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PHOTOFACT® Folder

with CIRCUITRACE™

EICO MODELS
770, 770W



EICO MODELS
770, 770W

TRADE NAME	Elco Models 770, 770W		
MANUFACTURER	Electronic Instrument Co., 3300 Northern Blvd., Long Island City 1, N. Y.		
TYPE SET	AC Operated 8 Tube Citizens Band Transmitter-Receiver		
POWER SUPPLY	110 - 120 Volts AC, 60 Cycles	RATING	54 Watts, .50 Amp. @117 Volts AC (Receive) 52 Watts, .48 Amp. @117 Volts AC (Transmit)
FREQ. RANGE	RECEIVER: Any one crystal controlled Citizens Band Channels 1 thru 23 or continuous manual tuning. TRANSMITTER: Any four Citizens Band Channels 1 thru 23		

NOTICE

ONLY THOSE PERSONS PROPERLY LICENSED ARE PERMITTED TO MAKE REPAIRS OR ADJUSTMENTS WHICH MAY RESULT IN ILLEGAL OPERATION. (REFER TO FCC RULES & REGULATIONS PART 19, SUBPART D, SECTION 19.71.)

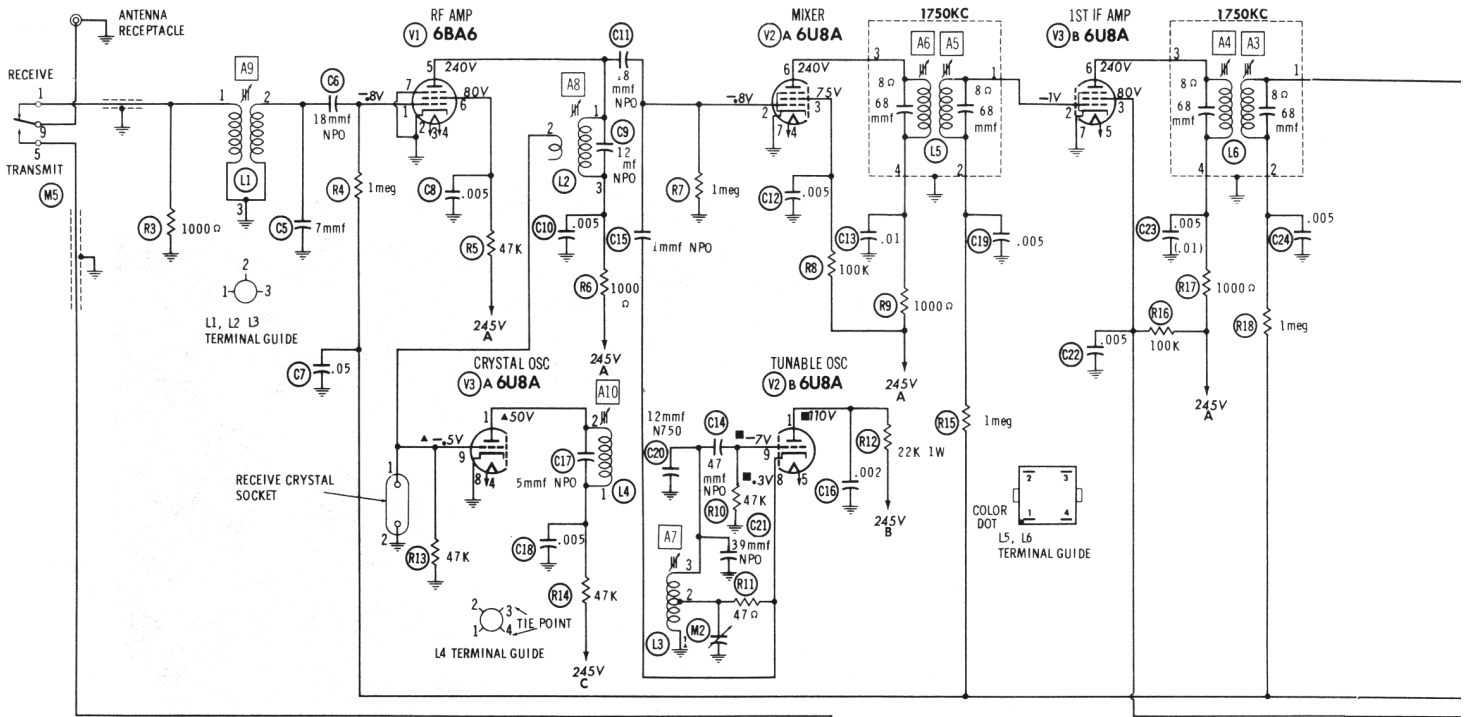
HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana



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 the particular type of replacement LY662

