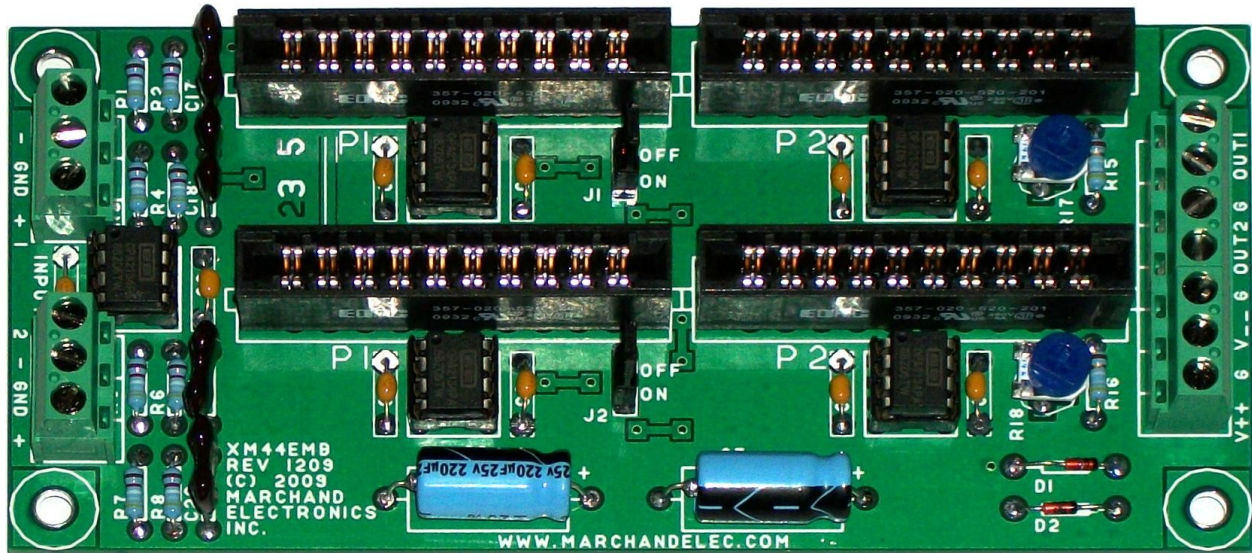


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XM44EMB embedded crossover



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)

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).

