



PHOTOFACT®

TRADE NAME : Olson Model RA-530
SUPPLIER : Olson Radio Corp.
 260 S. Forge Street, Akron 8, Ohio
TYPE SET : 9 Tube Transceiver
POWER SUPPLY : 110 - 120 Volts AC, 60 Cycles or
 12 Volt Storage Battery
RATING : 51 Watts, .50 Amp. @ 117VAC (Receive)
 70 Watts, .67 Amp. @ 117VAC (Transmit)
TUNING RANGE : Rec: Continuously Tuneable
 Trans: Any 12 CB Channels 1 thru 22



ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A1 thru A6, A9, A12 thru A15, A18..... GENERAL CEMENT #8606, 9295, 8282
 WALSCO #2526, 2543, 2544, 2545
 A7, A8, A16..... GENERAL CEMENT #8196, 8722, 8272
 WALSCO #2515, 2516, 2518, 2519, 2525, 2541

RECEIVER ALIGNMENT

Set volume for maximum output and squelch for maximum sensitivity.
 Output of signal generator should be no higher than necessary to obtain an output indication.

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to pin 2 (grid) of V3 (2nd Mixer), low side to chassis. Tune to 595KC (400v Mod.).	Any	A1 thru A6	Adjust for maximum output.
Not Used .	Any	A7	Adjust for maximum voltage on pin 9 of V2 , then back off 1/4 turn.
Across antenna jack. Tune to channel frequency.	Channel 2 (26.975MC)	A8	Adjust for maximum output.
"	Channel 22 (27.255MC)	A10	"
"	Channel 11 (27.085MC)	A9, A11, A12, A13, A14, A15	"

TRANSMITTER ALIGNMENT

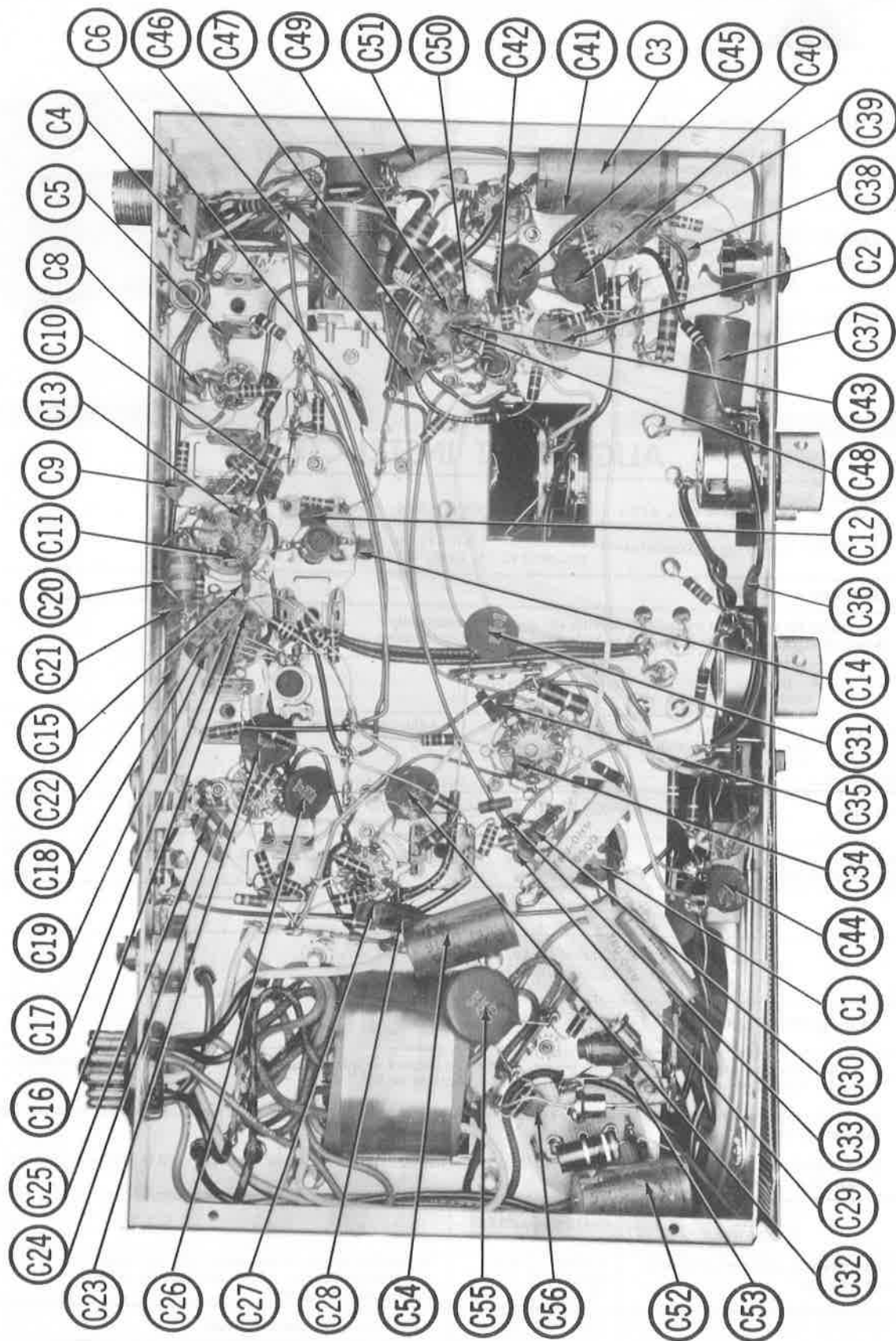
Only those persons properly licensed are permitted to make repairs or adjustments which may result in illegal operation. (Refer to FCC rules and regulations Part 19, Subpart D, Section 19.71).

