

SAMS PHOTOFACT[®] CB RADIO SERIES



CB-33
33
APRIL 1971

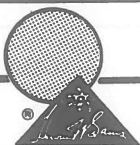


51
CONTENTS

TRADE NAME AND MODEL	PAGE	TRADE NAME AND MODEL	PAGE	TRADE NAME AND MODEL	PAGE
B & K		LAFAYETTE		REGENCY	
Cobra 25.....	5	Comstat 25B (99-32146WX).....	51	Imperial II (CB-254).....	79
CLARICON		PEARCE-SIMPSON		SBE	
15-600.....	27	Bobcat 23.....	65	SBE-6CB.....	93
COURIER					
Ranger 23.....	39				

*Naples
St Peters FLA*

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



PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index

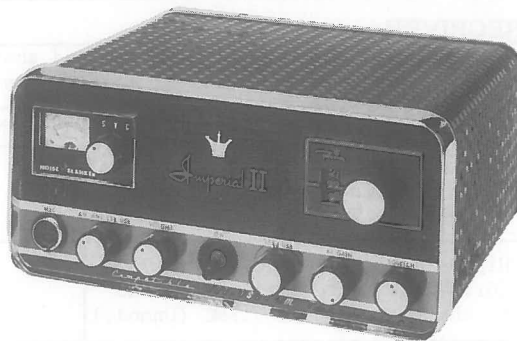
NOTE

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, SUBPARTS C & D.)

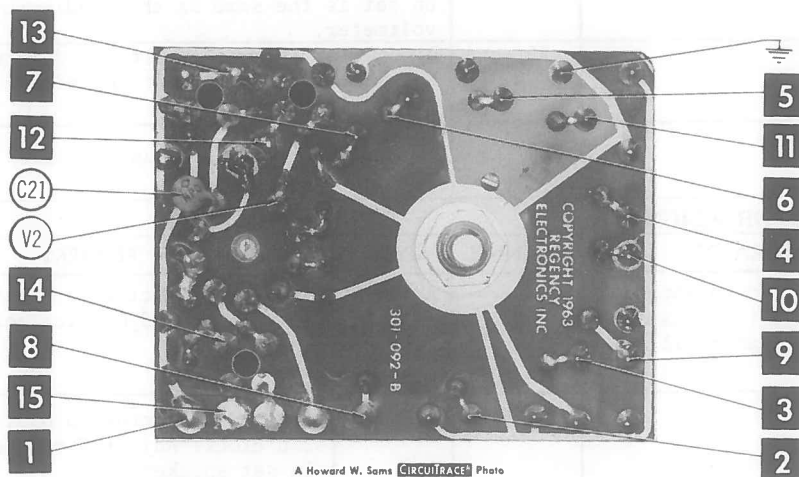
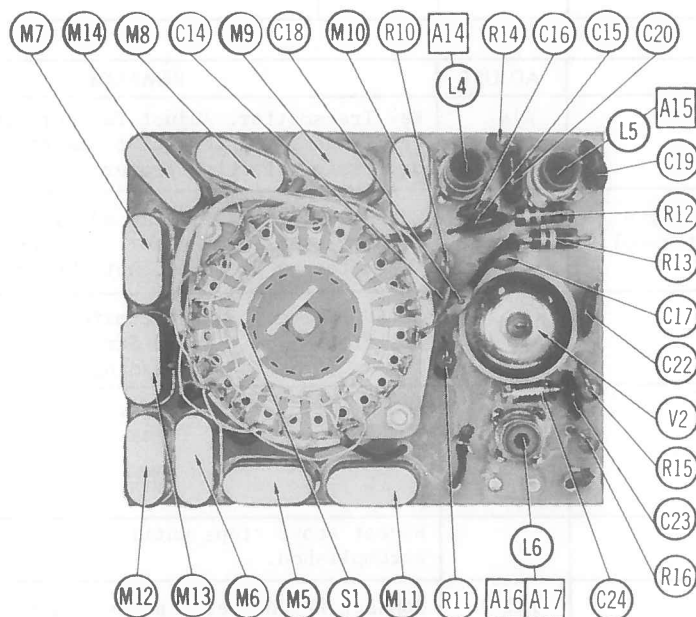
The frequency of the transmitter should be checked periodically with a secondary frequency standard to insure proper and legal operation.

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 50-ohm dummy load or the normally used antenna system.



MODEL IMPERIAL II (CB-254)



A Howard W. Sams CIRCUITRACE[®] Photo

REGENCY MODEL IMPERIAL II

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

© 1971 Howard W. Sams & Co., Inc. Printed in U. S. of America 1CY006

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A1 thru A10	GENERAL CEMENT #5097, 8727
A11 thru A22, A26	#8606, 8606L, 8869
A24, A25, A27	#8606, 8606L

RECEIVER

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

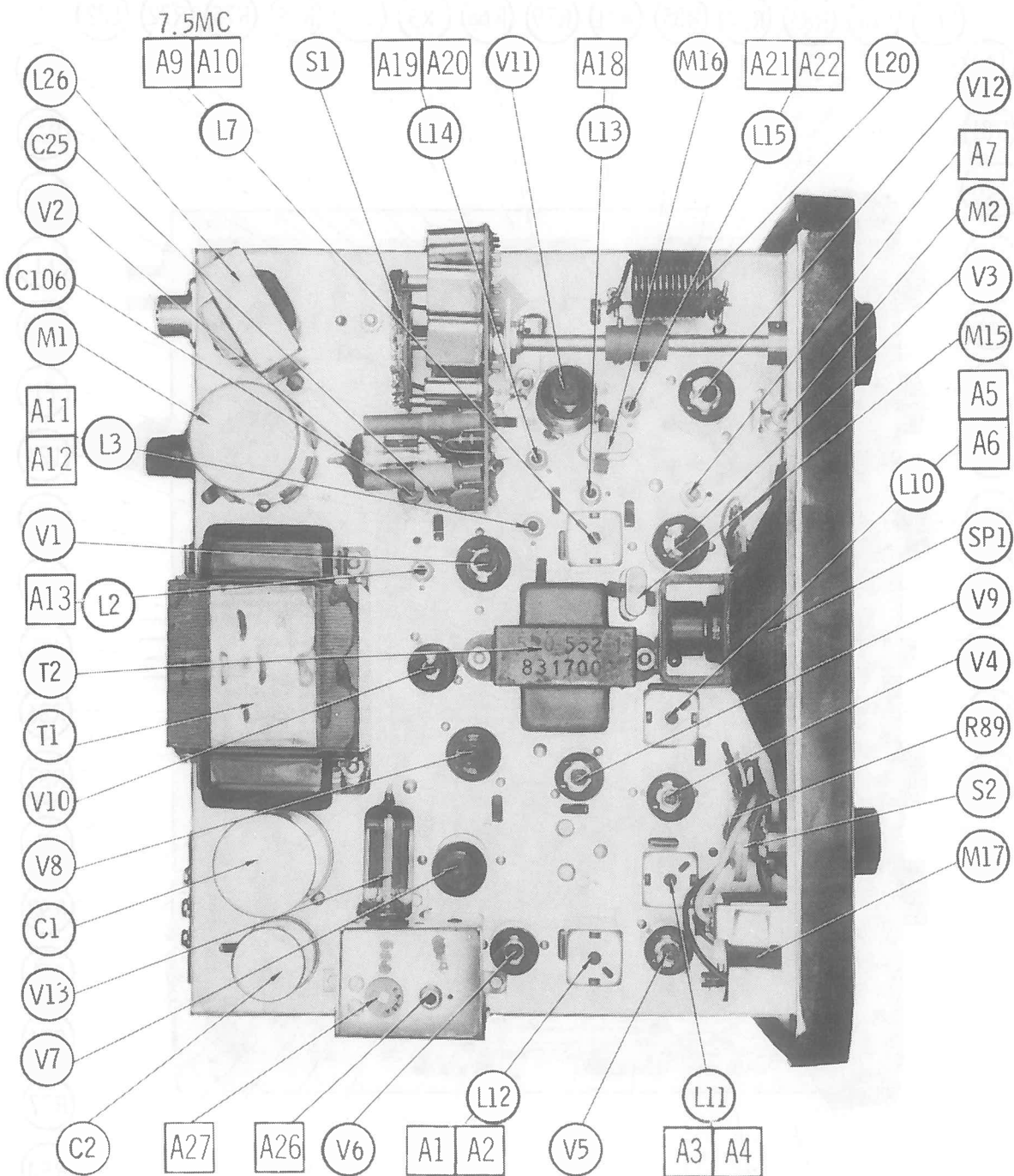
SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to Pin 2 (Grid) V3 (2nd Mixer). Low side to chassis. Tune to 262KC (Unmod.)	Any	A1 thru A6	Adjust for maximum deflection.
High side thru .01mfd to Pin 7 (Grid) V1B (1st Mixer). Low side to chassis. Tune to 7.5MC (Unmod.)	Any	A7 thru A10	"
High side thru .01mfd to antenna receptacle. Low side to chassis. Tune to 27.08MC (Channel 11) (Unmod.).	11	A11 thru A17	"

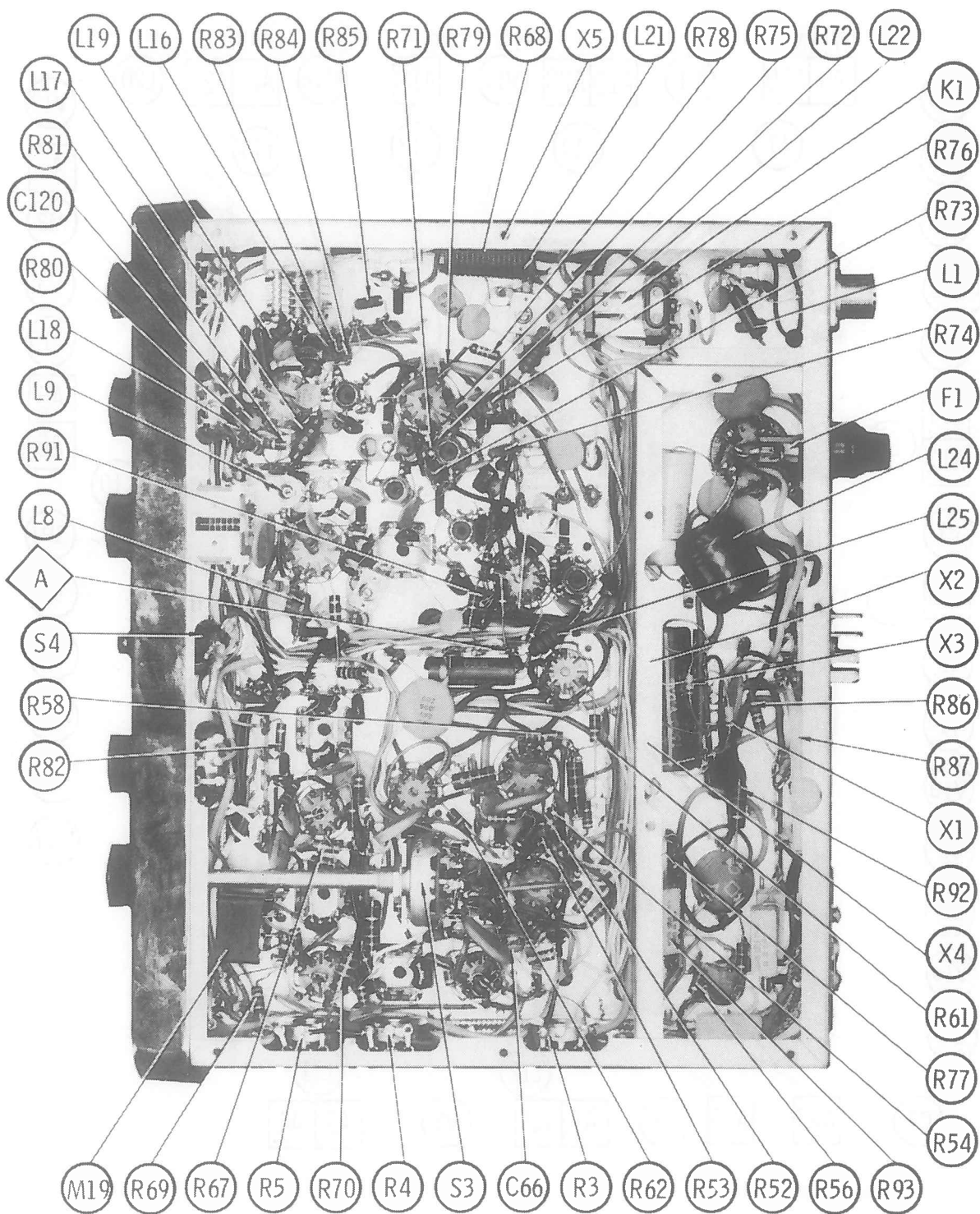
TRANSMITTER

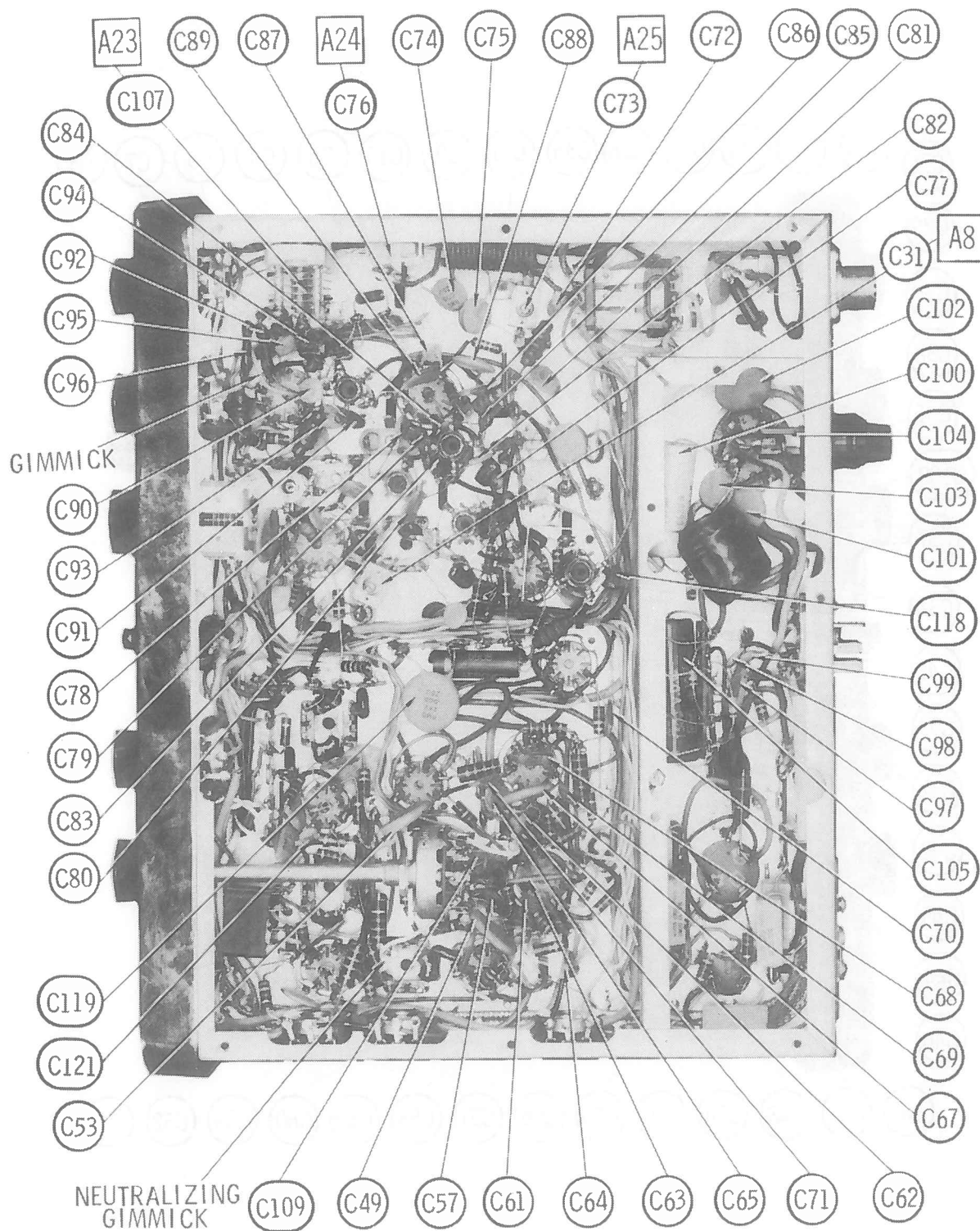
INDICATOR	ADJUST	REMARKS															
Accurate Frequency Meter	A14 thru A18	Key Transmitter. Adjust for correct frequency. Key Transmitter several times to ensure oscillator starting properly.															
RF Wattmeter or Field Strength Meter, and meter on front panel.	A19 thru	Correct R.F. Transmitter adjustment will be accomplished for the following Front Panel, RF Wattmeter or Field Strength Meter Readings:															
		<table border="1"> <thead> <tr> <th>S2(SVC Switch) Position</th> <th>RF Wattmeter or Field Strength Reading</th> <th>Front Panel Meter Reading</th> </tr> </thead> <tbody> <tr> <td>S</td> <td>Max.</td> <td>Max.</td> </tr> <tr> <td>V</td> <td>Max.</td> <td>170-190</td> </tr> <tr> <td></td> <td></td> <td>(Bottom Scale X10)</td> </tr> <tr> <td>C</td> <td>Max.</td> <td>15-18ma (Max.)</td> </tr> </tbody> </table>	S2(SVC Switch) Position	RF Wattmeter or Field Strength Reading	Front Panel Meter Reading	S	Max.	Max.	V	Max.	170-190			(Bottom Scale X10)	C	Max.	15-18ma (Max.)
S2(SVC Switch) Position	RF Wattmeter or Field Strength Reading	Front Panel Meter Reading															
S	Max.	Max.															
V	Max.	170-190															
		(Bottom Scale X10)															
C	Max.	15-18ma (Max.)															
		Repeat above steps until optimum performance is accomplished.															
RF Voltmeter	A25	Connect RF Voltmeter across dummy load. Put S2 (SVC Switch) in "S" position. Key Transmitter and adjust A25 until meter reading on set is the same as the reading on the RF voltmeter.															
Front Panel Meter	R5	Disconnect Antenna. Short L20 directly to chassis. Key Transmitter and adjust for zero on panel meter.															
Front Panel Meter	R4	Disconnect Antenna. Adjust for zero on panel meter.															

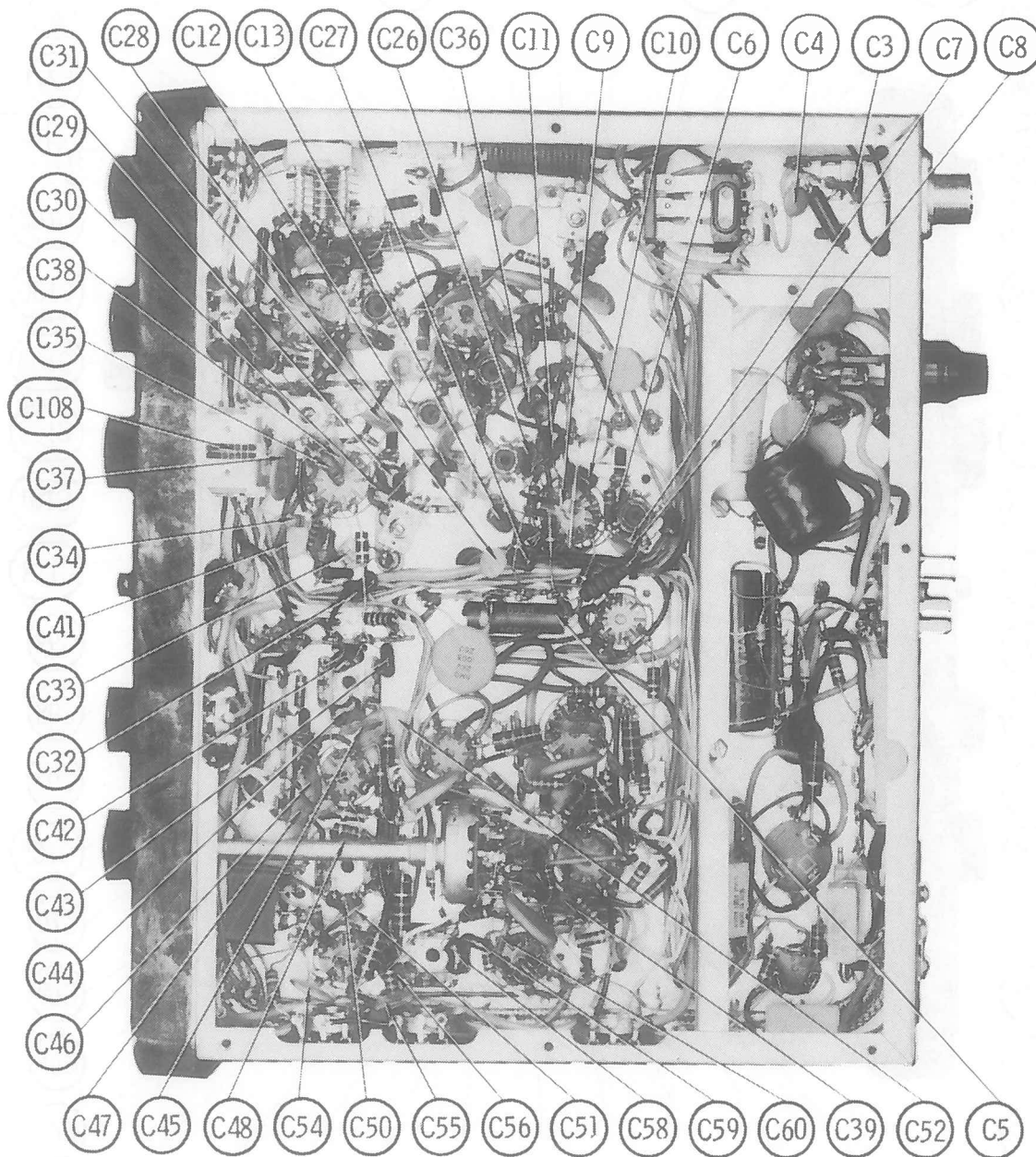
PRODUCT DETECTOR ALIGNMENT

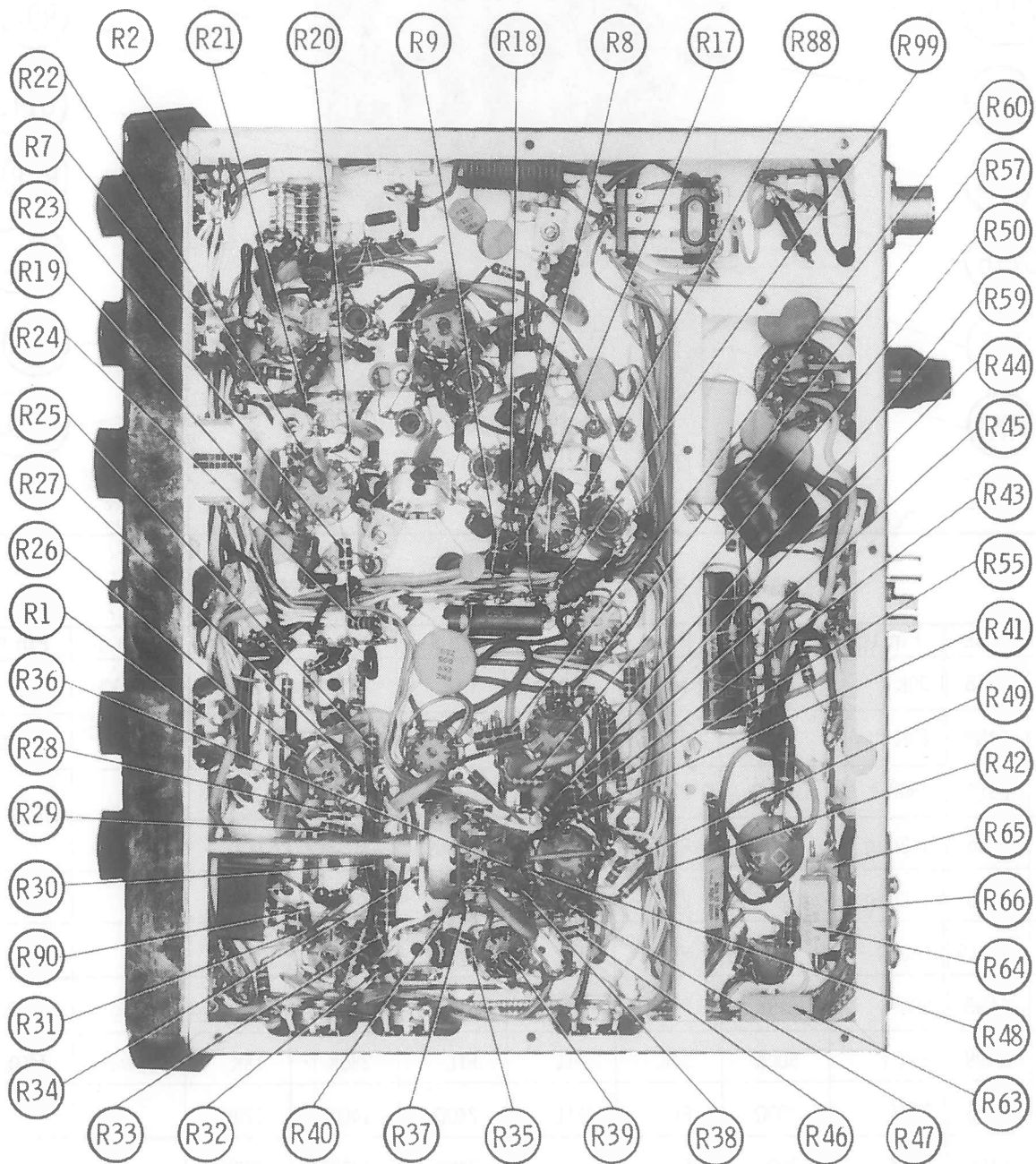
SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to antenna connector, low side to chassis. Tune to 27.085MC (Channel 11), (Unmodulated).	11	A26	Set Mode Selector to LSB, R/VFO to 10 o'clock. Adjust for zero (0) beat in speaker
"	11	A27	Set Mode Selector to USB, R/RVO to 2 o'clock. Adjust for zero (0) beat in set speaker.
High side thru .01 to Pin 1 (V5) 2nd IF Amp. Low side to chassis. Tune to 262.5KC (400 cycles Mod.)	Any	R6	Adjust for MINIMUM Audio.

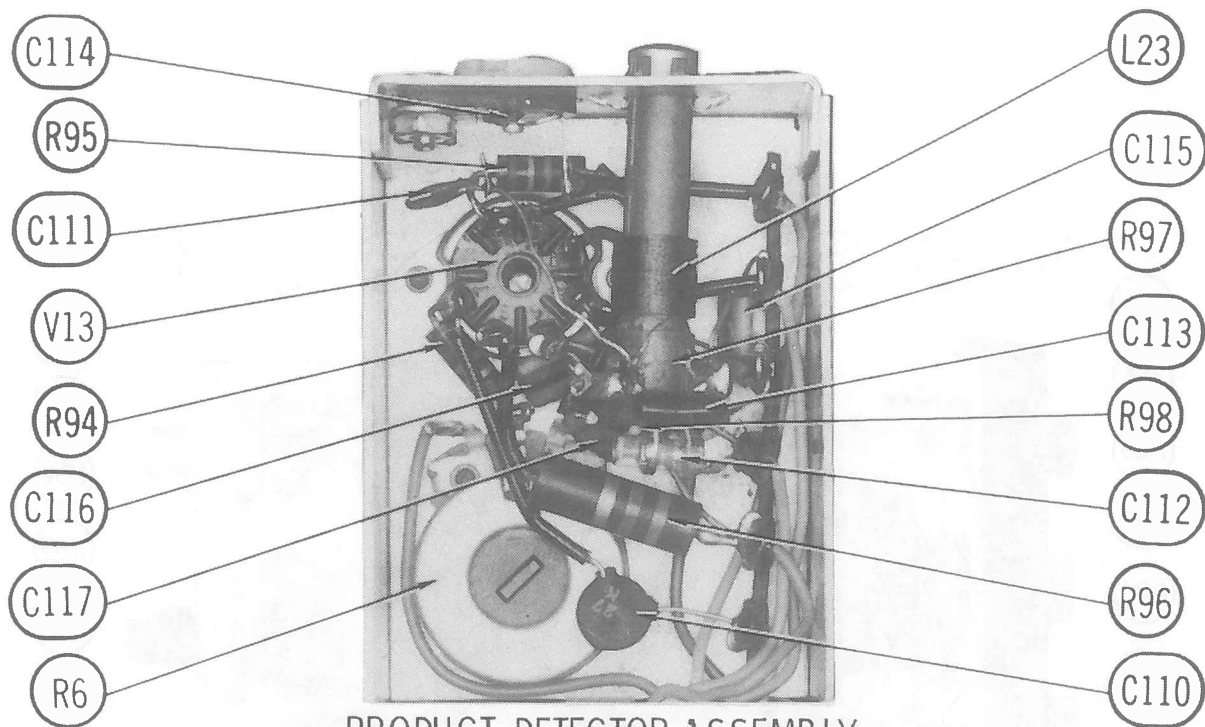












PRODUCT DETECTOR ASSEMBLY

RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6ES8	30K †	470K	100Ω	FIL	FIL	34K	2.2meg	1000Ω	
V2	6AN8	23K †	100K	2200Ω	FIL	FIL	2300Ω †	40K †	100K	1800Ω
V3	6BC8	350K †	1.6Ω	2200Ω	FIL	FIL	15K †	100K	0Ω	
V4	6BJ6	1.2meg	220Ω	FIL	FIL	6000Ω †	40K †	0Ω		
V5	6BJ6	1.2meg	1N	FIL	FIL	6000Ω †	40K †	0Ω		
V6	12AL5	6800Ω	470K	FIL	FIL	2meg	0Ω	300K		
V7	6AN8	500K	950K	2500Ω*	FIL	FIL	480K †	1.5meg†	4meg	4700Ω
V8	6AN8	36K †	500K	34K	FIL	FIL	280K †	18K	1.4meg	3400Ω
V9	6AQ5	270K	300Ω	FIL	FIL	260Ω †	1400Ω †	270K		
V10	6AQ5	270K	300Ω	FIL	FIL	260Ω †	1400Ω †	270K		
V11	6AN8	16K †	100K	2700Ω▲	FIL	FIL	2400Ω †	21K	22K	270Ω▲
V12	12BH7A	10K †	2400Ω#	FIL	FIL	550Ω#	22K †	10K †	NC	
V13	12BE6	18K	400Ω	FIL	FIL	54K †	36K †	10K		
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9

* VARIES WITH SETTING OF R2.

† MEASURED FROM JUNCTION OF X3 & X4.

MEASURED FROM PIN 4 of K1.

▲ MEASURED FROM PIN 5 of K1.

PARTS LIST AND DESCRIPTION

WIRING DATA

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

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.)