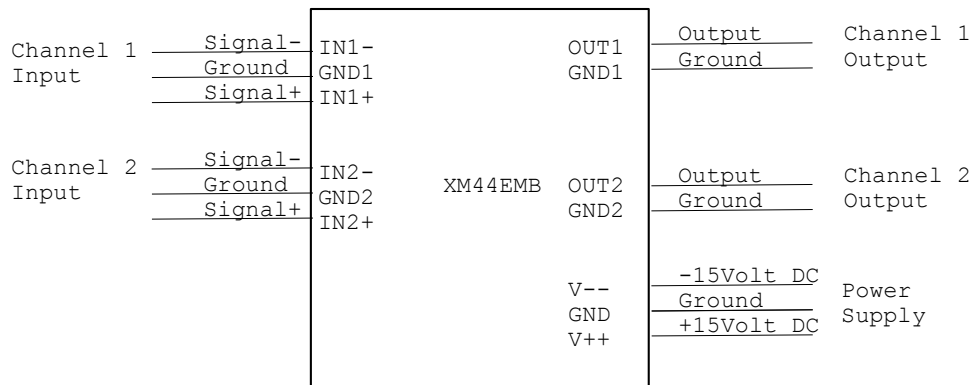


Figure 1. Signal Connections, balanced inputs

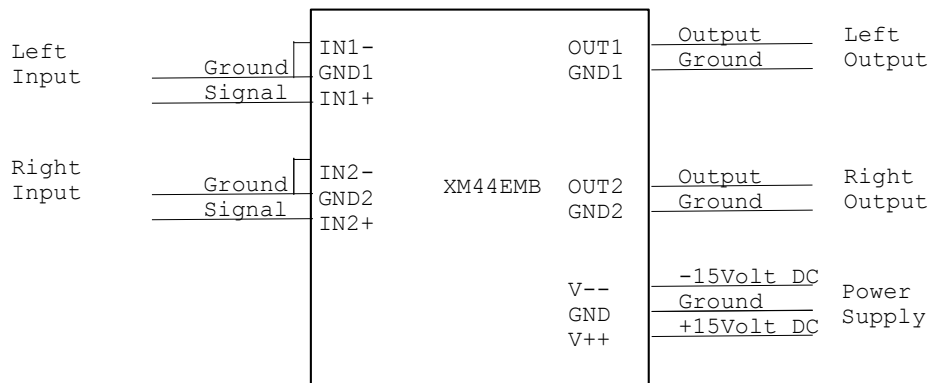


Figure 2. Signal Connections, single-ended inputs

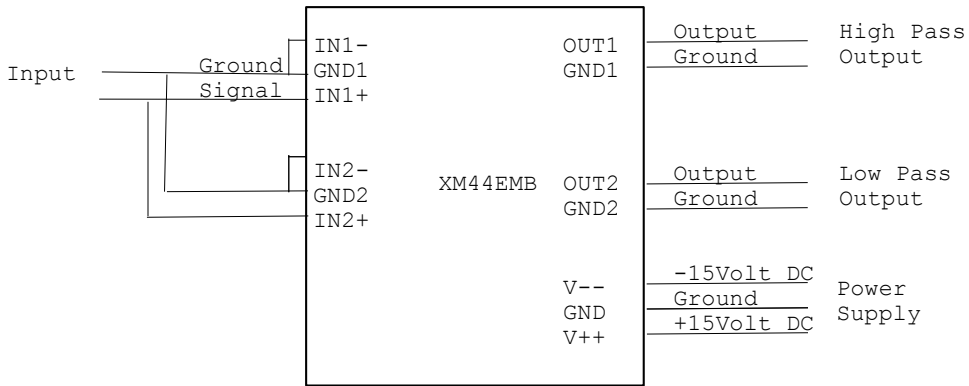


