

SAMS PHOTOFACT[®] CB RADIO SERIES



CB-35
35
AUGUST 1971



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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.

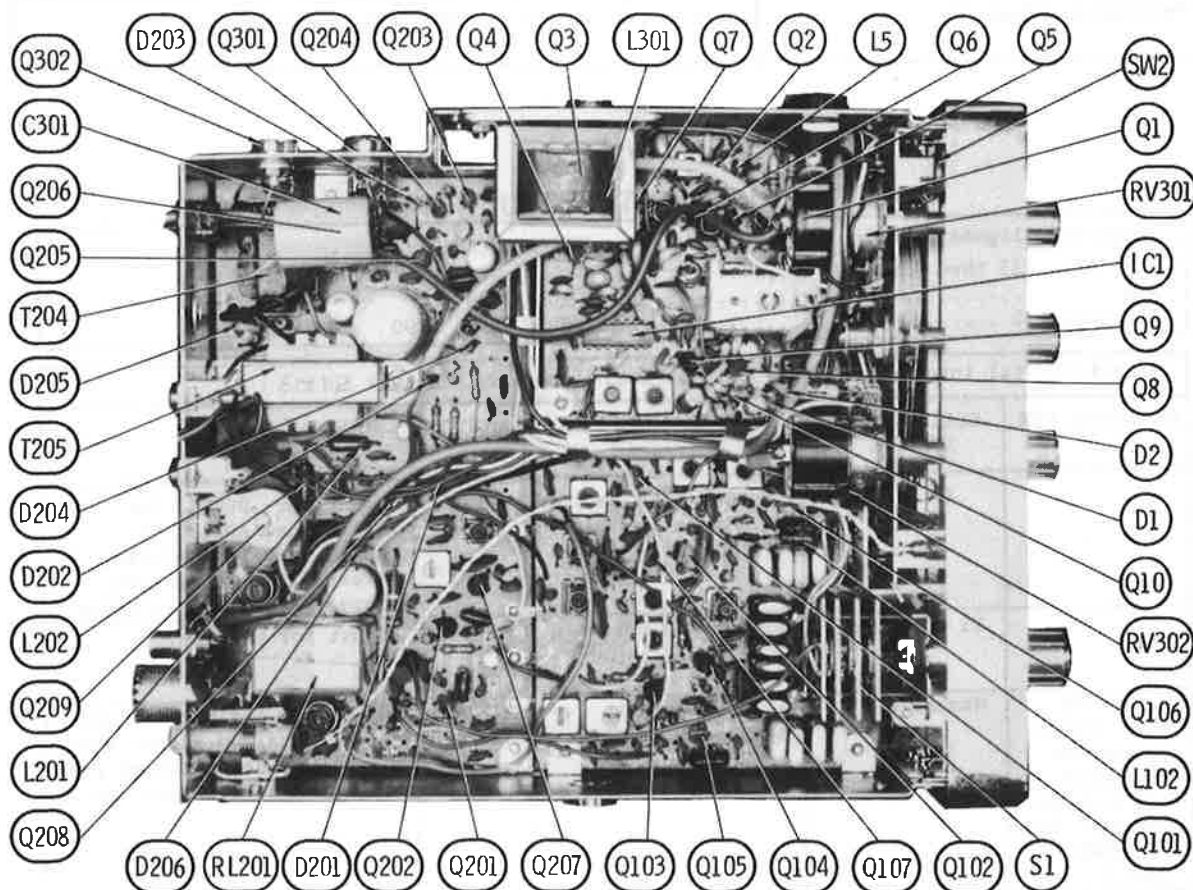
Best results will be obtained when adjusting the final RF output circuit if the antenna normally used is connected and the chassis is as nearly in the cabinet as possible.

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



MODEL CHIEF 23

COURIER MODEL CHIEF 23



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

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CB ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A1 thru A3	GENERAL CEMENT:
A4 thru A16	#8868, 9089
	#8606L, 9440

RECEIVER

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

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to base of Q103 (2nd. Mixer), low side to chassis. Tune to 455KC (Mod.).	Any	A1 Thru A3	Adjust for maximum.
High side thru .01mfd to antenna receptacle; low side to chassis. Tune to 27.085MC (Mod.).	11	A4 Thru A9	Adjust for maximum.

TRANSMITTER

INDICATOR	ADJUST	REMARKS
Field Strength Meter or RF wattmeter, 0-500ma DC Ammeter.	A10 Thru A15	Connect Ammeter in series with collector of Q209 (Final Amp). Adjust for maximum output and MINIMUM current.
Television (Chan. 2)	A16	Adjust for MINIMUM interference.

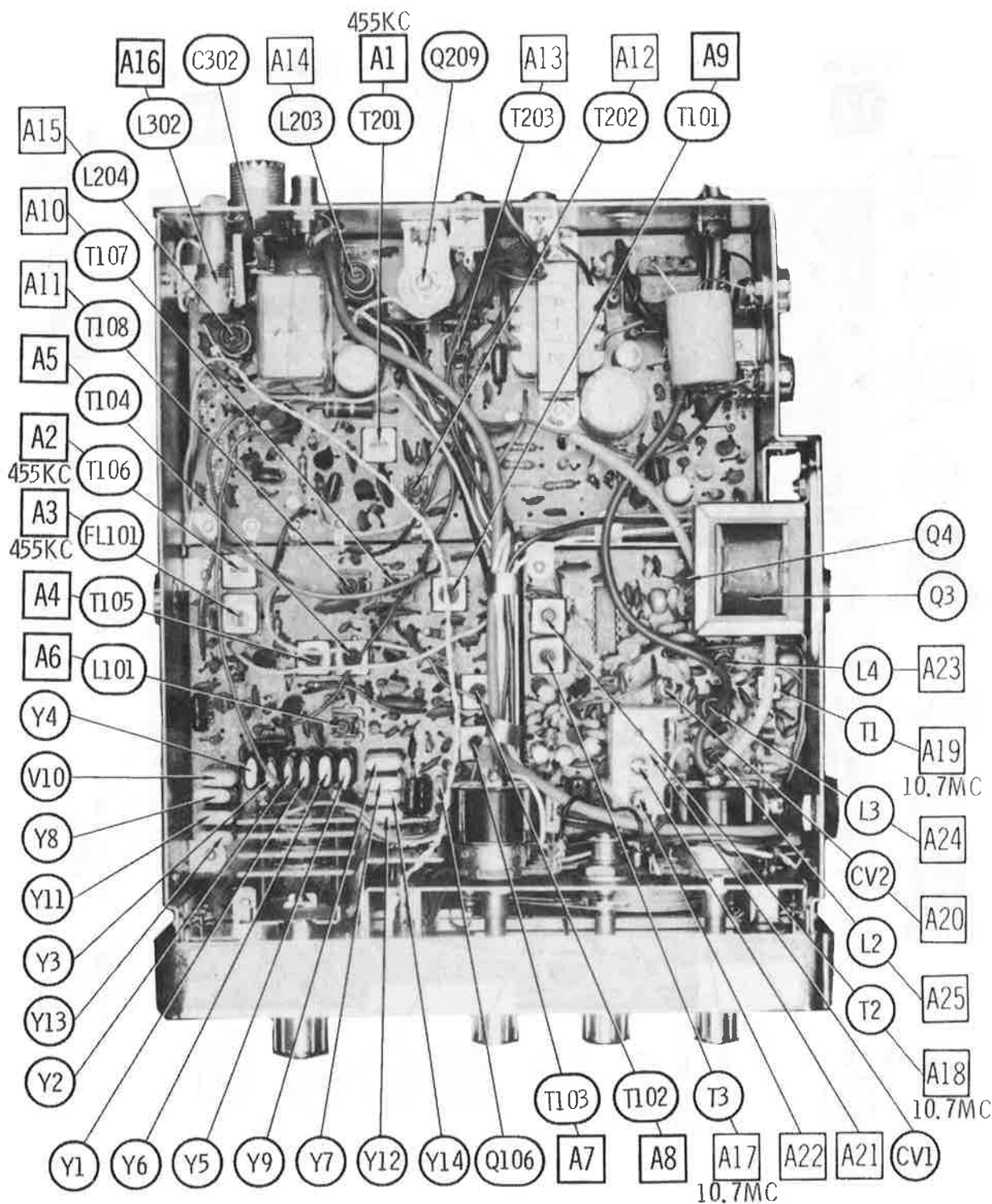
VHF ALIGNMENT INSTRUCTIONS

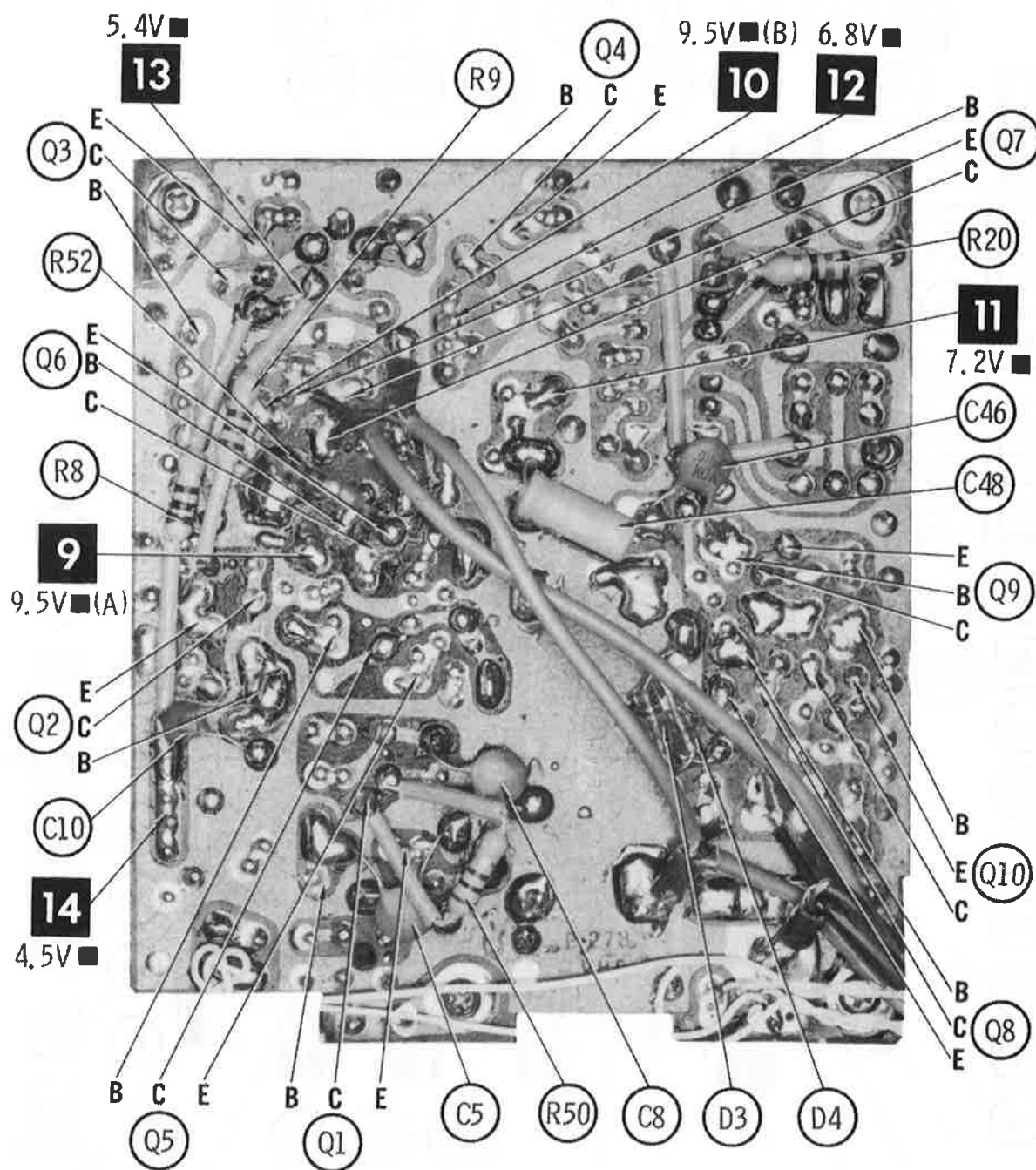
Suggested Alignment Tools:

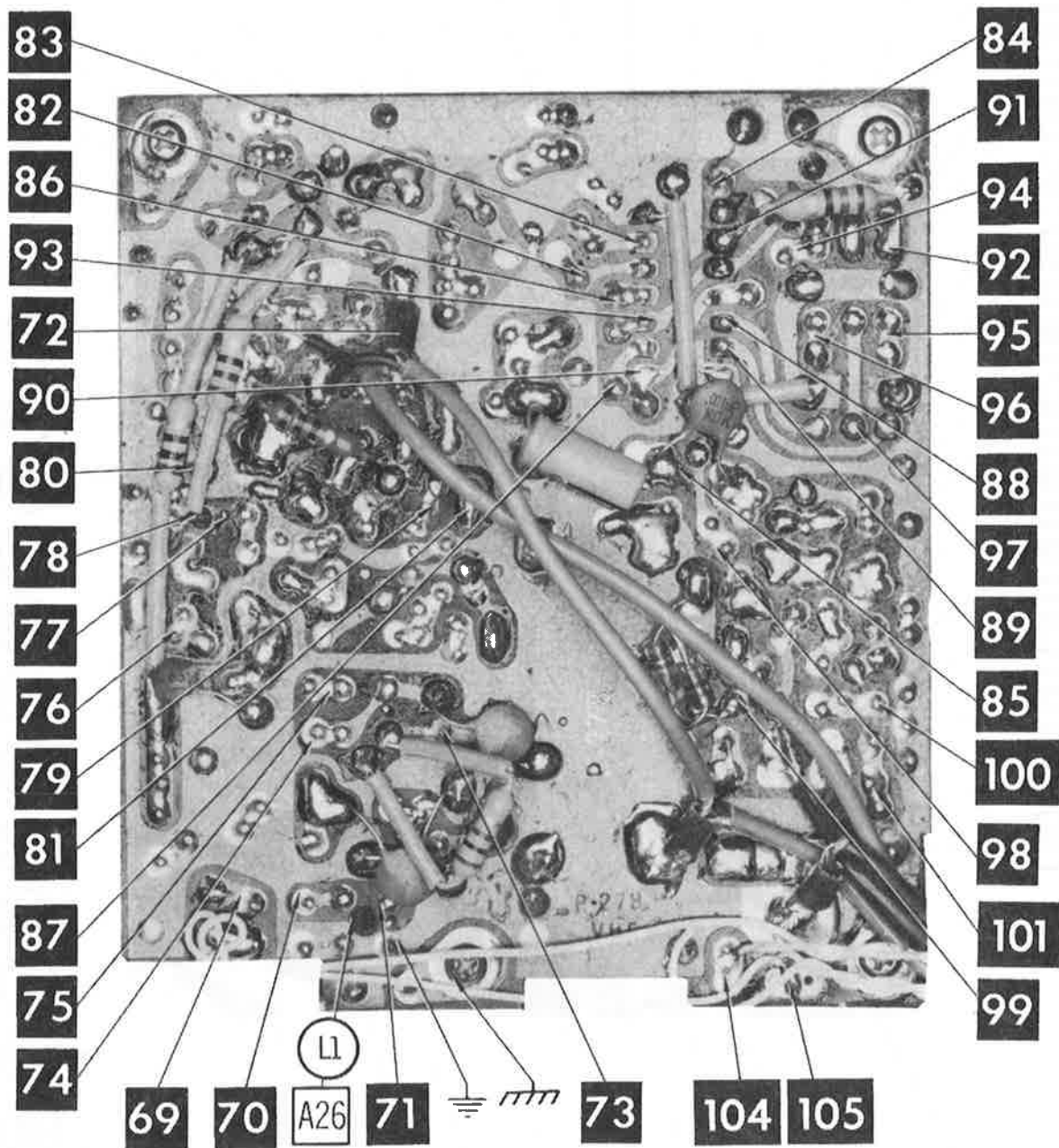
A17, A18, A23 thru A26	GENERAL CEMENT:
A19	#8606L, 9440
A20 thru A22	#8868, 9089
	#8276, 8277, 8290

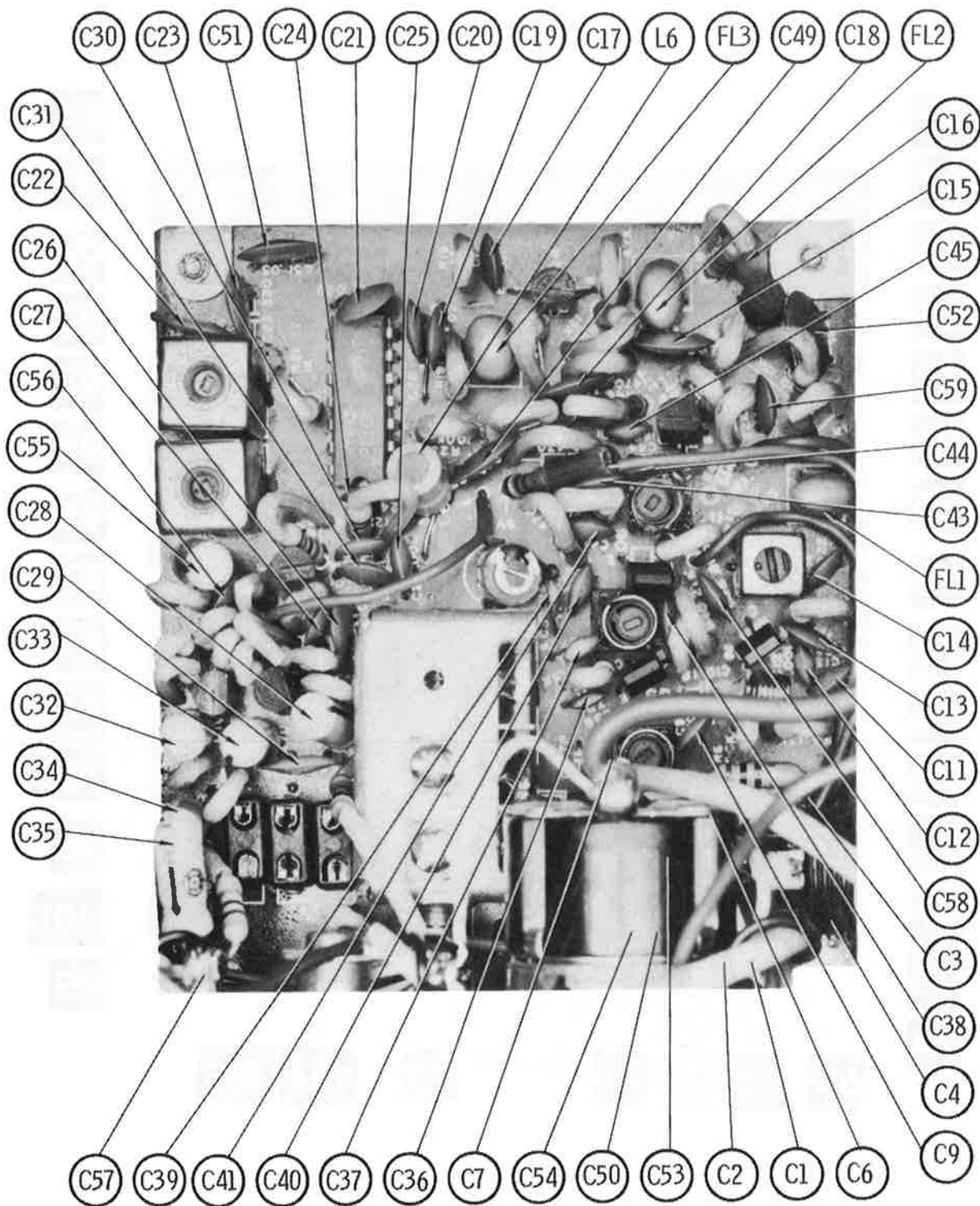
Insert Crystal into Crystal Socket. Set Xtal-Manual Switch (S2) to X1.

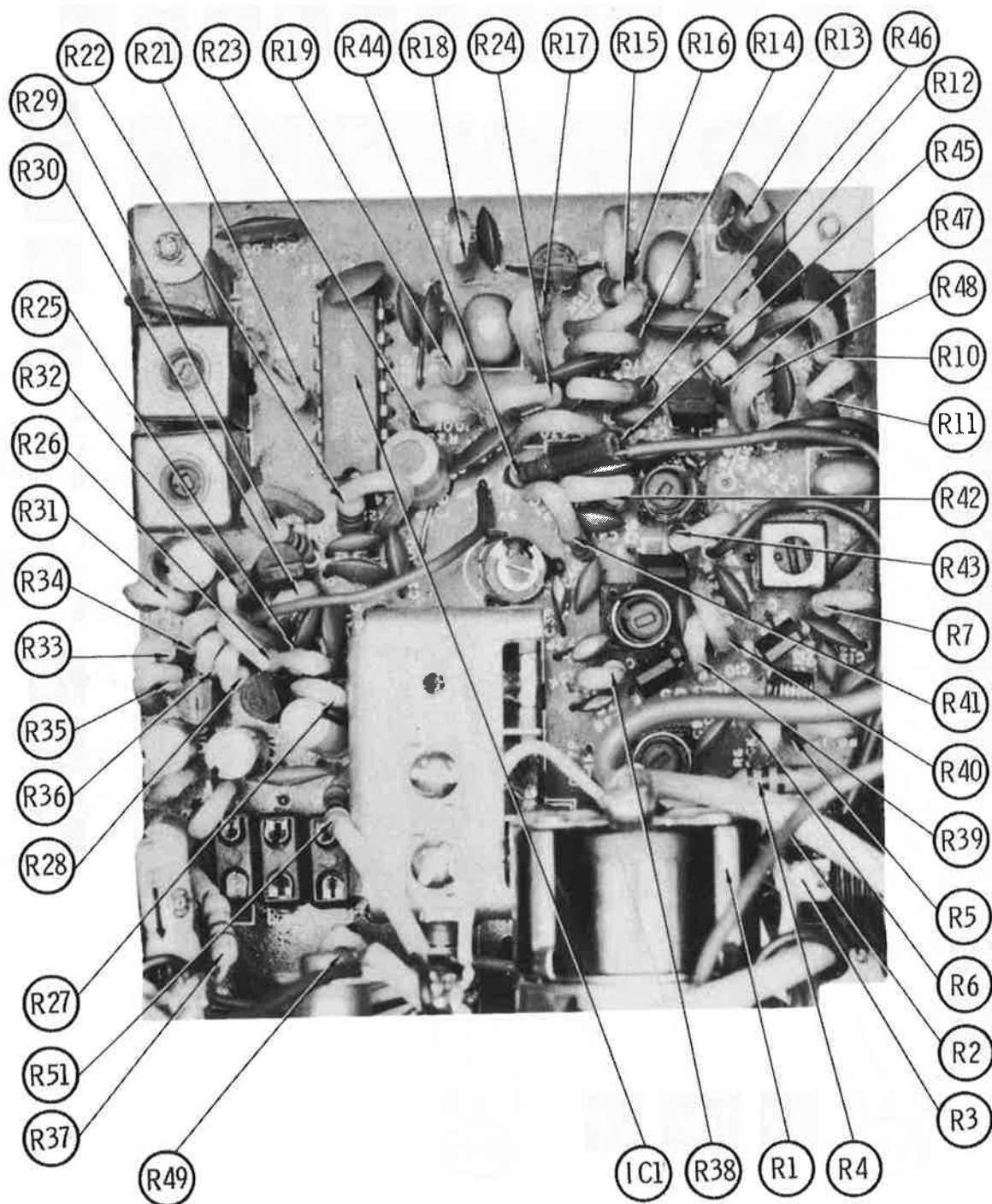
FM SIGNAL GEN.	XTAL-MANUAL SETTING	INDICATOR	ADJUST	REMARKS
	X1	DC VTVM from emitter of Q19 to ground.	A23	Adjust for .95VDC. Set Xtal-Manual switch to Manual, key Transmitter several times to ensure proper oscillator starting.
	X1 or Manual	Background Noise	A17,A18	Adjust for maximum.
High side thru .01mfd to antenna connector, low side to chassis. Tune to 150MC (Mod.).	Manual	AC VTVM across speaker Terminals.	A19,A24, A25,A26	Adjust for maximum. Adjust A26 for maximum signal and MINIMUM noise on center peak. Keep generator output low.
High side thru .01mfd to antenna connector, low side to chassis. Tune to 174MC (Mod.).	Manual	"	A20,A21, A22	Adjust for maximum signal and MINIMUM noise on center peak. Keep generator output low.