TUBES

AMPEREX			GENERAL ELECTRIC			RCA			SYLVANIA		
ITEM No.	USE		TYPE			ITEM No.	USE		TYPE		
V1	RF Amp - 1st Rec. Mixer		6ES8			V7	Squelch Amp. - Speech Amp		6AN8		
V2	Synthesizer Oscillator - Converter		6AN8			V8	AF Amp - Phase Inverter		6AN8		
V3	2nd Rec Mixer-Rec Oscillator		6BC8			V9	Output - Modulator		6AQ5		
V4	1st IF Amp		6BJ6			V10	Output - Modulator		6AQ5		
V5	2nd IF Amp		6BJ6			V11	2nd Xmtr Osc - Buffer		6AN8		
V6	Det - Noise Limiter		12AL5			V12	Final Amp		12BH7A		
						V13	Product Detector		12BE6		

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFR. PART OR TYPE No.	REPLACEMENT DATA				NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RCA PART No.	SYLVANIA PART No.	
X1	(ED3006)	GE-600 (1) or GE-504A	18DB6A (1) or 8D6	SK3017A or SK3032	ECG 169 (1) or ECG 116	(1) Single Unit Replacement for X1 thru X4.
X2	(ED3006)	GE-600 (1) or GE-504A	18DB6A (1) or 8D6	SK3017A or SK3032	ECG 169 (1) or ECG 116	
X3	(ED3006)	GE-600 (1) or GE-504A	18DB6A (1) or 8D6	SK3017A or SK3032	ECG 169 (1) or ECG 116	
X4	(ED3006)	GE-600 (1) or GE-504A	18DB6A (1) or 8D6	SK3017A or SK3032	ECG 169 (1) or ECG 116	
X5	1N34A	1N34AS	1N34A	1N34A	ECG 109	

ELECTROLYTIC CAPACITORS

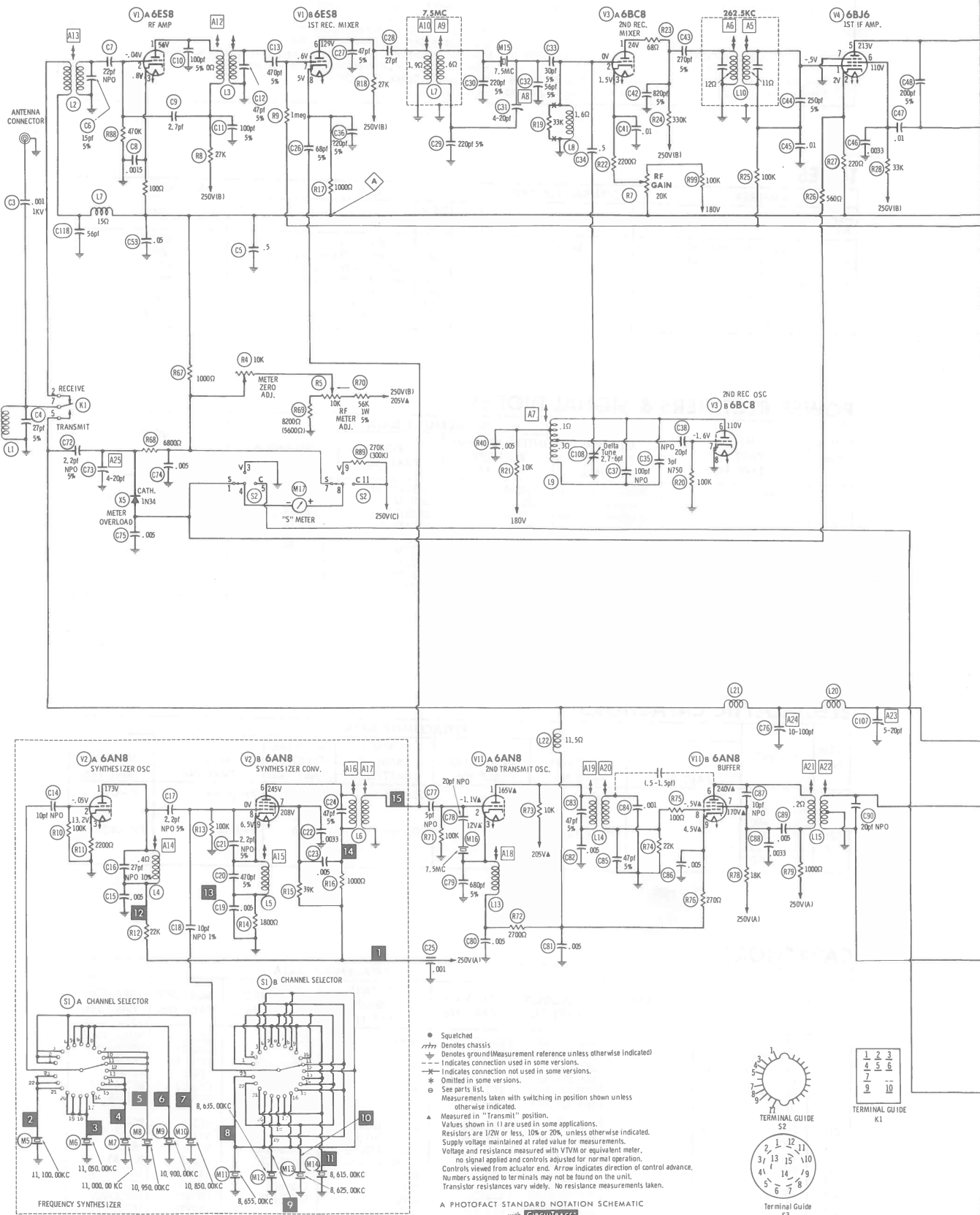
ITEM No.	RATING	REPLACEMENT DATA					
		PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	SPRAGUE PART No.
C1a	40 450V		AFH3-43		CC0410A	XC3-15	FP376.8A
b	40 450V						
c	10 450V						
C2a	30 350V		AFH3-169-50		CC0830A	XC3-28.1	FP331A
b	20 25V						
c	30 300V						

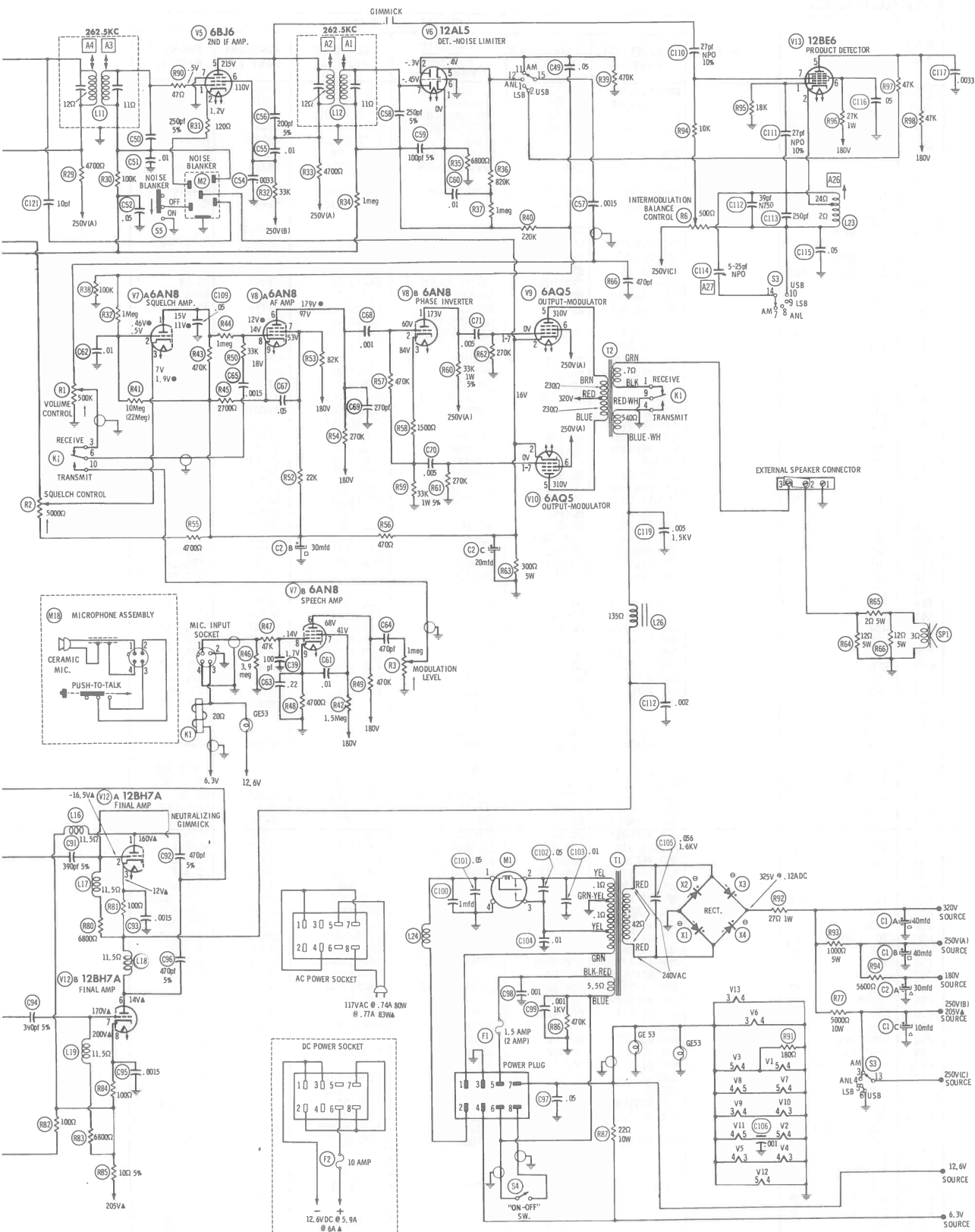
CAPACITORS

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		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C4	27 NPO	5%		TCZ-27			CN0427	10TCC-Q27
C5	.47 200V	10%	DBE2P47		2P47	2DP-5-474	PVC2047	2PS-P47
C6	15	5%	ADM-15-150			DM-15-150J	SX415	MS-415
C7	22 NPO	10%	NPO-DI 22	DTZ-22	NP022	CCT0-220	CN0422	10TCC-Q22
C8	.0015		GPD X5F152K	DD-152		CCD-152	GP215	10TS-D15
C9	2.7	10%						
C10	100	5%	ADM-15-101	CPR-100J	CD15FD101J03	DM-15-101	SX310	MS-31
C11	100	5%	ADM-15-101	CPR-100J	CD15FD101J03	DM-15-101	SX310	MS-31
C12	47	5%	ADM-15-470	CPR-47J	CD15ED470J03	DM-15-470	SX447	MS-447
C13	470	5%	ADM-15-471	CPR-470J	CD15FD471J03	DM-15-471	SX347	MS-347
C14	10 NPO	10%	NPO-DI 10	DTZ-10	NP010	CCT0-100	CN0410	10TCC-Q10
C15	.005		GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C16	27 NPO	10%		TCZ-27	NP027	CCT0-270	CN0427	10TCC-Q27
C17	2.2 NPO	10%	NPO-DI 2.2	DTZ-2R2	NP02P2		CN0522	10TCC-V22
C18	10 NPO	10%	NPO-DI 10	DTZ-10	NP010		CN0410	10TCC-Q10
C19	.005		GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C20	470	5%	ADM-15-471	CPR-470J	CD15FD471J03	CM-15-471	SX347	MS-347
C21	2.2 NPO	10%	NPO-DI 2.2	DTZ-2R2	NP02P2		CN0522	10TCC-V22
C22	.0033		GPD X5R332K	DD-332	GP3300	CCD-332	JF233	10TS-D33
C23	.005		GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50

(CONTINUED ON PAGE 90)

REGENCY MODEL IMPERIAL II





REGENCY MODEL IMPERIAL II

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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.
C24	47	5%		ADM-15-470	CPR-47J	CD15ED470J03	DM-15-470	SX447	MS-447
C25	.001			GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C26	68	5%		ADM-15-680	CPR-68J	CD15ED680J03	DM-15-680	SX468	MS-468
C27	47	5%		ADM-15-470	CPR-47J	CD15ED470J03	DM-15-470	SX447	MS-447
C28	27 NPO	10%			TCZ-27	NP027	CCTO-270	CN0427	10TCC-Q27
C29	220	5%		ADM-15-221	CPR-220J	CD15FD221J03	DM-15-221	SX322	MS-322
C30	220	5%		ADM-15-221	CPR-220J	CD15FD221J03	DM-15-221	SX322	MS-322
C31	4-20								
C32	56	5%		ADM-15-560	CPR-56J	CD15ED560J03	DM-15-560	SX456	MS-456
C33	30	5%		ADM-15-300	CPR-30J		DM-15-300	SX430	MS-43
C34	.5pf	10%							
C35	3 N750				TCN-3R3			CN7533	
C36	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C37	100 NPO			NPO-DI 100	DTZ-100	NP0100	CCTO-101	CN0310	10TCC-T10
C38	20 NPO	10%		NPO-DI 20	DTZ-20	NP020	CCTO-200	CN0420	10TCC-Q20
C39	100	5%		ADM-15-101	CPR-100J	CD15FD101J03	DM-15-101	SX310	MS-31
C40	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C41	.01			GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C42	820	5%		ADM-20-821		CD19FD821J03	DM-19-821	SX382	MS-382
C43	270	5%		ADM-15-271	CPR-270J	CD15FD271J03	DM-15-271	SX327	MS-327
C44	250	5%		ADM-15-251			DM-15-251		MS-325
C45	.01			GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C46	.0033			GPD X5R332K	DD-332	GP3300	CCD-332	JF233	10TS-D33
C47	.01			GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C48	200	5%		ADM-15-201	CPR-200J	CD15FD201J03	DM-15-201	SX320	MS-32
C49	.05			DBE6S5		DPMS6S5	6DP-3-503	PVC615	6PS-S50
C50	250	5%		ADM-15-251			DM-15-251		MS-325
C51	.01			GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C52	.01			GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C53	.05			DBE6S5		DPMS6S5	6DP-3-503	PVC615	6PS-S50
C54	.0033			GPD X5R332K	DD-332	GP3300	CCD-332	JF233	10TS-D33
C55	.01			GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C56	200	5%		ADM-15-201	CPR-200J	CD15FD201J03	DM-15-201	SX320	MS-32
C57	.0015			GPD X5F152K	DD-152		CCD-152	GP215	10TS-D15
C58	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C59	100	5%		ADM-15-101	CPR-100J	CD15FD101J03	DM-15-101	SX310	MS-31
C60	.01			GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C61	.01			GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C62	.01			GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C63	.22 25V								
C64	470			GPD X5F471K	DD-471	GP470	CCD-471	GP347	10TS-T47
C65	.0015			GPD X5F152K	DD-152		CCD-152	GP215	10TS-D15
C66	470			GPD X5F471K	DD-471	GP470	CCD-471	GP347	10TS-T47
C67	.05			DBE6S5		DPMS6S5	6DP-3-503	PVC615	6PS-S50
C68	.001			GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C69	270			GPD X5F271K	DD-271	GP270	CCD-271	GP327	10TS-T27
C70	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C71	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C72	2.2 NPO			NPO-DI 2.2	DTZ-2R2	NP02P2		CN0522	10TCC-V22
C73	4-20								
C74	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C75	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C76	10-100		#101-732						
C77	5 NPO 200V			NPO-DI 5.0		NP05			10TCC-V50
C78	20 NPO	10%		NPO-DI 20	DTZ-20	NP020	CCTO-200	CN0420	10TCC-Q20
C79	680	5%		ADM-20-681	CPR-680J	CD19FD681J03	DM-16-681	SX368	MS-368
C80	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C81	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C82	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C83	47	5%		ADM-15-470	CPR-47J	CD15ED470J03	DM-15-470	SX447	MS-447
C84	.001			GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C85	47	5%		ADM-15-470	CPR-47J	CD15ED470J03	DM-15-470	SX447	MS-447
C86	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C87	10 NPO	10%		NPO-DI 10	DTZ-10	NP010	CCTO-100	CN0410	10TCC-Q10
C88	.0033			GPD X5R332K	DD-332	GP3300	CCD-332	JF233	10TS-D33
C89	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C90	20 NPO	10%		NPO-DI 20	DTZ-20	NP020	CCTO-200	CN0420	10TCC-Q20
C91	390	5%		ADM-15-391	CPR-390J	CD15FD391J03	DM-15-391	SX339	MS-339
C92	470			ADM-15-471	CPR-470J	CD15FD471J03	DM-15-471	SX347	MS-347
C93	.0015			GPD X5F152K	DD-152		CCD-152	GP215	10TS-D15
C94	390	5%		ADM-15-391	CPR-390J	CD15FD391J03	DM-15-391	SX339	MS-339
C95	.0015			GPD X5F152K	DD-152		CCD-152	GP215	10TS-D15
C96	470	5%		ADM-15-471	CPR-470J	CD15FD471J03	DM-15-471	SX347	MS-347
C97	.05			DBE6S5		DPMS6S5	6DP-3-503	PVC615	6PS-S50
C98	.001 1KV			GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C99	.001 1KV			GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C100	1 200V 10%			NPO-DI 1.0	TCZ-1			CN0510	10TCC-V10
C101	.05			DBE6S5		DPMS6S5	6DP-3-503	PVC615	6PS-S50
C102	.05			DBE6S5		DPMS6S5	6DP-3-503	PVC615	6PS-S50
C103	.01			GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C104	.01			GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C105	.056 1600V 10%					PKM-16S5	16DP-5-503	PVC1615	16PS-S50
C106	.001			GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C107	5-20								
C108	2.7-6.2								
C109	.05			DBE6S5		DPMS6S5	6DP-3-503	PVC615	6PS-S50
C110	27 NPO	10%			TCZ-27			CN0427	10TCC-Q27
C111	27 NPO	10%			TCZ-27			CN0427	10TCC-Q27
C112	39 N750				TCN-39			CN7439	10TCU-Q39
C113	250	5%		ADM-15-251					MS-325
C114	5-25 NPO								
C115	.05			DBE6S5		DPMS6S5	6DP-3-503	PVC615	6PS-S50
C116	.05			DBE6S5		DPMS6S5	6DP-3-503	PVC615	6PS-S50
C117	.0033			GPD X5R332K	DD-332	GP3300	CCD-332	JF233	10TS-D33
C118	56			ADM-15-560	CPR-56J		DM-15-560	SX456	MS-456
C119	.005 2KV				DD30-502		3CCD-502		30GA-D50
C120	.002			GPD X5F202K	DD-202	GP2000	CCD-202	GP220	10TS-D20
C121	10			NPO-DI 10	DTZ-10	NP010	CCTO-100	CN0410	10TCC-Q10

Regency Part Number.

PARTS LIST AND DESCRIPTION (CONTINUED)

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

CONTROLS (All wattages 1/2 watt, or less, unless listed)

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume	500K	101-734-2	F2-500K, SSK104, BA006, CA005	A47-500K-Z, KSS-3 or [NP-500K-Z, UP-B-400]	QCB1(1), B13-133, TM5 or [BU2, CF25, SS1, DC1]*	UA55A, SK1000 or [RU55A, SL39, SK1000] or R48
R2	Squelch	5000	101-734-1	F1-5000, SSK104, BA006, CA005	A47-5000-S, KSS-3 or [NP-5000-S, UP-B-400]	QCB1(1), B11-114, TM5 or [BU2, CF8, SS1, DC1]*	UA53L, SK1000 or [RU53L, SL39, SK1000] or U14
R3	Microphone Level	1meg	301-094-1	F2-1meg, SNK010, AK-38	B47-1meg-Z or [NP-1meg-Z, NML-A-300, TT-2]	B13-137, TM4 or [BU11, CF26, SS6]*	RU16A, SL37, SN281
R4	Meter Zero Adjust	10K	301-094-2	F1-10K, SNK010, AK-38 or TT-14	B47-10K-S or [NP-10K-S, NML-A-300, TT-2]	B11-116, TM4 or [BU11, CF9, SS6]*	RU14L, SL37, SN281
R5	Meter Adjust	10K	301-094-2	F1-10K, SNK010, AK-38 or TT-14	B47-10K-S or [NP-10K-S, NML-A-300, TT-2]	B11-116, TM4 or [BU11, CF9, SS6]*	RU14L, SL37, SN281
R6	Intermodulation Adjust	500	301-094-3	F1-500, SNK010, AK-38 or TT-4	B47-500-S or [NP-500-S, NML-A-300, TT-2]	B11-103, TM4 or [BU11, CF4, SS6]*	TA52L or [RU52L, SL37, SN281] or [UA52L, SL37, SN281]
R7	RF Gain	20K	102-303-3	F3-25K, SSK104, BA006, CA005	A47-25K-V, KSS-3	QCB1 (1), B17-119, TM5 or [BU2, CF89, SS1, DC1]*	UA253R, SK1000 or [RU253R, SL39, SK1000] or U28

* "SNAPTROL"

(1) Use QCB1 Bushing instead of Tab Mount Plate in TM5 Kit.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.			WORKMAN PART No.	MFGR. PART No.
R63	300 5W	5W-SQ-300		R77	5000 10W	10W-SQ-5000	
R64	12 5W	5W-SQ-12.5		R87	22 10W	10W-SQ-22.5	
R65	2 5W	5W-SQ-2		R93	1000 5W	5W-SQ-1000	
R66	12 5W	5W-SQ-12.5					

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	TVI Trap (1.3uh)	300-303-2	19-1001	74F156AP	T856
L2	Antenna Input	101-760			
L3	RF Amp	301-106			
L4	Synthesizer Oscillator	101-757			
L5	Synthesizer Conv. Cathode	101-756		26A106RPC	
L6	Synthesizer Conv. Plate	301-109			
L7	1st Receive Mixer	(B119-69-15)			
L8	RFC (14uh)	101-802-1		72F155AP	
L9	2nd Receive Oscillator	102-396		4204	
L10	Input IF	(B119-69-02)	16-6752	14-H1	T604
L11	Interstage IF	(B119-69-02)	16-6752	14-H1	T604
L12	Output IF	(B119-69-02)	16-6754	14-H2	T605
L13	Xmtr Oscillator Cathode	101-755		4201-A	
L14	Xmtr Oscillator Coupling	301-107			
L15	Buffer Plate	301-108			
L16	RFC (220uh)	101-379-1	19-3250	72F224AP	T852
L17	RFC (220uh)	101-379-1	19-3250	72F224AP	T852
L18	RFC (220uh)	101-379-1	19-3250	72F224AP	T852
L19	RFC (220uh)	101-379-1	19-3250	72F224AP	T852
L20	Pi Network	101-753			
L21	Pi Network	101-754			
L22	RFC (220uh)	101-379-1	19-3250	72F224AP	T852
L23	Product Detector	102-259			
L24	Hash Filter (80uh)	101-771		5248	
L25	RFC (220mh)	101-379-1	19-3250	72F224AP	T852

FILTER (Audio)

ITEM No.	RATINGS			REPLACEMENT DATA				NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L26		135	1.2H	301-533		TR147		

TRANSFORMER (Power)

ITEM No.	RATING			REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	117VAC @ .77A* 12.6VDC @ .6A*	240VAC @ .12A DC	12.6V AC @ 3.1A	500-533-1				* Transmit

REGENCY MODEL IMPERIAL II

PARTS LIST AND DESCRIPTION (CONTINUED)

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

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	11000 CT	4	500-552				
		SEC. 2 540 DC Resistance					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	3" x 5" PM, 4 ohms	301-102	35A05	

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA							
		PART No.		BUSS PART No.		LITTELFUSE PART No.		WORKMAN PART No.	
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	
F1	3AG 1.5A 250V			AGC 1-1/2	HKP	31201.5		342012	
F2	3AG 10A 32V		101-766-1 & 101-766-2	AGC 10	HHJ	311010		150145	

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
K1	Relay	301-097-2	Receive - Transmit
M1	Vibrator		Mallory G1501
M2	Noise Blanking Assembly	500-845	
M5	Crystal	301-087-11	11,100KC Channels 21, 22, 23
M6	Crystal	301-087-10	11,050KC Channels 17, 18, 19, 20
M7	Crystal	301-087-9	11,000KC Channels 13, 14, 15, 16
M8	Crystal	301-087-8	10,950KC Channels 9, 10, 11, 12
M9	Crystal	301-087-7	10,900KC Channels 5, 6, 7, 8
M10	Crystal	301-087-6	10,850KC Channels 1, 2, 3, 4
M11	Crystal	301-087-5	8,655KC Channels 4, 8, 12, 16, 20, 23
M12	Crystal	301-087-4	8,635KC Channels 3, 7, 11, 15, 19
M13	Crystal	301-087-3	8,625KC Channels 2, 6, 10, 14, 18, 22
M14	Crystal	301-087-2	8,615KC Channels 1, 5, 9, 13, 17, 21
M15	Crystal	301-088-1	7,500KC (Red Dot)
M16	Crystal	301-087-1	7,500KC
M17	Meter	301-150-1	0-1ma
S1	Switch	301-090	Channel Selector
S2	Switch	301-098	Meter Selector
S3	Switch	102-260	Mode Selector
S4	Switch	AA-252	On-Off
S5	Switch	102-370	Noise Blanking
	Power Cord, DC	101-768	
	Power Cord, AC	101-767	

MICROPHONE

ITEM No.	REPLACEMENT DATA			REMARKS
	MFGR. PART No.	RCA REPLACEMENT	RCA STEP UP REPLACEMENT	
M18	Turner #365	HK-107	HK-101 (1), HK-113 (1)	(1) For base station use.

CABINETS & CABINET PARTS (When ordering specify model, chassis & color)

ITEM	PART No.	ITEM	PART No.
Knob, Selector	27000-75	Escutcheon, Selector	102-085-2
Knob, Squelch/Volume/Meter Switch	102-269-2	Escutcheon, Meter	102-084-2
Knob, USB/LSB/AM/1/AM/R/VFO, Final	102-269-1	Dial Assembly, Selector	301-105-5
Knob, USB/LSB	102-269-3	Front Panel	600-209-2



PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index

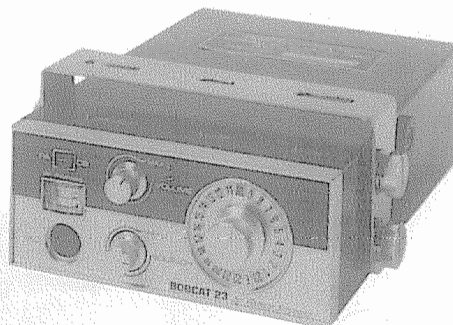
NOTE

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, SUBPARTS C & D.)

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 50-ohm dummy load or the normally used antenna system.



MODEL BOBCAT 23

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

GENERAL CEMENT

A1 thru A4, A12, A13, A14#8868, 9089

A5 thru A11#8606L, 9440

PEARCE-SIMPSON MODEL BOBCAT 23

RECEIVER

Connect an AC VTVM across speaker voice coil. Set Volume control fully clockwise and Squelch control fully counterclockwise.

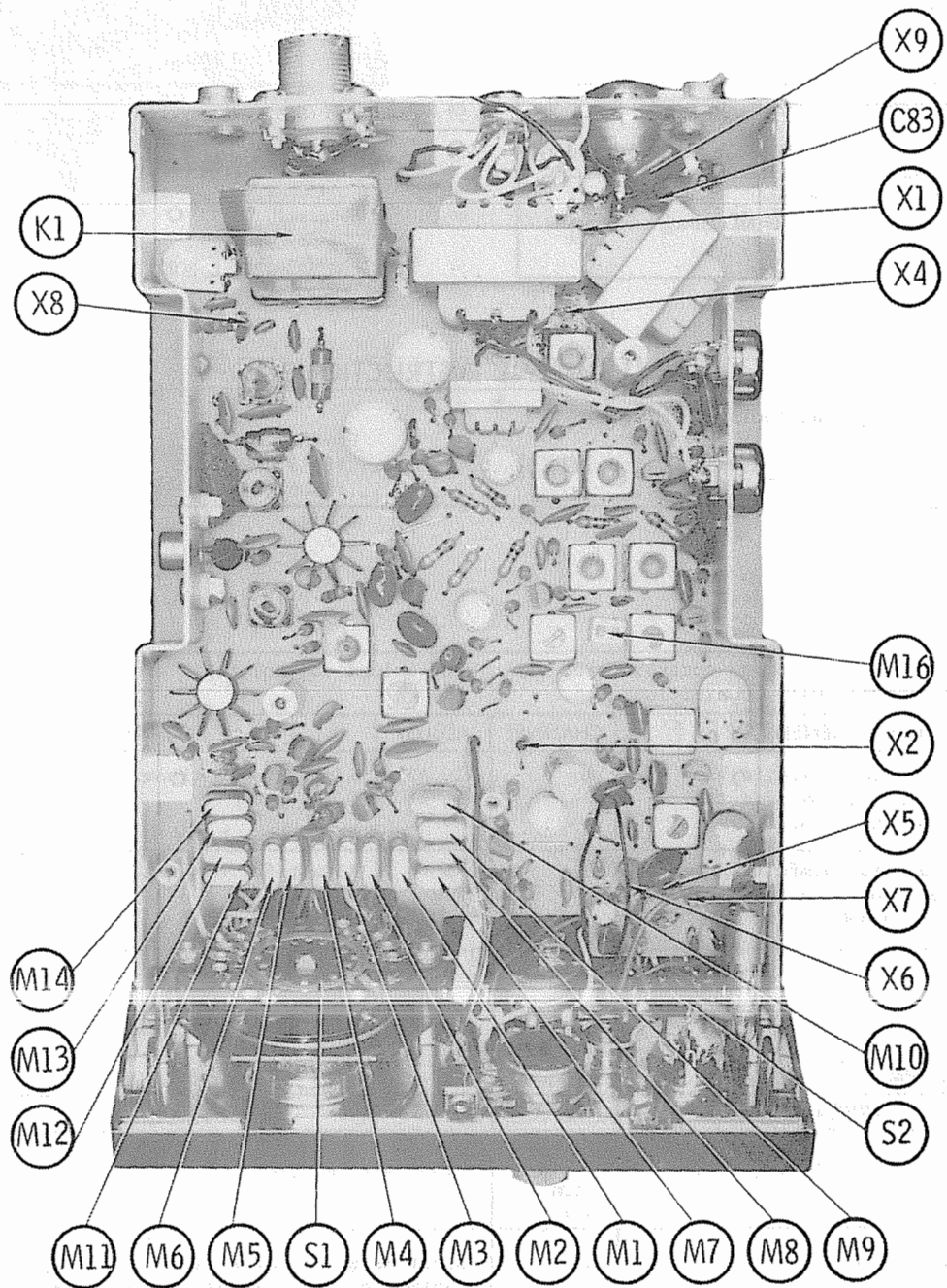
SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to base of Q5 (2nd Mixer), low side to chassis. Tune to 455KC (Mod.)	Any	A1, A2, A3, A4	Adjust for maximum.
High side thru .01mfd to Antenna Connector, low side to chassis. Tune to 27.085MC.	11	A5 Thru A9	Adjust for maximum.

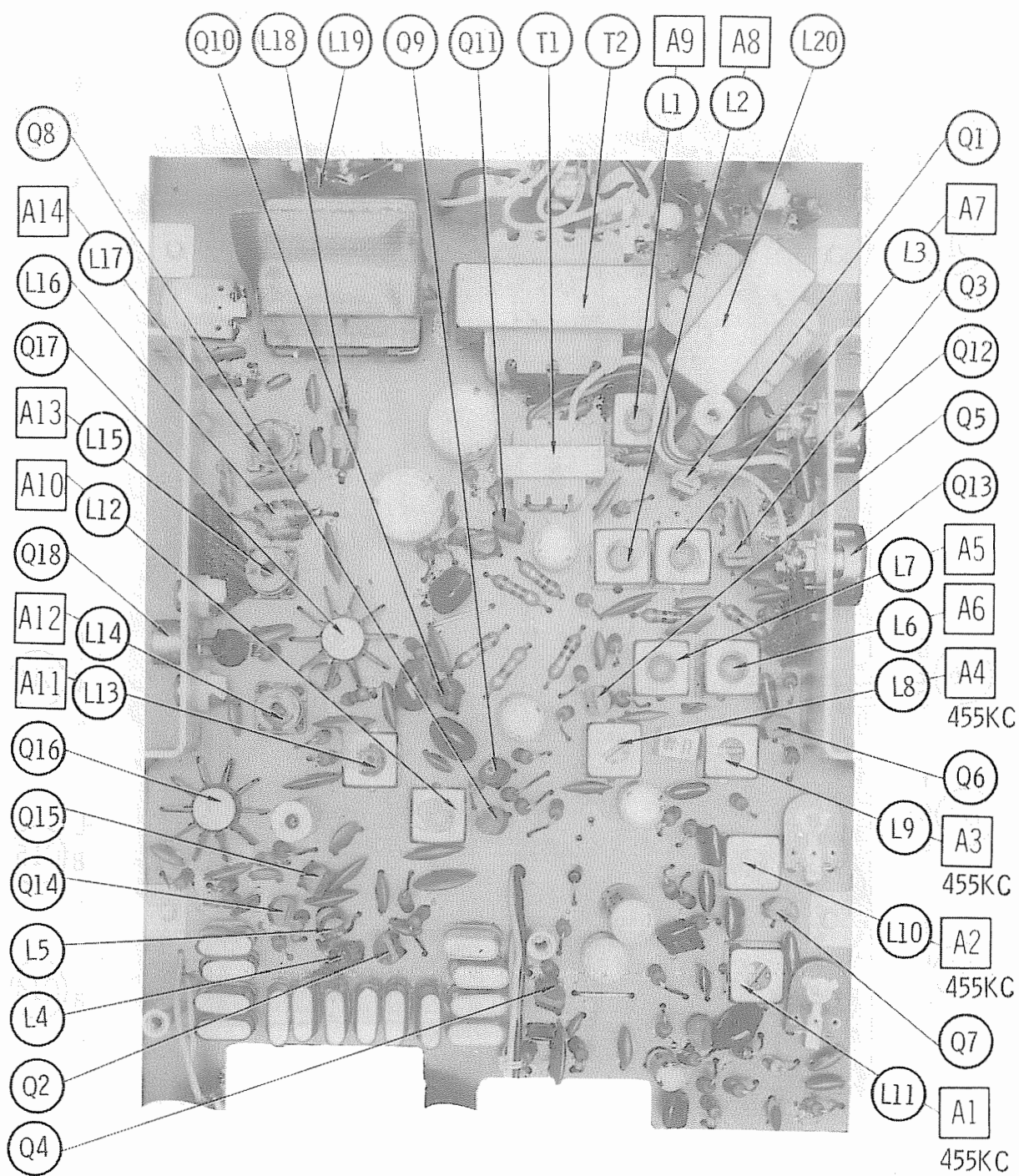
TRANSMITTER

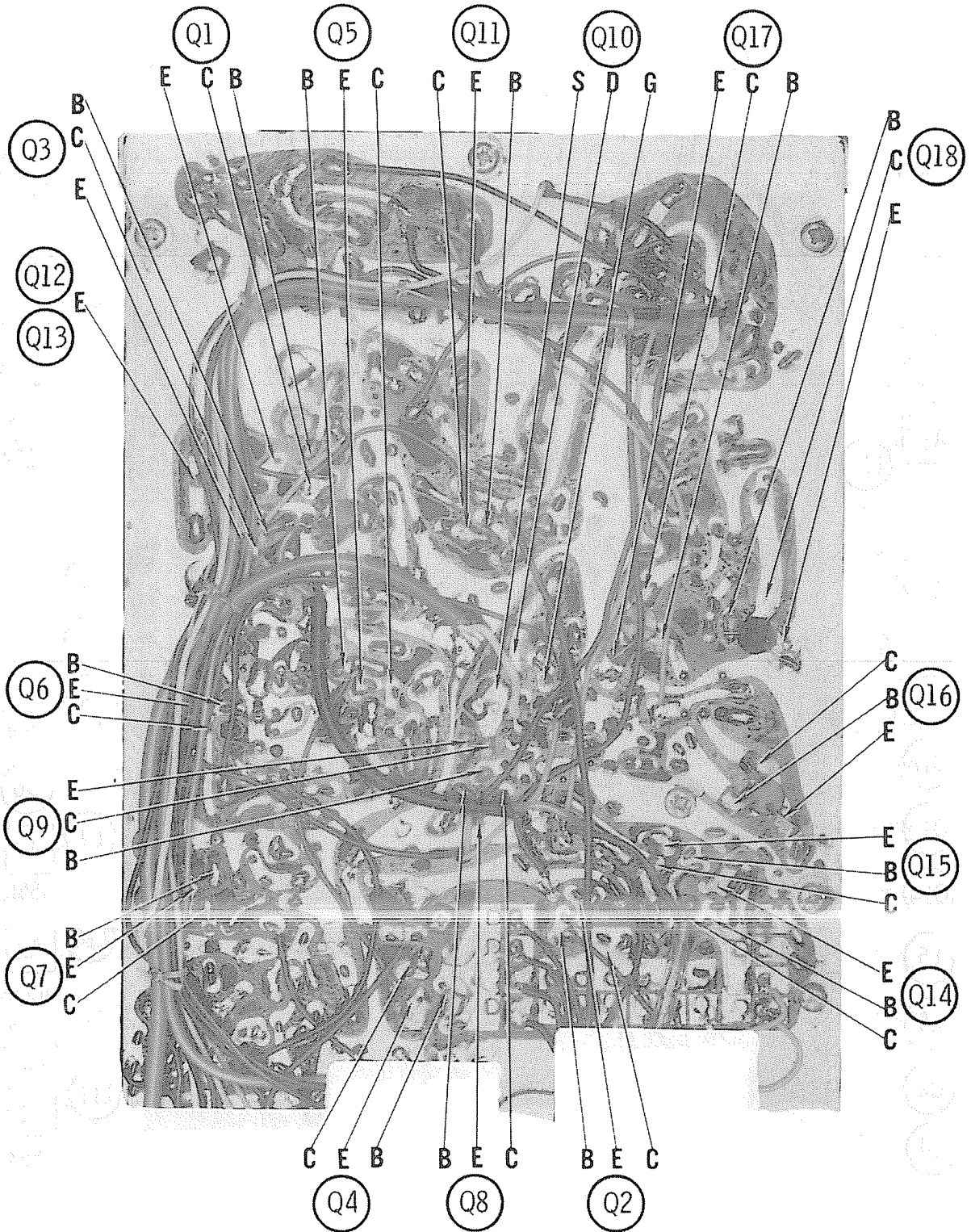
INDICATOR	ADJUST	REMARKS
RF wattmeter or Field Strength meter.	A10 Thru A14	Adjust for maximum.
0-500ma DC Ammeter	A14	Insert meter in series with L16. Key transmitter and readjust A14 for 5 watts input.

