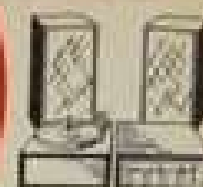


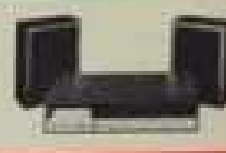
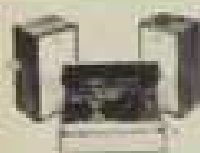
SAMS PHOTOFACT[®] MODULAR HI-FI SERIES



MHF-11

11

FEBRUARY 1971



CONTENTS

TRADE NAME AND MODEL	PAGE
LAFAYETTE LSC-100 (24-02907WX)	5
MIDLAND 19-545	25
REALISTIC SC-70 (13-1045)	51
SEARS 7423	71
SONY HF-580	99

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



PHOTOFACT[®]



TRADE NAME : Knight Model KN-2590 (86RU515MU)
SUPPLIER : For Current Address, see Master Index
TYPE SET : 7-Tube Transceiver
POWER SUPPLY : 110 — 120 Volts AC, 60 Cycles (or)
 12 Volt Storage Battery
RATING : 47 Watts, .45 Amp @ 117VAC (Receive)
 54 Watts, .53 Amp. @ 117VAC (Transmit)
 3.6 Amp. @ 12.6VDC (Receive)
 4.2 Amp. @ 12.6VDC (Transmit)
TUNING RANGE : Any 8 CB Channels 1 thru 23
 Receiver may be continuously tuned

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A1 thru A4.....GENERAL CEMENT #8727, 8195, 8606..... WALSCO #2515
 A5 thru A9.....GENERAL CEMENT #8609, 8868, 9087, 9089..... WALSCO #2528, 2541, 2587

RECEIVER ALIGNMENT

Connect VTVM from Point **A** to ground.

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to pin 9 (grid) of V2 (Mixer), low side to chassis. Tune to 455KC (unmod.).	Any	A1, A2, A3, A4	Turn squelch control fully clockwise. Adjust for maximum deflection.
High side thru .01mfd to antenna receptacle. Tune to 27.085, channel 11 (unmod.).	11	A5	Set crystal-tune switch to tune. Set dial reading to channel 11. Turn A5 all the way out (counterclockwise), then turn back and adjust for second maximum peak deflection.
High side thru .01mfd to antenna receptacle. Tune to 27.085, channel 11 (unmod.).	11	A6	Adjust for maximum deflection.

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 95, SUBPART D, SECTION 95.95).
 The frequency of the transmitter should be checked periodically with a secondary frequency standard to insure proper and legal operation.

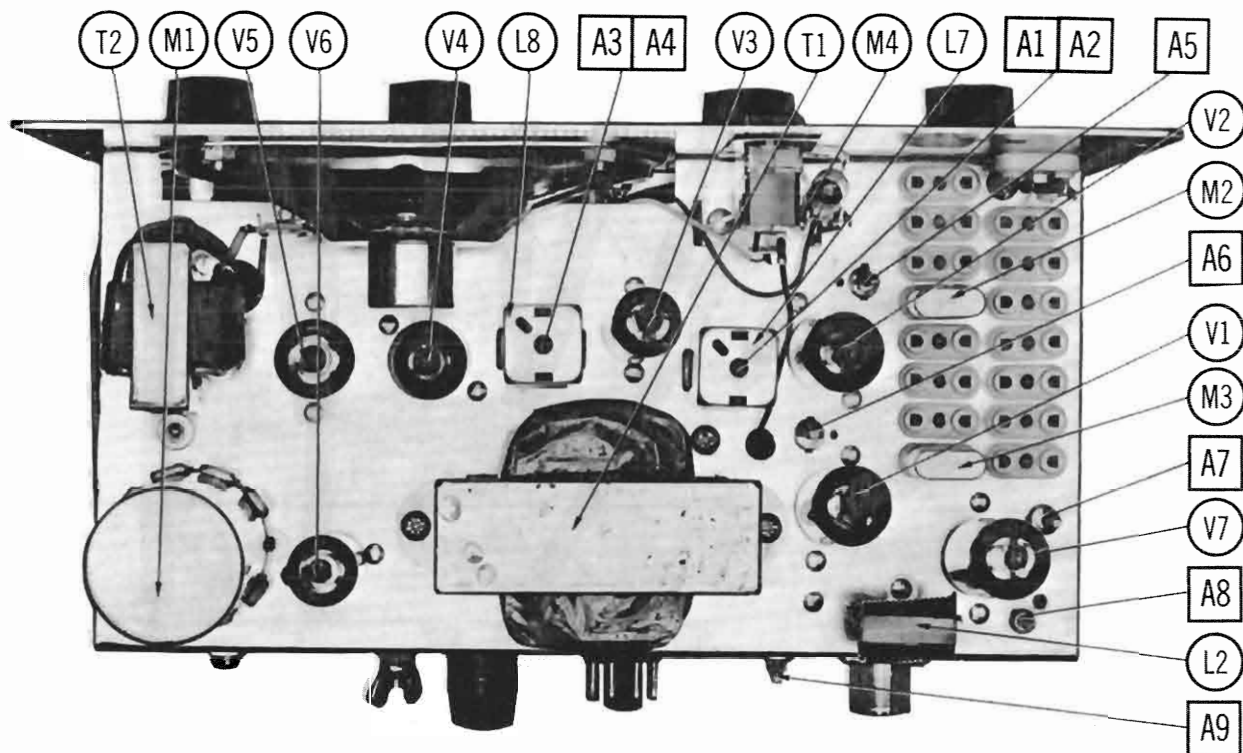
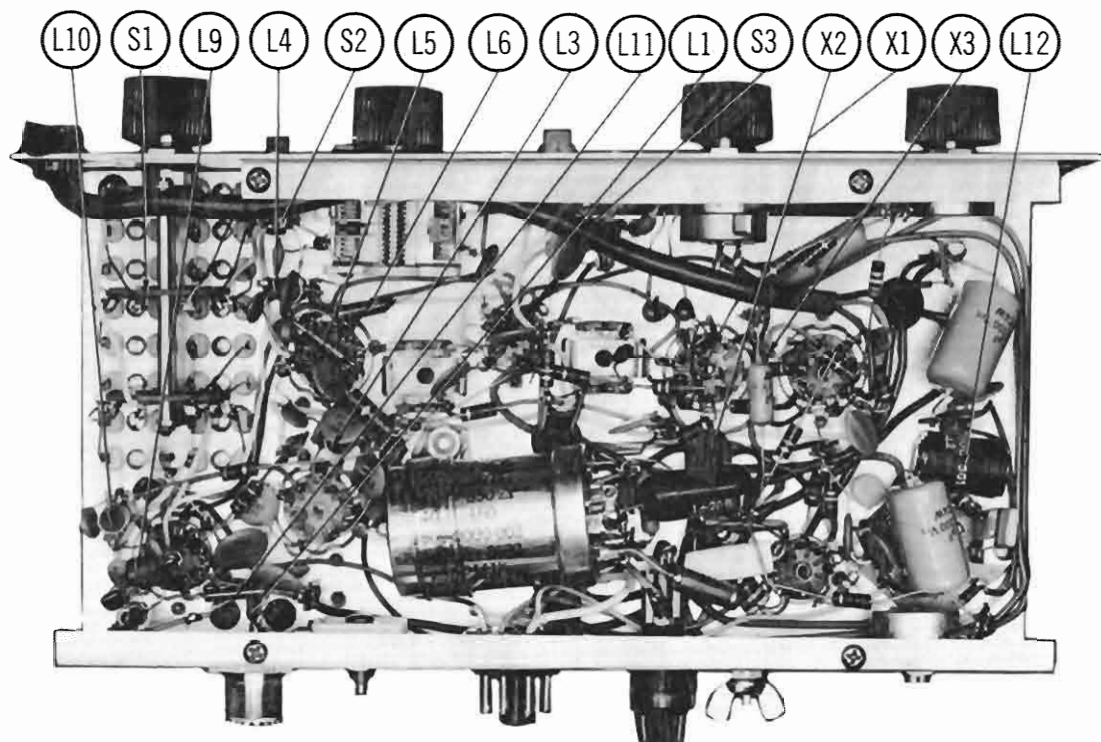
Best results will be obtained when adjusting the final RF output circuit if the antenna normally used is connected and the chassis is as nearly in the cabinet as possible.

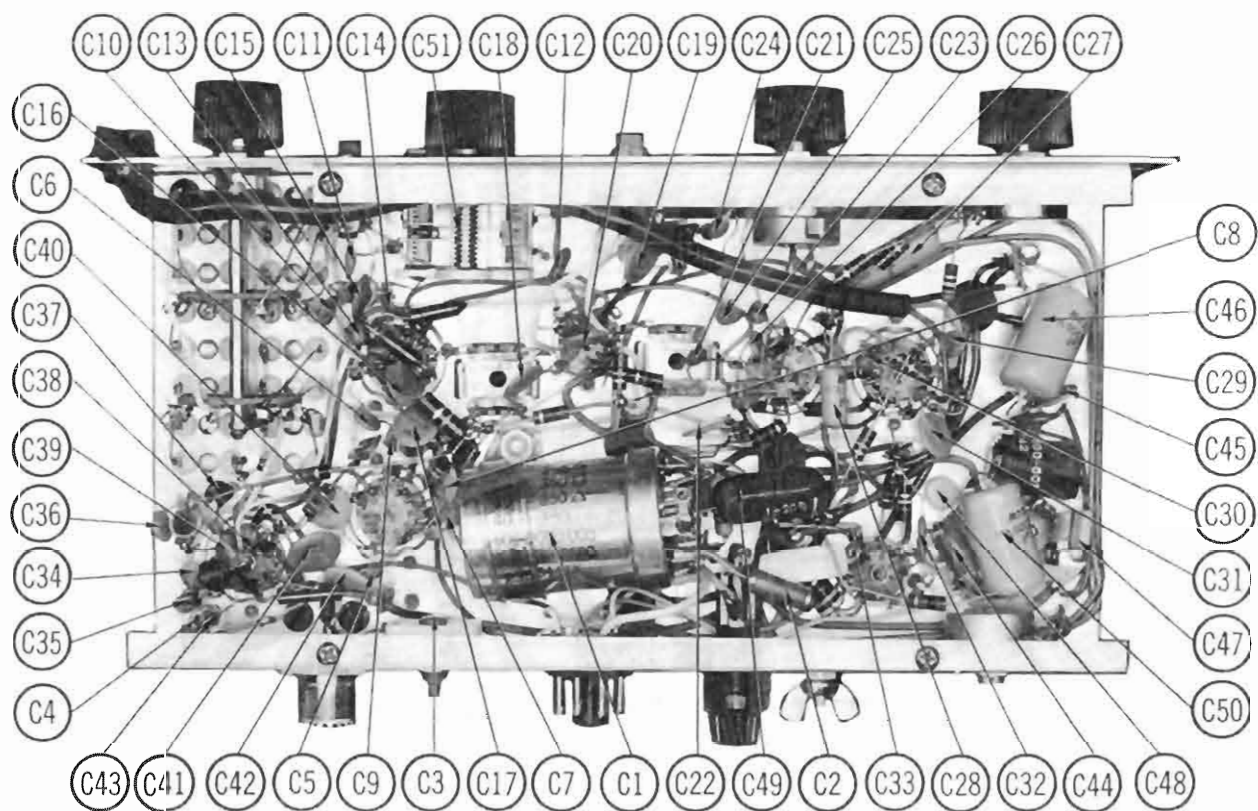
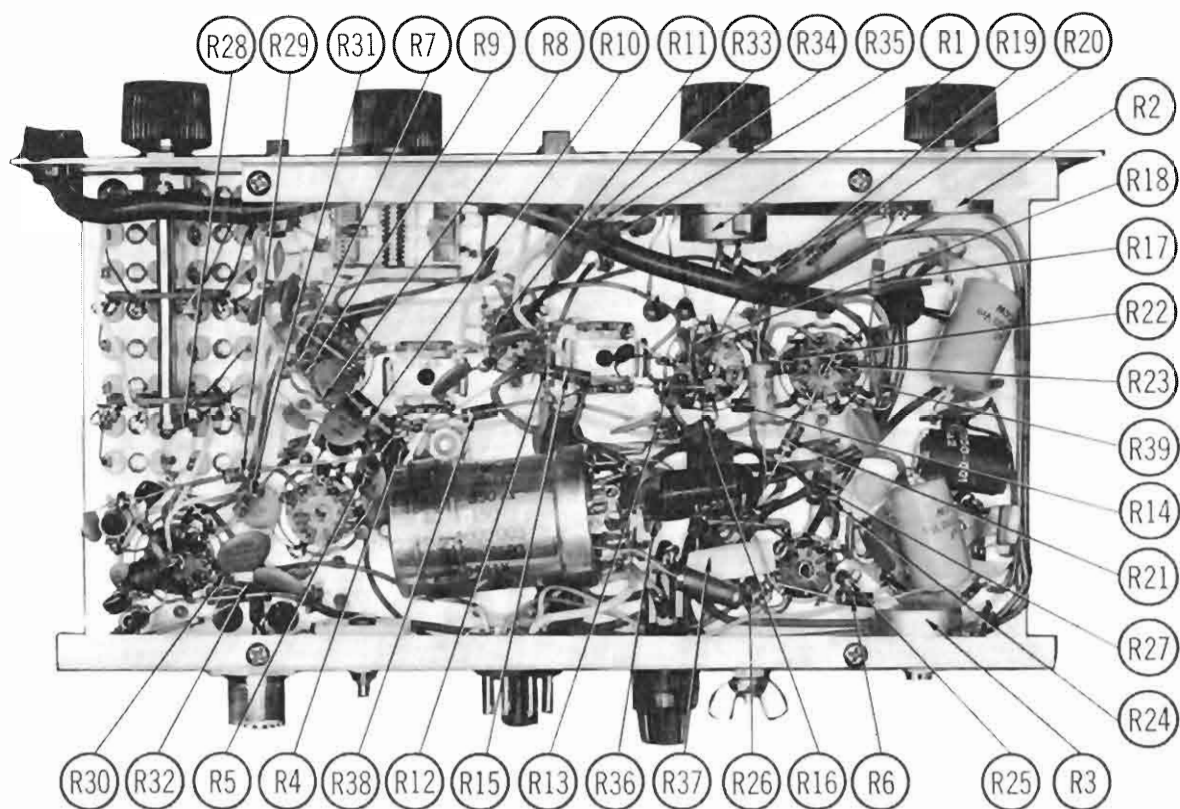
Connect either 50Ω dummy load or the normally used antenna system.

INDICATOR	ADJUST	REMARKS
Accurate Frequency Meter	A7	Key Transmitter. Adjust for maximum deflection. Set A7 slightly below peak to insure proper oscillation. Key Transmitter several times to be sure oscillator starts. Check all channels used.
Field Strength Meter	A8	Adjust for maximum. Repeat adjustment of A8 several times for maximum. Readjustment of A7 for maximum output may be required, quired.

Adjust A9 for MINIMUM Interference on nearby TV Receiver.

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





PARTS LIST AND DESCRIPTION

(When ordering parts, state Model, Part Number, and Description.)

WIRING DATA

General-use Hook-up Wire	Use BELDEN No.	8530 (Solid) Available in 12 Colors
Shielded Antenna Lead	Use BELDEN No.	8524 (Stranded) Available in 12 Colors
		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.	8497 3 Conductor-1 Shielded for Press-to-Talk (Neoprene)
		8496 3 Conductor-1 Shielded for Press-to-Talk (Vinyl)
Ignition Noise Suppression	Use BELDEN No.	7300-Series Spark-Plug Sets
Bonding Strap	Use BELDEN No.	8661 (3/8 in.)

TUBES

• AMPEREX •			• GENERAL ELECTRIC •			• RCA •			• SYLVANIA •		
ITEM No.	USE	TYPE		ITEM No.	USE	TYPE					
V1	RF Amp.	6CL8A		V5	Speech Amp.	12AX7A					
V2	Mixer- Osc.	6CL8A		V6	Audio Output- Modulator	6AQ5A					
V3	IF Amp.	6BJ6		V7	Transmit Osc. -	6CX8					
V4	Det. -AVC, AF Amp. - Noise Limiter	6TS(A)			Doubler-Final Amp.						

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS & DIODES		RECTIFIERS		
			GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.
X1	.085A			10D4 or 10B4	1N3194 or VB400†	SK-3016 or SK-3017	F-4 or 40B
X2	.085A			10D4 or 10B4	1N3194 or VB400†	SK-3016 or SK-3017	F-4 or 40B

† Replaces X1 and X2 with a single unit.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		KNIGHT PART No.	REPLACEMENT DATA				
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	40	350			CC0330 & BR40-150		FP420, 36A	TVLS-4635, 12*
B	20	350						
C	10	350						
D	40	150						
C2	10	64		CRE907A	NLW10-100	MT1-7	TT100X10	TE-1407

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

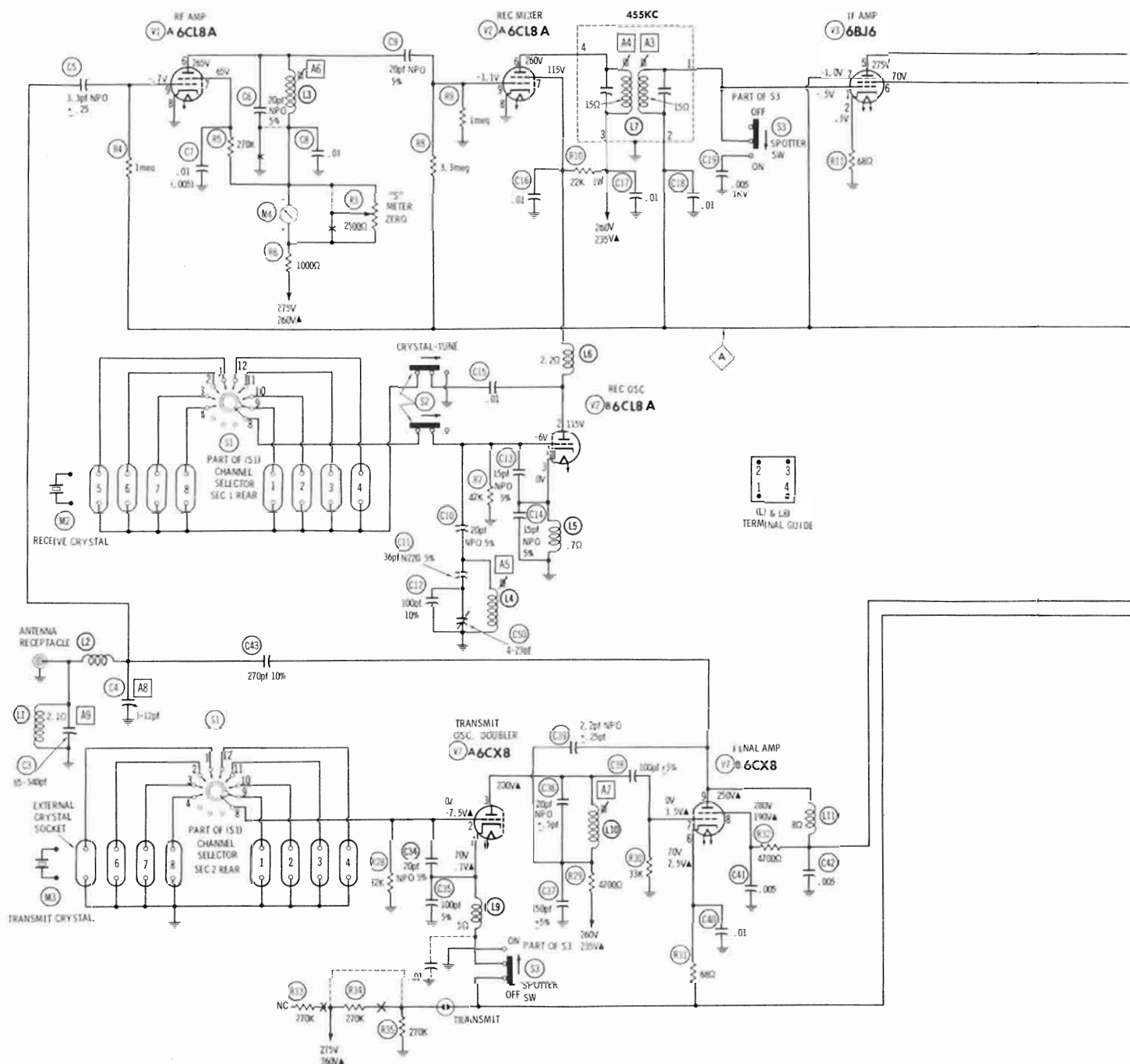
CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENDO PART No.	MALLORY PART No.	SPRAGUE PART No.
C3	65-340					303		
C4	3-12			822-FZ		460	S553-Z	
C5	3.3 NPO ±.25pf			TCZ-3R3			CNO533	10TCC-V33
C6	20 NPO 5%			DTZ-20			CNO420	10TCC-Q20
C7	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C8	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C9	20 NPO 5%			DTZ-20			CNO420	10TCC-Q20
C10	20 NPO 5%			DTZ-20			CNO420	10TCC-Q20
C11	36 N220 5%							
C12	100 10%		ADM-15-101	CPR-100J	E101J500	DM-10-101J	SX310	MS-31
C13	15 5%			DTZ-15	CZ601CG150J		CNO415	10TCC-Q15
C14	15 5%			DTZ-15	CZ601CG150J		CNO415	10TCC-Q15
C15	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C16	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C17	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C18	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C19	.005 1KV		BPD-005	DD-502	ACV142ZU502P	CCD-502	GP250	5HK-D50
C20	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C21	100 10%		ADM-15-101	CPP-100J	CD10E101J500	DM-10-101J	SX310	10TCC-T10
C22	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C23	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C24	220		DI-220	DD-221	JBZ601Y P221K	CCD-221	B222	5GA-T22
C25	.001		BPD-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C26	.005		BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C27	.22 200V		PHE2P22		DPMS2P22	2DP-4-224	PVC2022	2PS-P22
C28	.047 200V		P288N-047	DD-503	PM2S47	4DP-3-473	PVC2147	2TM-S47
C29	470		DI-470	DD-471	JB601YP471K	CCD-471	JF247	10TS-T47
C30	.001		BPD-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C31	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C32	.005		BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C33	.005		BPD-005	DD-502	ACV142ZU502P	CCD-502	GP250	5HK-D50
C34	20 NPO 5%			DTZ-20			CNO420	10TCC-Q20
C35	100 5%		ADM-15-101	CPP-100J	E101J500	DM-10-101J	SX310	MS-31
C36	20 NPO ±.5pf			DTZ-20			CNO420	10TCC-Q20
C37	150 5%		ADM-15-151	DTZ-150	E151J500	DM-15-151J	SC315	MS-315
C38	100 5%		ADM-15-101	CPP100J	E101J500	DM-10-101J	SX310	MS-31
C39	2.2 NPO ±.25pf		NPO-DI 2.2	DTZ-2R2	CZ601CJ2R2D	CCTO-2R2	CNO522	10TCC-V22
C40	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C41	.005		BPD-005	DD-502	ACV142ZU502P	CCD-502	GP250	5HK-D50
C42	.005		BPD-005	DD-502	ACV142ZU502P	CCD-502	GP250	5HK-D50
C43	270pf 10%		DI-270	DD-270	BYX601ZU502P	CCD-271	GP327	5GA-T27
C44	.005		BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C45	.005		BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C46	.1 200V		P488N-1	DF-104	PM4P1	4DP-3-104	GEM401	4TM-P10
C47	.047 407		P288N-047	DD-503	PM2S47	4DP-3-473	PVC2147	2TM-S47
C48	.005		BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C49	.1 400V		P488N-1	DF-104	PM4P1	4DP-3-104	GEM401	4TM-P10
C50	.1 200V		P488N-1	DF-104	PM4P1	4DP-3-104	GEM401	4TM-P10
C51	4-23							

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

† Alternate Value.

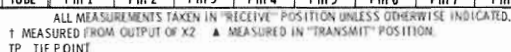
(CONTINUED ON PAGE 66)



Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.

- Not used in some versions.
- See parts list.
- 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 on ground.
- 4. All terminals viewed from bottom unless otherwise design noted.
- 5. Numbers assigned to terminals may not be found on the unit.
- 6. Supply voltage maintained at rated value for voltage readings.

A PHOTOFACT STANDARD NOTATION SCHEMATIC
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PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

CONTROLS

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

ITEM No.	USE	RESIST-ANCE	REPLACEMENT DATA				
			KNIGHT PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume & Power Switch	500K		F2-500K, SSK010, KR-1	A47-500K-Z, KSS-3, SWE-12	Q13-133, 76-1 or (BU1, CF25, SS1, GC)*	U55A, SK750, US41 or (RU55A, SL38, SK750, US41) or (U48, US26)
R2	Squelch	500K		F1-500K, SSK010	A47-500K-S, KSS-3	Q11-133 or (BU1, CF16, SS1, DC1)	UA55L, SK750, (RU55L, SL38, SK750) or (U50)
R3	Zero Meter	2500Ω		F1-2500, SNK010	A47-2500-S, FKS-1/2	B11-111, SK2 or (BU1, CF59, SS2, DC1)*	UA33L, SK750, or (RU252L, SL38, SK750) or (U8)

* "SNAPTROL"

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	KNIGHT PART No.			IRC PART No.	WORKMAN PART No.	KNIGHT PART No.
R37	250Ω 5W	PW5-250	5W-SQ-250		R40	9000Ω 10W	PW10-9000	10W-SQ-9000	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		KNIGHT PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	Ant. Filter (10mh)		19-1005	BC-566	4612		T860
L2	Final Plate						
L3	RF Plate		19-6816		4202		
L4	Rec. Osc.		19-6816		4202		
L5	RF Choke (10uh)		19-1005	BC-566	4612		T860
L6	Rec. Osc. Choke (10uh)		19-1005	BC-566	4612		T860
L7	1st IF (455KC)		19-6844	BC-352	12C-30		T607
L8	2nd IF (455KC)		19-6844	BC-353	12C-31		T608
L9	RF Choke (120uh)		19-3125	TV-195	72F124AP		T307
L10	Transmit Osc.		19-6816		4202		
L11	Final RF Choke (22uh)				72F225AP		
L12	Filament Choke (30uh)						

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
	PRI. 1	SEC. 1	SEC. 2	KNIGHT PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	117VAC @ .53A	110VAC @ 85mA	12.6VAC @ 1.6A						a Transmit
	PRI. 2 12.6VDC @ 4.2A	SEC. 4	SEC. 5						

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	KNIGHT PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	24K CT	3-4Ω						

FUSE DEVICES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
F1	AGC 1	1A 250V			312001	342012	AGC 1	KKP
	AGC 3	10A 32V ①			311010	342012	AGC 10	HKP

① DC Operation.