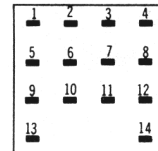
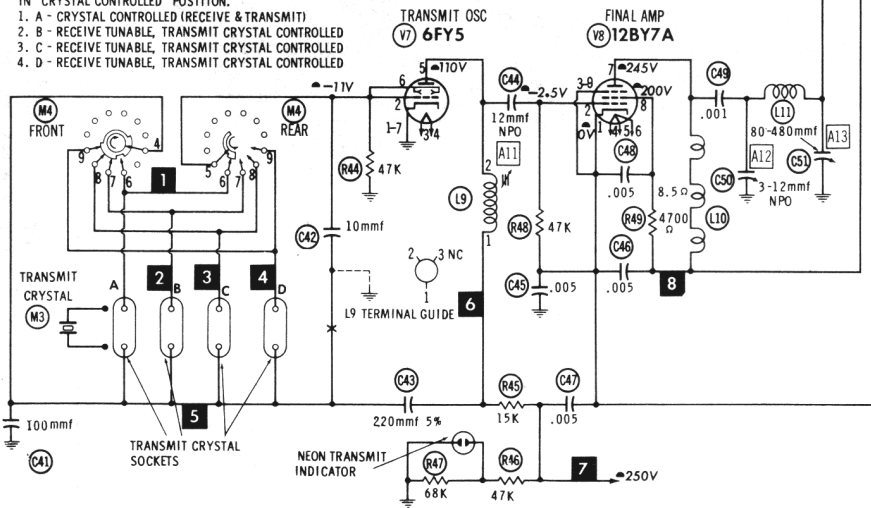
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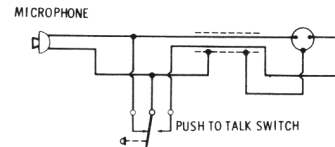


CHANNEL SELECTOR SWITCH M4 SHOWN IN "CRYSTAL CONTROLLED" POSITION.

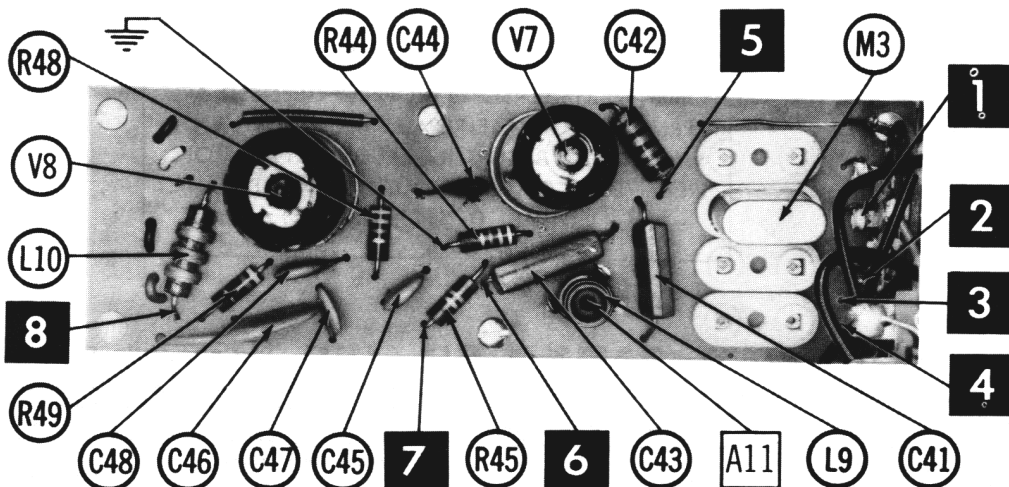
1. A - CRYSTAL CONTROLLED (RECEIVE & TRANSMIT)
2. B - RECEIVE TUNABLE, TRANSMIT CRYSTAL CONTROLLED
3. C - RECEIVE TUNABLE, TRANSMIT CRYSTAL CONTROLLED
4. D - RECEIVE TUNABLE, TRANSMIT CRYSTAL CONTROLLED