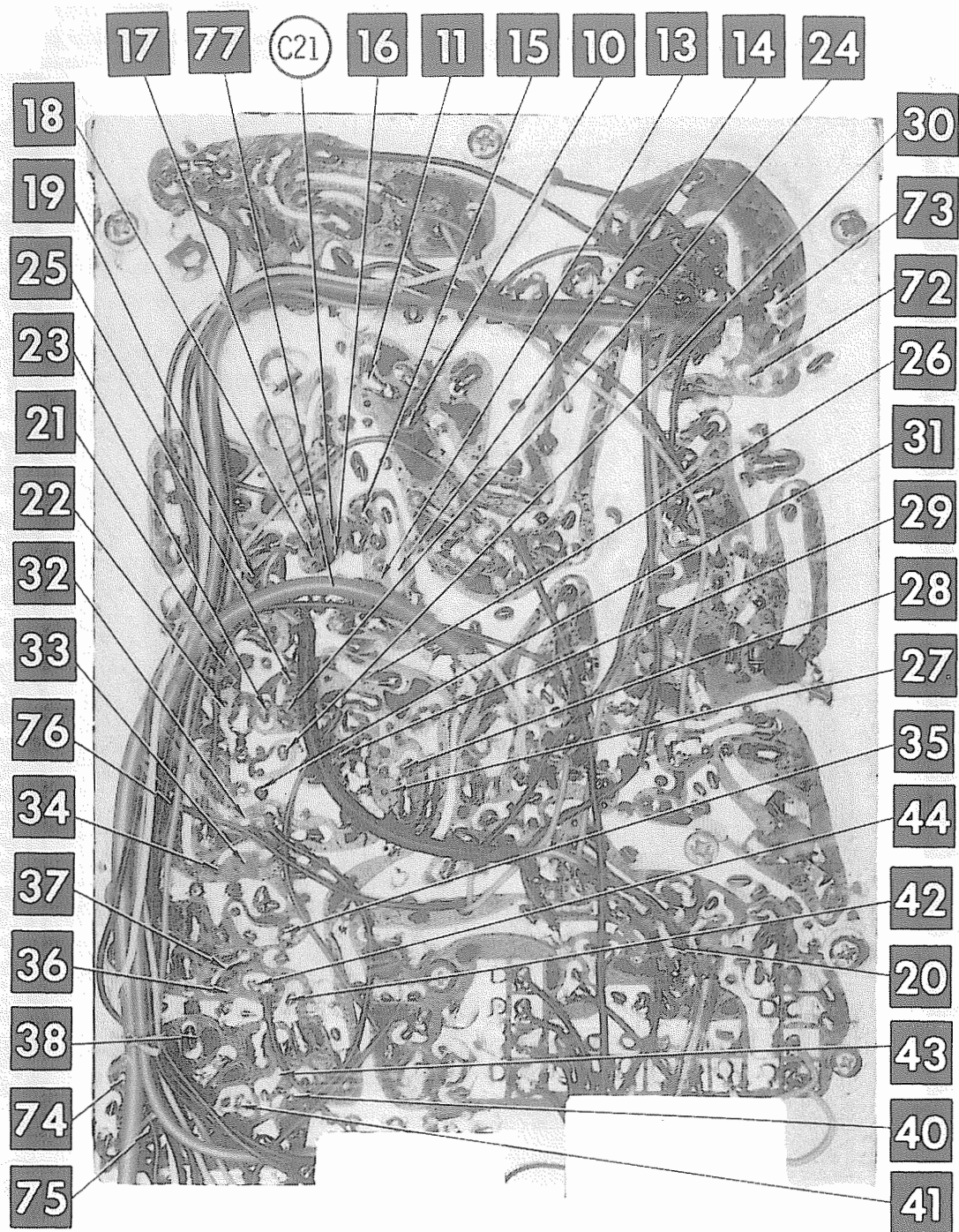
HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

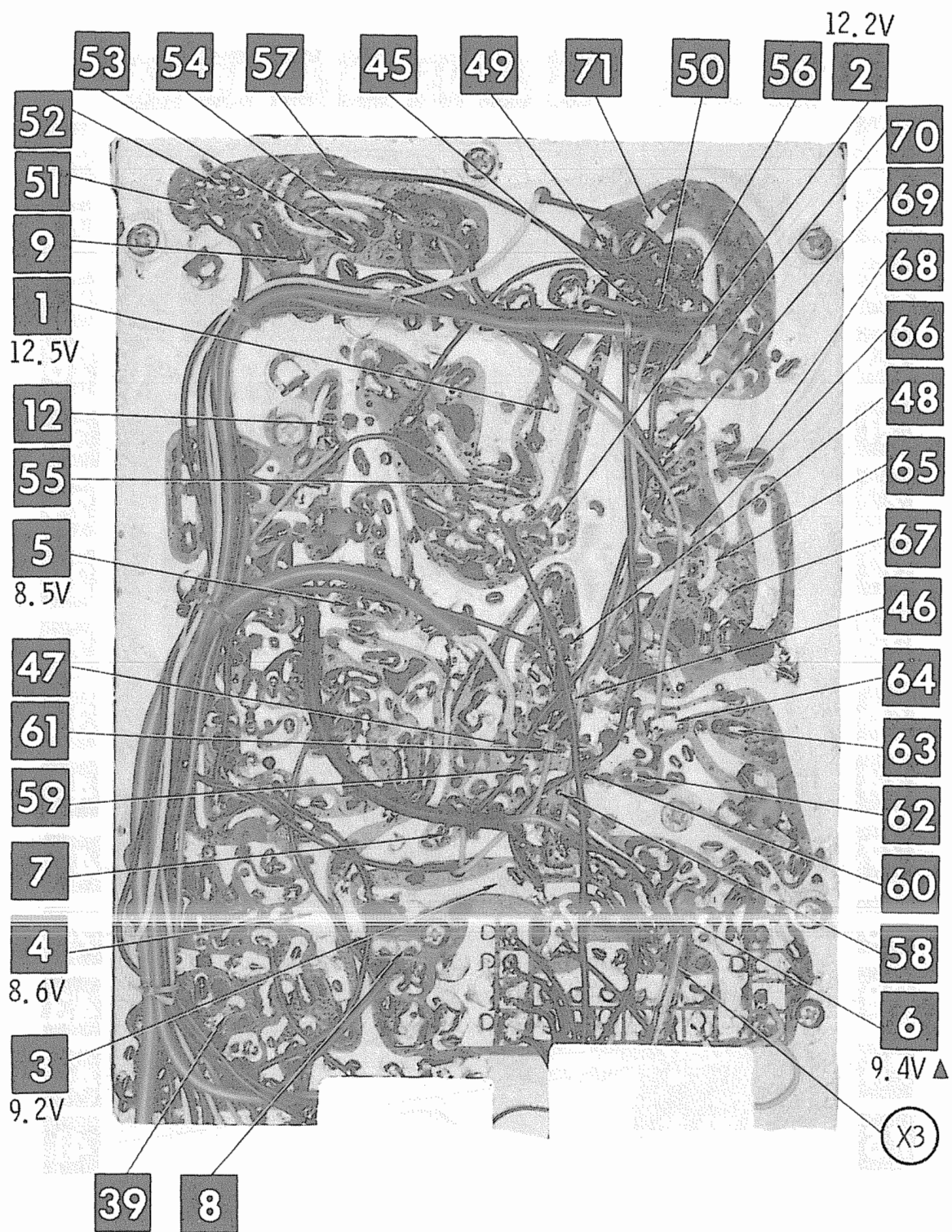
© 1971 Howard W. Sams & Co., Inc. Printed in U. S. of America TY976

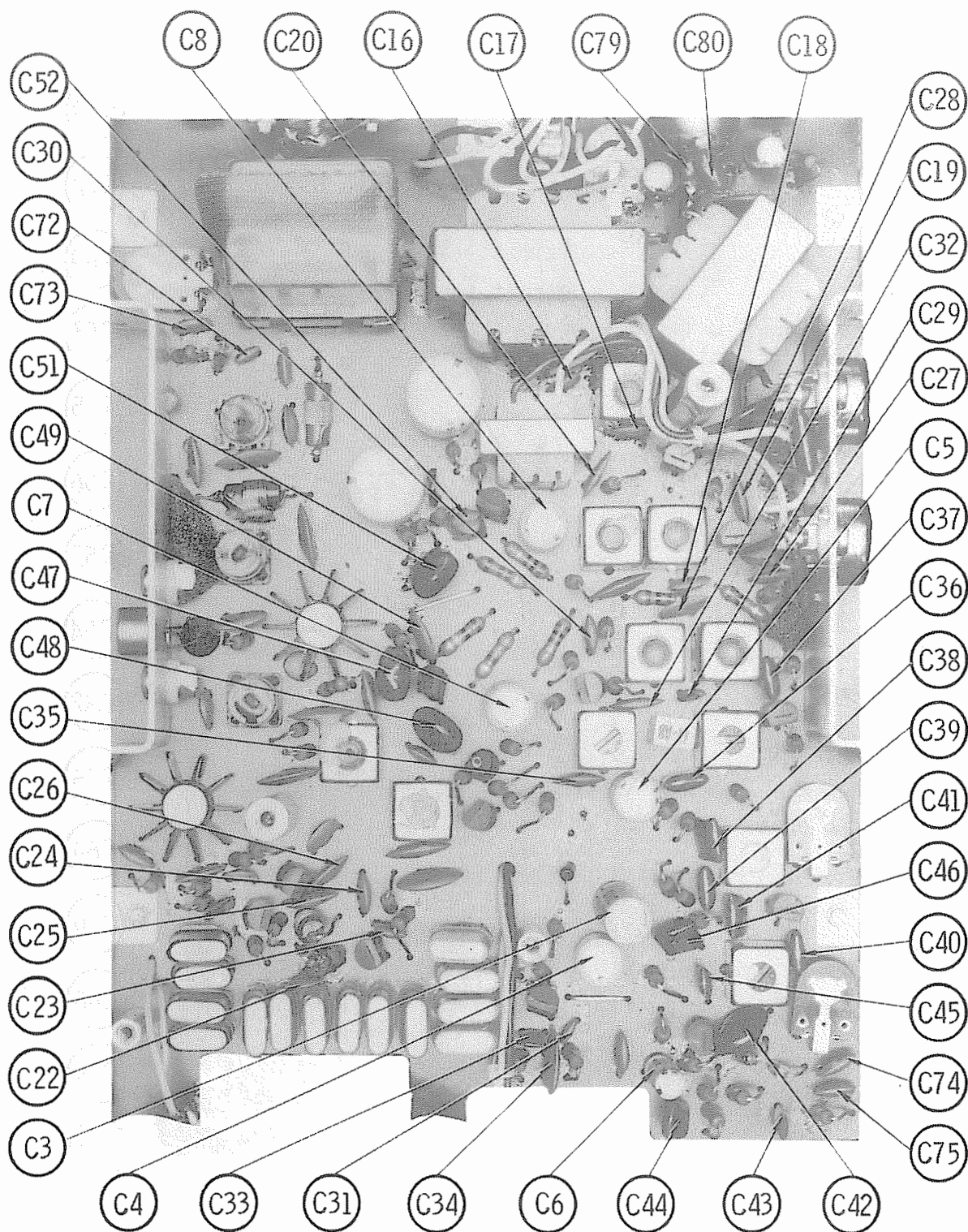


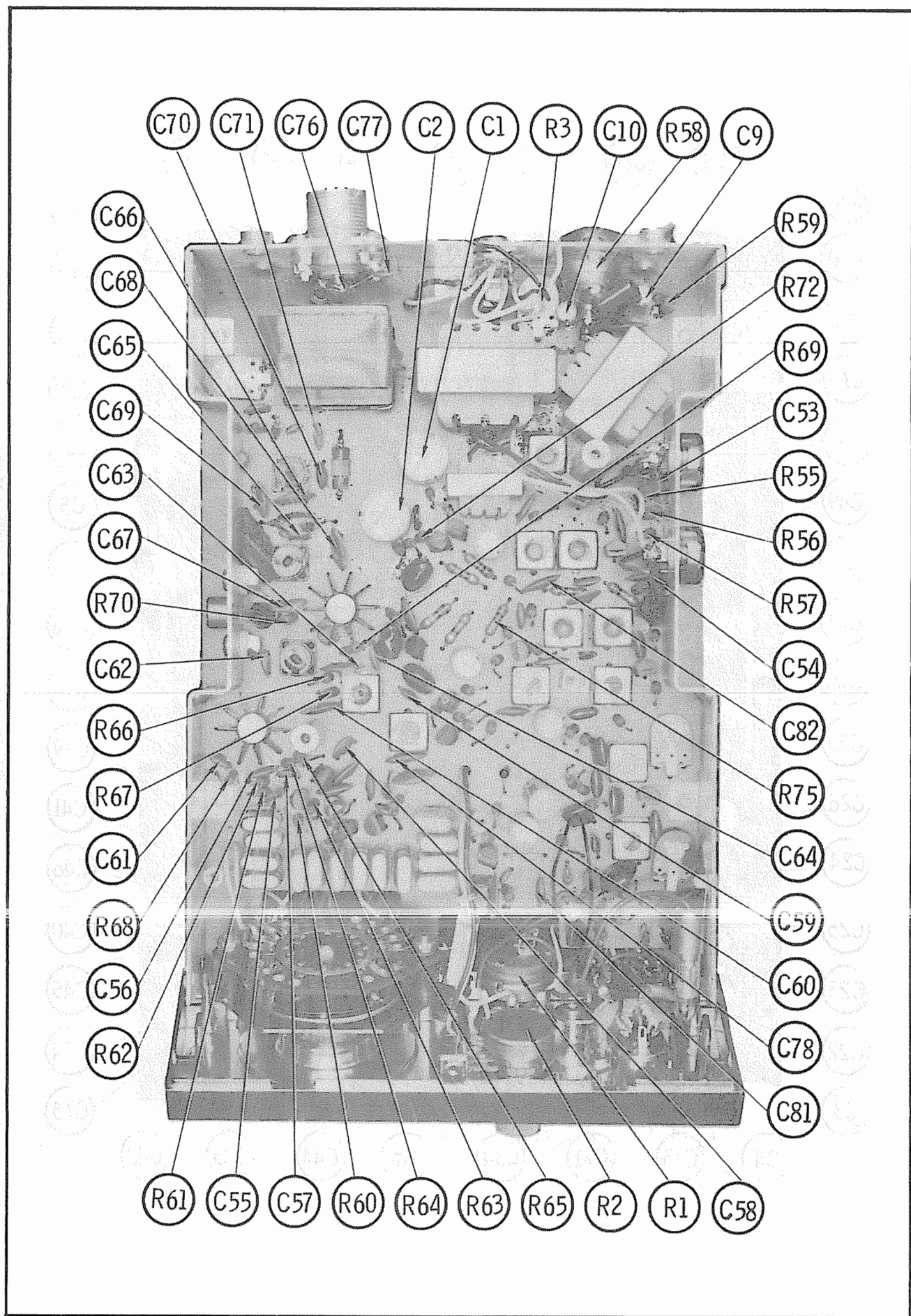


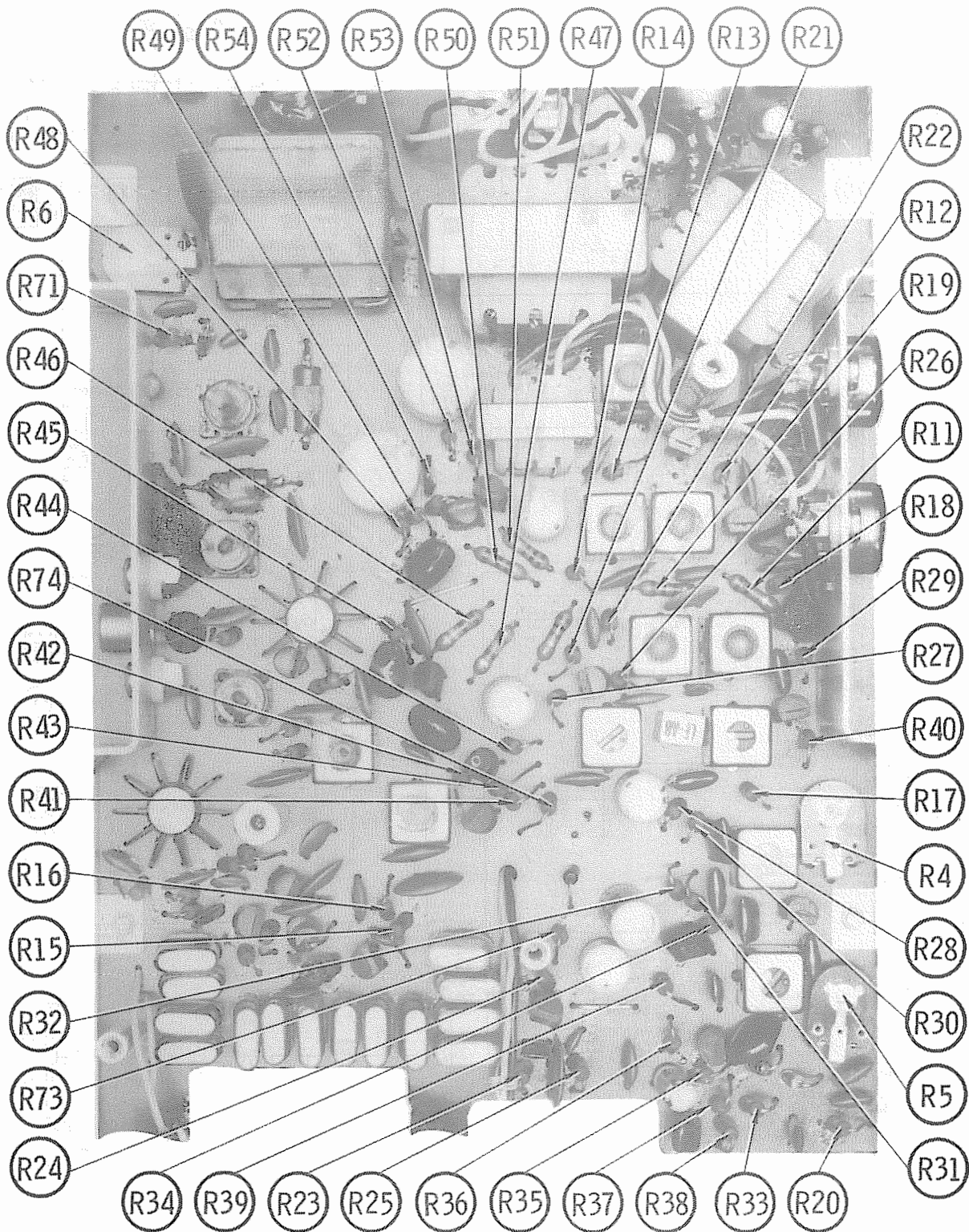


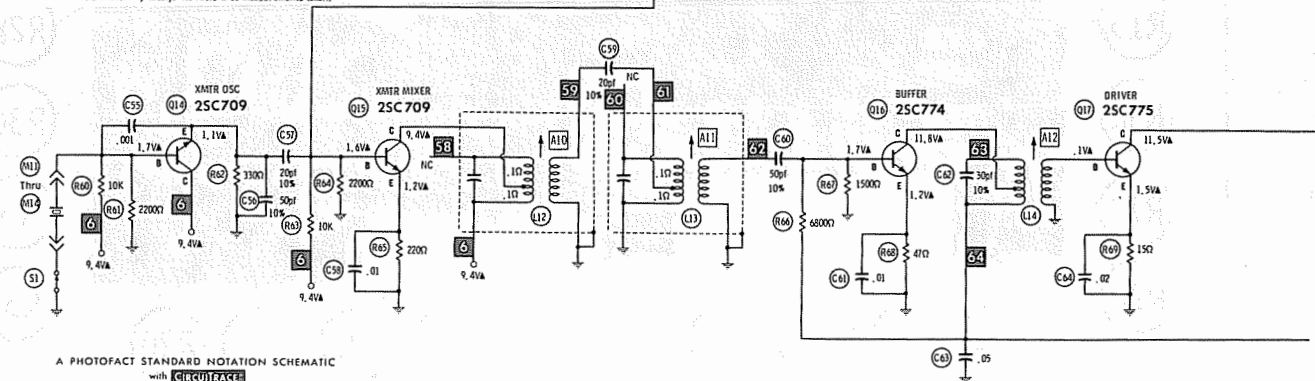
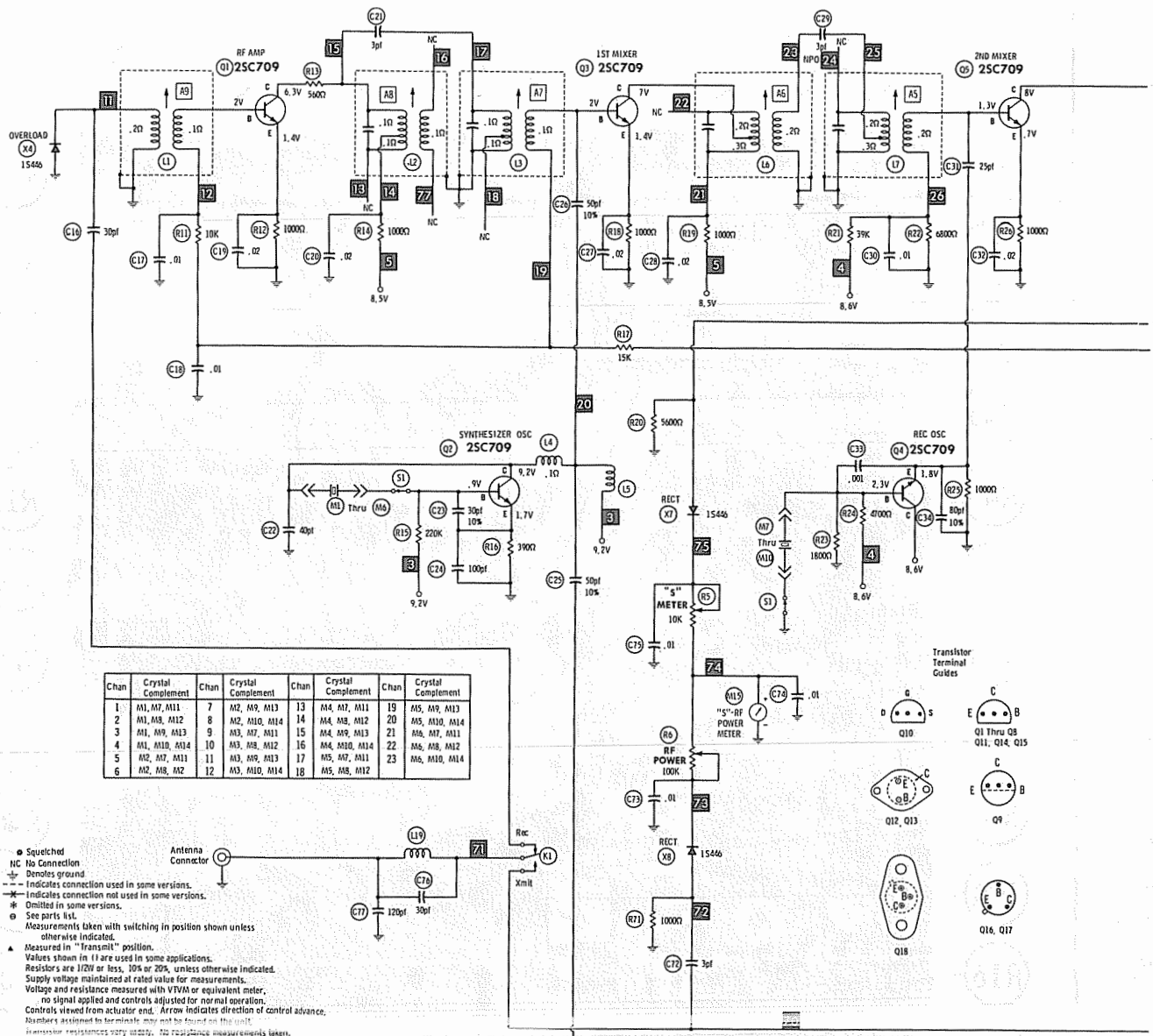




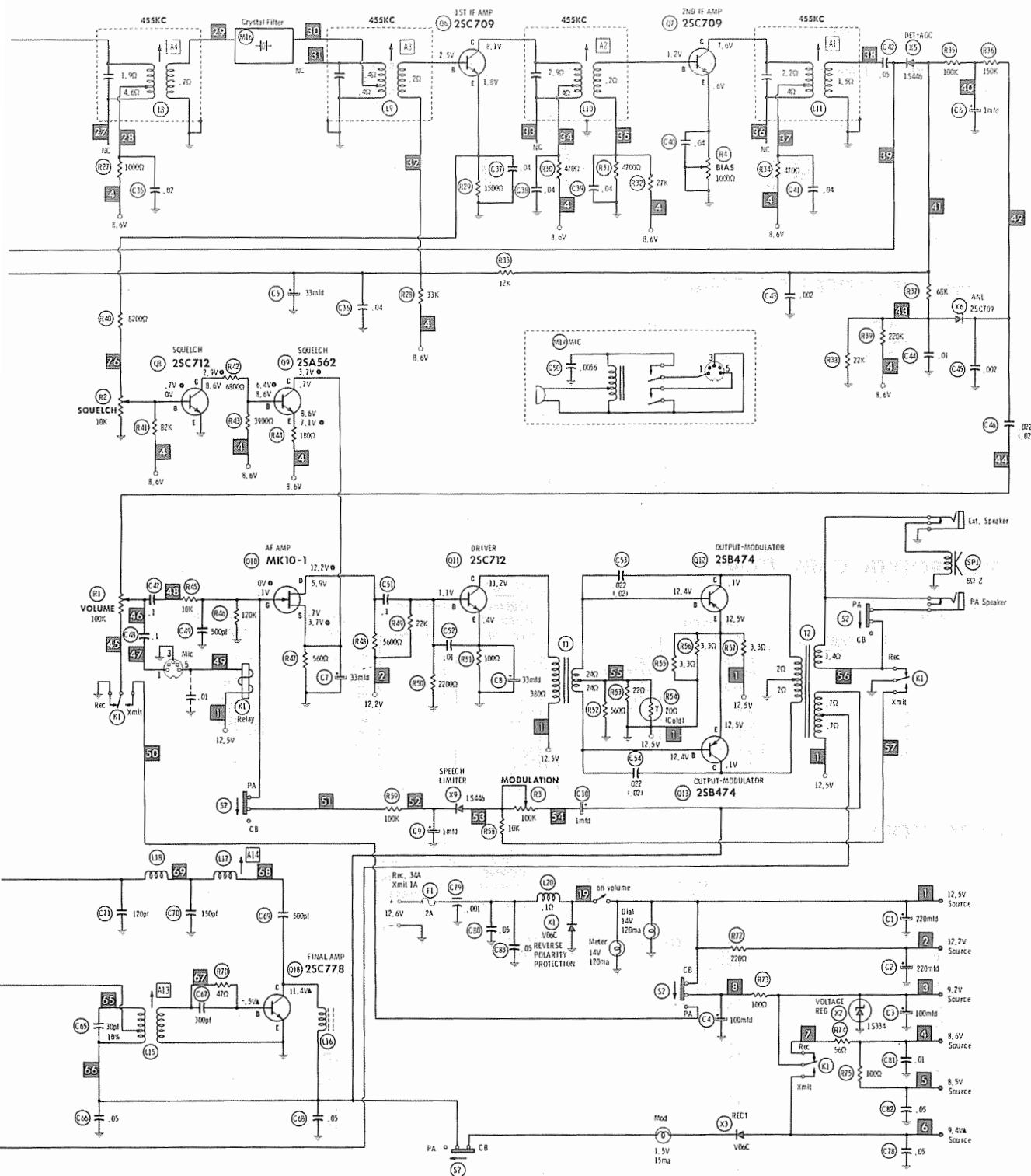








A PHOTOFACT STANDARD NOTATION SCHEMATIC
 with CIRCUITRACE
 © Howard W. Sams & Co., Inc. 1971



PEARCE-SIMPSON MODEL BOBCAT 23

PARTS LIST AND DESCRIPTION

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

TRANSISTORS

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA					
			MFGR. PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q1	25C709	RF Amp		GE-17	TR-21	HEP56	SK3018	ECG 123A
Q2	25C709	Synthesizer Oscillator		GE-17	TR-21	HEP56	SK3018	ECG 123A
Q3	25C709	1st Mixer		GE-17	TR-21	HEP56	SK3018	ECG 123A
Q4	25C709	Receive Oscillator		GE-17	TR-21	HEP56	SK3018	ECG 123A
Q5	25C709	2nd Mixer		GE-17	TR-21	HEP56	SK3018	ECG 123A
Q6	25C709	1st IF Amp		GE-17	TR-21	HEP56	SK3018	ECG 123A
Q7	25C709	2nd IF Amp		GE-17	TR-21	HEP56	SK3018	ECG 123A
Q8	25C712	Squelch		GE-17	TR-21	HEP50	SK3020	ECG 123A
Q9	25A562(0)	Squelch		GE-22	TR-19	HEP51	SK3025	ECG 159
Q10	MK10	AF Amp		GE-FET-1	TR-FE100	HEP802		ECG 132
Q11	25C712	Driver		GE-17	TR-21	HEP50	SK3020	ECG 123A
Q12	25B474	Output-Modulation		GE-30	IRTR-50	HEP643	SK3009	ECG 131
Q13	25B474	Output-Modulation		GE-30	IRTR-50	HEP643	SK3009	ECG 131
Q14	25C709	Xmtr. Oscillator		GE-17	TR-21	HEP56	SK3046	ECG 123A
Q15	25C709	Xmtr. Mixer		GE-17	TR-21	HEP56	SK3018	ECG 123A
Q16	25C774	Buffer		GE-20	TR-22	HEP53001	SK3047	ECG 128
Q17	25C775	Driver				HEP53001	SK3047	ECG 128
Q18	25C778	Final Amp					SK3049	ECG 128