Figure 3 . Signal Connections, typical crossover

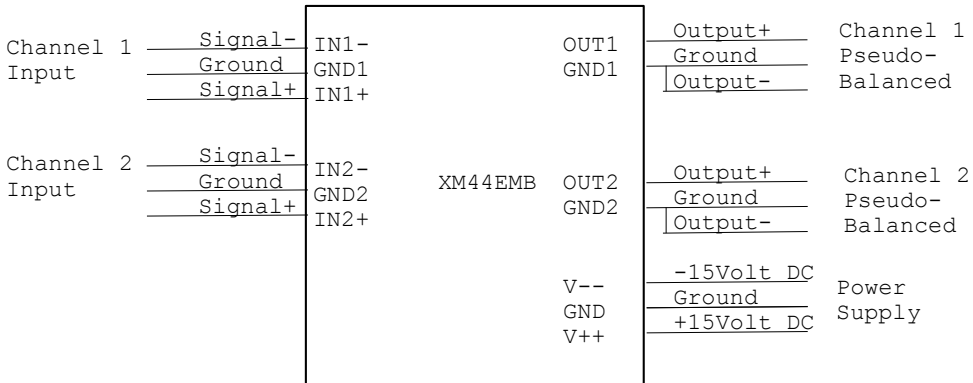
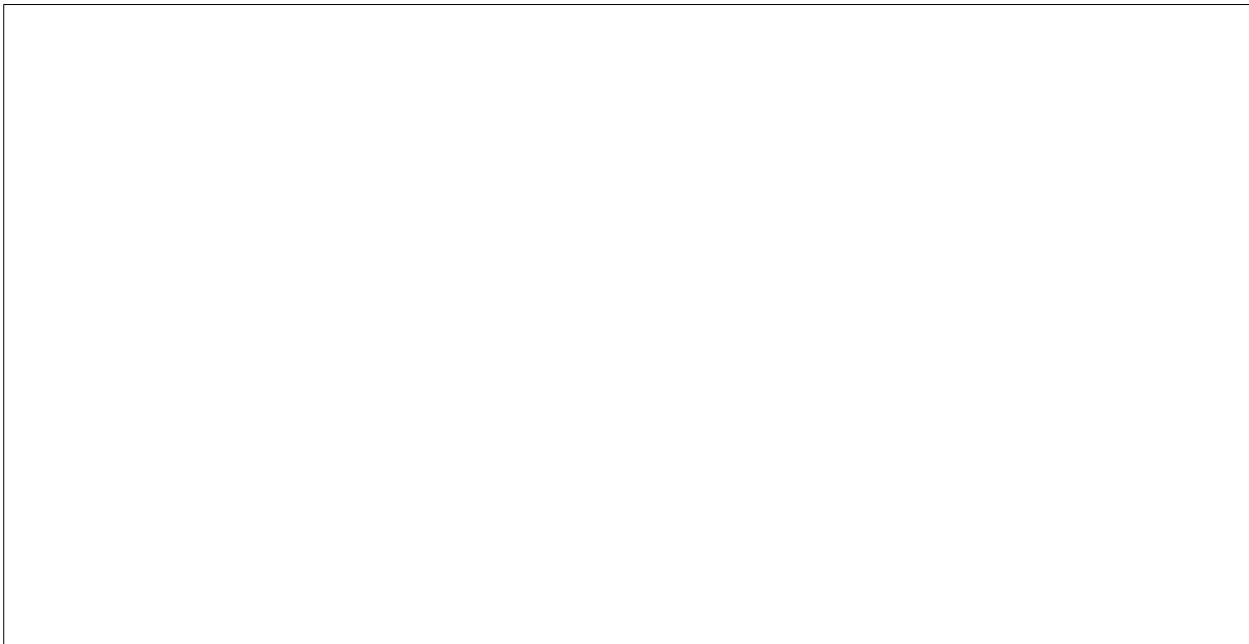
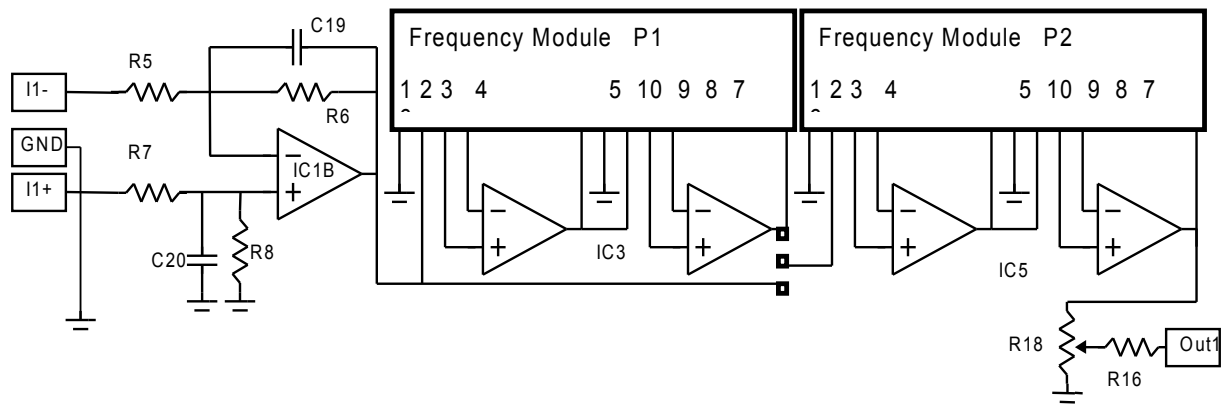
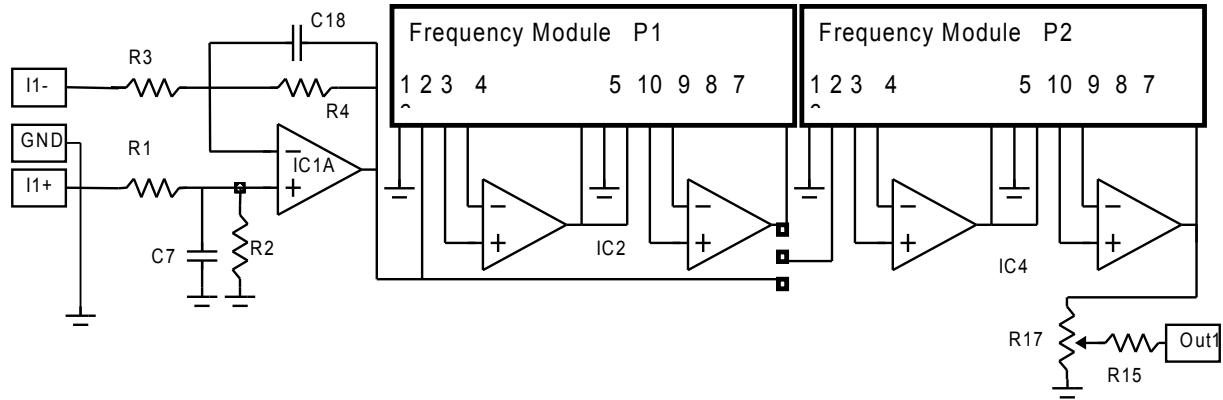


