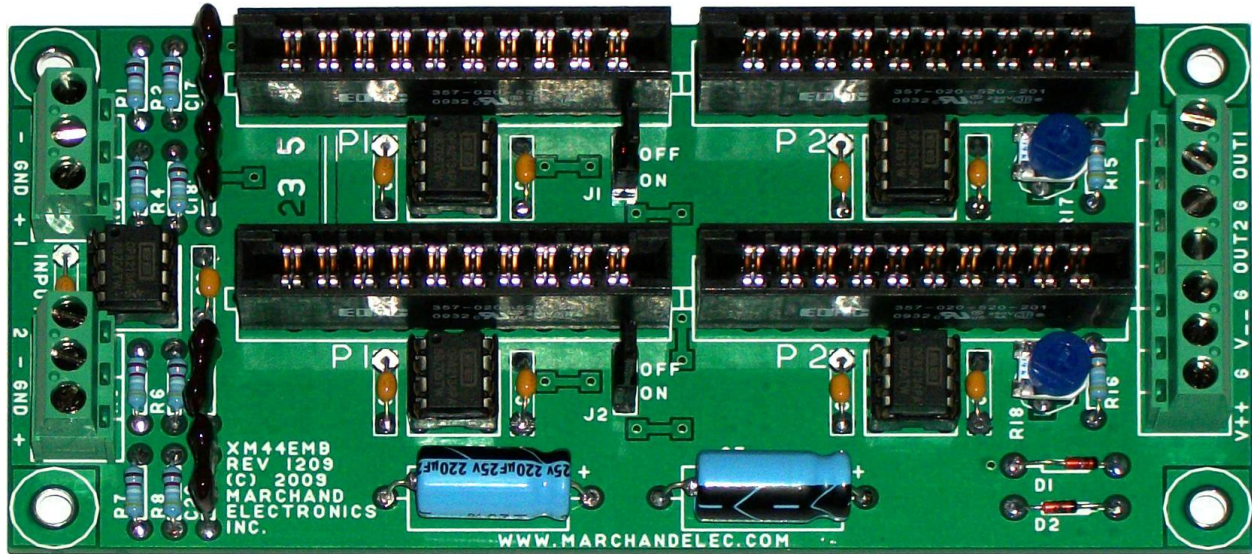


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XM44EMB embedded crossover



Description

Two channel XM44 type crossover: takes one or two XM44-FM frequency modules in each channel.
Sallen-Key second order filters.
Each channel can be configured as low-pass, high-pass or band-pass.
Balanced/single ended inputs.

Power supply requirements

Bipolar (positive and negative) power supply; typical +/-15VDC.
Power requirement: 50mA typ. (with OPA2134 op-amps, normally used)

Op-amps

The XM44EMB takes 5 standard dual op-amps in 8-pin DIP package. Many manufacturers make these parts. Best performance is achieved with low-input current type (FET input) For low power use TL062.