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT DATA				NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RCA PART No.	SYLVANIA PART No.	
X1	V06C	GE-504A	8D4 or 5A4D	SK3031	ECG 116 or ECG 117	Zener
X2	1S334	GEZD-9.1		KD2504	ECG 139	
X3	V06C	GE-504A	8D4 or 5A4D	SK3031	ECG 116 or ECG 117	
X4	1S446	1N34AS	1N34A	1N34A	ECG 109	
X5	1S446	1N34AS	1N34A	1N34A	ECG 109	
X6	25C709	1N82A	1N82AG	1N82A	ECG 112	
X7	1S446	1N34AS	1N34A	1N34A	ECG 109	
X8	1S446	1N34AS	1N34A	1N34A	ECG 109	
X9	1S446	1N34AS	1N34A	1N34A	ECG 109	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA						
		PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	220 16V		PTT108	EA15-250	PC200-16	MT1-23	MTV200CK15	TE-1164
C2	220 16V		PTT108	EA15-250	PC200-16	MT1-23	MTV200CK15	TE-1164
C3	100 15V		MCD-180	EP15-100	PC100-16	MT1-19	MTV100CF15	TE-1162
C4	100 15V		MCD-180	EP15-100	PC100-16	MT1-19	MTV100CF15	TE-1162
C5	33 16V		MCD-110	EP15-25	PC30-35	MT1-13.5	MTV30CB25	TE-1158
C6	1 25V		MCD-10		PC1-100	MT1-1	MTV1CB50	TE-1200
C7	33 16V		MCD-110	EP15-25	PC30-35	MT1-13.5	MTV30CB25	TE-1158
C8	33 16V		MCD-110	EP15-25	PC30-35	MT1-13.5	MTV30CB25	TE-1158
C9	1 25V		MCD-10		PC1-100	MT1-1	MTV1CB50	TE-1200
C10	1 25V		MCD-10		PC1-100	MT1-1	MTV1CB50	TE-1200

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.
C16	30			TCZ-30		CCT0-300		10TCC-Q30
C17	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C18	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C19	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C20	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C21	3		NPO-DI 3.0					10TCC-V30
C22	40		NPO-DI 39					10TCC-Q39
C23	30	10%		TCZ-39		CCT0-390	CN0439	10TCC-Q30
C24	100		NPO-DI 100	DTZ-100	NP0100	CCT0-101	CN0310	10TCC-T10
C25	50	10%	NPO-DI 50	DTZ-50	NP050	CCT0-510	CN0450	10TCC-Q50
C26	50	10%	NPO-DI 50	DTZ-50	NP050	CCT0-510	CN0450	10TCC-Q50
C27	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C28	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C29	3	NPO	NPO-DI 3.0					10TCC-V30
C30	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C31	25		NPO-DI 25	DTZ-25			CN0425	10TCC-Q25
C32	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C33	.001		DBE6D1	CPR-1000J	DPMS6D1	6DP-1-102	PVC621	225P10291W03
C34	80	10%		DTZ-82	NP082	CCT0-820	CN0482	10TCC-Q82
C35	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C36	.04		DBE6S4		DPMS6S4	1DP-1-40	PVC114	6PS-S40
C37	.04		DBE6S4		DPMS6S4	1DP-1-40	PVC114	6PS-S40
C38	.04		DBE6S4		DPMS6S4	1DP-1-40	PVC114	6PS-S40
C39	.04		DBE6S4		DPMS6S4	1DP-1-40	PVC114	6PS-S40
C40	.04		DBE6S4		DPMS6S4	1DP-1-40	PVC114	6PS-S40
C41	.04		DBE6S4		DPMS6S4	1DP-1-40	PVC114	6PS-S40
C42	.05		DBE6S5		DPMS6S5	6DP-3-503	PVC615	6PS-S50
C43	.002 50V		DBE6D2	CPR-2000J	DPMS6D2	6DP-1-202	PVC622	6PS-D20
C44	.01		V1612S1	CPR-10000J	DPMS6S1	1DP-1-103	PVC211	225P10391W03

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.
C45	.002		DBE602	CPR-2000J	DPMS602	GDP-1-202	PVC622	6PS-D20
C46	.022		V1612S22		DPMS6S22	1DP-1-223	PVC1122	225P22391WD3
C47	.1		DBE2P1		DPMS2P1	1DP-2-104	PVC101	225P10491WD3
C48	.1		DBE2P1		DPMS2P1	1DP-2-104	PVC101	225P10491WD3
C49	500		GPD X5F501K	DM-501	GP500	CCD-501	GP350	10TS-T50
C50								
C51	.1		DBE2P1		DPMS2P1	1DP-2-104	PVC101	225P10491WD3
C52	.01		V1612S1	CPR-10000J	DPMS6S1	1DP-1-103	PVC211	225P10391WD3
C53	.022		V1612S22		DPMS6S22	1DP-1-223	PVC1122	225P22391WD3
C54	.022		V1612S22		DPMS6S22	1DP-1-223	PVC1122	225P22391WD3
C55	.001		DBE6D1	CPR-1000J	DPMS6D1	6DP-1-102	PVC621	225P10291WD3
C56	50	10%	NPO-D1 50	DTZ-50	NP050	CCTO-510	CNO450	10TCC-Q50
C57	20	10%	NPO-D1 20	DTZ-20	NP020	CCTO-200	CNO420	10TCC-Q20
C58	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C59	20	10%	NPO-D1 20	DTZ-20	NP020	CCTO-200	CNO420	10TCC-Q20
C60	50	10%	NPO-D1 50	DTZ-50	NP050	CCTO-510	CNO450	10TCC-Q50
C61	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C62	30	10%		TCZ-30		CCTO-300		10TCC-Q30
C63	.05		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C64	.02		GPD Z5U203P	DD-203		CCD-203	GP120	10TS-S20
C65	30	10%		TCZ-30		CCTO-300		10TCC-Q30
C66	.05		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C67	300		GPD X5F301K	DM-301	GP300	CCD-301	GP330	10TS-T30
C68	.05		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C69	500		GPD X5F501K	DM-501	GP500	CCD-501	GP350	10TS-T50
C70	150		GPD X5F151K	DD-151	GP150	CCD-151	GP315	10TS-T15
C71	120		GPD X5F151K	DD-151	GP150	CCD-151	GP315	10TS-T15
C72	3		NPO-D1 3.0					10TCC-V30
C73	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C74	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C75	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C76	30			TCZ-30		CCTO-300		10TCC-Q30
C77	120		GPD X5F151K	DD-151	GP150	CCD-151	GP315	10TS-T15
C78	.05		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C79	.001							
C80	.056		DBE6S56		DPMS6S56	1DP-2-563	PVC1156	225P56391WD3
C81	.1		DBE2P1		DPMS2P1	1DP-2-104	PVC101	225P10491WD3
C82	.05		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C83	.05		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50

PEARCE-SIMPSON MODEL BOBCAT 23

CONTROLS (All wattages 1/2 watt, or less, unless listed)

ITEM No.	FUNCTION	RESIST- ANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume/Switch	100K					
R2	Squelch	10K					
R3	Modulation Adjust	100K		TSV-100K (1) or T-100K (1)		X201R104B (1)	MTC15L1 (1)
R4	Bias Adjust	1000		TSV-1K (1) or T-1000 (1)		X201R102B (1)	MTC13L1 (1)
R5	"S" Meter Adjust	10K		TSV-10K (1) or T-10K (1)		X201R103B (1)	MTC14L1 (1)
R6	"RF" Power Meter Adjust	100K		TSV-100K (1) or T-100K (1)		X201R104B (1)	MTC15L1 (1)

(1) For horizontal mounting, bend the two outside terminals to fit PC board. Use jumper to connect center terminal to PC board.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R54	20 (Cold)		
R55	3.3 1/2W	WS 3.3	

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R56	3.3 1/2W	WS 3.3	
R57	3.3 1/2W	WS 3.3	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	Rec. Antenna Coil				
L2	Rec. RF (Pri.)				
L3	Rec. RF (Sec.)				
L4	RF Choke				
L5	Synthesizer Output				
L6	Input IF (Pri.)			2071	
L7	Output IF (Sec.)			2071	
L8	Input IF		16-9026	8517	
L9	Interstage IF				
L10	Interstage IF		16-9027	8517	
L11	Output IF		16-9028	8518	
L12	Xmtr Mixer (Pri.)				
L13	Xmtr Mixer (Sec.)				
L14	Buffer Output				
L15	Driver Output				
L16	RF Choke				
L17	Pi Network				
L18	Pi Network				
L19	Antenna Coil				

PARTS LIST AND DESCRIPTION (CONTINUED)

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

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L20	1A Max (1)	.1	.35mh					(1) Transmit

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD Part No.	
T1	2	1 CT						

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	72 CT	8					
		SEC. 2					
		1.4 CT DC Resistance					

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
				MFGR. PART No.	QUAM PART No.	
SP1	3-1/2"	PM	8 ohms		3A05Z8	

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA							
		PART No.		BUSS PART No.		LITTELFUSE PART No.		WORKMAN PART No.	
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	
F1	2A Quick Acting			AGC-2	HDJ	312002	155020		

MISCELLANEOUS

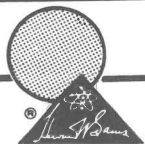
ITEM No.	PART NAME	PART No.	NOTES
K1	Relay	MAT4-1001	
M1	Crystal		37.600MC
M2	Crystal		37.650MC
M3	Crystal		37.700MC
M4	Crystal		37.750MC
M5	Crystal		37.800MC
M6	Crystal		37.850MC
M7	Crystal		10.180MC
M8	Crystal		10.170MC
M9	Crystal		10.160MC
M10	Crystal		10.140MC
M11	Crystal		10.635MC
M12	Crystal		10.625MC
M13	Crystal		10.615MC
M14	Crystal		10.595MC
M15	Meter	LF-A8	
M16	Filter, Crystal		
S1	Switch, Selector		
S2	Switch, PA-CB		

MICROPHONE

ITEM No.	REPLACEMENT DATA			REMARKS
	MFGR. PART No.	RCA REPLACEMENT	RCA STEP UP REPLACEMENT	
M17		HK-107	HK-113(1), HK-101(1)	(1) For base station use.

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
	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®

For Supplier Address See PHOTOFACT Index

NOTE

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, SUBPARTS C & D.)

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 50-ohm dummy load or the normally used antenna system.



MODEL COMSTAT 25B (99-32146WX)

ALIGNMENT INSTRUCTIONS

SUGGESTED ALIGNMENT TOOLS:

A1 thru A13, A15 thru A18, A21.....GENERAL CEMENT #8606,8869,9302
A14,A19,A20.....GENERAL CEMENT #8868,9087,9089

LAFAYETTE MODEL COMSTAT 25B

RECEIVER

Connect an AC VTVM across speaker Voice Coil. Turn Volume Control to mid-range, Squelch Control fully counterclockwise (MINIMUM). PA switch to CB position. Set Fine Tuning to Center

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to Pin 8 (Grid) V2A (2nd Rec Mixer), low side to Chassis. Tune to 455KC (Mod.)	Any	A1 thru A6	Adjust for maximum.
High side thru .01mfd to Pin 2 (Grid) V1B (1st Rec Mixer), low side to Chassis. Tune to 11.275MC (Mod.).	Any	A7, A8	Adjust for maximum.
	23	A9	Connect DC VTVM to Pin 9 (Grid) V3A (Local Osc) and Adjust A9 for approximately -4.5V to -8V Reading. Back off to 70% of peak reading.

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

© 1971 Howard W. Sams & Co., Inc. Printed in U. S. of America 1CY004

ALIGNMENT INSTRUCTIONS (Continued)

RECEIVER (CONT)

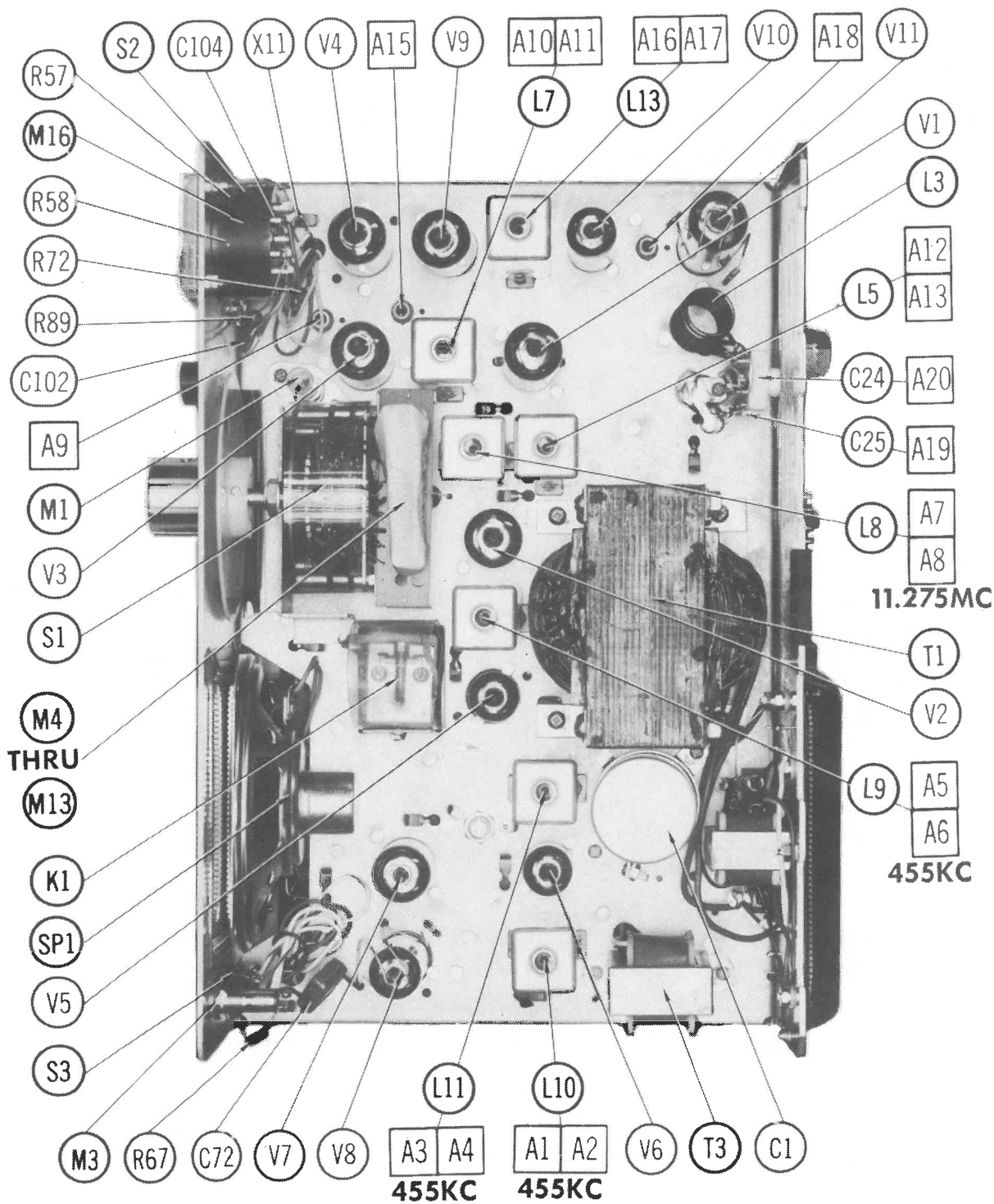
SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to antenna connector, low side to chassis. Tune to 27.115 (Channel B) Mod.	13	A10 thru A13	Adjust for maximum.
High side thru .01mfd to antenna connector, low side to chassis. Tune to 27.115 (Channel B) Mod. 100 microvolts input.	13	R4	Adjust for S-9 Indication on "S" -RF.

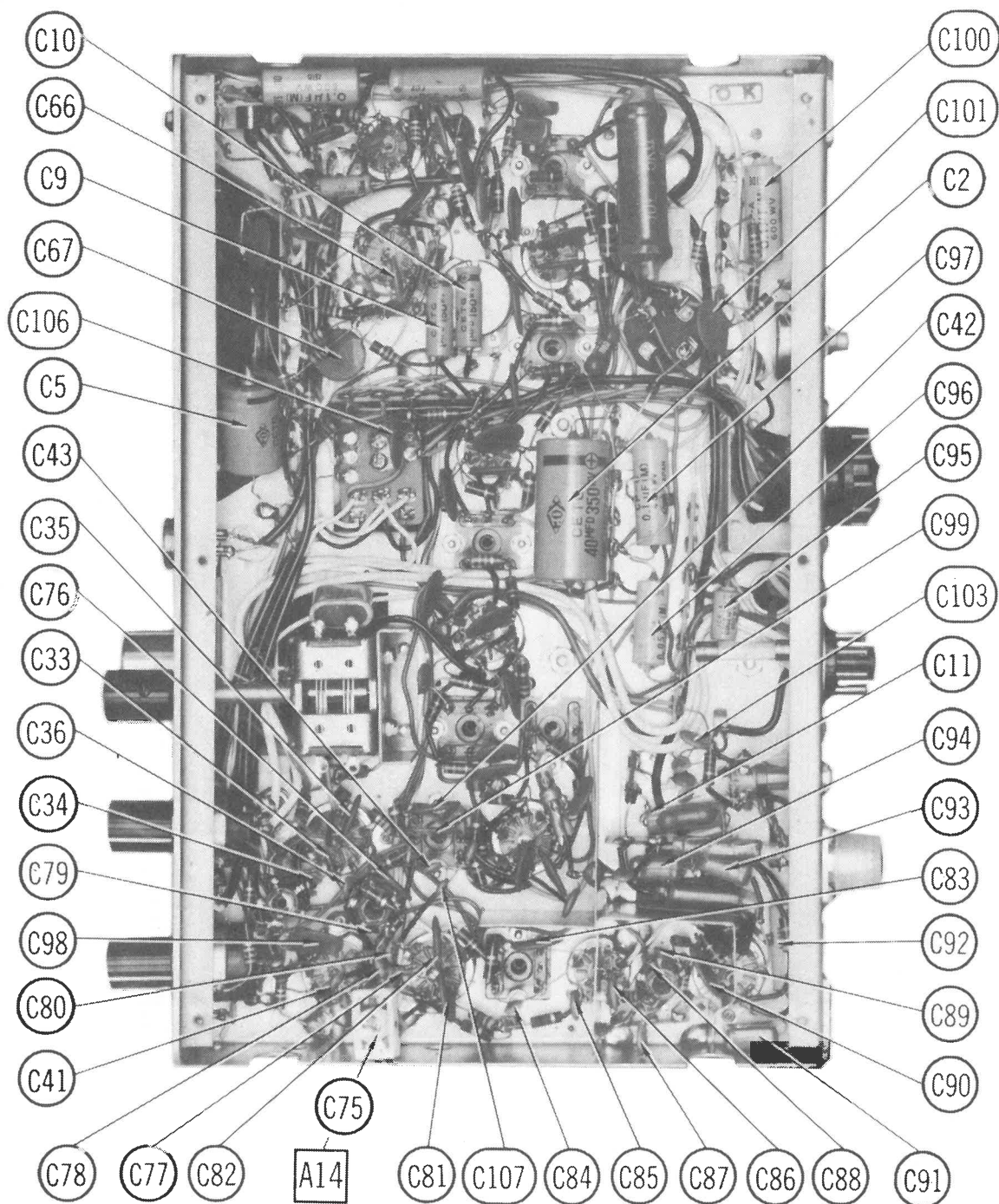
TRANSMITTER

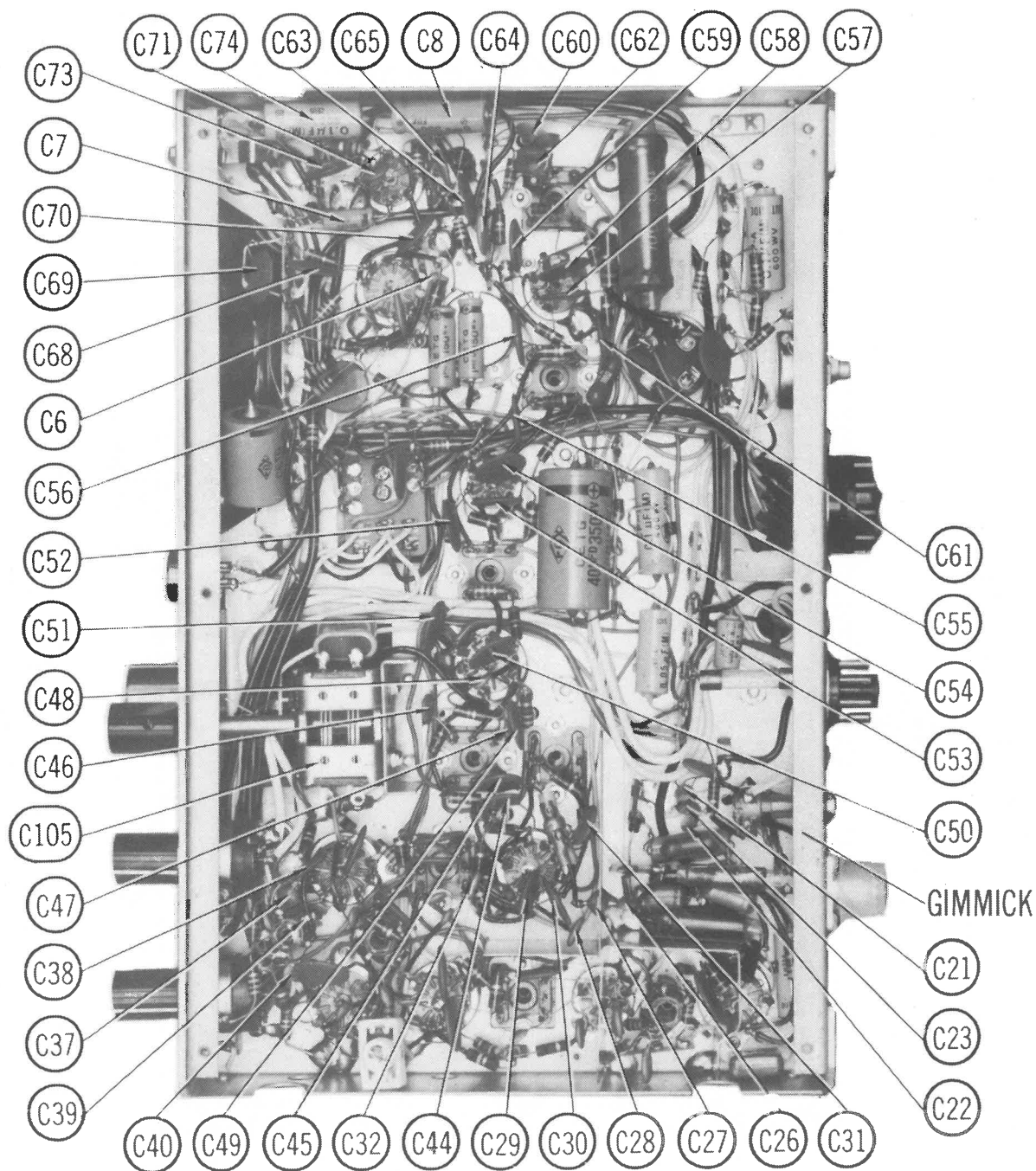
INDICATOR	ADJUST	REMARKS
AC VTVM & Frequency Meter.	A14 thru A17	Connect Meter to Pin 1 (Grid) V10 (Xmtr Driver). Adjust for approximately .5V to 1.4V (AC). Check output of xmtr for proper frequency.
DC VTVM with 1meg resistor in series with probe.	A18	Connect Meter to Pin 2 (Grid) V11 (Final Amp), Adjust A18 for approximately -15V. Check all Channels for equal Readings.
RF Wattmeter & DC VTVM.	A19,A20	Adjust for maximum. Check voltage across R87 (1000 ohms 2W), Reading should not exceed 19V. Readjust A19 (Plate) & A20 antenna for proper reading.
Nearby TV	A21	Tune TV to Channel "2". Adjust for MINIMUM Interference.

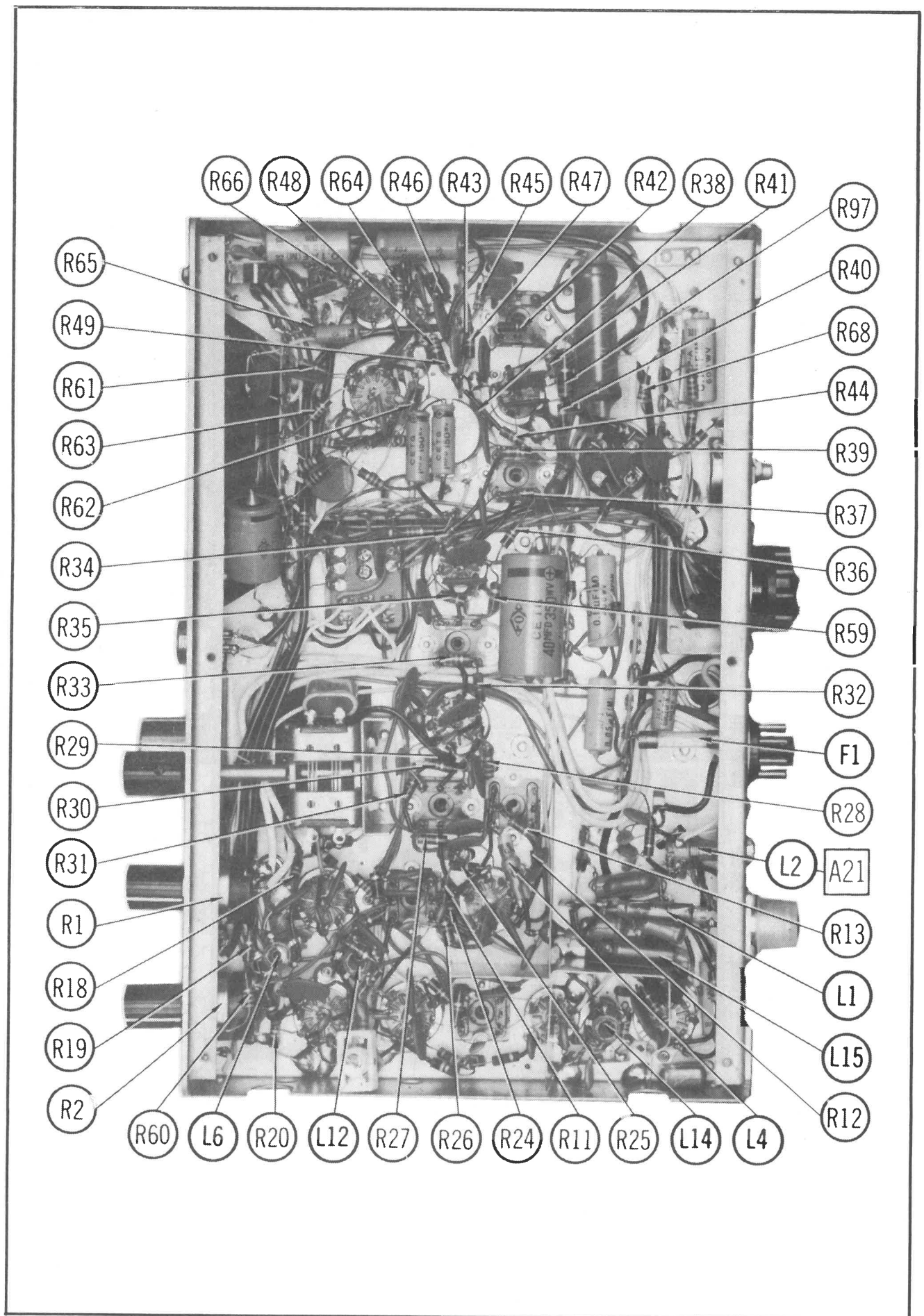
MODULATION ADJUSTMENT

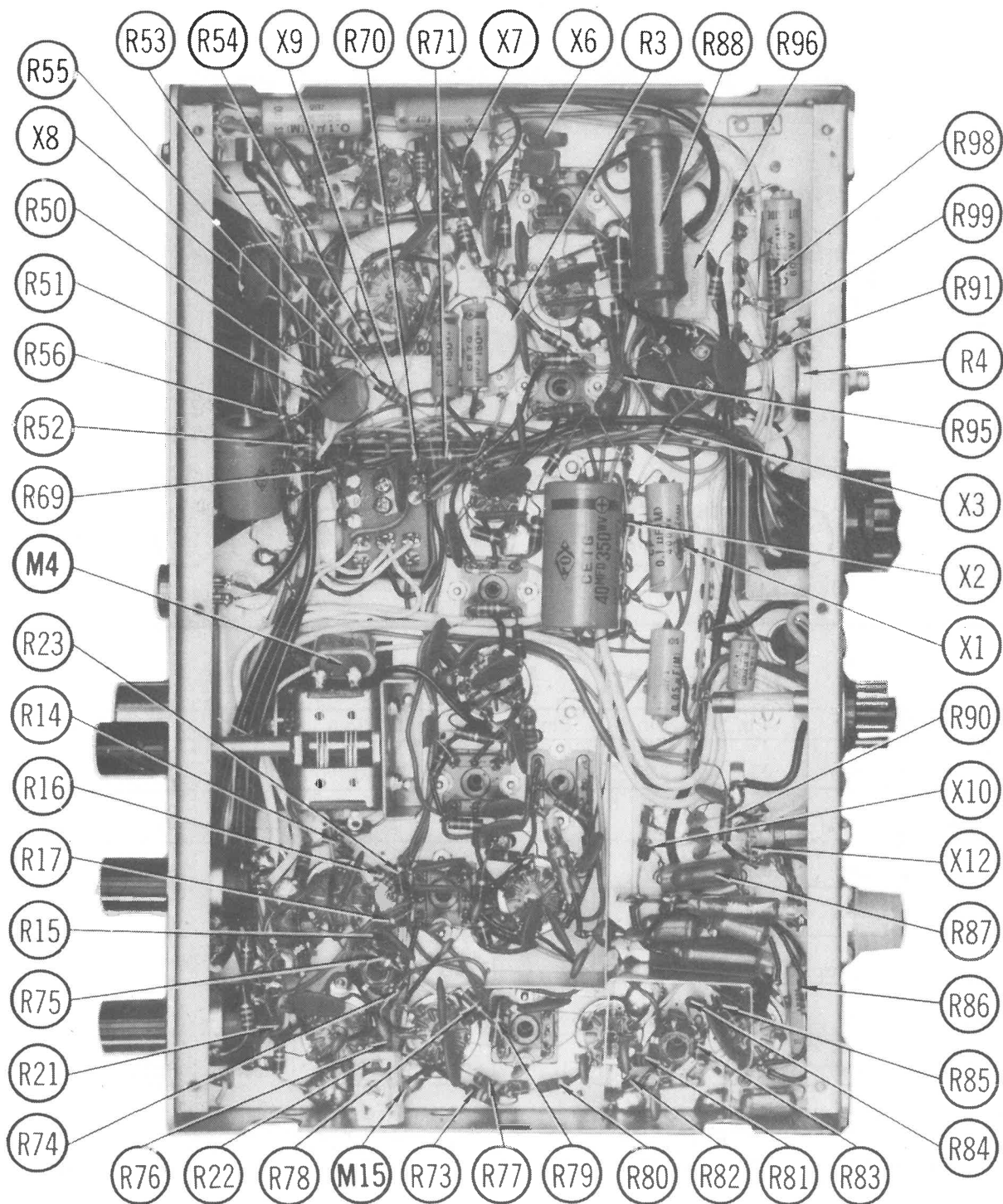
INDICATOR	ADJUST	REMARKS
Modulation Monitor & Audio Signal Generator	R3	Connect Generator to Pin 1 Microphone Jack thru .05mfd, low side to Chassis. Tune to 1KC and output of 40mv. Range Boost Switch to On. Adjust for 80% modulation. Generator output of 5MV should produce 50% modulation.