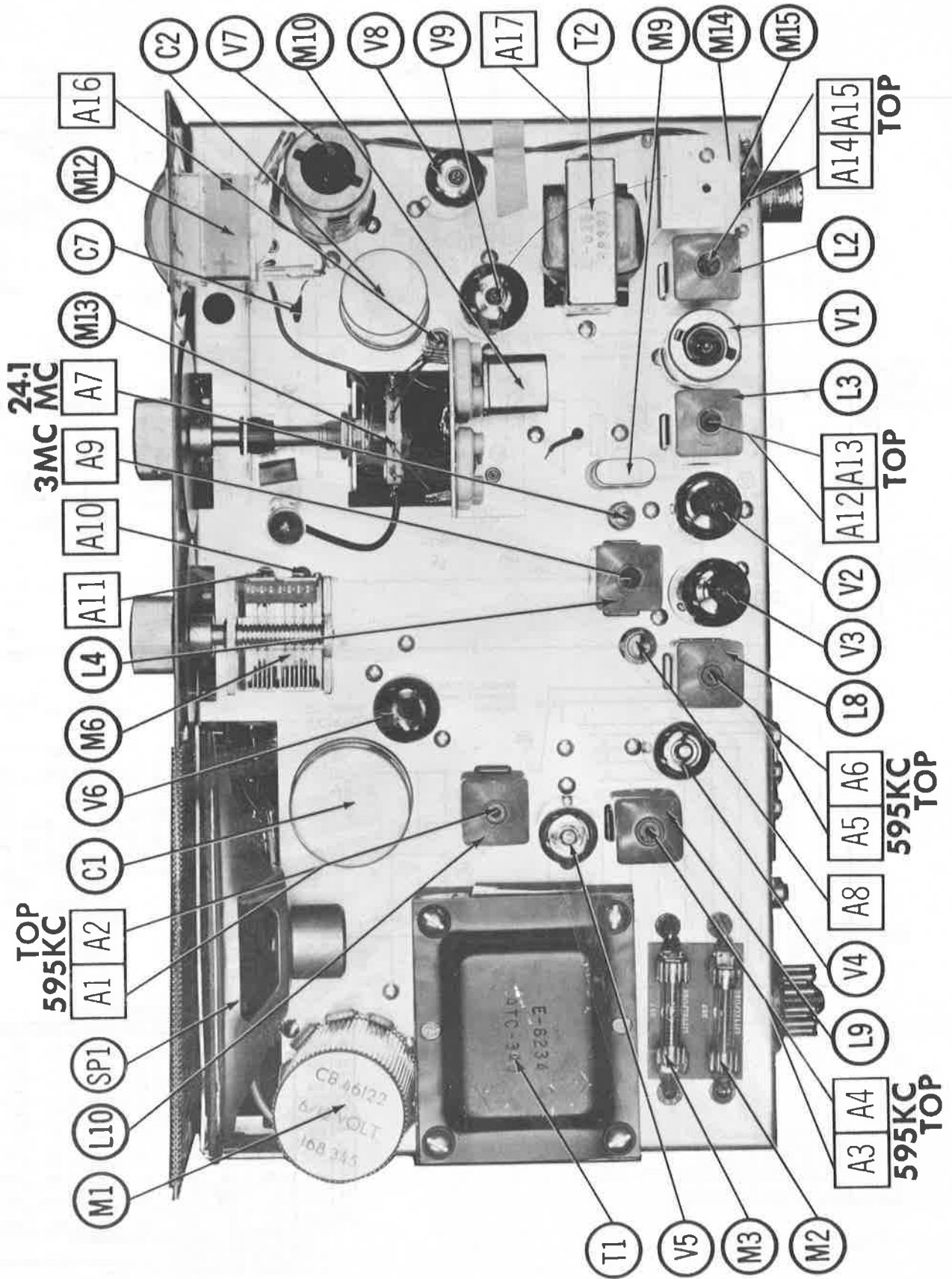
The frequency of the transmitter should be checked periodically with a secondary frequency standard to insure proper and legal operation.

Best results will be obtained when adjusting the final RF output circuit if the antenna normally used is connected and the chassis is as nearly in the cabinet as possible.