VIBRATOR

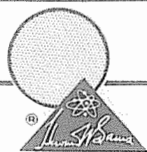
ITEM No.	TYPE	INPUT VOLTS	FRE-QUENCY	REPLACEMENT DATA			NOTES
				KNIGHT PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	
M1	Interrupter	12.6V	115%		6301	G1601	

MISCELLANEOUS

ITEM No.	PART NAME	NOTES
M2	Receive Crystal	27.520MC
M3	Transmit Crystal	13.5325MC
M4	"S" Meter	
M5	Microphone Ass'y.	Ceramic
S1	Switch	Channel Selector, Transmit/Receive
S2	Switch	Crystal/Tune (DPDT, Slide)
S3	Switch	Spot (DPDT, Slide)
S4	Switch	RF Power Selector (DPDT, Slide)

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		
		KNIGHT PART No.	JENSEN PART No.	QUAM PART No.
SP1	3" x 5" PM	3-4Ω	P3X5X3	35A05



PHOTOFACT[®]

TRADE NAME: Tram Model XL-100
 (PS-103, AC Power Supply)
 (PS-104, 6VDC Power Supply)
 (PS-102, 12VDC Power Supply)

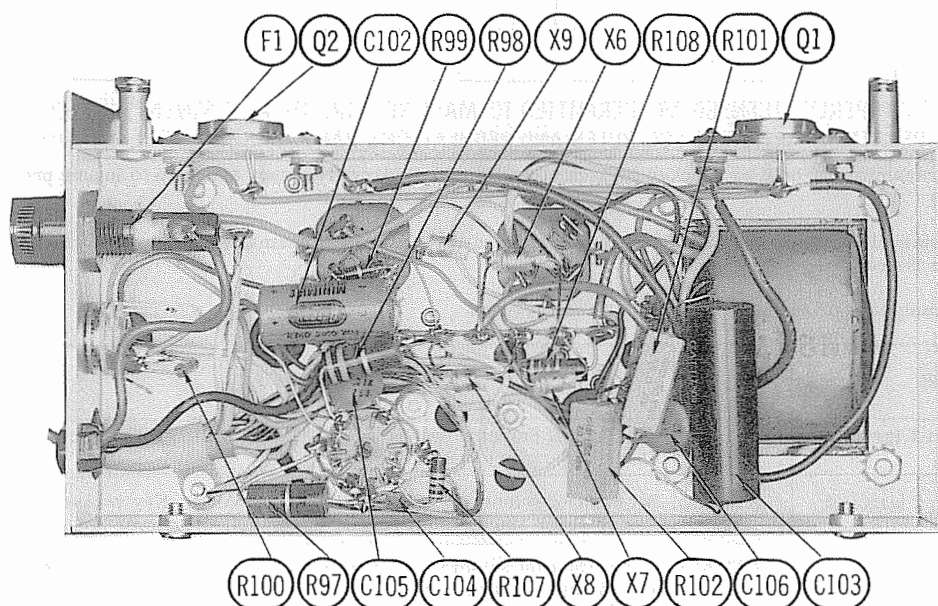
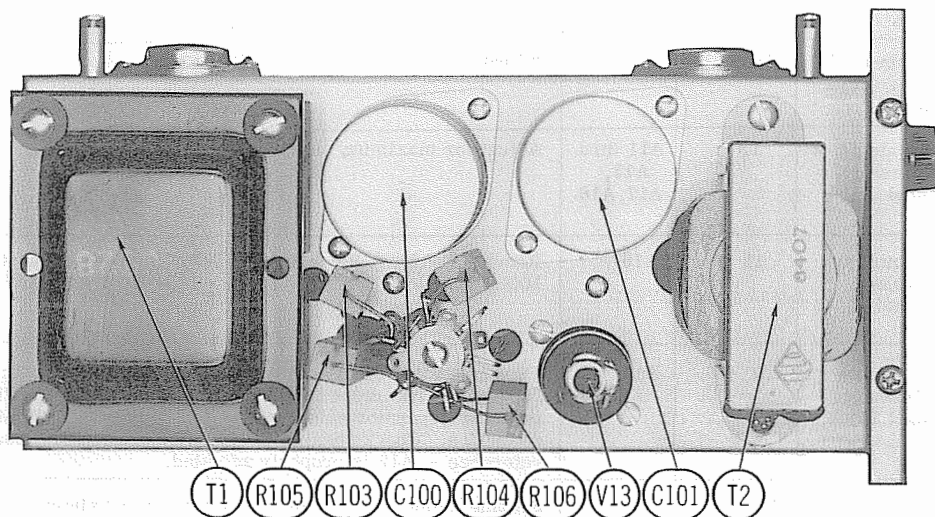
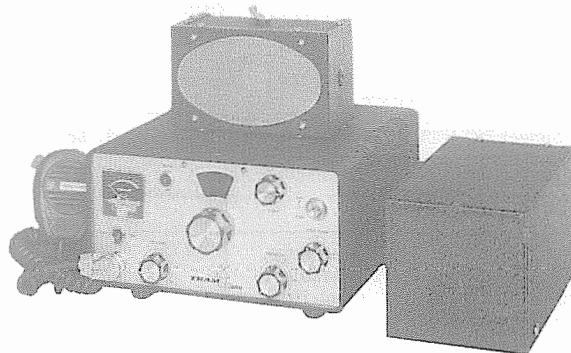
SUPPLIER: For Current Address, see Annual Index

TYPE SET: 13-Tube, 2-Transistor Transceiver

POWER SUPPLY: 110 ~ 120 Volts AC, 60 Cycles (or)
 6 or 12-volt Storage Battery

RATING: 5.6 Amp. @ 12.6VDC (Receive)
 5.9 Amp. @ 12.6VDC (Transmit)

TUNING RANGE: All 23 CB Channels



TRAM MODEL XL-100

HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

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ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A1 thru A21..... GENERAL CEMENT #8606, 8606L, 8869..... WALSCO #2543, 2544, 2588
A22, A23..... GENERAL CEMENT #8276, 8277, 8609

RECEIVER ALIGNMENT

Connect DC VTVM between point **A** and ground, set to indicate negative voltage.

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to antenna receptacle, low side to chassis. Tune to 27.255MC (Channel 23) (Unmodulated).	23	A10	Set Fine Tuning (R5) to MINIMUM (counterclockwise). Tune coil on slope side of peak, and adjust for -2.5V meter reading on pin 2 (grid) of V3A (16MC Osc.) and -10 to -12 volt reading on pin 1 (grid) of V4B (4MC Osc.). Check all channels. NOTE: No reading on blank channel.
High side thru 10pf to pin 1, V2 (grid), low side to chassis. Tune to 6.255MC (50MV Unmod.).	Any	A1 thru A8	Adjust to approximately -5 Volts.
High side thru 10pf to pin 1, V2 (grid), low side to chassis. Tune to 455KC (50MV, Unmod.).	Any	A1 thru A7	Adjust for maximum meter deflection.
High side thru 1.0mfd to pin 1, V2 (grid), low side to chassis. Tune to 6.255KC (50MV, Unmod.).	Any	A9	Adjust for maximum meter deflection.
High side thru .01mfd to antenna receptacle, low side to chassis. Tune to 27.085MC (Channel 11) (Unmod.).	11	A11 thru A13, A17, A18	Adjust for maximum meter deflection.
High side thru .01mfd to antenna receptacle, low side to chassis. Tune to 27.085MC. (Channel 11, Unmod.).	11	A16	Remove B + from RF stage (V1, Plate) by disconnecting 1000Ω resistor (R6). Adjust for MINIMUM meter deflection.
High side thru .01mfd to antenna receptacle, low side to chassis. Tune to 27.075MC (Channel 10) (1MV, Unmod.).	10	A19	Tune generator for maximum meter deflection. NOTE: This reading for reference only. Set Channel Selector to Channel 11; increase generator output and adjust A19 for MINIMUM deflection. Check channel 9. If meter deflection is less than reference — A19 is properly adjusted.
High side thru .01mfd to antenna receptacle, low side to chassis. Tune to 27.085MC. (Channel 11, Unmod.).	11	A20	Set fine tuning (R5) to center. Adjust for maximum meter deflection.

TRANSMITTER ALIGNMENT

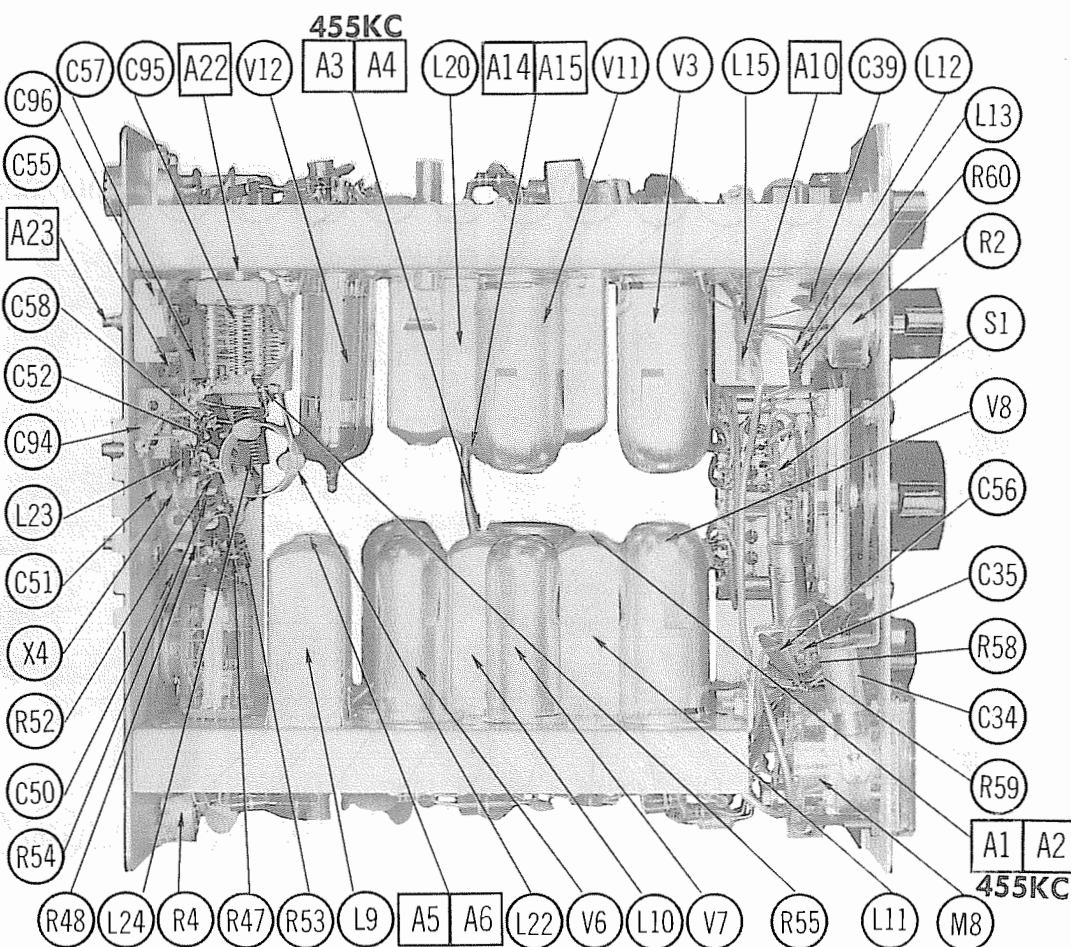
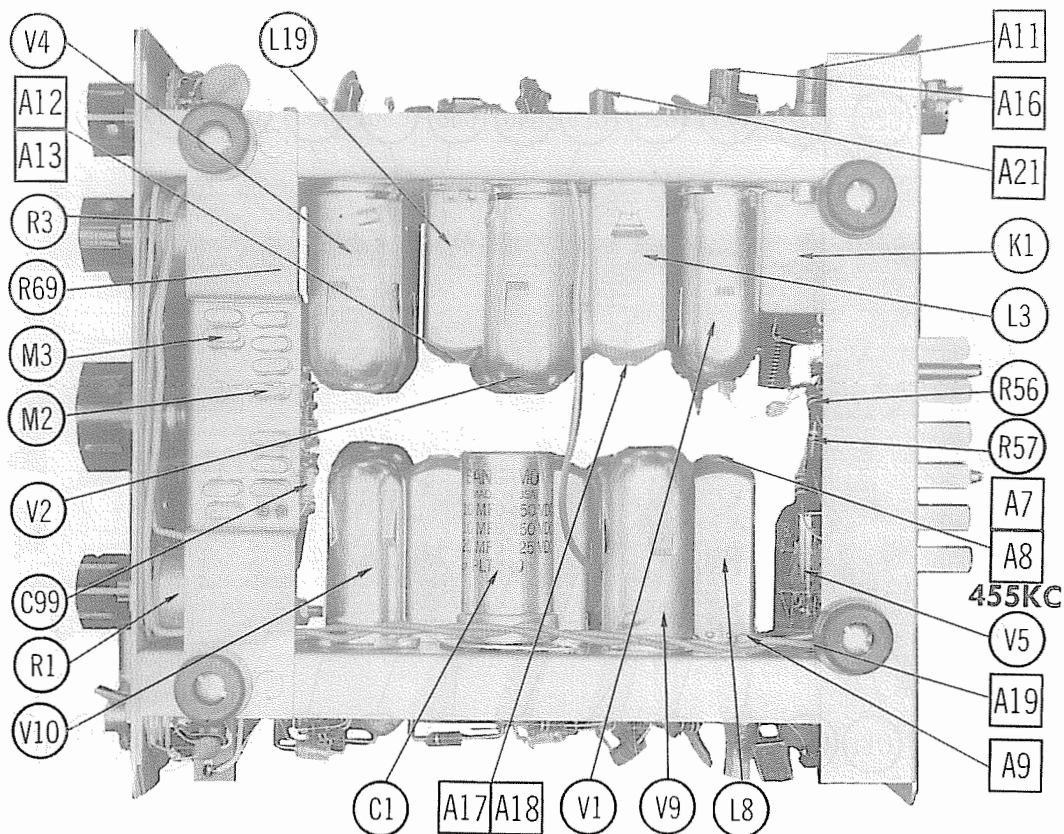
ONLY THOSE PERSONS PROPERLY LICENSED ARE PERMITTED TO MAKE REPAIRS OR ADJUSTMENTS WHICH MAY RESULT IN ILLEGAL OPERATION. (REFER TO FCC RULES AND REGULATIONS PART 95, SUBPART D, SECTION 95.95).

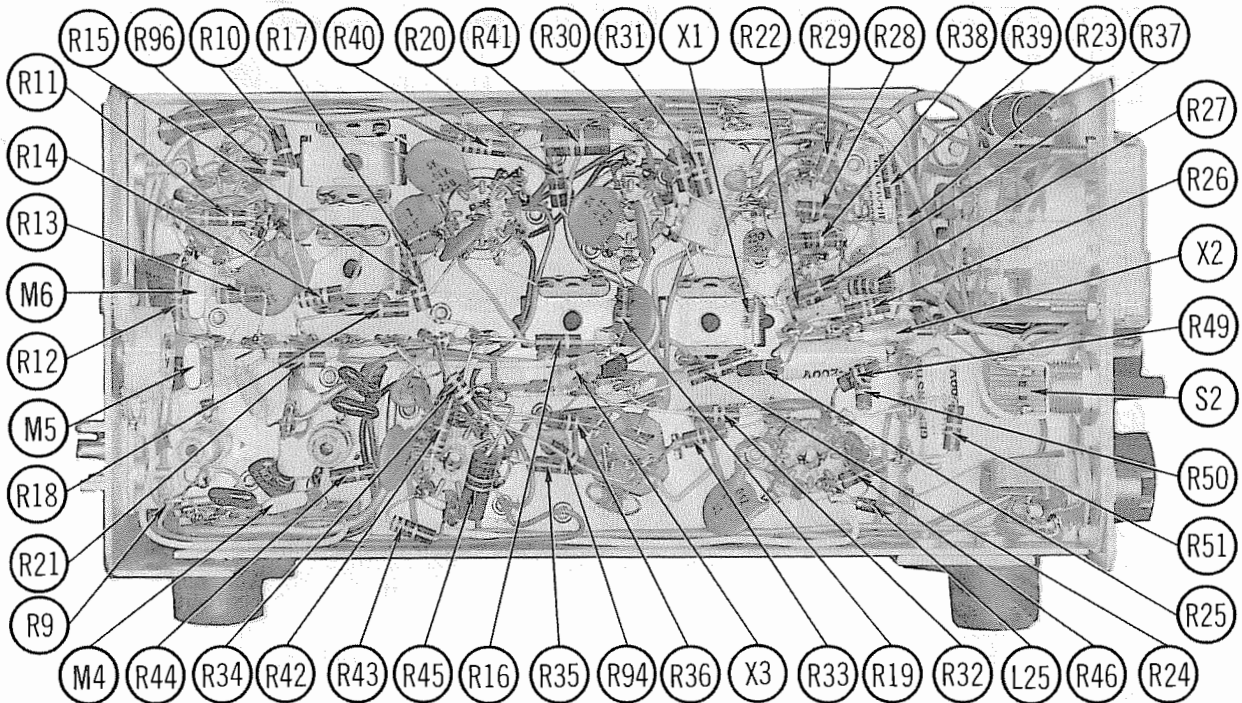
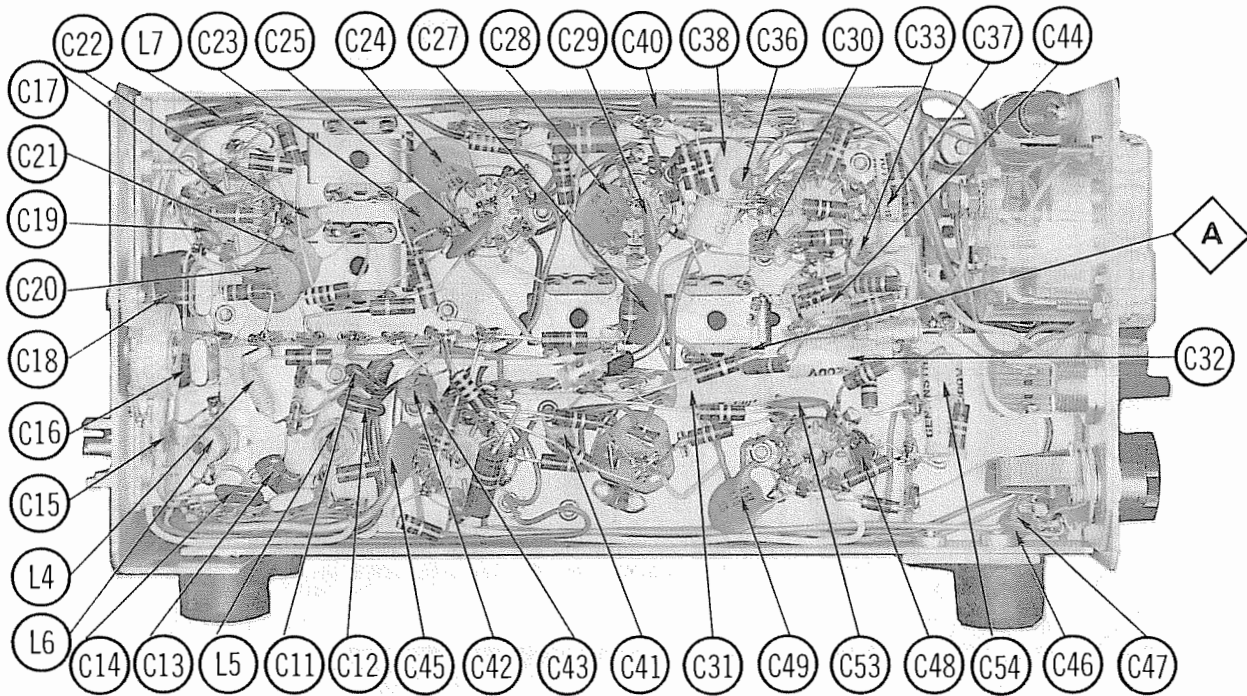
The frequency of the transmitter should be checked periodically with a secondary frequency standard to insure proper and legal operation.

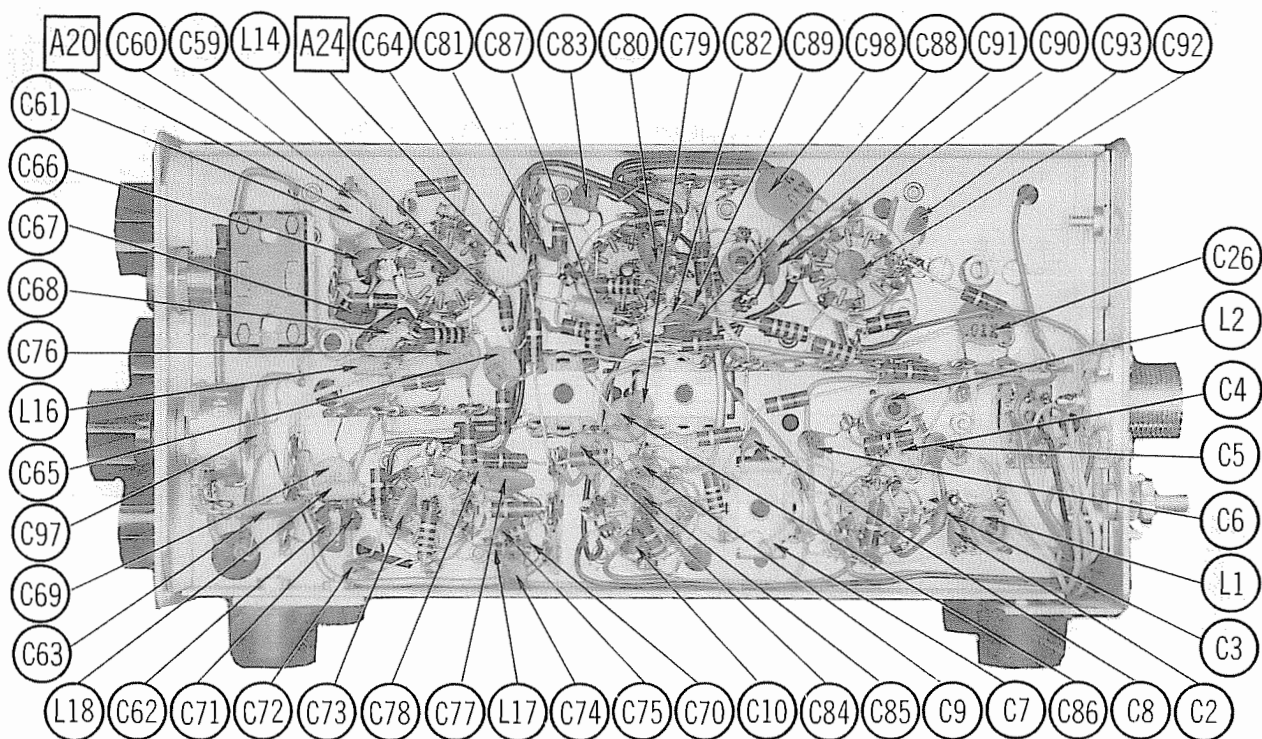
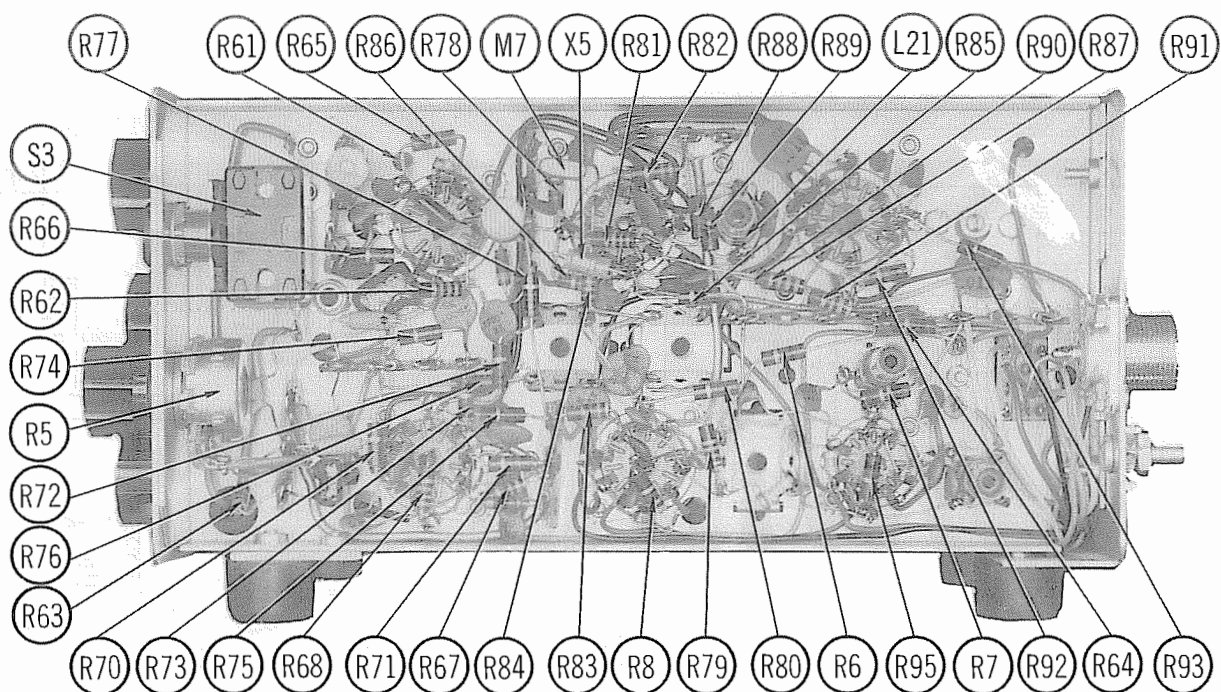
Best results will be obtained when adjusting the final RF output circuit if the antenna normally used is connected and the chassis is as nearly in the cabinet as possible.

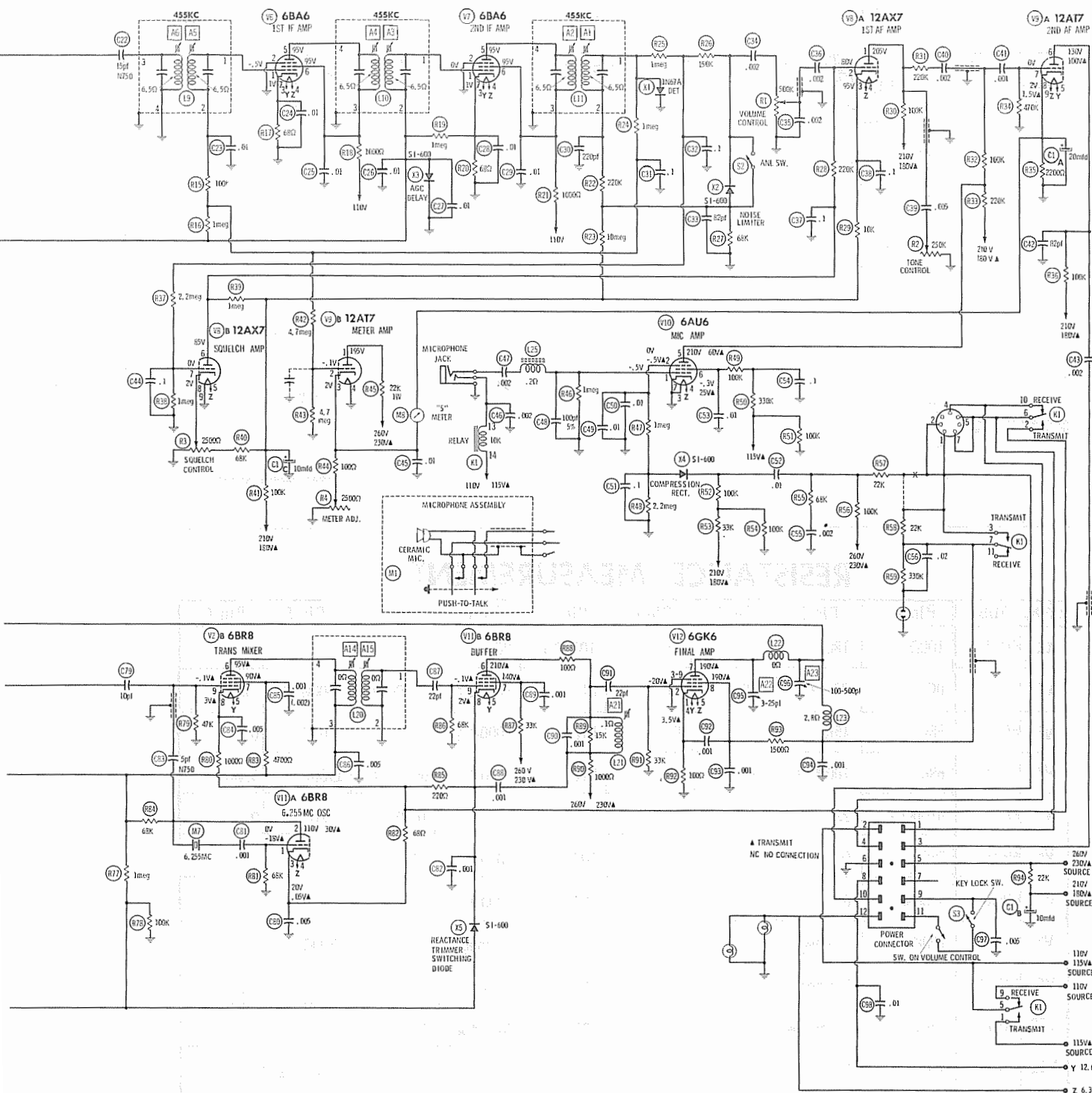
Connect either 50Ω dummy load or the normally used antenna system.