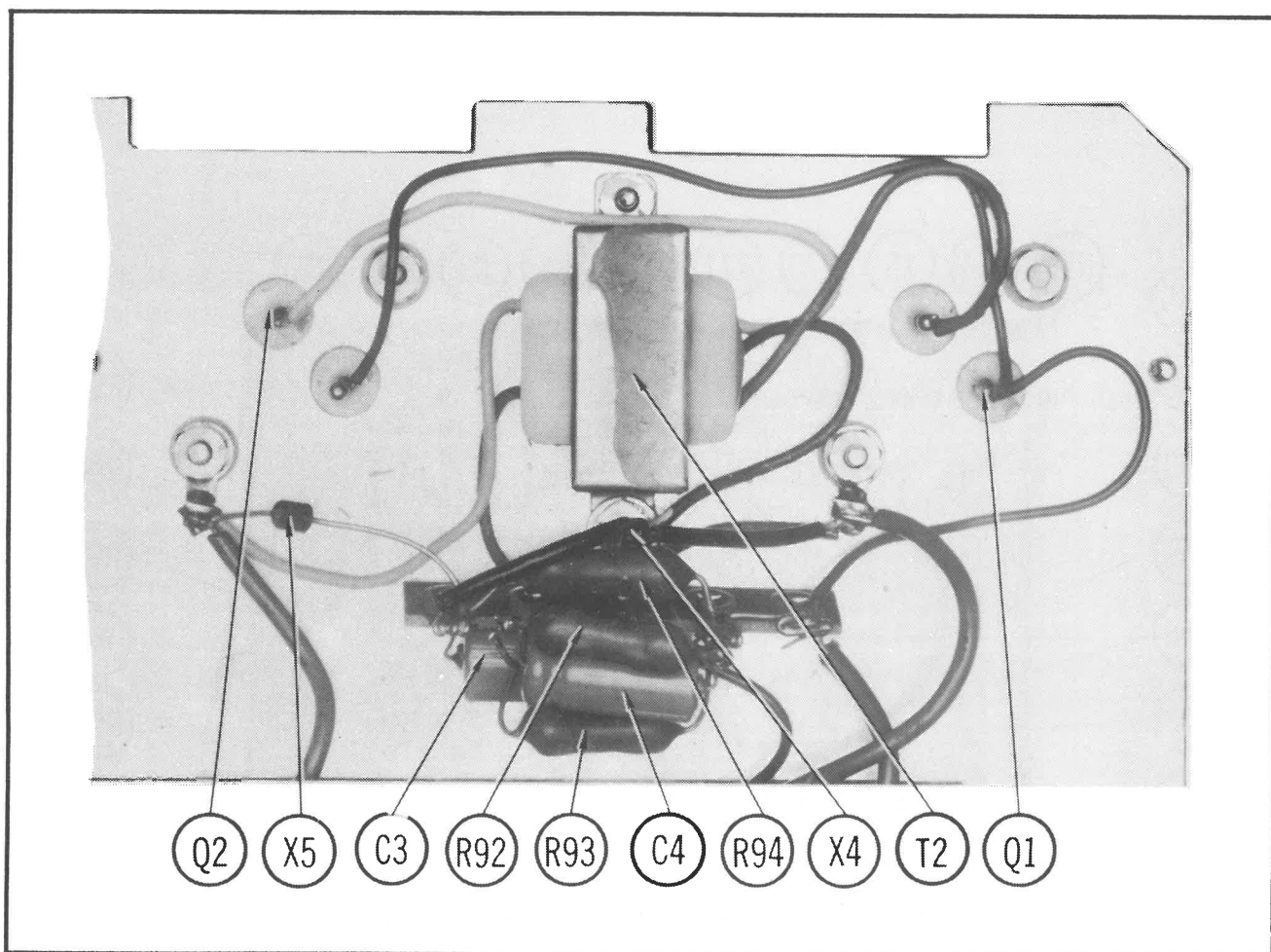








LAFAYETTE MODEL COMSTAT 25B



RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6AN8A	45K†	0Ω	900Ω	FIL	FIL	2000Ω†	100K†	800K	100Ω
V2	6AN8A	100K†	100K	0Ω	FIL	FIL	34K†	100K†	0Ω	470Ω
V3	6GH8	22K†	100K	47K†	FIL	FIL	10K†	1000Ω	0Ω	100K
V4	12A17	9000Ω†	100K	0Ω	FIL	FIL	18K†	100K	0Ω	FIL
V5	6BA6	1.1meg	0Ω	FIL	FIL	3300Ω†	25K†	100Ω		
V6	6BA6	600K	0Ω	FIL	FIL	3300Ω†	100K	100Ω		
V7	12AX7A	500K†	100K	2200Ω	FIL	FIL	340K†	300K	1000Ω	FIL
V8	6AQ5	470K	220Ω	FIL	FIL	250Ω†	6900Ω†	470K		
V9	6GH8	21K▲	47K	100K▲	FIL	FIL	11K▲	470Ω	0Ω	100K
V10	6BA6	0Ω	0Ω	FIL	FIL	2000Ω▲	28K▲	100Ω		
V11	6BQ5	NC	1.6meg*	47Ω	FIL	FIL	NC	1NF	NC	7000Ω▲
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9

† MEASURED FROM CATHODE X2

* MEASURED FROM ANODE X3

▲ MEASURED FROM CATHODE X2 WITH PINS 8 & 10 OF K1 SHORTED.

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 - 1st Rec Mixer		6AN8A			V7	Mic Preamp - AF Amp		12AX7A		
V2	2nd Rec Mixer - Rec Osc		6AN8A			V8	Output - Modulator		6AQ5		
V3	Local Oscillator		6GH8			V9	Xmtr Oscillator - Mixer		6GH8		
V4	Buffer - Synthesizer		12AT7			V10	Xmtr Driver		6BA6		
V5	1st IF Amp		6BA6			V11	Final Amp		6BQ5		
V6	2nd IF Amp		6BA6								

TRANSISTORS

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA					
			MFGR. PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q1	2SB471B	Power Oscillator		GE-16	TR-01	HEP232	SK-3009	ECG 121
Q2	2SB471B	Power Oscillator		GE-16	TR-01	HEP232	SK-3009	ECG 121

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT DATA				NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RCA PART No.	SYLVANIA PART No.	
X1	10D6	GE-504A	8D6 or 5A6D	SK3017A or SK3032	ECG 116 or ECG 117	
X2	10D6	GE-504A	8D6 or 5A6D	SK3017A or SK3032	ECG 116 or ECG 117	
X3	10D6	GE-504A	8D6 or 5A6D	SK3017A or SK3032	ECG 116 or ECG 117	
X4	10D4	GE-504A	8D4 or 5A4D	SK3031 or SK3017A	ECG 116 or ECG 117	
X5	10D4	GE-504A	8D4 or 5A4D	SK3031 or SK3017A	ECG 116 or ECG 117	
X6	1N60	1N60	1N60	1N60	ECG 109	
X7	1N72	1N34AS	1N34A	1N34A	ECG 109	
X8	10D1	GE-504A	8D4 or 5A4D	SK3031 or SK3017A	ECG 116 or ECG 117	
X9	10D4	GE-504A	8D4 or 5A4D	SK3031 or SK3017A	ECG 116 or ECG 117	
X10	10D4	GE-504A	8D4 or 5A4D	SK3031 or SK3017A	ECG 116 or ECG 117	
X11	1S34 (SD46)	1N34AS	1N34A	1N34A	ECG 109	
X12	1S34 (SD46)	1N34AS	1N34A	1N34A	ECG 109	

ELECTROLYTIC CAPACITORS

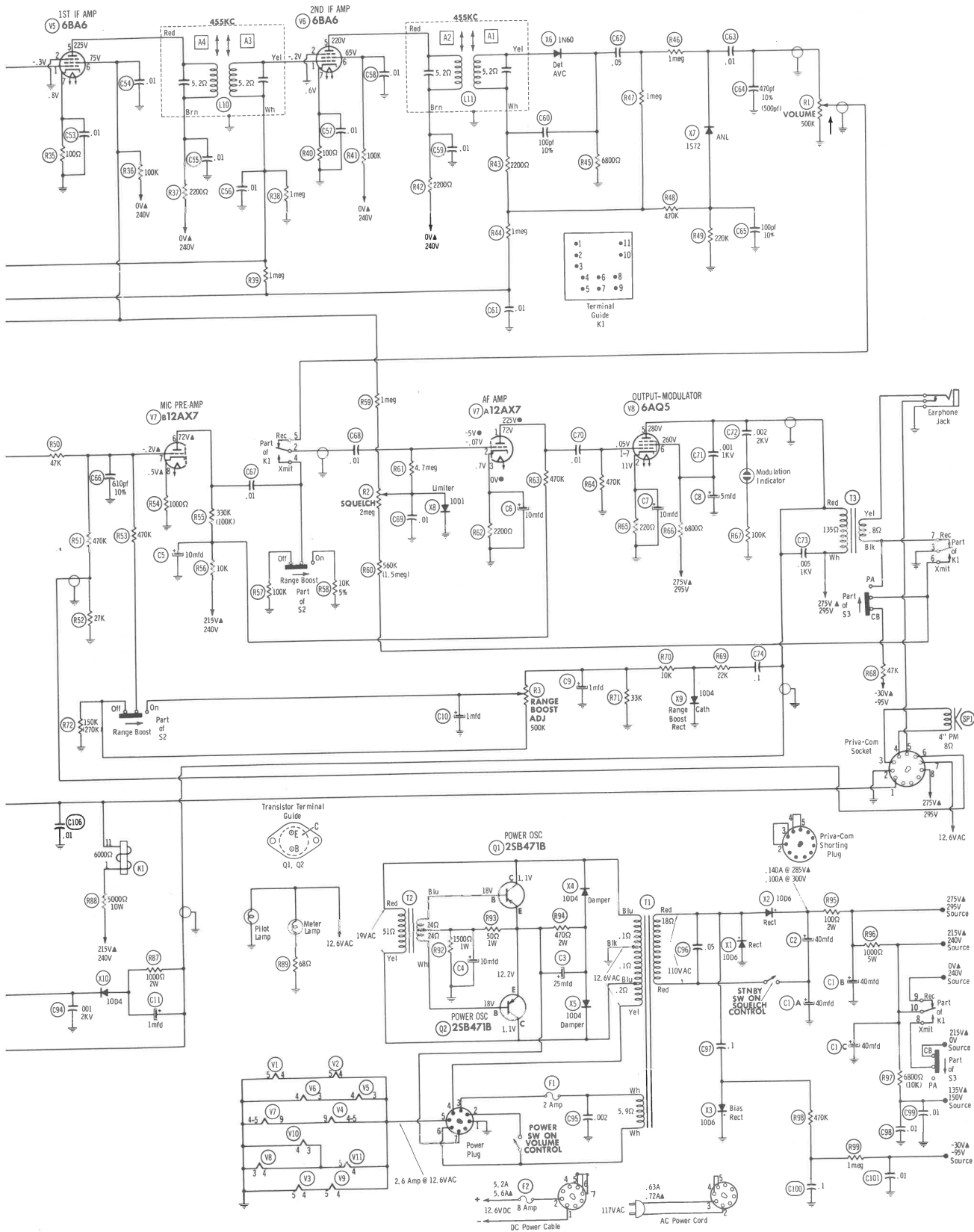
ITEM No.	RATING	REPLACEMENT DATA						
		PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	47 350V	2908-12	AFH3-29-25		CC0236A	XC3-45	FP330.9A	TVL-3639.9
B	47 350V							
C	47 350V							
C2	47 350V	2907-12	PRS-1680		WBR60-350	QT1-18	TC79A	TVA-1713
C3	22 50V		PRS-1340	EA50-25	PC30-50	MT1-14	MTA25F50	TL-1305.1
C4	10 50V	1125-12	BCD50010	EA50-10	PC10-50	MT1-6	MTA10E50	TL-1304
C5	10 350V	1032-12	PRS-1620		WBR-10-500	QT1-6	TC62A	TVA-1604
C6	10 16V		CRE457A	EA15-10	AL10-25	MT1-5	MTA10D35	TE-1155
C7	10 25V	2100-12	BCD25010	EA30-10	AL10-25	MT1-5	MTA10D35	TL-1204
C8	4.7 350V	2905-12	PRS-1600		WBR5-500	QT1-3.5	TC60A	TVA-1602.5
C9	1 160V	2906-12	PRS-1700		WBR1-500	QT1-1		TVA-1500
C10	1 160V	2906-12	PRS-1700		WBR1-500	QT1-1		TVA-1500
C11	1 160V	2906-12	PRS-1700		WBR1-500	QT1-1		TVA-1500

(CONTINUED ON PAGE 62)

LAFAYETTE MODEL COMSTAT 25B



Measurements taken with switching in position shown unless otherwise indicated.
Measured in "Transmit" position.
Values shown in () are used in some applications.
Resistors are 1/2W or less, 10% or 20%, unless otherwise indicated.
Supply voltage maintained at rated value for measurements.
Voltage and resistance measured with VTM or equivalent meter, no signal applied. Controls adjusted for normal operation.
Controls viewed from actuator end. Arrow indicates direction of control advance.
Numbers assigned to terminals may not be found on the unit.
Transistor resistances vary widely. No resistance measurements taken.



PARTS LIST AND DESCRIPTION (CONTINUED)

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

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.
C21	40	10%	#2272-12 #2271-12	NPO-DI39	TCZ-39		CCT0-390	CN0439	10TCC-Q39
C22	40	10%		NPO-DI39	TCZ-39		CCT0-390	CN0439	10TCC-Q39
C23	40	10%		NPO-DI39	TCZ-39		CCT0-390	CN0439	10TCC-Q39
C24	350								
C25	30								
C26	10	+1		NPO-DI 10	DTZ-10	NP010	CCT0-100	CN0410	10TCC-Q10
C27									
C28	.001	500V		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C29	.01	500V		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C30	.01	500V		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C31	.005	500V	GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50	
C32	2	+5	NPO-DI 2.2	DTZ-2R2	NP02P2		CN0522	10TCC-V22	
C33	30	10%		TCZ-30		CCT0-300		10TCC-Q30	
C34	30	10%		TCZ-30		CCT0-300		10TCC-Q30	
C35	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C36	10	+1	NPO-DI 10	DTZ-10	NP010	CCT0-100	CN0410	10TCC-Q10	
C37	10	+1	NPO-DI 10	DTZ-10	NP010	CCT0-100	CN0410	10TCC-Q10	
C38	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C39	20	10%	NPO-DI 20	DTZ-20	NP020	CCT0-200	CN0420	10TCC-Q20	
C40	4	+5			NP03P9			10TCC-V39	
C41	10	+1	NPO-DI 10	DTZ-10	NP010	CCT0-100	CN0410	10TCC-Q10	
C42	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C43	1	+5	NPO-DI 1.0	TCZ-1			CN0510	10TCC-V10	
C44	.005	500V	GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50	
C45	.005	500V	GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50	
C46	.001	500V	GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10	
C47	3	+5	NPO-DI 3.0					10TCC-V30	
C48	5	+5	NPO-DI 5.0		NP05			10TCC-V50	
C49	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C50	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C51	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C52	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C53	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C54	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C55	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C56	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C57	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C58	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C59	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C60	100	10%	NPO-DI 100	DTZ-100	NP0100	CCT0-101	CN0310	10TCC-T10	
C61	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C62	.05	50V	TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50	
C63	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C64	470	10%	GPD X5F471K	DD-471	GP470	CCD-471	GP347	10TS-T47	
C65	100	10%	NPO-DI 100	DTZ-100	NP0100	CCT0-101	CN0310	10TCC-T10	
C66	610	10%		DD-601		CCS-621	GP360	5GA-T60	
C67	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C68	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C69	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C70	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C71	.001	1KV	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C72	.002	2KV	GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10	
C73	.005	1KV	GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50	
C74	.1	600V	DBR6P1		6P1	6DP-4-104	PVC601	6PS-P10	
C75	30		#2271-12						
C76	.01	500V		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C77	20	10%		NPO-DI 20	DTZ-20	NP020	CCT0-200	CN0420	10TCC-Q20
C78	2	+5		NPO-DI 2.2	DTZ-2R2	NP02P2		CN0522	10TCC-V22
C79	60	10%		ADM-10-620	CPR-62J	CD10ED620K03	DM-10-620K	SX462	MS-462
C80	3	+5		NPO-DI 3.0					10TCC-V30
C81	.01	500V		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C82	.01	500V		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C83	.01	500V		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C84	3	+5		NPO-DI 3.0					10TCC-V30
C85	.001	500V	GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10	
C86	.001	500V	GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10	
C87	.001	500V	GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10	
C88	20	10%	NPO-DI 20	DTZ-20	NP020	CCT0-200	CN0420	10TCC-Q20	
C89	10	10%	NPO-DI 10	DTZ-10	NP010	CCT0-100	CN0410	10TCC-Q10	
C90	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C91	.001	2KV	HVD-301000	DD30-102	HV3-1000	3CCD-102	3HV210	30GA-D10	
C92	.05	600V	DBE6S5		DPMS6S5	6DP-3-503	PVC615	6PS-S50	
C93	.001	2KV	HVD-301000	DD30-102	HV3-1000	3CCD-102	3HV210	30GA-D10	
C94	.001	2KV	HVD-301000	DD30-102	HV3-1000	3CCD-102	3HV210	30GA-D10	
C95	.002	600V	GPD X5F202K	DD-202	GP2000	CCD-202	GP220	10TS-D20	
C96	.05	600V	DBE6S5		DPMS6S5	6DP-3-503	PVC615	6PS-S50	
C97	.1	400V	DBE4P1		DPMS4P1	4DP-3-104	PVC401	4PS-P10	
C98	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C99	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C100	.1	600V	DBEGP1		6P1	6DP-4-104	PVC601	6PS-P10	
C101	.01	500V	GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10	
C102	.001	500V	GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10	
C103	.001	500V	GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10	
C104	.001	500V	GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10	
C105	25		#2910-12						
C106	.01	500V		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C107	7	+5		NPO-DI 6.8	DTZ-6R8	NP06P8		CN0568	10TCC-V68

Lafayette Part Number

PARTS LIST AND DESCRIPTION (CONTINUED)

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

CONTROLS (All wattages 1/2 watt, or less, unless listed)

REPLACEMENT DATA							
ITEM No.	FUNCTION	RESIST-ANCE	MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS—IRC PART No.	MALLORY PART No.
R1	Volume & Power Switch	500K	1537-11	F2-500K,SSK014, KR-1	R47-500K-Z,KSS-3, SWE-12, or [NP-500K-Z, UP-C-400,SWE-12]	Q13-133,76-1 or [BU1,CF25,SS1, GC]*	RU55A,SL36, SL3250,US41 or [UA55A,SK1000, US41] or U48, US26
R2	Squelch & Standby Switch	2meg	1536-11	F1-2meg,SSK014, KR-1	A47-2meg-S,KSS-3, SWE-12, or [NP-2meg,UP-C-400, NWE-12]	Q11-139,76-1 or [BU1,CF19,SS1, GC]*	RU26L,SL36, SL3250,US41 or [UA26L,SK1000, US41] or U56, US26
R3	Range Boost Adjust	500K	1340-11	F1-500K, SNK010	A47-500K-S, FKS-1/2, or [NP-500K-S, UP-C-400]	B11-133,SK2 or [BU1,CF16,SS6]*	RU55L,SL38, SK750 or [UA55L,SK750] or SU50
R4	Meter Adjust	30K	1339-11	F1-25K,SRS006	A47-30K-S, FKS-1/2 or [NP-30K-S, UP-A-400]	B11-121,SK2 or [BU1,CF11,SS2, DC1]*	RU34L,SL36, SK3250 or [UA34L,SK750] or U30

* "SNAPTROL"

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R88	5000 10W	10W-SQ-5K	1108-13

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R96	1000 5W	5W-SQ-1K	1057-13

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	RFC (5.6uh)	1640-23	19-6022	74F566AP	T820
L2	TVI Trap	1639-23			
L3	PI Network (12 turns)	1641-23		72F225AP	TA311
L4	RFC (22uh)	1646-23			
L5	RF Amp	1466-24		21A156RB1	
L6	Local Oscillator	1645-23			
L7	Synthesizer Mixer	1465-24			
L8	1st Rec Mixer	1467-24		16-PC2 (1)	
L9	Input IF	1469-24		16-PC2 (1)	
L10	Interstage IF	1470-24		16-PC2 (1)	
L11	Output IF	1468-24			
L12	Xmtr Oscillator	1644-23		21A156RB1	T972
L13	Xmtr Mixer	1464-24		72F335AP	
L14	Xmtr Driver	1643-23			
L15	RFC (30uh)	1642-23			

(1) Solder to chassis

TRANSFORMER (Power)

ITEM No.	RATING			REPLACEMENT DATA				NOTES
	PRI. 1	SEC. 1	SEC. 2	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	117VAC .72A *	110VAC .360A	12.6VAC 2.6A	1357-15				* Transmit
	PRI 2	SEC. 4	SEC. 5					
	12.6V @ 5.6A *							

TRANSFORMER

ITEM No.	RATING			REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	2	1CT		1359-15				

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA				NOTES
	PRI.	SEC.	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T3	3872	8	1358-15				

LAFAYETTE MODEL COMSTAT 25B

PARTS LIST AND DESCRIPTION (CONTINUED)

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

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	4" PM, 8 ohms	1006-36	4A1Z8	

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA						
		PART No.		BUSS PART No.		LITTELFUSE PART No.		WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE
F1	2 Amp	2298-20		GJV2		318002		
F2	8 Amp			AGC8	HHJ-B	312008	150145	

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
K1	Relay	1033-37	Receive - Transmit
M4	Crystal	1152-35	14.970MC
M5	Crystal	1151-35	14.960MC
M6	Crystal	1150-35	14.950MC
M7	Crystal	1153-35	14.990MC
M8	Crystal	1149-35	23.540MC
M9	Crystal	1144-35	23.290MC
M10	Crystal	1145-35	23.340MC
M11	Crystal	1146-35	23.390MC
M12	Crystal	1147-35	23.440MC
M13	Crystal	1148-35	23.490MC
M14	Crystal	1155-35	11.730MC
M15	Crystal	1154-35	11.275MC
M16	Meter	1135-27	"S" -RF Power Indicator
S1	Switch, Selector	1352-14	
S2	Switch, Range Boost	1351-14	
S3	Switch, PA-CB	1350-14	

MICROPHONE

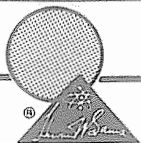
ITEM No.	REPLACEMENT DATA			REMARKS
	MFGR. PART No.	RCA REPLACEMENT	RCA STEP UP REPLACEMENT	
M17		HK-107	HK-101(1),HK113(1)	(1) For base station use.

CABINETS & CABINET PARTS (When ordering specify model, chassis & color)

ITEM	PART No.	ITEM	PART No.
Cabinet, Top	5736-10	Knobs, Squelch/Volume/Fine Tune	1664-18
Cabinet, Bottom	5735-10	Knob, Selector	1665-18
Face Glass, Meter	1287-20	Plastic Face Plate	3530-20

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
	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[®]

For Supplier Address See PHOTOFACT Index

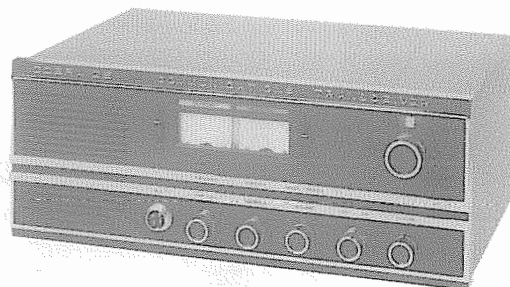
NOTE

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, SUBPARTS C & D.)

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 50-ohm dummy load or the normally used antenna system.



MODEL COBRA 25

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:	GENERAL CEMENT #
A1 thru A4, A7, A8.....	9087
A5, A9, A13, A24	8276, 8277, 8290
A6, A10, A11, A12, A14, thru A18	9440
A19 thru A23.....	8868, 9089

RECEIVER

Connect AC VTVM to terminals of speaker. Turn volume control fully clockwise, turn Squelch control fully counterclockwise.

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to Base of Q3 (2nd Rec. Mixer), low side to chassis. Tune to 455KC (Mod.).	Any	A1 thru A4	Adjust for maximum.
Frequency Meter or counter thru 5pf to Emitter of Q102 (Rec. Osc.)	Any	A5	Adjust only if all Rec. Osc. crystal frequencies are high or low.
Frequency meter or counter thru 5pf to Emitter of Q101 (Synthesizer).	Any	A9	Adjust only if all synthesizer crystal frequencies are high or low.
High side thru .01 to Antenna Receptacle, low side to chassis. Tune to 27.115MC (Mod.). (Channel 13).	13	A6, A7, A8, A10, A11, A12	Adjust for maximum.

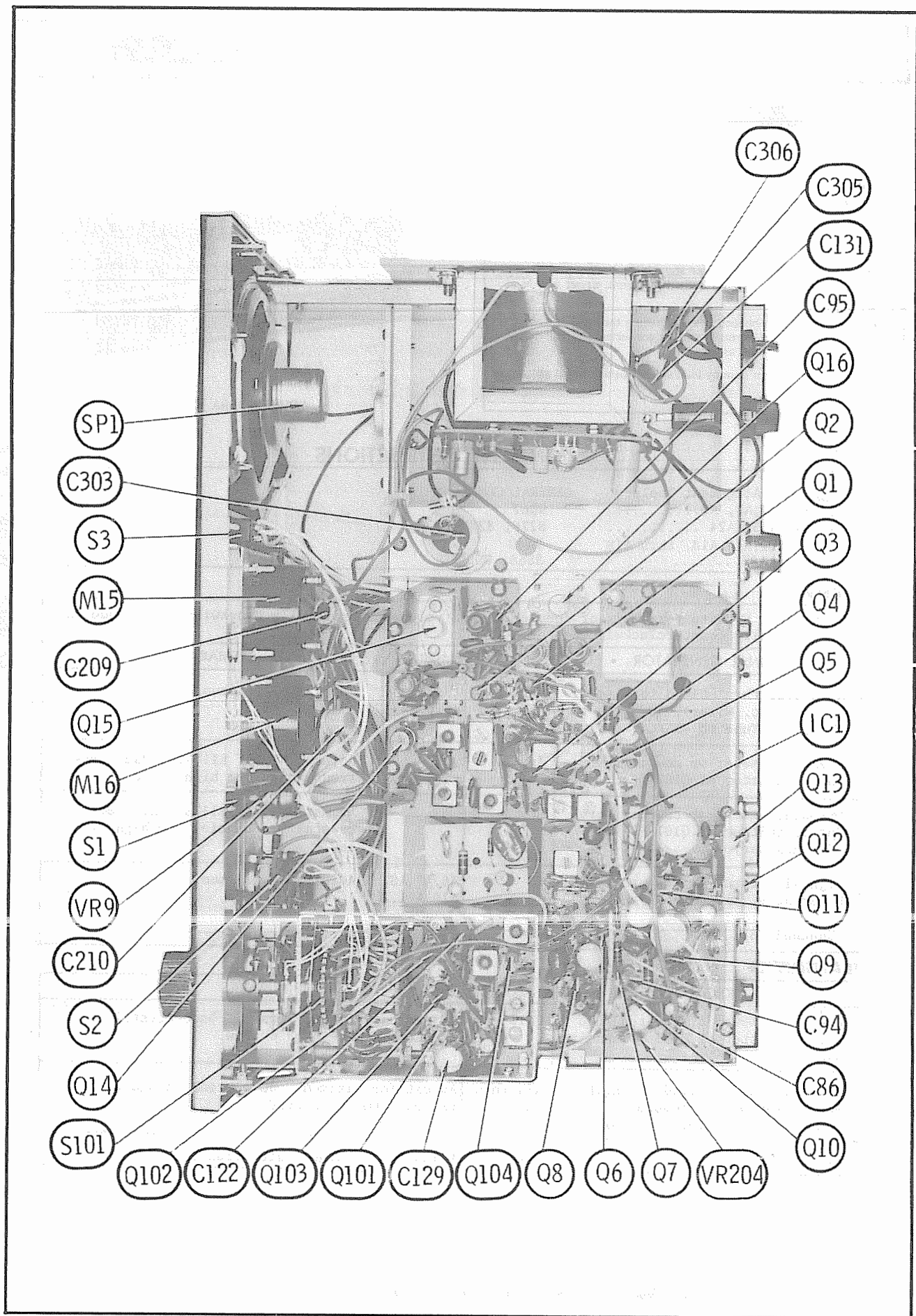
TRANSMITTER

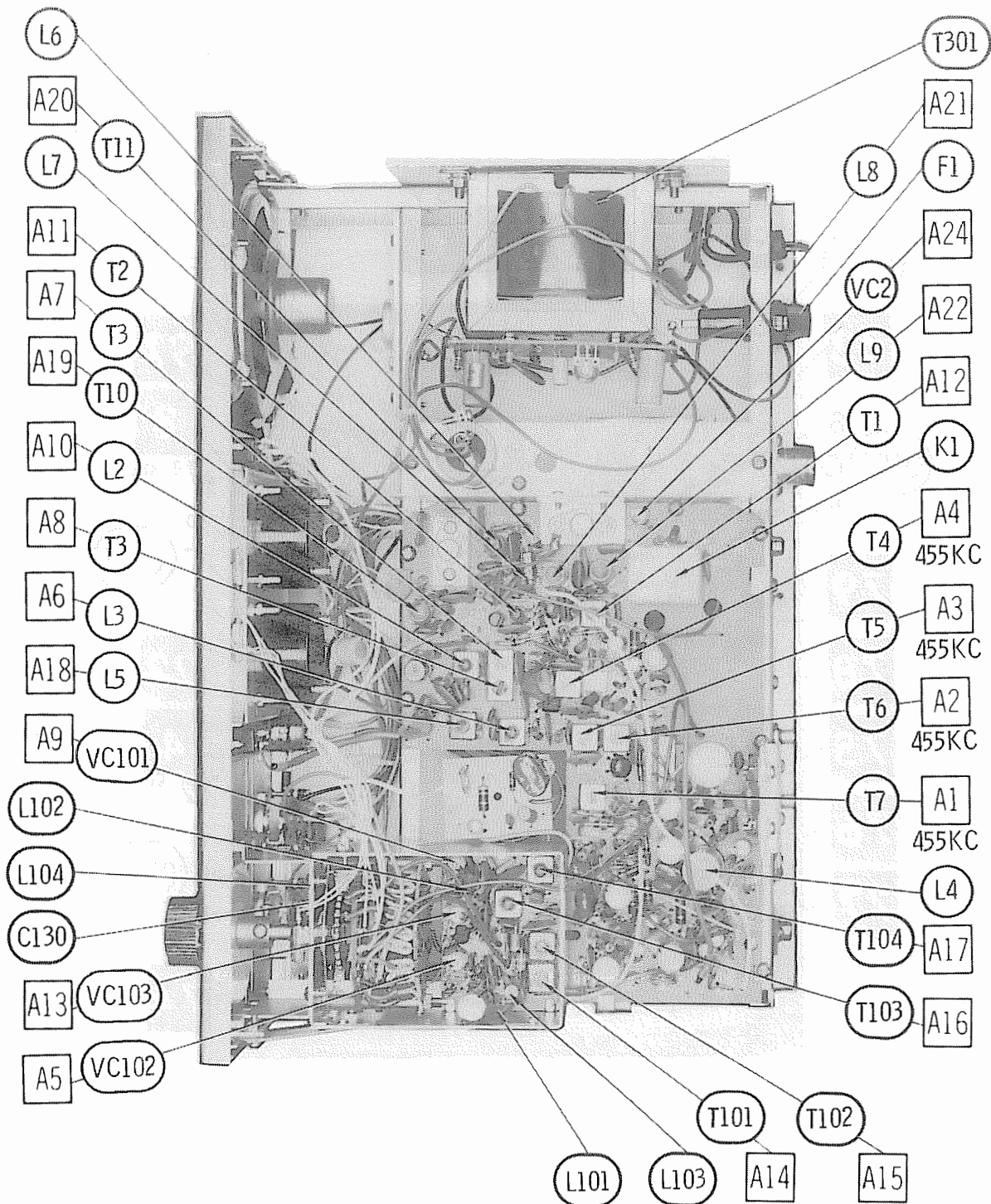
INDICATOR	ADJUST	REMARKS
Frequency Meter or Counter thru 5pf to Emitter of Q103 (Transmit Osc.)	A13	Adjust only if all Transmit Osc. crystal frequencies are high or low.
RF wattmeter or Field Strength Meter 0-500ma DC ohmmeter connected in collector of Q16.	A14 thru A23	Adjust for maximum. DC current should not exceed 370ma @ 13.5VDC.
TV set (Ch. 2).	A24	Adjust for MINIMUM interference.