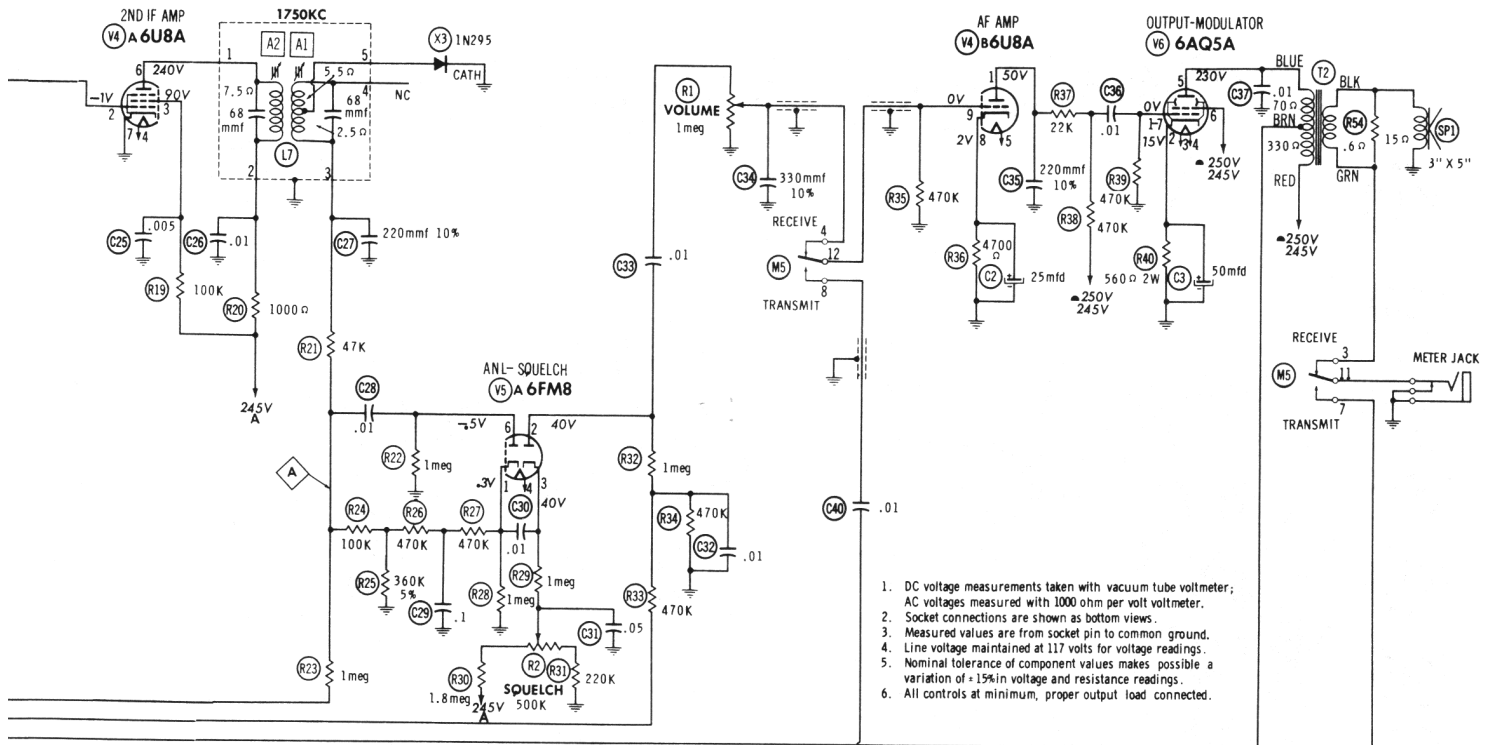


COLOR DOT L7 TERMINAL GUIDE

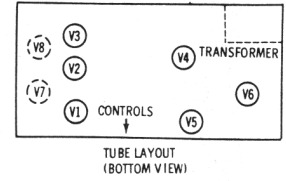
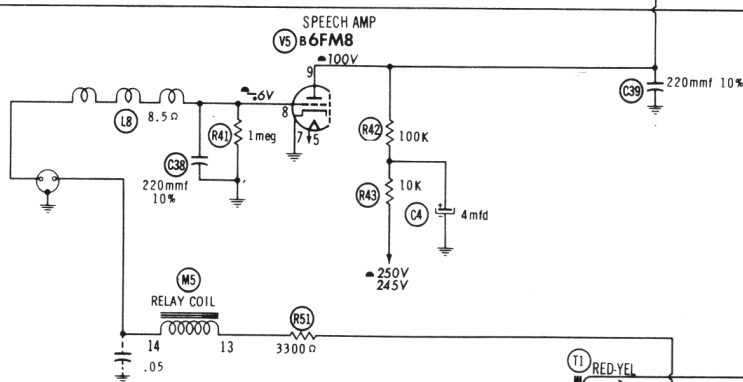


TRANSMITTER BOARD

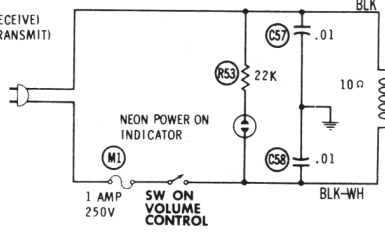




1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured with 1000 ohm per volt voltmeter.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common ground.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance of component values makes possible a variation of ±15% in voltage and resistance readings.
6. All controls at minimum, proper output load connected.