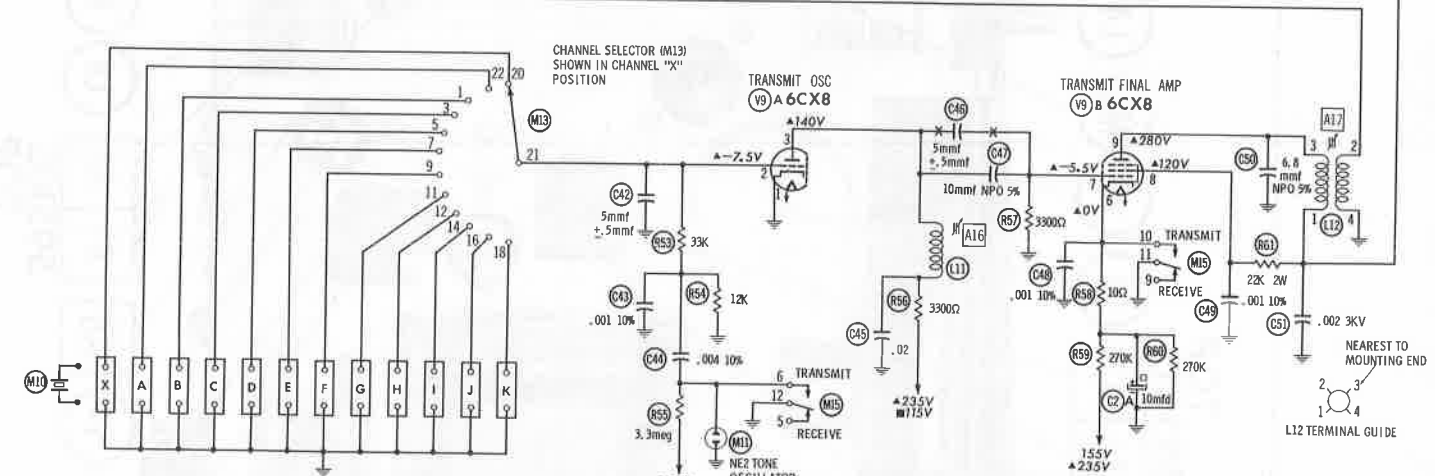
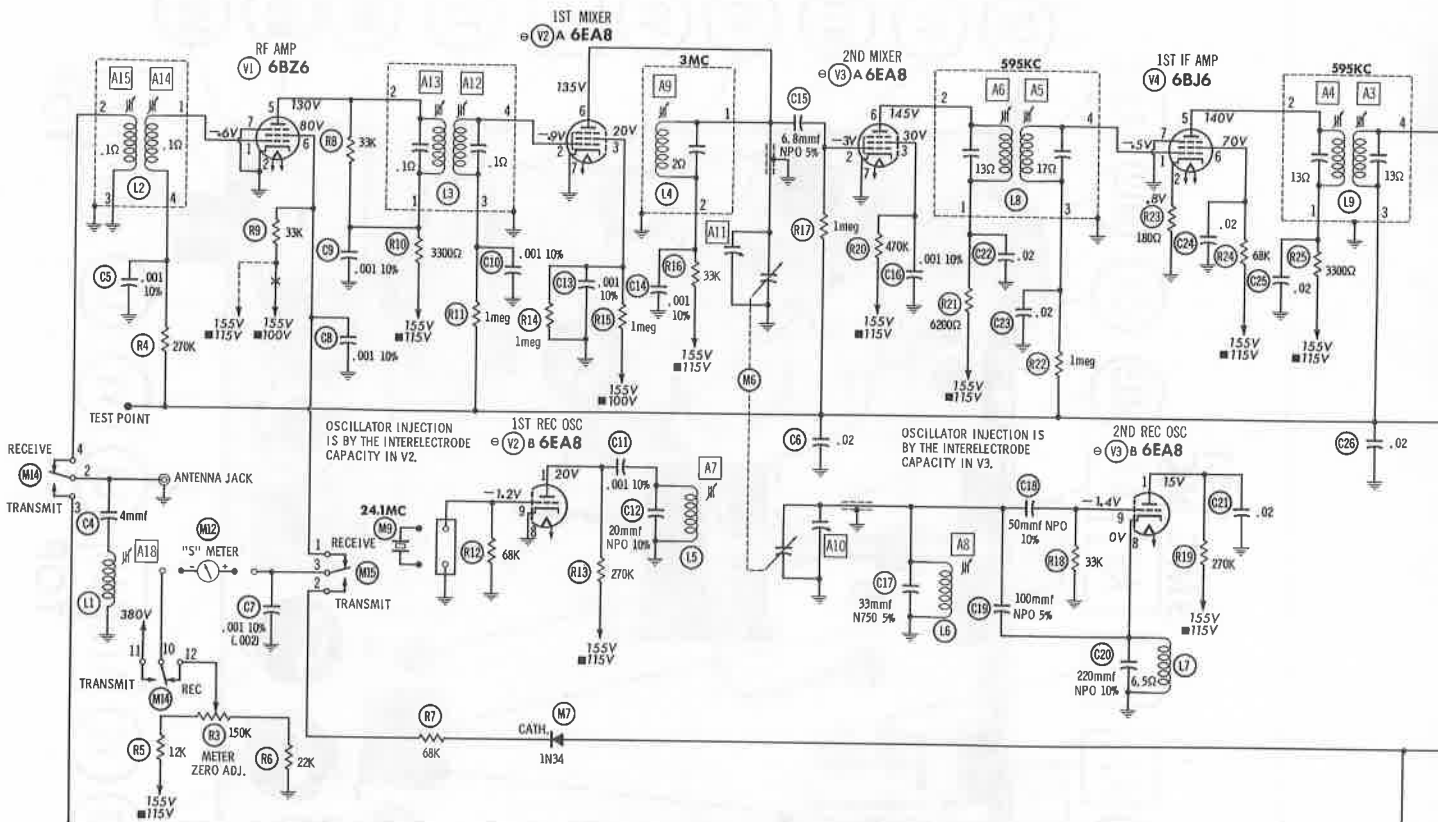
SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
Field strength meter or pilot lamp dummy load.	Center Channel Used.	A16	Adjust for maximum indication then turn slug 1/2 turn clockwise. Check all channels to be sure oscillator starts.
"	"	A17	Adjust for maximum indication.
"	"	A18	Adjust for MINIMUM interference with local TV receivers.