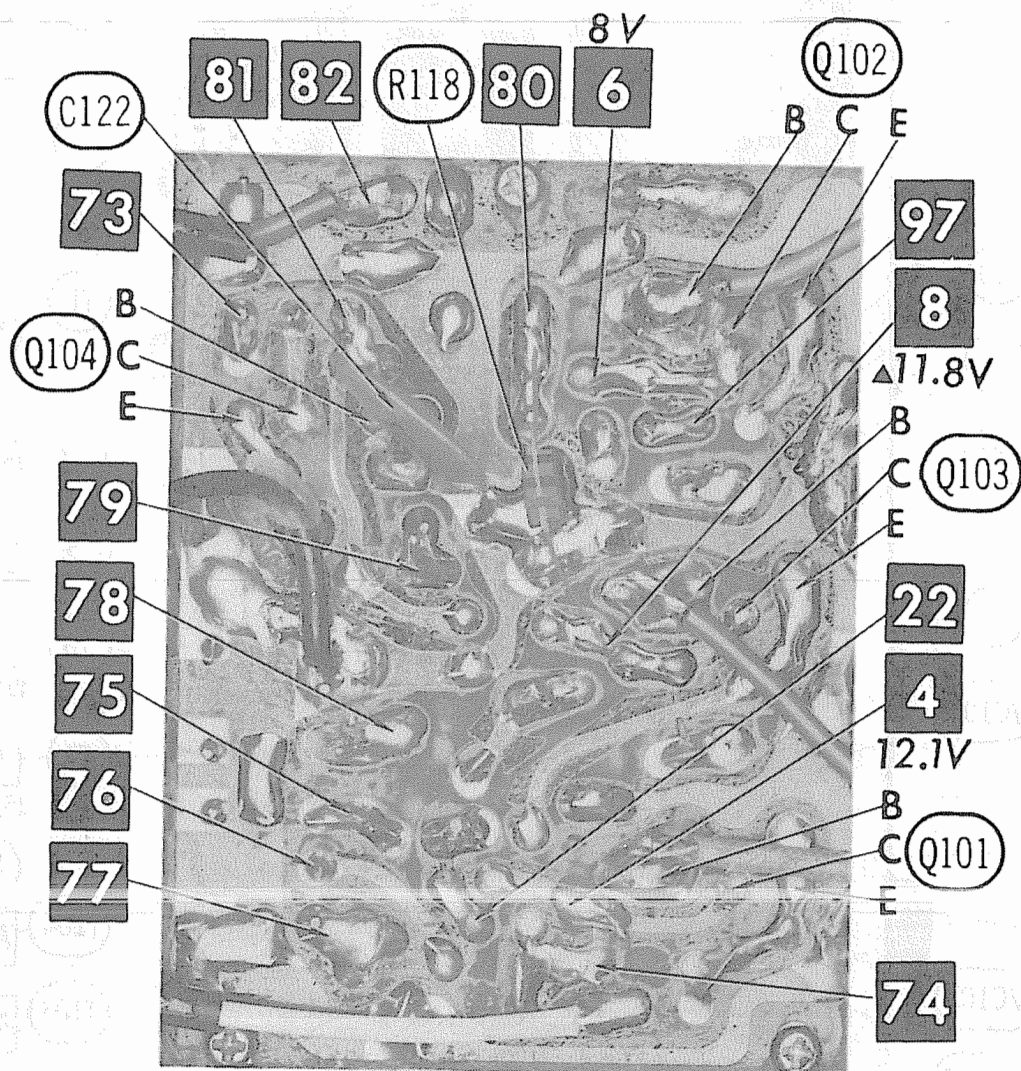
B & K MODEL COBRA 25

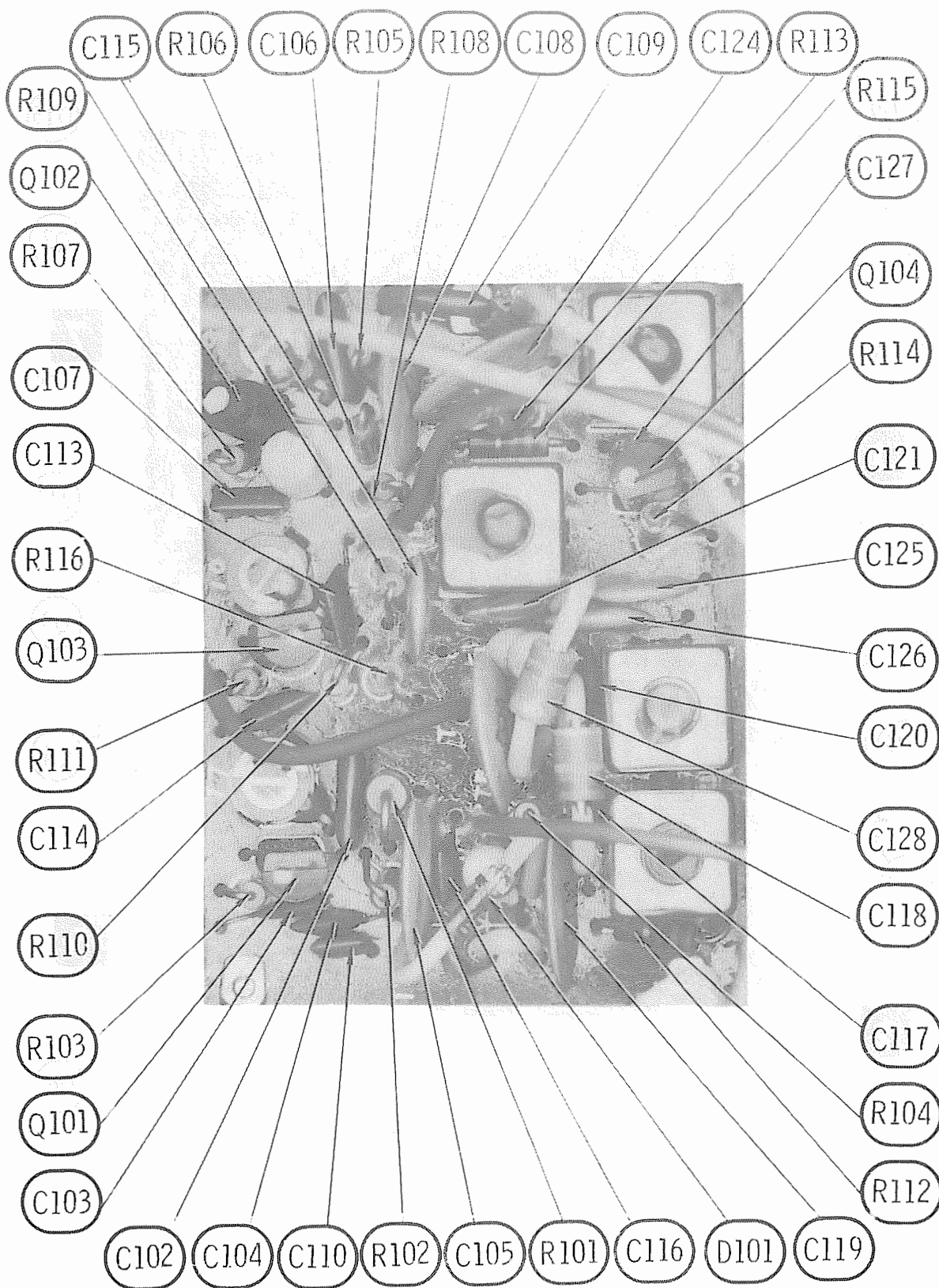
HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

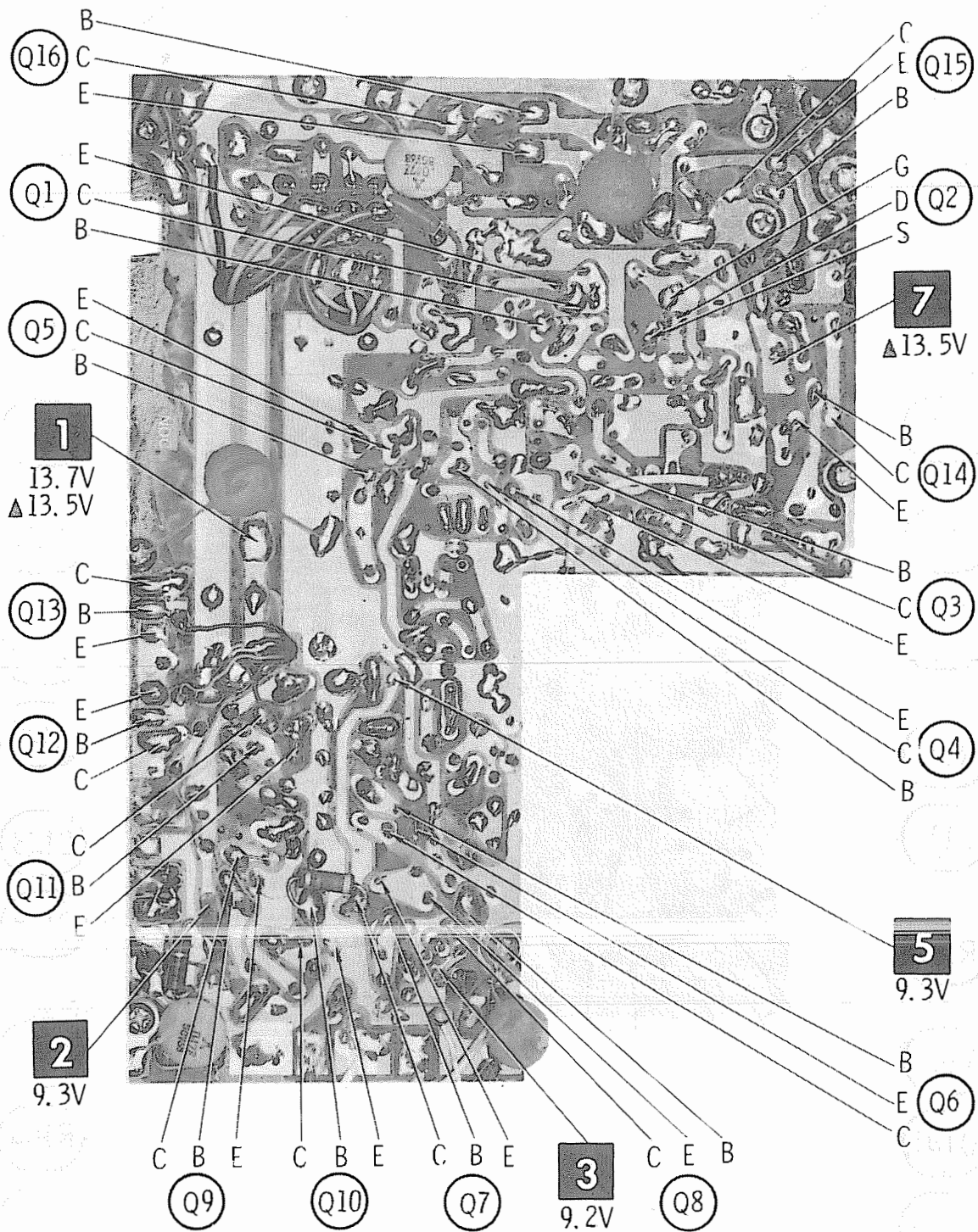
© 1971 Howard W. Sams & Co., Inc. Printed in U. S. of America 1CY001

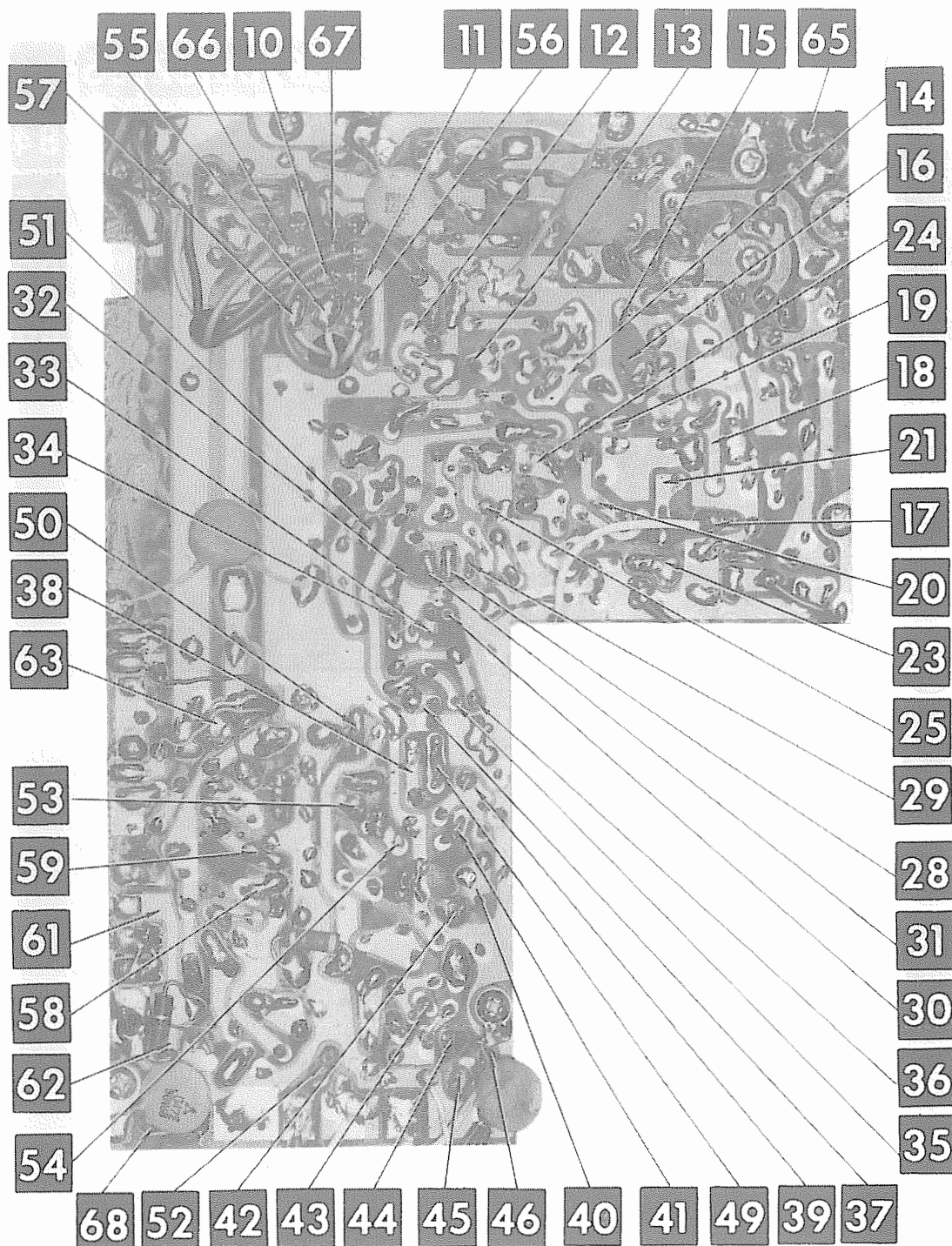


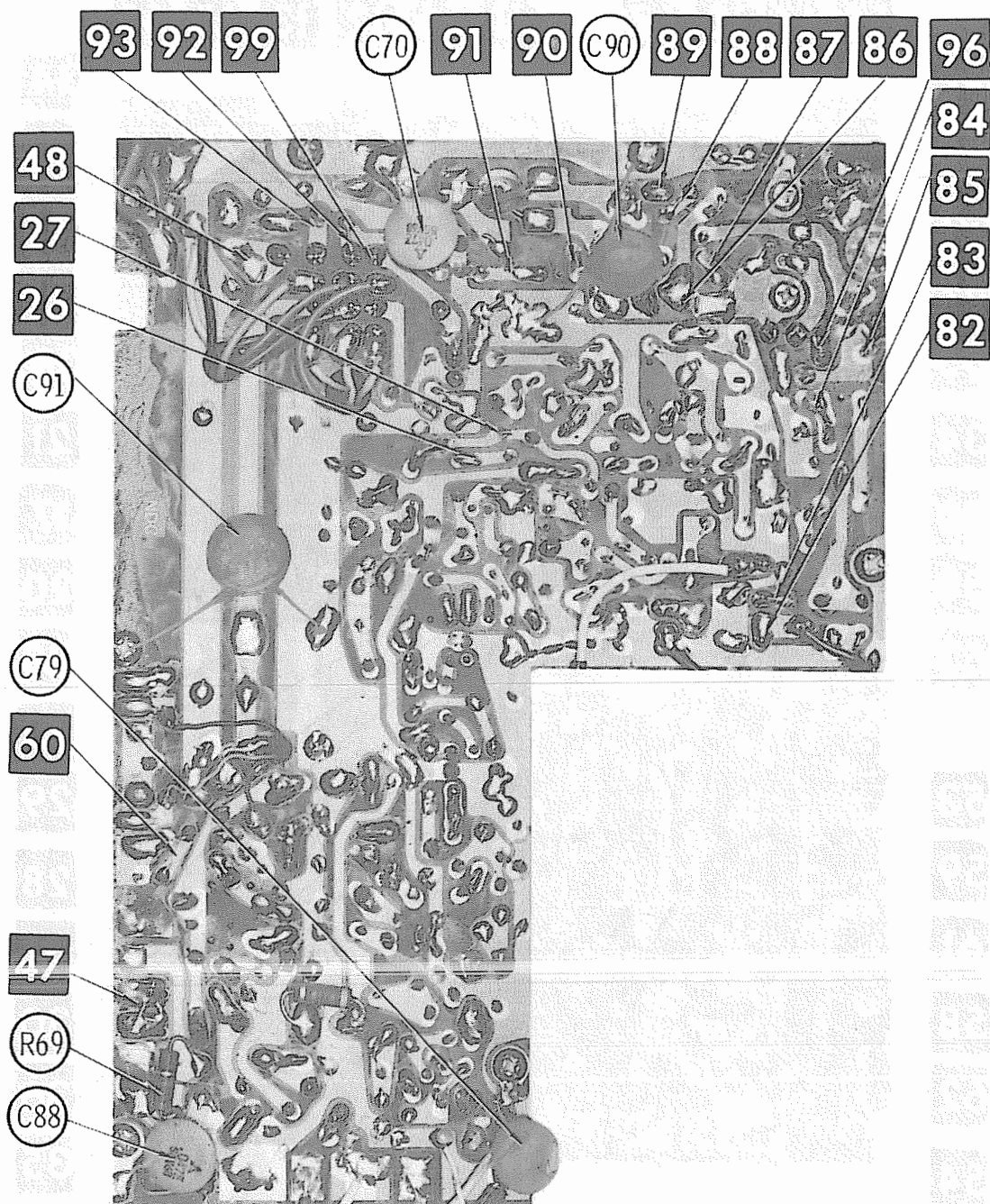


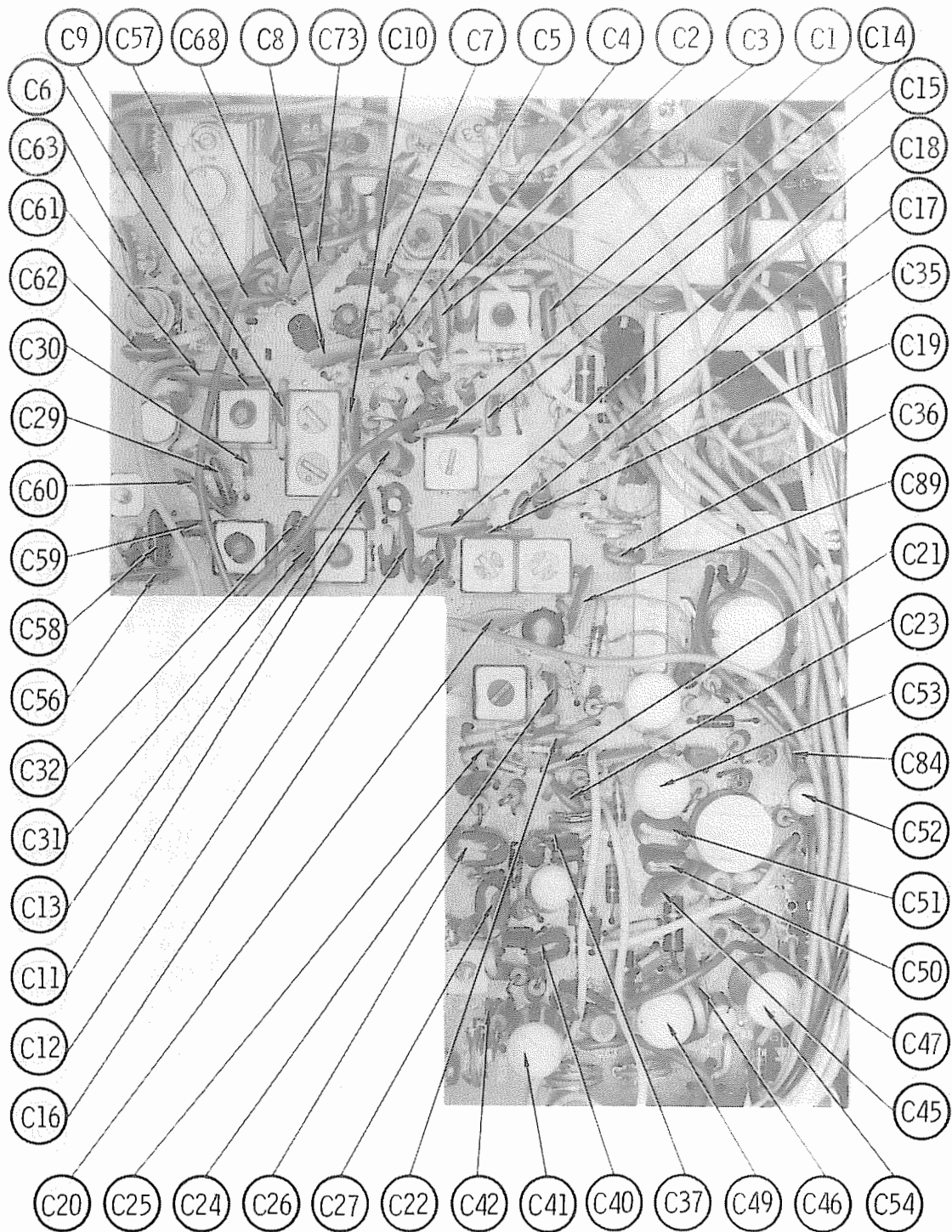


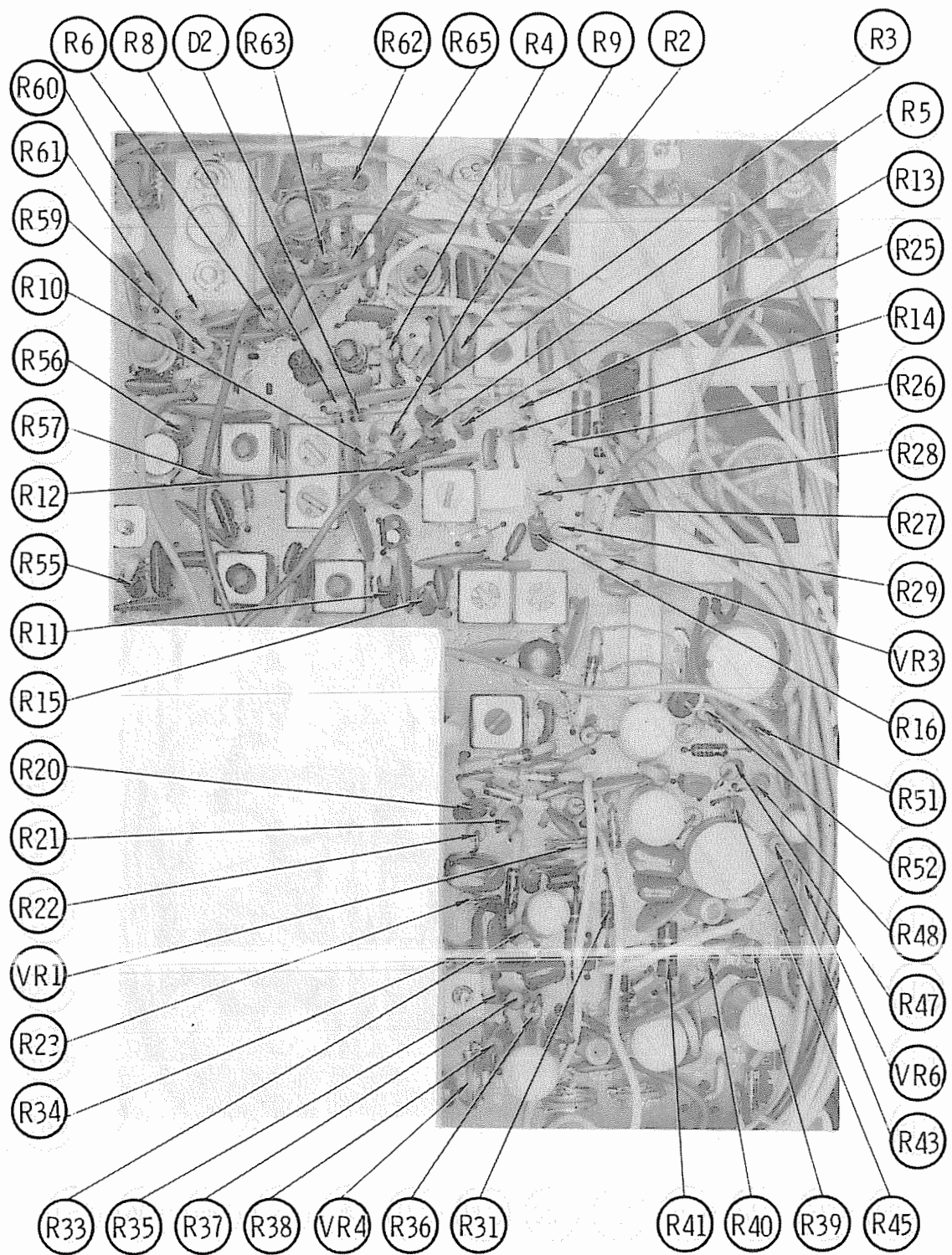


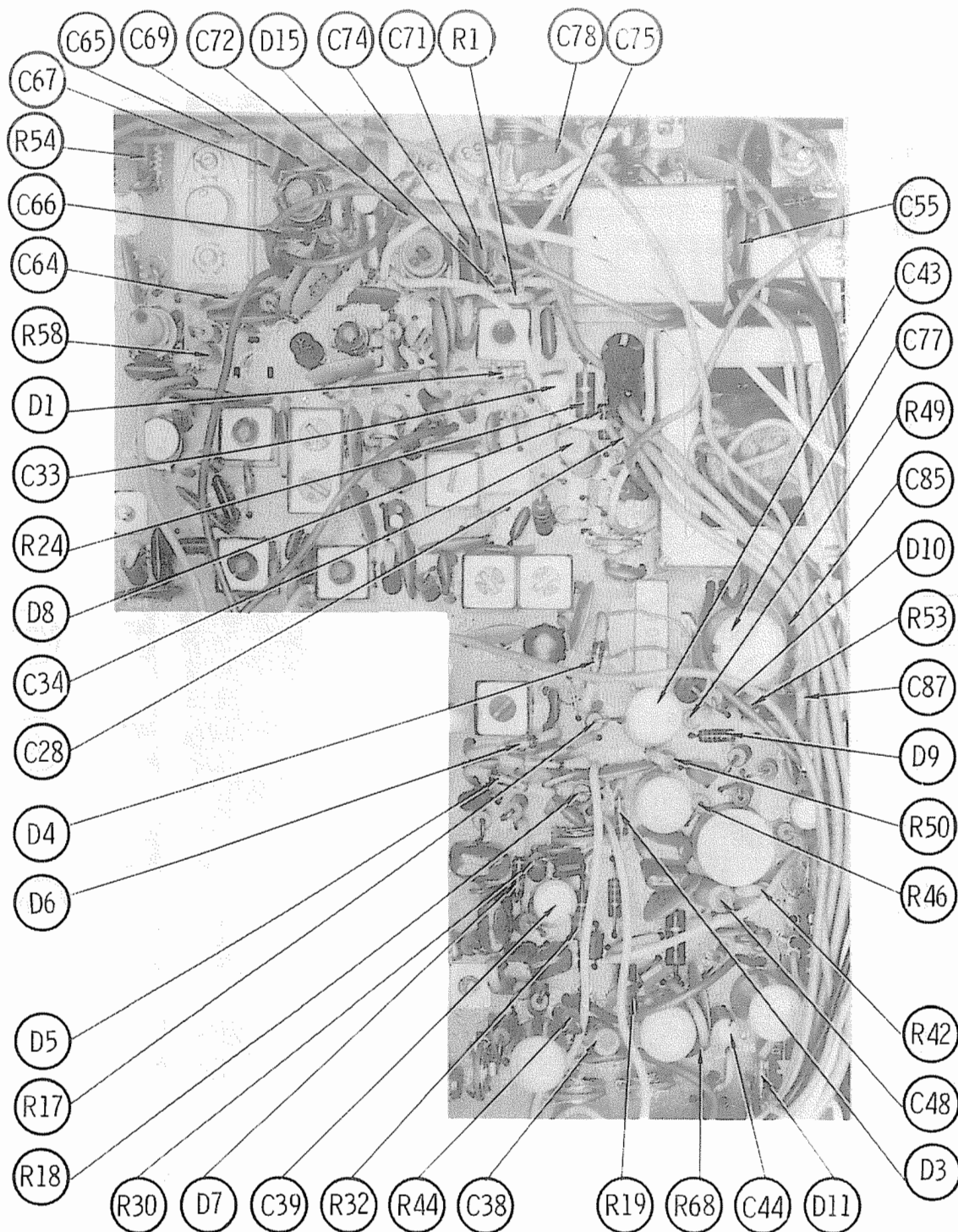


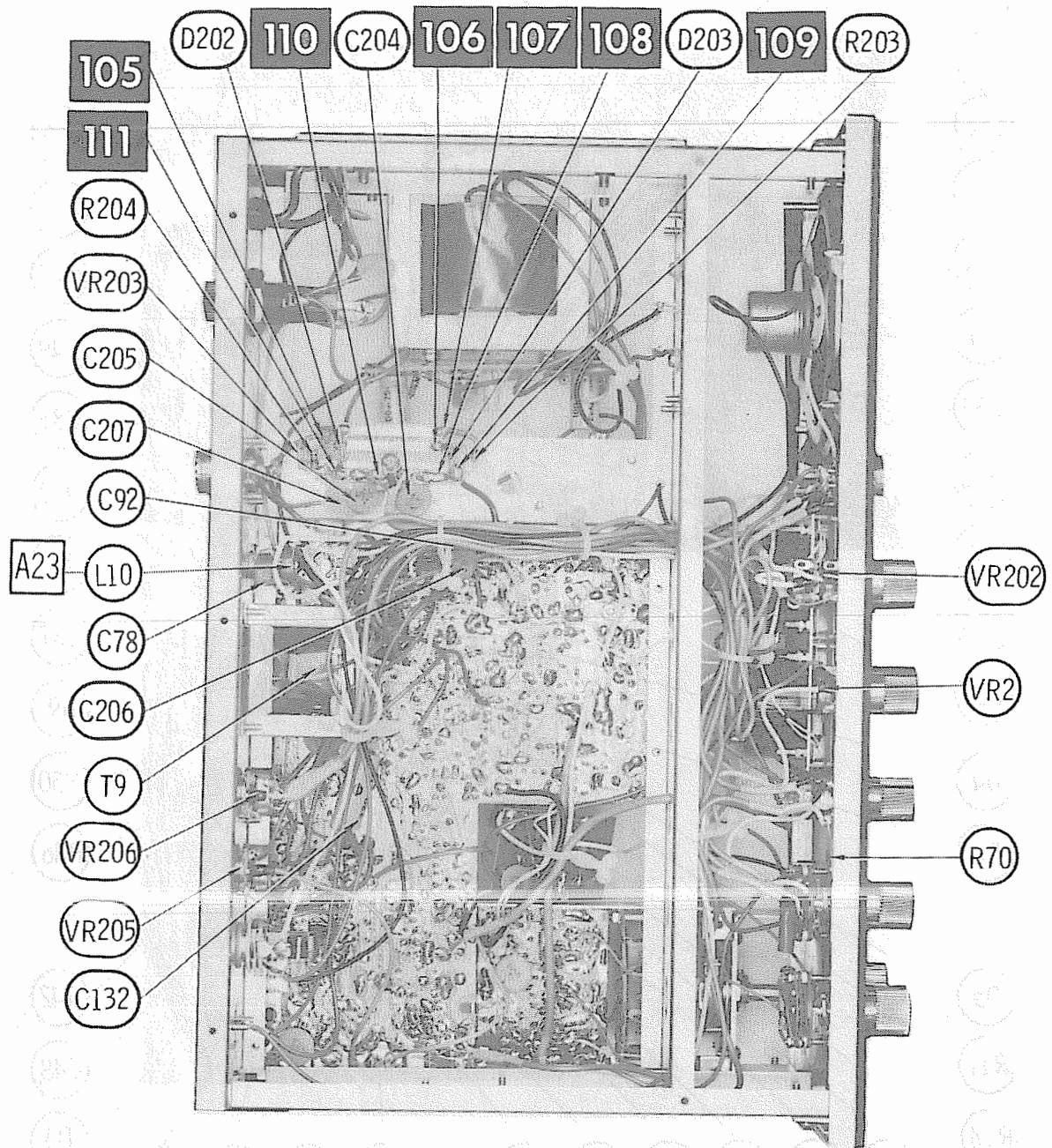




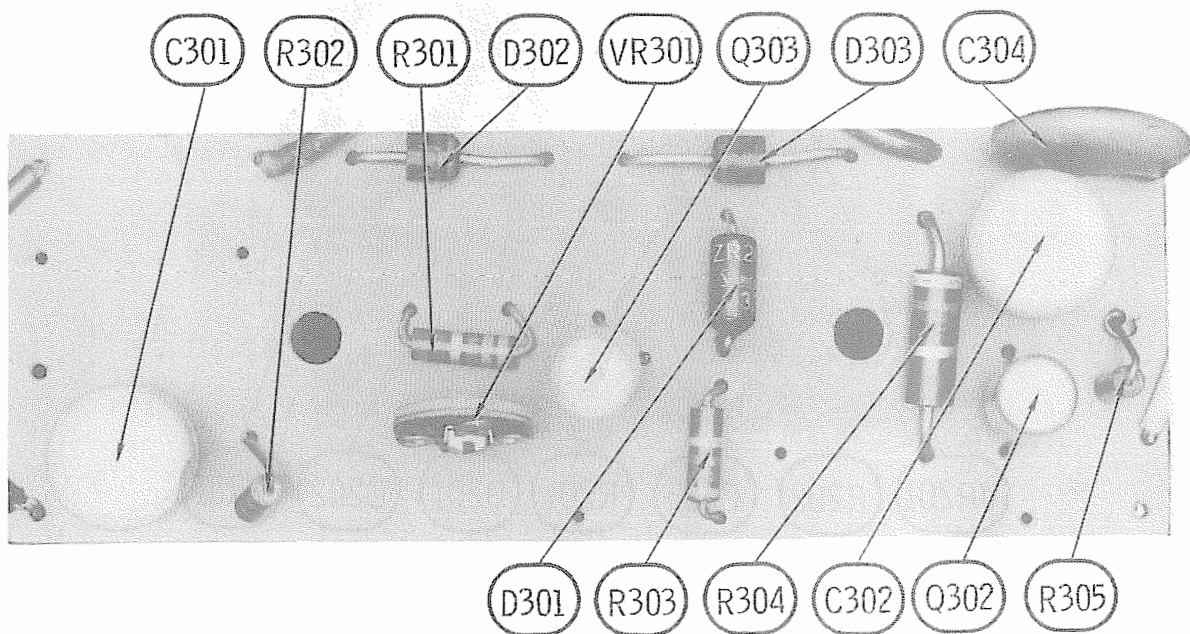
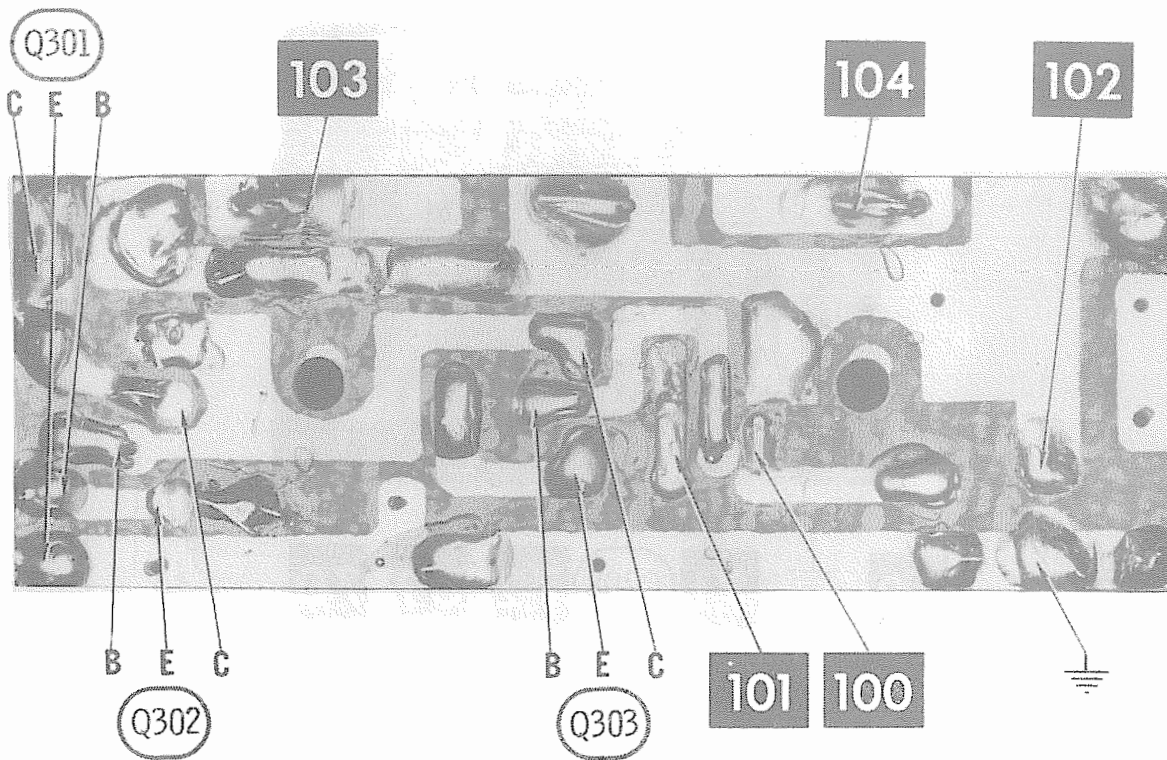




