



**synthesis
technology**

**MOTM-480 CS Resonant VCF
Assembly Instructions & Owner's Manual**

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MOTM-480 PARTS LIST

Please carefully check that all parts are in your kit. If you have a suspected shortage, please call or email. If you get free extra stuff, keep it for next time.

Capacitor/Resistor bag, containing the following 14 parts:

2ea 10 μ fd, 50V Electrolytic	C28, C29
2ea 1nf (0.001 μ fd) yellow box caps	C3, C6
4ea 3M3 non-polar electrolytic	C8, C15, C21 and C27
4ea 1N5 (1500pf) polypropylene caps	C12, C13, C19 and C20
2ea 1K 1% 3W Tempco resistor	R9, R17 (see text)

A pre-stuffed pc board, containing the following components:

Capacitors

15ea 0.1 μ fd (marked 104) ceramic axial	C1, C2, C4, C5, C7, C9-11, C14, C16-18, C24-C26
2ea 150pf (marked 151) ceramic axial	C22, C23

Resistors (NOTE! – 1% resistors may be substituted for 5% parts)

10ea 100K 1%	R1, R2, R4, R5, R10, R12, R13, R18, R57, R62
2ea 221K 1%	R3, R11
4ea 54K9 1%	R6, R14, R58, R63
2ea 562K 1%	R7, R15
2ea 4K99 1%	R8, R16
4ea 51K1 1%	R19 – R22
4ea 150K 5%	R23-R25, R68
14ea 10K 5%	R26, R30, R32, R35, R40, R44, R46, R49, R70, R71, R73, R74, R77, R78
8ea 270ohm 5%	R27, R28, R33, R34, R41, R42, R47, R48
6ea 33K 5%	R29, R43, R54, R55, R69, R76
4ea 4M7 5%	R31, R36, R45, R50
6ea 68K 5%	R37, R51, R66, R67, R75, R80
4ea 1K 5%	R38, R52, R56, R61
4ea 6K8 5%	R39, R53, R59, R64
2ea 200K 5%	R60, R65
2ea 1M2 5%	R72, R79

- IC bag, containing the following 18 parts:**

7ea TL072ACP dual op amp	U2, U6, U7, U9 – U12
4ea BC560C PNP transistor	Q3 – Q6
2ea LT1013 op amp	U1, U3
3ea CA3280 dual OTA	U4, U5, U8
2ea SSM2220P PNP array	Q1, Q2

- Misc #1 bag, containing the following 3 parts:**

2ea Axial ferrite beads (plain, gray things)L1, L2	
1ea MTA-156 power connector	JP1

- Knobs, 8ea, ALCO PKES90B1/4**

- Jacks, 8ea Switchcraft 112A**

- Pots, 8ea containing the following:**

3ea 100K log Spectrol 148-9609-104	VR1, VR2, VR3
1ea 100K lin Spectrol 149-71104	VR4
4ea 100K lin Bourns panel pots	VR5- VR8

- Front panel**

- Mounting bracket**

- Wire bag, containing the following 12 wires:**

2ea long RG-174 coax	J5, J6
3ea short RG-174 coax	J4, J7, J8
1ea 3-wire set 22ga (white/red/black) long	on VR5
1ea 2-wire set 22ga (orange/white) long	J3
3ea 3-wire set 22ga. (orange/white/gray) long	on VR6 – VR8
1ea 2-wire set, 22ga, 3½” (red/black)	J1, J2
1ea Power Cable, 20”	

- Hardware bag, containing:**

4ea #8-32 x 3/8” black screws (for mounting module to rack)
4ea #6-32 x 1/2” zinc screws (for attaching pc board to bracket)
4ea 1/4” aluminum spacers
6ea #6 KEPS nuts (2 for attaching bracket to front panel, 4 for pc board)
7ea small tie-wraps

- Organic Solder AND No-Clean solder (1 bag each type)**