117 VAC
 54 WATTS (RECEIVE)
 52 WATTS (TRANSMIT)

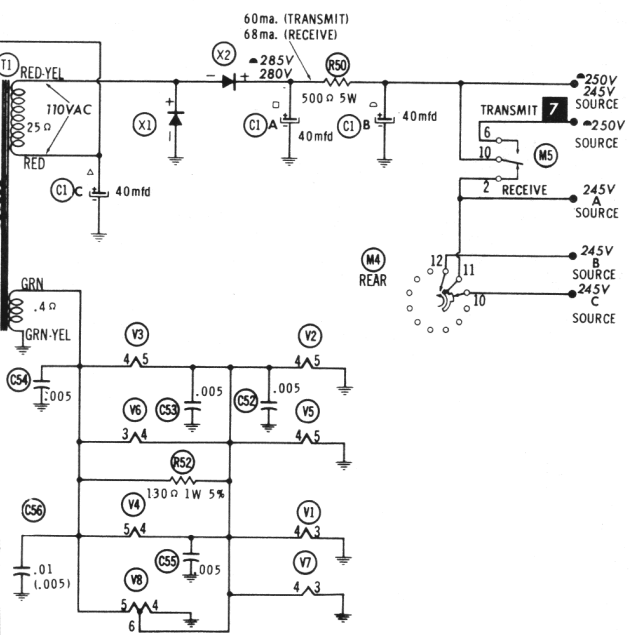


NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

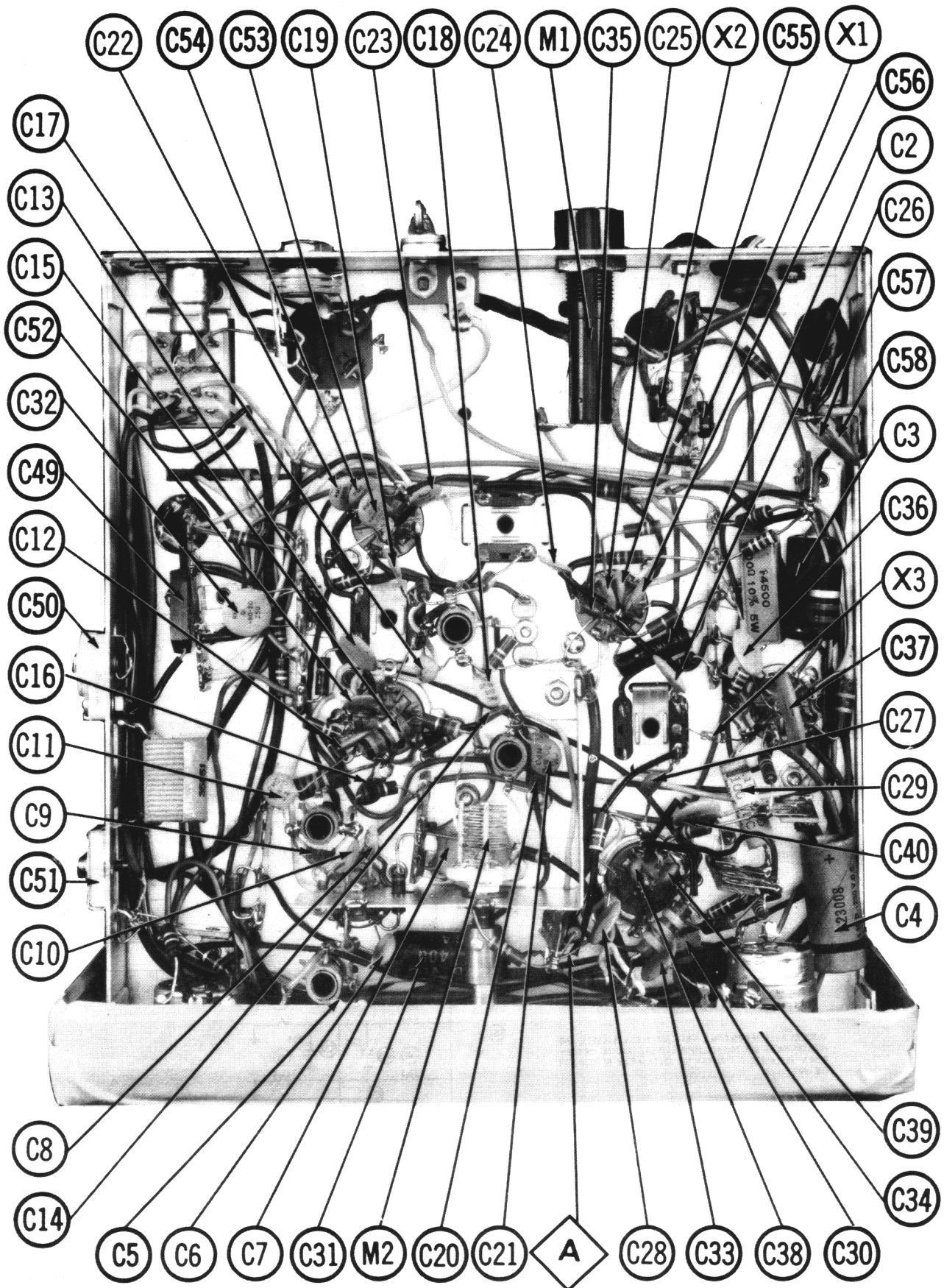
RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6BA6	2.5 meg	0Ω	FIL	FIL	†1500Ω	†47K	0Ω		
V2	6U8A	†122K	1 meg	†100K	FIL	FIL	†1500Ω	0Ω	47Ω	47K
V3	6U8A	†147K	2.5 meg	†100K	FIL	FIL	†1500Ω	0Ω	0Ω	47K
V4	6U8A	†1490K	2.5 meg	†100K	FIL	FIL	†1500Ω	0Ω	4700Ω	470K
V5	6FM8	1 meg	1.5 meg	1.5 meg	FIL	FIL	1 meg	0Ω	1 meg	†110K
V6	6AQ5A	470K	560Ω	FIL	FIL	†900Ω	†500Ω	470K		
V7	6F5	0Ω	47K	FIL	FIL	†15K	47K	0Ω		
V8	12BY7A	0Ω	†47K	0Ω	FIL	FIL	1830Ω	†5500Ω	0Ω	

ALL MEASUREMENTS TAKEN IN "RECEIVE" POSITION UNLESS OTHERWISE DESIGNATED.
 † MEASURED FROM OUTPUT OF X2. ■ TAKEN IN SWITCH POSITION B, C OR D.
 ● TAKEN IN "TRANSMIT" POSITION. ▲ TAKEN IN SWITCH POSITION A WITHOUT RECEIVE CRYSTAL.