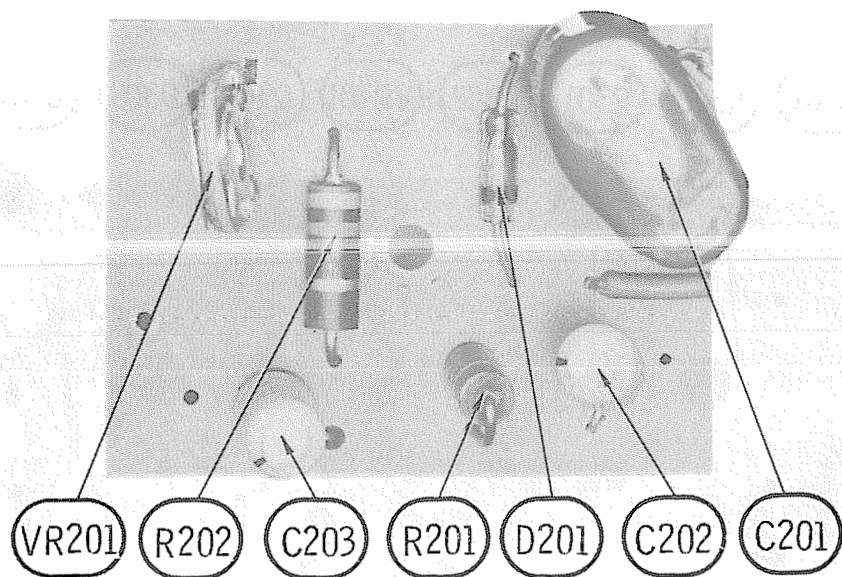
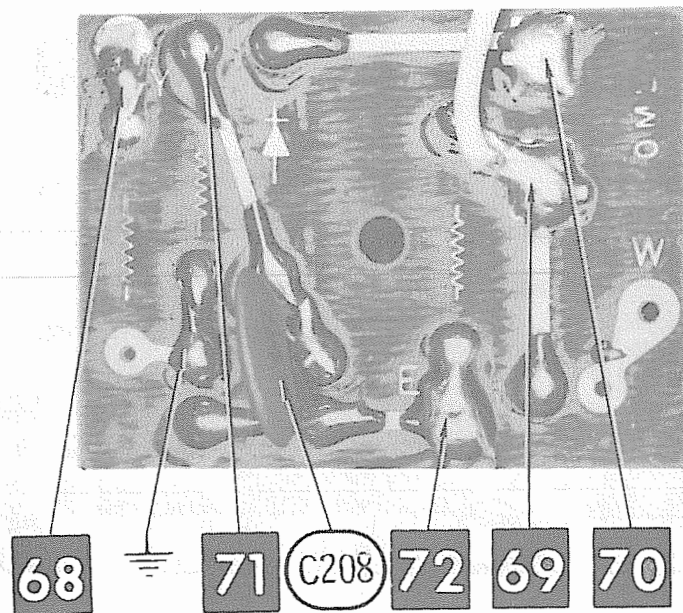




A Howard W. Sams **CIRCUITRACE** Photo



B & K MODEL COBRA 25



PARTS LIST AND DESCRIPTION

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

TRANSISTORS

ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA					
			MFGR. PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q1	2SC710 (2SC460)	RF Amp	176-014-9-001	GE-17	TR-22	HEP56	SK3018	ECG 123A
Q2	2SK19	1st Receive Mixer	182-009-9-001	GE-FET-1	FE-100	HEP802		ECG 132
Q3	2SC710 (2SC460)	2nd Receive Mixer	176-014-9-001	GE-17	TR-22	HEP56	SK3018	ECG 123A
Q4	2SC710 (2SC460) (2SC709)	1st IF Amp	176-014-9-001	GE-17	TR-22	HEP56	SK3018	ECG 123A
Q5	2SC458C (2SC619)	AGC Amp	176-016-9-001	GE-10	TR-21	HEP738	SK3020	ECG 108
Q6	2SC458C (2SC619)	Squelch	176-016-9-001	GE-10	TR-21	HEP738	SK3020	ECG 108
Q7	2SC458C (2SC619)	Squelch	176-016-9-001	GE-10	TR-21	HEP738	SK3020	ECG 108
Q8	2SC458C (2SC619)	AF Amp	176-016-9-001	GE-10	TR-21	HEP738	SK3020	ECG 108
Q9	2SC458C (2SC619)	AF Amp	176-016-9-001	GE-10	TR-21	HEP738	SK3020	ECG 108
Q10	2S0187 (2SD77)	Speech Limiter	174-002-9-001	GE-8	TR-04	HEP641	SK3010	ECG 101
Q11	2SC620 (2SC458)	Driver	176-017-9-001	GE-18	TR-25	HEP53	SK3020	ECG 123A
Q12	2SC1014	Output-Mod.	172-006-9-001	GE-28	1RTR55	HEP245	SK3041	ECG 152
Q13	2SC1014	Output-Mod.	172-006-9-001	GE-28	1RTR55	HEP245	SK3041	ECG 152
Q14	2SC774 (2SC163)	Xmtr Amp	176-018-9-001	GE-17	TR-22	S3001	SK3047	ECG 128
Q15	2SC777 (2SC608)	Xmtr Driver	172-007-9-001			S3001	SK3049	ECG 128
Q16	2SC778 (2SC609)	Xmtr Final	172-008-9-001			S3001	SK3049	ECG 128
Q101	2SC710 (2SC460)	Synthesizer Osc.	176-014-9-001	GE-17	TR-22	HEP56	SK3018	ECG 123A
Q102	2SC710 (2SC455)	Receiver Oscillator	176-014-9-001	GE-17	TR-22	HEP56	SK3018	ECG 123A
Q103	2SC710 (2SC455)	Xmtr Oscillator	176-014-9-001	GE-17	TR-22	HEP56	SK3018	ECG 123A
Q104	2SC710 (2SC460)	Buffer	176-014-9-001	GE-17	TR-22	HEP56	SK3018	ECG 123A
Q301	2SB426	Regulator	171-015-9-001	GE-16	TR-01	HEP230	SK3009	ECG 121
Q302	2SB324	Regulator Control	175-006-9-001	GE-2	TR-05	HEP254	SK3004	ECG 158
Q303	2SB187	Error Amp	175-007-9-001	GE-2	TR-05	HEP632	SK3004	ECG 102A

B & K MODEL COBRA 25

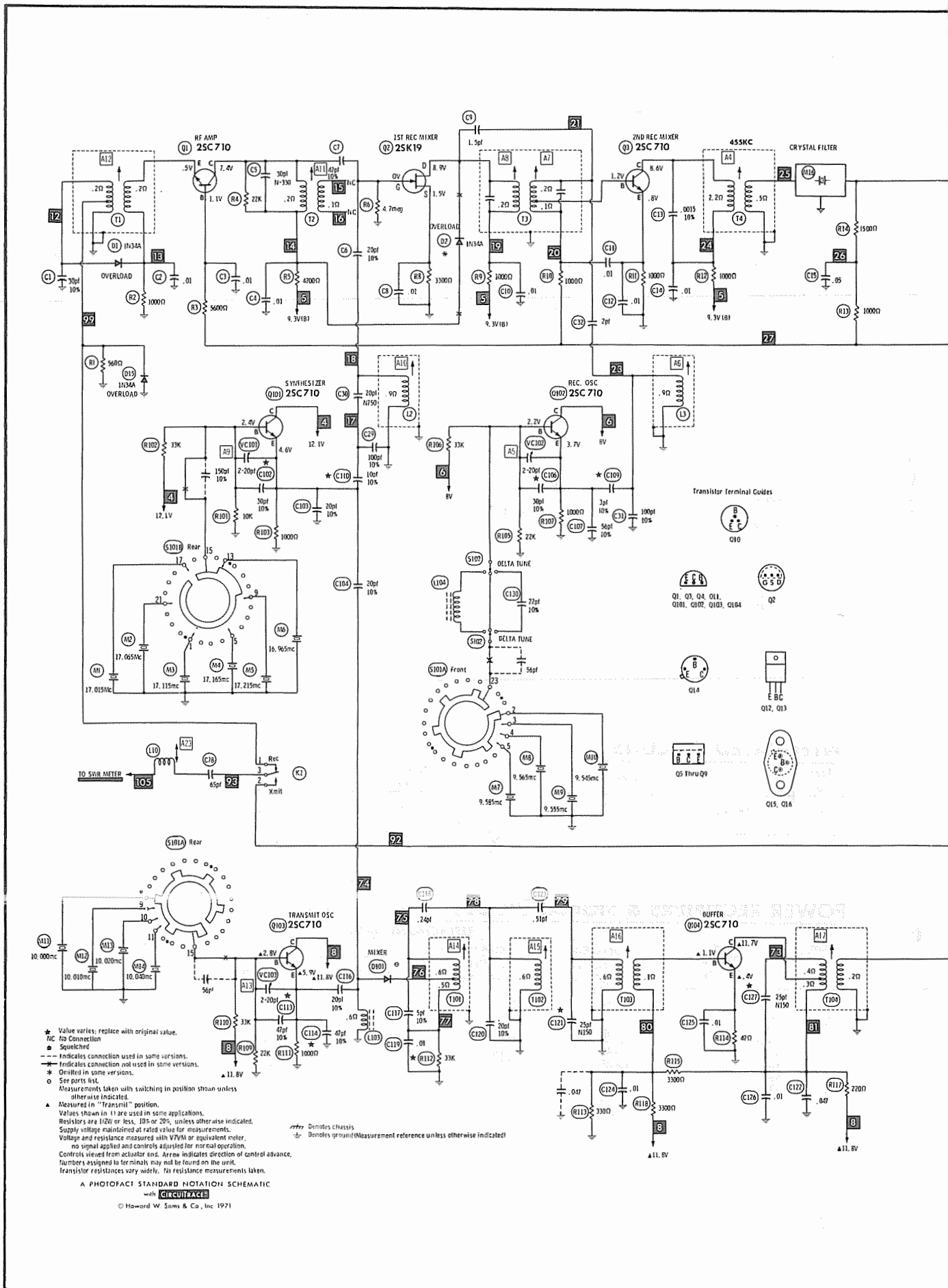
INTEGRATED CIRCUITS

ITEM No.	FUNCTION	MFGR. PART No.	REMARKS
IC1	2nd IF Amp	307-001-9-001 (uA703A)	Sylvania Replacement ECG 703

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT DATA				NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RCA PART No.	SYLVANIA PART No.	
D1	1N34A	1N34AS	1N34A	1N34A	ECG 109	Zener 9.1V Zener 9.1V
D2	1N34A	1N34AS	1N34A	1N34A	ECG 109	
D3	1N34A	1N34AS	1N34A	1N34A	ECG 109	
D4	1N34A	1N34AS	1N34A	1N34A	ECG 109	
D5	1N34A	1N34AS	1N34A	1N34A	ECG 109	
D6	1N34A	1N34AS	1N34A	1N34A	ECG 109	
D7	1S84				ECG 177	
D8	1S757A	GEZD-9.1			ECG 139	
D9	1S757A	GEZO-9.1			ECG 139	
D10	MV3	GE-504A	804 or 5A4D	SK3030 or SK3031	ECG 116 or ECG 117	
D11	1N34A	1N34AS	1N34A	1N34A	ECG 109	Zener 6V
D15	1N34A	1N34AS	1N34A	1N34A	ECG 109	
D101	1S180				ECG 177	
D201	1N34A	1N34AS	1N34A	1N34A	ECG 109	
D202	1N34A	1N34AS	1N34A	1N34A	ECG 109	
D203	1N34A	1N34AS	1N34A	1N34A	ECG 109	
D301	152-019-9-001	GEZD-6.2			ECG 137	
D302	151-D18-9-001	GE-504A	8D4 or 5A4D	SK3030 or SK3031	ECG 116 or ECG 117	
D303	151-018-9-001	GE-504A	8D4 or 5A4D	SK3030 or SK3031	ECG 116 or ECG 117	

(CONTINUED ON PAGE 23)



PARTS LIST AND DESCRIPTION (CONTINUED)

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

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA						
		PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C28	47 16V	022-046-9-001	MCD-140	EP30-50	PC50-25	MT1-16.5	MTV50CD25	TE-1209
C33	10 16V	022-044-9-001	MCD-70	EP15-10	PC10-50	MT1-5	MTV10CB50	TE-1155
C34	10 16V	022-044-9-001	MCD-70	EP15-10	PC10-50	MT1-5	MTV10CB50	TE-1155
C38	1 16V	022-045-9-001	MCD-10		PC1-100	MT1-1	MTV1CB50	TE-1148
C39	47 16V	022-046-9-001	MCD-140	EP30-50	PC50-25	MT1-16.5	MTV50CD25	TE-1209
C41	220 16V	022-047-9-001	BCD20200	EA15-250	PC200-16	QT1-28	MTV200CK15	TL-1164
C43	220 16V	022-047-9-001	BCD20200	EA15-250	PC200-16	QT1-28	MTV200CK15	TL-1164
C44	1 16V	022-045-9-001	MCD-10		PC1-100	MT1-1	MTV1CB50	TE-1148
C48	1 16V	022-045-9-001	MCD-10		PC1-100	MT1-1	MTV1CB50	TE-1148
C49	220 16V	022-047-9-001	BCD20200	EA15-250	PC200-16	QT1-28	MTV200CK15	TL-1164
C52	10 16V	022-044-9-001	MCD-70	EP15-10	PC10-50	MT1-5	MTV10CB50	TE-1155
C53	220 16V	022-047-9-001	BCD20200	EA15-250	PC200-16	QT1-28	MTV200CK15	TL-1164
C54	10 16V	022-044-9-001	MCD-70	EP15-10	PC10-50	MT1-5	MTV10CB50	TE-1155
C77	1000 15V	022-048-9-001	PRS1230	EA15-1000	WBR1000-16	QT1-32	TC1501A	TL-1166.5
C94	1 16V	022-045-9-001	MCD-10		PC1-100	MT1-1	MTV1CB50	TE-1148
C129	220 16V	022-047-9-001	BCD20200	EA15-250	PC200-16	QT1-28	MTV200CK15	TL-1164
C132	220 16V	022-047-9-001	BCD20200	EA15-250	PC200-16	QT1-28	MTV200CK15	TL-1164
C202	1 16V	022-045-9-001	MCD-10		PC1-100	MT1-1	MTV1CB50	TE-1148
C203	1 16V	022-045-9-001	MCD-10		PC1-100	MT1-1	MTV1CB50	TE-1148
C209	47 16V	022-046-9-001	MCD-140	EP30-50	PC50-25	MT1-16.5	MTV50CD25	TE-1209
C210	47 16V	022-046-9-001	MCD-140	EP30-50	PC50-25	MT1-16.5	MTV50CD25	TE-1209
C301	100 25V	022-056-9-001	MCD-180	EA30-100	PC100-25	MT1-20	MTV100CK25	TE-1211
C302	100 25V	022-056-9-001	MCD-180	EA30-100	PC100-25	MT1-20	MTV100CK25	TE-1211
C303	1000 35V	022-055-9-001	PRS-1395		WBR1000-35		TC50100A	TL-1317

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.
C1	30 10%		ADM-15-300	CPR-30J	CD15E0330J03	DM-15-300	SX430	MS-43
C2	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C3	.01		TTP-01	CK-103	MGP01	CCO-103	TA110	TG-S10
C4	.01		TTP-01	CK-103	MGP01	CCO-103	TA110	TG-S10
C5	30 N330	#020-055-9-001		TCA-33				10TCS-Q30
C6	20 10%		ADM-10-200	CPR-20J	CD15ED220J03	DM-10-220	SX420	MS-42
C7	47 10%		ADM-15-470	CPR-47J	CD15ED470J03	DM-15-470J	SX447	424MC470J501
C8	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C9	1.5	#023-008-9-001						
C10	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C11	.01		TTP-01	CK-103	MGP01	CCO-103	TA110	TG-S10
C12	.01		TTP-01	CK-103	MGP01	CCO-103	TA110	TG-S10
C13	.0015 10%			CPR-1500J	CD19FD152J03	DM-19-152	SX215	MS-215
C14	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C15	.05		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C16	.05		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C17	2 ±.5	#023-009-9-001				DM-10-020		
C18	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C19	10 10%		ADM-10-100		CD15CD100J03	DM-10-100	SX410	MS-41
C20	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C21	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C22	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C23	.05		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C24	15 10%		ADM-10-150			DM-10-180	SX415	MS-415
C25	.001		GPD X5F102K	DM-102	GP1000	CCO-102	SM210	2SS-D10
C26	.1		TTP-1	CK-104			TA010	TG-P10
C27	.1		TTP-1	CK-104			TA010	TG-P10
C29	100 10%		ADM-10-101	CPR-100J	CD15FD101J03	DM-10-101	SX310	MS-31
C30	30 N750			TGN-30				10TCU-Q30
C31	100 10%		ADM-10-101	CPR-100J	CD15FD101J03	DM-10-101	SX310	MS-31
C32	2 ±.5	#023-0D9-9-001						
C35	.05		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C36	.05		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C37	.05		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C40	.04			DD-403			GP140	
C42	.001		GPD X5F102K	DM-102	GP1000	CCO-102	SM210	2SS-D10
C45	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C46	.047		TTP-05	CK-503	MGP05	CCO-503	TA150	TGL-S50
C47	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C50	.05		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C51	.1		TTP-1	CK-104			TA010	TG-P10
C55	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C56	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C57	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C58	130 10%		ADM-10-131	PCR-130J		DM-10-131	SX313	MS-313
C59	30 10%		ADM-10-300	CPR-30J	CD15ED330J03	DM-15-300	SX430	MS-43
C60	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C61	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C62	.78		ADM-10-750	CPR-75J	CD15ED750J03	DM-10-750	SX475	MS-475
C63	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C64	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C65	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C66	100 10%		ADM-10-101	CPR-100J	CD15FD101J03	DM-10-101	SX310	MS-31
C67	.04			DD-403			GP140	
C68	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10

B & K MODEL COBRA 25

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.
C69	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C70	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C71	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C72	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C73	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C74	170 10%		ADM-10-181	CPR-180J	CD15FD181J03	DM-10-181	SX318	MS-318
C75	220 10%		ADM-10-221	CPR-220J	CD15FD221J03	DM-10-221	SX322	424ME2200J501
C78	65 10%		ADM-15-680	CPR-68J	CD15ED680J03	DM-15-680J	SX468	424MC680J501
C79	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C85	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C86	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C87	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C88	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C89	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C90	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C91	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C92	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C95	170 10%		ADM-10-181	CPR-180J	CD15FD181J03	DM-10-181	SX318	MS-318
C102	30 10%		ADM-10-300	CPR-30J	CD15ED330J03	DM-15-300	SX430	MS-43
C103	20 10%		ADM-10-200	CPR-20J	CD15ED220J03	DM-10-220	SX420	MS-42
C104	20 10%		ADM-10-200	CPR-20J	CD15ED220J03	DM-10-220	SX420	MS-42
C105	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C106	30 10%		ADM-10-300	CPR-30J	CD15ED330J03	DM-15-300	SX430	MS-43
C107	56 10%		ADM-15-560	CPR-56J	CD15ED560J03	DM-15-560J	SX456	424MC560J501
C108	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C109	3 10%	#023-023-9-001	ADM-10-100		CD15CD100J03	DM-10-100	SX410	MS-41
C110	10 10%		ADM-15-470	CPR-47J	CD15ED470J03	DM-15-470J	SX447	424MC470J501
C113	47 10%		ADM-15-470	CPR-47J	CD15ED470J03	DM-15-470J	SX447	424MC470J501
C114	47 10%		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C115	.01		ADM-10-200	CPR-20J	CD15ED220J03	DM-10-220	SX420	MS-42
C116	20 10%		ADM-15-050		CD15CD050D03	DM-10-050	SX550	MS-55
C117	5 10%	#033-006-9-001	TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C118	.24pf 10%		ADM-10-200	CPR-20J	CD15ED220J03	DM-10-220	SX420	MS-42
C119	.01		TTP-05	CK-503	MGP05	CCD-503	TA150	10TCP-Q25
C120	20 10%							TGL-S50
C121	25 N150							
C122	.047	#033-007-9-001	TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C123	.51pf 10%		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C124	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C125	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C126	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C127	25 N150							10TCP-Q25
C128	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C130	22 10%		ADM-15-220	CPR-22J	CD15ED220J03	DM-15-220	SX422	MS-422
C131	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C201	.5				WMF1P5	1DP-4-504	PVC105	
C204	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C205	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C206	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C207	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C208	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10

B&K Part Number

CONTROLS (All wattages 1/2 watt, or less, unless listed)

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA				
			MFR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
VR1	Squelch Limit	20K	008-114-9-001	T-20K (1) or TSV-25K (1)		X201R253B (1)	MTC24L1 (1)
VR2	Squelch	5000	008-112-9-001	F1-5000 (1), SSK010	A47-5000-S (1), KSS-3 or [NP-5000-S (1), UP-C-400]	Q11-114 (1) or [BU1(1),CF12, SS1,DC1]*	RU53L, SL36 (1) SL3250 or [UA53L (1), SK750] or U14 (1)
VR3	AGC Adjust	10K	008-115-9-001	T-10K or TSV-10K		X201R103B	MTC14L1
VR4	Volume Level	10K	008-115-9-001	T-10K or TSV-10K		X201R103B	MTC14L1
VR6	Modulation Adjust	100K	008-116-9-001	TSV-100K (2) or T-100K (2)		X201R104B (2)	MTC15L1 (2)
VR9	Volume/Switch	5000	008-113-9-001	F2-5000(1), SSK010,KR-1		Q13-114 (1), 76-1 or [BU(1), CF60,SS1,GC]*	RU53A,SL36(1), SL3250,US41 or [UA53A(1),SK750, US41] or U12(1), US26)
VR201	Cal.	10K	008-115-9-001	TSV-10K (2) or T-10K (2)		X201R103B (2)	MTC14L1 (2)
VR202a	SWR Cal.	5000	008-144-9-001	F1-5000 (1), R1-5000, SSK010,CPL-2	NP-5000-S (1), NR-5000-S, UP-C-400,DC-2	B11-114,B11-114, SK1(1),QCM or [BU1(1),CF12, CR7,SS1,SS7A, DC1]*	P53L,3014 (1), RU53L,CS3500
	SWR Cal.	5000				X201R501B(2)	MTC52L1(2)
VR203	Bias	500	008-145-9-001	TSV-500(2) or T-500 (2)		X201R502B(2)	MTC53L1(2)
VR204	Meter Adj.	5000	008-146-9-001	TSV-5K(2) or T-5000 (2)			

PARTS LIST AND DESCRIPTION (CONTINUED)

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

CONTROLS (All wattages 1/2 watt, or less, unless listed) (Cont)

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
VR205	"S" Meter Ad.	5000	008-147-9-001	F2-5000 (1), SRS006		Q13-114(1) or [BU1(1), CF60, SS3, DC1]*	RU53A, SL3B(1), SF1000 or [UA53A(1), SF1000] or U12(1)
VR206	Mic Gain	50K	008-143-9-001	F1-50K(1), SRS006	A47-50K-S(1), RS-2 or [NP-50K-S(1), UP-A-400]	Q11-123(1) or [BU1(1), CF12, SS3, DC1]*	RU54L, SL3B(1), SF1000 or [UA54L(1), SF1000] or U12 (1) MTC22L1
VR301	Bias	200	008-136-9-001	T-200 or TSV-250		X201 R251B	

* "SNAPTROL"

(1) Enlarge mounting hole.

(2) Cut off one of the end terminals and bend to fit "PC" board.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L2	Synthesizer	046-004-9-001			
L3	Receiver Oscillator	046-004-9-001			
L5	Harmonic Suppressor	046-006-9-001			
L6	RF Choke (33uh)	041-039-9-001		74F335A1	
L7	RF Choke (2.2uh)	041-040-9-001		74F226AP	T812
L8	Antenna Matching	044-019-9-001			
L9	Antenna Tuning	044-020-9-001			
L10	Antenna Matching	044-021-9-001			
L11	TVI Trap (1uh)	041-001-9-005	19-2009	4602	T806
L101	RF Choke (33uh)	041-039-9-001		74F335A1	
L102	RF Choke (33uh)	041-039-9-001		74F335A1	
L103	RF Choke (23uh)	041-041-9-001	19-2019	4626	T863
L104	Delta Tune (6.8uh)	041-045-9-001		74F686AP	T821
T1	Antenna Matching	066-006-9-001			
T2	RF Output	066-007-9-001			
T3	1st Receive Mixer	060-004-9-001			
T4	Input IF	060-005-9-001	16-9026 (1)	2066 (1)	
T5	Interstage IF	060-006-9-001	16-9027	2067	
T6	Interstage IF	060-006-9-001	16-9027	2067	
T7	Output IF	060-008-9-001	16-9028	2068	
T10	RF Interstage	066-008-9-001			
T11	Driver	066-009-9-001			
T101	Xmtr Mixer	046-007-9-001			
T102	Harmonic Suppressor	046-008-9-001			
T103	Buffer	066-010-9-001			
T104	RF Interstage	066-011-9-001			

(1) Remove C13

B & K MODEL COBRA 25

FILTER

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (O CURRENT 1000~)	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	
L4		96	140mh	042-007-9-001			

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD Part No.	
T8	1.4	1CT		061-014-9-001				

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA				NOTES
	PRI.	SEC.	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T9	32	8	061-015-9-001				
		SEC.2					
		.8 DC Resistance					

PARTS LIST AND DESCRIPTION (CONTINUED)

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

TRANSFORMER (Power)

ITEM No.	RATING		REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T301	117VAC @ .12A Rec .31A Xmit	39VAC/CT @.33A Rec .97A Xmit	065-064-9-001				

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	2 3/4" PM, 8 ohms	580-007-9-001	27A06Z12	

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA					
		PART No.		BUSS PART No.		LITTELFUSE PART No.	
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER
F1	1.5A 3AG 250V	191-002-9-001		AGC 1 1/2	HKP	31301,5	342001
							FG 1 1/2-2

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
K1	Relay	441-005-9-001	4PDT
M1	Crystal	132-003-9-006	17.015MC (Channels 5,6,7,8)
M2	Crystal	132-003-9-007	17.065MC (Channels 9,10,11,12)
M3	Crystal	132-003-9-008	17.115MC (Channels 13,14,15,16)
M4	Crystal	132-003-9-009	17.165MC (Channels 17,18,19,20)
M5	Crystal	132-003-9-010	17.215MC (Channels 21,22,23)
M6	Crystal	132-003-9-005	16.965MC (Channels 1,2,3,4)
M7	Crystal	132-003-9-004	9.585MC (Channels 4,8,12,16,20,23)
M8	Crystal	132-003-9-003	9.565MC (Channels 3,7,11,15,19)
M9	Crystal	132-003-9-002	9.555MC (Channels 2,6,10,14,18,22)
M10	Channel	132-003-9-001	9.545MC (Channels 1,5,9,13,17,21)
M11	Crystal	132-003-9-011	10.000MC (Channels 1,5,9,13,17,21)
M12	Crystal	132-003-9-012	10.010MC (Channels 2,6,10,14,18,22)
M13	Crystal	132-003-9-013	10.020MC (Channels 3,7,11,15,19)
M14	Crystal	132-003-9-014	10.040MC (Channels 4,8,12,16,20,23)
M15	Meter	320-030-9-001	(SWR,MOD)
M16	Meter	320-029-9-001	(Power, "S")
M17	Filter, Ceramic	140-005-9-001	
S2	Switch	083-105-9-001	(PA-CB)
S3	Switch	093-008-9-001	(Meter Sel)
S4	Switch	093-008-9-001	(Noise Limiter)
S101	Switch, Selector	083-084-9-001	
S102	Switch	083-106-9-001	(Delta Tune)

MICROPHONE

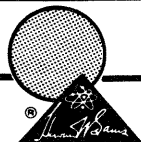
ITEM No.	REPLACEMENT DATA			REMARKS
	MFGR. PART No.	RCA REPLACEMENT	RCA STEP UP REPLACEMENT	
		HK-107	HK-101 (1), HK113 (1)	(1) For base station use.

CABINETS & CABINET PARTS (When ordering specify model, chassis & color)

ITEM	PART No.	ITEM	PART No.
Knob, Selector	751-072-9-001	Cabinet	272-075-9-001
Knob, Control	751-073-9-001		

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



PHOTOFACT®

For Supplier Address See PHOTOFACT Index

NOTE

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, SUBPARTS C & D.)

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 50-ohm dummy load or the normally used antenna system.



MODEL RANGER 23

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:	GENERAL CEMENT
A1 thru A10, A20	#8606, 8606L, 8869
A11, A12, A13, A15, A16, A19	#8609, 9090, 8867
A14, A17, A18	#8868, 8987, 9089

RECEIVER

Connect a DC VTVM from point Δ to chassis. Set to indicate Negative Voltage. Turn Volume control to mid-range. Turn Squelch control fully clockwise.

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to Pin 1, (Grid) of V4, low side to chassis. Tune to 455KC.	Any	A1 thru A6	Adjust for maximum.
High Side thru .01mfd to Pin 4, (Grid) of V2, low side to chassis. Tune to 6MC.	Any	A7, A8	Adjust for maximum.
High side thru .01mfd to Antenna Receptacle, low side to chassis. Tune to 27.085MC (Channel 11)	11	A9, A10, A11	Adjust for maximum.
Disconnect Antenna	Any	R4	Adjust R4 (Meter Zero Adjust) for "0" indication.