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





OLSON MODEL RA-530

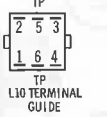
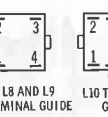
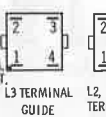
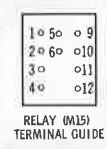
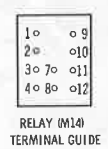
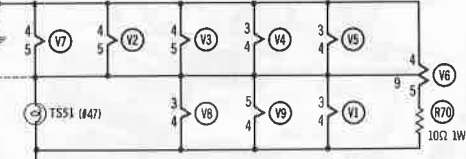
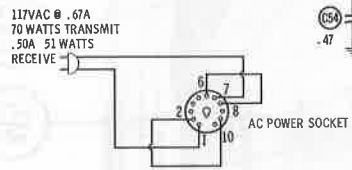
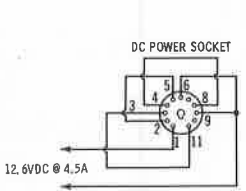
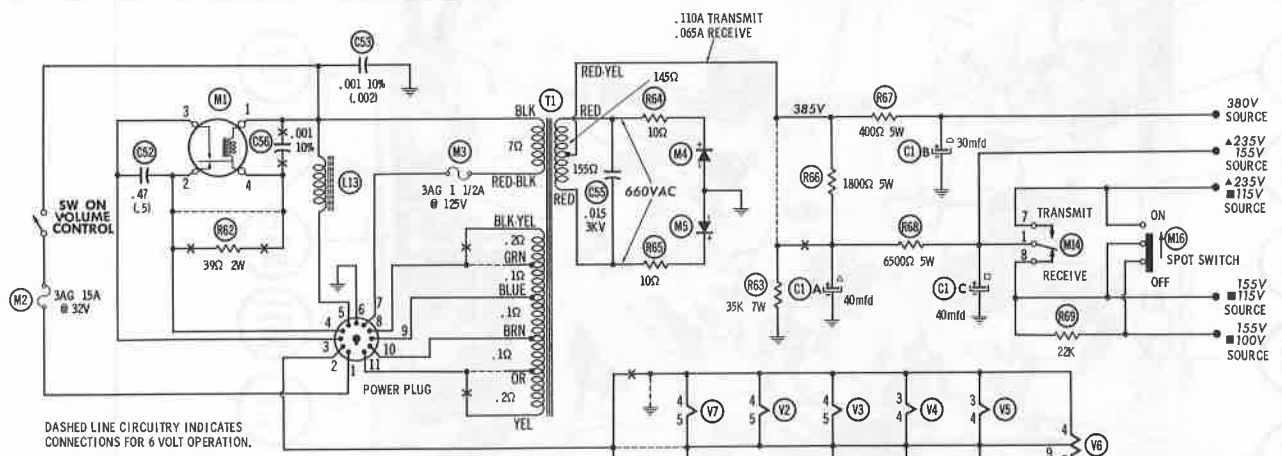
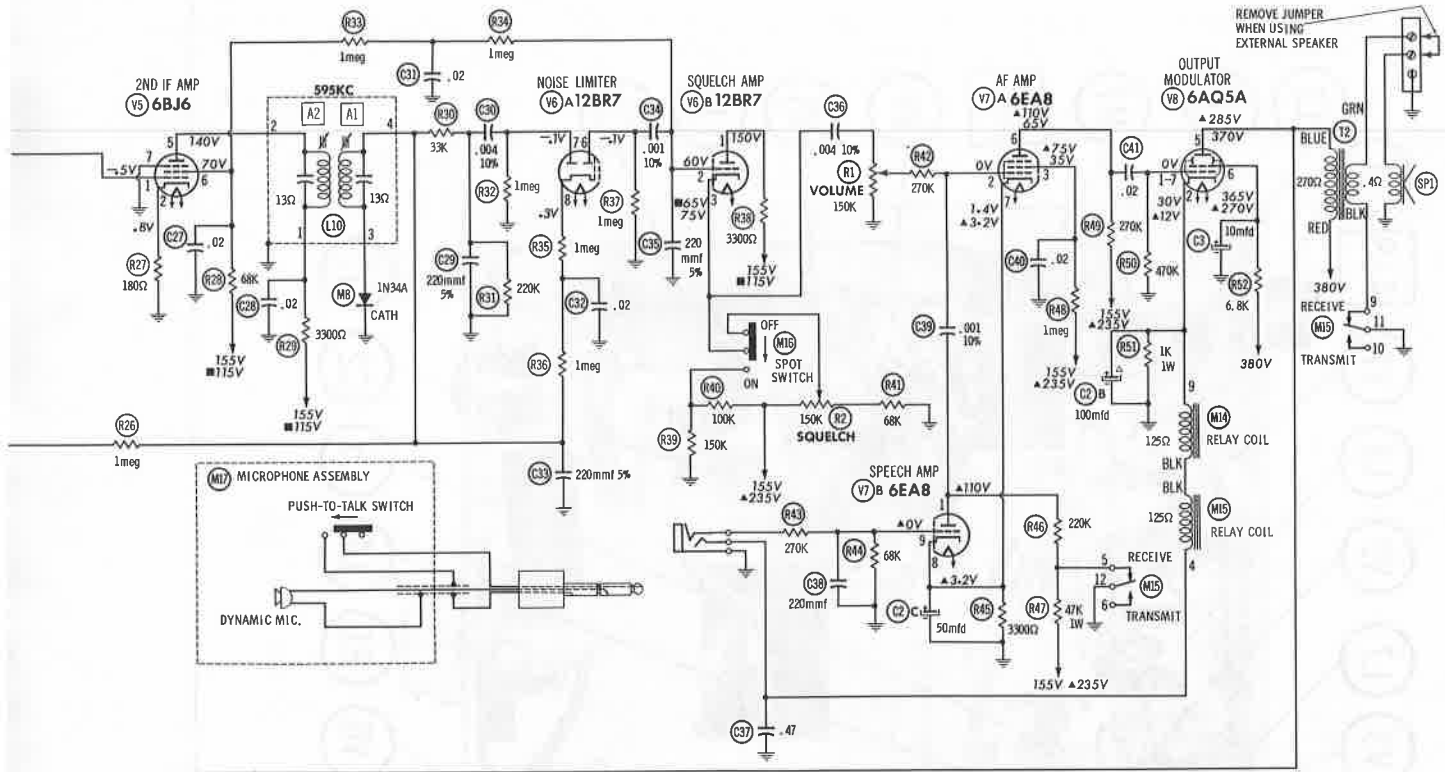