INDICATOR	ADJUST	REMARKS
VTVM connected to Pin 1 (grid) of V11A		Set Channel Selector on Channel 11 (27.085MC). Key transmitter and check for approximately -15 volts.
VTVM connected to pin 2 (grid) of V12.	A14, A15, A21	Set channel selector on Channel 11 (27.085MC). Key transmitter and adjust for -20 volts MINIMUM meter deflection.
RF Wattmeter	A22, A23	Set Channel Selector on Channel 11 (27.085MC). Key transmitter and adjust for maximum meter deflection.
Accurate frequency meter.	A24	Set channel selector to channel 11 (27.085MC). Adjust for zero beat. Check frequency of other channels. Variation should not exceed .003%.

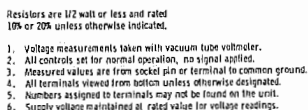








TRAM MODEL XL-100



TRAM MODEL XL-100

RECEIVER — TRANSMITTER PARTS LIST AND DESCRIPTION

(When ordering parts, state Model, Part Number, 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)
Cotled Microphone Cable	Use BELDEN No. 8497 3 Conductor-1 Shielded for Press-to-Talk (Neoprene)
	8496 3 Conductor-1 Shielded for Press-to-Talk (Vinyl)
Ignition Noise Suppression	Use BELDEN No. 7300-Series Spark-Plug Sets
Bonding Strap	Use BELDEN No. 8661 (3/8 in.)

TUBES

AMPEREX			GENERAL ELECTRIC			RCA			SYLVANIA		
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V1	RF Amp.	6GK5	V7	2nd IF Amp.	6BA6						
V2	1st Rec. Mixer-Transmit Mixer	6BR8	V8	1st AF Amp. - Squeech Amp.	12AX7						
V3	16MC Osc. - Reactance Amp.	6BK7	V9	2nd AF Amp. - Meter Amp.	12AT7						
V4	Synthesizer - 4MC Osc.	6BR8	V10	Mic Amp.	6AU6						
V5	2nd Rec. Mixer-Rec. Osc.	6BK7	V11	6, 255MC Osc. Buffer	6BR8						
V6	1st IF Amp.	6BA6	V12	Final Amp.	6GK6						

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS & DIODES		RECTIFIERS		
			GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.
X1		1N67A	1N34AS	1N67A			
X2		SI-600	1N1697 or	SD-96A or			
			1N1696	10D6			
X3		SI-600	1N1697 or	SD-96A or			
			1N1696	10D6			
X4		SI-600	1N1697 or	SD-96A or			
			1N1696	10D6			
X5		SI-600	1N1697 or	SD-96A or			
			1N1696	10D6			

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA					
	CAP.	VOLT.	TRAM PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	20	25						
B	10	450		AFH3-35	CC0910	XC3-23, 1	FP345, 2	TVL-3719
C	10	350						

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENDO PART No.	MALLORY PART No.	SPRAGUE PART No.
C2	27		DI-27		CD10E270J500	DM-10-270	SX427	MS-427
C3	27		DI-27		CD10E270J500	DM-10-270	SX427	MS-427
C4	2			DTZ-2R2	CZ601CJ2R2D	CCTO-2R2	CNO522	10TCC-V22
C5	680		DI-680	DD-681	JBY601YP681K	CCD-681	GP368	10TS-T68
C6	220		DI-220	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22
C7	2			DTZ-2R2	CZ601CZ2R2D	CCTO-2R2	CNO522	10TCC-V22
C8	.002		DI-2200	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C9	6.8		NPO-DI 6.8	DTZ-6R8	CZ601CH6R8D	CCTO-6R8	CNO568	10TCC-V68
C10	.002		DI-2200	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C11	100 5%		ADM-15-101	CPR-100J	CD10E101J500	DM-10-101	SX310	MS-31
C12	100 5%		ADM-15-101	CPR-100J	CD10E101J500	DM-10-101	SX310	MS-31
C13	100 5%		ADM-15-101	CPR-100J	CD10E101J500	DM-10-101	SX310	MS-31
C14	15 5%		ADM-15-150		CD10C150J500	DM-10-150	SX415	MS-415
C15	22		NPO-DI 22	DTZ-22	CY601CG220K	CCTO-220	CNO422	10TCC-Q22
C16	15 5%		ADM-15-150	DTZ-15	CD10C150J500	DM-10-150	SX415	MS-415
C17	.005		DI-5000	DD-502	JBT601YP502K	CCD-502	GP250	10TS-D50
C18	270 5%			CPR-270J	CD15F271J500	DM-15-271	SX327	MS-327
C19	33		NPO-DI 33	DTZ-33	CS601CG330K	CCTO-330	CNO433	10TCC-Q33
C20	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C21	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C22	15 N750		N750-DI 15	DTZ-15	CZ601UJ150J	CCTN-150	CN7415	10TCU-Q15
C23	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C24	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C25	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C26	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C27	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C28	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C29	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C30	220		DI-220	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22

TRAM MODEL XL-100

RECEIVER — TRANSMITTER PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

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 200V		DBE4P1		DMF4P1	4DP-3-104	PVC601	4PS-P10
C32	.1 200V		DBE4P1		DMF4P1	4DP-3-104	PVC601	4PS-P10
C33	82			DTZ-82		CCTO-820	CNO482	10TCC-Q82
C34	.002		DI-2200	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C35	.002		DI-2200	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C36	.002		DI-2200	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C37	.1 200V		DBE4P1		DMF4P1	4DP-3-104	PVC601	4PS-P10
C38	.1 200V		DBE4P1		DMF4P1	4DP-3-104	PVC601	4PS-P10
C39	.005		DI-5000	DD-502	JBT601YP502K	CCD-502	GP250	10TS-D50
C40	.002		DI-2200	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C41	.001		DI-1000	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C42	82			DTZ-82		CCTO-820	CNO482	10TCC-Q82
C43	.002		DI-2200	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C44	.1 200V		DBE4P1		DMF4P1	4DP-3-104	PVC601	4PS-P10
C45	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C46	.002		DI-2200	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C47	.002		DI-2200	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C48	100 5%		ADM-15-101	CPR-100J	CD10E 101J500	DM-10-101	SX310	MS-31
C49	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C50	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C51	.1 200V		DBE4P1		DMF4P1	4DP-3-104	PVC601	4PS-P10
C52	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C53	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C54	.1 200V		DBE4P1		DMF4P1	4DP-3-104	PVC601	4PS-P10
C55	.002		DI-2200	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C56	.02		BPD-02	DD-203	BYT601ZU203Z	CCD-203	GP120	10TS-S20
C57	.001		CM-30D-102	CPR-10000J	SR5D1JF	DM-20E-102	CM-21	MS-21
C58	100 5%		ADM-15-101	CPR-100J	CD10E 101J500	DM-10-101	SX310	MS-31
C59	5 N750			DTN-5	CZ601UJ5R0D	CCTN-050	CNT550	10TCU-V50
C60	7-25 N300	(2, 5-11p)†		820C		403	ST553-Z	
C61	51 5%		ADM-15-510		CD10E510J500	DM-10-510		MS-451
C62	51 5%		ADM-15-510		CD10E510J500	DM-10-510		MS-451
C63	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C64	7-25 N300			820C		403	ST553-Z	
C65	.005		DI-5000	DD-502	JBT601YP502K	CCD-502	GP250	10TS-D50
C66	3.3		NPO-DI 3.0	DTZ-3R3		CCTO-3R3	CNO533	10TCC-V30
C67	51 5%		ADM-15-510		CD10E510J500	DM-10-510		MS-451
C68	180 5%		ADM-15-181	CPR-180J	CD10E181J500	DM-10-181	SX318	MS-318
C69	.005		DI-5000	DD-502	JBT601YP502K	CCD-502	GP250	10TS-D50
C70	220		DI-220	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22
C71	100 5%		ADM-15-101	CPR-100	CD10E101J500	DM-10-101	SX310	MS-31
C72	33		NPO-DI 33	DTZ-33	CS601CG330K	CCTO-330	CNO433	10TCC-Q33
C73	.005		DI-5000	DD-502	JBT601YP502K	CCD-502	GP250	10TS-D50
C74	10		NPO-DI 10	DTZ-10	CZ601CG100J	CCTO-100	CNO410	10TCC-Q10
C75	330		DI-330	DD-331	JBZ601YP331K	CCD-331	GP331	10TS-T33
C76	.005		DI-5000	DD-502	JBT601YP502K	CCD-502	GP250	10TS-D50
C77	.005		DI-5000	DD-502	JBT601YP502K	CCD-502	GP250	10TS-D50
C78	.005		DI-5000	DD-502	JBT601YP502K	CCD-502	GP250	10TS-D50
C79	10		NPO-DI 10	DTZ-10	CZ601CG100J	CCTO-100	CNO410	10TCC-Q10
C80	.005		DI-5000	DD-502	JBT601YP502K	CCD-502	GP250	10TS-D50
C81	.001		DI-1000	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C82	.001		DI-1000	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C83	5 N750			DTN-5	CZ601UJ5R0D	CCTN-050	CNT550	10TCU-V50
C84	.005		DI-5000	DD-502	JBT601YP502K	CCD-502	GP250	10TS-D50
C85	.001	(.002) †	DI-1000	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C86	.005		DI-5000	DD-502	JBT601YP502K	CCD-502	GP250	10TS-D50
C87	22		NPO-DI 22	DTZ-22	CY601CG220K	CCTO-220	CNO422	10TCC-Q22
C88	.001		DI-1000	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C89	.001		DI-1000	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C90	.001		DI-1000	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C91	22		NPO-DI 22	DTZ-22	CY601CG220K	CCTO-220	CNO422	10TCC-Q22
C92	.001		DI-1000	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C93	.001		DI-1000	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C94	.001		DI-1000	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C95	3-25							
C96	100-500					304-M		
C97	.005		DI-5000	DD-502	JBT601YP502K	CCD-502	GP250	10TS-D50
C98	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C99	2			DTZ-2R2	CZ601CJ2R2D	CCTO-2R2	CNO522	10TCC-V22

† Alternate Value.

CONTROLS

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

ITEM No.	USE	RESIST- ANCE	REPLACEMENT DATA				
			TRAM PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume & Switch	500K	(LF4422)	F2-500K, SRS010, KR-4	A47-500K-Z, RS-2, SWE-13 or (NP-500K-Z, UP-A-400, NWE-13)	B13-133, SK3, 76-1 or (BU2, CF25, SS3, GC)*	UA55A, SK750, US41 or (RU55A, SL38, SK750, US41) or (U48, US26)
R2	Tone	250K	(BA811-4122)	F2-250K, SRS010	A47-250K-Z, RS-2 or (NP-250K-Z, UP-A-400)	B13-130, SK3 or (BU2, CF23, SS3, DC1)*	UA254A, SK750 or (RU254A, SL38, SK750) or (U44)
R3	Squelch	2500Ω	(LF4424)	F1-2500, SRS010	A47-2500-S, RS-2 or (NP-2500-S, UP-A-400)	B11-111, SK3 or (BU2, CF59, SS3, DC1)*	UA33L, SK750 or (RU252L, SL38, SK750) or (SU8)
R4	Fine Tuning	2500Ω	(CM33429)	F2-2500, SRS010		B13-111, SK3	RU252A, SL38, SK750
R5	"S" Meter Calibrate	1000Ω	(BF23374)	V-1000	U39-1000	112-1000 or (117R102A)	MR1000F

* "SNAPTROL"

RECEIVER — TRANSMITTER PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				
		TRAM PART No.	MEISSNER Part No.	MERIT PART No.	MILLER PART No.	WORKMAN PART No.
L1	Ant. Input	A-0030				
L2	RF Neutralizer	A-0052				
L3	RF Plate	E018680				
L4	RFC (2, 2uh)					
L5	Mixer Plate	A-0052				
L6	IF Filter	A-0052				
L7	RFC (15uh)				72F155AP	T944
L8	IF Interstage	E018176	16-6764	BC-567	12-C12	T9683
L9	1st IF (455KC)	E017846	16-6786	BC-352	12-C30	T607
L10	2nd IF (455KC)	E017846	16-6787	BC-353	12-C31	T608
L11	3rd IF (455KC)	E017846	16-6787	BC-353	12-C31	T608
L12	RFC (5, 6uh)					
L13	RFC (5, 6uh)					
L14	RFC (4, 7uh)					
L15	16MC Osc. Plate	A-0029				
L16	RFC (2, 2uh)					
L17	RFC (5, 6uh)					
L18	RFC (2, 2uh)					
L19	Synthesizer Plate	E019734				
L20	Trans. Mixer Plate	E018680				
L21	Trans. Buffer Plate	A-0029				
L22	PI Network	A-0127				
L23	RFC (15 uh)				72F155AP	T944
L24	Ant. Loading	A-0126				
L25	RFC (5, 6uh)					

MISCELLANEOUS

ITEM No.	PART NAME	TRAM PART No.	NOTES
K1	Relay		110V Transmit-Receive (4PDT)
M1	Microphone Ass'y.		Ceramic
M2	Transmit and Receive Crystal	A-0119*	16,310MC (Channels 1, 2 and 3)
	"	A-0119 *	16,360MC (Channels 4, 5, 6 and 7)
	"	A-0119 *	16,410MC (Channels 8, 9, 10 and 11)
	"	A-0119 *	16,460MC (Channels 12, 13, 14 and 15)
	"	A-0119 *	16,510MC (Channels 16, 17, 18 and 19)
	"	A-0119 *	16,560MC (Channels 20, 21 and 22)
	"	A-0119 *	16,580MC (Channel 23)
M3	"	A-0118 *	4,390MC (Channels 4, 8, 12, 16 and 20)
	"	A-0118 *	4,400MC (Channels 1, 5, 9, 13, 17 and 21)
	"	A-0118 *	4,410MC (Channels 2, 6, 10, 14, 18 and 22)
	"	A-0118 *	4,420MC (Channels 3, 7, 11, 15, 19 and 23)
M4	IF Interstage Crystal	A-0121	6,255MC
M5	IF Filter Crystal	A-0121	6,255MC
M6	2nd Rec. Osc. Crystal	A-0120	5,80MC
M7	Transmit Osc. Crystal	A-0121	6,255MC
M8	"S" Meter		
S1	Channel Selector		24-Position Rotary
S2	ANL Switch		DPST
S3	Key Switch		SPST

* Order by Frequency.

POWER AMP PARTS LIST AND DESCRIPTION

(When ordering parts, state Model, Part Number, and Description.)

TUBES

• AMPEREX •			• GENERAL ELECTRIC •			• RCA •			• SYLVANIA •		
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V13	Audio Output-Modulator	7189									

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			TRAM	NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.		
Q1	(SP1894)	Power Osc. ①	DX-520	GE-3		A-0098	PNP
Q2	(SP1894)	Power Osc. ①	DS-520	GE-3		A-0098	PNP

① Used in DC Versions only

TRAM MODEL XL-100

POWER AMP PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS & DIODES		RECTIFIERS		
			GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.
X6	.12ADC	SI-600		SD-96A or 10DB6 ①	1N1492 or FW600 ①	SK-3017 or 1N3195	F-6 or S5959-2
X7	.12ADC	SI-600		SD-96A or 10DB6 ①	1N1492 or FW600 ①	SK-3017 or 1N3195	F-6 or S5959-2
X8	.12ADC	SI-600		SD-96A or 10DB6 ①	1N1492 or FW600 ①	SK-3017 or 1N3195	F-6 or S5959-2
X9	.12ADC	SI-600		SD-96A or 10DB6 ①	1N1492 or FW600 ①	SK-3017 or 1N3195	F-6 or S5959-2

① Single Unit Replacement for X6, X7, X8 and X9.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA					
	CAP.	VOLT.	TRAM PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C100A	▲20	450						
B	■20	450						
C	▲20	450						
C101A	■20	450						
B	▲20	450						
C	▲20	450						
C102	4	150						
C103	500	15						
				AFH3-36	DD0179, 3	XC3-24		
				AFH3-36	DD0179, 3	XC3-24		
				PRS1400	BBR4-150	QT1-2	TC40A	TE-1503
				PRS1220	BR500-15	QT1-30	TC1505A	TVA-1162

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.
C104	.001		DI-1000	DD-102	JBS601YP102K	CCD-102	GP210	10TS-D10
C105	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10
C106	.01		DI-10000	DD-103	BYX601ZU103M	CCD-103	GP110	10TS-S10

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	TRAM PART No.			IRC PART No.	WORKMAN PART No.	TRAM PART No.
R101	1.5Ω 5W	1A-1.5	MR-1		R104	300Ω 7W	PW10-300	10W-SQ-300	
R102	50Ω 5W	PW5-50	5W-SQ-50		R105	100Ω 7W	PW10-100	10W-SQ-100	
R103	50Ω 5W	PW5-50	5W-SQ-50		R106	300Ω 7W	PW10-300	10W-SQ-300	

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	TRAM PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	12.6VDC @ 5.9A ▲	210VCT @ .12A DC		A-0128 A-0139 A-0108					12VDC Version 6VDC Version 117VAC Version ▲ Transmt

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	TRAM PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	4B00Ω	4Ω	A-0039	A-2905 ①	A-3825	22S89	S-56Z	① Drill Net Mtg. Holes

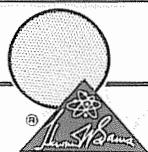
SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA			NOTES
		TRAM PART No.	JENSEN PART No.	QUAM PART No.	
SP1	3" x 5" PM 3-4Ω		P3X5X3	35A05	

FUSE DEVICES

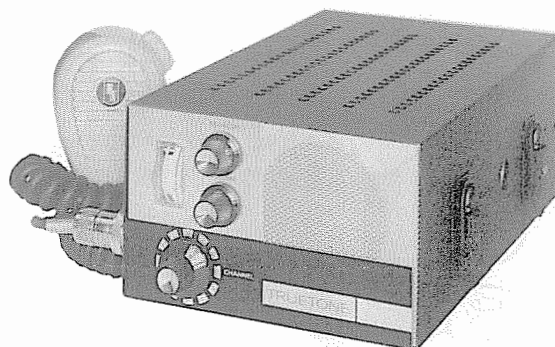
ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
F1	AGC 10 ① AGC 2 ② AGC 15 ③	10 Amp. 2 Amp. 15 Amp.			311010 312002 311015	342001 342001 342001	AGC 10 AGC 2 AGC 15	HKP HKP HKP

① 12 Volt Version ② AC Version ③ 6 Volt Version



PHOTOFACT®

TRADE NAME : Truetone Model 1250B
SUPPLIER : For Current Address, See Annual Index.
TYPE SET : 9-Tube Transceiver
POWER SUPPLY : 110-120 Volts AC, 60 Cycles or
 12 Volt Storage Battery
RATING : 62 Watts, .68 Amp. @ 117 Volts AC (Receive)
 82 Watts, 1.0 Amp. @ 117 Volts AC (Transmit)
 5.4 Amp. @ 12.6 Volts DC (Receive)
 6.6 Amp. @ 12.6 Volts DC (Transmit)
TUNING RANGE : Any 12 CB Channels 1 thru 23.



ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A1 thru A4..... GENERAL CEMENT #8282, 8195, 8727....WALSCO #2515
 A6 thru A7..... GENERAL CEMENT #8606, 8606L, 8869....WALSCO #2543, 2544, 2588
 A5, A8..... GENERAL CEMENT #8609, 8196

RECEIVER ALIGNMENT

Connect an AC VTVM across the speaker voice coil. Set the volume control at maximum, squelch control to normal.

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to Pin 1 (Grid) V2 (Mixer), low side to chassis. Tune to 455KC (Mod.).	Any	A1 thru A4	Adjust for maximum.
High side thru .01mfd to antenna receptacle, low side to chassis. Tune to 27.085MC (Mod.).	11	A5	Adjust for maximum.

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 95, SUBPART D, SECTION 95.95).

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.

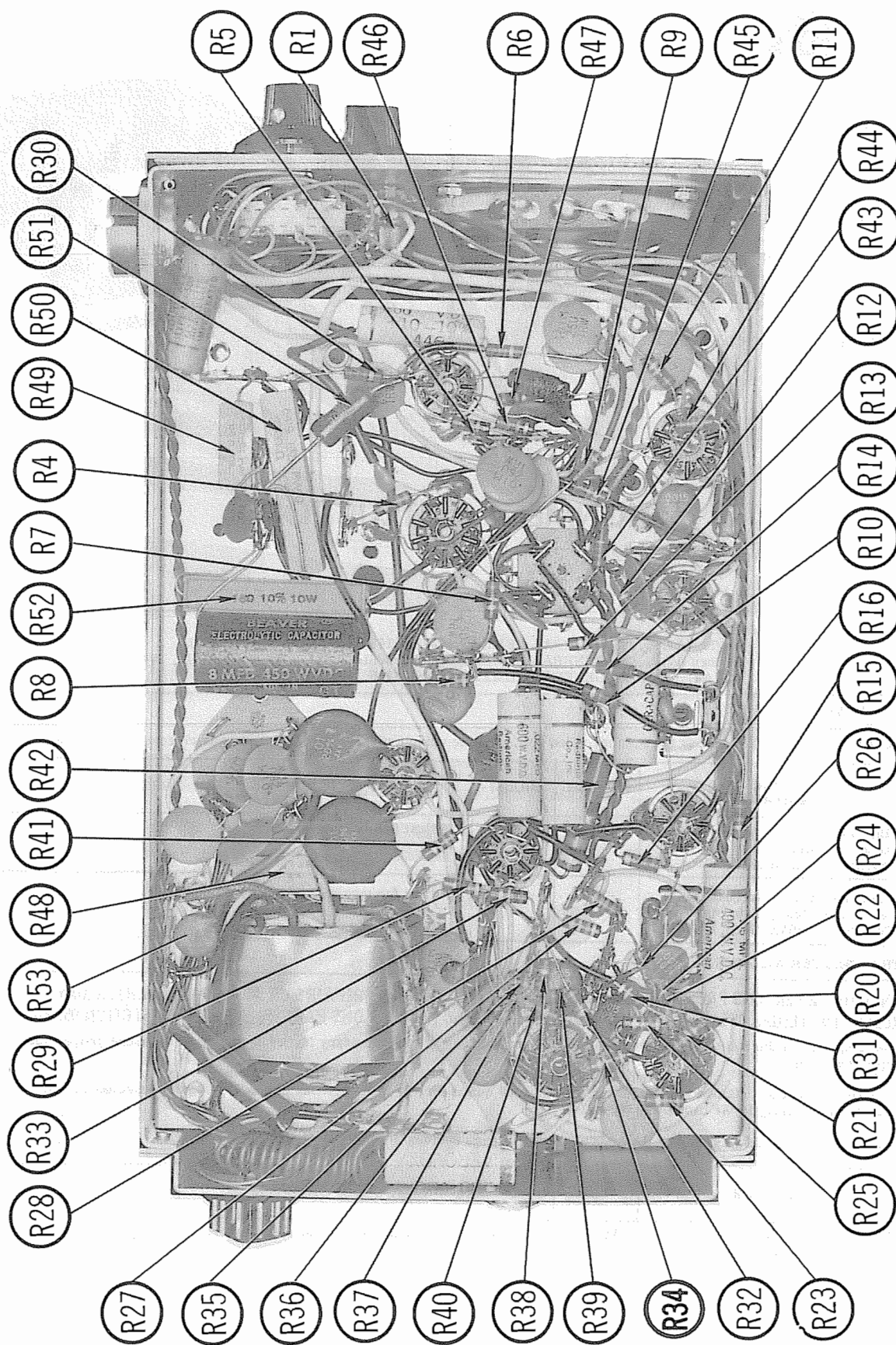
Connect either 50Ω dummy load or the normally used antenna system.