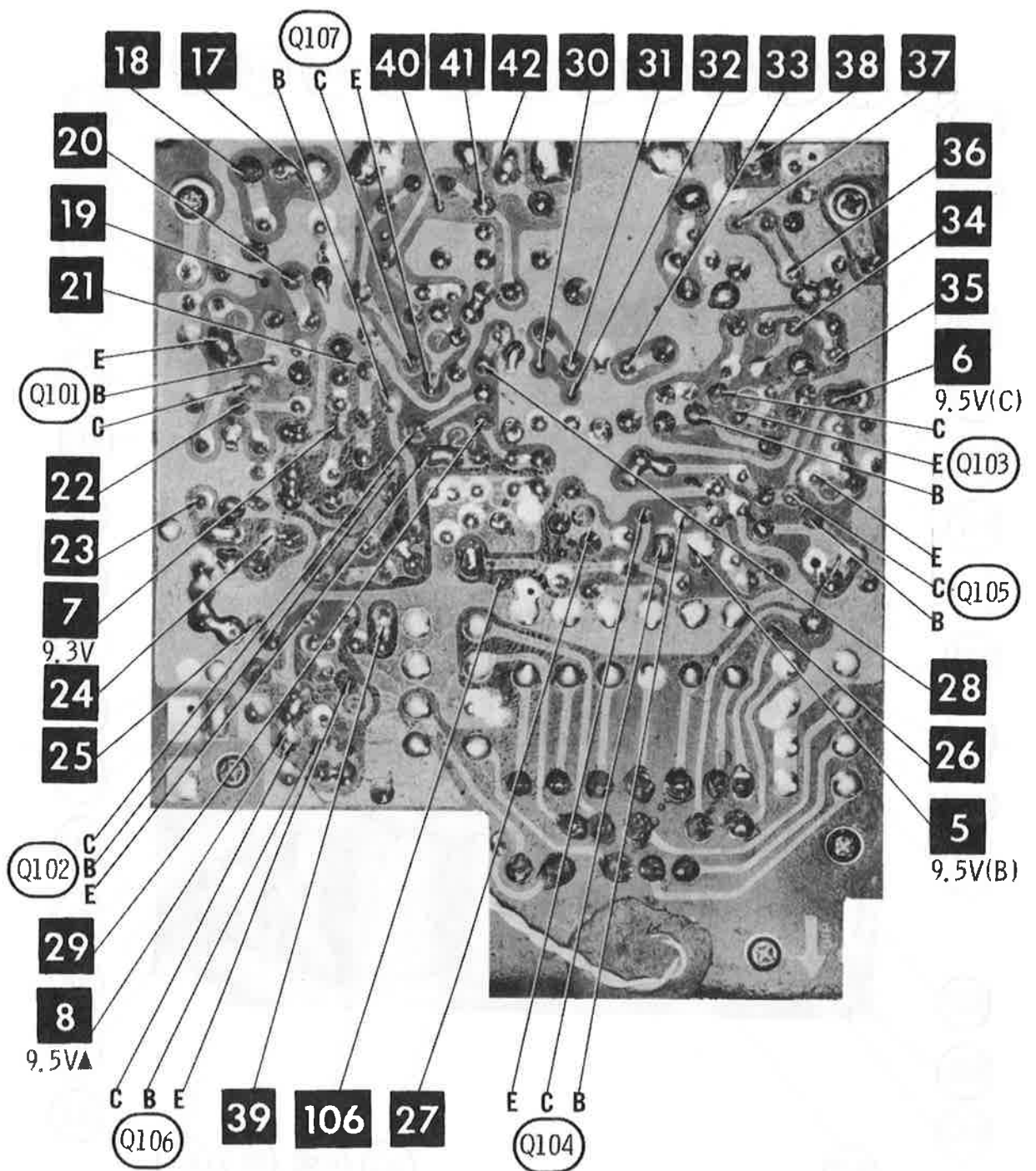


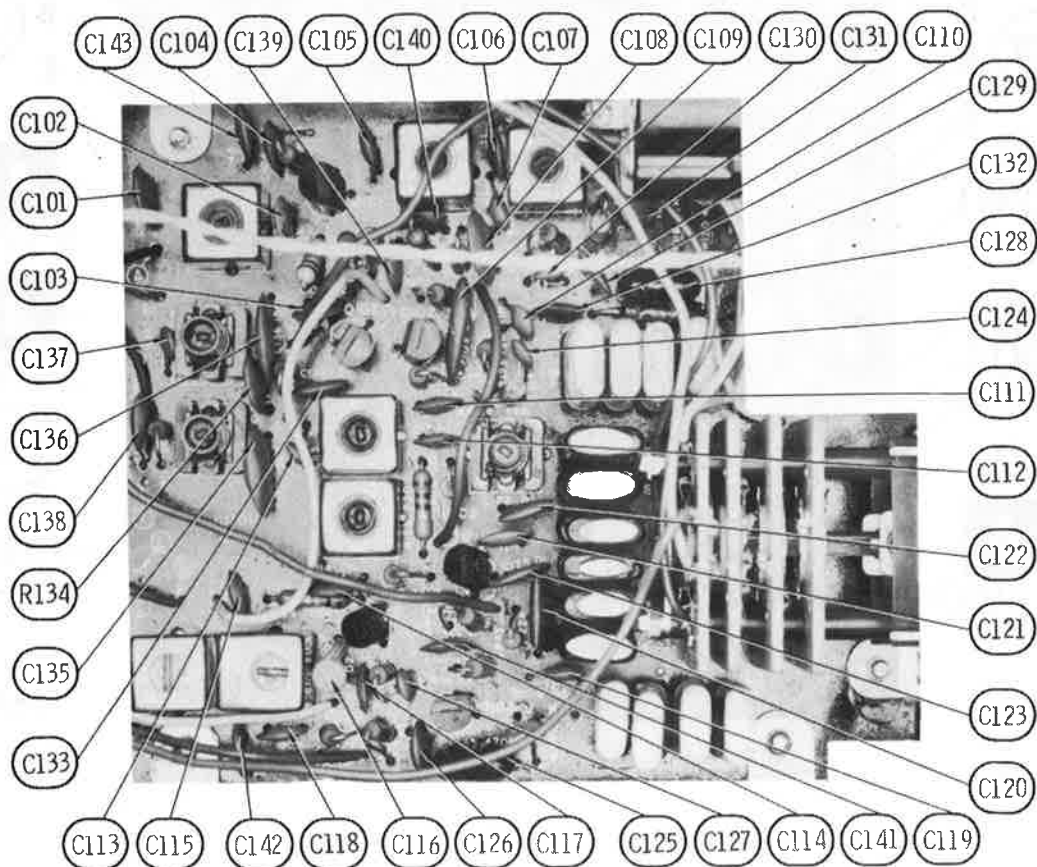
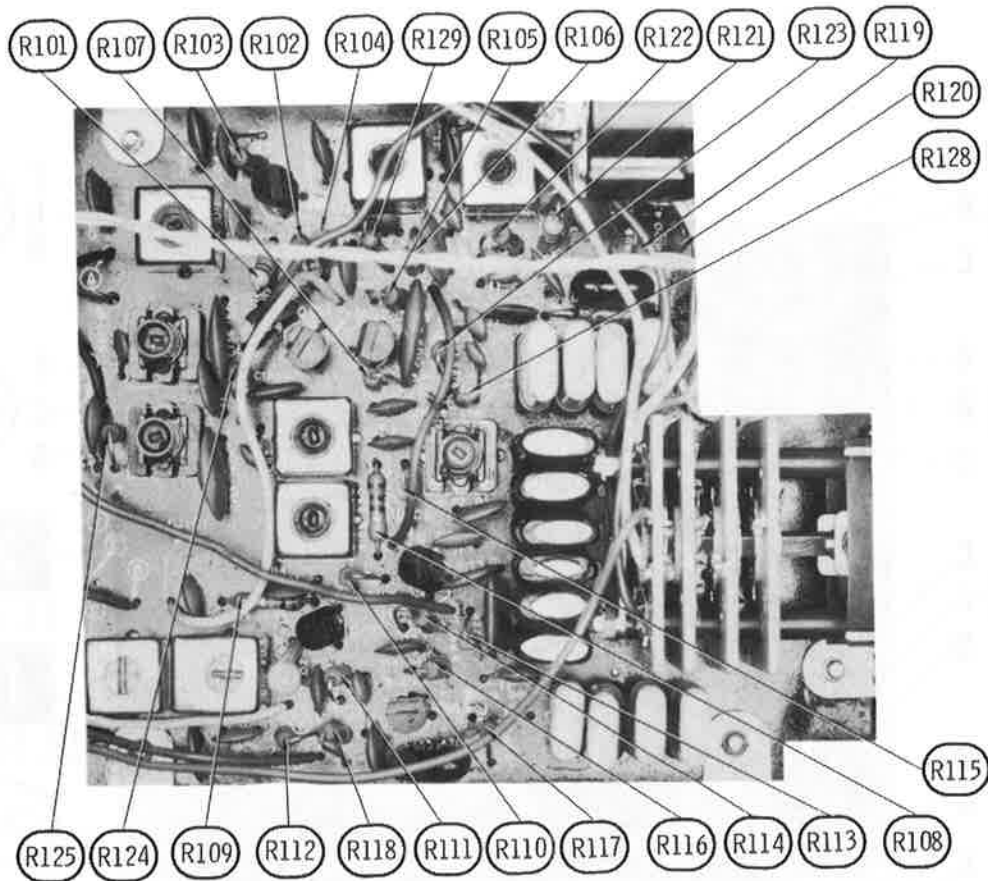


