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**RADSON MODELS**  
**RT-70A, RT-75A, RP-115, RP-612**



**RADSON MODELS**  
**RT-70A, RT-75A, RP-115, RP-612**

TRADE NAME	Radson Models RT-70A, RT-75A, RP-115, RP-612
MANUFACTURER	Radson Engineering Corp., Macon, Illinois
TYPE SET	Seven Tube Crystal Controlled 2 Channel Citizens Band Transmitter-Receiver
POWER SUPPLY	Models RT-70A, RP-115: 110-120 Volts AC, 60 Cycles Models RT-75A, RP-612: 6 (or) 12 Volt Storage Battery
RATING	35 Watts, .38 Amp. @117 Volts AC (Receive); 46 Watts, .5 Amp. @117 Volts AC (Transmit) (or) 6 Amp. @6.3 Volts DC (Receive); 8 Amp. @6.3 Volts DC (Transmit) (or) 3 Amp. @12.6 Volts DC (Receive); 4 Amp. @12.6 Volts DC (Transmit)
TUNING RANGE	Any 2 of Citizens Band Channels 1 thru 22

**NOTICE**

ONLY THOSE PERSONS PROPERLY LICENSED BY FCC ARE PERMITTED TO EFFECT REPAIRS OR MAKE CRYSTAL SUBSTITUTION ON THIS TYPE EQUIPMENT.