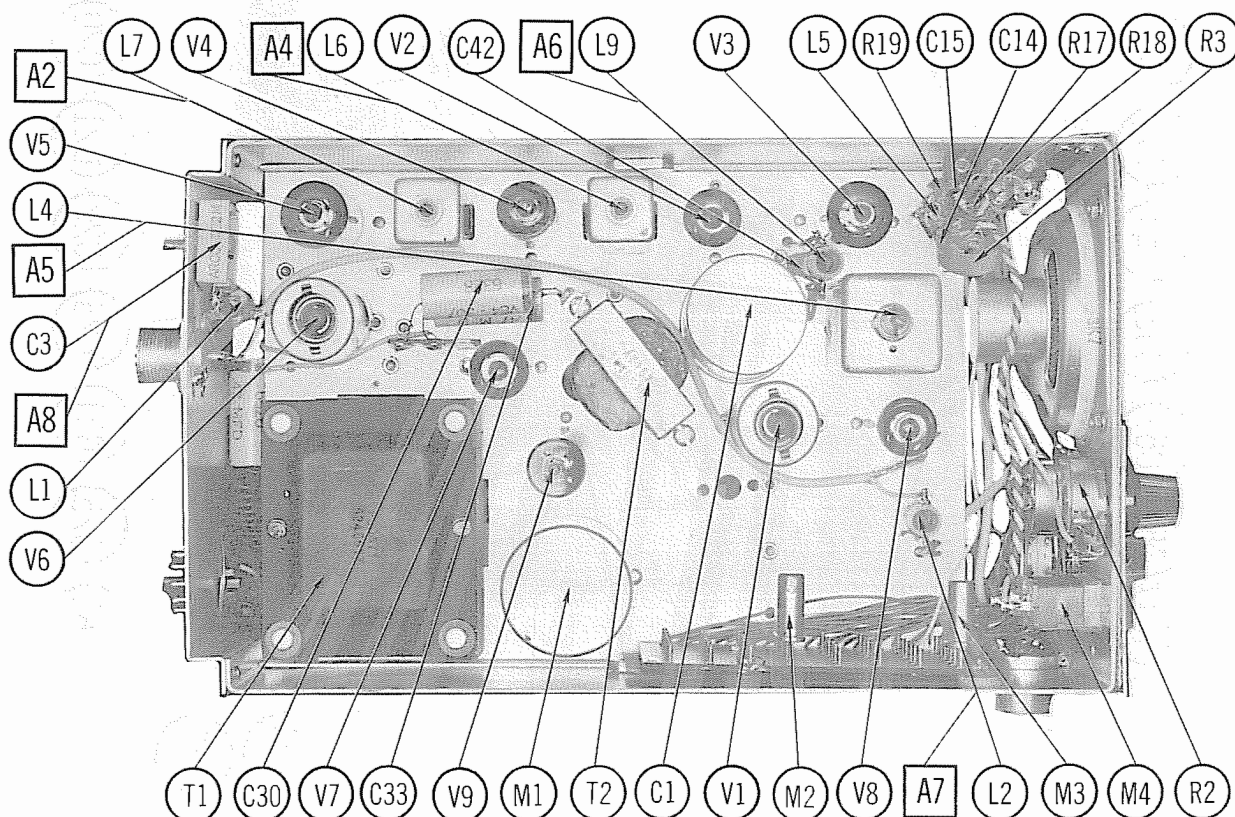
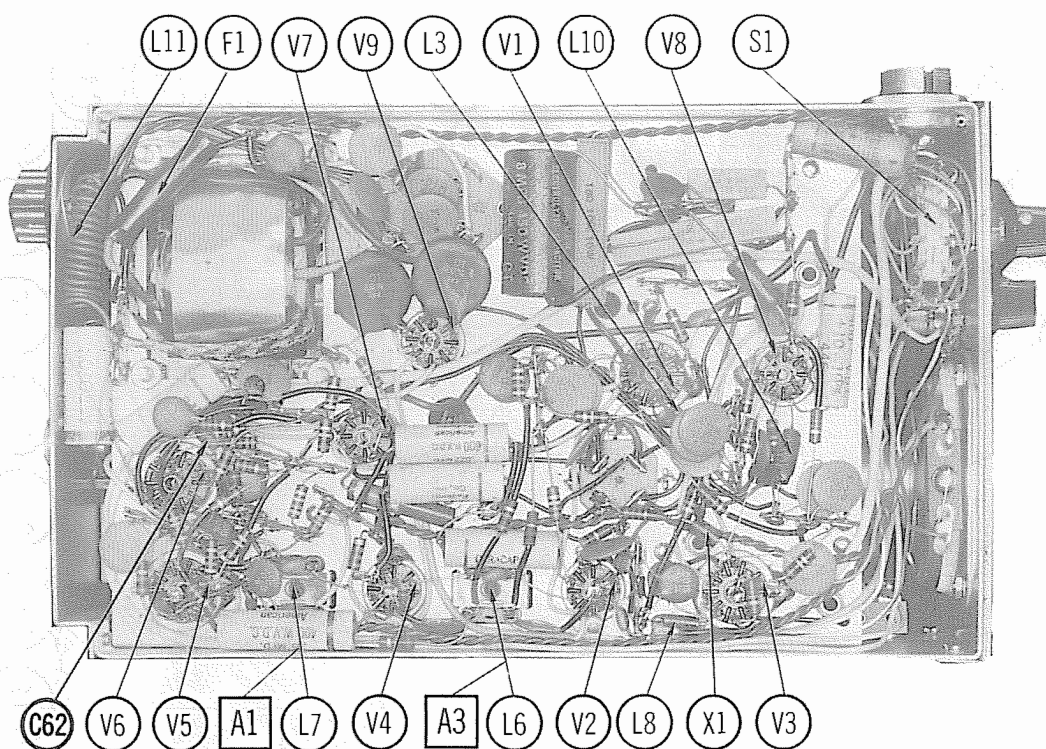
INDICATOR	ADJUST	REMARKS
RF Wattmeter, Signal Strength Meter, or "S" Meter on front Panel.	A6, A7	Adjust for maximum. Key transmitter several times to insure proper oscillation.
Nearby TV	A8	Adjust for MINIMUM.

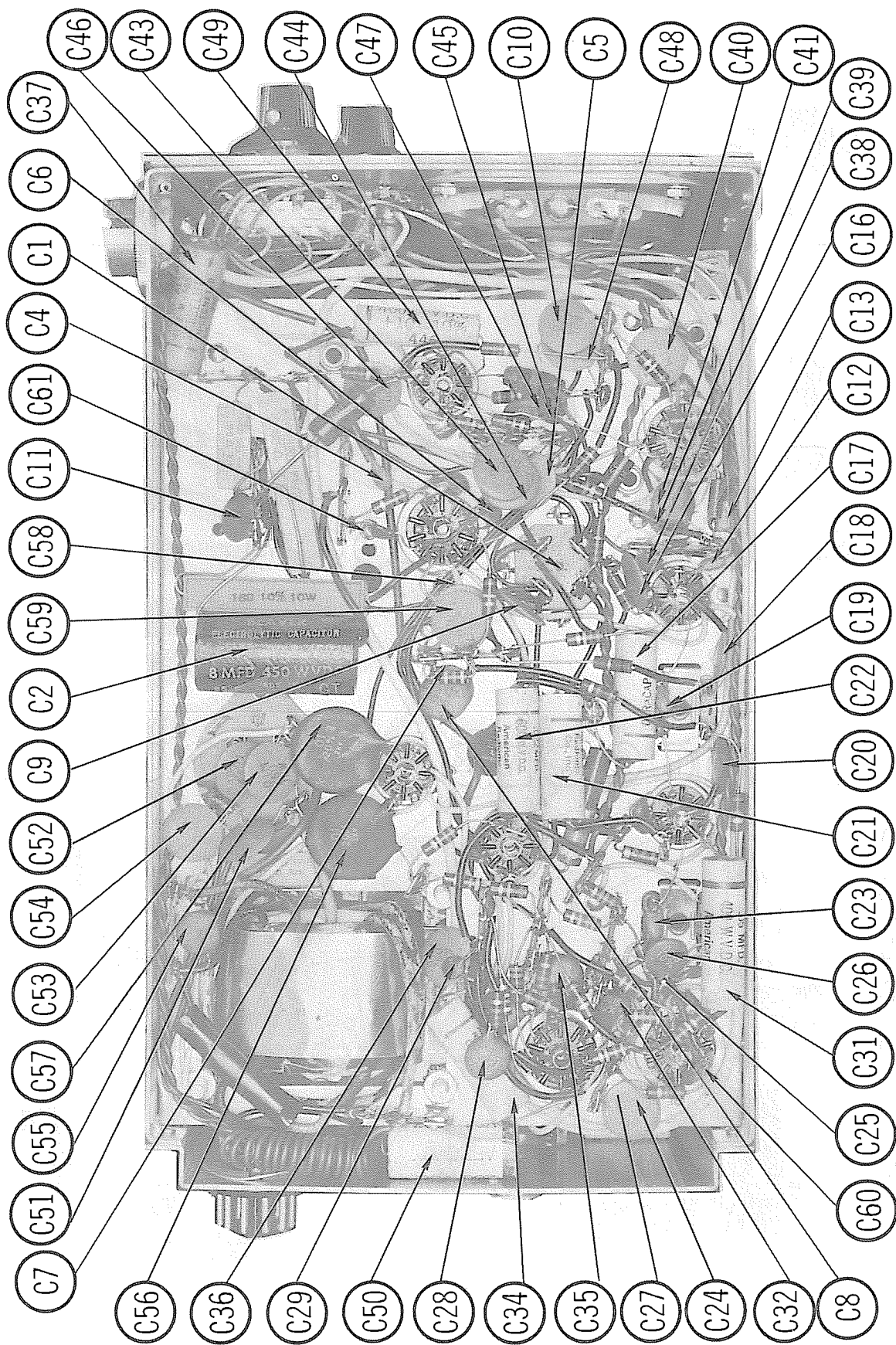
HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

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TRUETONE MODEL 1250B







PARTS LIST AND DESCRIPTION

(When ordering parts, state Model, Part Number, and Description.)

TUBES

♦ AMPEREX ♦			♦ GENERAL ELECTRIC ♦			♦ RCA ♦			♦ SYLVANIA ♦		
ITEM No.	USE	TYPE		ITEM No.	USE	TYPE					
V1	RF Amp.	6U8A		V6	AF Amp. -	6U8A					
V2	Mixer	12BA6			Speech Amp.						
V3	Rec. Osc. -Trans. Osc.	6U8A		V7	Output Modulator	6AQ5A					
V4	1F Amp.	12BA6		V8	Final Amp.	6AQ5A					
V5	Detector - Squelch - Noise Limiter	6BN8		V9	Rectifier	6X4					

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS & DIODES		RECTIFIERS		
			GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.
X1		1N2069		10D2 or 10B2	1N2069 or 1N538	SK-3016 or SK-3017	20B

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		TRUE-TONE PART No.	REPLACEMENT DATA				
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	40	450		AFH4-78-10	CCO410	XC4-21	FP431, 2	TVL-4745
B	40	450			BBR20-25			
C	8	450						
D	20	25						
C2	8	450		PRS1715	BR8-450	QT1-4	TC71	TVA-1704

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA						
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENDO PART No.	MALLORY PART No.	SPRAGUE PART No.	
C3	120			823		302			
C4	3.3		NPO-DI 3.0	DTZ-3R3		CCTO-3R3	CNO533	10TCC-V30	
C5	.01		BPD-031	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10	
C6	100 10%		DI-100	DD-101	CDEJBZ60YPI01K	CCD-101	GP310	10TS-T10	
C7	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10	
C8	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10	
C9	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10	
C10	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10	
C11	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10	
C12	3.3		NPO-DI 3.0	DTZ-3R3		CCTO-3R3	CNO533	10TCC-V30	
C13	3.3		NPO-DI 3.0	DTZ-3R3		CCTO-3R3	CNO533	10TCC-V30	
C14	15		NPO-DI 15	DTZ-15	CZ601CG150J	CCTO-150	CNO415	10TCC-Q15	
C15	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10	
C16	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10	
C17	.022		P488N-022	DD-203	PM4S22	4DP-2-223	GEM4122	4TM-S22	
C18	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10	
C19	3.3		NPO-DI 3.0	DTZ-3R3		CCTO-3R3	CNO533	10TCC-V30	
C20	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10	
C21	.022		P488N-022	DD-203	PM4S22	4DP-2-223	GEM4122	4TM-S22	
C22	.022		P488N-022	DD-203	PM4S22	4DP-2-223	GEM4122	4TM-S22	
C23	3.3		NPO-DI 3.0	DTZ-3R3		CCTO-3R3	CNO533	10TCC-V30	
C24	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10	
C25	100		DI-100	DD-101	CDEJBZ60YPI01K	CCD-101	GP310	10TS-T10	
C26	1500 10%		DI-1500	DD-152	CDEJBS60YPI22K	CCD-152	GP215	10TS-D15	
C27	100		DI-100	DD-101	CDEJBZ60YPI01K	CCD-101	GP310	10TS-T10	
C28	1500 10%		DI-1500	DD-152	CDEJBS60YPI22K	CCD-152	GP215	10TS-D15	
C29	220		DI-220	DD-221	CDEJBZ60YPI22K	CCD-221	GP322	10TS-T22	
C30	.47 200V		DBE2P47		DPMS2P47	2DP-5-474	GEM6047	2PS-P47	
C31	.05 400V		P488N-05	DD-152	PM4S5	4DP-3-503	GEM415	4TM-S50	
C32	1500		DI-1500	DD-152	CDEJBS60YPI22K	CCD-152	GP215	10TS-D15	
C33	.47 200V		DBE2P47		DPMS2P47	2DP-5-474	GEM6047	2PS-P47	
C34	.022		P488N-022	DD-203	PM4S22	4DP-2-223	GEM4122	4TM-S22	
C35	1500		DI-1500	DD-152	CDEJBS60YPI22K	CCD-152	GP215	10TS-D15	
C36	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10	
C37	.02 400V		P488N-022	DD-203	PM4S22	4DP-2-223	GEM4122	4TM-S22	
C38	30		DI-30	DD-300		CCD-300	GP430	10TS-Q30	
C39	1500		DI-1500	DD-152	CDEJBS60YPI22K	CCD-152	GP215	10TS-D15	
C40	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10	
C41	1500		DI-1500	DD-152	CDEJBS60YPI22K	CCD-152	GP215	10TS-D15	
C42	15		NPO-DI 15	DTZ-15	CZ601CG150J	CCTO-150	CNO415	10TCC-Q15	
C43	.01		BPD-01	DD-103	BYV103ZU103M	CCD-103	B110	5HK-S10	
C44	.01		BPD-01	DD-103	BYV103ZU103M	CCD-103	B110	5HK-S10	
C45	56		DI-56	DD-560	CDEJBZ60YPI680K	CCD-560	GP456	10TS-Q56	

(CONTINUED ON PAGE 148)



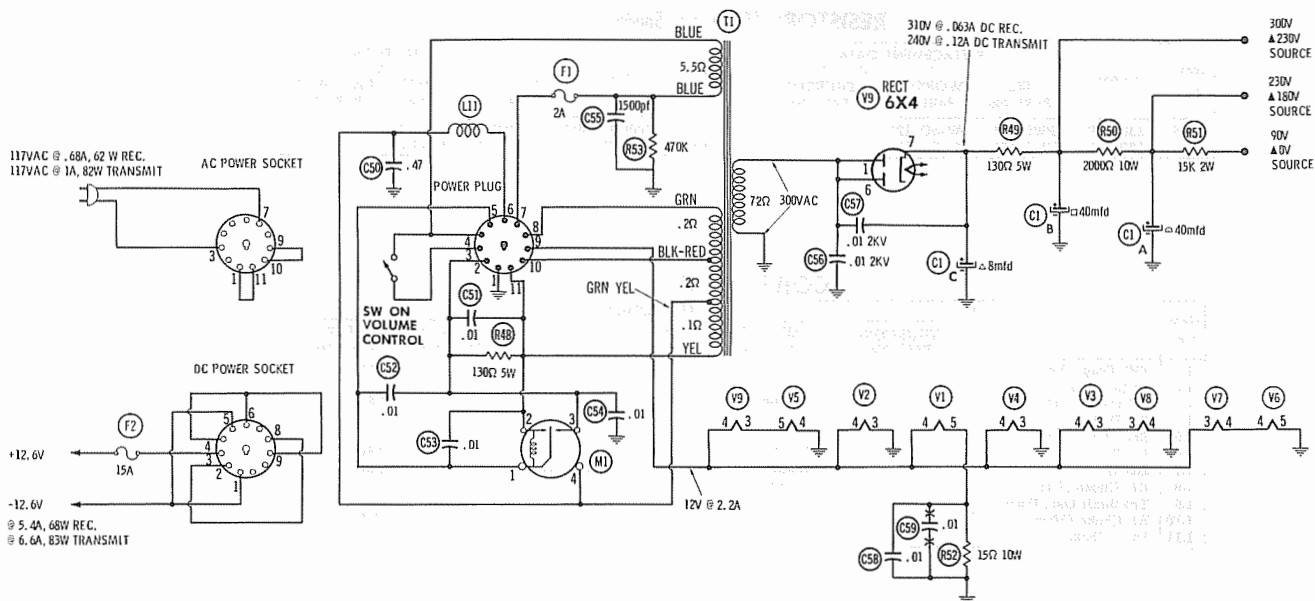
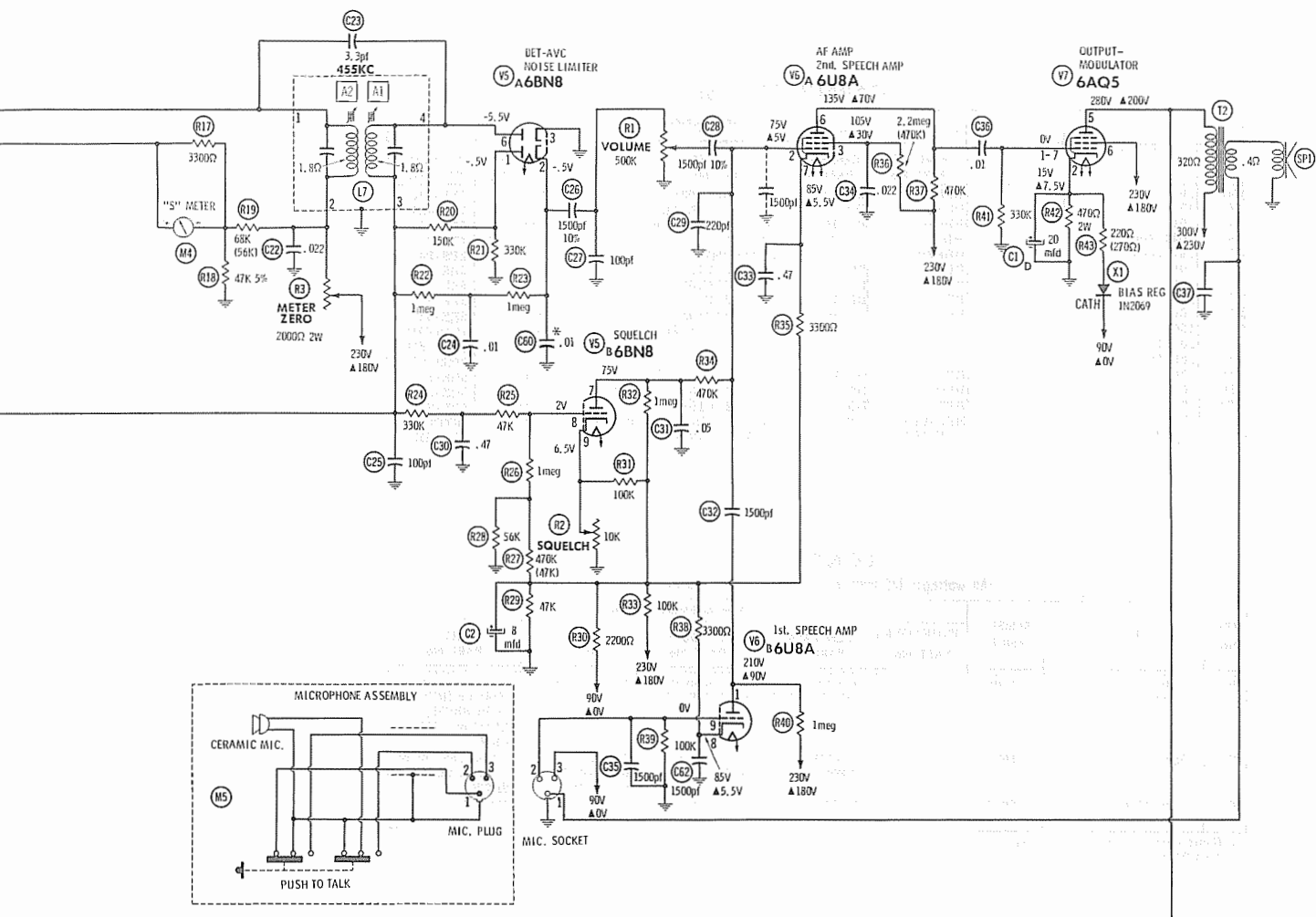
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6U8A	39K ↑	500K	34K ↑	FIL	FIL	2130Ω ↑	0Ω	0Ω	3300Ω
V2	12BA6	.2Ω	0Ω	FIL	FIL	3130Ω ↑	152K ↑	1000Ω		
V3	6U8A	19K ↑	22K	130Ω ↑	FIL	FIL	10K ↑	17K ↑	0Ω	100K
V4	12BA6	740K	0Ω	FIL	FIL	2300Ω ↑	20K ↑	0Ω		
V5	6BN8	260K	2.4meg	0Ω	FIL	FIL	320K	1.1meg	460K	7100Ω
V6	6U8A	1meg ↑	1.6meg	2.2meg↑	FIL	FIL	472K ↑	20K #	17K ↑	100K
V7	6AQ5	330K	470Ω	FIL	FIL	450Ω ↑	2130Ω ↑	330K		
V8	6AQ5	15K	17K ↑	FIL	FIL	458Ω ↑	10K ↑	15K		
V9	6X4	72Ω	NC	FIL	FIL	NC	72Ω	300K #		
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9

ALL MEASUREMENTS TAKEN IN "RECEIVE" POSITION UNLESS OTHERWISE INDICATED.
 † THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.
 † MEASURED FROM PIN 7 OF V9. ▲ MEASURED IN "TRANSMIT" POSITION. NC NO CONNECTION.
 * NOT USED ON SOME MODELS

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.

* VALUE MAY VARY REPLACE WITH ORIGINAL VALUE

* VALUE MAY VARY REPLACE WITH ORIGINAL VALUE



TRUETONE MODEL 1250B

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

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.
C46	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C47	1500		DI-1500	DD-152	CDEJBS601YP122K	CCD-152	GP215	10TS-D15
C48	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C49	.022 400V		P488N-022	DD-203	PM4S22	4DP-2-223	GEM4122	4TM-S22
C50	.47 200V		DBE2P47		DPMS2P47	2DP-5-474	GEM6047	2PS-P47
C51	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C52	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C53	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C54	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C55	1500		DI-1500	DD-152	CDEJBS601YP122K	CCD-152	GP215	10TS-D15
C56	.01 2KV						2HV110	30GA-S10
C57	.01 2KV						2HV110	30GA-S10
C58	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C59	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C60	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C61	15		NPO-DI 15	DTZ-15	CZ601CG150J	CCTO-150	CNO415	10TCC-Q15
C62	1500		DI-1500	DD-152	CDEJBS601YP680K	CCD-152	GP215	10TS-D15

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			TRUETONE PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume & Power Switch	500K	①	F7-500K, SRS010, KR-1	A47-500K-S, RS-2, SWE-12	B11-133, SK3, 76-1 or (BU2, CF16, SS3, GC)*	UA55L, SK750, US41 or (RU55L, SL38, SK750, US41) or (U50, US28)
R2	Squelch	10K		F1-10K, SRS010	A47-10K-S, RS-2	B11-116, SK3, or (BU2, CF9, SS3, DC1)*	UA14L, SK750, or (RU14L, SL38, SK750) or (U20)
R3	Zero Meter	2000Ω		V-2000	U39-2000	P115R252A or (110, 3000)	MR2500T

① Some versions may use a 1meg control.
* "SNAPTROL"

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	TRUETONE PART No.			IRC PART No.	WORKMAN PART No.	HALLMARK PART No.
R48	130Ω 5W	PW5-125	5W-SQ-125		R50	2000Ω 10W	PW10-2000	10W-SQ-2000	
R49	130Ω 5W	PW5-125	5W-SQ-125		R52	15Ω 10W	PW10-15	10W-SQ-15	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		TRUETONE PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	TVI Trap (50uh)						T954
L2	P1 Network						
L3	RF Choke (1uh)		19-3001	BC-561	4602		T855
L4	RF Plate						
L5	Rec. Osc. Plate						
L6	1st IF		16-6767	BC-352	12-C30		T607
L7	2nd IF		16-6767	BC-353	12-C31		T608
L8	RF Choke (1uh)		19-3001	BC-561	4602		T855
L9	Transmit Osc. Plate						
L10	RF Choke (50uh)						T954
L11	Hash Choke						

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	TRUETONE PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	12.6VDC @ 6.6A ▲ (or) 117VAC @ 1A▲	300V @ .12ADCA	12VAC @ 2.2A	(P60471)					▲ Transmit

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
			TRUETONE	MERIT	STANCOR	THORDARSON	TRIAD	
	PRI.	SEC.	PART No.	PART No.	PART No.	PART No.	PART No.	
T2	4000Ω	3-4Ω	(AT167)		A-3825①	24S13①	S-53X①	① Drill New Mtg. Holes

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA			NOTES
				TRUETONE	JENSEN	QUAM	
SP1	3"	PM	3-4Ω		P3WP	30A05	

FUSE DEVICES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			TRUETONE		LITTELFUSE		BUSS	
			PART No.		PART No.		PART No.	
F1	MDL	2 Amp.						
F2	AGC	15 Amp.			318002		MDV 2	
					311015	155020	AGC 15	HHJ-A

VIBRATOR

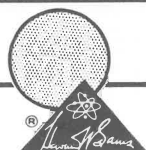
ITEM No.	TYPE	INPUT VOLTS	FRE-QUENCY	REPLACEMENT DATA			NOTES
				TRUETONE	CORNELL-DUBILIER	MALLORY	
M1	Interrupter	12V	115%		6371	G1601	

MISCELLANEOUS

ITEM No.	PART NAME	TRUETONE PART No.	NOTES
M2	Receive Crystal		27.085MC
M3	Transmit Crystal		27.085MC
M4	"S" Meter		Not used in some versions
M5	Microphone Ass'y.		Ceramic
S1	Switch		Channel Selector (Trollex)

WIRING DATA

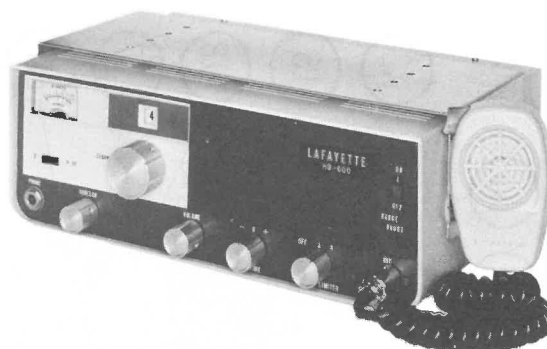
General-use Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors
Shielded Antenna Lead	8524 (Stranded) Available in 12 Colors
	Use BELDEN No. 8214 Lowest Loss (RG-8/U Type)
	8237 Low Loss (RG-8/U)
	8240 (Solid) Miniature (RG-58/U)
	8259 (Stranded) Miniature (RG-58A/U)
Coiled Microphone Cable	Use BELDEN No. 8497 3 Conductor- 1 Shielded for Press-to-Talk (Neoprene)
	8496 3 Conductor- 1 Shielded for Press-to-Talk (Vinyl)
Ignition Noise Suppression	Use BELDEN No. 7300-Series Spark-Plug Sets
Bonding Strap	Use BELDEN No. 8861 (3/8 In.)



PHOTOFACT[®] with

CIRCUITRACE[®]

TRADE NAME : Lafayette Model HB-600 (99-3051WX)
 SUPPLIER : For Current Address, see Annual Index
 TYPE SET : 21-Transistor Transceiver
 POWER SUPPLY : 110-120 Volts AC, 60 Cycles (or)
 12-Volt Storage Battery
 RATING : 6 Watts, .2 Amp. @ 117VAC (Transmit)
 2 Watts, .1 Amp. @ 117VAC (Receive)
 TUNING RANGE : All 23 CB Channels



ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A1 thru A9, A12, A14, A15, A16, A19, A20, A21, A25... GENERAL CEMENT #8195, 8606, 8606L, 8290
 WALSCO #2543, 2544, 2588
 A17 thru A24 GENERAL CEMENT #8606, 8606L
 A10, A11, A13, A18..... GENERAL CEMENT #9440
 WALSCO #2501

RECEIVER ALIGNMENT

Connect an AC VTVM across speaker terminals. Turn Volume Control to midrange, squelch control and noise limiter off. Set tune switch to 0 (center position).

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to terminal 5 of L13, low side to common ground. Tune to 455KC (Mod. 30%).	Any	A1 thru A4	Adjust for maximum output with MINIMUM signal input.
High side thru .01mfd to antenna receptacle, low side to common ground. Tune to 27.105MC (Channel 12) (Mod., 30%, 1uv Input.).	12	A5 thru A11	Adjust for maximum output with MINIMUM signal input. Adjust A6 for maximum, then rotate slug 1/2 turn counterclockwise from peak. Adjust A9 clockwise until oscillator stops, then adjust A9 counterclockwise until oscillator starts and adjust 1/2 turn more.
High side thru .01mfd to antenna receptacle, low side to common ground. Tune to 26.965MC (Channel 1) (Unmod.).	1	A12, A13	Set Noise Limiter Switch to position B. Connect DC VTVM across R25 (output of X27 Pulse Detector). Set to indicate negative voltage. Adjust generator output for a usable indication. Adjust A12 and A13 for MINIMUM.
Retune generator to 25MC) (Unmod.).	1	A14, A15, A16	Adjust for maximum. NOTE: Do not attempt to adjust Noise Gain control (R5) Control is preset at factory.

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 95, SUBPART D, SECTION 95.95).

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.