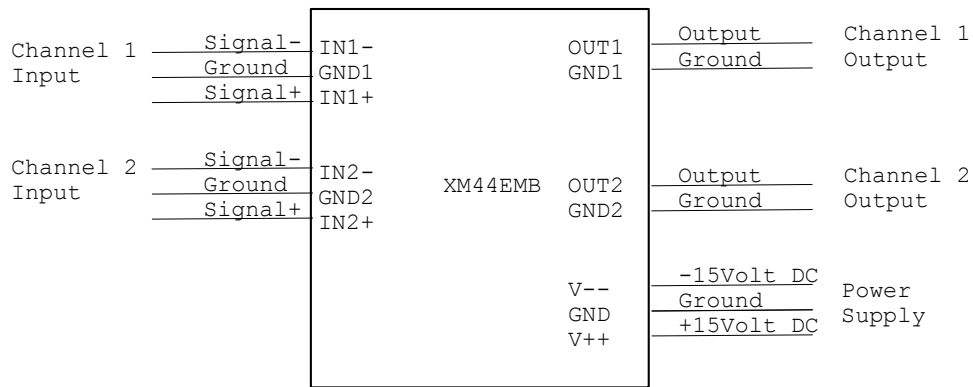


Figure 1. Signal Connections, balanced inputs

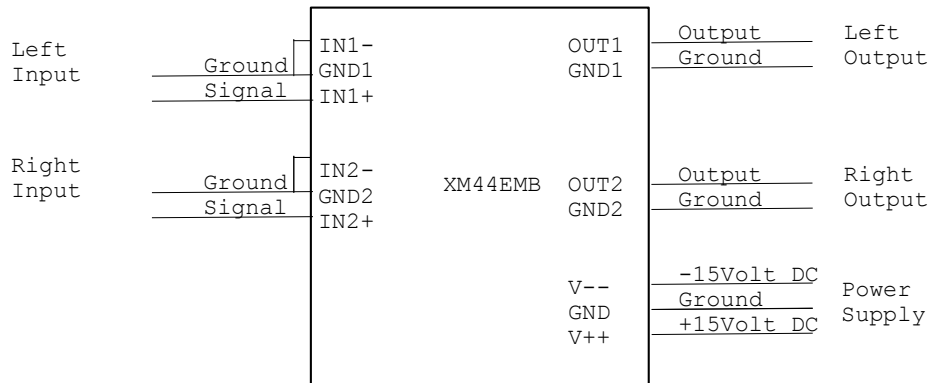


Figure 2. Signal Connections, single-ended inputs

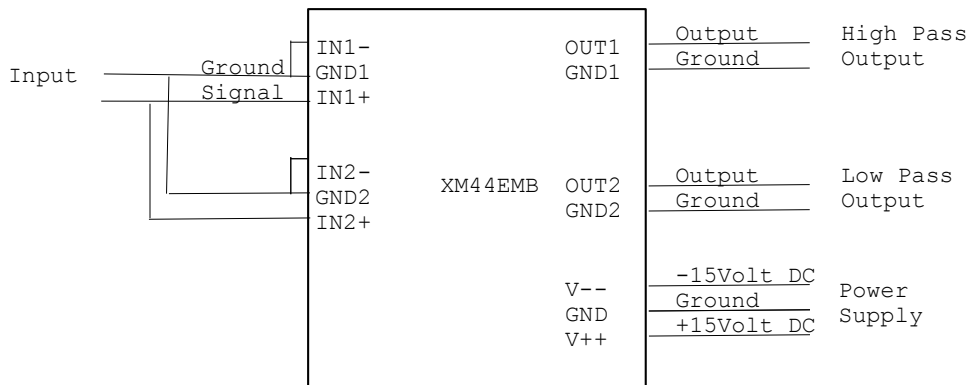