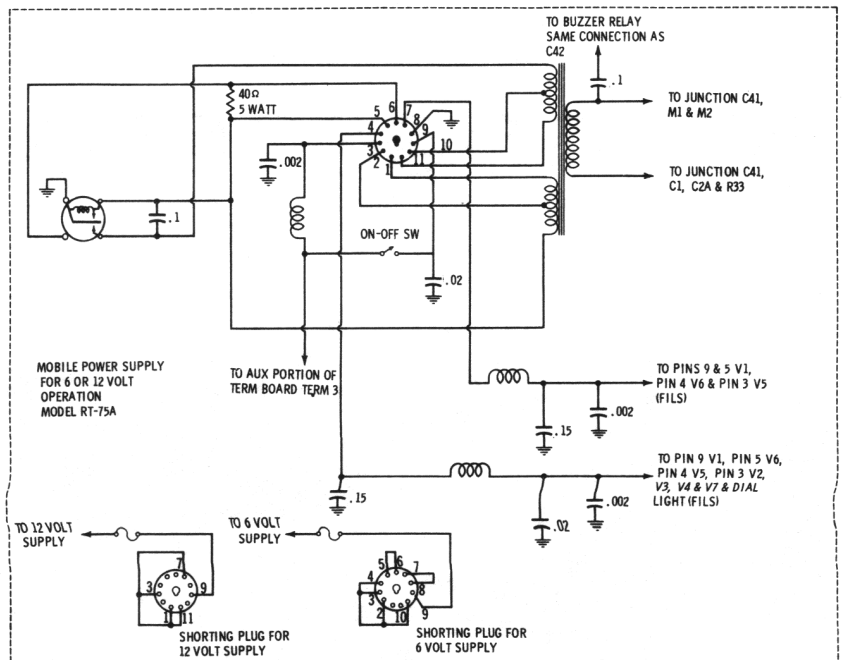
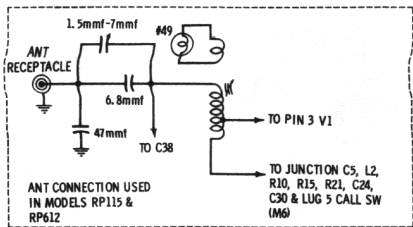
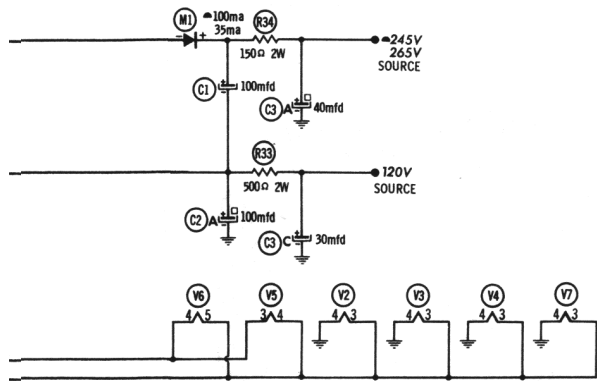
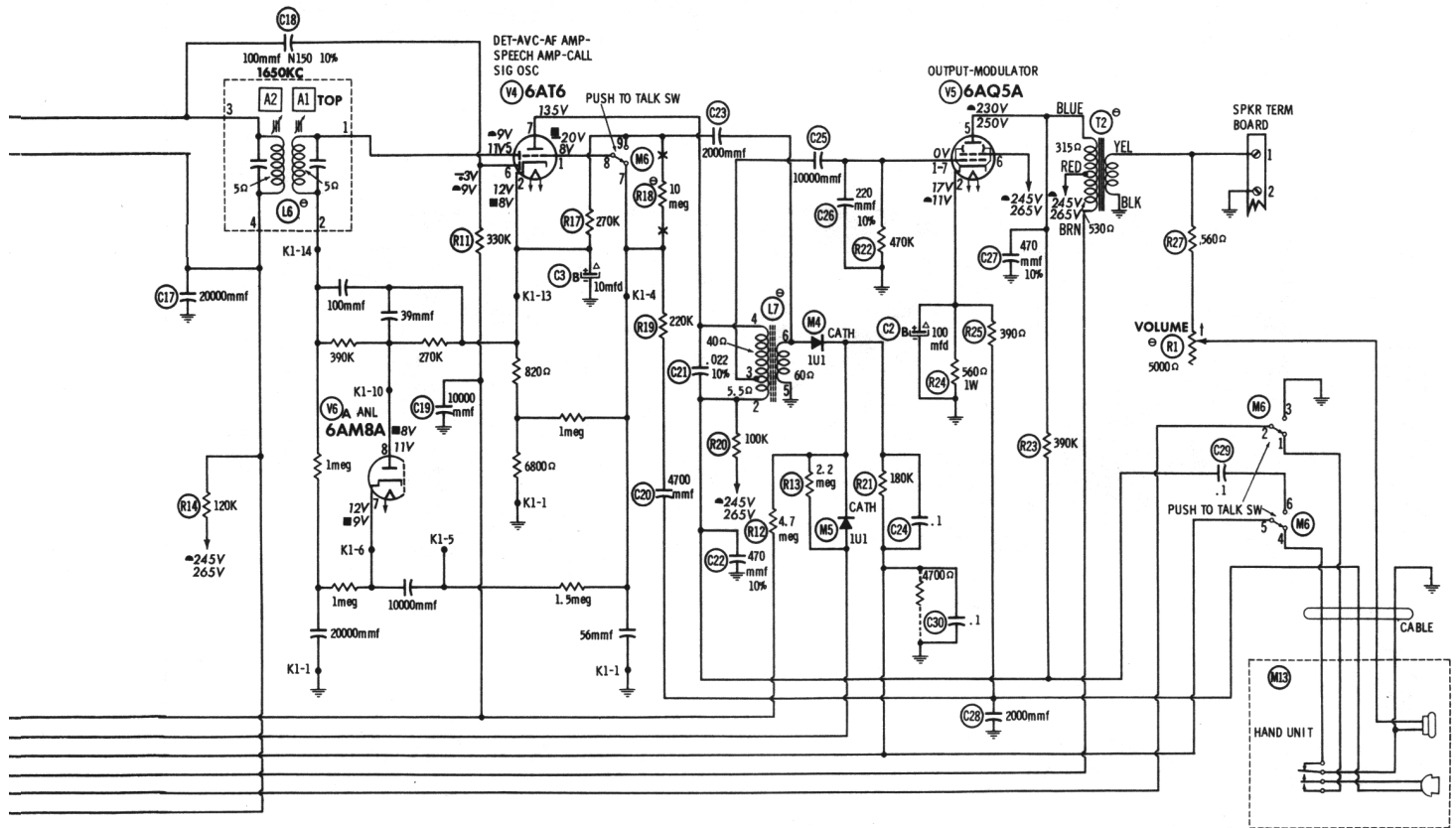
**HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana**



