



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.



ROBYN MODEL TR-123B

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ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:	GENERAL CEMENT #	WALSCO #
A1, A2, A3	8276, 8277, 8290.....	2512, 2515, 2525
A6 Thru A11	9087.....	2528
A4, A5, A12, A13	8868, 9089.....	2541, 2587

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 Q4 (2nd Mixer), low side to chassis. Tune to 455KC (Mod.)	Any	A1,A2	Adjust for maximum.
High side thru .01mfd to antenna connector, low side to chassis. Tune to 27.085MC	11	A3 thru A8	Adjust A6 approximately one turn beyond the point where oscillation starts. Adjust the others for maximum.

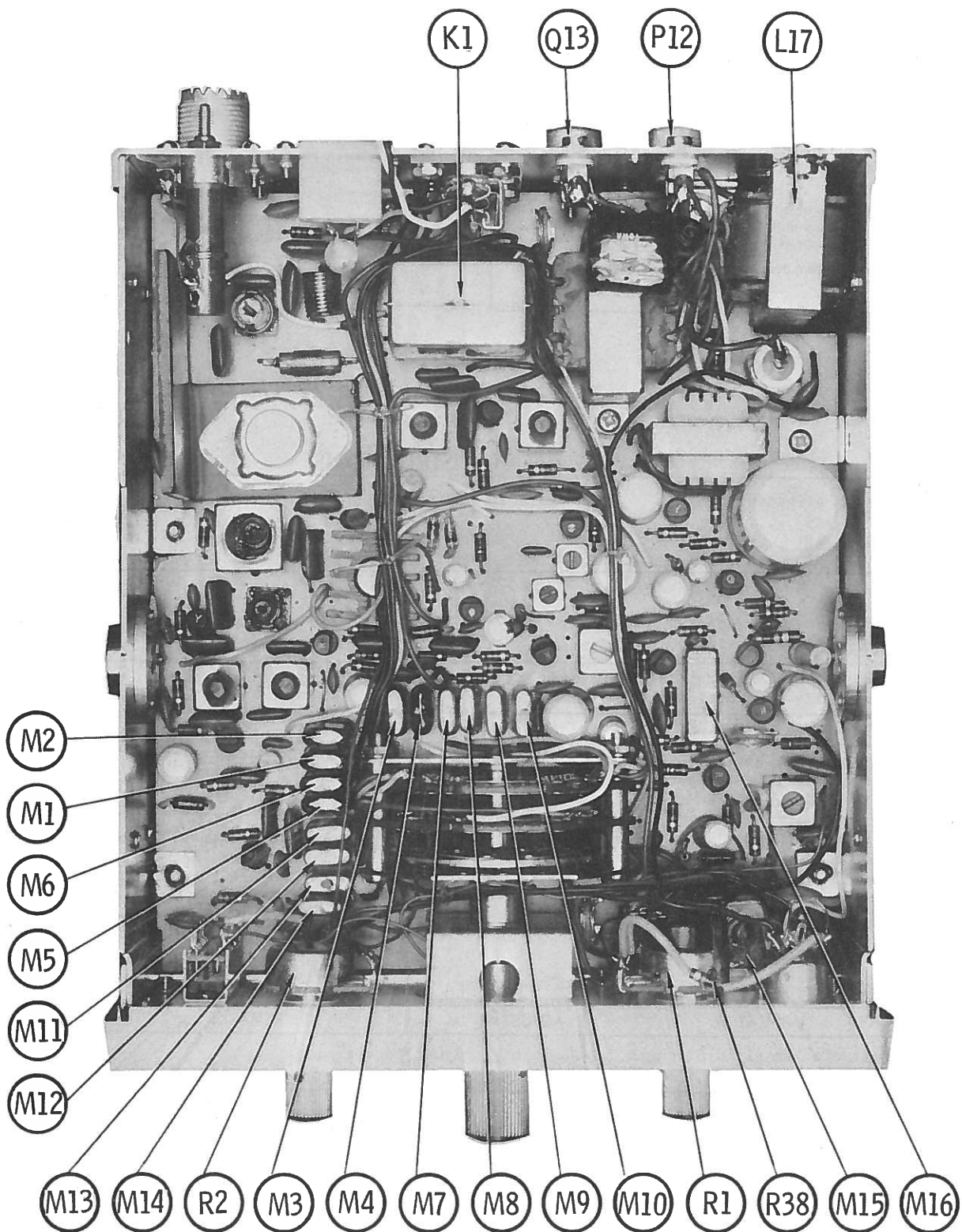
TRANSMITTER

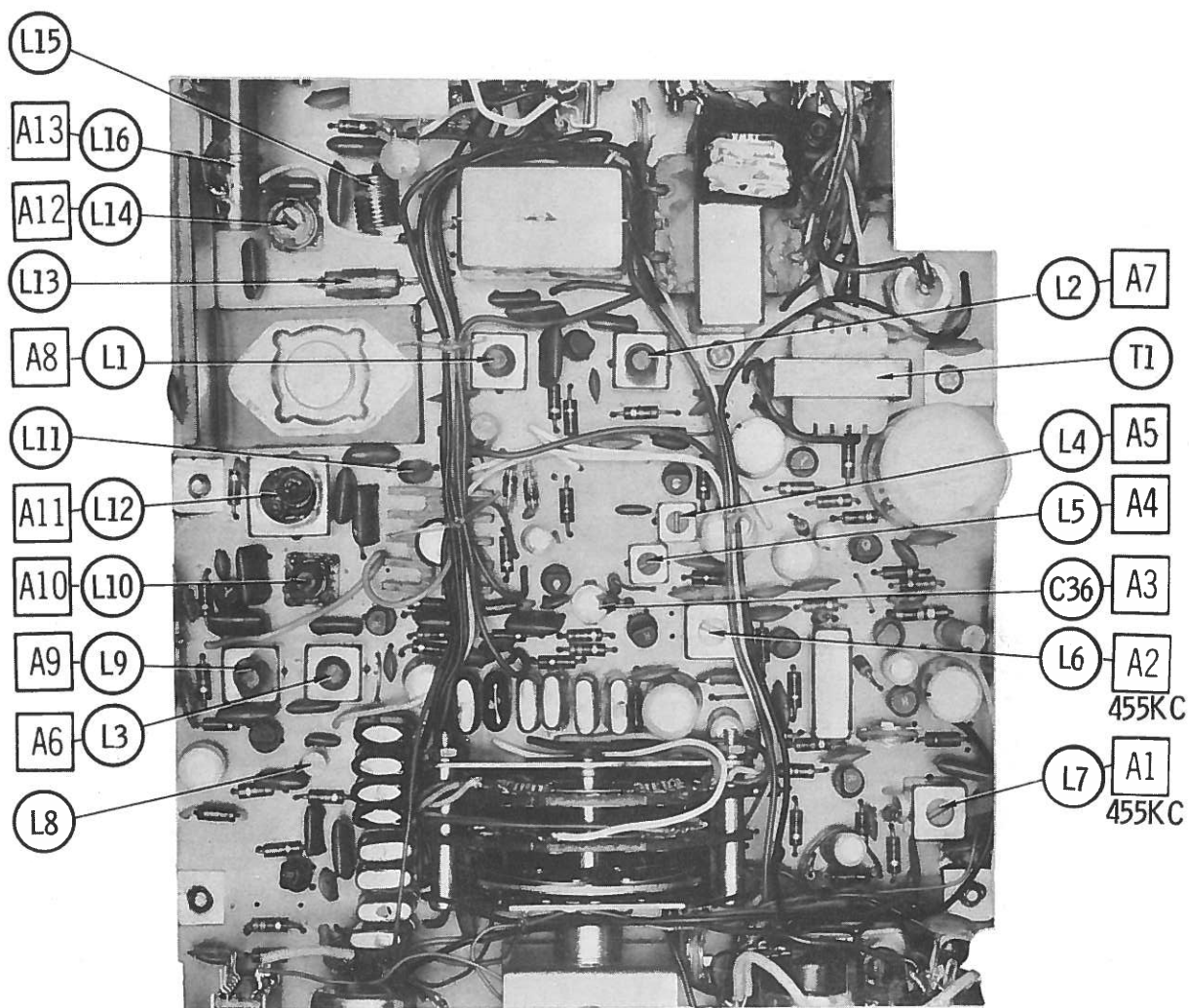
INDICATOR	ADJUST	REMARKS
RF Wattmeter or Field Strength Meter	A9 thru A12	Adjust for maximum.
0-500ma DC Ammeter	A12	Remove meter jumper at L13 and insert meter. Adjust A12 for 5 Watts input.
TV (Ch. 2)	A13	Adjust for MINIMUM interference on TV.