EICO MODELS 770, 770W



CHASSIS BOTTOM VIEW -- CAPACITOR & MISC. IDENT.

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
Best results will be obtained when adjusting A9, A12, and A13 if the antenna normally used is connected and the unit is as nearly in the cabinet as possible.	
Suggested Alignment Tools:	
A1 thru A11.....	GENERAL CEMENT #8282, 8606, 8606-L, 9295, 9440
	WALSCO #2526, 2543, 2544, 2545
A12, A13.....	GENERAL CEMENT #5000, 5003, 5066, 8271, 8272, 8276, 8277, 8290, 8609, 8722, 9150, 9298
	WALSCO #2515, 2516, 2518, 2519, 2525, 2541

RECEIVER ALIGNMENT

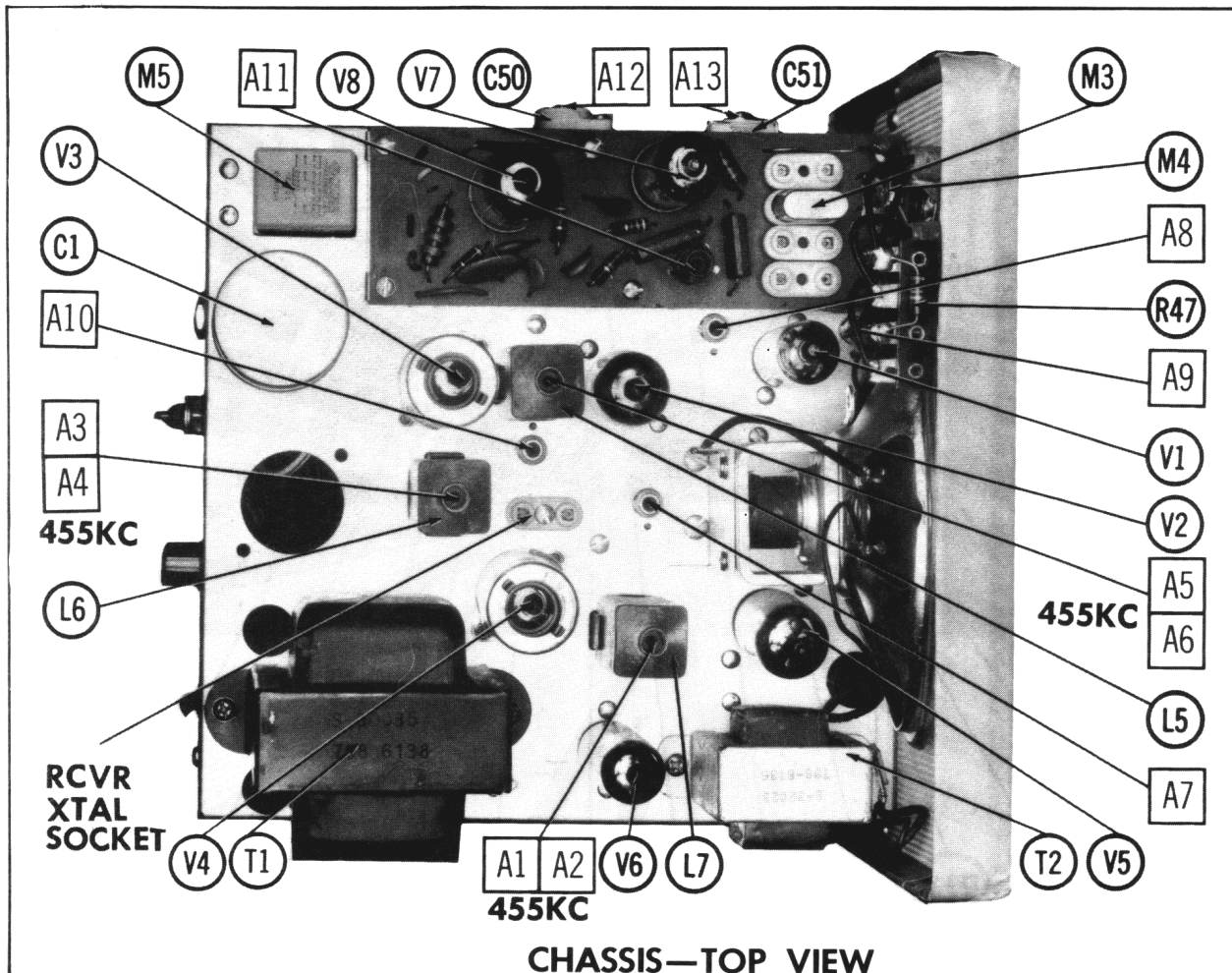
Connect DC VTVM between point Δ and ground.