Figure 3 . Signal Connections, typical crossover

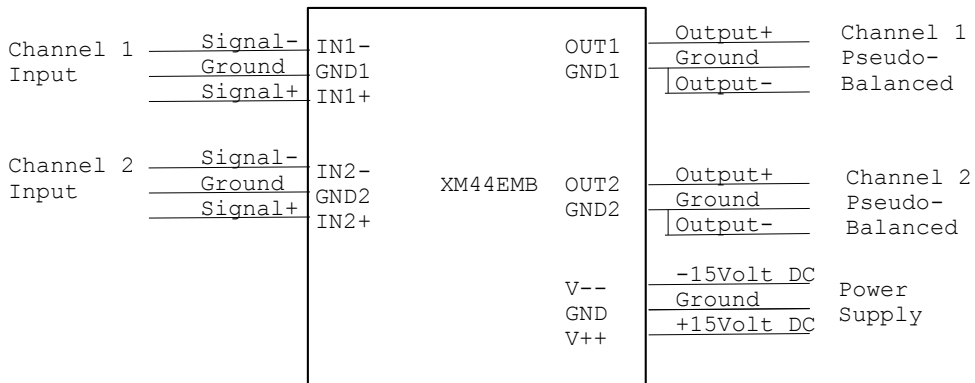
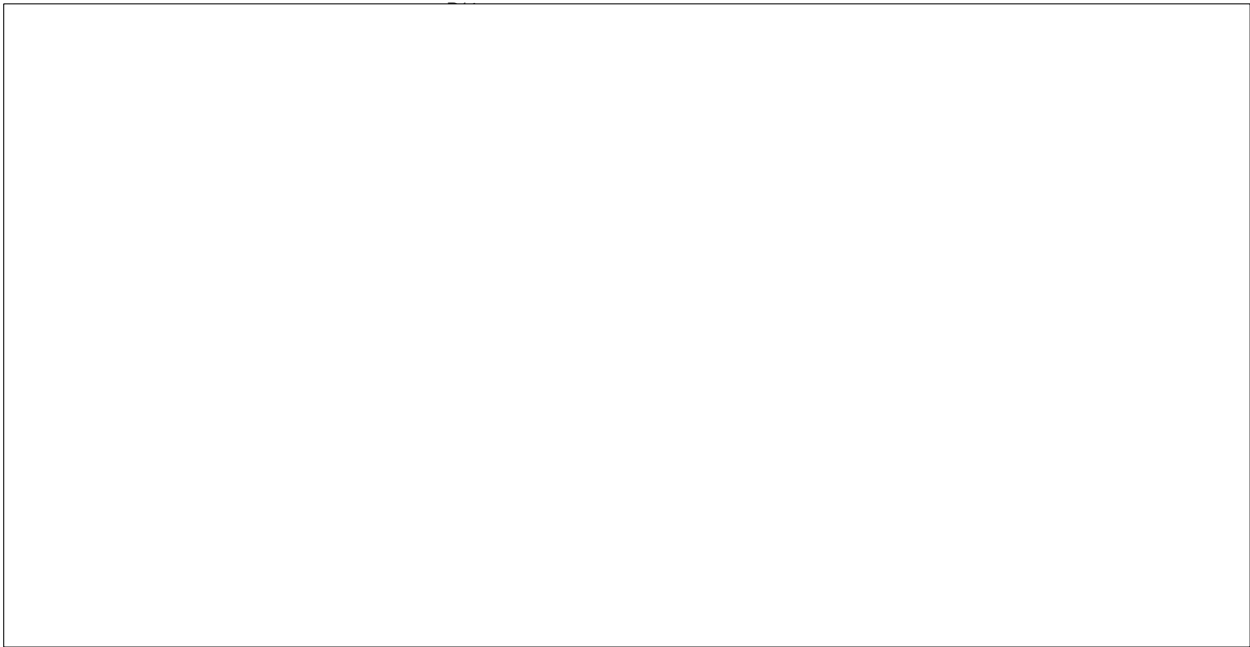
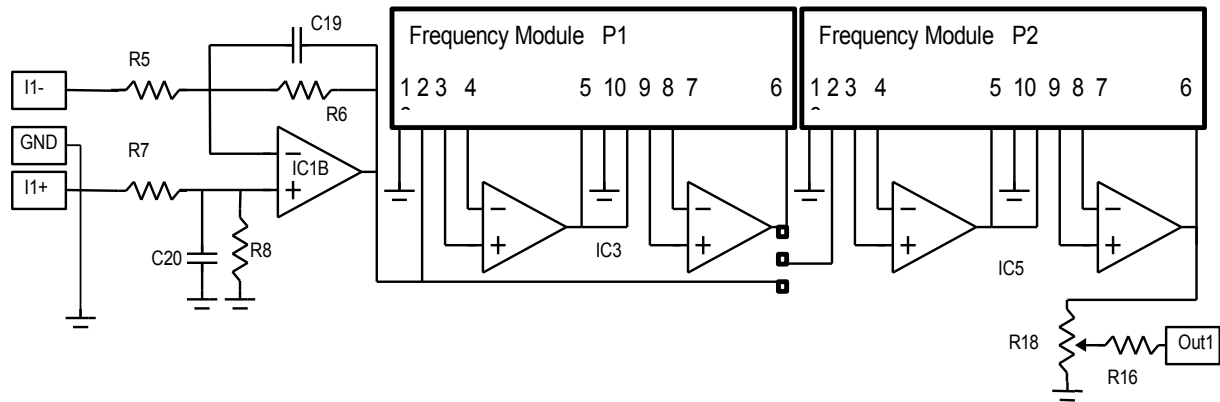
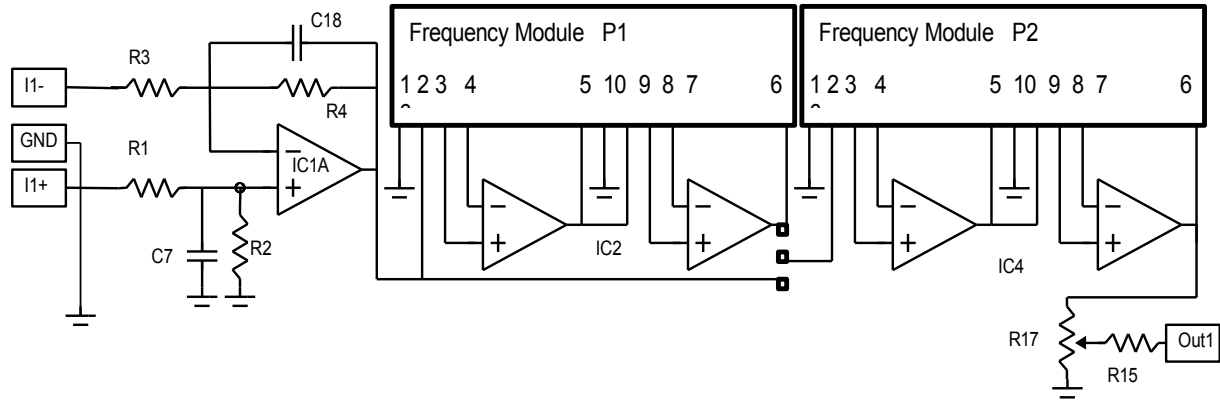