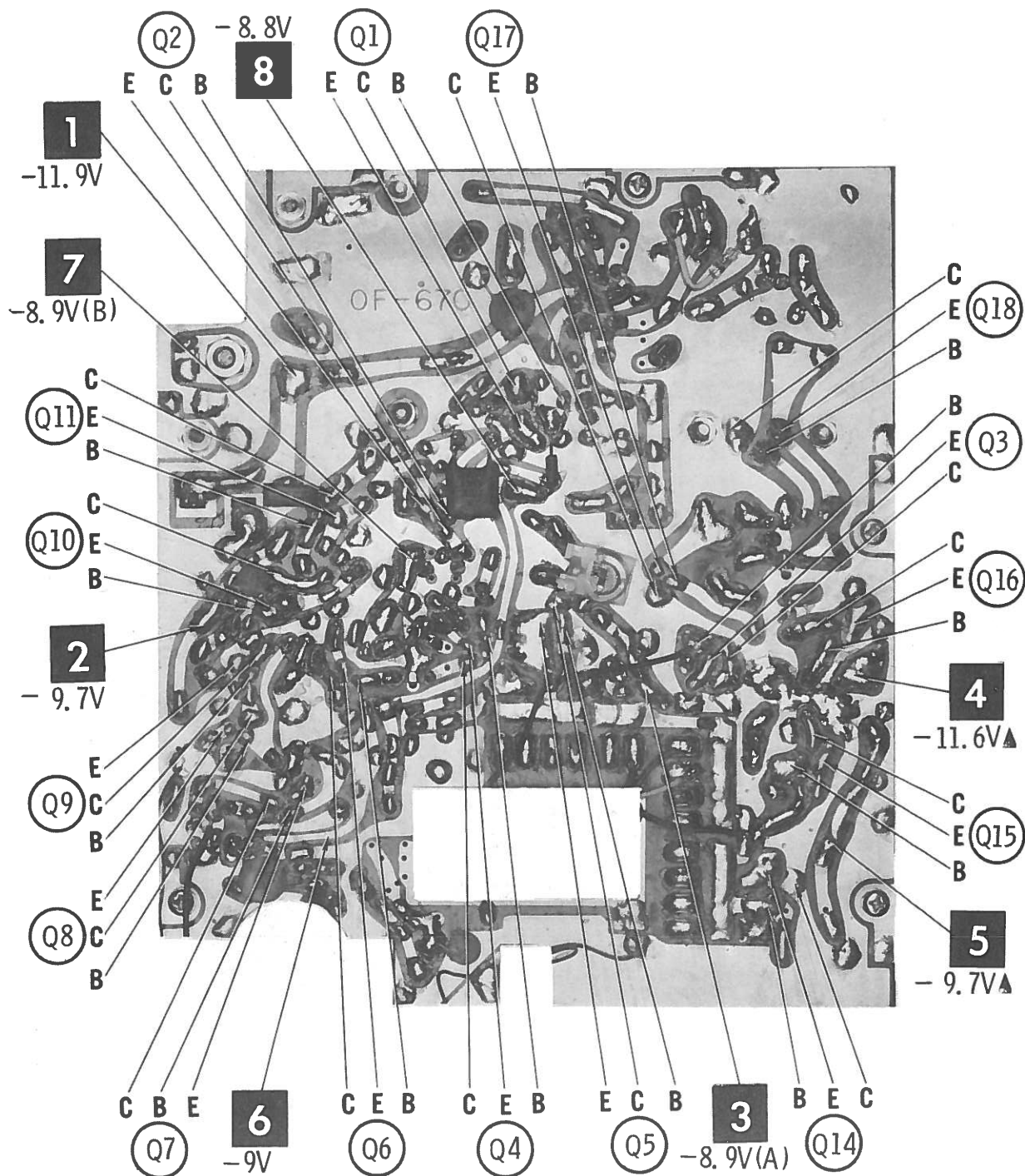
HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