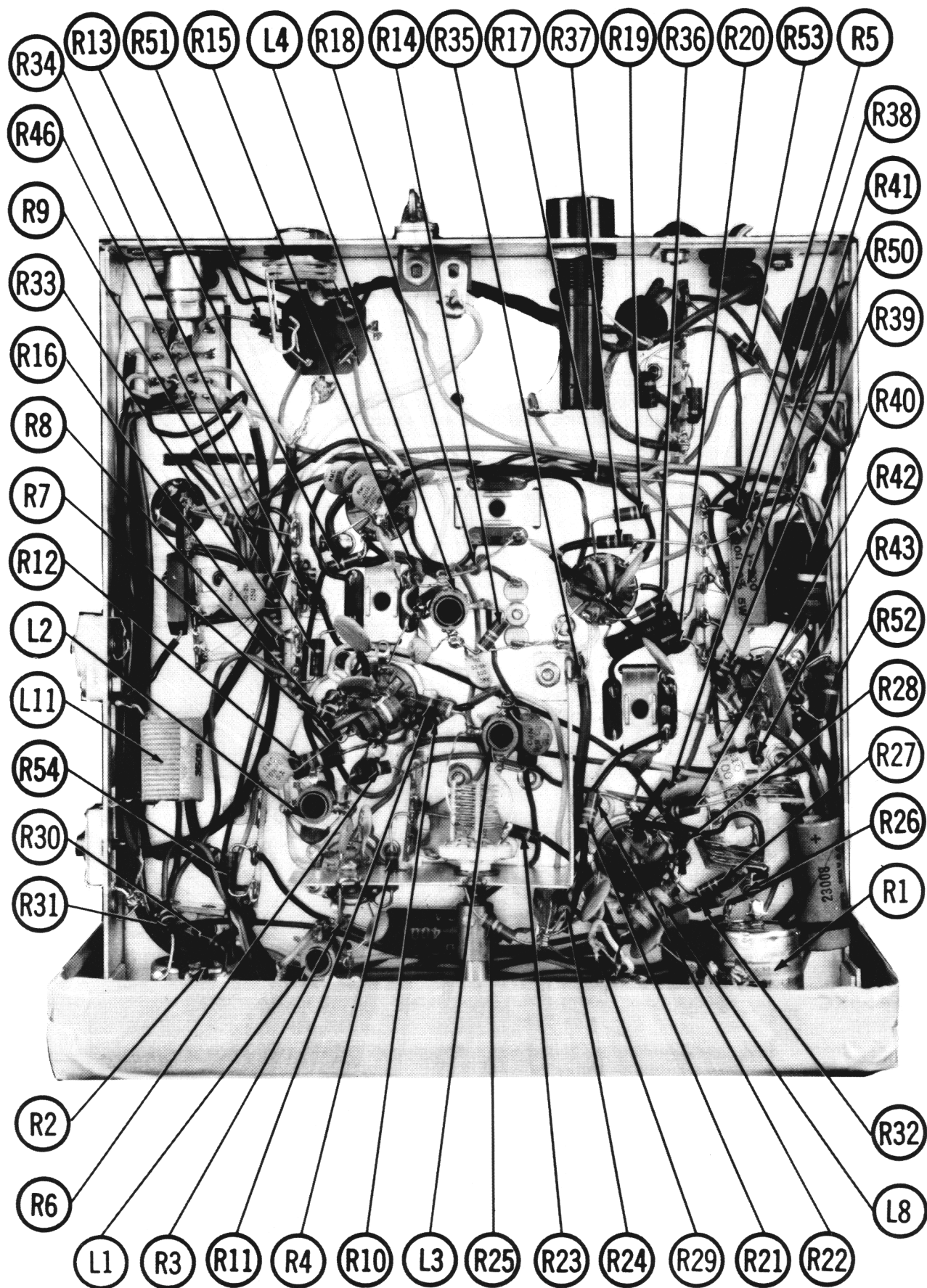
	SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
1.	High side thru .001mfd to pin 2 (grid) of mixer, common to chassis. Tune to 1750KC (Unmod.)	Any	A1, A2, A3, A4, A5, A6	Adjust for maximum deflection.
2.	High side to antenna terminal, common to chassis. Tune to Channel Frequency (Unmod.)	11 (27.085MC)	A7, A8, A9	"
3.	Not Used.		A10	Place channel selector switch in position 1. Be sure crystal is installed. (Receiver section). Connect DC VTVM between Pin 9 of V3 and ground. Adjust A10 for maximum deflection. Rock A10 to each side of peak, noting rate of dropoff. Set A10 just below peak on side of gradual dropoff.

TRANSMITTER ALIGNMENT

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SPECIAL INSTRUCTIONS	INDICATOR	ADJUST	REMARKS
1. Place channel switch on or near the center most channel.	Connect dummy load and RF Wattmeter to antenna terminal.	A11	Connect DC VTVM between Pin 2 of V8 and ground. Rock A11 to each side of peak, noting rate of dropoff. Set A11 just below peak on side of gradual dropoff.
2.	"	A12, A13	Adjust for maximum output.
3.	Field Strength Meter.		Connect antenna to unit and readjust A12, A13 for maximum output.





CHASSIS BOTTOM VIEW -- RESISTOR & INDUCTOR IDENT.

PARTS LIST AND DESCRIPTION

WIRING DATA

General-use Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors
Shielded Antenna Lead	Use BELDEN No. 8214 (Stranded) Available in 12 Colors
	Use BELDEN No. 8214 (Lowest Loss (RG-8/U) Type)
	Use BELDEN No. 8237 (Low Loss (RG-8/U) Type)
	Use BELDEN No. 8240 (Stranded) Miniature (RG-58/U)
	Use BELDEN No. 8259 (Stranded) Miniature (RG-58A/U)
	Use BELDEN No. 8497 (3 Conductor - 1 Shielded for Press-Io-Talk (Neoprene))
	Use BELDEN No. 8496 (3 Conductor - 1 Shielded for Press-Io-Talk (Vinyl))
	Use BELDEN No. 7300-Series Spark-Plug Sets
	Use BELDEN No. 8661 (3/8 In.)