Connect either 50Ω dummy load or the normally used antenna system.

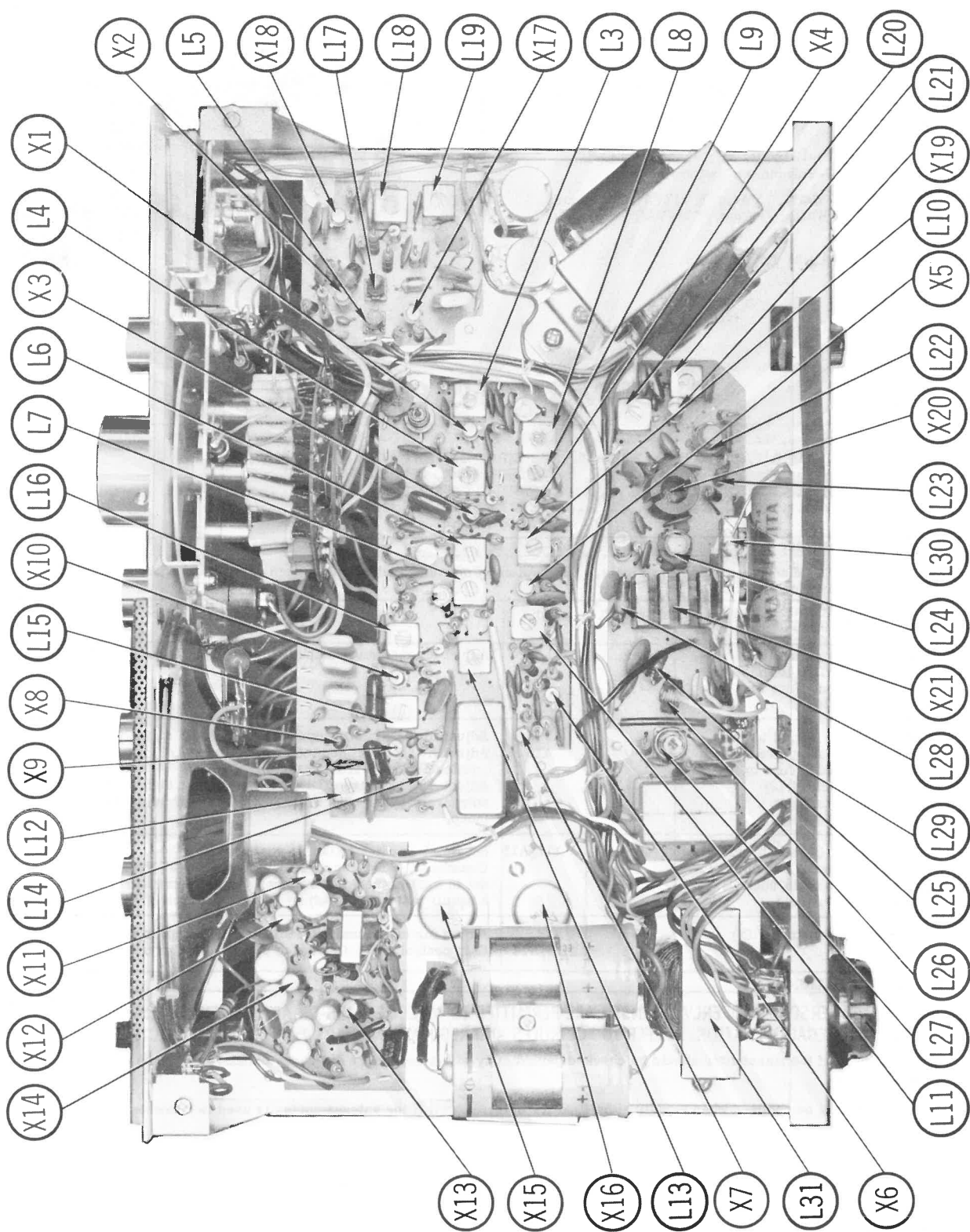
INDICATOR	ADJUST	REMARKS
RF Wattmeter or Field Strength Meter.	A17 thru A24	Adjust for maximum deflection.
"	R4	Set meter switch to P-RF. Adjust R4 until front panel meter indicates the same as the RF Wattmeter.
Nearby TV Receiver.	A25	Adjust for MINIMUM deflection.

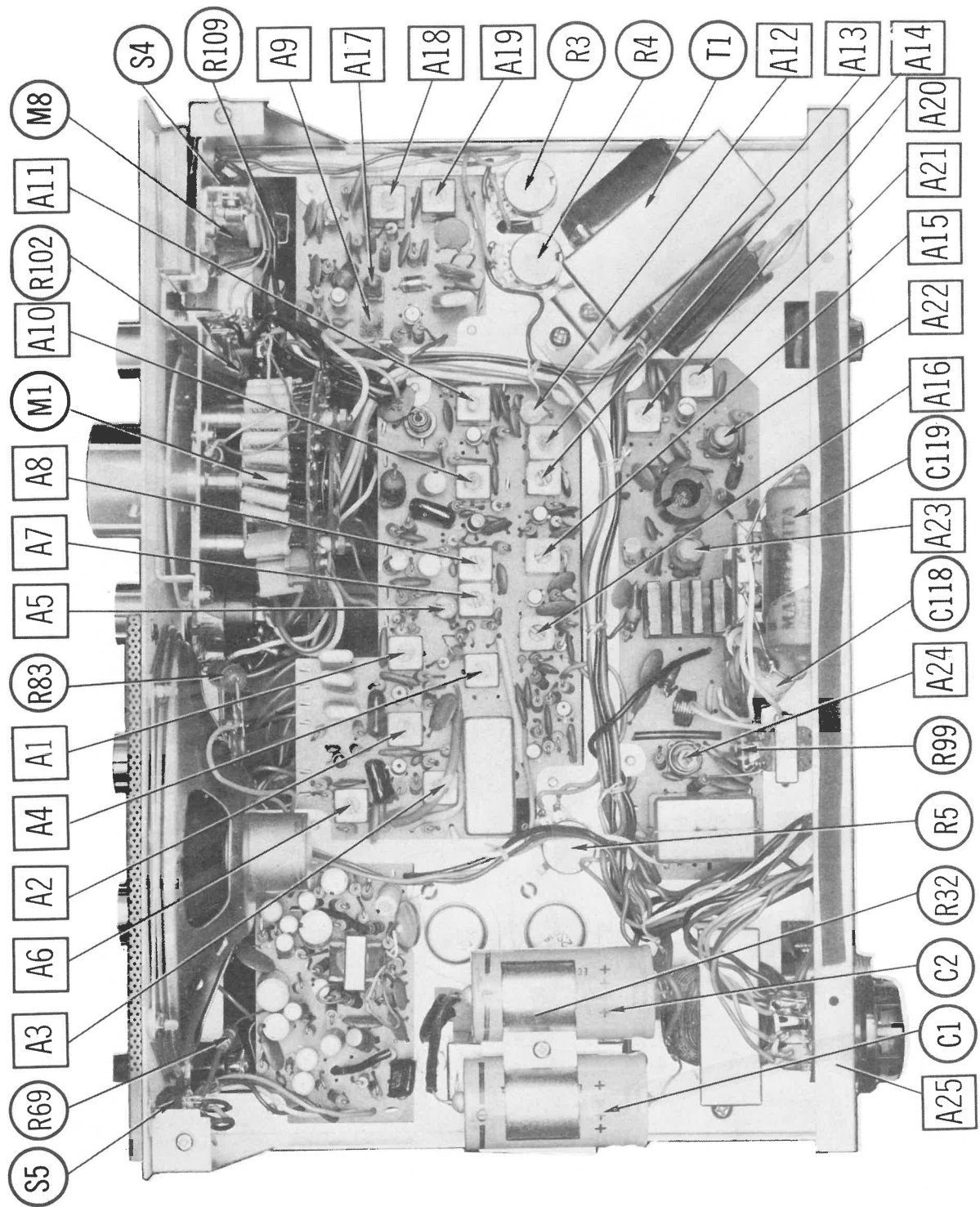
HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

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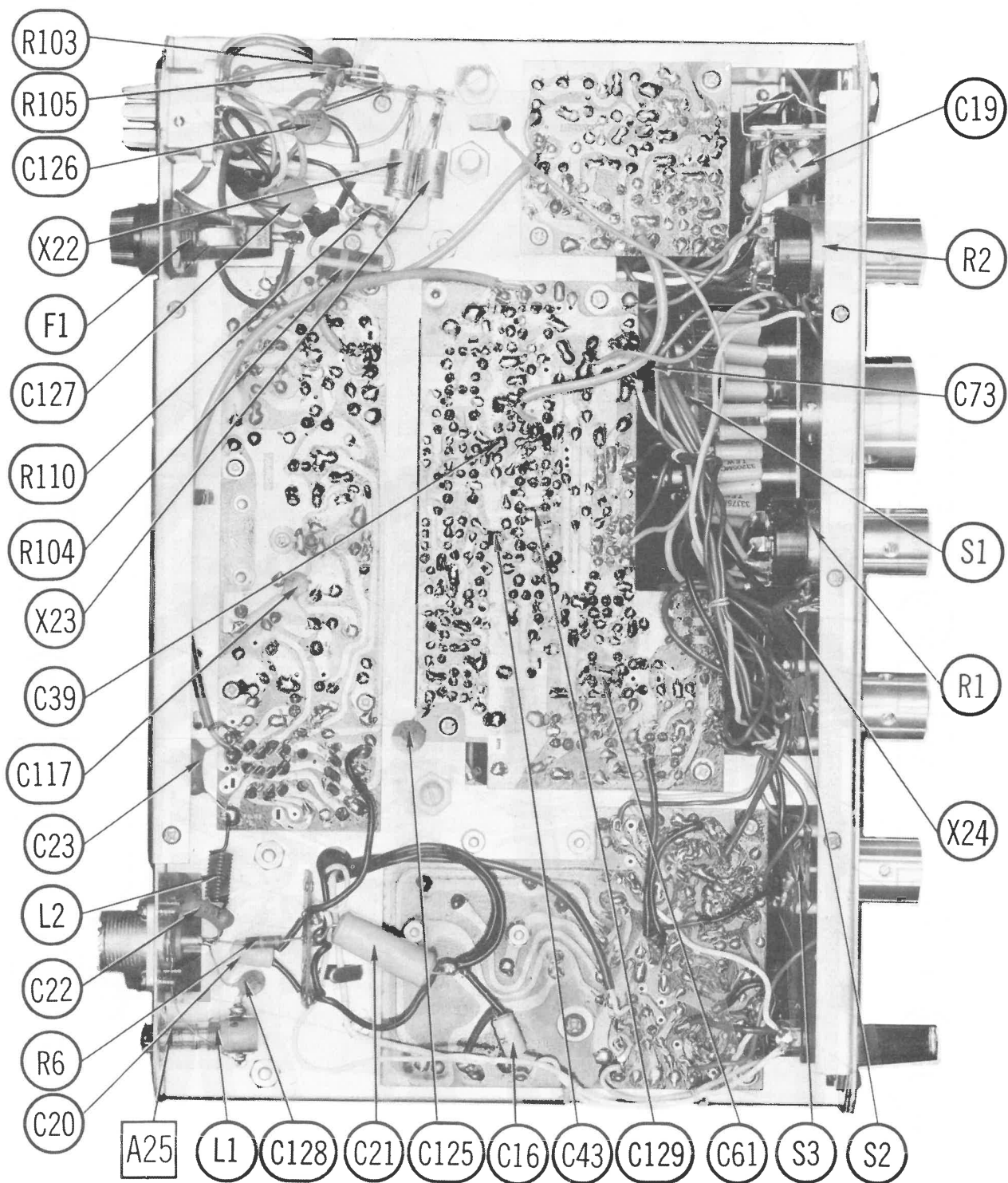
RY509

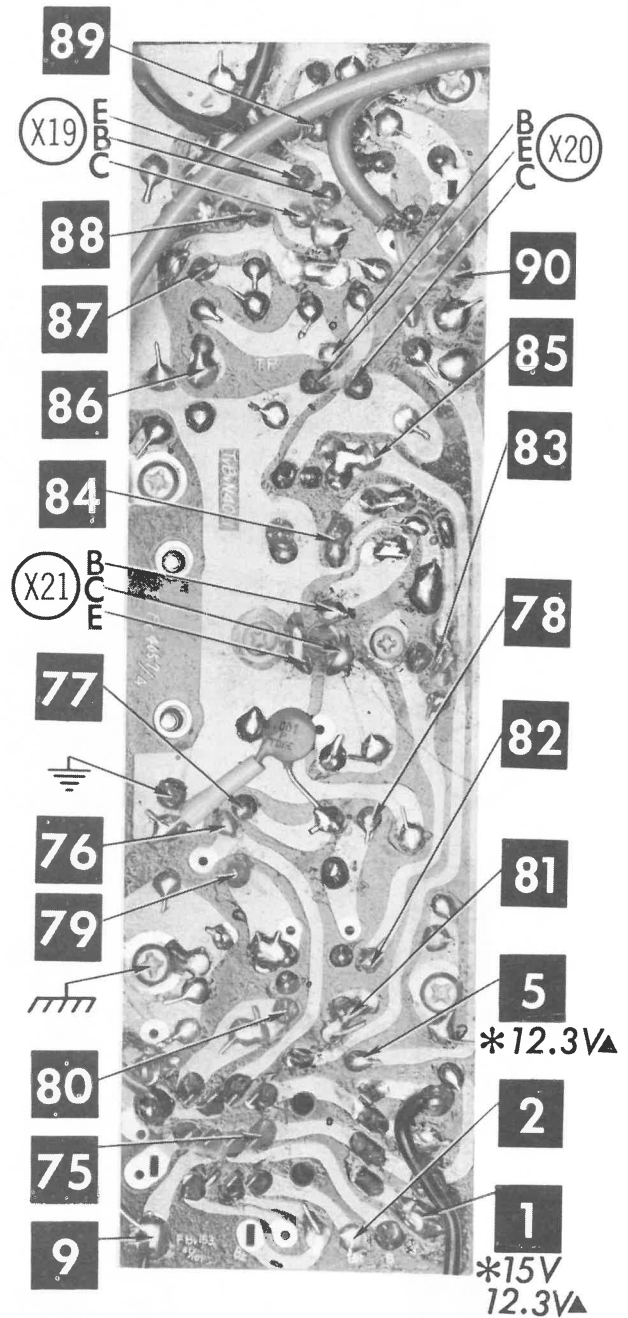
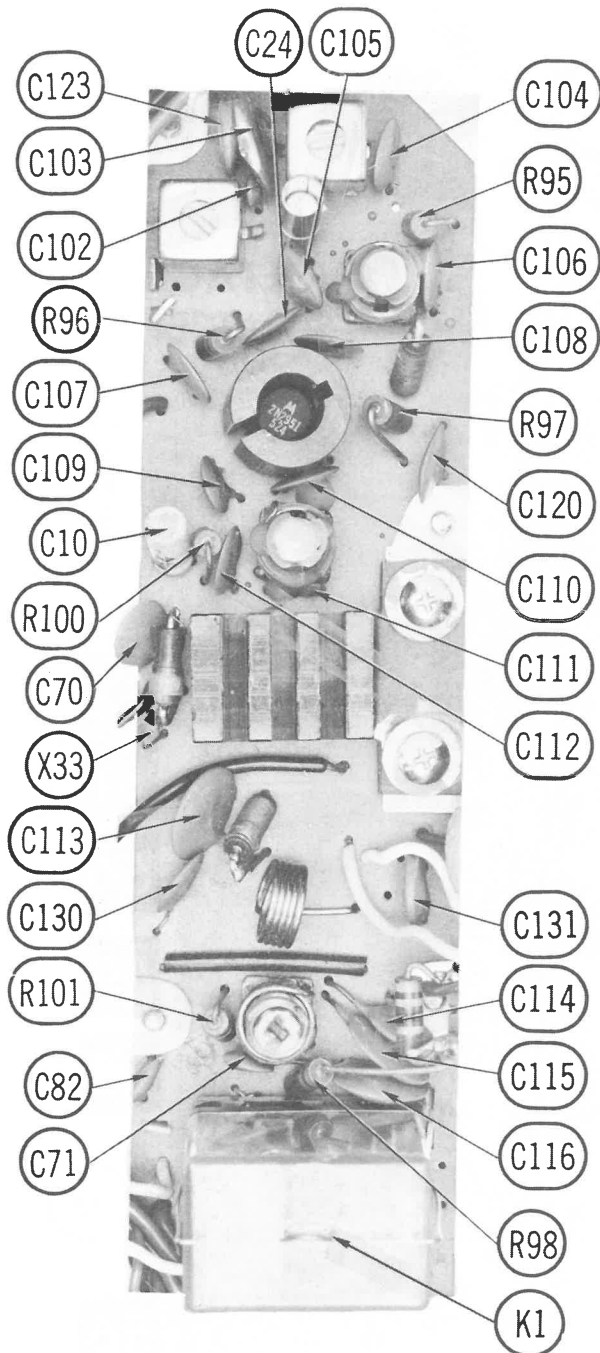
LAFAYETTE MODEL HB-600 (99-3051WX)





LAFAYETTE MODEL HB-600 (99-3051WX)