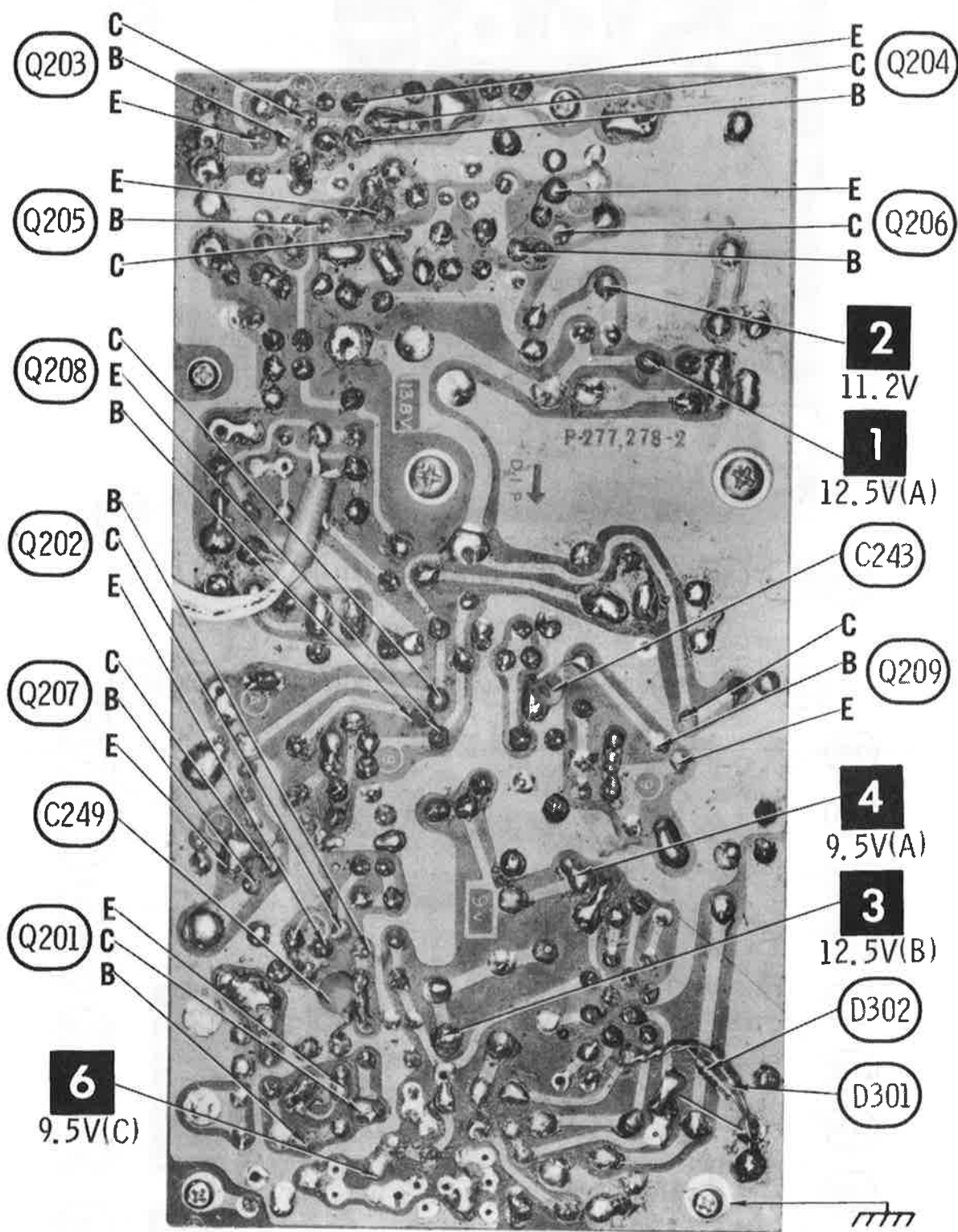






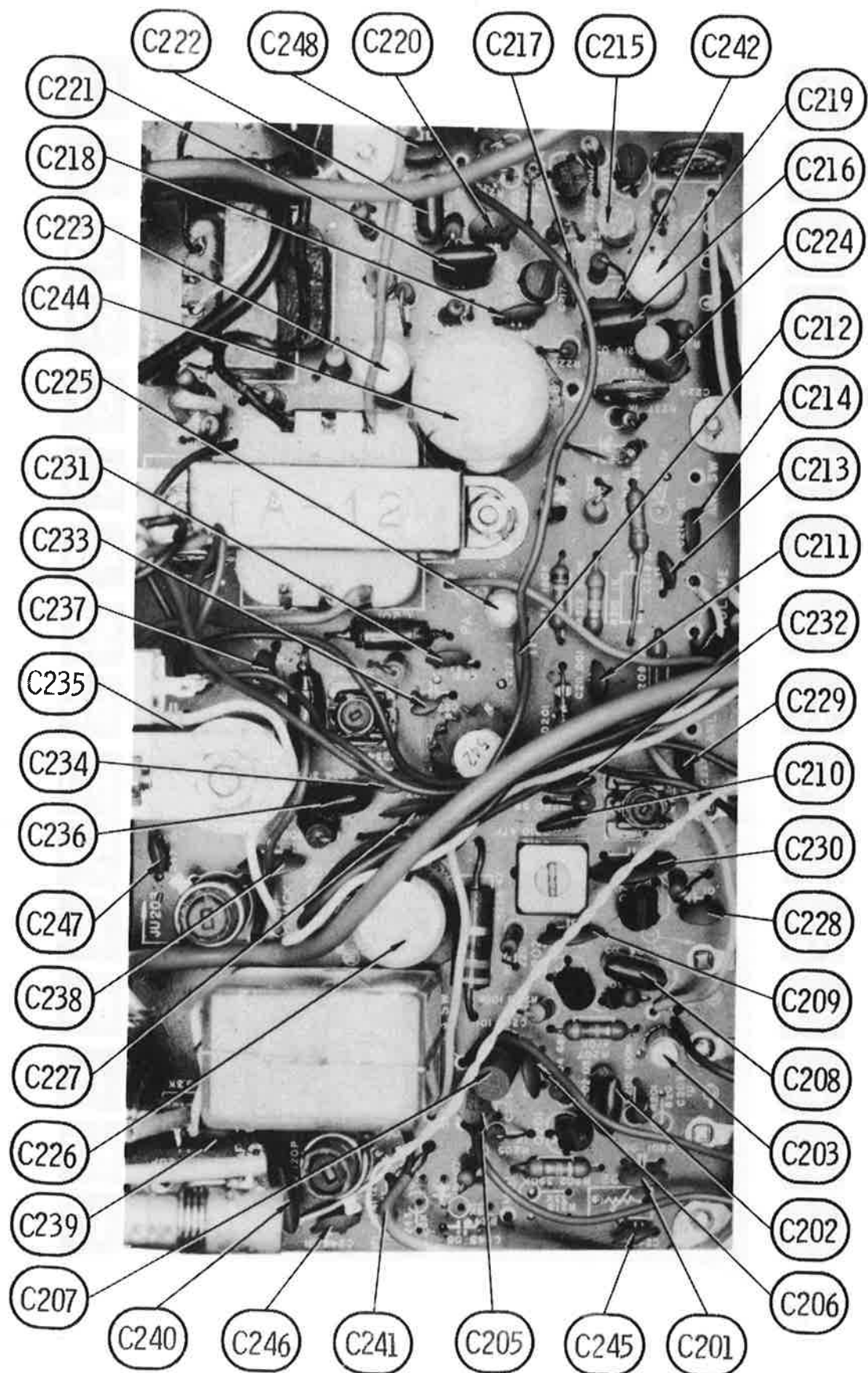


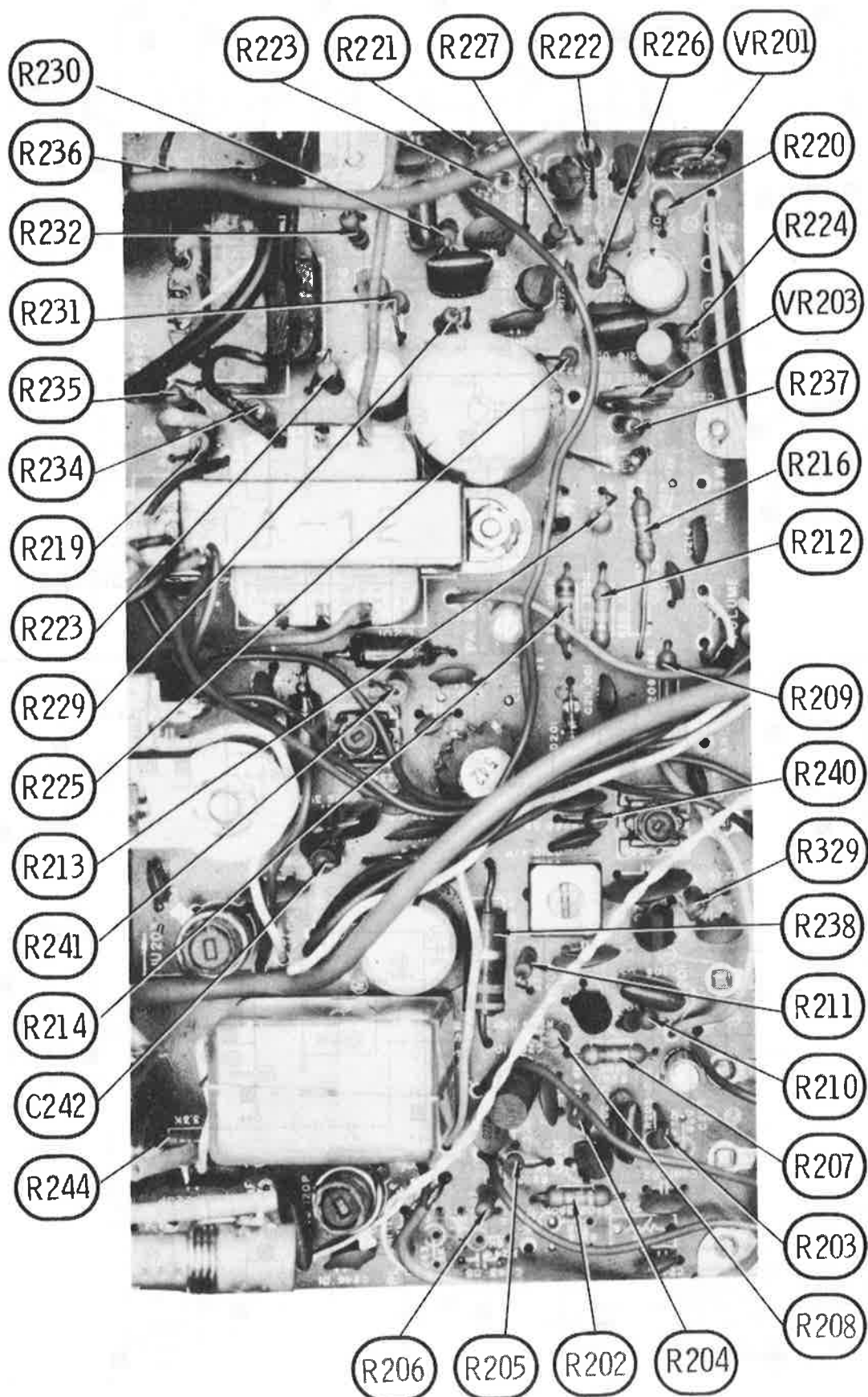


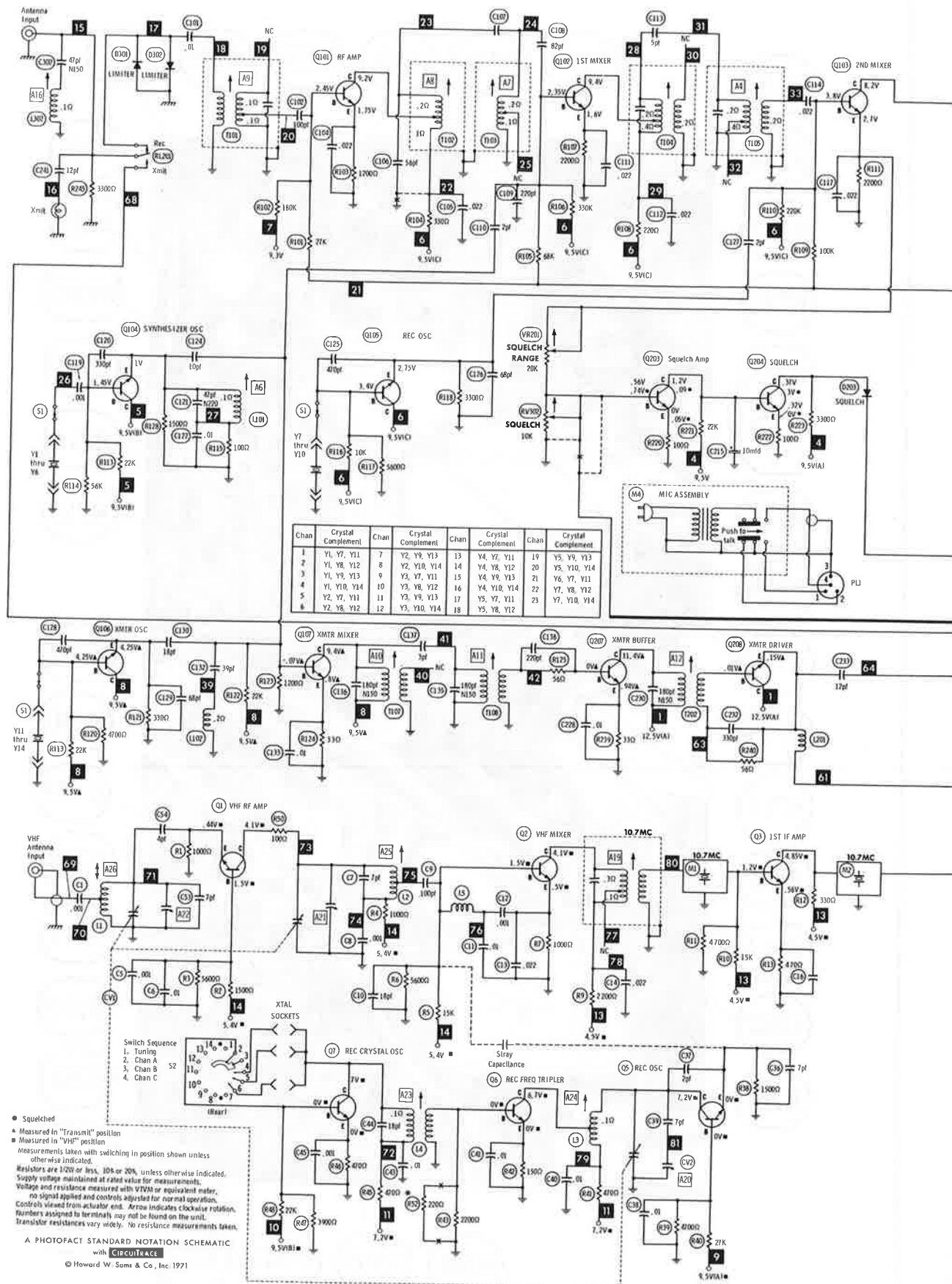


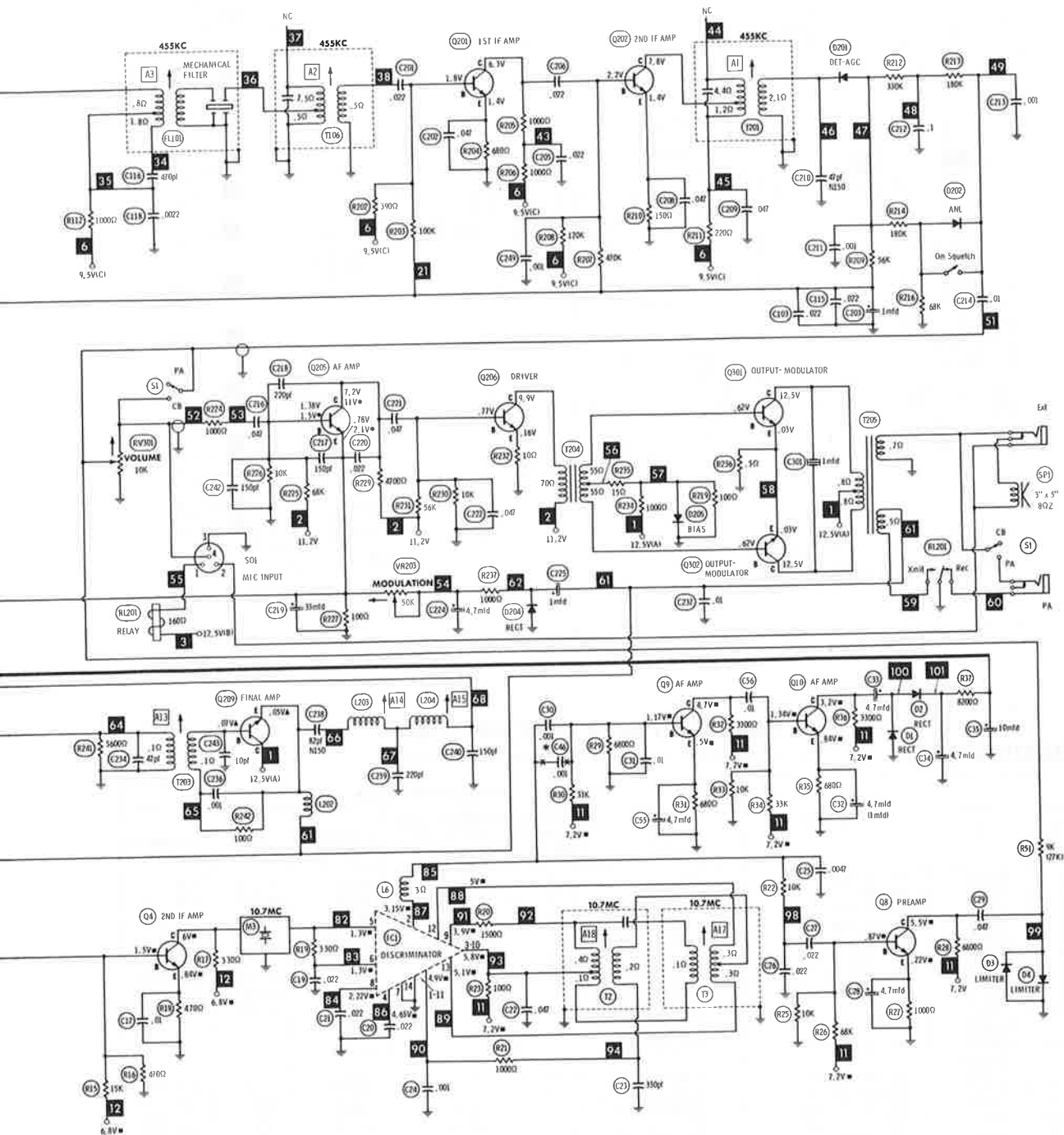


COURIER MODEL CHIEF 23

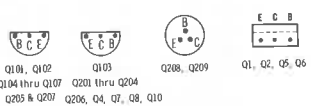




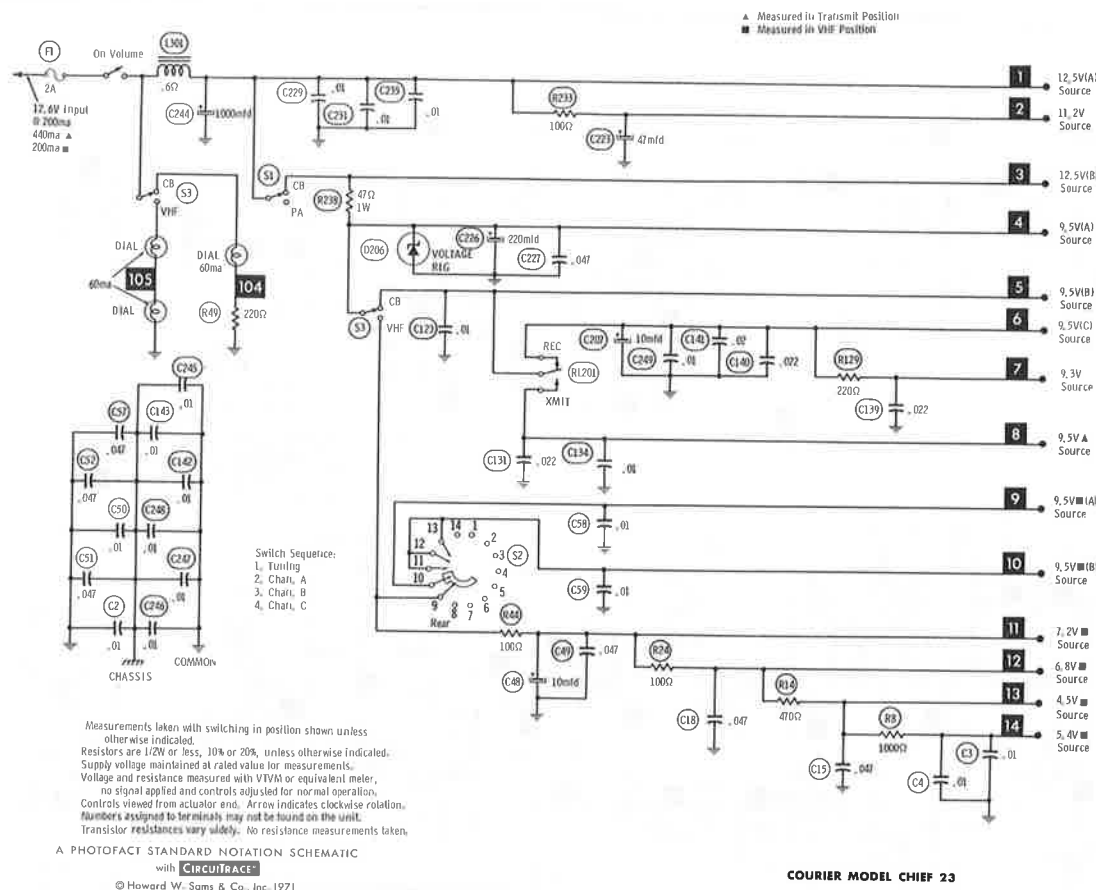




Transistor Terminal Guides



--- Indicates connection used in some versions.
 * Indicates connection not used in some versions.



PARTS LIST AND DESCRIPTION

TRANSISTORS

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

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	2SC535	VHF RF Amp	1003-01	GE-17	TR-22	HEP56	SK3018	ECG 107
Q2	2SC535	VHF Mixer	1003-01	GE-17	TR-22	HEP56	SK3018	ECG 107
Q3	2SC838	1st IF Amp	9TR2/1001-02	GE-10	TR-21	HEP728	SK3020	ECG 123A
Q4	2SC828	2nd IF Amp	9TR2/1001-02	GE-10	TR-21	HEP728	SK3020	ECG 123A
Q5	2SC535	Rec. Oscillator	1003-01	GE-17	TR-22	HEP56	SK3018	ECG 107
Q6	2SC535	Rec. Freq. Tripler	1003-01	GE-17	TR-22	HEP56	SK3018	ECG 107
Q7	2SC838	Rec. Crystal Osc.	9TR2/1001-02	GE-10	TR-21	HEP728	SK3020	ECG 123A
Q8	2SC838	Preamp	9TR2/1001-02	GE-10	TR-21	HEP728	SK3020	ECG 123A
Q9	2SC838	AF Amp	9TR2/1001-02	GE-10	TR-21	HEP728	SK3020	ECG 123A
Q101	2SC763	RF Amp	9TR1/1001-01			HEP732		
	(2SC535)							
Q102	2SC763	1st Rec. Mixer	9TR1/1001-01			HEP732		
	(2SC535)							
Q103	2SC838	2nd Rec. Mixer	9TR2/1001-02	GE-10	TR-21	HEP728	SK3020	ECG 123A
Q104	2SC710	Synthesizer Osc.	9TR3/1001-03	GE-17	TR-22	HEP56	SK3018	ECG 123A
Q105	2SC710	Rec. Oscillator	9TR3/1001-03	GE-17	TR-22	HEP56	SK3018	ECG 123A
Q106	2SC710	Xmtr Oscillator	9TR3/1001-03	GE-17	IRTR-62	HEP56	SK3046	ECG 123A
Q107	2SC710	Xmtr Mixer	9TR3/1001-03	GE-17	IRTR-62	HEP56	SK3046	ECG 123A
Q201	2SC838	1st IF Amp	9TR2/1001-02	GE-10	TR-21	HEP728	SK3020	ECG 123A
Q202	2SC838	2nd IF Amp	9TR2/1001-02	GE-10	TR-21	HEP728	SK3020	ECG 123A
Q203	2SC838	Squelch Amp	9TR2/1001-02	GE-10	TR-21	HEP728	SK3020	ECG 123A
Q204	2SC838	Squelch	9TR2/1001-02	GE-10	TR-21	HEP728	SK3020	ECG 123A
Q205	2SC711	AF Amp	1001-04	GE-17	TR-25	HEP728	SK3020	ECG 123A
Q206	2SC815	Driver	1001-05	GE-17		HEP733	SK3024	ECG 128