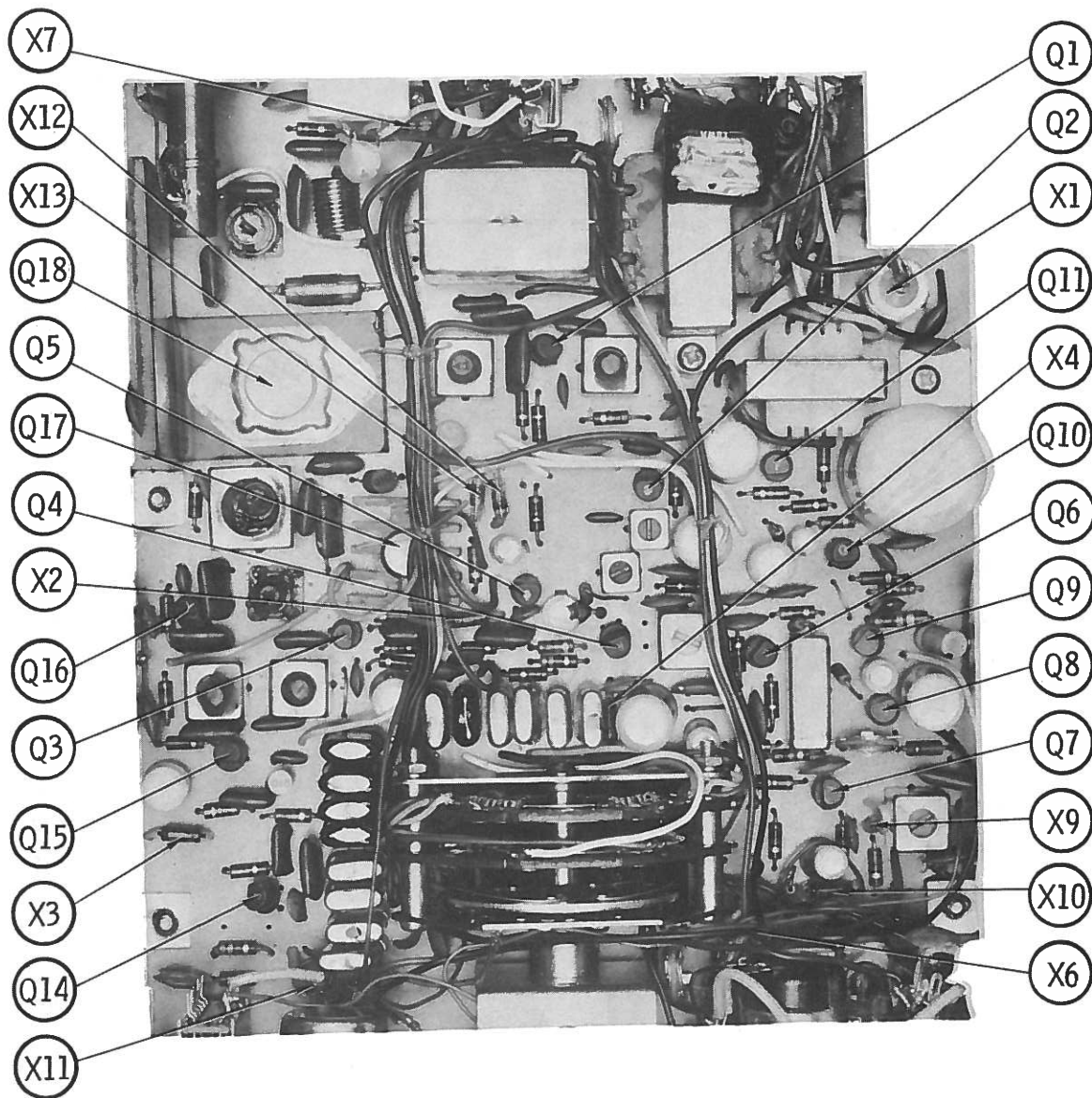
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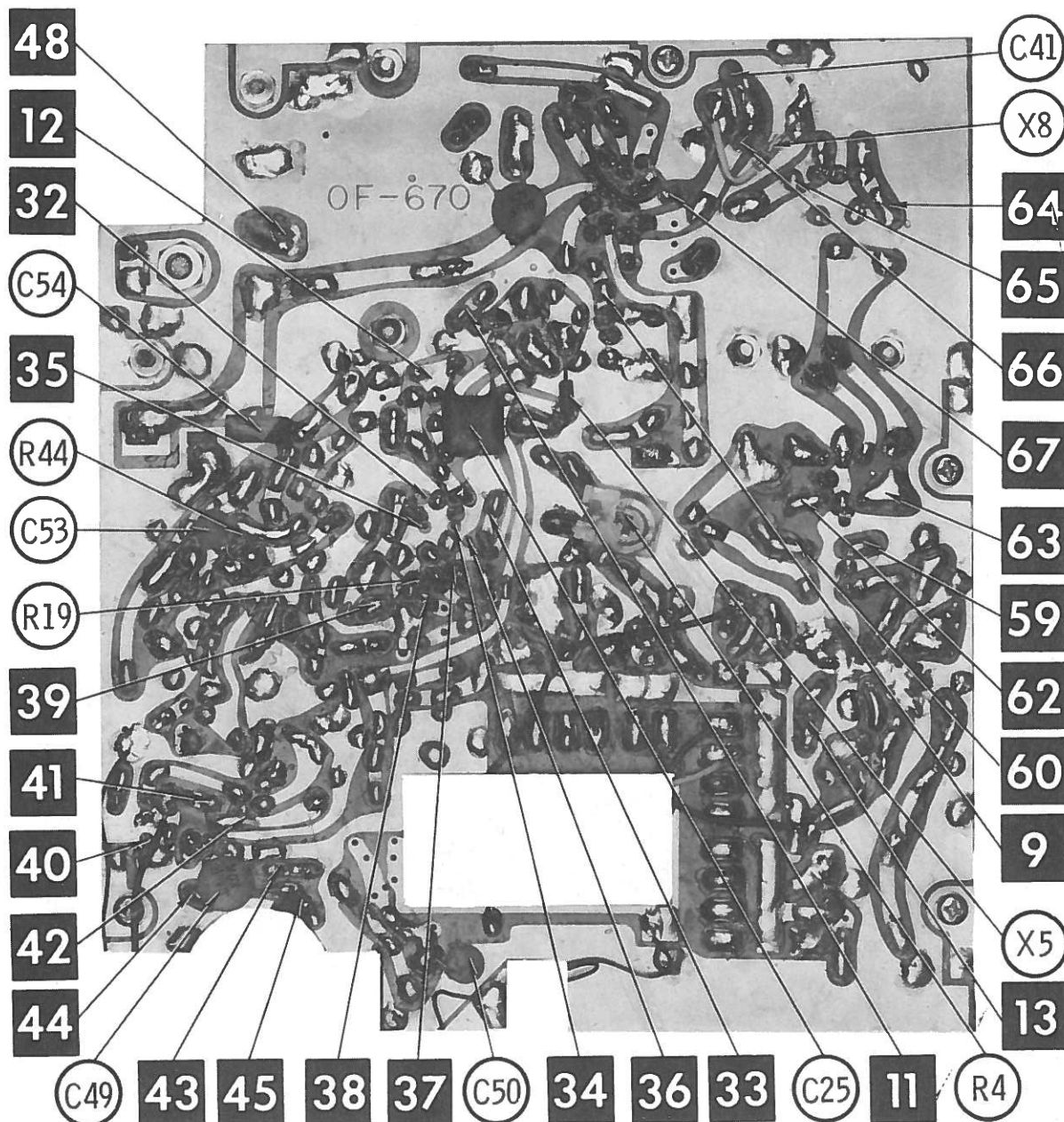
