

## Mega Persussive Synthesizer BOM

### Resistors 1/4W 5%

Reference	Qty	Value	Mouser PN	
R1	0	100	271-100-RC	-1 for change R1 to 1K
R2,R3,R4,R5,R6	5	220	271-220-RC	
R7,R8	2	390	271-390-RC	
R9, R10	2	560	271-560-RC	
R11	1	820	271-820-RC	
R12,R13,R14,R15,R16	6	1k	271-1K-RC	+1 for R1
R17	1	1.5k	271-1.5K-RC	
R18	1	2k	271-2K-RC	
R19, R20	2	2.2k	271-2.2K-RC	
R21	1	3.9k	271-3.9K-RC	
R22	1	4.7k	271-4.7K-RC	
R23,R24,R25	3	5.1k	271-5.1K-RC	
R26,R27,R28,R29,R30,R31,R32, R33,R34,R35	9	10k	271-10K-RC	-1 for change R35 to 20K; ground
R44	1	12k	271-12K-RC	
R45,R46,R47,R48	4	20k	271-20K-RC	-1 for change R45 to 200K; +1 for change R35 to 20K
R49	1	22k	271-22K-RC	
R50,R51,R52,R53	4	27k	271-27K-RC	
R54,R55	2	47k	271-47K-RC	
R56,R57,R58,R59	4	56k	271-56K-RC	
R60,R61,R62,R63,R64,R65,R66, R67,R68,R69,R70,R71,R72,R73, R74,R75,R76,R77	18	100k	271-100K-RC	
R86	1	180k	271-180K-RC	
R87,R88,R89,R90,R91,R92	7	200k	271-200K-RC	+1 for R45
R93	1	330k	271-330K-RC	
R94	1	1M	271-1.0M-RC	

### Capacitors 16V

Reference	Qty	Value	Mouser PN	
C1, C2	2	820 pF polystyrene axial	23PS182	5mm LS; mount radially to fit
C3	1	0.001 uF mylar	505-FKP21000/100/5	5 mm LS use polyester 505-FKS21000/100/5

C4,C5,C6,C7,C8,C9,C10, C11,C12	9 0.01 uF disc	581-SA105E104M	5 mm LS; axial - bend to fit
C13	1 0.01 uF mylar	505-MKP20.01/100/5	5 mm LS
C14,C15	2 0.022 uF mylar	505-MKP20.022/100/5	5 mm LS
C16,C17,C18,C19,C20 C21,C22,C23,C24,C25,C26, C27,C28,C29	5 0.1 uF mylar	505-MKP20.1/100/5	5 mm LS; C17, C18, & C20 tight fit - bend to fit
C29	8 2.2 uF electrolytic	647-UKL1H2R2KDDANA	2.5mm LS ; 2mm LS bend to fit
C30	1 2.2 uF bipolar electrolytic	647-UVP1H2R2MDD	2.5mm LS ; 2mm LS bend to fit
C31,C32,C33,C34	1 4.7 uF electrolytic	647-UKL1H4R7KDDANA	2.5mm LS; 2mm LS bend to fit
	4 10 uF electrolytic	647-UKL1H100KDDANA	2.5mm LS; 2mm LS bend to fit

### Semiconductors

Reference	Qty Value	Mouser PN	
D1,D2,D3,D4,D5,D6	8 1N4148 diode	512-1N4148	+2 for manual trigger switch
Q1,Q2,Q3,Q4,Q5,Q6,Q7	7 2N3904 NPN transistor	512-2N3904TFR	
Q8,Q9,Q10,Q11,Q12,Q13,Q14	7 2N3906 PNP transistor	512-2N3906TFR	
IC1,IC2,IC3	3 LM13700 dual OTA	926-LM13700N/NOPB	use socket
IC4	1 4046 CMOS PLL	595-CD4046BE	use socket
IC5	1 XR-2206 VCO	Jameco	use socket
IC6	1 TL074 quad op-amp	595-TL074BCN	

### Misc PCB Components

Reference	Qty Value	Mouser PN	
	5 16 pin socket	517-4816-3000-CP	
	1 transistor socket	517-929870-01-09-RA	1x9 gold - cut to 1x3
	2 0.100" 2 pin male	Pololu	
	1 0.100" 3 pin male	Pololu	
	5 0.100" 8 pin male	Pololu	
	1 MTA 0.156" 4 pin male	571-6404454	

### Panel Components

Reference	Qty Value	Mouser PN	
J1,J2,J3,J4,J5,J6	0 1/4" phone jack, NO	502-111X	Panel design has 3 jacks; use NC
J7,J8,J9,J10	3 1/4" phone jack, NC	502-112AX	Panel design has 3 jacks
S1,S2,S3	3 SPDT switch	633-M201202	\$3.53

R36,R37,R38,R39,R40,R41, R42,R43 R78,R79,R80,R81,R82,R83, R84,R85 R95,R96,R97 D7	1 SPDT momentary switch	633-M201502	\$4.72
	3 10k linear potentiometer	652-91A1A-B24-A15L	Do not install R43. Change R36, R40, R41, R42 to 100K. R36 requires changing R45 to 200K and R1 to 1K \$5.15; 3/4" plastic shaft
	12 100k linear potentiometer	Use BTT P260P	
	3 1M linear potentiometer	652-91A1A-B28-A25L	\$5.04; 7/8" plastic shaft - needs to be shortened
	1 LED	696-SSI-LXH387GD	

**Wiring  
Reference**

Qty	Value	Mouser PN	
13	0.100" 1 pin female housing	649-65039-035LF	
7	0.100" 2 pin female housing	Pololu	
3	0.100" 3 pin female housing	Pololu	
2	0.100" 4 pin female housing	Pololu	
44	0.100" female crimp pins	649-48235-000LF	Gold
	0.100" female crimp pins	Pololu	Tin
2	MTA 0.156" 4 pin female	571-3-640426-4	
2	MTA 0.156" 4 pin dust cover	571-6405514	