Q207	2SC773	Xmtr Buffer	1001-06	GE-20		HEP736	SK3024	ECG 123A
Q208	2SC775	Xmtr Driver	9TR6/1001-07	GE-17	IRTR-63	HEP736	SK3047	ECG 123A
	(2SC614)				IRTR-64	HEP3001	SK3047	ECG 128
Q209	2SC799	Final Amp	9TR7/1001-08		IRTR-65	S3002	SK3048	
Q301	2SD154	Output-Modulator	9TR9/1001-09	GE-23	IRTR-57	HEP703	SK3021	ECG 130
	(2SC491)							
Q302	2SC154	Output-Modulator	9TR9/1001-09	GE-23	IRTR-57	HEP703	SK3021	ECG 130
	(2SC491)							

INTEGRATED CIRCUITS

ITEM No.	FUNCTION	MFGR. PART No.	REMARKS
IC1	Discriminator	1003-02	

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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.	
D1	1N60	1N60	1N60	1N60	ECG 109	Zener
D2	1N60	1N60	1N60	1N60	ECG 109	
D3	1N34	1N34AS	1N34A	1N34A	ECG 109	
D4	1N34	1N34AS	1N34A	1N34A	ECG 109	
D201	1N60	1N60	1N60	1N60	ECG 109	
D202	1S358S	GE-504A	8D4 or 5A4D	SK3030 or SK3031	ECG 116 or ECG 117	
D203	1N60	1N60	1N60	1N60	ECG 109	
D204	1N60	1N60	1N60	1N60	ECG 109	
D205	MV-1					
D206	AWD1-09					
D301	1N60	1N60	1N60	1N60	ECG 109	
D302	1N60	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.
C28	4.7 10V	1001-70	MCD-50	EP15-5	WBR5-50	MT1-3	MTV5CB50	TE-1127
C32	4.7 10V	1003-16	MCD-50	EP15-5	WBR5-50	MT1-3	MTV5CB50	TE-1127
C33	4.7 10V	1001-70	MCD-50	EP15-5	WBR5-50	MT1-3	MTV5CB50	TE-1127
C34	4.7 10V	1001-70	MCD-50	EP15-5	WBR5-50	MT1-3	MTV5CB50	TE-1127
C35	10 10V	1003-17	MCD-70	EP15-10	WBR10-25	MT1-5	MTV10CB50	TE-1128
C48	10 10V	1001-67	MCD-70	EP15-10	WBR10-25	MT1-5	MTV10CB50	TE-1128
C55	4.7 10V	1001-70	MCD-50	EP15-5	WBR5-50	MT1-3	MTV5CB50	TE-1127
C203	1 16V	1001-66	MCD-10		WBR1-50	MT1-1	MTV1CB50	TE-1148
C207	10 10V	1001-67	MCD-70	EP15-10	WBR10-25	MT1-5	MTV10CB50	TE-1128
C215	10 10V	1001-67	MCD-70	EP15-10	WBR10-25	MT1-5	MTV10CB50	TE-1128
C219	33 10V	1001-68	MCD-110	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	TE-1132.1
C223	47 16V	1001-69	MCD-140	EP30-50	WBR50-25	MT1-16.5	MTV50CD25	TE-1209
C224	4.7 10V	1001-70	MCD-50	EP15-5	WBR5-50	MT1-3	MTV5CB50	TE-1127
C225	1 16V	1001-66	MCD-10		WBR1-50	MT1-1	MTV1CB50	TE-1148
C226	220 16V	1001-71	PTT108	EA15-250	WBR250-16	MT1-23	MTV200CK15	TE-1164
C244	1000 25V	1001-72						
C301	1 NP 250V		PRS7525					