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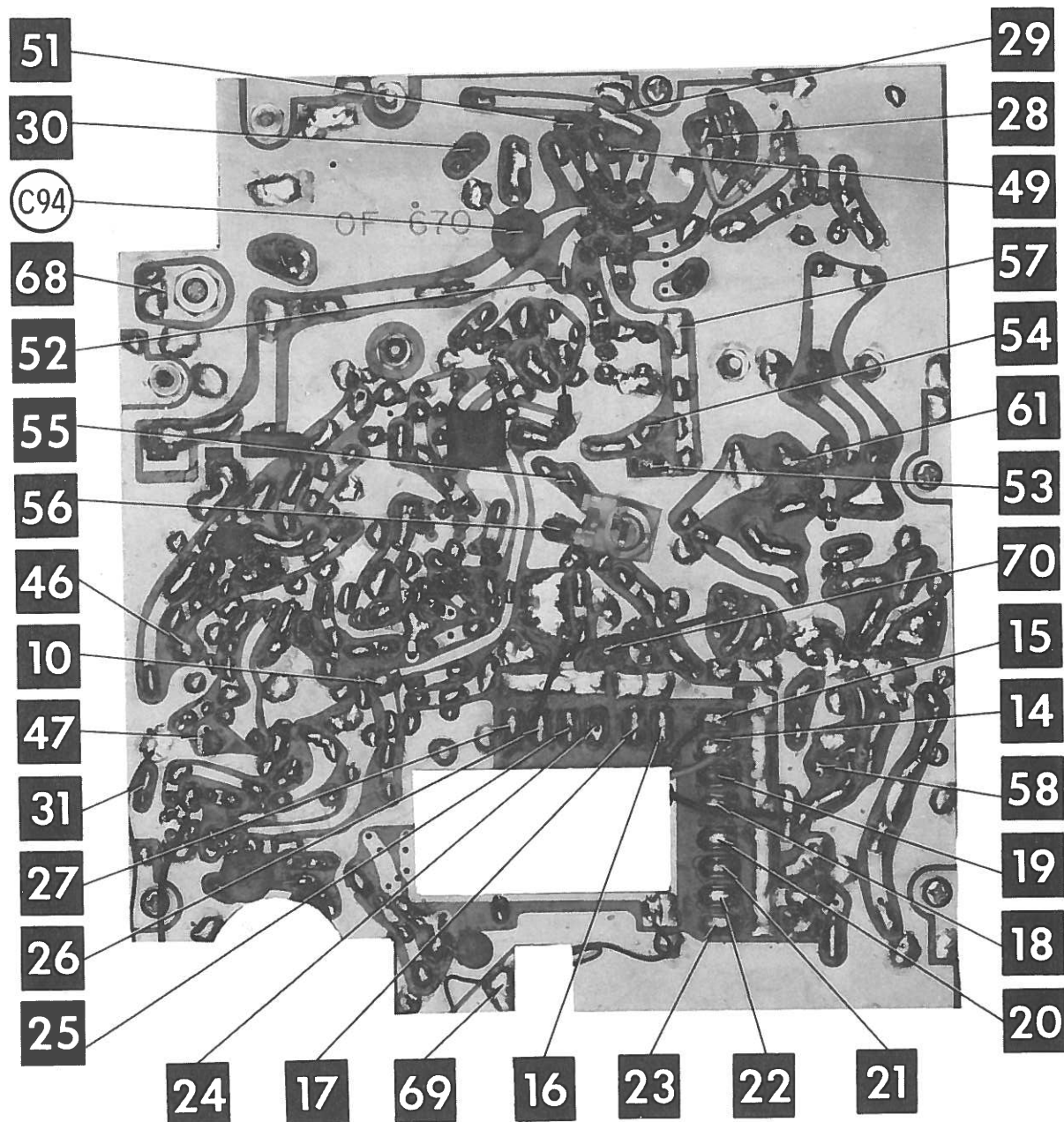