The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of KZ396

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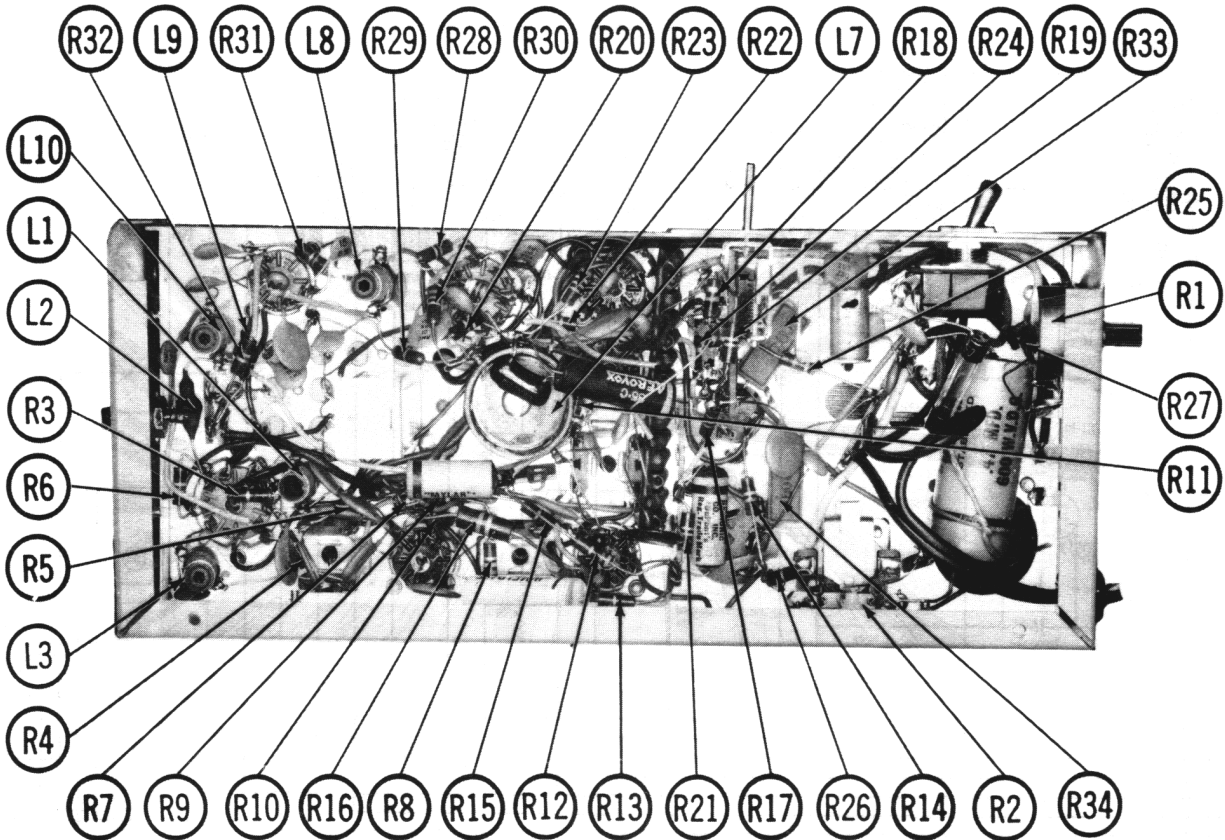