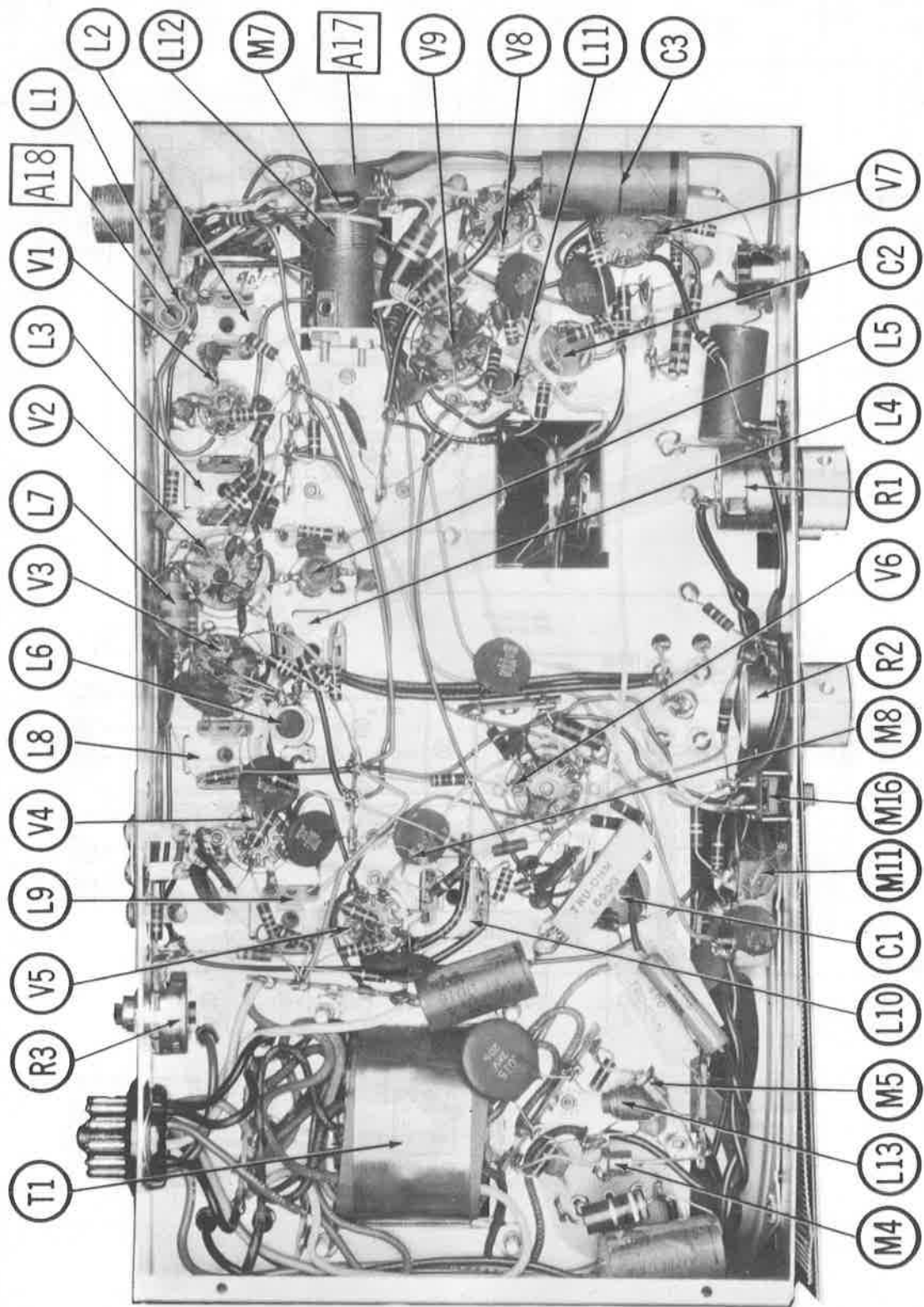
RESISTANCE READINGS

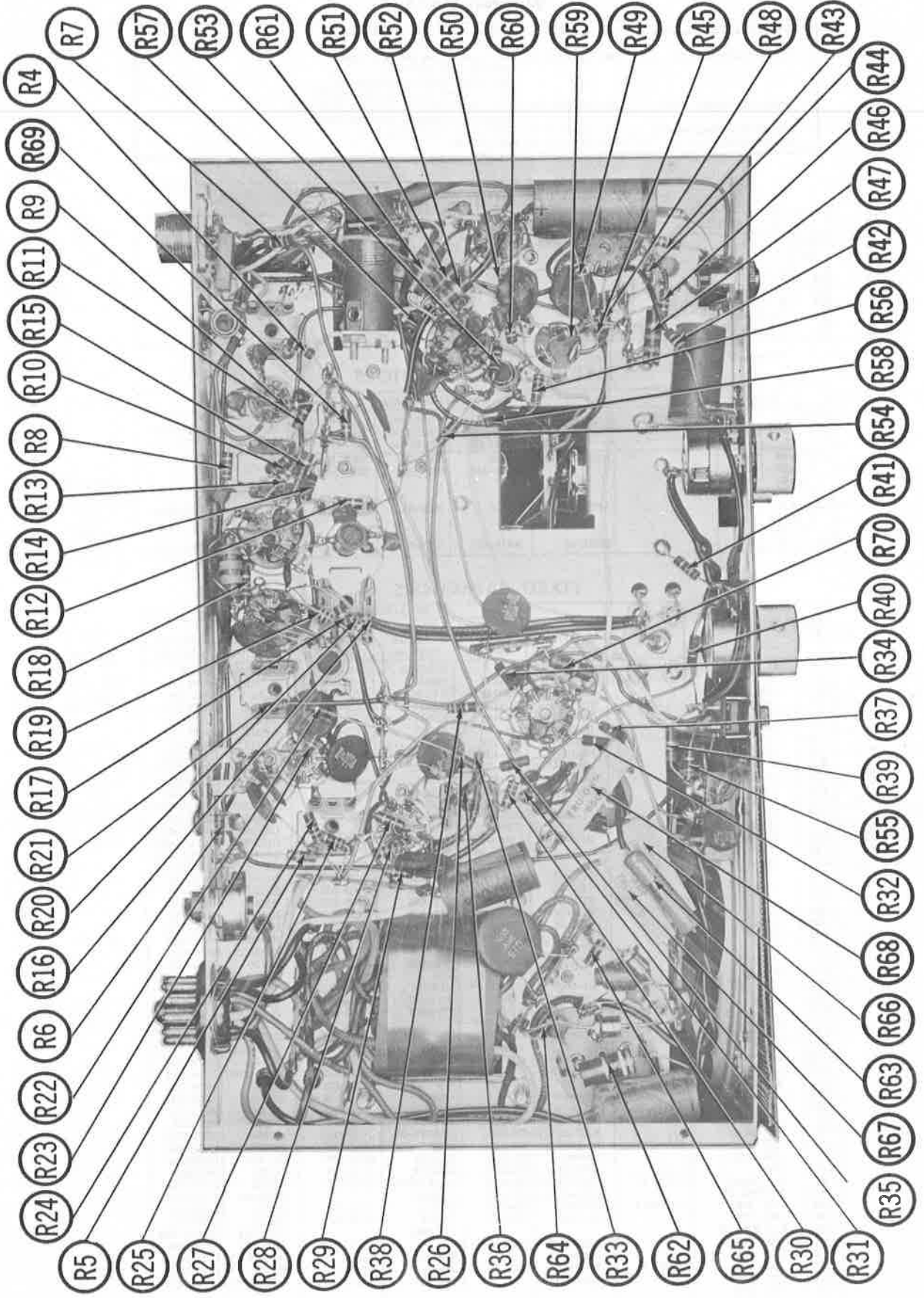
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6BZ6	1.5meg	0Ω	FIL	FIL	112K	128K	0Ω		
V2	6EA8	1280K	2.2meg	1500K	FIL	FIL	141K	0Ω	0Ω	68K
V3	6EA8	1280K	2.2meg	1480K	FIL	FIL	115K	0Ω	6.5Ω	33K
V4	6BJ6	2.2meg	180Ω	FIL	FIL	112K	176K	0Ω		
V5	6BJ6	1.2meg	180Ω	FIL	FIL	112K	176K	0Ω		
V6	12BR7	112K	2meg	150K	FIL	FIL	1meg	1meg	2.2meg	FIL
V7	6EA8	1280K	280K	11meg	FIL	FIL	1280K	3300Ω	3300Ω	68K
V8	6AQ5	470K	1250Ω	1000Ω	FIL	FIL	1700Ω	17200Ω	470K	
V9	6CX8	0Ω	45K	112K	FIL	FIL	40Ω	3300Ω	112K	1700Ω