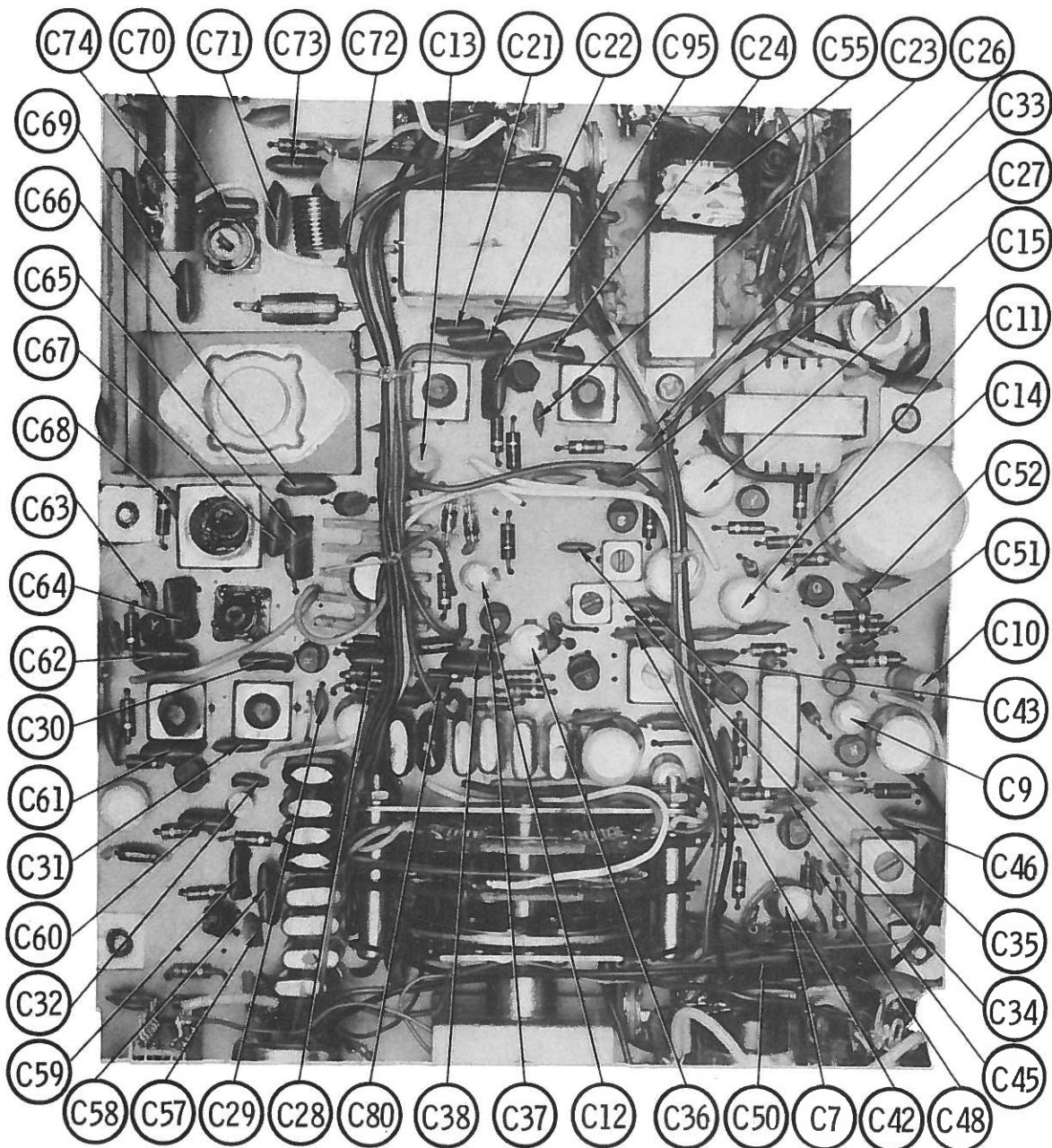


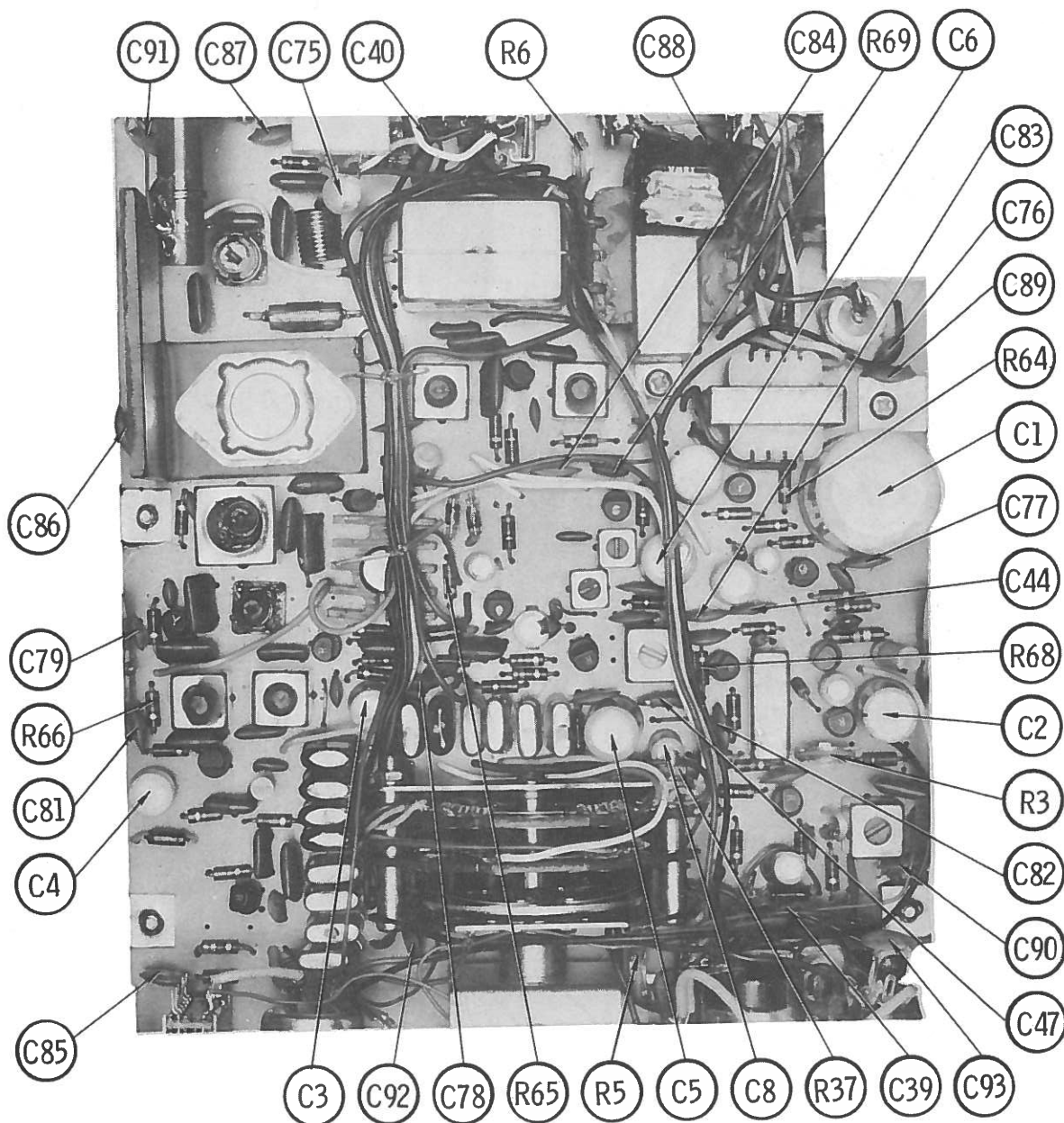


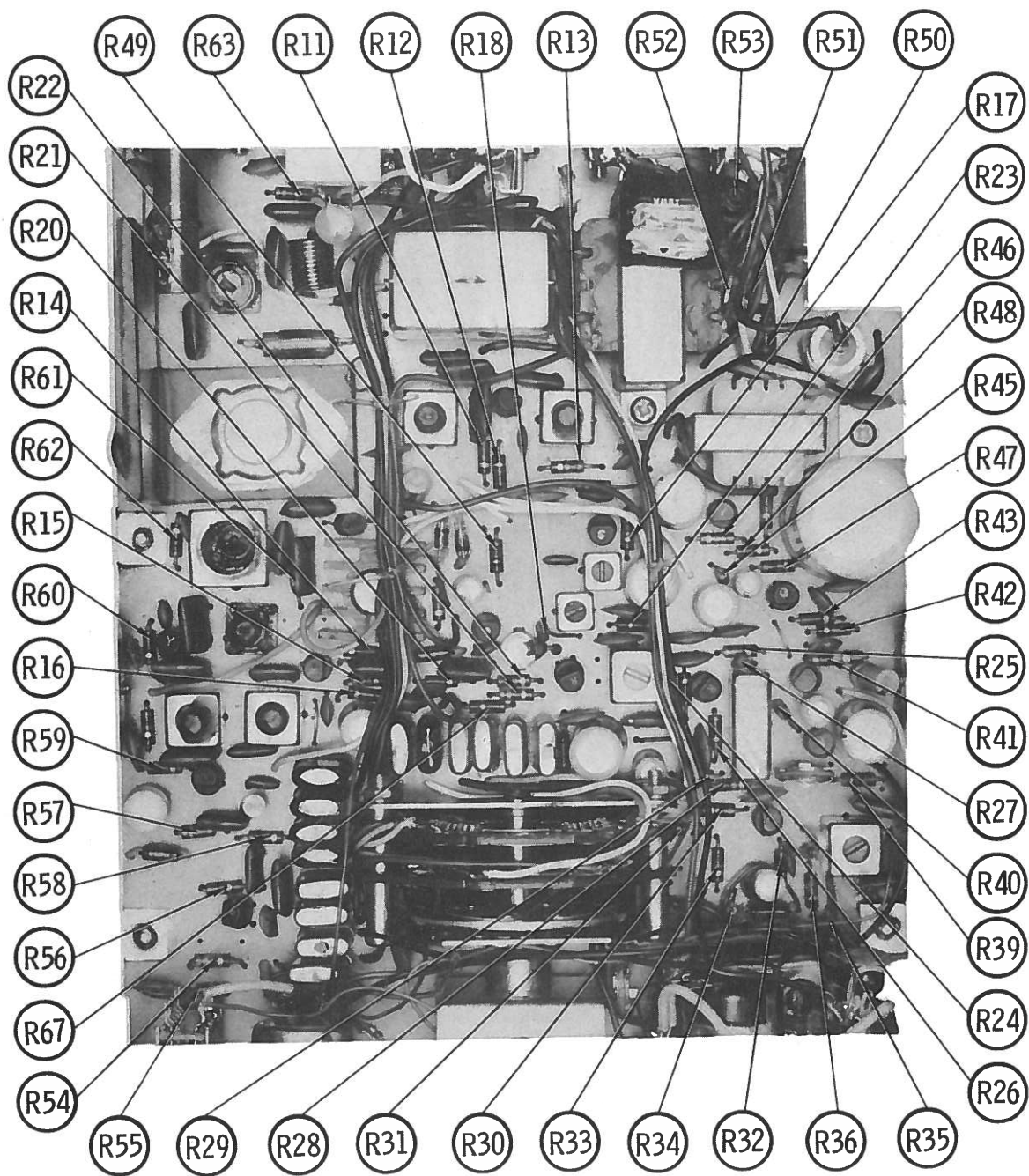












PARTS LIST AND DESCRIPTION

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

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid 22AWG)	Available
	8524 (Stranded 22AWG)	in
	8570 (Stranded 26AWG)	12 Colors

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	2SC388	RF Amp		GE-17	TR-24	HEP56	SK3018	ECG 108
Q2	2SC371	1st Mixer		GE-17	TR-22	HEP50	SK3018	ECG 108
Q3	2SC371	Synthesizer		GE-17	TR-22	HEP50	SK3018	ECG 108
Q4	2SC371	2nd Mixer		GE-17	TR-22	HEP50	SK3018	ECG 108
Q5	2SC371	Receiving Oscillator		GE-17	TR-22	HEP50	SK3018	ECG 108
Q6	2SC371	1st IF Amp		GE-17	TR-22	HEP50	SK3018	ECG 108
Q7	2SC371	2nd IF Amp		GE-17	TR-22	HEP50	SK3018	ECG 108
Q8	2SC371	Squelch		GE-17	TR-22	HEP50	SK3018	ECG 108
Q9	2SA495	Squelch		GE-21	TR-19	HEP52	SK3025	ECG 129
Q10	2SC372	AF Amp		GE-20	TR-21	HEP55	SK3020	ECG 108
Q11	2SC375	Driver		GE-20	TR-21	HEP56	SK3020	ECG 108
Q12	2SB463	Output Modulator				HEP643		ECG 131
Q13	2SB463	Output Modulator				HEP643		ECG 131
Q14	2SC371	Transmitter Oscillator		GE-17	TR-22	HEP50	SK3018	ECG 108
Q15	2SC388	Transmitter Mixer		GE-17	TR-24	HEP56	SK3018	ECG 108
Q16	2SC735	Buffer		GE-20	TR-21	HEP53	SK3020	ECG 123
Q17	2SC481	Driver						ECG 128
Q18	2SC106	Final Amp		GE-11				