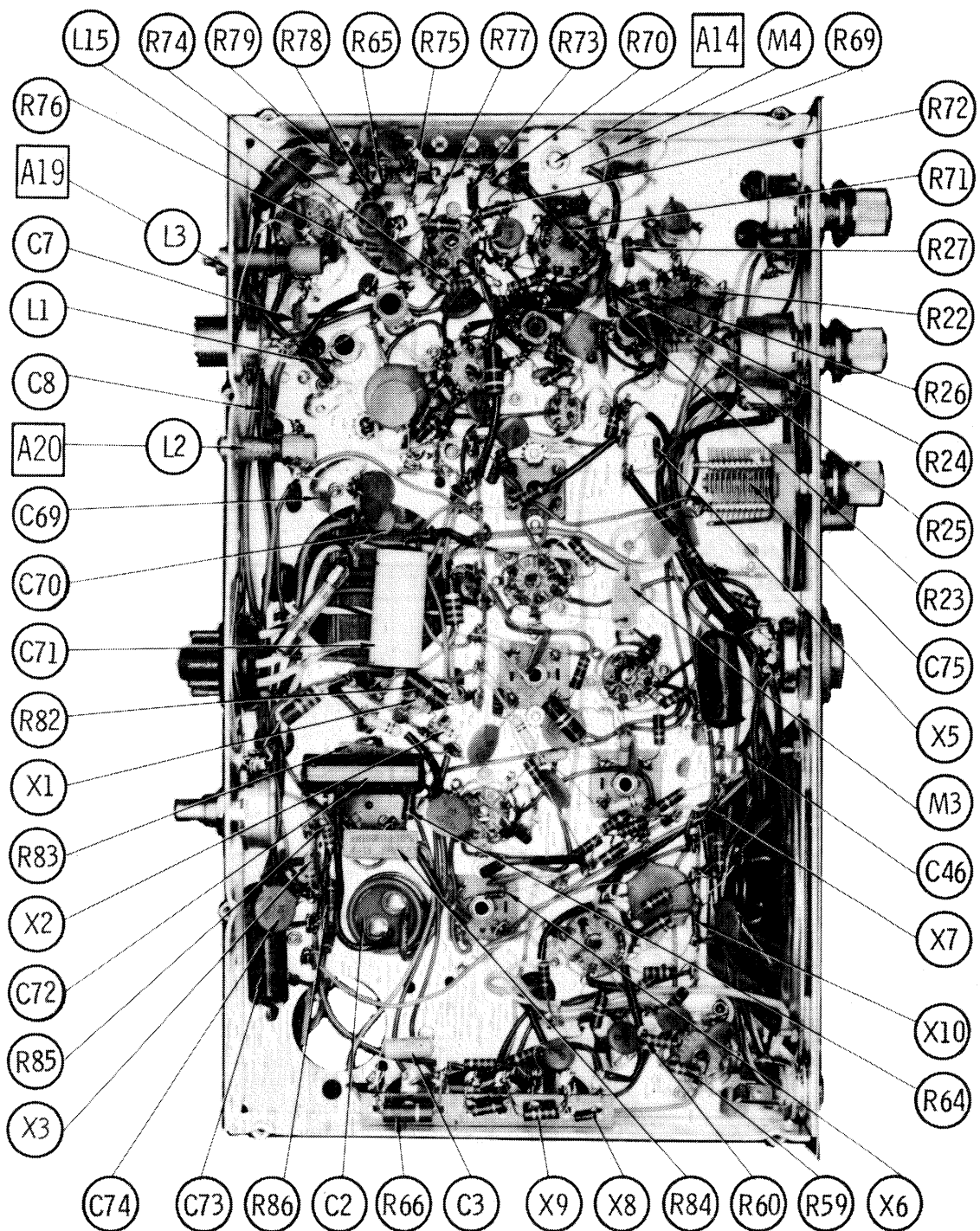
TRANSMITTER

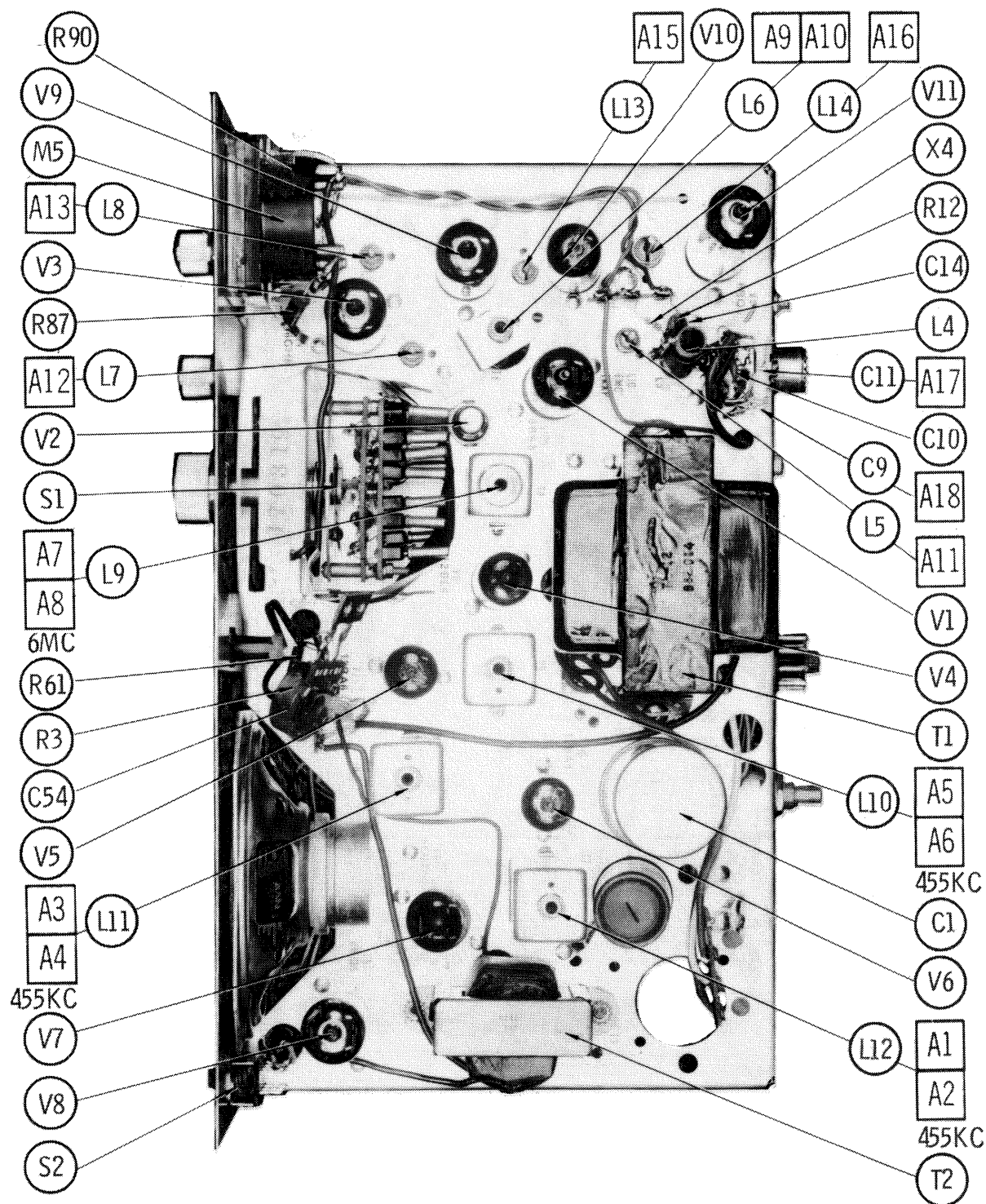
INDICATOR	ADJUST	REMARKS
Accurate Frequency Meter	A12, A13, A14	Key Transmitter. Adjust for correct frequency. Key Transmitter several times to ensure Oscillator starting properly.
RF Watt Meter or Field Strength Meter and 0-100ma DC Current Meter.	A15 thru A18	Insert 0-100ma DC Current Meter in series with Pin 2 (Grid) of V11 (Final Amp). Key Transmitter. Adjust for MINIMUM RF Power Output. Repeat above steps until optimum performance is accomplished.
Nearby TV	A19, A20	Key Transmitter. Adjust for MINIMUM interference.

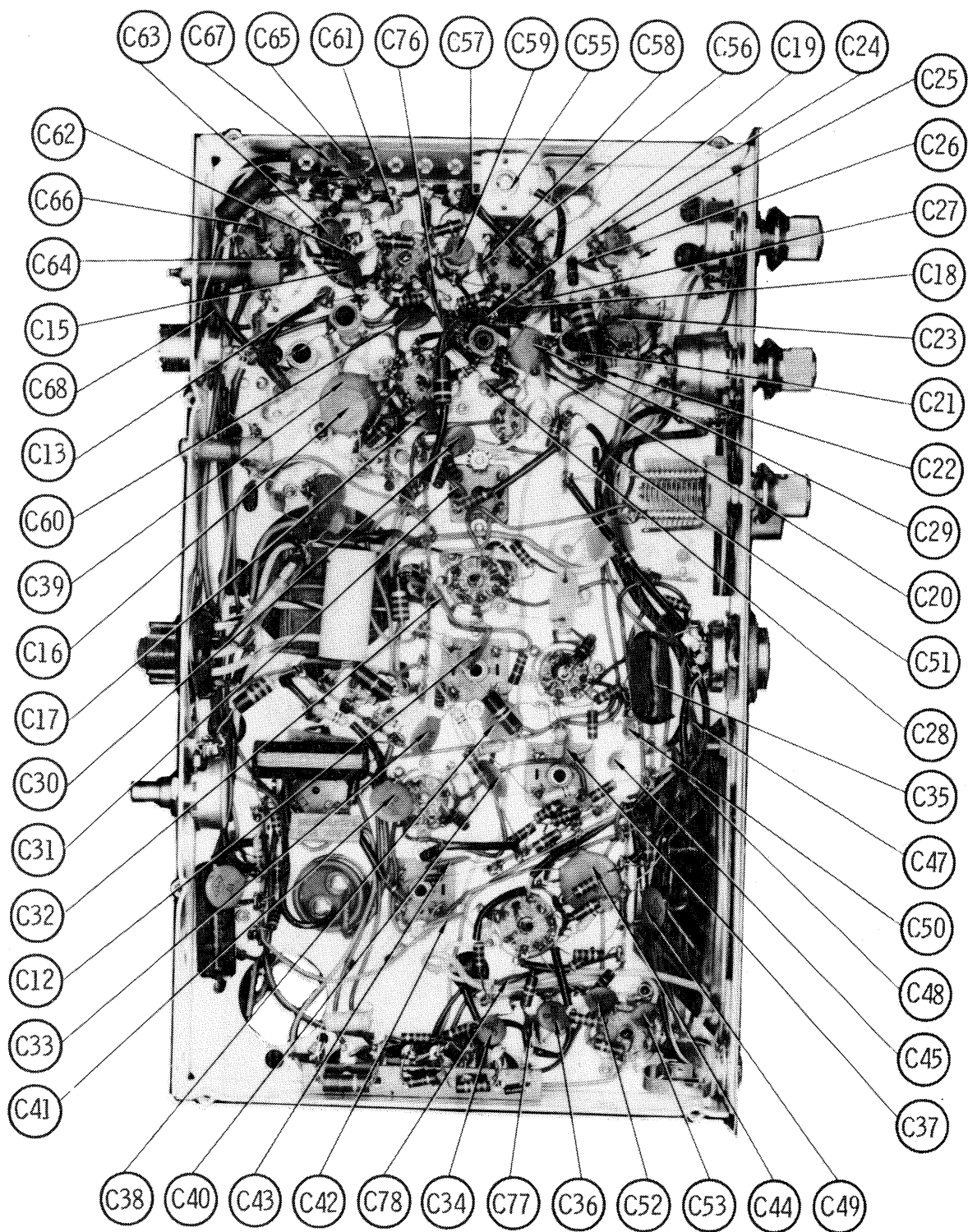
HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

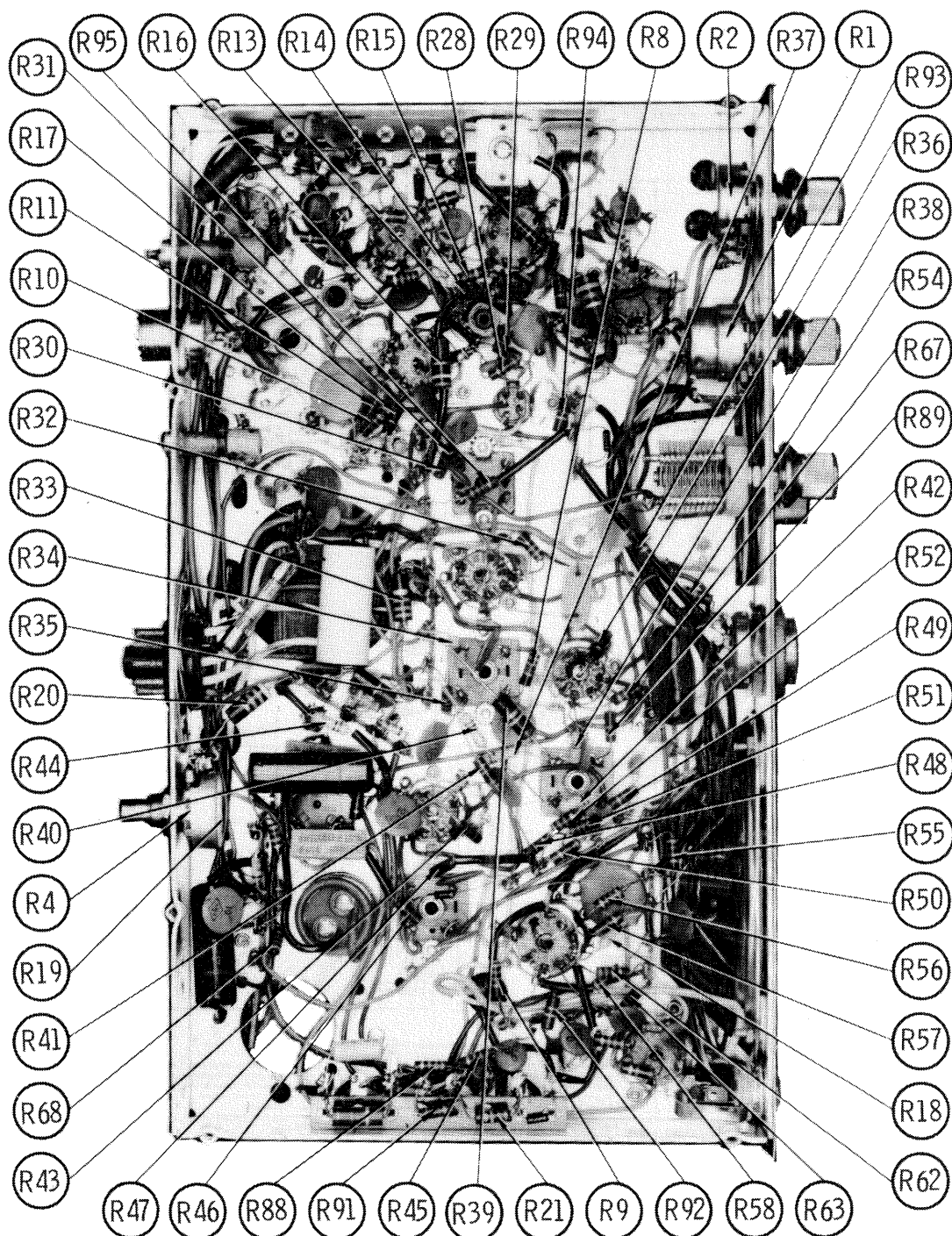
© 1971 Howard W. Sams & Co., Inc. Printed in U. S. of America 1CY003

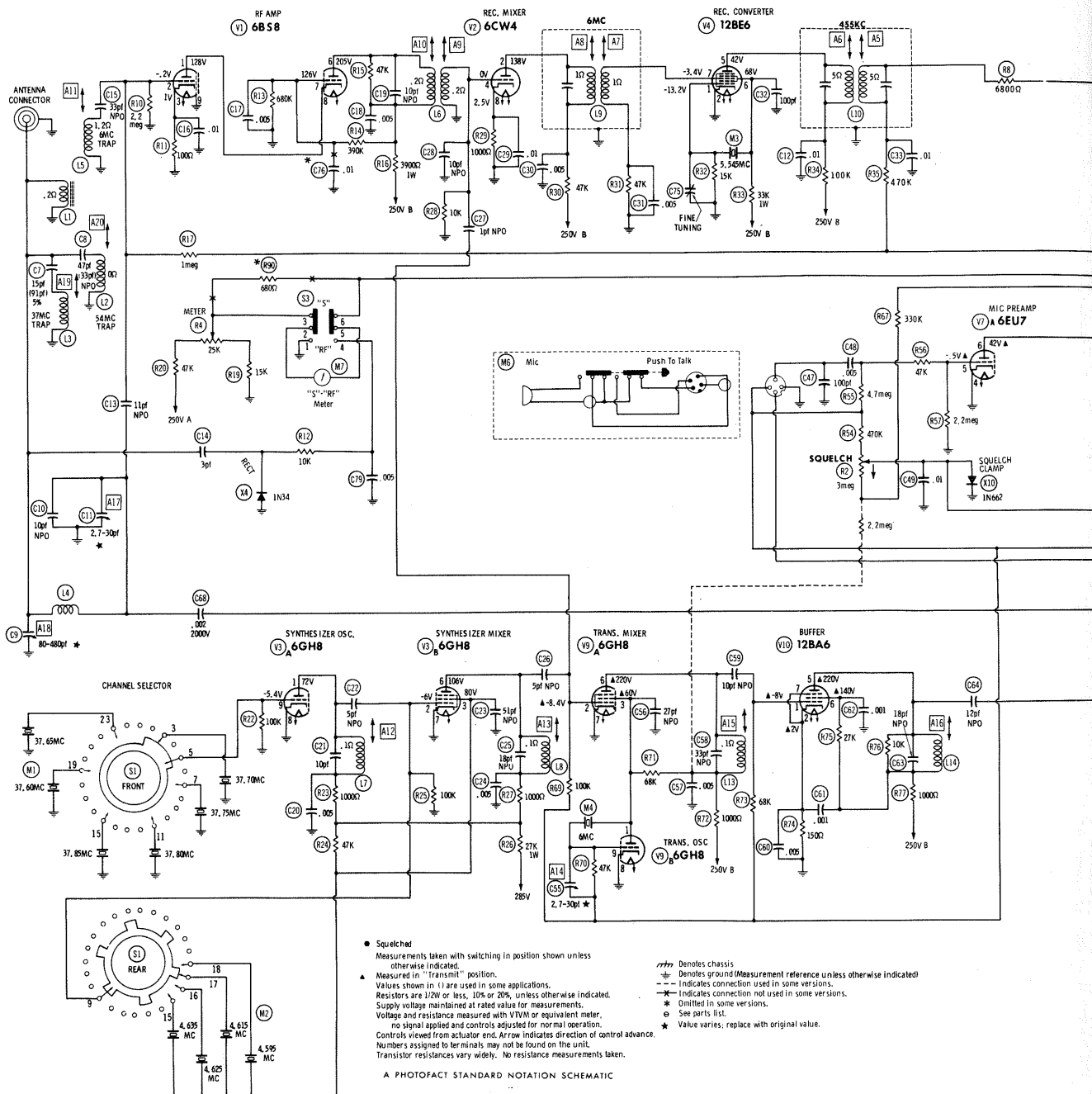
COURIER MODEL RANGER 23

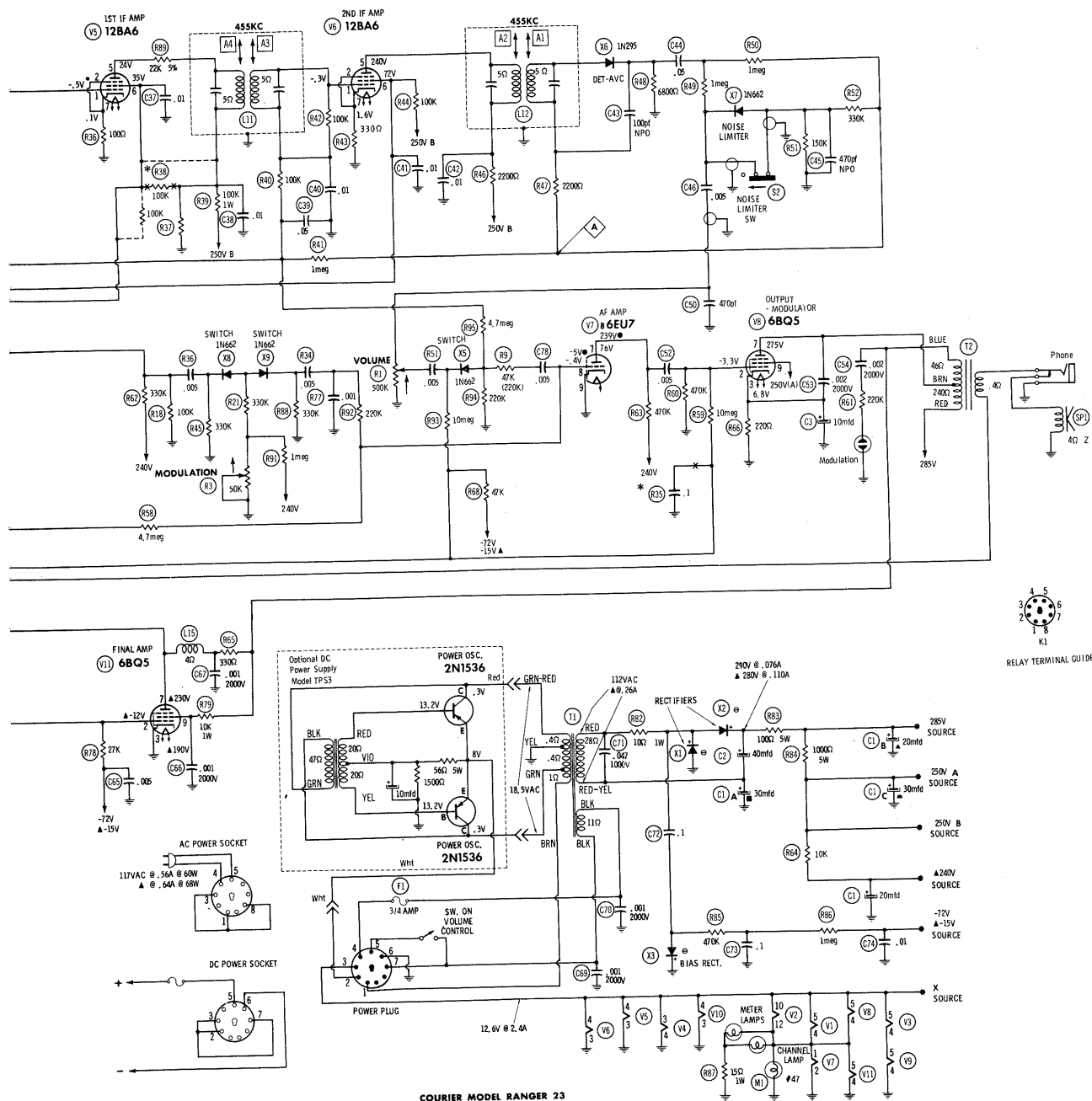












RESISTANCE MEASUREMENTS

ITEM	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8	PIN 9	PIN 10	PIN 11	PIN 12
V1	INFINITE	1.2meg	100Ω	FIL	FIL	5000Ω †	300K	INFINITE	0Ω			
V2	NC	48K †	NC	.2Ω	NC	NC	NC	1000Ω	NC	FIL	NC	FIL
V3	30K †	100K	75K †	FIL	FIL	32K †	0Ω	0Ω	100K			
V4	15K	0Ω	FIL	FIL	100K †	35K †	47K					
V5	1.5meg	100Ω	FIL	FIL	85K † #	150K † #	100Ω					
V6	100K	330Ω	FIL	FIL	3200Ω †	28K † #	330Ω					
V7	FIL	FIL	TP	0Ω	1.5meg	110K † #	500K † #	5.5meg	0Ω			
V8	NC	470K	150Ω	FIL	FIL	NC	320Ω †	TP	1000Ω †			
V9	70K † ▲	100K	70K † ▲	FIL	FIL	2000Ω † ▲	0Ω	0Ω	47K			
V10	68K	150Ω	FIL	FIL	2100Ω † ▲	30K † ▲	150Ω					
V11	NC	1.4meg	0Ω	FIL	FIL	NC	720Ω †	NC	12K †			

THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.
† MEASURED FROM OUTPUT OF X2. ▲ MEASURED IN TRANSMIT POSITION.

NC NO CONNECTION
TP TIE POINT

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	6BS8			V7	Mic Preamp - AF Amp	6EU7	
V2	Receive Mixer	6CW4			V8	Output - Modulator	6BQ5	
V3	Synthesizer Osc-Mixer	6GH8			V9	XMTR Mixer-Osc	6GH8	
V4	Receive Converter	12BE6			V10	XMTR Buffer	12BA6	
V5	1st IF Amp	12BA6			V11	Final Amp	6BQ5	
V6	2nd IF Amp	12BA6						

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFR. PART OR TYPE No.	REPLACEMENT DATA				NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	RCA PART No.	SYLVANIA PART No.	
X1	1N4006	GE-509	8D8 or 5A8D	SK3032 or SK3033	ECG 125	
X2	1N4006	GE-509	8D8 or 5A8D	SK3032 or SK3033	ECG 125	
X3	1N4006	GE-509	8D8 or 5A8D	SK3032 or SK3033	ECG 125	
X4	1N34	1N34AS	1N34A	1N34A	ECG 109	
X5	1N662				ECG 177	
X6	1N295	1N295	1N295	1N34A	ECG 109	
X7	1N662				ECG 177	
X8	1N662				ECG 177	
X9	1N662				ECG 177	
X10	1N662				ECG 177	

PARTS LIST AND DESCRIPTION (CONTINUED)

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

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA						
		PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1a	30 450V		AFH4-15-30		DD0185A	XC4-55	FP444.8	TVL-4769.4
b	20 450V							
c	30 450V							
d	20 350V							
C2	40 350V		PRS1670		WBR40-350	QT1-14	TC67A	TVA-1611
C3	10 25V		CRE607A	EA30-10	AL10-25	MT1-5	MTV10CB50	TL-1204

CAPACITORS

ITEM No.			RATING	REMARKS	REPLACEMENT DATA				
					AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.
C7	15 NPO	5%		ADM-15-470	DTZ-15 CPR-47J	NP015 CD15ED470J03	DM-15-470	CN0415 SX447	10TCC-Q15 MS-447
C8	47								
C9	80-480								
C10	10 NPO	10%		NPO-DI 10	DTZ-10	NP010	CCT0-100	CN0410	10TCC-Q10
C11	2.7-30								
C12	.01			GPD X5S103K	DD-103 DTZ-10	GP10000 NP010	CCD-103	JF110 CN0410	10TS-S10 10TCC-Q10
C13	10 NPO	5%							
C14	3 N075	1%							
C15	33 NPO			NPO-DI 33	DTZ-33	NP033	CCT0-330	CN0433	10TCC-Q33
C16	.01			GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C17	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C18	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C19	10 NPO	5%			DTZ-10	NP010		CN0410	10TCC-Q10
C20	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C21	10 NPO			NPO-DI 10	DTZ-10	NP010	CCT0-100	CN0410	10TCC-Q10
C22	5			NPO-DI 5.0		NP05			10TCC-V50
C23	51			NPO-DI 50	DTZ-50	NP050	CCT0-510	CN0450	10TCC-Q50
C24	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C25	18 N075	10%							
C26	5	+ .5		NPO-DI 5.0		NP05			10TCC-V50
C27	1 NPO	+ .25		NPO-DI 1.0	TCZ-1			CN0510	10TCC-V10
C28	10 NPO			NPO-DI 10	DTZ-10	NP010	CCT0-100	CN0410	10TCC-Q10
C29	.01			GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C30	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C31	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C32	100 NPO	10%		NPO-DI 100	DTZ-100	NP0100	CCT0-101	CN0310	10TCC-T10
C33	.01			GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C34	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C35	.1			DBE4P1		DPMS4P1	4DP-3-104	PVC401	4PS-P10
C36	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C37	.01			GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C38	.01			GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C39	.047	400V		DBE6S47		DPMS6S47	4DP-3-473	PVC4147	4PS-S47
C40	.01			GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C41	.01			GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C42	.01			GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C43	100 NPO	10%		NPO-DI 100	DTZ-100	NP0100	CCT0-101	CN0310	10TCC-T10
C44	.05			DBE6S5		DPMS6S5	6DP-3-503	PVC615	6PS-S50
C45	470			GPD X5F471K	DD-471	GP470	CCD-471	GP347	10TS-T47
C46	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C47	100 NPO	10%		NPO-DI 100	DTZ-100	NP0100	CCT0-101	CN0310	10TCC-T10
C48	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C49	.01			GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C50	470			GPD X5F471K	DD-471	GP470	CCD-471	GP347	10TS-T47
C51	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C52	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C53	.002 2KV			HVD-302200	DD30-202	HV3-2000	3CCD-202	3HV222	30GA-D20
C54	.002 2KV			HVD-302200	DD30-202	HV3-2000	3CCD-202	3HV222	30GA-D20
C55	2.7-30								
C56	27 NPO	10%			TCZ-27	NP027	CCT0-270	CN0427	10TCC-Q27
C57	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C58	33 NPO	10%		NPO-DI 33	DTZ-33	NP033	CCT0-330	CN0433	10TCC-Q33
C59	10 NPO	5%		NPO-DI 10	DTZ-10	NP010	CCT0-100	CN0410	10TCC-Q10
C60	.005			GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C61	.001			GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C62	.001			GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C63	27 NPO	10%			TCZ-27	NP027	CCT0-270	CN0427	10TCC-Q27
C64	13 NPO	5%			TCZ-12	NP012		CN0412	10TCC-Q12

COURIER MODEL RANGER 23

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.
C65	.005		GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C66	.001 2KV		HVD-301000	DD30-102	HV3-1000	3CCD-102	2HV210	30GA-D10
C67	.001 2KV		HVD-301000	DD30-102	HV3-1000	3CCD-102	3HV210	30GA-D10
C68	.002 2KV		HVD-301000	DD30-102	HV3-1000	3CCD-102	2HV210	30GA-D10
C69	.001 2KV		HVD-301000	DD30-102	HV3-1000	3CCD-102	2HV210	30GA-D10
C70	.001 2KV		HVD-301000	DD30-102	HV3-1000	3CCD-102	2HV210	30GA-D10
C71	.047 1000V		GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C72	.1 400V		DBE4P1		DPMS4P1	4DP-3-104	PVC401	4PS-P10
C73	.1 400V		DBE4P1		DPMS4P1	4DP-3-104	PVC401	4PS-P10
C74	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C75	.75							
C76	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C77	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C78	.005		GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C79	.005		GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50

CONTROLS (All wattages 1/2 watt, or less, unless listed)

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume/Switch	500K	(CT-8)	F2-500K, SRS012, KR-4	A47-500K-Z, RS-2, SWE-12 or [NP-500K-Z, UP-A-400, NWE-12]	Q13-133, 76-1 or [BU2, CF25, SS3, GC]*	UA55A, SL2500, US41 or [RU55A, SL39, SL2500, US41] or [U48, US26]
R2	Squelch	3meg	(CT-11)	F1-3meg, SRS012	A47-3meg-S, RS-2, or [NP-3meg-S, UP-A-400]	Q11-140 or [BU2, CF21, SS3, DC1]*	UA36L, SL2500 or [RU36L, SL39, SL2500] or U59
R3	Modulation Level	50K	(CT-27)	TT-31 or [F1-50K, SRS004]	B47-50K-S or [NP-50K-S, UP-S-014]	Q11-123 or [BU11, CF12, SS2, DC1]*	TA54L or [RU54L, SL37, SN281] or UA54L, SN281
R4	Meter Adjust	30K	(CT-6)	FL-50K, SRS012	A47-50K-S, RS-2 or [NP-50K-S, UP-A-400]	B11-121, SK1 or [BU2, CF12, SS3, DC1]*	UA34L, SL2500 or [RU34L, SL39, SL2500] or U30

* "SNAPTROL"

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R81	56 5W	5W-SQ-55	
R83	100 5W	5W-SQ-100	

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R84	1000 5W	5W-SQ-1K	

PARTS LIST AND DESCRIPTION (CONTINUED)

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

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	Antenna Filter (5.6uh)		19-2013	4609	T820
L2	54MC Trap			20A227RB1	
L3	37MC Trap			20A227RB1	
L4	Final Plate				
L5	6MC Trap			20A225RB1	
L6	RF Interstage				
L7	Synthesizer Oscillator Plate			20A156RB1	
L8	Synthesizer Mixer Plate			20A156RB1	
L9	6MC IF				
L10	Input IF	(IF-3)		16-PC1 (1)	
L11	Interstage IF	(IF-3)		16-PC2 (1)	
L12	Output IF	(IF-3)		16-PC2 (1)	
L13	XMTR Mixer Plate			20A106RB1	
L14	Buffer Amp Plate			4202	
L15	RF Choke			72F335AP	T972

(1) Solder to chassis

TRANSFORMER (Power)

ITEM No.	RATING			REPLACEMENT DATA				NOTES
	PRI. 1	SEC. 1	SEC. 2	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	117VAC @ .64ma*	112VAC @ 260ma*	12.6VAC @ 2.4A	TP-12				* Transmit Position
	PRI. 2	SEC. 1						
	18.5VAC CT @3.7A	112VAC @ 260ma						DC Operation

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA				NOTES
	PRI.	SEC.	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	7500 Tap @ 5500	4	TA-1				

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	4" PM, 4 ohms		4A05	

COURIER MODEL RANGER 23

PARTS LIST AND DESCRIPTION (CONTINUED)

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

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA					
		PART No.		BUSS PART No.		LITTELFUSE PART No.	
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	WORKMAN PART No. DEVICE
F1	3/4 Amp Slow-blow			MDV 3/4		315.750	

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M1	Transmit & Receive Crystal		37.60MC (Channel 1 thru 4) 37.65MC (Channel 5 thru 8) 37.60MC (Channel 9 thru 12) 37.75MC (Channel 13 thru 16) 37.80MC (Channel 17 thru 20) 37.85MC (Channel 21, 22, 23)
M2	Transmit & Receive Crystal		4.635MC (Channels 1, 5, 9, 13, 17, 21) 4.625MC (Channels 2, 6, 10, 14, 18, 22) 4.615MC (Channels 3, 7, 11, 15, 19) 4.595MC (Channels 4, 8, 12, 16, 20, 23)
M3	Receive Converter Crystal		5.545MC
M4	Transmit Oscillator Crystal		6MC
M5	S-RF Meter		
S1	Switch, Selector		
S2	Switch, Noise Limiter		
S3	Switch, Meter		

MICROPHONE

ITEM No.	REPLACEMENT DATA			REMARKS
	MFGR. PART No.	RCA REPLACEMENT	RCA STEP UP REPLACEMENT	
M6		HK-107	HK-101 (1), HK-113 (1)	(1) For base station use.

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.)