- ⊙ See parts list for alternate value or application.
- 1. Voltage measurements taken with vacuum tube voltmeter.
- 2. All controls set for normal operation, no signal applied.
- 3. Measured values are from socket pin or terminal to common ground.
- 4. All terminals viewed from bottom unless otherwise designated.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
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OLSON MODEL RA-530

PARTS LIST AND DESCRIPTION

WIRING DATA

General-use Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors)
Shielded Antenna Lead	Use BELDEN No. 8214 Lowest Loss (RG-8/U Type) 8237 Low Loss (RG-8/U) 8240 (Solid) Miniature (RG-58/U) 8259 (Stranded) Miniature (RG-58A/U)
Coiled Microphone Cable	Use BELDEN No. 8499 Single Conductor Shielded (Neoprene) 8498 Single Conductor Shielded (Vinyl)
Ignition Noise Suppression	Use BELDEN No. 7300-Series Spark-Plug Sets
Bonding Strap	Use BELDEN No. 8861 (3/8 In.)

TUBES

ITEM No.	USE	REPLACEMENT DATA					
		AMPEREX	GENERAL ELECTRIC	RCA	RAYTHEON	SYLVANIA	
V1	RF Amp.		6BZ6		V8	Noise Limiter-Squelch Amp.	12BR7
V2	1st Mixer-1st Rec. Osc.		6EA8 (6U8)*		V7	AF Amp. -Speech Amp.	6EA8
V3	2nd Mixer-2nd Rec. Osc.		6EA8 (6U8)*		V8	Output-Modulator	6AQ5A
V4	1st IF Amp.		6BJ6		V9	Transmit Osc. -	6CX8
V5	2nd IF Amp.		6BJ6			Final Amp.	

* Alternate

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	OLSON PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	40	350		AFH4-04-25	B0450	XC2-25	TMD-2390	FP376.7A	
B	30	450			BR30-450	QT1-12	TD-30-450		
C	40	350							
D	30	25							
C2A	10	100		AFH3-73	C0490	XC3-41.1	TMT-3060	FP307A	TVL-3423
B	100	25							
C	50	6							
C3	10	350		PRS1620	BR10-450	QT1-6	TD-10-450	TC62	TVA-1604