TUBES

ITEM No.	USE	GENERAL ELECTRIC	RCA	RAYTHEON	SYLVANIA	TYPE
V1	RF Amp.	6BA6				6FM8
V2	Mixer-Tune Osc.	6U8A				6AQ5A
V3	Crystal Osc. -1st IF Amp.	6U8A				6FY5
V4	2nd IF Amp. -AF Amp.	6U8A				12BY7A

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	CURRENT RATING (Measured)	RECTIFIERS		DIODES		NOTES
		ORIGINAL Part or Type No.	RCA PART No.	SARKES TARZIAN PART No.	ITEM No.	
X1	.068A	93007	IN3194	F6		
X2	.068A	93007	IN3194	F6		
X3		95002			IN295	HV Doubler HV Doubler Detector (IN295)

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	VOLT.	REPLACEMENT DATA						
			EICO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.	
C1A	40	350	24017	A FH3-44	B0450	XC3-40	FP377.1	TMT3748	TVL-3787
C1B	40	350			BBR40-250				
C2	25	6	23020	PTT26	NLW25-10	MTI-13	TT6X25	MLV25-6	TE-1091
C3	50	25	23007	PTT85	NLW50-25	MTI-17	TT25X50	MLV50-25	TE-1209
C4	4	250	23008	PRSI550	BBR4-250	QTI-2	TC50X	TD-4-250	TVA-1501

FIXED CAPACITORS

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.
C8	.005		DI-5000	DD-502	L10D5	CCD-502	GP250	10TS-D50
C9	12 NPO		DI-5000	TCZ-12	L10Q2C	CCO-120	CNO-412	10TCC-Q12
C10	.005		DI-5000	DD-502	L10D5	CCD-502	GP250	10TS-D50
C11	18 NPO		DI-5000	TCZ-18	L10Q18C	CCO-180	CNO-418	10TCC-Q18
C12	.005		DI-5000	DD-502	L10D5	CCD-502	GP250	10TS-D50
C13	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C14	47 NPO		NFO-DI 47	TCZ-47	C10Q47C	CCO-470	CNO-447	10TCC-Q47
C15	1 NPO		CI-1	TCZ-1			CNO-510	10TCC-V10
C16	.002		DI-2000	DD-202	L10D2	CCD-202	GP220	10TS-D20
C17	5 NPO		NFO-DI 5	TCZ-5	C10V5C	CCO-050	CNO-547	10TCC-V50
C18	.005		DI-5000	DD-502	L10D5	CCD-502	GP250	10TS-D50
C19	.005		DI-5000	DD-502	L10D5	CCD-502	GP250	10TS-D50
C20	12 N750							
C21	39 NPO							
C22	.005		DI-5000	DD-502	L10D5	CCD-502	GP250	10TS-D50
C23	.005	(.01) †	DI-5000	DD-502	L10D5	CCD-502	GP250	10TS-D50
C24	.005		DI-5000	DD-502	L10D5	CCD-502	GP250	10TS-D50
C25	.005		DI-5000	DD-502	L10D5	CCD-502	GP250	10TS-D50
C26	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C27	220 10%		DI-220	DD-221	L10T22	CCD-221	GP322	10TS-T22
C28	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C29	1.100V		P288N-1	DF-104	CUR2PI	IDP-2-104	GEM-201	5HK-PI0
C30	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C31	.05 400V		P488N-05	DD-503	CUBAS5	4DP-3-503	GP150	4PS-S50
C32	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C33	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C34	330 10%		DI-330	DD-331	L10T33	CCD-331	GP333	10TS-F33
C35	220 10%		DI-220	DD-221	L10T22	CCD-221	GP322	10TS-F22
C36	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C37	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C38	220 10%		DI-220	DD-221	L10T22	CCD-221	GP322	10TS-T22
C39	220 10%		DI-220	DD-221	L10T22	CCD-221	GP322	10TS-T22
C40	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C41	.001		1459-100		2R25T1	CM-19-100	MC235	MS-31
C42	10		CI-10	TCZ-10	L10Q1	DD-100	GP410	10TS-Q10
C43	20 5%		1459-220		2R25T2	CM-19-220J	MS-322	MS-322
C44	12 NPO			TCZ-12	C10Q12C	CCO-120	CNO-412	10TCC-Q12
C45	.005		DI-5000	DD-502	L10D5	CCD-502	GP250	10TS-D50
C46	.005 10%		DI-5000	DD-502	L10D5	CCD-502	GP250	10TS-D50
C47	.005		DI-5000	DD-502	L10D5	CCD-502	GP250	10TS-D50
C48	.005		DI-5000	DD-502	L10D5	CCD-502	GP250	10TS-D50
C49	.001		1469-1000		1W5D1	VCM-20-102	MC255	1FM-21
C50	3-12 NPO	#29500		822-FZ		466		
C51	80-480	#29509						
C52	.005		DI-5000	DD-502	L10D5	CCD-502	GP250	10TS-D50
C53	.005		DI-5000	DD-502	L10D5	CCD-502	GP250	10TS-D50
C54	.005		DI-5000	DD-502	L10D5	CCD-502	GP250	10TS-D50
C55	.005		DI-5000	DD-502	L10D5	CCD-502	GP250	10TS-D50
C56	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C57	.01		BPD-01	DD-103	BYA10S1	CCD-103	GP110	10TS-S10
C58	.01							

