

**Bill Of Materials for JH. Subtle Chorus, Main Board, Vintage Version
(PCB mount components listed only.)**

Errors excepted, subject to modifications.

Parts marked with *) required for on-board PSU only.

Quantity	Part name	Remarks
	Semiconductors	
17	1N4148	All unmarked diodes on PCB
6 *)	1N4002	Diode 1A. (The one next to the fuse holder must be bent slightly away to give room for the fuse holder.)
1 *)	LM317 T	Positive Voltage Regulator, TO 220 or similar package. Needs Heat Sink!
1 *)	LM337 T	Negative Voltage Regulator, TO 220 or similar package. Needs Heat Sink!
11	BF245A	JFET
2	BC550C	NPN
1	BC560C	PNP
1	LM358	Dual OpAmp
1	TL082	Dual BiFET OpAmp (TL072 is ok, too.)
1	MC1458	Dual Opamp (Other brands of 1458 are ok, too.)
4	BD139 or 2SC495-Y	Marked "N" on the PCB. I've tested the circuit with BD 139 transistors. The original uses 2SC495-Y (not tested by me)
4	BD140 or 2SA505-Y	Marked "P" on the PCB. I've tested the circuit with BD 140 transistors. The original uses 2SA505-Y (not tested by me)
12	HA1457W	Vintage OpAmp in SIL package. If you don't find these, you can build a modern version with TL072's (and without power transistors) - there's a different BOM for this version. Or, if you want to use the power transistor output stage without HA1457W's, try other Dual OpAmps in the DIL8 package. I'm sure there are some that will work. (TL072's will not work in that configuration - there's oscillation on capacitive load!)
	Capacitors SMT	
21	100nF, 35V or higher, 0805	
	Capacitors, Electrolytic	Polarized – note orientation! Higher voltage than specified is ok, as long as fits into the PCB space!
4	1uF, 63V	No bigger than 5mm diameter
3	10uF, 35V	No bigger than 5mm diameter
2	10uF, 25V (Tantal preferred)	near LM317 and LM337 (Marked as "Ta" on PCB)
2 *)	470uF, 35V	105 deg C version if available. No bigger than 10mm diameter!
	Capacitors, Polyester	5mm spacing
2	15nF	

2	27nF	If you can't get this value, use 22nF and 4.7nF in parallel
5	100n	Marked "u1"
	Capacitors, Ceramic	2.5mm spacing
4	15pF	
10	47pF	
2	100pF	
2	150pF	
2	390pF	
2	470pF	
1	1nF	
	Trimpots, single turn	Rectangular Cermet version preferred. Check PCB layout to see what fits in.
2	100k	
	Trimpots, multi turn	Vertically mounted multiturn pots with set screw on top. Check PCB layout to see what fits in.
2	500 Ohm	Or 470 Ohm. 1k is ok, too.
	Resistors, 1%	Metall film types.
4	0	Wire Bridge ("0 Ohms")
8	39	39 Ohm
2 *)	240	
2	300	...
9	470	
1	2k2	2.2 kOhm
2 *)	2k7	...
2	3k16	3.16 kOhm (if you cannot get these, use 3k3 and 75k in parallel)
2	4k87	4.87 kOhm (if you cannot get these, use 5k1 and 110k in parallel)
6	6k8	
1	7k5	
6	8k06	8.06 kOhm (if you cannot get these, use 11k and 30k in parallel)
2	8k2	
2	9k53	9.53 kOhm (if you cannot get these, use 10k and 200k in parallel)
26	10k	10 kOhm
1	13k	...
2	15k	
9	22k	
1	27k	
3	39k	
2	47k	
1	51k	

2	56k	
1	68k	
3	82k	
13	100k	
	110k	
	150k	
	200k	
1	220k	
	270k	
9	1M	1 MegOhm
1	1M2	1.2 MegOhm (incorrectly labelled "1M5" on PCB)
	Board Connectors	Of course you can solder the wires directly to the board, and then don't need any connectors! Here's what connectors I used (from Reichelt):
3	2-pin	PSS 254/2G (2pin, 2.54mm spacing)
7	3-pin	PSS 254/3G (3pin, 2.54mm spacing)
2	5-pin	PSS 254/5G (5pin, 2.54mm spacing)
1	8-pin	PSS 254/8G (8pin, 2.54mm spacing)
(1)	MOTM Power Connector	Only needed for MOTM version (goes to a space that is covered by fuse holders on onboard-PSU version!)
(1)	Synthesizers.com Power Connector	Only needed for Synthesizers.com version (goes to a space that is covered by fuse holders on onboard-PSU version!)
	Fuses	
2 *)	Fuse Holder 5x20mm	ELU 199060 (Reichelt PL112000) or similar
2 *)	315mA T (slow blow) fuse 5x20mm	