ROBYN MODEL TR-123B

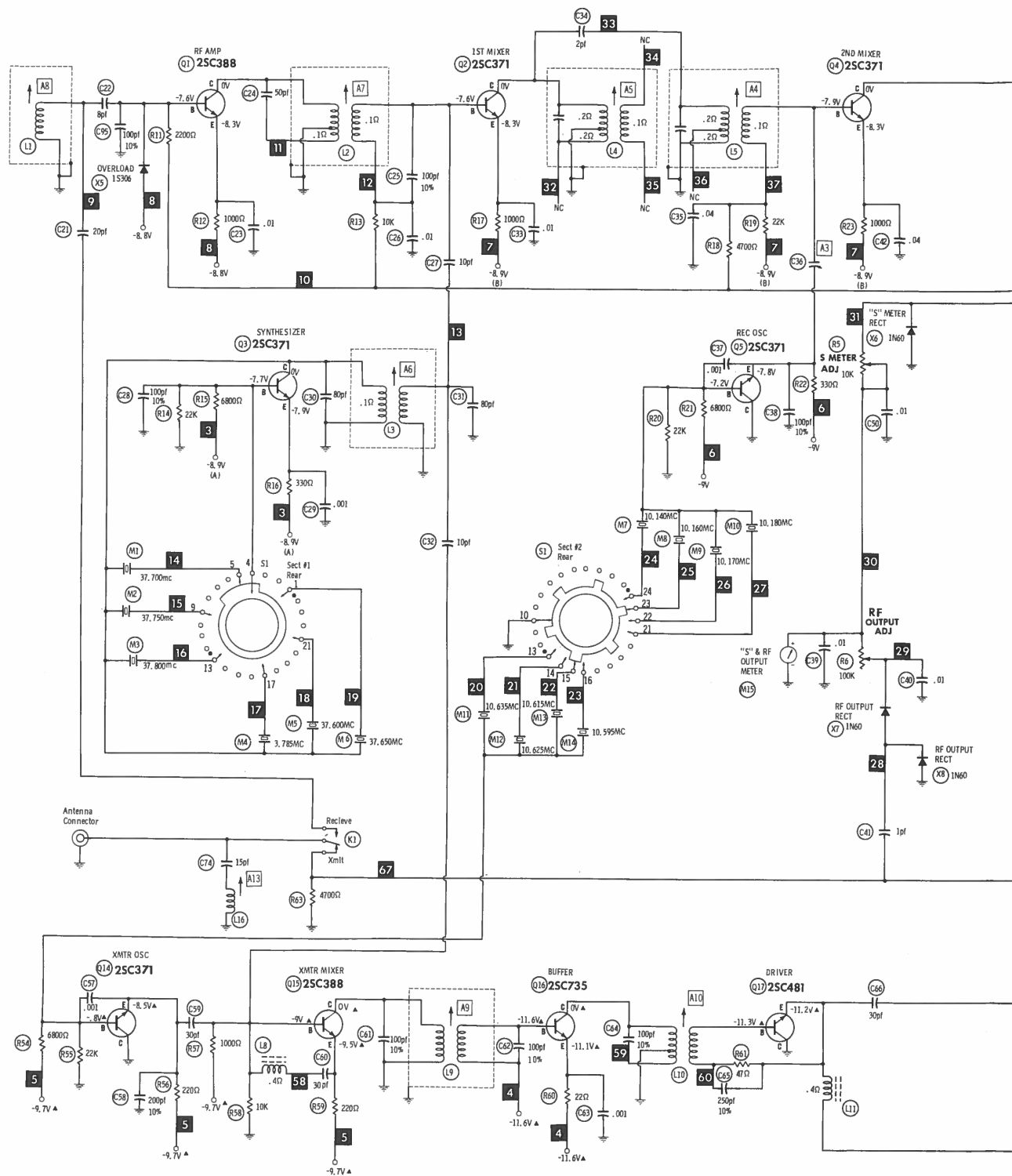
POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES			REPLACEMENT RECTIFIERS	NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.	RCA PART No.	
X1	1S1660	GEMR-2	3F40D			Zener
X2	1S130	GEZD-9.1	1ZM9.1-T10	ECG 139		
X3	1S130		1ZM10-T10 or Z-1110	ECG 140		
X4	1S130	GEZD-9.1	1ZM9.1-T10	ECG 139		Zener
X5	1S306	1N60	1N60	ECG 109		
X6	1N60	1N60	1N60	ECG 109		
X7	1N60	1N60	1N60	ECG 109		
X8	1N60	1N60	1N60	ECG 109		
X9	1N60	1N60	1N60	ECG 109		
X10	MC2526	1N34AS	1N34A	ECG 109		
X11	1S32	1N34AS	1N34A	ECG 109		
X12	1N60	1N60	1N60	ECG 109		
X13	1N60	1N60	1N60	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	1000 25V		PRS1295	EA30-1000	WBR1000-35			
C2	200 15V		BCD20200	EA15-250	PC200-16	MT1-23	MTV200CK15	TE-1164
C3	30 16V		BCD15035	EP15-25	PC30-35	MT1-13.5	MTV30CB25	TE-1158
C4	30 16V		BCD15035	EP15-25	PC30-35	MT1-13.5	MTV30CB25	TE-1158
C5	100 16V		BCD15100	EP15-100	PC100-16	MT1-19	MTV100CF15	TE-1162
C6	47 16V		BCD15050	EP15-50	PC50-16	MT1-16	MTV50CB15	TE-1160
C7	10 16V		BCD25010	EP15-10	PC10-50	MT1-5	MTV10CB50	TE-1155
C8	10 16V			EP15-10				TE-1155
C9	10 16V		BCD25010	EP15-10	PC10-50	MT1-5	MTV10CB50	TE-1155
C10	1 25V		BCD50001	EP30-2	PC1-100	MT1-1	MTV1CB50	TE-1200
C11	33 16V		BCD12035	EP15-25	PC30-35	MT1-16	MTV30CB25	TE-1158
C12	4.7 16V		BCD25005	EP15-5	PC5-100	MT1-3	MTV5CB50	TE-1152
C13	1 25V		BCD50001	EP30-2	PC1-100	MT1-1	MTV1CB50	TE-1200
C14	1 25V		BCD50001	EP30-2	PC1-100	MT1-J	MTV1CB50	TE-1200
C15	100 15V		BCD15100	EP15-100	PC100-16	MT1-19	MTV100CF15	TE-1162

(CONTINUED ON PAGE 112)



NC No Connection

▲ Measured in "Transmit" position.
* May not be used in some versions.

Controls viewed from actuator end. Arrow indicates clockwise rotation.

1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found on the unit.
6. Supply voltage maintained at rated value for voltage readings.
7. Resistance measurements not given because of the wide variation in internal resistance of transistor.