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	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C2	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C3	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C4	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C5	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C6	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C7	10		NPO-DI 6.8	DTZ-6R8	NP06P8		CN0568	10TCC-V68
C8	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C9	100		GPD X5F101K	DD-101	GP100	CCD-101	GP310	10TS-T10
C10	18			TCZ-18	NP018	CCTO-180	CN0418	10TCC-Q18
C11	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C12	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C13	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C14	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C15	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C16	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C17	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C18	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
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	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C22	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C23	.330		GPD X5F331K	DD-331	GP330	CCD-331	GP333	10TS-T33
C24	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C25	.0047		TTP-005	CK-502	MGP005	CCD-502	TA250	TG-D50
C26	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C27	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C29	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C30	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C31	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C36	7		NPO-DI 6.8	DTZ-6R8	NP06P8		CN0568	10TCC-V68
C37	2		NPO-DI 2.2	DTZ-2R2	NP02P2		CN0522	10TCC-V22
C38	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C39	7		NPO-DI 6.8	DTZ-6R8	NP06P8		CN0568	10TCC-V68
C40	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C41	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C43	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C44	18			TCZ-18	NP018	CCTO-180	CN0418	10TCC-Q18
C45	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C46	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C49	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C50	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C51	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C52	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50

COURIER MODEL CHIEF 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.
C53	7	#1003-13 #1003-14	NPO-DI 6.8	DTZ-6R8	NP06P8		CN0568	10TCC-V68
C54	4				NP03P9			10TCC-V39
C56	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C57	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C58	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C59	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
CV1								
CV2								
C101	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C102	100		NPO-DI 100	DTZ-100	NP0100	CCT0-101	CN0310	10TCC-T10
C103	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C104	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C105	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C106	56			TCZ-56			CN0456	10TCC-Q56
C107	2		NPO-DI 2.2	DTZ-2R2	NP02P2		CN0522	10TCC-V22
C108	82			DTZ-82	NP082	CCT0-820	CN0482	10TCC-Q82
C109	220		GPD X5F221K	DD-221	GP220	CCD-221	GP322	10TS-T22
C110	2		NPO-DI 2.2	DTZ-2R2	NP02P2		CN0522	10TCC-V22
C111	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C112	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C113	5		NPO-DI 5.0		NP05			10TCC-V50
C114	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C115	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C116	470			CPR-470J	CD15F471J500	DM-16-471J	SX347	MS-347
C117	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C118	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C119	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C120	390		ADM-15-391	CPR-390J	CD15F391J500	DM-15-391J	SX339	MS-339
C121	47		NPO-DI 47	DTZ-47	NP047	CCT0-470	CN0447	10TCC-Q47
C122	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C123	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C124	10		NPO-DI 10	DTZ-10	NP010	CCT0-100	CN0410	10TCC-Q10
C125	470		ADM-15-471	CPR-470J	CD15F471J500	DM-16-471J	SX347	MS-347
C126	68			DTZ-68			CN0468	10TCC-Q68
C127	2		NPO-DI 2.2	DTZ-2R2	NP02P2		CN0522	10TCC-V22
C128	470		ADM-15-471	CPR-470J	CD15F471J500	DM-16-471J	SX347	MS-347
C129	68			DTZ-68			CN0468	10TCC-Q68
C130	18			TCZ-18	NP018	CCT0-180	CN0418	10TCC-Q18
C131	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C132	39			TCZ-39			CN0439	10TCC-Q39
C133	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C134	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C135	180	N150			*	*	10TCP-T18	
C136	180	N150			*	*	10TCP-T18	
C137	3	NPO-DI 3.0					10TCC-V30	
C138	220	GPD X5F221K	DD-221	GP220	CCD-221	GP322	10TS-T22	
C139	.022	TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20	
C140	.022	TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20	
C141	.022	TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20	
C142	.01	TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10	
C143	.01	TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10	
C201	.022	TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20	
C202	.047	TTP-05	CK-503	MGP05	CCD-503	TA120	TG-S20	
C205	.022	TTP-02	CK-203	MGP02	CCD-503	TA150	TGL-S50	
C206	.022	TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20	
C208	.047	TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20	
C209	.047	TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50	
C210	47	N150	CK-503	MGP05	CCD-503	TA150	TGL-S50	
C211	.001	GPD X5F102K	DM-102	GP1000	*	*	10TCP-Q47	
C212	.1	TTP-1	CK-104		CCD-102	SM210	2SS-D10	
C213	.001	GPD X5F102K	DM-102	GP1000	CCD-102	TA010	TG-P10	
C214	.01	TTP-01	CK-103	MGP01	CCD-103	SM210	2SS-D10	
C216	.047	TTP-05	CK-503	MGP05	CCD-503	TA110	TG-S10	
C217	150	GPD X5F151K	DD-151	GP150	CCD-103	TA150	TGL-S50	
C218	220	GPD X5F221K	DD-221	GP220	CCD-151	GP315	TGL-S50	
C220	.022	TTP-02	CK-203	MGP02	CCD-221	GP322	10TS-T15	
C221	.047	TTP-05	CK-503	MGP05	CCD-203	GP322	10TS-T22	
C222	.047	TTP-05	CK-503	MGP05	CCD-203	TA120	TG-S20	
C227	.047	TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50	
C228	.01	TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50	
C229	.01	TTP-01	CK-103	MGP01	CCD-503	TA150	TGL-S50	
C230	180	N150	CK-103	MGP01	CCD-103	TA110	TGL-S50	
C231	.01	TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10	
C232	330	GPD X5F331K	DD-331	GP330	*	*	10TCP-T18	
C233	12		TCZ-12		CCD-103	TA110	TG-S10	
C234	47	NPO-DI 47	DTZ-47	NP012	CCD-331	GP333	10TS-T33	
C235	.01	TTP-01	CK-103	NP047	CCT0-120	CN0412	10TCC-Q12	
C236	.001	GPD X5F102K	DM-102	MGP01	CCT0-470	CN0447	10TCC-Q47	
C237	.01	TTP-01	CK-103	GP1000	CCD-103	TA110	TG-S10	
C238	82	N150	CK-103	MGP01	CCD-102	SM210	TG-S10	
C239	220	ADM-15-221	CPR-220J		CCD-103	TA110	2SS-D10	
C240	150	ADM-15-151	CPR-150J		*	*	TG-S10	
C241	12		TCZ-12		DM-15-221J	SX322	10TCP-Q82	
C242	150	GPD X5F151K	DD-151	NP012	DM-15-151J	SX315	MS-322	
C243	10	NPO-DI 10	DTZ-10	GP150			MS-315	
C245	.01	TTP-01	CK-103	NP010	CCD-151	GP315	10TS-T15	
C246	.01	TTP-01	CK-103	MGP01	CCT0-100	CN0410	10TCC-Q10	
C247	.01	TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10	
C248	.01	TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10	
C249	.001	GPD X5F102K	DM-102	MGP01	CCD-103	TA110	TG-S10	
				GP1000	CCD-102	SM210	2SS-D10	

PARTS LIST AND DESCRIPTION (CONTINUED)

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

CAPACITORS (cont)

			REPLACEMENT DATA					
ITEM No.	RATING	REMARKS	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C302	47 N150					*	*	10TCP-Q47

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

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.
RV301	Volume/Power Switch	10K	1003-19	F2-10K (1), SPU304, KR-8FR	NP-10K-Z (1), UPP-B-400, PPAP, NWG-18	B13-116, SK7(1), or [BU2 (1), CF61, SS20,K]*	P14A, 3038 (1), FPP1, SL250
RV302	Squelch/Switch	10K	1003-19	F2-10K (1), SPU304, KR-8FR	NP-10K-Z (1), UPP-B-400, PPAP, NWG-18	B13-116, SK7(1), or [BU2 (1), CF61, SS20,K]*	P14A, 3038 (1), FPP1, SL250
VR201	Squelch Range	20K		T-20K (2) or TSV-25K (2)		X201R253B (2)	MTC24L1 (2)
VR203	Modulation Adjust	50K		TSV-50K (2) or T-50K (2)		X201R503B (2)	MTC54L1 (2)

* "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.
FL101	Interstage IF	1001-41 (1)			
L1	VHF Antenna Matching	1003-03			
L2	VHF RF	1003-04			
L3	Tripler	1003-05			
L4	VHF Rec. Oscillator	1003-06			
L5	RF Choke	1003-07			
L6	RF Choke	1003-08	19214	4610	T859
L101	Synthesizer Oscillator	1001-34			
L102	RF Choke			74F186AP	T811
L201	RF Choke	1001-39	19210	4604	T856
L202	RF Choke	1001-39	19210	4604	T856
L203	Final	1001-35			
L204	Pi Network	1001-36			
T1	IF Input	1003-09			
T2	Discriminator (Pri)	1003-10			
T3	Discriminator (Sec)	1003-11			
T101	Antenna Matching	1001-28			
T102	RF (Pri)	1001-29			
T103	RF (Sec)	1001-29			
T104	Input IF	1001-30			
T105	Interstage IF	1001-30			
T106	Interstage IF	1001-31		8517	
T107	Xmtr Buffer	1001-32			
T108	Xmtr Buffer Input	1001-32			
T201	Output IF	1001-33		8518	
T202	Xmtr Buffer Output	1001-32			
T203	Xmtr Driver	1001-34			
T301	TVI	1001-37			

(1) Includes Mechanical Filter.

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.	
L301	440ma	.6	3.5mh	1001-40				

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.	
T204	3.3	1 CT		1001-42				

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA				NOTES
	PRI.	SEC.1	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T205	32	8	1001-43				
		SEC.2					
		.5DC Resistance					

COURIER MODEL CHIEF 23

PARTS LIST AND DESCRIPTION (CONTINUED)

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

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFR. PART No.	QUAM PART No.	
SP1	3" x 5" PM, 8 ohms	1001-49	35A05Z8	

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			AGC-2	HDJ	312-002	150145		

MICROPHONE

MICROPHONE

ITEM No.	REPLACEMENT DATA			REMARKS
	MFR. PART No.	RCA REPLACEMENT	RCA STEP UP REPLACEMENT	
M1	1001-47	HK-107		

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
FL1	Filter, Ceramic	1003-12	10.7MC
FL2	Filter, Ceramic	1003-12	10.7MC
FL3	Filter, Ceramic	1003-12	10.7MC
RL201	Relay		
Y1	Crystal	9CR3760/1001-14	37.600MC
Y2	Crystal	9CR3765/1001-15	37.650MC
Y3	Crystal	9CR3770/1001-16	37.700MC
Y4	Crystal	9CR3775/1001-17	37.750MC
Y5	Crystal	9CR3780/1001-18	37.800MC
Y7	Crystal	9CR3785/1001-19	37.850MC
Y8	Crystal	9CR140/1001-20	10.140MC
Y9	Crystal	9CR160/1001-21	10.160MC
Y10	Crystal	9CR170/1001-22	10.170MC
Y11	Crystal	9CR180/1001-23	10.180MC
Y12	Crystal	9CR595/1001-24	10.595MC
Y13	Crystal	9CR615/1001-25	10.615MC
Y14	Crystal	9CR625/1001-26	10.625MC
S1	Switch, PA-CB	1001-52	10.635MC
S2	Switch, Tune-Crystal	1003-22	
S3	Switch, VHF-CB	1003-23	

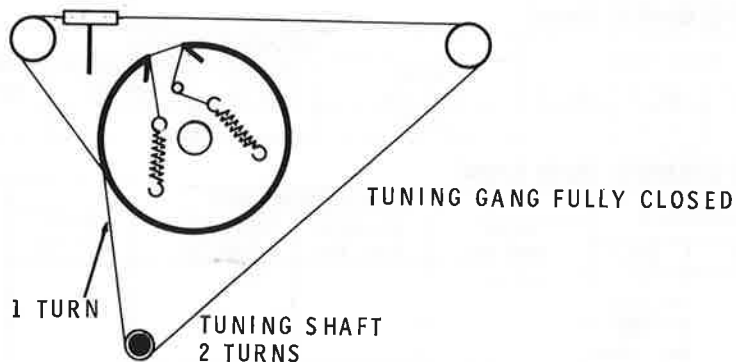
CABINETS & CABINET PARTS (When ordering specify model, chassis & color)

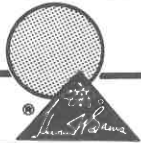
ITEM	PART No.	ITEM	PART No.
Cabinet, Top	1001-78	Knob, Selector	1001-62
Cabinet, Bottom	1001-79	Knob, Volume, Squelch, VHF	1001-63

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.)

