

### Parts List for the OctalMania Transmitter

C1	Command Xmtr VFO variable, rear unit, 150 pf
C2	Command Xmtr VFO variable, range set, 180 pf
C3	Original dogbone cap on C2, 5 pf ceramic
C4, C5	15 pf miniature air variable
C6	Two 100 pf air variables, mechanically coupled
C7	(deleted)
C8	Miniature air variable, 10 pf, double spacing
C9	250 pf air variable, spacing to handle at least 1200 volts
C10	Dual 450 pf BC air variable, stators in parallel
C11, C12	.005 feed-through capacitor
D1, D2	1N914 or 1N4148, matched with ohmmeter for forward resistance and then in circuit for best carrier suppression
D3-D9, D12	50 PRV minimum GP silicon, 1N4001 or similar
D10	Green LED
D11	Yellow LED
FL1	Crystal filter, eight pole, 2.1 kHz BW, 9.000 MHz center freq, 500 ohms in/out, INRAD #2309
J1	Microphone jack, Collins type used here
J2, J3, J6, J7, J9	RCA phono jack, chassis mount
J4, J5	SO-239 UHF Jack
J8	11 pin chassis mount plug to mate with power supply cable
K1	3PDT or 4PDT, 12 VDC coil, ~180 ohms
K2	DPDT, 10 amp contacts, 12 VDC coil, ~150 ohms
L1, L3	22 turns #24 on T50-2 toroid form, link 5 turns #24 over cold end
L2	13 turns #26 trifilar wound on FT50A-43 toroid form. Phasing as indicated on schematic.
L4, L6	17 turns #24 on T50-2 toroid form
L5, L7	42 turns #26 on T50-2 toroid form
L8	PA output coil #7247 from 3.0-4.0 MHz Command xmtr, tapped where upper section crosses over to lower section
L9	VFO Coil from 7.0-9.1 MHz Command Xmtr, original tap removed, hot end tapped $\frac{3}{4}$ turn from top end of winding.
M1	0-1 ma meter
PC1, PC2	3 turns #18 space wound on 47 ohm, 2 watt carbon resistor
R1	Panel mount, audio taper
R2-R5	Panel mount, linear taper, composition
R6-R9	Miniature 10 or 15 turn composition trimpot, 10k also suitable
RFC1-RFC4	Miniature epoxy coated choke
RFC5, RFC7, RFC8	Pi-wound choke
RFC6	Pi-wound plate choke, 400 ma minimum, National R-154U used here

S1	Four pole, four position rotary switch
S2	Multiple section, ten poles total, two position rotary switch. S2D and S2E are located in PA cage.
S3	Miniature toggle, DPDT
S4	Three pole, three position rotary switch
S5	SPDT Toggle, 10 amp contacts
S6	Miniature toggle, 3PDT
T1, T2	Output transformer from Command receiver, #5631. Case of T2 must be insulated from chassis.
U1	12 volt linear regulator IC, type 7812
Y1	9.0015 MHz crystal, INRAD
Y2	8.9985 MHz crystal, INRAD

General Notes for Transmitter Parts:

1. Fixed capacitors: Capacitors marked with an asterisk are silver mica, 300 volt minimum rating. Capacitors with a plus sign are electrolytic. ALC time constant capacitors are mylar or polyester film, 100 volts rating. Bypass capacitors are disc ceramic, 500 volt rating except as noted. Other capacitors may be mylar or polyester film.
2. Fixed resistors: Unless otherwise noted, all resistors are 0.25 watt, 5 percent tolerance, carbon composition or carbon film. 0.5 and 1.0 watt are 5 percent tolerance, carbon composition or carbon film. 10 watt are wire wound. 7k/10W is from Command receiver. 6k/10W tap set to keep V12 fired under full power output conditions.

### Parts List for the OctalMania Receiver

C1	Two 100 pf air variables, mechanically coupled
C2	15 pf miniature air variable, or use original variable from Command receiver
C3, C4	15 pf miniature air variable
C5-C7, C11	1000 pf feed-through capacitor
C8	Command Xmtr VFO variable, rear unit, 150 pf
C9	Command Xmtr VFO variable, range set, 180 pf
C10	Original dogbone cap on C9, 5 pf ceramic
D1, D2	1N914 or 1N4148
D3, D4	1000 PRV GP silicon, 1N4007 or similar
D5	200 PRV minimum GP silicon, 1N4003 or similar
D6	50 PRV minimum GP silicon, 1N4001 or similar
D7	Green LED
FL1	Crystal filter, eight pole, 2.1 kHz BW, 9.000 MHz center freq, 500 ohms in/out, INRAD #2309
F1	1.5 amp slow blow fuse with holder
J1	SO-239 UHF Jack
J2, J4	RCA phono jack, chassis mount
J3	¼ inch phone jack, shorting type
J5	Chassis mount AC receptacle for business machine cord
L1	17 turns #24 on T50-2 toroid form, link 2 turns #24 over cold end
L2	42 turns #26 on T50-2 toroid form, link 5 turns #26 over cold end
L3	17 turns #24 on T50-2 toroid form
L4	42 turns #26 on T50-2 toroid form
L5, L6, L8, L11	22 turns #24 on T50-2 toroid form, link 5 turns #24 over cold end
L7, L9	22 turns #24 on T50-2 toroid form
L10	VFO Coil from 7.0-9.1 MHz Command Xmtr, original tap removed, hot end tapped ¾ turn from top end of winding.
L12	Filter choke, 2 H minimum, 150 ma, 200-300 ohms
M1	0-1 ma S-meter
R1, R2	Panel mount, linear taper, composition
R3	Panel mount, audio taper
R4-R7	Miniature 10 or 15 turn composition trimpot, 10K also suitable
RFC1, RFC2	Miniature epoxy coated choke
SP1	4 x 6 inch PM speaker
S1	Multiple section, eight poles total, two position rotary switch.
S2	Miniature toggle, SPDT
S3	SPDT Toggle, 10 amp contacts

T1	Power transformer, 465 VAC CT @ 150 ma, 6.3 VAC @ 4.0 amps, 5.0 VAC if available for bias xfmr, otherwise use 6.3 VAC winding
T2	12 VAC CT transformer, .5 or 1.0 amp secondary satisfactory
T3	Audio output transformer, 5k ohms to voice coil, primary DC current 30 ma minimum
Y1	9.0015 MHz crystal, INRAD
Y2	8.9985 MHz crystal, INRAD

General Notes for Receiver Parts:

1. Fixed capacitors: Capacitors marked with an asterisk are silver mica, 300 volt minimum rating. Capacitors with a plus sign are electrolytic. AGC time constant capacitors are mylar or polyester film, 100 volts rating. Bypass capacitors are disc ceramic, 500 volt rating except as noted. Other capacitors may be mylar or polyester film.
2. Fixed resistors: Unless otherwise noted, all resistors are 0.25 watt, 5 percent tolerance, carbon composition or carbon film. 0.5 and 1.0 watt are 5 percent tolerance, carbon composition or carbon film.
3. The line filter used here is a common, metal encased module with chokes and capacitors inside. A typical example would be Qualtek #851-03/003 available from Mouser Electronics. Or a filtered power entry module that includes the J5 receptacle can be used.