

MST VCO BOM

Updated: 8/26/2015

Resistors:

QTY	Value	Ref.	Mouser Part #	
1	15Ω	R6	291-15-RC	<input type="checkbox"/>
1	200Ω	R64	291-200-RC	<input type="checkbox"/>
2	330Ω	R53, R60	291-330-RC	<input type="checkbox"/>
1	820Ω	R67	291-820-RC	<input type="checkbox"/>
6	1kΩ	R48, R49, R51, R54, R56, R62	291-1K-RC	<input type="checkbox"/>
1	1kΩ Tempco 3300ppm***	TC1	Synthrotek, Various Suppliers	<input type="checkbox"/>
1	1.58kΩ 1%	R47	660-MF1/4DC1581F	<input type="checkbox"/>
3	2kΩ 1%	R31, R34, R44	660-MF1/4DC2001F	<input type="checkbox"/>
2	2.2kΩ	R63, R65	291-2.2K-RC	<input type="checkbox"/>
1	2.37kΩ 1%	R16	660-MF1/4DC2371F	<input type="checkbox"/>
1	3.4kΩ 1%	R37	660-MF1/4DC3401F	<input type="checkbox"/>
1	4.7kΩ	R12	291-4.7K-RC	<input type="checkbox"/>
5	4.99kΩ 1%	R2, R4, R26, R28, R41	660-MF1/4DC4991F	<input type="checkbox"/>
1	5.6kΩ	R61	291-5.6K-RC	<input type="checkbox"/>
1	7.5kΩ	R27	291-7.5K-RC	<input type="checkbox"/>
7	10kΩ	R21, R23, R24, R25, R30, R57, R59	291-10K-RC	<input type="checkbox"/>
3	10kΩ 1%	R33, R36, R39	660-MF1/4DC1002F	<input type="checkbox"/>
1	15kΩ	R11	291-15K-RC	<input type="checkbox"/>
1	19.6kΩ 1%	R1	660-MF1/4DC1962F	<input type="checkbox"/>
2	20kΩ	R22, R58	291-20K-RC	<input type="checkbox"/>
1	22kΩ	R17	291-22K-RC	<input type="checkbox"/>
1	27kΩ	R15	291-27K-RC	<input type="checkbox"/>
1	30kΩ	R19	291-30K-RC	<input type="checkbox"/>
1	33kΩ 1%	R2 (control board)	603-MFR-25FRF52-33K	<input type="checkbox"/>
1	33.6kΩ 1%	R35	271-33.6K-RC	<input type="checkbox"/>
1	47kΩ	R8	291-47K-RC	<input type="checkbox"/>
1	49.9kΩ 1%	R29	660-MF1/4DC4992F	<input type="checkbox"/>
2	56kΩ 1%	R1 (control board), R20	660-MF1/4DC5602F	<input type="checkbox"/>
1	91kΩ 1%	R66	660-MF1/4DC9102F	<input type="checkbox"/>
8	100kΩ	R7, R13, R14, R18, R32, R42, R45, R55	291-100K-RC	<input type="checkbox"/>
2	100kΩ 1%	R3, R5	660-MF1/4DC1003F	<input type="checkbox"/>
3	220kΩ	R38, R50, R52	291-220K-RC	<input type="checkbox"/>
1	470kΩ	R10	291-470K-RC	<input type="checkbox"/>
1	680kΩ	R46	291-680K-RC	<input type="checkbox"/>
1	1MΩ	R40	291-1M-RC	<input type="checkbox"/>
1	2MΩ	R43	291-2M-RC	<input type="checkbox"/>
1	4.7MΩ	R9	291-4.7M-RC	<input type="checkbox"/>

TOTAL: 70

Diodes:

QTY	Part	Ref.	Mouser Part #	
6	1N4148	D1, D2, D3, D4, D5, D6	512-1N4148	<input type="checkbox"/>
2	4.3V Zener	DZ1, DZ2	78-TZX4V3B	<input type="checkbox"/>

TOTAL: 8

***Please note: The Tempco resistor must be populated after certain other components. Please see the Assembly Instructions page for more details at synthrotek.com/kits.