DIAL CORD STRINGING - FRONT VIEW





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 DYNA-COM 5a (99-32096L)

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools: A1 thru A4, A10 ... GENERAL CEMENT 8868, 9089
A5 thru A9, A11 ... GENERAL CEMENT 8606L, 9440

LAFAYETTE MODEL DYNA-COM 5a

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 Q2 (Rec. Mixer), low side of chassis. Tune to 455KC.	Any	A1,A2, A3,A4	Adjust for maximum.
High side thru .01mfd to external antenna, low side to ground. Tune to 27.075MC.	10	A5,A6, A7	Adjust for maximum.

TRANSMITTER

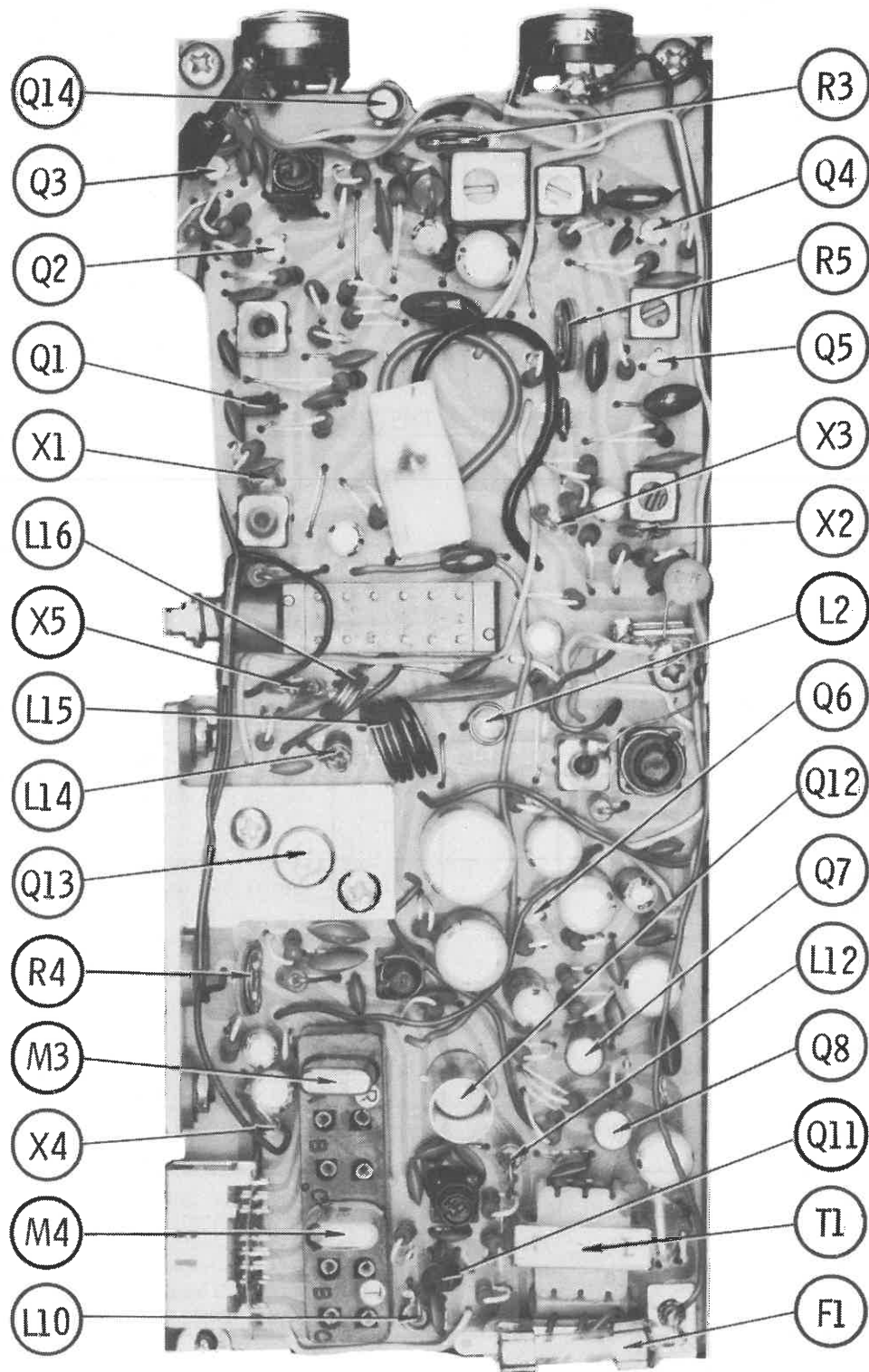
INDICATOR	ADJUST	REMARKS
RF wattmeter or field strength meter	A8,A9, A10	Adjust for maximum.
Television (Channel 2)	A11	Adjust for MINIMUM interference