Figure 4. Pseudo-balanced outputs



XM44EMB filter
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XM44EMB circuit board parts list

R1	49.9K	1%, 1/4W, Metal Film
R2	49.9K	1%, 1/4W, Metal Film
R3	49.9K	1%, 1/4W, Metal Film
R4	49.9K	1%, 1/4W, Metal Film
R5	49.9K	1%, 1/4W, Metal Film
R6	49.9K	1%, 1/4W, Metal Film
R7	49.9K	1%, 1/4W, Metal Film
R8	49.9K	1%, 1/4W, Metal Film
R15	49.9 Ohm	1%, 1/4W, Metal Film
R16	49.9 Ohm	1%, 1/4W, Metal Film
R17	10K	Trimpot
R18	10K	Trimpot
C1	0.1uF	Monolithic Axial Ceramic
C2	0.1uF	Monolithic Axial Ceramic
C3	0.1uF	Monolithic Axial Ceramic
C4	0.1uF	Monolithic Axial Ceramic
C5	0.1uF	Monolithic Axial Ceramic
C6	0.1uF	Monolithic Axial Ceramic
C7	220uf, 25v	Aluminum Electrolytic
C8	220uf, 25v	Aluminum Electrolytic
C9	0.1uF	Monolithic Axial Ceramic
C10	0.1uF	Monolithic Axial Ceramic
C11	0.1uF	Monolithic Axial Ceramic
C12	0.1uF	Monolithic Axial Ceramic
C17	22pF	Silver Mica
C18	22pF	Silver Mica
C19	22pF	Silver Mica
C20	22pF	Silver Mica
D1	1N4937	1Amp. Diode
D2	1N4937	1Amp. Diode
IC1	OPA2134	op-amp
IC2	OPA2134	op-amp
IC3	OPA2134	op-amp
IC4	OPA2134	op-amp
IC5	OPA2134	op-amp
P1,2,3,4		10pos. connector
IC1,2,3,4,5	8-pin dip socket	
TB1,2		3-pin terminal block
TB3		7-pin terminal block
H1,2		3-pin header
		Jumper block (2 pc.)

!! Jumper blocks must be installed on the 3-pin headers !!

Please make sure the jumpers are installed onto either ON or OFF position, depending on whether there is a frequency module in slot P1. Slot P2 must always have a frequency module.