Figure 4. Pseudo-balanced outputs



XM44EMB filter
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XM44EMB circuit board parts list

		<u>Resistors</u>	C17	22pF	Silver Mica
			C18	22pF	Silver Mica
R1	49.9K	1%, 1/4W, Metal Film	C19	22pF	Silver Mica
R2	49.9K	1%, 1/4W, Metal Film	C20	22pF	Silver Mica
R3	49.9K	1%, 1/4W, Metal Film			
R4	49.9K	1%, 1/4W, Metal Film			<u>Diodes</u>
R5	49.9K	1%, 1/4W, Metal Film			
R6	49.9K	1%, 1/4W, Metal Film	D1	1N4937	1Amp. Diode
R7	49.9K	1%, 1/4W, Metal Film	D2	1N4937	1Amp. Diode
R8	49.9K	1%, 1/4W, Metal Film			
R15	49.9 Ohm	1%, 1/4W, Metal Film			<u>Transistors & IC's</u>
R16	49.9 Ohm	1%, 1/4W, Metal Film			
R17	10K	Trimpot	IC1	OPA2134	op-amp
R18	10K	Trimpot	IC2	OPA2134	op-amp
		<u>Capacitors</u>	IC3	OPA2134	op-amp
			IC4	OPA2134	op-amp
C1	0.1uF	Monolithic Axial Ceramic	IC5	OPA2134	op-amp
C2	0.1uF	Monolithic Axial Ceramic			<u>Misc.</u>
C3	0.1uF	Monolithic Axial Ceramic			
C4	0.1uF	Monolithic Axial Ceramic	P1,2,3,4		10pos. connector (4 pc)
C5	0.1uF	Monolithic Axial Ceramic	IC1,2,3,4,5		8-pin dip socket (5 pc.)
C6	0.1uF	Monolithic Axial Ceramic	TB1,2		3-pin terminal block (2 pc.)
C7	220uf, 25v	Aluminum Electrolytic	TB3		7-pin terminal block
C8	220uf, 25v	Aluminum Electrolytic	H1,2		3-pin header (2 pc.)
C9	0.1uF	Monolithic Axial Ceramic			Jumper block (2 pc.)
C10	0.1uF	Monolithic Axial Ceramic			circuit board
C11	0.1uF	Monolithic Axial Ceramic	XM44EMB-B		TO220 Heatsink (2 pc.)
C12	0.1uF	Monolithic Axial Ceramic			

!! 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.