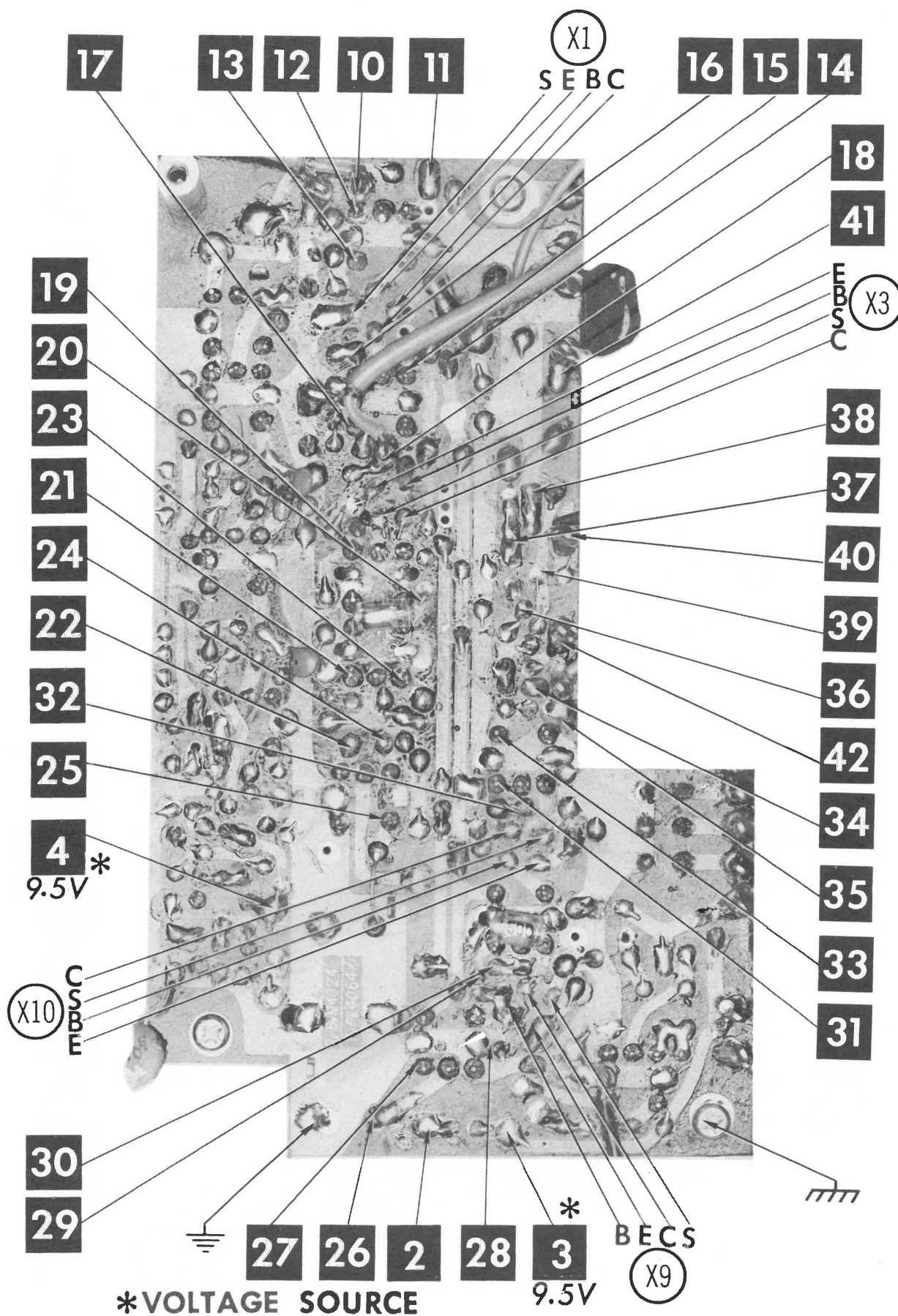


*VOLTAGE SOURCE

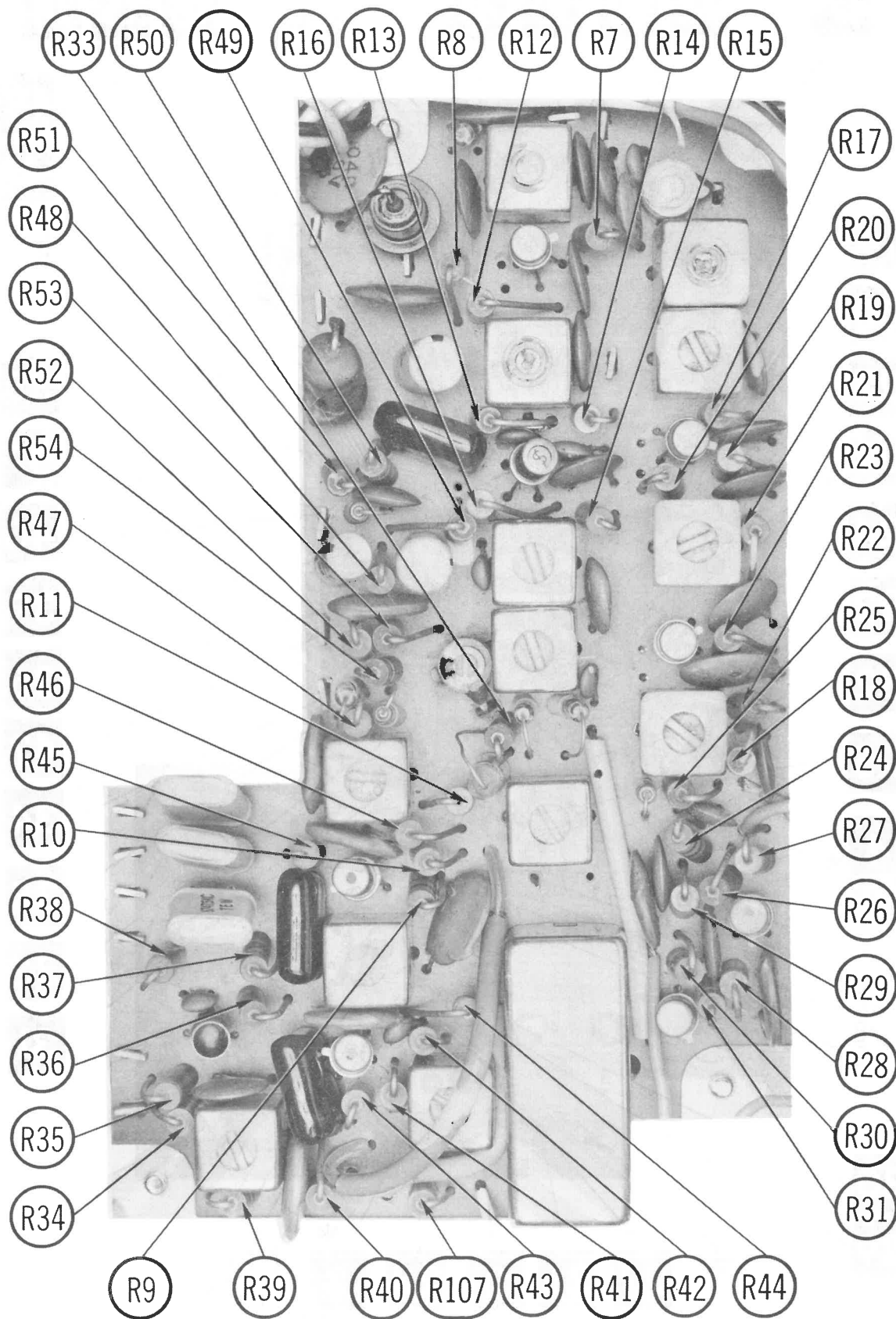
TRANSMITTER OUTPUT BOARD



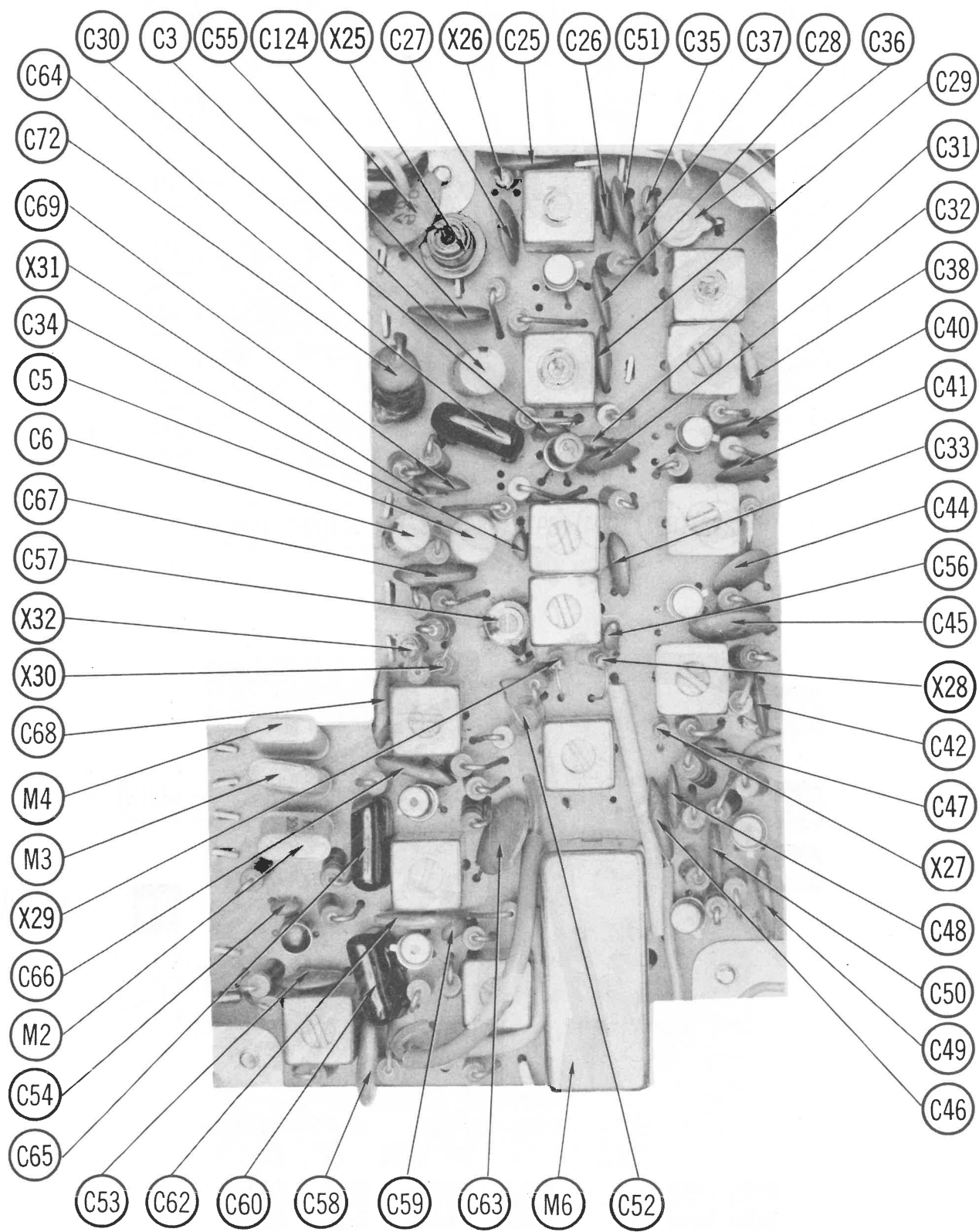
82



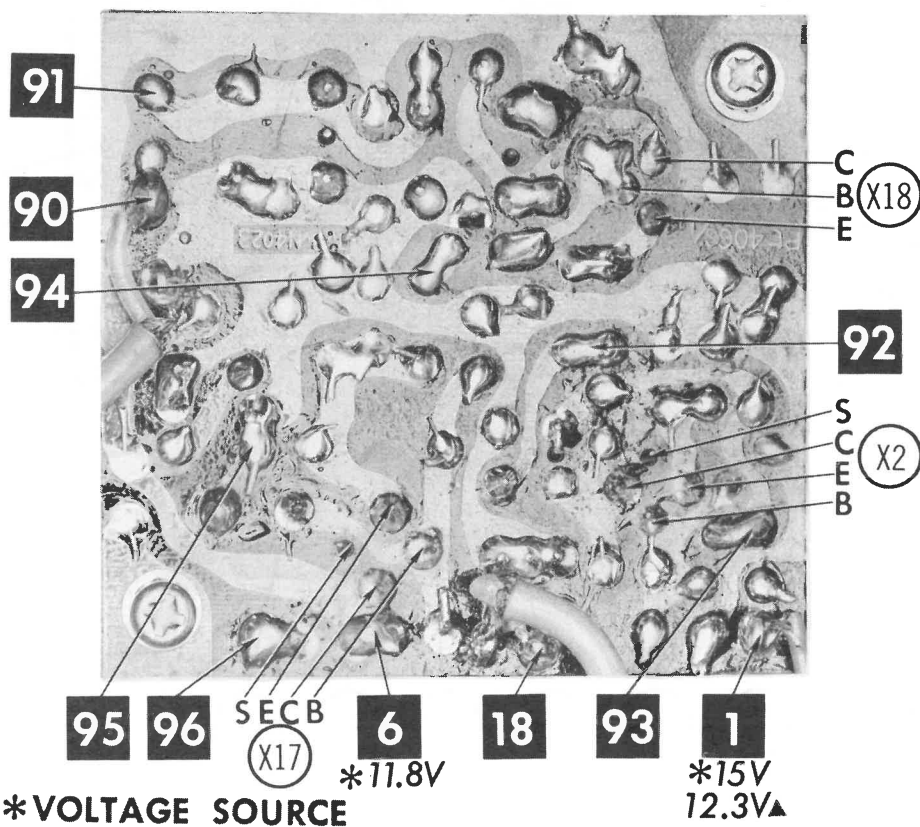
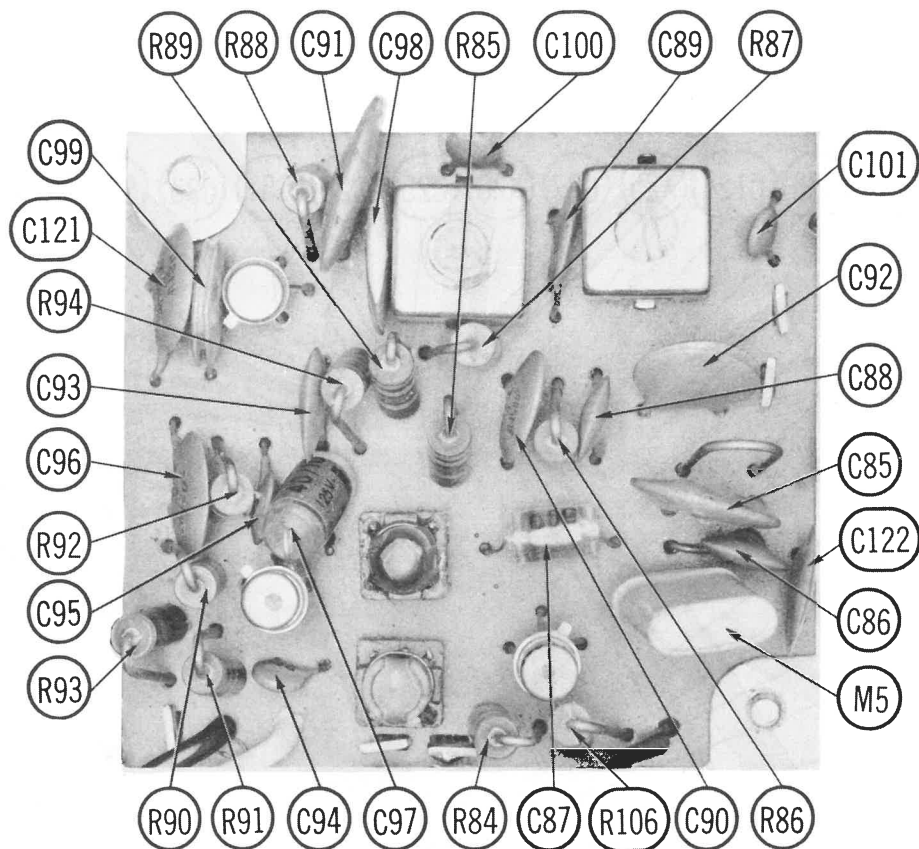
RF-IF BOARD (2, 3, 4, 10 THRU 42)

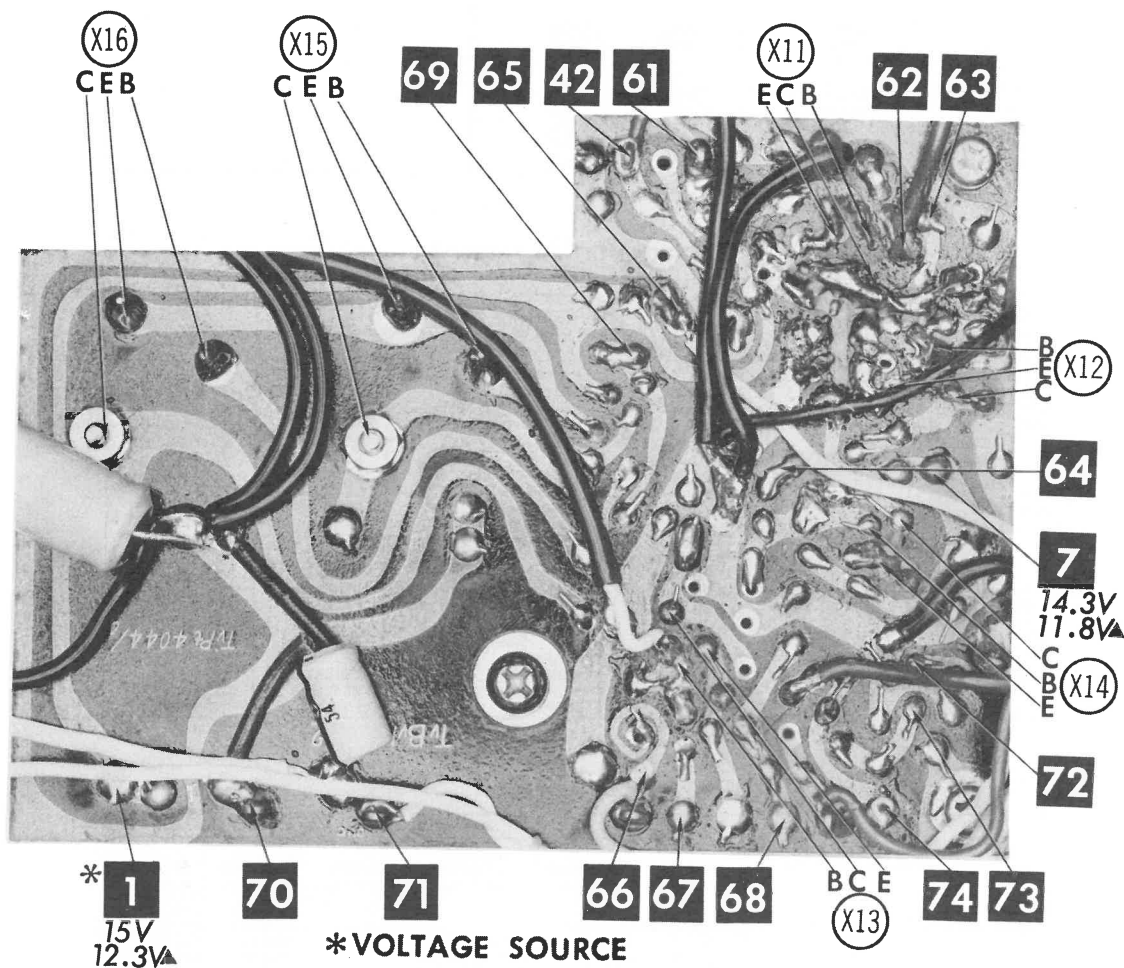
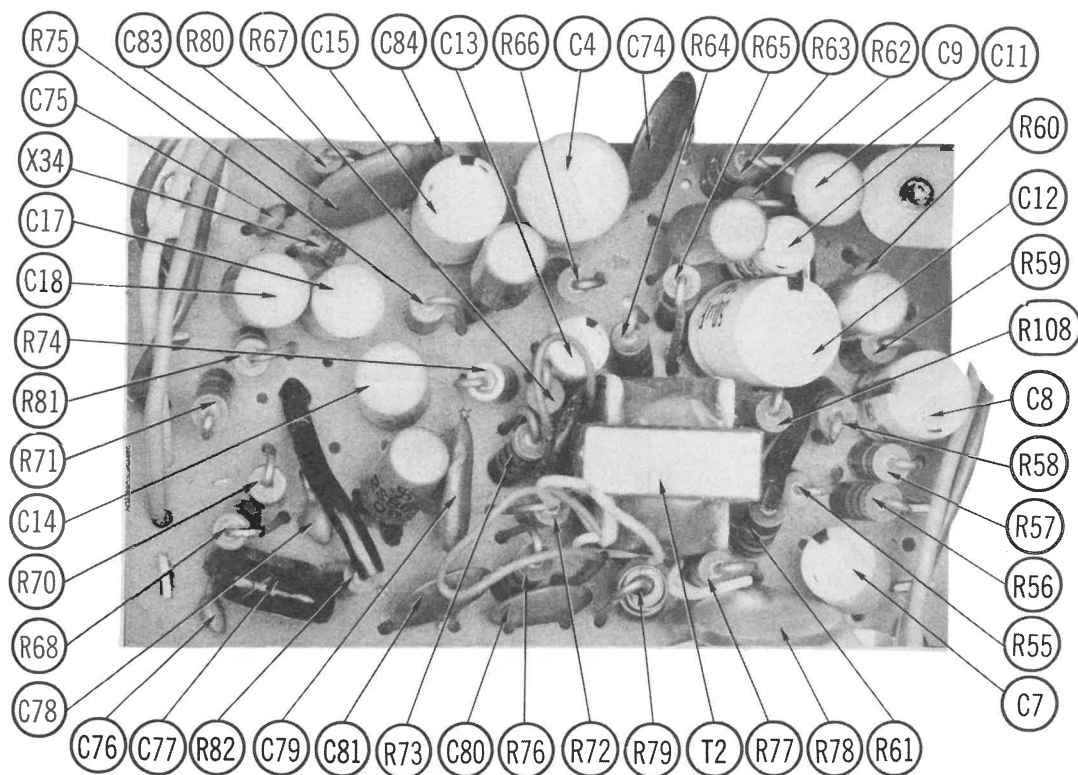


RF-IF BOARD (RESISTORS)



RF-IF BOARD (CAPACITORS & MISC.)





AUDIO BOARD

PARTS LIST AND DESCRIPTION

(When ordering parts, state Model, Part Number, and Description.)

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2SC206	RF Amp.	DS-66	GE-11		NPN
X2	2SC206	Master Oscillator	DS-66	GE-11		NPN
X3	2SC206	1st Mixer	DS-66	GE-11		NPN
X4	2SC206	1st Silencer Amp.	DS-66	GE-11		NPN
X5	2SC206	2nd Silencer Amp.	DS-66	GE-11		NPN
X6	2SC206	1st Pulse Amp.	DS-66	GE-11		NPN
X7	2SC206	2nd Pulse Amp.	DS-66	GE-11		NPN
X8	2SC206	2nd Receive Oscillator	DS-66	GE-11		NPN
X9	2SC206	1st IF Amp.	DS-66	GE-11		NPN
X10	2SC206	2nd IF Amp.	DS-66	GE-11		NPN
X11	2SD33	Squelch Amp.	DS-44	GE-10	SK-3010	NPN
X12	2SD33	1st AF Amp.	DS-44	GE-10	SK-3010	NPN
X13	2SB60	Speech Amp.	DS-26	GE-2	SK-3004	PNP
X14	2SB60A	2nd AF Amp.	DS-26	GE-2	SK-3004	PNP
X15	2SB41	Output - Modulator	DS-503	GE-3	SK-3009	PNP ①
X16	2SB41	Output - Modulator	DS-503	GE-3	SK-3009	PNP ①
X17	2SC206	Transmit Osc.	DS-66	GE-11		NPN
X18	2SC55	Transmit Mixer				NPN
X19	2SC55	Transmit Buffer				NPN
X20	2N2951	Transmit Driver				NPN
X21	2N2949	Final Amp.				NPN

① When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS & DIODES		RECTIFIERS		
			GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.
X22	.46A	DS1M		10B2 or 10D2	1N1488 or 1N1393	SK-3016 or SK-3017	20B or 20C
X23	.46A	DS1M		10B2 or 10D2	1N1488 or 1N1393	SK-3016 or SK-3017	20B or 20C
X24				10B2 or 10D2	1N1488 or 1N1393	SK-3016 or SK-3017	20B or 20C
X25		1S446	1N295	1N295			
X26		1S454	1N295	1N295			
X27		1S447P	1N295	1N295			
X28		1S447P	1N295	1N295			
X29		1S446	1N295	1N295			
X30		1S446	1N295	1N295			
X31		1S446	1N295	1N295			
X32		1S446	1N295	1N295			
X33		1S446	1N295	1N295			
X34		1S446	1N295	1N295			

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA					
	CAP.	VOLT.	Lafayette PART No.	AEROVOX PART No.	CORNELL- DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	1000	25		PRS1295	BR1000-25		TC501000	TVA-1211
C2	1000	25		PRS1295	BR1000-25		TC501000	TVA-1211
C3	10	15		BCD15010	NLW10-15	MT1-5	PET1760	VL-1167
C4	100	15		BCD15100	NLW100-15	MT1-19	TT15X100	TVA-1160
C5	30	6		BCD6025	NLW30-6	MT1-13	TT6X30	VL-1090
C6	10	6		BCD6010	NLW10-6	MT1-5	PET1340	VL-1087
C7	10	15		BCD15010	NLW10-15	MT1-5	PET1760	VL-1167
C8	30	15		BCD15025	NLW30-15	MT1-16	TT15X30	VL-1170
C9	10	15		BCD15010	NLW10-15	MT1-5	PET1760	VL-1167
C10	5	15		BCD15005	NLW5-15	MT1-3	PET1935	VL-1164
C11	1	15		BCD15001	NLW1-50B	MT1-1	TT15X1	VL-1160
C12	50	15		BCD15050	NLW50-15	MT1-16	PET1575	VL-1174
C13	1	15		BCD15001	NLW1-50B	MT1-1	TT15X1	VL-1160
C14	10	15		BCD15010	NLW10-15	MT1-5	PET1760	VL-1167
C15	50	10		BCD10050	NLW50-10	MT1-16	PET1575	VL-1134
C16	3	50		BCD50003	NLW3-50	MT1-3	PET1930	VL-1302
C17	5	25		BCD25005	NLW5-50	MT1-3	PET1935	VL-1204
C18	5	25		BCD25005	NLW5-50	MT1-3	PET1935	VL-1204
C19	20	25		CRE611A	NLW20-25	MT1-11	TT25X20	TE-1206
C20	3	50		BCD50003	NLW3-50	MT1-3	PET1930	VL-1302
C21	10	50		CRE757A	NLW10-5	MT1-6	TT50X10	TE-1304

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENDO PART No.	MALLORY PART No.	SPRAGUE PART No.
C22	150		NPO-DI 150	DTZ-150		CCTO-151	CNO315	10TCC-T15
C23	150		NPO-DI 150	DTZ-150		CCTO-151	CNO315	10TCC-T15
C24	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C25	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C26	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C27	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C28	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C29	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C30	15		NPO-DI 15	DTZ-15	CZ601CG150J	CCTO-150	CNO415	10TCC-Q15

PARTS LIST AND DESCRIPTION (CONTINUED)

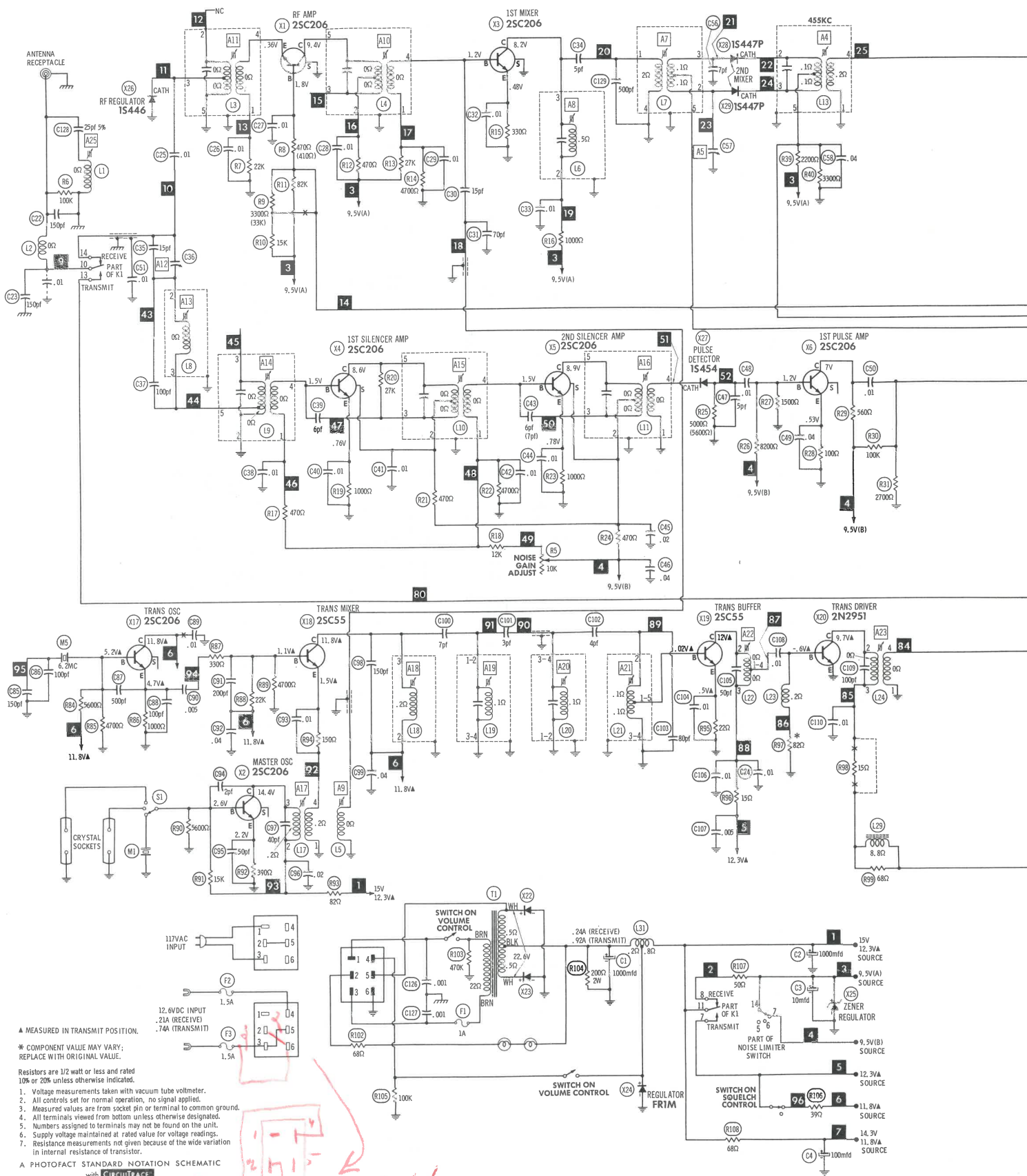
(When ordering parts, state Model, Part Number, and Description.)

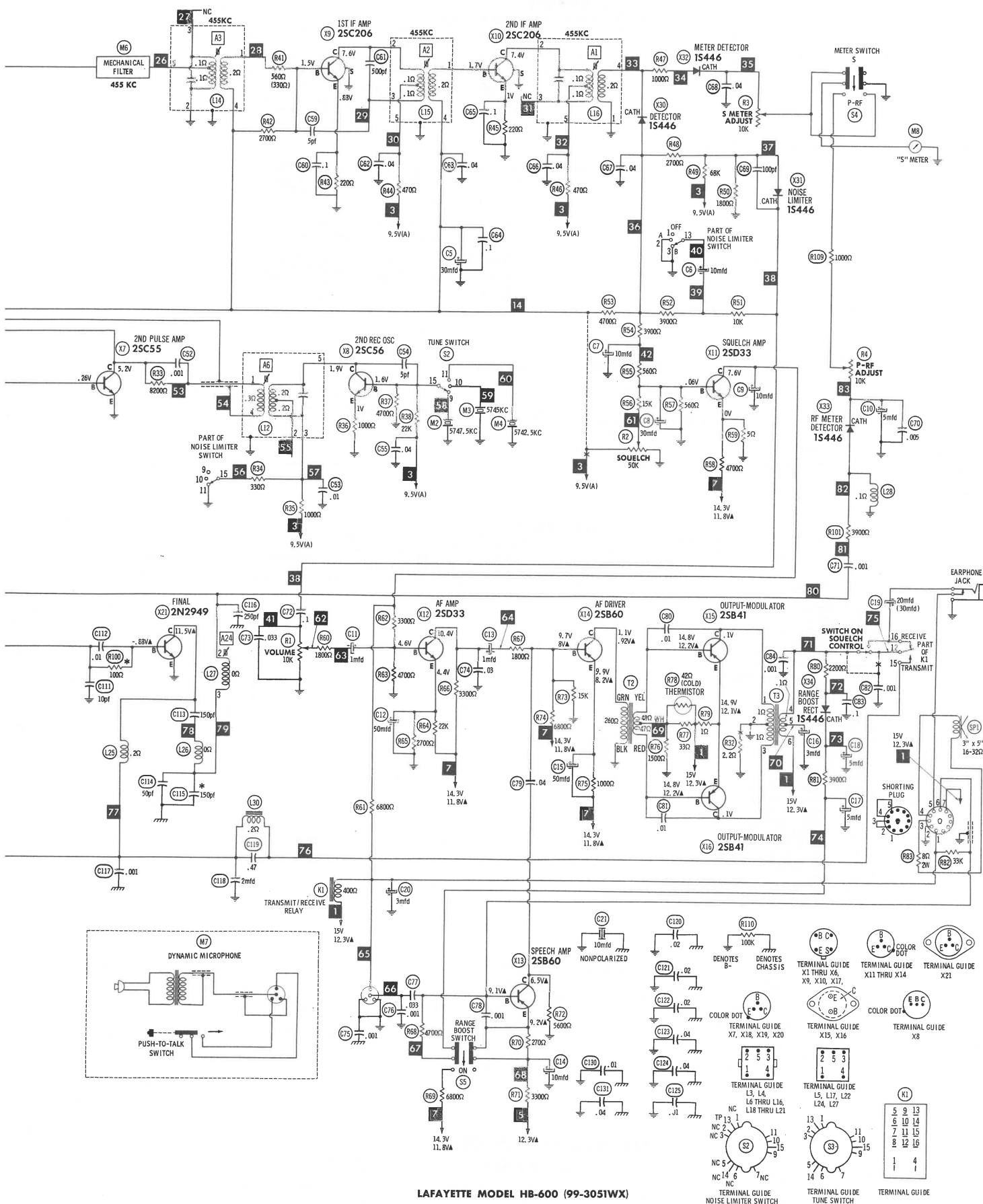
CAPACITORS (cont)