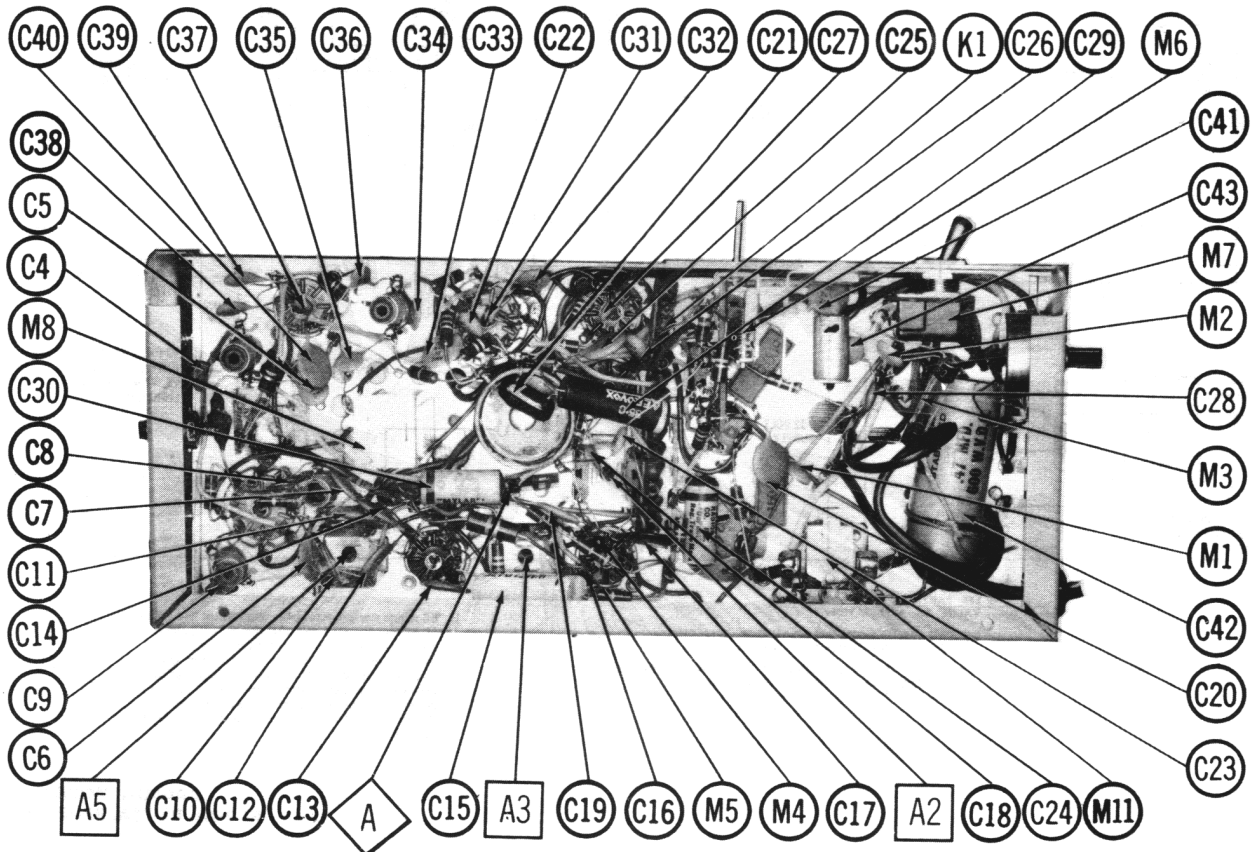
● SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION  
 DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM  
 ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured with 1000 ohm per volt meter.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common ground.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

**RADSON MODELS**  
**RT-70A, RT-75A, RP-115, RP-612**



CHASSIS BOTTOM VIEW-RESISTOR & INDUCTOR IDENT.



CHASSIS BOTTOM VIEW-ALIGNMENT, CAPACITOR & MISC. IDENT.

# PARTS LIST AND DESCRIPTIONS

## FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C31	1, 2 10%		NPO-SI 1.5	DTZ-1B3	C10V15C	CCD-202	CNO-515	10TCC-V12
C32	2000		BPD-002	DD-202	BYA10D2	CCD-103	B-220	5HK-D20
C33	10000		BPT-01	DD-103	BYA10S1		B-110	5HK-S10
C34	27 NPO 5%			TCZ-27	C10Q27C	*	CNO-427	10TCC-Q27
C35	100 N150 10%							10TCC-T10
C36	15 NPO 5%			DTZ-15	C10Q15C		CNO-415	10TCC-Q15
C37	2, 2 NPO 1, .25mmf			DTZ-2R2	C10V22C		CNO-522	10TCC-Y22
C38	2000		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C39	2000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C40	10000	Note 1	BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C41	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C42	47 600V		P488N-47		WAF6P47E	8DP-6-474	GEM-6047	6TM-P47
C43	150 10%		DI-150	DD-151	L10T15	CCD-151	GF315	10TS-T15

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.  
 Note 1. Not used in some versions.

## CONTROLS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					INSTALLATION NOTES
			RADSON PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1	500000		10-487-2①	B-12			Q17-114	Volume Sensitivity
R2	500000		10-487-3②					

① Some versions may use Part #10-487-1.  
 ② Some versions may use Part #10-697-1.

## RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					REMARKS
			IRC PART No.	WORKMAN TV PART No.	RATING	IRC PART No.	WORKMAN TV PART No.	
R3	1meg							
R4	3.3meg							
R5	100000							
R6	100K							
R7	300K							
R8	330K							
R9	100000							
R10	330K							
R11	330K							
R12	4.7meg							
R13	2.2meg							
R14	120K							
R15	220K							
R16	22K 1W							
R17	270K							
R18	10meg	Note 1						

Note 1. Not used in some versions.

## TUBES

GENERAL ELECTRIC		RAYTHEON		SYLVANIA	
ITEM No.	USE	ITEM No.	USE	ITEM No.	TYPE
V1	RF Amp. - Conv.	12A77		6A95A	
V2	1st IF Amplifier	6BJ6	Output-Modulator	6AM8A	
V3	2nd IF Amplifier	6BH6	ANL - Trans. Osc.	6A95A	
V4	Det. -AFC-AF Amp. - Speech Amp. -Call. Sig. Osc.	6AT6	F'inal Amplifier		

## ELECTROLYTIC CAPACITORS

ITEM No.	CAP.	VOLT.	REPLACEMENT DATA					NOTES
			RADSON PART No.	AEROVOX PART No.	CORNELL DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	
C1	100	150	10-452-2	AFH1-21	XA0941	FP116	TMS-1240	TVL-1423
C2A	100	150	10-452-3	AFH2-24-21	XA0941	FP116	TMD-2145	TVL-1423
C2B	100	25			BRU00-25	TC2501		TVL-1207
C3A	40	300	10-452-1	AFH3-28-30	B0410	FP230.3	TMD-2475	TVL-2757
C3B	10	300			BR4035	TC47	TD-40-350	TYA-1611
C	30	150						

## FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					SPRAGUE PART No.
			AEROVOX PART No.	CORNELL DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.	
C4	2000		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C5	2000		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C6	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C7	39 NPO 5%			TCZ-39	C10Q39C		CNO-439	10TCC-Q39
C8	20000		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C9	27 NPO 5%			TCZ-27	C10Q27C		CNO-427	10TCC-Q27
C10	10000			TCZ-56	C10Q56C		CNO-456	10TCC-Q56
C11	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C12	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C13	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C14	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C15	47 100V		P488N-47		CUB2P47	IDP-4-474	GEM-2047	2TM-P47
C16	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C17	20000		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C18	100 N150 10%					*		10TCC-T10
C19	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C20	470 10%		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C21	022 100V 10%		V84C2522-10%		PM4S22	IDP-2-223		4TM-S22
C22	470 10%		DI-470	DD-471	5R5747	CCD-471	GP347	10TS-T47
C23	2000		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C24	1.2 200V		P288N-1	DF-104	CUB2P1	2DP-3-104	GEM-201	2TM-P10
C25	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C26	220 10%		DI-220	DD-221	L10T22	CCD-221	GP322	10TS-T22
C27	470 10%		DI-470	DD-471	5R5747	CCD-471	GP347	10TS-T47
C28	2000		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C29	1.2 200V		P288N-1	DF-104	CUB2P1	2DP-3-104	GEM-201	2TM-P10
C30	1.2 200V		P288N-1	DF-104	CUB2P1	2DP-3-104	GEM-201	2TM-P10

# PARTS LIST AND DESCRIPTIONS (Continued)

## COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	RADSON PART No.	REPLACEMENT DATA
K1	Audio Network	39mmf, 56mmf, 100mmf, 10000mmf, 20000mmf, 8200, 6800, 270K, 390K, 1meg, 1meg, 1meg, 1.5meg	10-622-1	

## COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			NOTES
		RADSON PART No.	Merit PART No.	Stancor PART No.	
L1	RF Choke(36uh)	10-460-2			① Alternate Part #10-022-3 (18uh) ② Alternate Part #20-110-2 ③ Alternate Part #20-110-1 ④ Part #10-462-1, 10-631-2 or 10-631-1 (With C21) may be used. ⑤ Alternate Part#10-022-1 (250uh)
L2	RF Choke(36uh)	10-629-1	6176	RTC-8598	
L3	Conv. Plate	10-460-1	6171-A	RTC-8609	
L4	1st IF	20-110-4			
L5	2nd IF	20-110-3	13-W1	RTC-8686	
L6	3rd IF	20-110-3	13-W1	RTC-8686	
L7	Call Signal Osc.				
L8	Osc. Plate	10-460-1	6171-A	RTC-8609	
L9	RF Choke (36uh)	10-629-1	6176	RTC-8598	
L10	Ant.	10-460-2			

