



**synthesis
technology**

**MOTM-410 Triple Resonant Filter
Assembly Instructions & Owner's Manual**

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MOTM-410 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 bag, containing the following 20 parts:

2ea 10mfd, 50V Electrolytic	C19, C20
2ea 0.047mfd yellow box (marked 47N or 473)	C3, C4
3ea 0.1mfd yellow box (marked 100N or 104)	C6, C7, C8
3ea 1000pf axial polystyrene	C5, C9, C10
1ea 0.47mfd yellow box (marked 470N or 474)	C11
1ea 0.22mfd stacked film (marked 224)	C14
1ea 0.33mfd stacked film (marked 334)	C13
7ea 0.1mfd (marked 104) ceramic axial	C1, C2, C12, C15 – C18

Resistor bag, containing the following 65 parts:

8ea 10K (brown, black, orange)	R1, R11-R15, R21, <i>R68 {optional}</i>
8ea 1K (brown, black, red)	R2-3, R6, R9, R17, R52, R55, R58
7ea 100K (brown, black yellow)	R18, R23, R30, R34, R38, R43, R45
6ea 33K (orange, orange, orange)	R31, R33, R35, R37, R47, R51
4ea 1M (brown, black, green)	R16, R48, R49, R50
3ea 150K (brown, green, yellow)	R8, R62, R65
3ea 390K (orange, white, yellow)	R10, R61, R64
3ea 51K (green, brown, orange)	R22, R40, R67
3ea 180K (brown, gray, yellow)	R53, R56, R59
3ea 2K7 (red, violet, red)	R54, R57, R60
3ea 120K (brown, red, yellow)	R42, R63, R66
2ea 47K (yellow, violet, orange)	R19, R41
2ea 220K (red, red, yellow)	R24, R28
2ea 4K7 (yellow, violet, red)	R32, R36
2ea 2K2 (red, red, red)	R44, R46
2ea 22K (red, red, orange)	R26, R39
1ea 6K8 (blue, gray, red)	R25
1ea 3K9 (orange, white, red)	R27
1ea 8K2 (gray, red, red)	R29
1ea 68 ohm (blue, gray, black)	R20

IC bag, containing the following 19 parts:

3ea VTL5C4/2 dual Vactrol	D1, D2, D3
1ea TL074 quad op amp	U5
2ea JRC4558 dual op amp	U1, U2
2ea TL072 dual op amp	U3, U4
2ea NE5517 dual OTA	U6, U7
6ea BC560C PNP transistor	Q1, Q2, Q3, Q7, Q8, Q9
3ea BC550C NPN transistor	Q4, Q5, Q6

- Misc #1 bag, containing the following 4 parts:**
 - 2ea Axial ferrite beads (plain, gray things)L1, L2
 - 1ea MTA-156 power connector JP1
 - 1ea DPDT (ON-OFF-ON) toggle switch SW1

- Knobs, 7ea, ALCO PKES90B1/4**

- Jacks, 8ea Switchcraft 112A**

- Pots, 7ea containing the following:**
 - 4ea 100K cermet Spectrol 149 VR1 – VR4
 - 3ea 100K conductive plastic Bourns 95A1 VR5, VR6, VR7

- Front panel**

- Mounting bracket**

- Wire bag, containing the following 14 wires:**
 - 4ea RG-174 coax, 4 ½ inches
 - 1ea RG-174 coax, 7 inches
 - 1ea 2-conductor red/black cable 8 inches
 - 4 ea 2-wire set, 22ga. 3 inches (red/black)
 - 3ea 3-wire set, 22ga, 4 inches (white/orange/gray)
 - 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 inch aluminum spacers
 - 6ea #6 KEPS nuts (2 for attaching bracket to front panel, 4 for pc board)
 - 7ea small tie-wraps

- Organic Solder**
- No-clean Solder**
- PC Board, MOTM-410**