Capacitors:

QTY	Value	Ref.	Mouser Part #	
1	3.3pF Ceramic	C7	810-FK28C0G1H3R3C	<input type="checkbox"/>
1	10pF Ceramic	C4	810-FK18C0G1H100D	<input type="checkbox"/>
2	100pF Ceramic	C1, C3	140-50S5-101J-RC	<input type="checkbox"/>
1	470pF Ceramic	C6	810-FK28C0G1H471J	<input type="checkbox"/>
3	100nF Ceramic	C5, C8, C9	140-50V5-104Z-RC	<input type="checkbox"/>
2	10µF Electrolytic	C10, C11	667-ECE-A1CKA100	<input type="checkbox"/>
1	.005µF Polystyrene	C2	80-PFR5472J100J12L4	<input type="checkbox"/>

TOTAL: 11

Transistors/Voltage Regulators:

QTY	Part	Ref.	Mouser Part #	
3	2N3904	Q5, Q6, Q7	512-2N3904BU	<input type="checkbox"/>
2	2N3906	Q3, Q4	610-2N3906	<input type="checkbox"/>
2	BF256B	Q1, Q2	512-BF256B	<input type="checkbox"/>

TOTAL: 7

Integrated Circuits:

QTY	Part	Ref.	Mouser Part #	
4	8-Pin Socket	U1, U2, U5, U6	649-DILB8P-223TLF	<input type="checkbox"/>
2	14-Pin Socket	U3, U7	649-DILB14P-223TLF	<input type="checkbox"/>
1	340P14	U4 (no socket)	887-340P14-U	<input type="checkbox"/>
2	LT1013 OpAmp	U1, U2	595-LT1013CP	<input type="checkbox"/>
2	TL071	U5, U6	595-TL071CP	<input type="checkbox"/>
2	TL074	U3, U7	595-TL074CN	<input type="checkbox"/>

TOTAL: 13

Potentiometers:

QTY	Value	Ref.	Mouser Part #	
2	500B Single-Turn Trimmer	TR204, TR205	652-3306F-1-501	<input type="checkbox"/>
2	10kB Single-Turn Trimmer	TR202, TR203	652-3306F-1-103	<input type="checkbox"/>
2	50kB Single-Turn Trimmer	TR200, TR201	652-3306F-1-503	<input type="checkbox"/>
1	100kB Multi-Turn Trimmer	TR1	652-3296W-1-104	<input type="checkbox"/>
5	100kB 9mm Vertical-Mount Potentiometer	VR1, VR2, VR3, VR4, VR5	Various Suppliers	<input type="checkbox"/>
5	Potentiometer Nut	VR1, VR2, VR3, VR4, VR5	Various Suppliers	<input type="checkbox"/>

TOTAL: 17

Switches:

QTY	Part	Ref.	Mouser Part #	
1	SPDT Center Off	SW1	Various Suppliers	<input type="checkbox"/>

TOTAL: 1

Jacks/Connectors:

QTY	Part	Ref.	Mouser Part #	<input type="checkbox"/>
1	16-Pin Keyed Shrouded Header	J200	517-30316-6002	<input type="checkbox"/>
1	2-Pin Header	TP1	571-826936-2	<input type="checkbox"/>
1	2-Pin Jumper	TP1	571-8815451	<input type="checkbox"/>
5	5-Pin Male Header	J1, J2, J3, J4, J5	571-826936-5	<input type="checkbox"/>
5	5-Pin Female Header	J6, J7, J8, J9, J10	Various Suppliers	<input type="checkbox"/>
9	3.5mm Vertical Mount Jack	J11, J12, J13, J14, J15, J16, J17, J18, J19	PJ301BM from Synthrotek, Various Suppliers	<input type="checkbox"/>
9	Jack Nut		Various Suppliers	<input type="checkbox"/>

TOTAL: 31

Other:

QTY	Part	Ref.	Mouser Part #	<input type="checkbox"/>
4	25mm (7/16") Standoff	MH1, MH2, MH3, MH4	534-24428, Synthrotek	<input type="checkbox"/>
8	Screw for Standoff	MH1, MH2, MH3, MH4	Various Suppliers	<input type="checkbox"/>
5	Black Knob		Various Suppliers	<input type="checkbox"/>
1	16-Pin Eurorack Power Cable		Various Suppliers	<input type="checkbox"/>
4	2.5mm Screw		Various Suppliers	<input type="checkbox"/>
4	3mm Screw		Various Suppliers	<input type="checkbox"/>
1	Panel		Synthrotek	<input type="checkbox"/>
2	PCB		Synthrotek	<input type="checkbox"/>

TOTAL: 29