## TRANSFORMER (POWER)

ITEM No.	RATING	REPLACEMENT DATA			NOTES
		RADSON PART No.	Merit PART No.	Stancor PART No.	
T1	PRI. SEC. 1 SEC. 2 117V @ 100V @ 12.6V @ .5A .300A 1.3A AC	B-20-104 ①			① Alternate Part # 20-104-1, Part #20-111-1 used in Battery Operated Models.

## TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA			NOTES
		RADSON PART No.	Merit PART No.	Stancor PART No.	
T2	11.6K CT	A-10-463 ①	A-2836 ②	22887	① Alternate Part #10-463-1. ② Use Original Frame.

## POWER RECTIFIERS

ITEM No.	RATING CURRENT (Measured)	REPLACEMENT DATA			NOTES
		RADSON PART No.	RCA PART No.	SARKES TARZIAN PART No.	
M1	.100A	10-526-1	IN1763	2F4	Silicon Type
M2	.100A	10-526-1	IN1763	2F4	

## FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA		
			RADSON PART No.	LITTELFUSE PART No.	BUSS PART No.
M3	3AG	1 1/2A 250V P/T	10-736-2 (Note 1)	31801.5 (1 1/2A 250V P/T) 3AG	FUSE HOLDER GJV 1 1/2

Note 1. 6 volt versions use 14 Amp. and 12 volt versions use 6 Amp. fuse.

## SIGNAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		RADSON PART No.	GENERAL ELECTRIC PART No.	RAYTHEON PART No.	
M4	IU1	10-527-1			♦ Selenium
M5	IU1	10-527-1			

## MISCELLANEOUS

ITEM No.	PART NAME	RADSON PART No.	NOTES
M6	Switch	10-467-1	Push-To-Call (Pushbutton Type, Spring Loaded) Power Off-On (Toggle Type) Channel Selector (Pushbutton Type) Receive (Order by Channel Desired) Transmit (Order by Channel Desired) Buzzer Control Includes Push-To-Talk Switch
M7	Switch	10-062-1	
M8	Crystal		
M9	Crystal		
M10	Relay	10-628-1	
M11	Buzzer	10-633-1	
M12	Buzzer	(or) 10-512-1	
M13	Hand Set	20-121-1	

## WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in Ten Colors 8524 (Stranded) Available in Ten Colors
Power Cord	Use BELDEN No. 1765-B (6 Ft. Length) 1725-K (7 1/2 Ft. Length)



# ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading.

Suggested Alignment Tools: A1 Thru A10... GENERAL CEMENT #8282, 8606, 8606-L, 9295, 9440  
WALSCO #2526, 2543, 2544, 2545

## RECEIVER ALIGNMENT

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
1.	High side to antenna terminal. Low side to chassis.	1650KC (400% 30% Mod.)	Not Used	DC probe to point $\Delta$ . Common to chassis.	A1	Adjust for MINIMUM deflection.
2.	"	"	"	"	A2, A3, A4, A5, A6	Adjust for maximum deflection.
3.	High side thru termination to antenna.	Receiver Frequency	"	"	A7	Turn clockwise until oscillator ceases, then counterclockwise until oscillation just starts. This should be within 1 turn of maximum AVC voltage as indicated on VTVM.
4.	"	"	"	"	A8	Adjust for maximum deflection (Use position farthest in which produces maximum).

## TRANSMITTER ALIGNMENT

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
5.	Connect a dummy load to the antenna terminal.	Not Used	Not Used	DC probe thru 100K to pin 1 (grid) of Final. Common to chassis.	A9	Adjust for -20 volts.
6.	Connect whip antenna.	"	"	Use field strength meter.	A10	Adjust for maximum output. Check transmitter frequency with Frequency meter or crystal calibrated receiver.

