

Step	Qty	Reference(s)	Value	Footprint	Note
1	7	R1, R2, R3, R4, R5, R6, R8	180R	0805 plain	output protections, could be 100R to 1K
2	7	R7, R14, R16, R17, R18, R28, R32	100k	0805 plain	
3	6	R9, R10, R11, R12, R13, R15	200k	0805 plain	
4	4	R19, R20, R21, R22	220k	0805 plain	
5	2	R23, R25	10k	0805 plain	
6	4	R24, R26, R27, R29	1.0M	0805 plain	R27 sets noise volume
7	1	R30	470k	0805 plain	
8	1	R31	4.7k	0805 plain	
9	1	C3	100p	0805 plain	trigger conditioning
10	6	C4, C5, C6, C7, C8, C9, C11	100n	0805 plain	
11	1	C10	4.7u	0805 plain	buffer before noise generator, value not critical
12	1	C12	10n	0805 COG special	sample/hold
13	10	D3, D4, D5, D6, D7, D8, D9, D10, D11, D12	1N4148 or FDLL4148	Diode_SMD:D_1206	FDLL4148 or generic signal diode
14	1	IC3	OPA4171	SOIC-14_3.9x8.7mm	a tl074 almost works but the fancy opamp is better
15	1	IC1	TL074	SOIC-14_3.9x8.7mm_P1.27mm	
16	1	IC2	TL072	SOIC-8_3.9x4.9mm_P1.27mm	
17	1	Q1	MMBFJ309	SOT-23	J112 works too. Trying others.
18	2	Q2, Q3	MMBT3904	SOT-23	NPN Plain
19	1	JP1	M05X2PTH	power connector 2x5	shrouded fits
20	2	C1, C2	22u	Cap_THT:D6.3mm_P	pre-bend to lay flat on board inside
21	2	D1, D2	1N4001 or 1N5819	Diode_THT:D_DO-41	reverse power protection optional, could jumper these with wire instead of series diode drop
22	3	J13, J14, J15	n_01x05_Fer	Connector_PinHeader_2.54mm:PinHeader_1x05_P2.54mm_Vertical	
23	3	J16, J17, J18	nn_01x05_M	Connector_PinHeader_2.54mm:PinHeader_1x05_P2.54mm_Vertical	
24	12	J1, J2, J3, J4, J5, J6, J7, J8, J9, J10, J11, J12	PJ301 THONKICON N6	Switching Mono-Jack	