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

A PHOTOFAC STANDARD NOTATION SCHEMATIC
with **CIRCUITRACE**
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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	20		NPO-DI 20	DTZ-20	NP020	CCT0-200	CN0420	10TCC-Q20
C22	80			DTZ-82	NP082	CCT0-820	CN0482	10TCC-Q82
C23	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C24	50		NPO-DI 50	DTZ-50	NP050	CCT0-510	CN0450	10TCC-Q50
C25	100	10%	GPD X5F101K	DD-101	GP100	CCD-101	GP310	10TS-T10
C26	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C27	10		NPO-DI 10	DTZ-10	NP010	CCT0-100	CN0410	10TCC-Q10
C28	100	10%	GPD X5F101K	DD-101	GP100	CCD-101	GP310	10TS-T10
C29	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C30	80			DTZ-82	NP082	CCT0-820	CN0482	10TCC-Q82
C31	80			DTZ-82	NP082	CCT0-820	CN0482	10TCC-Q82
C32	10		NPO-DI 10	DTZ-10	NP010	CCT0-100	CN0410	10TCC-Q10
C33	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C34	2		NPO-DI 2.2	DTZ-2R2	NP02P2		CN0522	10TCC-V22
C35	.04			DD-403			GP140	
C36								
C37	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C38	100	10%	GPD X5F101K	DD-101	GP100	CCD-101	GP310	10TS-T10
C39	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C40	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C41	1		NPO-DI 1.0	TC7-1			CN0510	10TCC-V10
C42	.04			DD-403			GP140	
C43	.04			DD-403			GP140	
C44	.04			DD-403			GP140	
C45	.04			DD-403			GP140	
C46	100	10%	GPD X5F101K	DD-101	GP100	CCD-101	GP310	10TS-T10
C47	.04			DD-403			GP140	
C48	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C49	.04			DD-403			GP140	
C50	.1		TTP-1	CK-104			TA010	TG-P10
C51	.001							
C52	.002		GPD X5F202K	DD-202	GP2000	CCD-202	GP220	10TS-D20
C53	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C54	.001			DD30-102	DPMS20D1	16DP-2-102		16PS-D10
C55	1	200V	V1612W1					
C57	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C58	200	10%	GPD X5F201K	DD-201	GP200	CCD-201	GP320	10TS-T20
C59	33			DD-330	NP033	CCD-330	GP433	10TS-Q33
C60	30			DD-300		CCD-300	GP430	10TS-Q30
C61	100	10%	GPD X5F101K	DD-101	GP100	CCD-101	GP310	10TS-T10
C62	100	10%	GPD X5F101K	DD-101	GP100	CCD-101	GP310	10TS-T10
C63	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C64	130	10%		DD-131			GP313	10TS-T13
C65	250	10%	GPD X5F251K	DD-251		CCD-251	GP325	10TS-T25
C66	30			DD-300		CCD-300	GP430	10TS-Q30
C67	100	10%	GPD X5F101K	DD-101	GP100	CCD-101	GP310	10TS-T10
C68	.001		GPD X5F102K	DD-102	GP1000	CCD-102	GP210	10TS-D10
C69	200	10%	GPD X5F201K	DD-201	GP200	CCD-201	GP320	10TS-T20
C70	50		GPD X5F500K	DD-500	NP050	CCD-500	GP450	10TS-Q50
C71	200	10%	GPD X5F201K	DD-201	GP200	CCD-201	GP320	10TS-T20
C72	15		NPO-DI 15	DTZ-15	NP015	CCT0-150	CN0415	10TCC-Q15
C73	130	10%		DD-131			GP313	10TS-T13
C74	15		NPO-DI 15	DTZ-15	NP015	CCT0-150	CN0415	10TCC-Q15
C75	.02		GPD Z5U203P	DD-203		CCD-203	GP120	10TS-S20
C76	.02		GPD Z5U203P	DD-203		CCD-203	GP120	10TS-S20
C77	.04			DD-403			GP140	
C78	.04			DD-403			GP140	
C79	.01			DD-403			GP140	
C80	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C81	.04		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C82	.04			DD-403			GP140	
C83	.04			DD-403			GP140	
C84	.04			DD-403			GP140	
C85	.04			DD-403			GP140	
C86	.04			DD-403			GP140	
C87	.04			DD-403			GP140	
C88	.04			DD-403			GP140	
C89	.04			DD-403			GP140	
C90	.04			DD-403			GP140	
C91	.04			DD-403			GP140	
C92	.04			DD-403			GP140	
C93	.04			DD-403			GP140	
C94	.04			DD-403			GP140	
C95	100	10%	GPD X5F101K	DD-101	GP100	CCD-101	GP310	10TS-T10

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/Switch	5000		F1-5000 (1), SF014, KR-1	A47-5000-S (1), FS-3,SWE-12 or [NP-5000-S (1), UP-B-400,NWE-12]	Q11-114 (1), 76-1 or [BU1 (1), CF8,SS1,GC]*	RU53L,SL36 (1), SL3250,US41 or [UA53A (1), SF1000,US41] or [U14 (1), US26]
R2	Squelch	5000		F2-5000 (1) SF014		Q13-114 (1) or [BU1 (1),CF60, SS1,GC] *	RU53A,SL36 (1), SL3250 or [UA53A (1), SF1000] or U12 (1)
R3	Squelch Limit	100K		TSV-100K (2) or T-100K (2)		X201R104B (2)	MTC15L1 (2)
R4	Modulation Adjust	10K		TSV-10K (2) or T-10K (2)		X201R103B (2)	MTC14L1 (2)
R5	"S" Meter Adjust	10K		TSV-10K (2) or T-10K (2)		X201R103B (2)	MTC14L1 (2)
R6	RF Output Adjust	100K		TSV-100K (2) or T-100K (2)		X201R104B (2)	MTC15L1 (2)

(1) Enlarge Mounting Hole.

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

* "SNAPTROL".

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R52	35 (Cold)		

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R53	1 1/2 W	WS-1	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	Antenna Matching				
L2	Receiving RF				
L3	Synthesizer				
L4	IF Input				
L5	IF Output				
L6	IF Input		16-9026	2066	
L7	IF Output		16-9028	2068	
L8	RF Choke (1.2uh)				
L9	Transmitter Mixer				
L10	Buffer				
L11	RF Choke (1.2uh)				
L12	Driver				
L13	RF Choke (1.1uh)		19-2009	4602	T806
L14	Final Output				
L15	Pi Network				
L16	TVI Trap			20A687RBI	

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L17	.48A	.6	2mh						

ROBYN MODEL TR-123B

PARTS LIST AND DESCRIPTION (CONTINUED)

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

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD Part No.	
T1	1.4	1 CT							

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	47	8						
		SEC 2						
		1.4 DC Resistance						

SPEAKER

ITEM No.	TYPE		REPLACEMENT DATA		NOTES
			PART No.	QUAM PART No.	
SP1	4" PM	8 ohms		4A1Z8	

FUSE DEVICES

ITEM No.	DESCRIPTION		REPLACEMENT DATA					
			PART No.		BUSS PART No.		LITTELFUSE PART No.	
			DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER
F1	2 Amp	250V			AGC-2	HDJ	311002	155020

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
K1	Relay		
M1	Crystal		37.700MC Channels 9, 10, 11, 12.
M2	Crystal		37.750MC Channels 13, 14, 15, 16.
M3	Crystal		37.800MC Channels 17, 18, 19, 20.
M4	Crystal		37.850MC Channels 21, 22, 23.
M5	Crystal		37.600MC Channels 1, 2, 3, 4.
M6	Crystal		37.650MC Channels 5, 6, 7, 8.
M7	Crystal		10.140MC Channels 4, 8, 12, 16, 20, 23.
M8	Crystal		Channels 3, 7, 11, 15, 19.
M9	Crystal		10.170MC Channels 2, 6, 10, 14, 18, 22.
M10	Crystal		10.180MC Channels 1, 5, 9, 13, 17, 21.
M11	Crystal		10.635MC Channels 1, 5, 9, 13, 17, 21.
M12	Crystal		10.625MC Channels 2, 6, 10, 14, 18, 22.
M13	Crystal		10.615MC Channels 3, 7, 11, 15, 19.
M14	Crystal		10.595MC Channels 4, 8, 12, 16, 20, 23.
M15	Meter		S & RF Output
M16	Ceramic Filter		
S1	Switch		Selector
S2	Switch		ANL