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.
C4	4		1469-000005		22R5V5K	CM-20C-050J	MCB205	MS-55
C5	.001 10%		DI-1000	DD-102	JB6D1	CCD-102	GP210	10TS-D10
C6	.02		BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20
C7	.001 10%	(.002) †	DI-1000	DD-102	JB6D1	CCD-102	GP210	10TS-D10
C8	.001 10%		DI-1000	DD-102	JB6D1	CCD-102	GP210	10TS-D10
C9	.001 10%		DI-1000	DD-102	JB6D1	CCD-102	GP210	10TS-D10
C10	.001 10%		DI-1000	DD-102	JB6D1	CCD-102	GP210	10TS-D10
C11	.001 10%		DI-1000	DD-102	JB6D1	CCD-102	GP210	10TS-D10
C12	20 NPO 10%		NPO-DI 20	DTZ-20	C10Q2C	CC TO-200	CNO-422	10TCC-Q20
C13	.001 10%		DI-1000	DD-102	JB6D1	CCD-102	GP210	10TS-D10
C14	.001 10%		DI-1000	DD-102	JB6D1	CCD-102	GP210	10TS-D10
C15	0.8 NPO 5%				C10V68C		CNO-568	10TCC-V68
C16	.001 10%		DI-1000	DD-102	JB6D1	CCD-102	GP210	10TS-D10
C17	33 N750 5%			DTN-33	C10Q33U		CN7-433	10TCU-Q33
C18	50 NPO 10%		NPO-DI 50	DTZ-50	C10Q5C	CC TO-510	CNO-450	10TCC-Q50
C19	100 NPO 5%			DTZ-100	C10T1C		CNO-310	10TCC-T18
C20	220 NPO 10%			DTZ-220			CNO-322	10TCC-T22
C21	.02		BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20
C22	.02		BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20
C23	.02		BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20
C24	.02		BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20
C25	.02		BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20
C26	.02		BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20
C27	.02		BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20
C28	.02		BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20
C29	220 5%			DTZ-220			CNO-322	10TCC-T22
C30	.004 10%		DI-4000	CF-392	JB6D39	CCD-392	JL-239	10TS-D40
C31	.02		BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20
C32	.02		BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20
C33	220 5%			DTZ-220			CNO-322	10TCC-T22
C34	.001 10%		DI-1000	DD-102	JB6D1	CCD-102	GP210	10TS-D10
C35	220 5%			DTZ-220			CNO-322	10TCC-T22
C36	.004 10%		DI-4000	CF-392	JB6D39	CCD-392	JL-239	10TS-D40
C37	.47 200V		P288N-47		PM2P47	2DP-5-474	GEM-2047	2TM-P47
C38	220		DI-220	DD-221	LA10T22-S3	CCD-221	GP322	10TS-T22
C39	.001 10%		DI-1000	DD-102	JB6D1	CCD-102	GP210	10TS-D10
C40	.02		BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20
C41	.02		BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20
C42	5 ±.5mMf		NPO-DI 5.0	DD-050	LA10V5-SL	CCD-050	GP550	10TS-V50
C43	.001 10%		DI-1000	DD-102	JB6D1	CCD-102	GP210	10TS-D10
C44	.004 10%		DI-4000	CF-392	JB6D39	CCD-392	JL-239	10TS-D40
C45	.02		BPD-02	DD-203	BYA6S2	CCD-203	B-120	5HK-S20
C46	5 ±.5mMf	Note 1	NPO-DI 5.0	DD-050	LA10V5-SL	CCD-050	GP550	10TS-V50
C47	10 NPO 5%		NPO-DI 10	DTZ-10	C10Q1C		CNO-410	10TCC-Q10
C48	.001 10%	(.002) †	DI-1000	DD-102	JB6D1	CCD-102	GP210	10TS-D10
C49	.001 10%		DI-1000	DD-102	JB6D1	CCD-102	GP210	10TS-D10
C50	0.8 NPO 5%				C10V68C		CNO-568	10TCC-V68
C51	.002 3KV		HVD-30-2200	DD30-202		3CCD-202	3HV-222	30GA-D20
C52	.47 200V		P288N-47		PM2P47	2DP-5-474	GEM-2047	2TM-P47
C53	.001 10%	(.002) †	DI-1000	DD-102	JB6D1	CCD-102	GP210	10TS-D10
C54	.47 200V		P288N-47		PM2P47	2DP-5-474	GEM-2047	2TM-P47
C55	.015 3KV				JB6D1	CCD-102	GP210	10TS-D10
C56	.001 10%	Note 1	DI-1000	DD-102	JB6D1	CCD-102	GP210	10TS-D10

Note 1. Not used in some versions.
† Alternate Value.

PARTS LIST AND DESCRIPTION (CONTINUED)

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			OLSON PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume & Switch	150K	W7305PL	F2-250K, SU204, KR-1 or (B-44, KR-1)	A47-250K-Z, RS-2, SWE-12	B13-328, SK3 76-1	UA154A, SL2500, US-41 or (RU25A, SL38, SL2500, US-41) or (U42, US-26)
R2	Squelch	150K	W7306PL	F1-150K, SU204 or (B-43)	A47-150K-S, RS-2	B13-328, SK3 or (BU1, CF14, SS3, DC1)*	UA25L, SL2500, or (RU154L, SL38, SL2500) or (U43)
R3	S Meter Adjust	150K	W7909-P	F1-150K, SN010 or (B-43)	A47-150K-S, FKS-1/2	B11-328, SK6, or (BU1, CF14, SS8)*	UA25L, SN1000, or (RU154L, SL38, SN1000) or (U43)

* "SNAPTROL"

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		OLSON PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	54MC TV Trap	AK-40-310 T3P L3P L2P T5P T6P T7P					
L2	Receiver Input						
L3	Receiver RF						
L4	3MC IF						
L5	1st Receiver Osc.						
L6	2nd Receiver Osc.						
L7	3-P1 Choke(109uh)				4642	RTC-8527	T867
L8	1st 595KC IF						
L9	2nd 595KC IF						
L10	3rd 595KC IF						
L11	Transmitter Osc.						
L12	Final Amp.						
L13	Hash Choke (56uh)						

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
	PRI. 1	PRI. 2	SEC. 2	OLSON PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	117VAC @. 67A	12.0VCT @2.7A Tap @ 6.3VCT	660VCT @. 110A	E-6234					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	OLSON PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	8000Ω	3-4Ω	E-6256					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		OLSON PART No.	QUAM PART No.	
SP1	3" x 5" PM 3-4Ω	36A987	35A05	

VIBRATOR

ITEM No.	TYPE	INPUT VOLTS	FREQUENCY	REPLACEMENT DATA			NOTES
				OLSON PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	
M1	Interrupter	6VDC	115%	CB46122	5372	1610	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			OLSON PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M2	3AG	15A 32V			313015.	356002	AGC15	
M3	3AG	1 1/2A 125V			30301.5		MDL 1 1/2	3833-2

POWER RECTIFIERS

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS		
			MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.
M4	.110A		1N540 or 1N2094 ①	1N1764 or 1N2863 or 1N3195	60H or F-6 ②
M5	.110A		1N540 or 1N2094 ①	1N1764 or 1N2863 or 1N3195	60H or F-6 ②

① Part #CTP500 may be used to replace M4 and M5.

② Two Required

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