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	70		DI-68	DD-680	JBZ601YP680K	CCD-680	GP468	10TS-Q68
C32	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C33	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C34	5		NPO-DI 5.0	DTZ-4R7	CZ601CH5R0D	CCTO-050	CNO547	10TCC-V50
C35	15		NPO-DI 15	DTZ-15	CZ601CG150J	CCTO-150	CNO415	10TCC-Q15
C36								
C37	100		DI-100	DD-101	JBZ601YP101K	CCD-101	GP310	10TS-T10
C38	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C39	6							10TCC-V56
C40	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C41	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C42	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C43	6							10TCC-V56
C44	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C45	.02		TTD-02	CK-203	HOR101ZV203P		TA120	TG-S20
C46	.04		TTD-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C47	50		DI-50	DD-500	RR05CW470K	CCD-500	GP450	10TS-Q50
C48	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C49	.04		TTD-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C50	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C51	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C52	.001			DM-102	BYZ601ZU102M		SM210	
C53	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C54	5		NPO-DI 5.0	DTZ-4R7	CZ601CH5R0D	CCTO-050	CNO547	10TCC-V50
C55	.04		TTD-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C56	7		NPO-DI 6.8	DTZ-6R8	CZ601CH6R8D	CCTO-6R8	CNO568	10TCC-V68
C57								
C58	.04		TTD-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C59	5		NPO-DI 5.0	DTZ-4R7	CZ601CH5R0D	CCTO-050	CNO547	10TCC-V50
C60	.1		P288N-1	DF-104	PM2P1	2DP-3-104	PVC201	2TM-P10
C61	500		ADM-15-501	CPR-510J	CD15F510K500	DM-15-501	SX351	MS-35
C62	.04		TTD-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C63	.04		TTD-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C64	.1		P288N-1	DF-104	PM2P1	2DP-3-104	PVC201	2TM-P10
C65	.1		P288N-1	DF-104	PM2P1	2DP-3-104	PVC201	2TM-P10
C66	.04		TTD-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C67	.04		TTD-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C68	.04		TTD-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C69	.04		TTD-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C70	.005		TTD-005	CK-502	HOY101ZV502P		TA250	TG-D50
C71	.001			DM-102	BYZ601ZU102M		SM210	
C72	.1		P288N-1	DF-104	PM2P1	2DP-3-104	PVC201	2TM-P10
C73	.033		BE4S33		PKM4S33	4DP-2-333	PVC2133	2WF-S33
C74	.03		TTD-03	CK-303				TG-S30
C75	.001			DM-102	BYZ601ZU102M		SM210	
C76	.001			DM-102	BYZ601ZU102M		SM210	
C77	.033		BE4S33		PKM4S33	4DP-2-333	PVC2133	2WF-S33
C78	.001			DM-102	BYZ601ZU102M		SM210	
C79	.04		TTD-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C80	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C81	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C82	.001			DM-102	BYZ601ZU102M		SM210	
C83	.1		TTD-1	CK-104	HOV101ZV104Z		TA010	TG-P10
C84	.001			DM-102	BYZ601ZU102M		SM210	
C85	150		NPO-DI 150	DTZ-150		CCTO-151	CNO315	10TCC-T15
C86	100		DI-100	DD-101	JBZ601YP101K	CCD-101	GP310	10TS-T10
C87	500		ADM-15-501	CPR-510J	CD15F510K500	DM-15-501	SX351	MS-35
C88	100				JBZ601YP101K	CCD-101	GP310	10TS-T10
C89	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C90	.005		TTD-005	CK-502	HOY101ZV502P		TA250	TG-D50
C91	200		DI-200	DD-201	CD10E201K500	CCD-201	GP320	10TS-T20
C92	.04		TTD-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C93	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C94	2		NPO-DI 2.2	DTZ-2R2	CZ601CJ2R2D	CCTO-2R2	CNO522	10TCC-V22
C95	50		DI-50	DD-500	RR05CW470K	CCD-500	GP450	10TS-Q50
C96	.02		TTD-02	CK-203	HOR101ZV203P		TA120	TG-S20
C97	.40		ADM-15-39J	CPR-39J	CD10E390K500	DM-10-390	SX439	MS-44
C98	150		NPO-DI150	DTZ-150		CCTO-151	CNO315	10TCC-T15
C99	.04		TTD-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C100	7		NPO-DI 6.8	DTZ-6R8	CZ601CH6R8D	CCTO-6R8	CNO568	10TCC-V68
C101	3		NPO-DI 3.0	DTZ-3R3		CCTO-3R3	CNO533	10TCC-V30
C102	4							10TCC-V39
C103	80		DI-82	DD-820	JBZ601YP820K	CCD-820	GP482	10TS-Q82
C104	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C105	50		DI-50	DD-500	RR05CW470K	CCD-500	GP450	10TS-Q50
C106	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C107	.005		TTD-005	CK-502	HOY101ZV502P		TA250	TG-D50
C108	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C109	100		DI-100	DD-101	JBZ601YP101K	CCD-101	GP310	10TS-T10
C110	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C111	10		NPO-DI 10	DTZ-10	CZ601CG100J	CCTO-100	CNO410	10TCC-Q10
C112	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C113	150		NPO-DI 150	DTZ-150		CCTO-151	CNO315	10TCC-T15
C114	50		DI-50	DD-500	RR05CW470K	CCD-500	GP450	10TS-Q50
C115	150		NPO-DI150	DTZ-150		CCTO-150	CNO315	10TCC-T15
C116	250		DI-250	DD-251	CD10E251K500	CCD-251	GP325	10TS-T25
C117	.001			DM-102	BYZ601ZU102M		SM210	
C118	2mfd 150V				WMF1W2		PVC22	155P2.0-200
C119	.47 400V				DPMS2P47	2DP-5-474	PVC2047	2WF-P47
C120	.02		TTD-02	CK-203	HOR101ZV203P		TA120	TG-S20
C121	.02		TTD-02	CK-203	HOR101ZV203P		TA120	TG-S20
C122	.02		TTD-02	CK-203	HOR101ZV203P		TA120	TG-S20
C123	.04		TTD-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C124	.04		TTD-05	CK-503	HOV101ZV503Z		TA150	TG-S50
C125	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C126	.001 150V		DI-1000	DD-102	JBS601YP102K	CCD-102	JF210	10TS-D10
C127	.001 150V		DI-1000	DD-102	JBS601YP102K	CCD-102	JF210	10TS-D10
C128	25 5%		NPO-DI25	DTZ-25	CD10E240K500	DM-10-240	CNO250	10TCC-Q25
C129	500			CPR-510J	CD15F510K500	DM-15-501	SX351	MS-35
C130	.01		TTD-01	CK-103	HOY101ZV103P		TA110	TG-S10
C131	.04		TTD-05	CK-503	HOV101ZV503Z		TA150	TG-S50

(CONTINUED ON PAGE 92)

LAFAYETTE MODEL HB-600 (99-3051WX)





LAFAYETTE MODEL HB-600 (99-3051WX)

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

CONTROLS

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

ITEM No.	USE	RESIST-ANCE	REPLACEMENT DATA				
			Lafayette PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume & Power Switch	10K		F2-10K, SRS012, KR-2	A47-10K-Z, RS-2, SWE-20 or (NP-10K-Z, UP-A-400, NWE-20)	B13-116, SK3, 76-2 or (BU1, CF61, SS3, WF)*	RU14A, SL36, SL3250, US42 or (UA14A, SK750, US42) or (U18, US27)
R2	Squelch & PA Switch	50K					
R3	"S" Meter Adjust	10K		F1-10K, SRS008	A47-10K-S, FKS-1/2 or (NP-10K-S, UP-A-400)	B11-116, SK3 or (BU1, CF9, SS3, DC1)*	RU14L, SL36, SL3250, UA14L, SK750 or (US20)
R4	P-RF Adjust	10K		F1-10K, SRS008	A47-10K-S, FKS-1/2 or (NP-10K-S, UP-A-400)	B11-116, SK3 or (BU1, CF9, SS3, DC1)*	RU14L, SL36, SL3250, UA14L, SK750 or (US20)
R5	Noise Gain Adjust	10K		F1-10K, SRS008	A47-10K-S, FKS-1/2 or (NP-10K-S, UP-A-400)	B11-116, SK3 or (BU1, CF9, SS3, DC1)*	RU14L, SL36, SL3250, UA14L, SK750 or (US20)

* "SNAPTROL"

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	Lafayette PART No.			IRC PART No.	WORKMAN PART No.	Lafayette PART No.
R78	Thermistor 42Ω(Cold)								

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		Lafayette PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.
L1	TVI Trap		19-1034	TV-239	4201		
L2	RFC (.55uh)				4588	RTC-8513	T-802
L3	RF Input						
L4	RF						
L5	Master Osc. Rec. Pickup						
L6	1st IF (6.2MC)						
L7	2nd IF (6.2MC)						
L8	Silencer Amp. Input						
L9	1st Silencer						
L10	2nd Silencer						
L11	3rd Silencer						
L12	2nd Rec. Osc.						
L13	3rd IF (455KC)		8810				
L14	4th IF (455KC)		8811				
L15	5th IF (455KC)		8811				
L16	6th IF (455KC)		8812				
L17	Master Osc.						
L18	Transmit Mixer						
L19	Transmit Mixer						
L20	Transmit Mixer						
L21	Trans. Buffer Cpl.						
L22	Transmit Buffer						
L23	RFC (2.2uh)		19-0012	BC-563	4606		T812
L24	Transmit Driver						
L25	RFC (2.2uh)		19-0012	BC-563	4606		T812
L26	RFC						
L27	Antenna Loading				23A337RPC		
L28	RFC (.9uh)		19-1000	BC-561	4602		T855

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	Lafayette PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L29	.1ADC	8.8Ω	47mh						
L30	.76ADC	.2Ω	2.25mh						
L31	.92ADC	1Ω	24mh Tap @ 17.3mh						

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	Lafayette PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	117VAC @ .2A	22.6VCT @ .92A DC		(TvFab 256/053)					

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			Lafayette	MERIT	STANCOR	THORDARSON	TRIAD	
	PRI.	SEC.	PART No.	PART No.	PART No.	PART No.	PART No.	
T2	2.5	1						

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
			Lafayette	MERIT	STANCOR	THORDARSON	TRIAD	
	PRI.	SEC.	PART No.	PART No.	PART No.	PART No.	PART No.	
T3	50Ω CT	16-32Ω CT	(TvBvTy4019)					

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA			NOTES
				LAFAYETTE	JENSEN	QUAM	
				PART No.	PART No.	PART No.	
SP1	3" x 5"	PM	16-32Ω			35A05Z16	

FUSE DEVICES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
F1		1A			312001	342001	AGC 1	HKP
F2		1.5A			31201.5	155020	AGC 1 1/2	HHJ
F3		1.5A			31201.5	155020	AGC 1 1/2	HHJ

MISCELLANEOUS

ITEM No.	PART NAME	Lafayette PART No.	NOTES
M1	Master Osc. Crystal		33.165MC (Channel 1) 33.175MC (Channel 2) 33.185MC (Channel 3) 33.205MC (Channel 4) 33.215MC (Channel 5) 33.225MC (Channel 6) 33.235MC (Channel 7) 33.255MC (Channel 8) 33.265MC (Channel 9) 33.275MC (Channel 10) 33.285MC (Channel 11) 33.305MC (Channel 12) 33.315MC (Channel 13) 33.325MC (Channel 14) 33.355MC (Channel 15) 33.365MC (Channel 16) 33.375MC (Channel 17) 33.385MC (Channel 18) 33.405MC (Channel 19) 33.415MC (Channel 20) 33.425MC (Channel 21) 33.455MC (Channel 22)
M2	Receive Crystal		5747.5KC
M3	Receive Crystal		5745KC
M4	Receive Crystal		5742.5KC
M5	Transmit Crystal		6.2MC
M6	Mechanical Filter		455KC
M7	Microphone Ass'y.		Dynamic
M8	"S" Meter		
S1	Switch		Channel Selector (25-Position Rotary)
S2	Switch		Tune (3-Position Rotary)
S3	Switch		Noise Limiter (3-Position Rotary)
S4	Switch		Meter, S/P-RF (DPDT)
S5	Switch		Range Boost (DPDT)

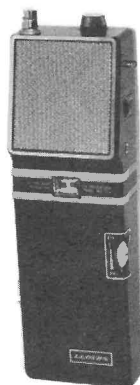
WIRING DATA

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. 8497 3 Conductor- 1 Shielded for Press-to-Talk (Neoprene)
8496 3 Conductor- 1 Shielded for Press-to-Talk (Vinyl)
Ignition Noise Suppression Use BELDEN No. 7300-Series Spark-Plug Sets
Bonding Strap Use BELDEN No. 8661 (3/8 In.)



PHOTOFACT[®] with

CIRCUITRACE[®]



TRADE NAME : Lloyd's Models WT-715, 5A26
 SUPPLIER : For Current Address, see Annual Index
 TYPE SET : 15-Transistor Transceiver
 POWER SUPPLY : 12 Volts DC
 RATING : .012ma @ 12VDC (Receive)
 .170ma @ 12VDC (Transmit)
 TUNING RANGE : Any two CB Channels 1 thru 23

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A1 thru A10.....GENERAL CEMENT #8195, 8282, 8606, 9291
 WALSCO #2515

RECEIVER ALIGNMENT

Connect an AC VTVM across speaker voice coil. Turn Volume control to Normal volume; Squelch to midrange.

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to Base of X2 (Mixer). Low side to chassis. Tune to 455KC (Mod.).	Any	A1, A2, A3	Adjust for maximum meter indication.
High side thru .01mfd to antenna receptacle, low side to chassis. Tune to 27.085MC (Channel 11).	11	A4, A5, A6	Adjust for maximum meter indication.

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 95, SUBPART D, SECTION 95.95).

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.

Connect either 50Ω dummy load or the normally used antenna system.

INDICATOR	ADJUST	REMARKS
RF Wattmeter for Field Strength Meter	A7, A8, A9, A10	Set Channel Selector to appropriate channel. Key Transmitter several times to insure oscillator starting. Adjust for maximum.

HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

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RY510



PHOTOFACT[®] with

CIRCUITRACE[®]



TRADE NAME : Olson Model RA-590 (Revised)
(Side-Bander II)
SUPPLIER : For Current Address, see Annual Index
TYPE SET : 12-Tube Transceiver
POWER SUPPLY : 110 — 120 Volts AC, 60 Cycles (or)
12-Volt Storage Battery
RATING : 80 Watts, .74 Amp. @ 117VAC (Receive)
83 Watts, .77 Amp. @ 117VAC (Transmit)
5.9 Amp. @ 12.6VDC (Transmit)
TUNING RANGE: All 23 CB Channels

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A1 thru A6, A7, A9, A10....	GENERAL CEMENT #5097, 8727.....	WALSCO #2522
A11 thru A22.....	GENERAL CEMENT #8606, 8606L, 8869..	WALSCO #2543, 2544, 2588
A24, A25.....	GENERAL CEMENT #8606, 8606L.....	WALSCO #2520, 2522

RECEIVER ALIGNMENT

Connect DC VTVM between point **A** and chassis. Set to indicate positive voltage. Turn volume control to midrange position; squelch control fully clockwise.

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to Pin 2 (Grid) V3 (2nd Mixer). Low side to chassis. Tune to 262KC (Unmod.)	Any	A1 thru A6	Adjust for maximum deflection.
High side thru .01mfd to Pin 7 (Grid) V1B (1st Mixer). Low side to Chassis. Tune to 7.5MC (Unmod)	Any	A7 thru A10	"
High side thru .01mfd to antenna receptacle. Low side to chassis. Tune to 27.085MC (Channel 11) (Unmod.).	11	A11 thru A17	"
Remove antenna and short antenna receptacle to chassis.	Any	R4	Adjust for zero reading on M15 ("S") Meter.

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 95, SUBPART D, SECTION 95.95). The frequency of the transmitter should be checked periodically with a secondary frequency standard to insure proper and legal operation.

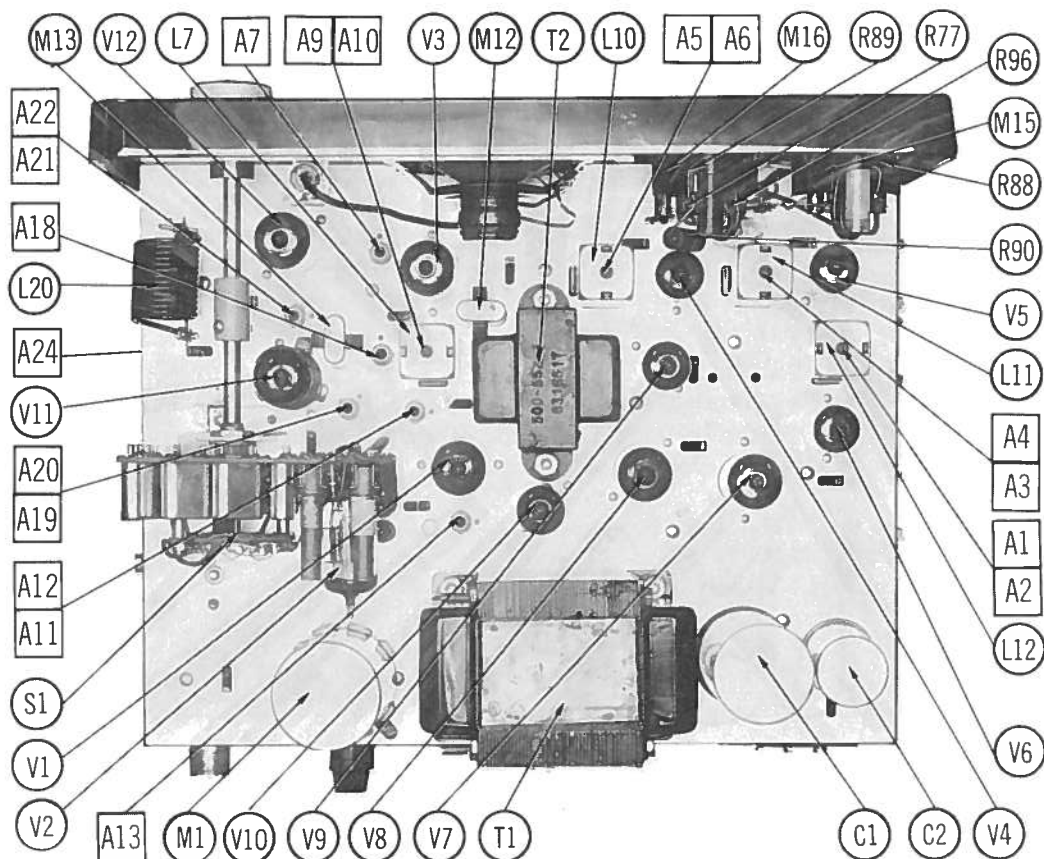
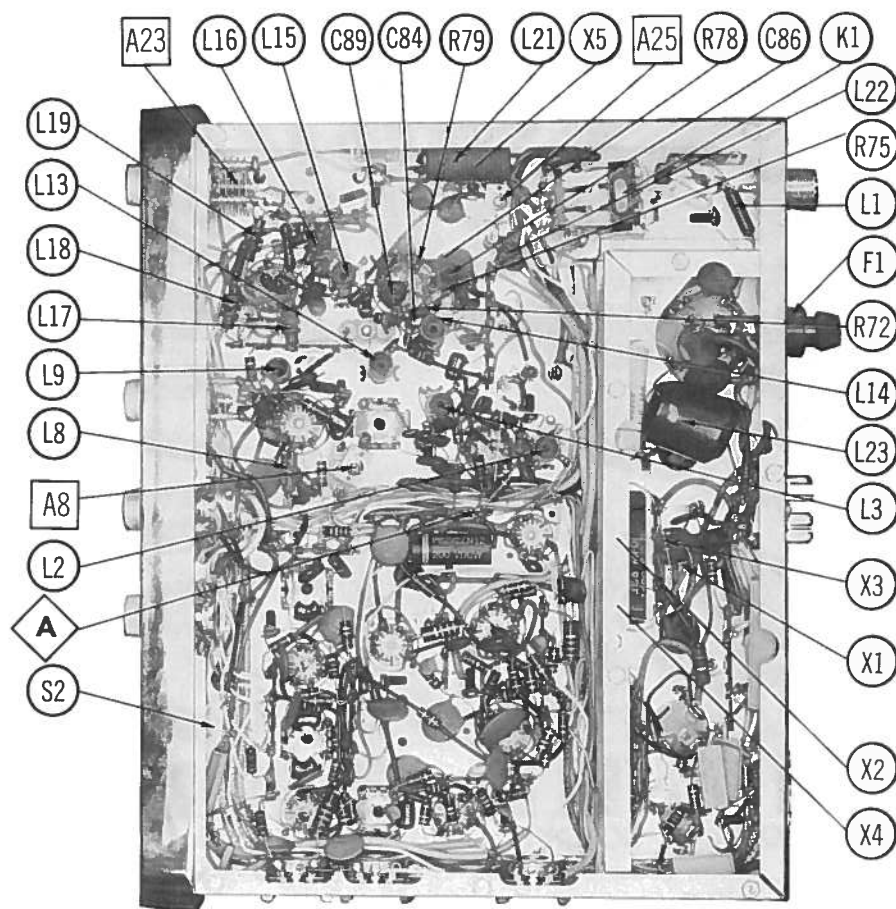
Best results will be obtained when adjusting the final RF output circuit if the antenna normally used is connected and the chassis is as nearly in the cabinet as possible.

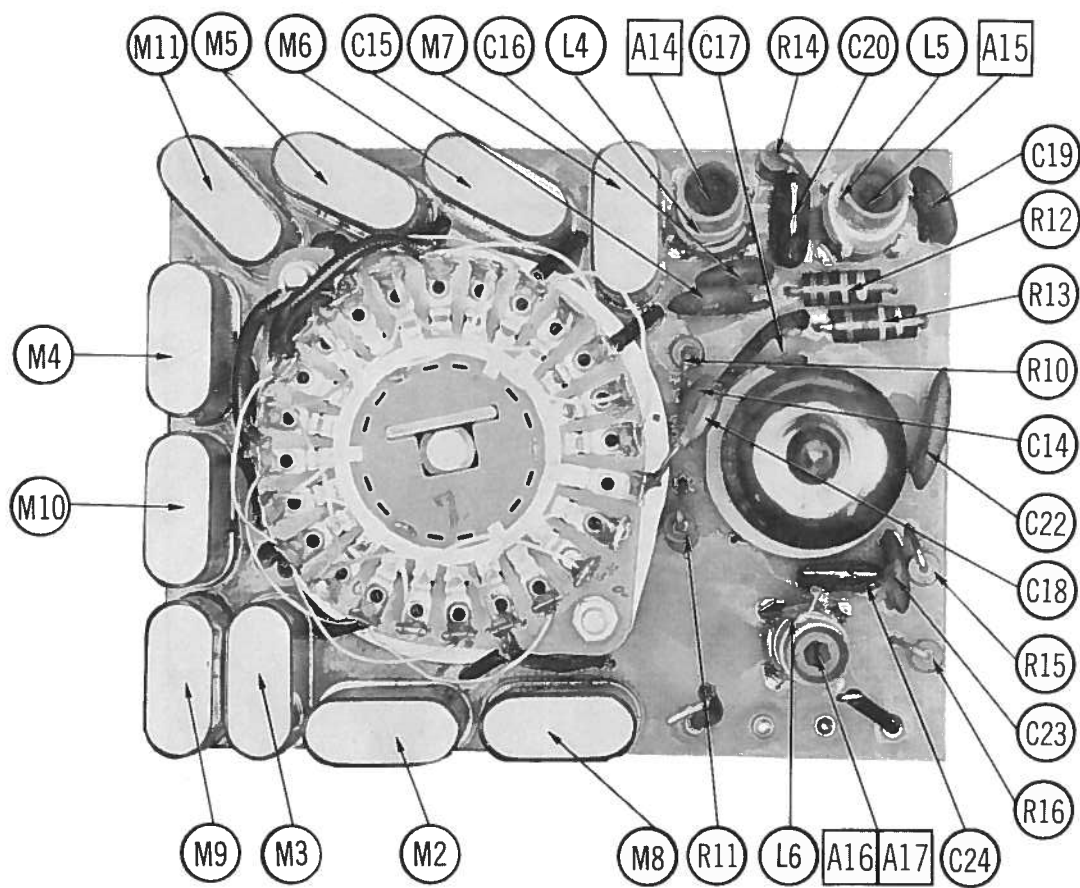
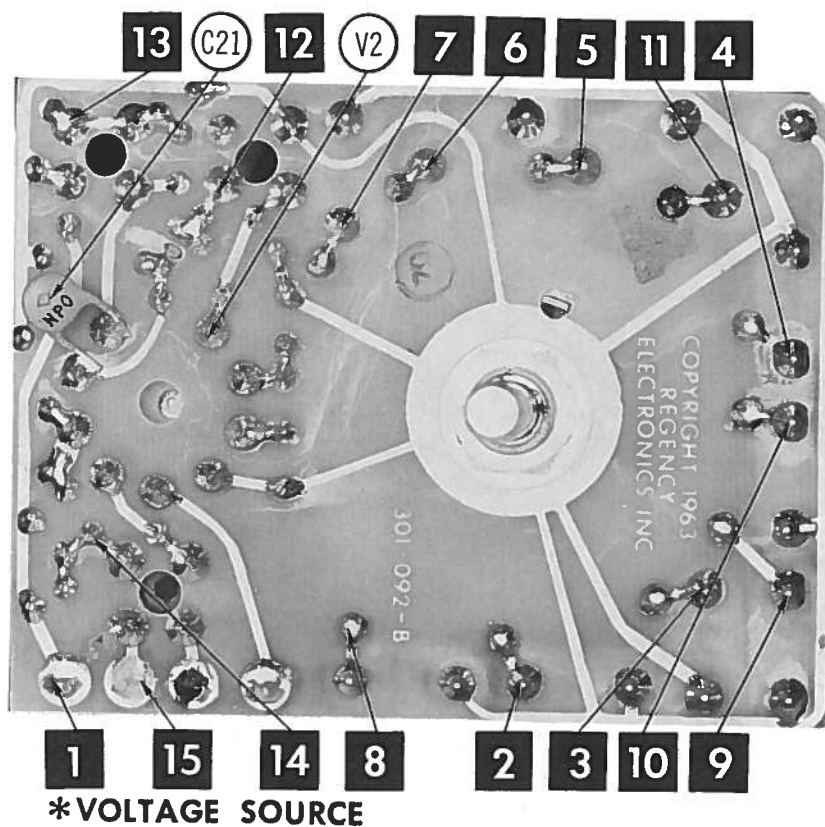
Connect either 50Ω dummy load or the normally used antenna system.

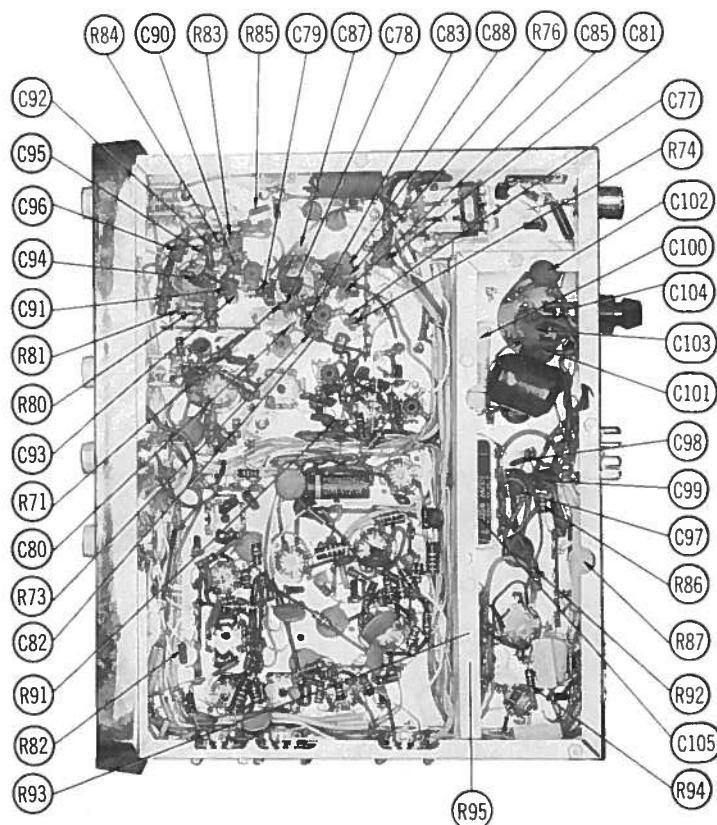
INDICATOR	ADJUST	REMARKS
RF Wattmeter or Field Strength Meter	A18 thru A24	Adjust for maximum deflection. Key Transmitter several times to insure oscillator starting.
Remove antenna and short antenna receptacle to chassis.	R5	Key Transmitter, and adjust for zero reading on M16 RF Monitor.