† Alternate Value.
Eico Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			EICO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	ELMENCO PART No.	MALLORY PART No.
R1	Volume & Switch	Imeg	18059	B-70-S, or (F1)-500K, SU204)	A47-1m ϵ -Z, SWE-12, KSS-3	Q13-137, 76-1, or (BU2), C F26, SSI, GC)*	U53, US-26, or (UA16A, US-41, SK-1000)
R2	Squelch	500K	18076	B-59 or (F2)-1m ϵ , KR-1, SU204)	A47-500K-S, KSS-3	Q11-133, or (BU2, C F16, SSI, DC1)*	U50, or (UA55L, SK-1000)

* "SNAPTRON"

FIXED CAPACITORS

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.
C5	7		CI-7	DD-6R8	L10V7	CCO-6R8	CNO-568	10TCC-V68
C6	18 NPO			TCZ-18	C10Q18C	CCO-180	CNO-418	10TCC-Q18
C7	.05		BPD-05	DD-503	CUB6S5	6DP-3-503	GP150	6PS-S50

PARTS LIST AND DESCRIPTION (CONTINUED)

RESISTORS

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

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA		REMARKS
		IRC PART No.	WORKMAN PART No.			IRC PART No.	WORKMAN PART No.	
R3	1000Ω			R29	1meg			
R4	1meg			R30	1.8meg			
R5	47K			R31	220K			
R6	1000Ω			R32	1meg			
R7	1meg			R33	470K			
R8	100K			R34	470K			
R9	1000Ω			R35	470K			
R10	47K			R36	4700Ω			
R11	47Ω			R37	22K			
R12	22K 1W			R38	470K			
R13	47K			R39	470K			
R14	47K			R40	560Ω 2W			
R15	1meg			R41	100K			
R16	100K			R42	100K			
R17	1000Ω			R43	10K			
R18	1meg			R44	47K			
R19	100K			R45	15K			
R20	1000Ω			R46	47K			
R21	47K			R47	68K			
R22	1meg			R48	47K			
R23	1meg			R49	4700Ω			
R24	100K			R50	500Ω 5W	PWS-500		
R25	360K 5%			R51	3300Ω	5W-SQ-500		
R26	470K			R52	1300Ω 1W 5%			
R27	470K			R53	22K			
R28	1meg			R54	1meg			(15Ω) †

† Alternate

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			ITEM No.	USE	REPLACEMENT DATA			ITEM No.	USE
		EICO PART No.	Merit PART No.	Miller PART No.			Stancor PART No.	Workman PART No.			
L1	Rec. Ant.	36024									
L2	Mixer (2.4uh)	36025									
L3	Osc. (Tunable)(1.6uh)	36026									
L4	Osc.(Crystal)(6.5uh)	36027	4204								
L5	1st IF	34615									
L6	2nd IF	34616									
L7	3rd IF	34617									
L8	Grid Choke(100uh)	35052	6112								
L9	Trans. Osc. (3.5uh)	36023									
L10	Final Plate (100uh)	35052									
L11	Tank Coil(1.9uh)	35051									

TRANSFORMER (POWER)

ITEM No.	IMPEDANCE	RATING			REPLACEMENT DATA			ITEM No.	IMPEDANCE
		PRI.	SEC. 1	SEC. 2	EICO PART No.	MERIT PART No.	STANCOR THORDARSON PART No.		
T1	117VAC	110VAC	12.6VAC						
		④ .5A	③ .066A	④ 1.7A	30035				

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	RATING			REPLACEMENT DATA			ITEM No.	IMPEDANCE
		PRI.	SEC.		EICO PART No.	MERIT PART No.	Stancor PART No.		
T2	7500Ω Tap	3-4Ω							
		④ 8000Ω			32023				

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		ITEM No.	TYPE	REPLACEMENT DATA	
		FIELD	V. C. IMP.			EICO PART No.	QUAM PART No.
SPL	3"x5" PM	3-4Ω		55014	35A05		

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA			ITEM No.	TYPE	RATING	REPLACEMENT DATA		
			FUSE	HOLDER	FUSE				HOLDER	FUSE	HOLDER
M1	3AG S/B	1A 250V	91006	97800	313001 (3AG 1A 250V) S/B	341001	MDL1	HCM			

MISCELLANEOUS

ITEM No.	PART NAME	EICO PART No.	NOTES
M2	Tuning Cap.	29016	
M3	Crystal	49011	15mf Transmit (Order: Frequency Desired)
M4	Switch	60087	Channel Selector (Rotary Wafer Type)
M5	Relay	39002	Receive-Transmit
	Microphone	57501	
	Neon Indicator	97715	2 Used (Power On, Transmit Indicator)

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Knob	53034	
Cabinet	88093	