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RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6ES8	32K †	470K	100Ω	FIL	FIL	32K †	2.3meg	1100Ω	FIL
V2	6AN8	23K †	100K	2200Ω	FIL	FIL	2300Ω†	40K†	100K	1800Ω
V3	6BC8	335K †	1.6Ω	2200Ω	FIL	FIL	23K †	22K	0Ω	FIL
V4	6BJ6	1.4meg	180Ω	FIL	FIL	6000Ω†	38K†	0Ω		
V5	6BJ6	1.4meg	120Ω	FIL	FIL	6000Ω†	38K†	0Ω		
V6	12AL5	6800Ω	180K	FIL	FIL	2.1meg	0Ω	360K		
V7	6CM8	481K†	3.6meg	2600Ω	FIL	FIL	510K	80K	4700Ω	1meg
V8	6AN8	34K †	503K	34K	FIL	FIL	281K †	30K #†	1.5meg	3600Ω
V9	6AQ5	270K	300Ω	FIL	FIL	267Ω †	1327Ω†	NC		
V10	6AQ5	NC	300Ω	FIL	FIL	267Ω †	1327Ω†	270K		
V11	6AN8	15K †	100K	2700Ω	FIL	FIL	2300Ω†	19K†	22K	281Ω
V12	12BH7A	5000Ω†	7351Ω▲	640Ω▲	FIL	FIL	551Ω▲	12K †	5100Ω†	NC
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9

ALL MEASUREMENTS TAKEN IN RECEIVE, ANL SWITCH IN ON POSITION UNLESS OTHERWISE NOTED

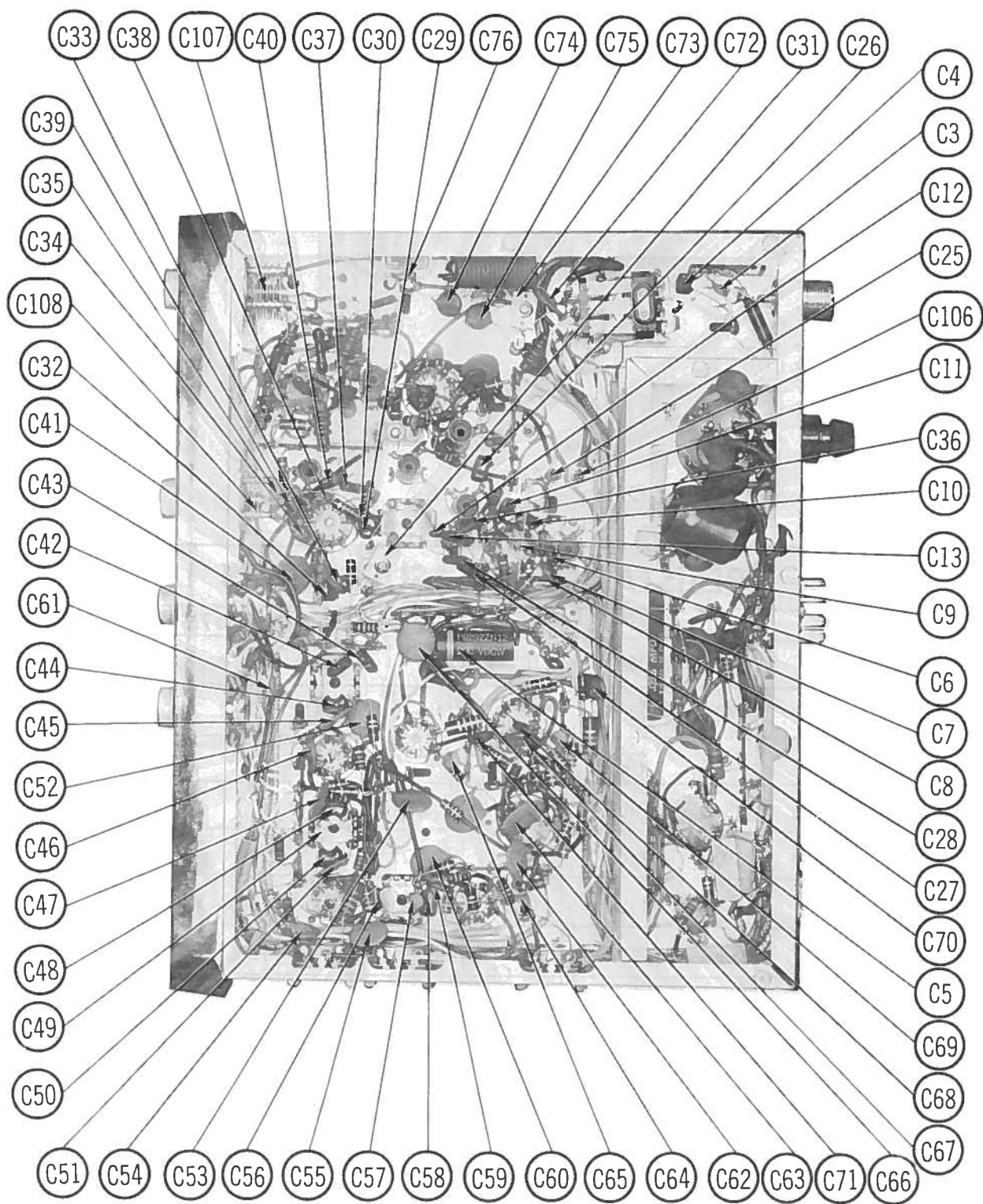
† MEASURED FROM OUTPUT OF X3, X4

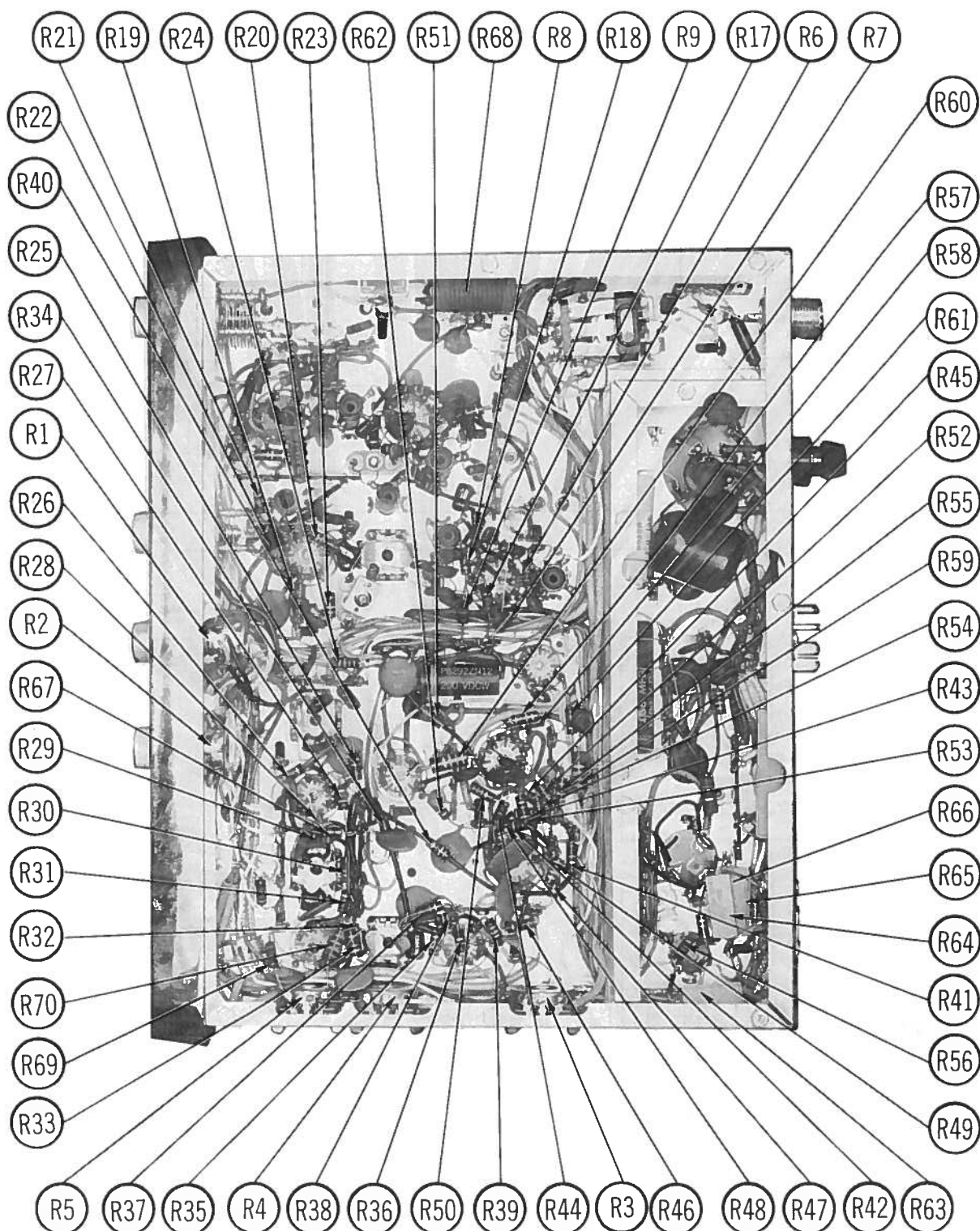
▲ MEASURED IN TRANSMIT POSITION

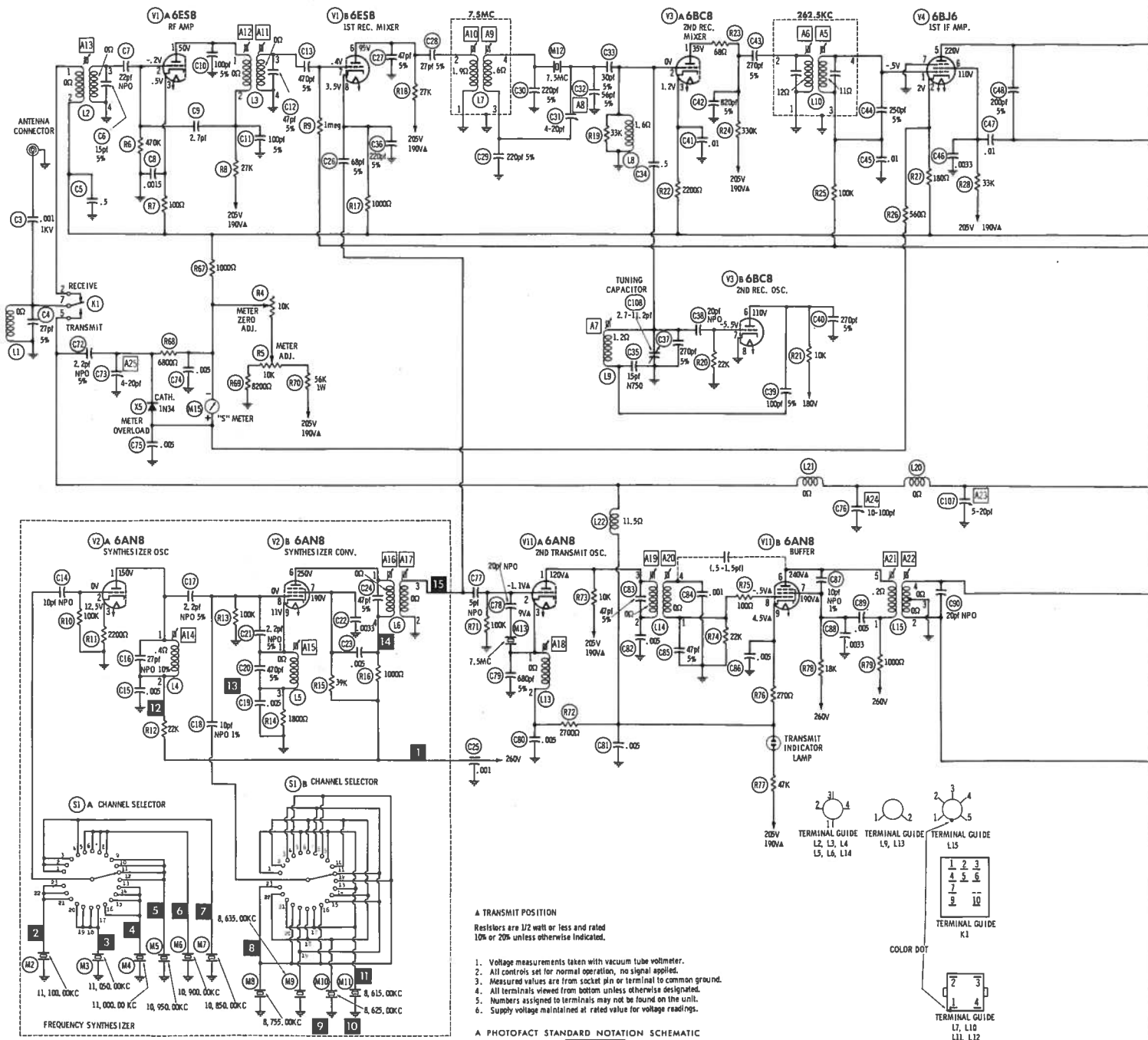
NC NO CONNECTION

‡ MEASURED WITH ANL SWITCH IN OFF POSITION

THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.









PARTS LIST AND DESCRIPTION

(When ordering parts, state Model, Part Number, and Description.)

TUBES

• AMPEREX •			• GENERAL ELECTRIC •			• RCA •			• SYLVANIA •		
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V1	RF Amp. -1st Mixer	6ES8	V7	Speech Amp. -Squelch Amp.	6CM8	V8	AF Amp. -Phase Inv.	6AN8	V9	Output-Modulator	6AQ5
V2	Synthesis Osc. - Converter	6AN8	V10	Output-Modulator	6AQ5	V11	Trans. Osc. -Buffer	6AN8	V12	Final Amp.	12BH7A
V3	2nd Mixer-Rec. Osc.	6BC8									
V4	1st IF Amp.	6BJ6									
V5	2nd IF Amp.	6BJ6									
V6	Det. -Noise Limiter	12AL5									

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS & DIODES		RECTIFIERS		
			GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.
X1	.12ADC	ED3006		10D6 or 10DB6A ①	1N2071 or FW800 ①	SK-3018 or SK-3017	F-6 or 80B
X2	.12ADC	ED3006		10D6 or 10DB6A ①	1N2071 or FW800 ①	SK-3018 or SK-3017	F-6 or 80B
X3	.12ADC	ED3006		10D6 or 10DB6A ①	1N2071 or FW800 ①	SK-3018 or SK-3017	F-6 or 80B
X4	.12ADC	ED3006		10D6 or 10DB6A ①	1N2071 or FW800 ①	SK-3018 or SK-3017	F-6 or 80B
X5		1N34A	1N34AS	1N34A			

① Replaces X1 thru X4

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		OLSON PART No.	REPLACEMENT DATA				
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	40	450		AFH3-45	CCO410	XC3-15	FP376.8	TVL-3785
B	40	450						
C	10	450						
C2A	30	350		AFH3-169	CCO830	XC3-28.1	FP331A	TVL-3620
B	30	300						
C	20	25						

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.
C3	.001 1KV		BPD-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C4	27 5%		ADM-15-270	CPR-27J	CD10E270J500	DM-10-270	SX427	MS-427
C5	.5 200V		BE2P5		PM2P5	2DP-5-504	PVC205	2PS-P50
C6	15 5%		ADM-15-150	DTZ-15	CZ601CG150J	CCTO-150	CNO415	10TCC-Q15
C7	22 NPO		NPO-DI 22	DTZ-22	CDECY601CG220K	DM-10-220	CNO422	10TCC-Q22
C8	.0015		BPD-0015	DD-152		CCD-152	B215	5HK-D15
C9	2.7		NPO-DI 3	DTZ-2R2			CNO533	10TCC-V27
C10	100 5%		ADM-15-101	CPR-100J	CD10E101J500	DM-10-101	SX310	MS-31
C11	100 5%		ADM-15-101	CPR-100J	CD10E101J500	DM-10-101	SX310	MS-31
C12	47 5%		ADM-15-470	CPR-47J	CD10E470J500	DM-10-470	SX447	MS-447
C13	470 5%		ADM-15-471	CPR-470J	CD15F470J500	DM-15-471	SX347	MS-347
C14	10 NPO		NPO-DI 10	DTZ-10	CZ601CG100J	CCTO-100	CNO410	10TCC-Q10
C15	.005		BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C16	27 NPO 10%		NPO-DI 25	DTZ-25		CCTO-270	CNO427	10TCC-Q27
C17	2.2 NPO 5%		NPO-DI 2.2	DTZ-2R2	CDECZ601CJ2R2D	CCTO-2R2	CNO522	10TCC-V22
C18	10 NPO 10%		NPO-DI 10	DTN-10			CNO410	10TCC-Q10
C19	.005		BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C20	470 5%		ADM-15-471	CPR-470J	CD15F470J500	DM-15-471	SX347	MS-347
C21	2.2 NPO 5%		NPO-DI 2.2	DTZ-2R2	CDECZ601CJ2R2D	CCTO-2R2	CNO522	10TCC-V22
C22	.0033		BPD-0033	DD-332	BY8601ZU332P	CCD-332	B233	5HK-D33
C23	.005		BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C24	47 5%		ADM-15-470	CPR-47J	CD10E470J500	DM-10-470	SX447	MS-447
C25	.001		EF-001	MFT-1000		CCF-102	CT280A	
C26	88 5%		ADM-15-880	CPR-88J	CD10E880J500	DM-10-880	SX468	MS-468
C27	47 5%		ADM-15-470	CPR-47J	CD10E470J500	DM-10-470	SX447	MS-447
C28	27 5%		ADM-15-270	CPR-27J	CD10E270J500	DM-10-270	SX427	MS-427
C29	220 5%		ADM-15-221	CPR-220J	CD10E221J500	DM-10-221	SX322	MS-322
C30	220 5%		ADM-15-221	CPR-220J	CD10E221J500	DM-10-221	SX322	MS-322
C31	4-20			825-AZ		402	ST554-N	
C32	56 5%		ADM-15-560	CPR-56J	CD10E560J500	DM-10-560	SX456	MS-456
C33	30 5%		ADM-15-300	CPR-30J	CD10E300J500	DM-10-300	SX430	MS-43
C34	.5pf							
C35	15 N750		N750-DI 15	DTN-15	CDECZ601UJ150J	CCTN-150	CN7415	10TCU-Q15
C36	220 5%		ADM-15-221	CPR-220J	CD10E221J500	DM-10-221	SX322	MS-322
C37	270 5%		ADM-15-271	CPR-270J	CD15F271J500	DM-10-271	SX327	MS-327
C38	20 NPO		NPO-DI 20	DTZ-20	CDECY601CG220K	CCTO-200	CNO420	10TCC-Q20
C39	100 5%		ADM-15-101	CPR-100J	CD10E101J500	DM-10-101	SX310	MS-31
C40	270 5%		ADM-15-271	CPR-270J	CD15F271J500	DM-10-271	SX327	MS-327
C41	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C42	820 5%		ADM-19-821	CPR-820J	CD19F821J500	DM-15-821	SX382	MS-382
C43	270 5%		ADM-15-271	CPR-270J	CD15F271J500	DM-10-271	SX327	MS-327
C44	250 5%		ADM-15-251	CPR-240J	CD10E251J500	DM-10-251	SX324	MS-325
C45	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C46	.0033		BPD-0033	DD-332	BY8601ZU332P	CCD-332	B233	5HK-D33
C47	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C48	200 5%		ADM-15-201	CPR-200J	CD10E201J500	DM-10-201	SX320	MS-32
C49	4.7			DTZ-4R7	CZ601CH5R0D	CCTO-050	CNO547	10TCC-V50
C50	250 5%		ADM-15-251	CPR-240J	CD10E251J500	DM-10-251	SX324	MS-325
C51	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C52	.05		BPD-05	DD-503		CCD-503	GP150	5HK-S50
C53	.05		BPD-05	DD-503		CCD-503	GP150	5HK-S50
C54	.0033		BPD-0033	DD-332	BY8601ZU332P	CCD-332	B233	5HK-D33
C55	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C56	200 5%		ADM-15-201	CPR-200J	CD10E201J500	DM-10-201	SX320	MS-32
C57	2.2 NPO 5%		NPO-DI 2.2	DTZ-2R2	CDECZ601CJ2R2D	CCTO-2R2	CNO522	10TCC-V22

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCOR PART No.	MALLORY PART No.	SPRAGUE PART No.
C58	250 5%		ADM-15-251	CPR-240J	CD10E251J500	DM-10-251	SX324	MS-325
C59	100 5%		ADM-15-201	CPR-100J	CD10E101J500	DM-10-101	SX310	MS-31
C60	.05		BPD-05	DD-503		CCD-503	GP150	5HK-S50
C61	.0015		BPD-0015	DD-152		CCD-152	B215	5HK-D15
C62	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C63	.2 20V			UK20-204				
C64	.470		BPD-00047	DD-471	BYZ601ZU471P	CCD-471	B347	5GA-T47
C65	.0015		BPD-0015	DD-152		CCD-152	B215	5HK-D15
C66	.05		BPD-05	DD-503		CCD-503	GP150	5HK-S50
C67	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C68	.001		BPD-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C69	.270		DI-270	CPR-270J	CD15F271J500	DM-10-271	GP327	10TS-T27
C70	.005		BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C71	.005		BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C72	2.2 NPO 5%		NPO-DI 2.2	DTZ-2R2	CZ601CJ2R2D	CCTO-2R2	CNO522	10TCC-V22
C73	4-20			825-AZ		402	ST554-N	
C74	.005		BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C75	.005		BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C76	10-100					463		
C77	5 NPO		NPO-DI 5.0	DTZ-4R7	CZ601CH5R0D	CCTO-050	CNO547	10TCC-V50
C78	20 NPO		NPO-DI 20	DTZ-20		CCTO-200	CNO422	10TCC-Q20
C79	680 5%		ADM-19-681	CPR-680J	CD19F681J500	DM-15-681	SX368	MS-368
C80	.005		BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C81	.005		BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C82	.005		BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C83	.47 5%		ADM-15-470	CPR-47J	CD10E470J500	DM-10-470	SX447	MS-447
C84	.001		BPD-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C85	.47 5%		ADM-15-470	CPR-47J	CD10E470J500	DM-10-470	SX447	MS-447
C86	.005		BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C87	10 NPO		NPO-DI 10	DTN-10			CNO410	10TCC-Q10
C88	.0033		BPD-0033	DD-332	BYS601ZU332P	CCD-332	B233	5HK-D33
C89	.005		BPD-005	DD-502	BYX601ZU502P	CCD-502	B250	5HK-D50
C90	20 NPO		NPO-DI 20	DTZ-20		CCTO-200	CNO422	10TCC-Q20
C91	390 5%		ADM-15-391	CPR-390J	CD15F391J500	DM-10-391	SX339	MS-339
C92	.470 5%		ADM-15-471	CPR-470J	CD15F470J500	DM-10-471	SX347	MS-347
C93	.0015		BPD-0015	DD-152		CCD-152	B215	5HK-D15
C94	.390 5%		ADM-15-391	CPR-390J	CD15F391J500	DM-10-391	SX339	MS-339
C95	.0015		BPD-0015	DD-152		CCD-152	B215	5HK-D15
C96	.470 5%		ADM-15-471	CPR-470J	CD15F470J500	DM-10-471	SX347	MS-347
C97	.05		BPD-05	DD-503		CCD-503	GP150	5HK-S50
C98	.001 1KV		BPD-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C99	.001 1KV		BPD-001	DD-102	HVX162XP102M	CCD-102	B210	5HK-D10
C100	1mfd 100V				PM2W1	1DP-5-105	PVC11	2WF-M1
C101	.05		BPD-05	DD-503		CCD-503	GP150	5HK-S50
C102	.05		BPD-05	DD-503		CCD-503	GP150	5HK-S50
C103	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C104	.01		BPD-01	DD-103	BYV102ZU103M	CCD-103	B110	5HK-S10
C105	.056 1.6KV					16DP-5-503		
C106	.001		EF-001	MFT-1000		CCF-102	CT280A	
C107	5-20							
C108	2.7-11.2							

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	500K	(101-734-3)	F2-500K, SRS200, BA006, CA005, KR-1	A47-500K-Z, KSS-3, SWE-12 or (NP-500K-Z, UP-C-400, NWE-12)	QCB1 ①, B13-133, TM5, 76-1 or (BU2, CF26, SS1, GC)*	UA55A, SK1000, UA41 or (RU55A, SL41, SK1000, UA41) or (U48, US26)
R2	Squeich	5000Ω	(101-734-1)	F1-5000, SRS200, CA005	A47-5000-S, KSS-3 or (NP-5000-S)	QCB1 ① or (BU2, CF8, SS1, DC)*	UA53L, SK1000 or (RU53L, SL41, SK1000) or (U14)
R3	Modulation Level	1meg	(301-094-1)	F2-1meg, SNK010, AK-38	B47-1meg-Z or (NP-1meg-Z, UP-A-400, TT-2)	B13-137, TM4 or (BU11, CF26, SS8)*	RU16A, SL37, SN1000
R4	Zero Meter Adjust	10K	(301-094-2)	F1-10K, SNK010, AK-38	B47-10K-S or (NP-10K-S, UP-A-400, TT-2)	B11-116, TM4 or (BU11, CF9, SS8)*	RU14L, SL37, SN1000
R5	Meter Adjust	10K	(301-094-2)	F1-10K, SNK010, AK-38	B47-10K-S or (NP-10K-S, UP-A-400, TT-2)	B11-116, TM4 or (BU11, CF9, SS8)*	RU14L, SL37, SN1000

* "SNAPTROL"

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	OLSON PART No.			IRC PART No.	WORKMAN PART No.	OLSON PART No.
R63	300Ω 5W	PW5-300	5W-SQ-300		R66	12Ω 5W	PW5-12	5W-SQ-12.5	
R64	12Ω 5W	PW5-12	5W-SQ-12.5		R67	22Ω 10W	PW10-22	10W-SQ-22.5	
R65	2Ω 5W	PW5-2	5W-SQ-2		R93	1300Ω 5W	PW5-1300	5W-SQ-1250	
					R95	5000Ω 10W	PW10-5000	10W-SQ-5000	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				
		OLSON PART No.	MEISSNER Part No.	MERIT PART No.	MILLER PART No.	WORKMAN PART No.
L1	TVI Trap (1.7uh)		19-1001	BC-562	4804	T856
L2	Antenna					
L3	RF					
L4	Synthesizer Osc.				23A156RPC	

OLSON MODEL RA-590 (SIDE-BANDER II)

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

COILS (RF-IF)(cont)

ITEM No.	USE	REPLACEMENT DATA				
		OLSON PART No.	MEISSNER Part No.	MERIT PART No.	MILLER PART No.	WORKMAN PART No.
L5	Synt. Conv. Cathode	(119-65-19)			23A106RPC	
L6	Synt. Conv. Plate					
L7	1st Mixer					
L8	RFC (14uh)				72F155AP	
L9	2nd Rec. Osc.	(119-65-16)	16-6752	BC-350	4204	T604
L10	1st IF				12-H1	
L11	2nd IF				12-H2	
L12	3rd IF				12-H2	
L13	Trans. Osc. Cathode	(119-65-16)	16-6754	BC-351	4201-A	T605
L14	Trans. Osc. Coupling					
L15	Buffer Plate					
L16	RFC (220uh)				72F224AP	
L17	RFC (220uh)	19-3250	19-3250	BC-673	72F224AP	T852
L18	RFC (220uh)				72F224AP	
L19	RFC (220uh)				72F224AP	
L20	PI Network				72F224AP	
L21	PI Network	19-3250	19-3250	BC-673	72F224AP	T852
L22	RFC (220uh)					
L23	Hash Filter (80uh)					

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
				OLSON PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	117VAC @ .77A ▲ (or) 12.6V @ 2.8A DC	240VAC @ .12A DC	12.6V @ 3.1A	(500-553-1)					▲ Transmit

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
			OLSON PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	11000Ω CT	3-4Ω	(500-552-1)					
		SEC. 2						
		540Ω DC Resistance						

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA			NOTES
				OLSON PART No.	JENSEN PART No.	QUAM PART No.	
SP1	3"	PM	3-4Ω		P3W3	30A05	

FUSE DEVICES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
F1	3AG	1 1/2A 250V			312001.5	342001	AGC 1 1/2	HKP

MISCELLANEOUS

ITEM No.	PART NAME	OLSON PART No.	NOTES
K1	Relay		Transmit/Receive
M2	Crystal		11100.00KC
M3	Crystal		11050.00KC
M4	Crystal		11000.00KC
M5	Crystal		10950.00KC
M6	Crystal		10900KC
M7	Crystal		10850.00KC
M8	Crystal		8855KC
M9	Crystal		8835KC
M10	Crystal		8825KC
M11	Crystal		8815KC
M12	Crystal		7.5MC, Receive
M13	Crystal		7.5MC, Transmit
M14	Microphone Ass'y.		Ceramic
M15	"S" Meter		
M16	Trans. Meter		
S1	Switch		Channel Selector (Rotary)
S2	Switch		ANL (DPDT)

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. 8497 3 Conductor-1 Shielded for Press-to-Talk (Neoprene)
 8496 3 Conductor-1 Shielded for Press-to-Talk (Vinyl)
 Ignition Noise Suppression Use BELDEN No. 7300-Series Spark-Plug Sets
 Bonding Strap Use BELDEN No. 8861 (3/8 In.)