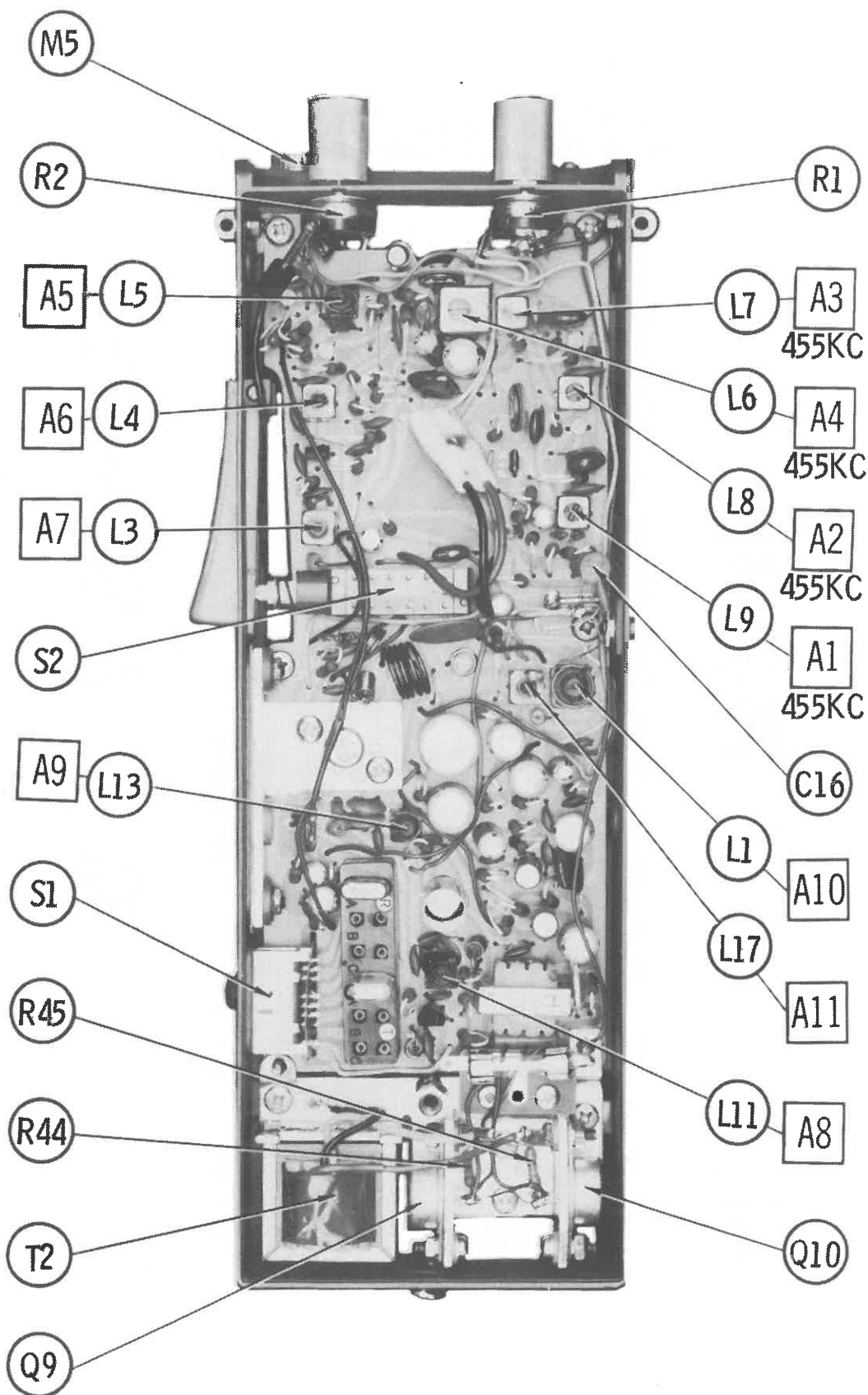
METER ADJUST

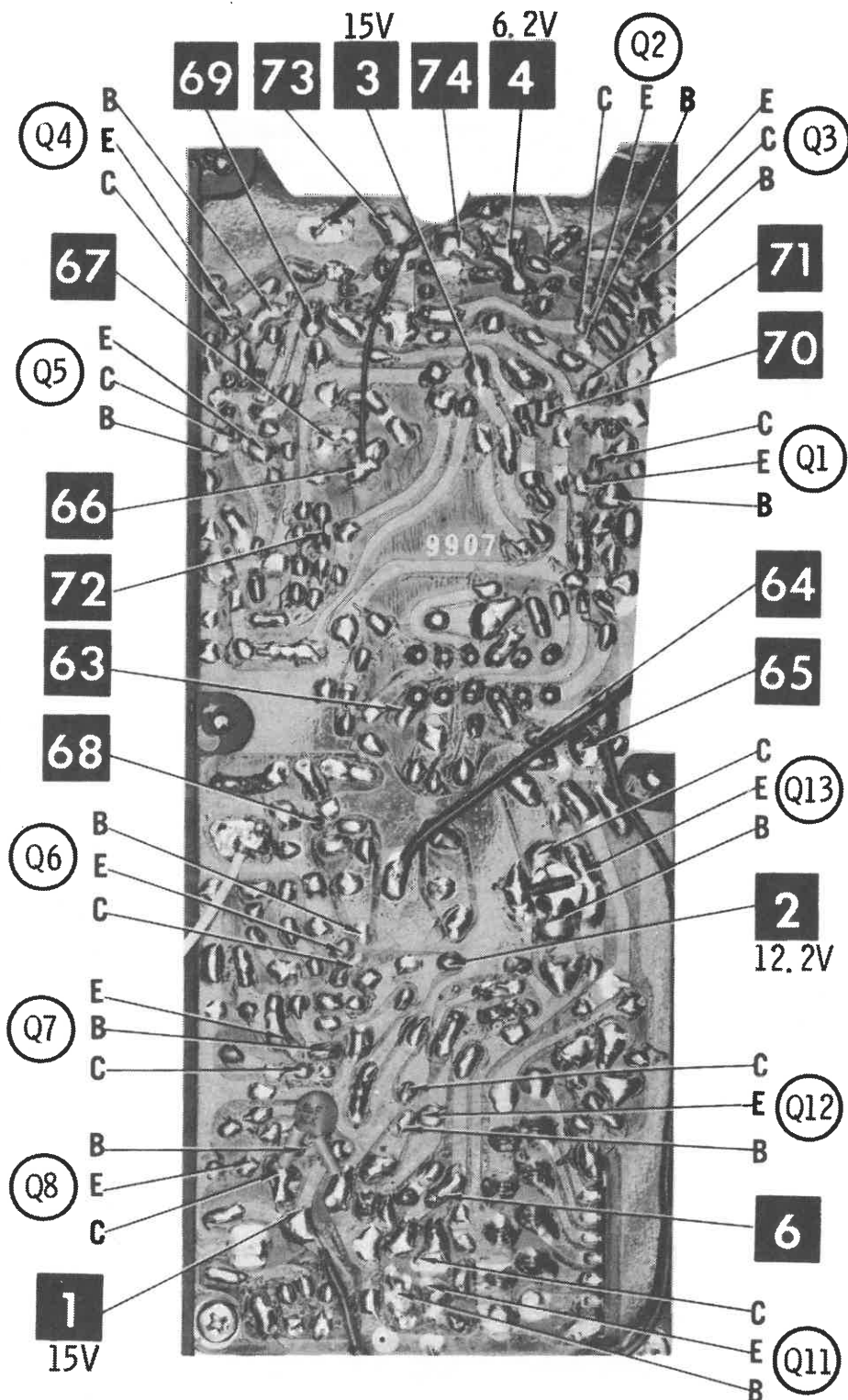
Connect unit to a 15V DC source.	R5	Adjust R5 for full scale reading at the extreme edge of green area on meter.
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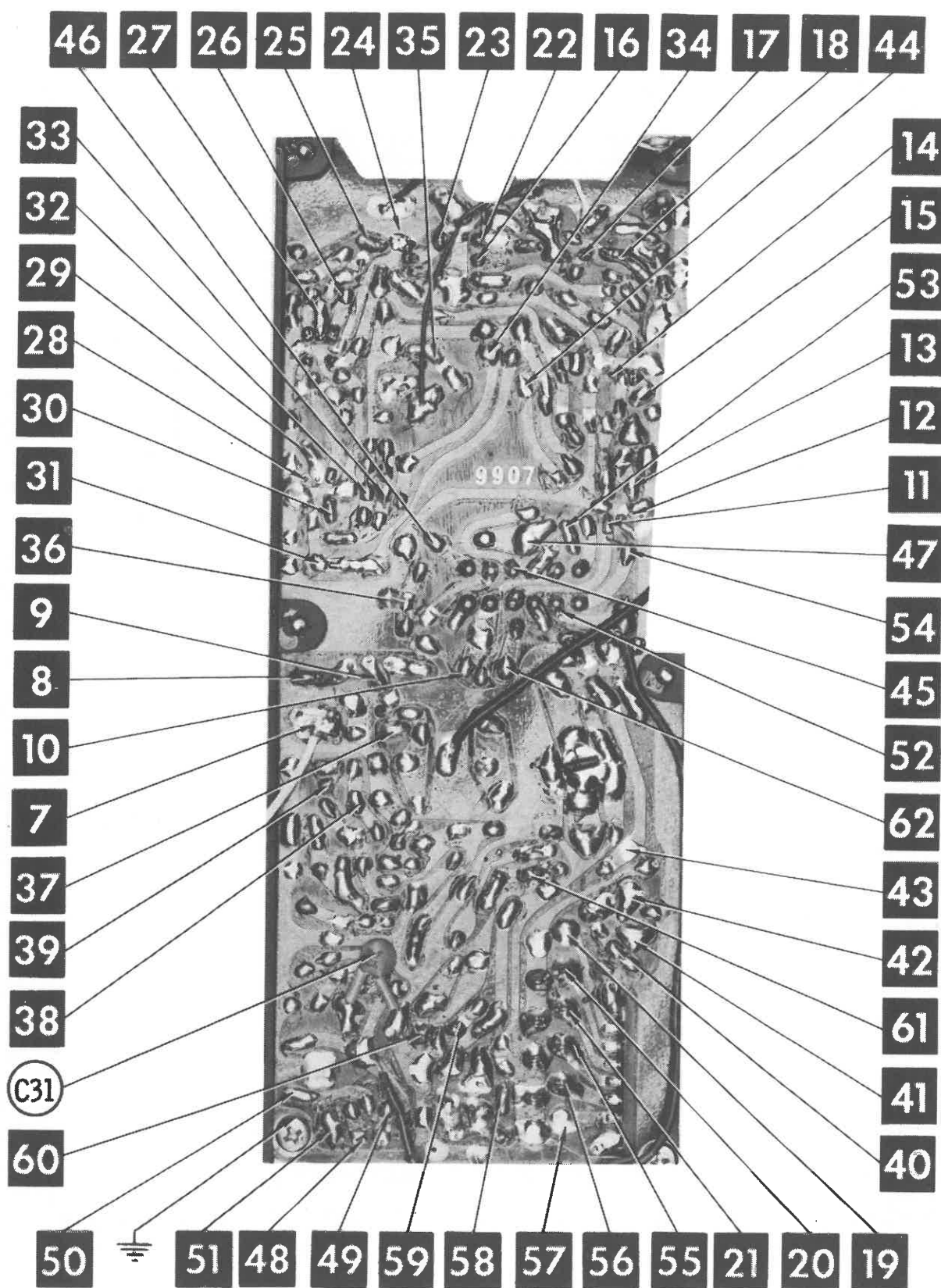
HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

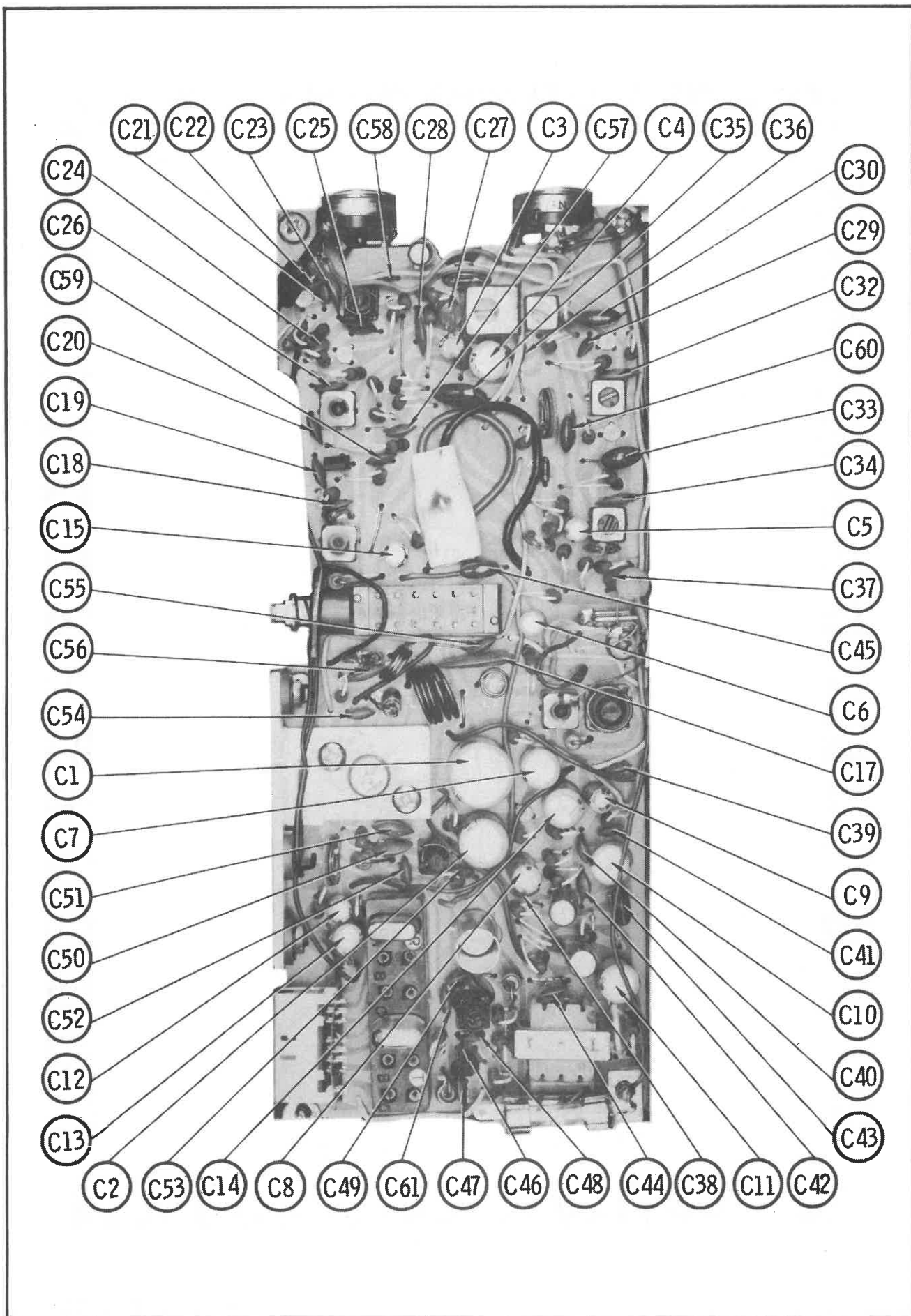
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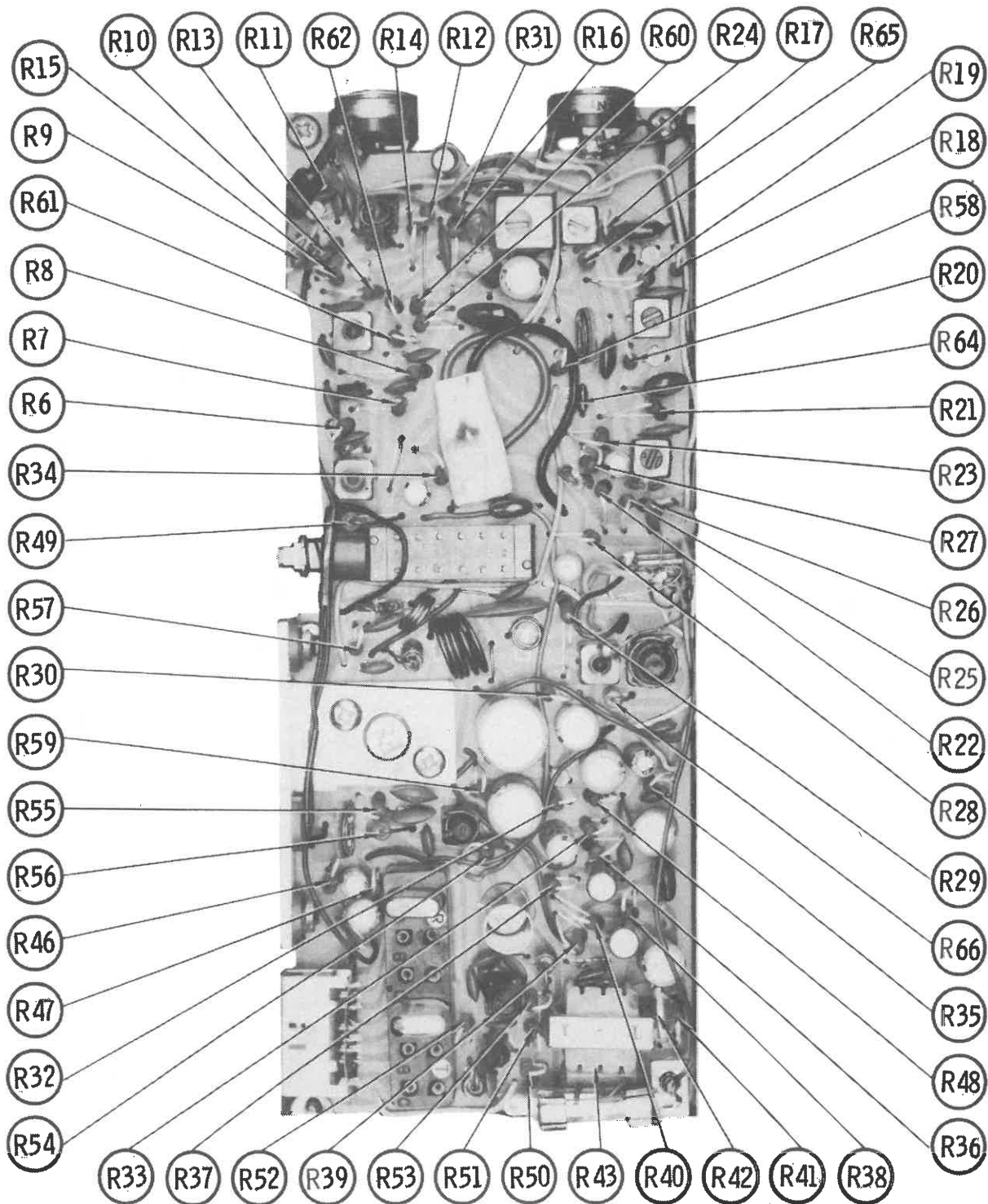


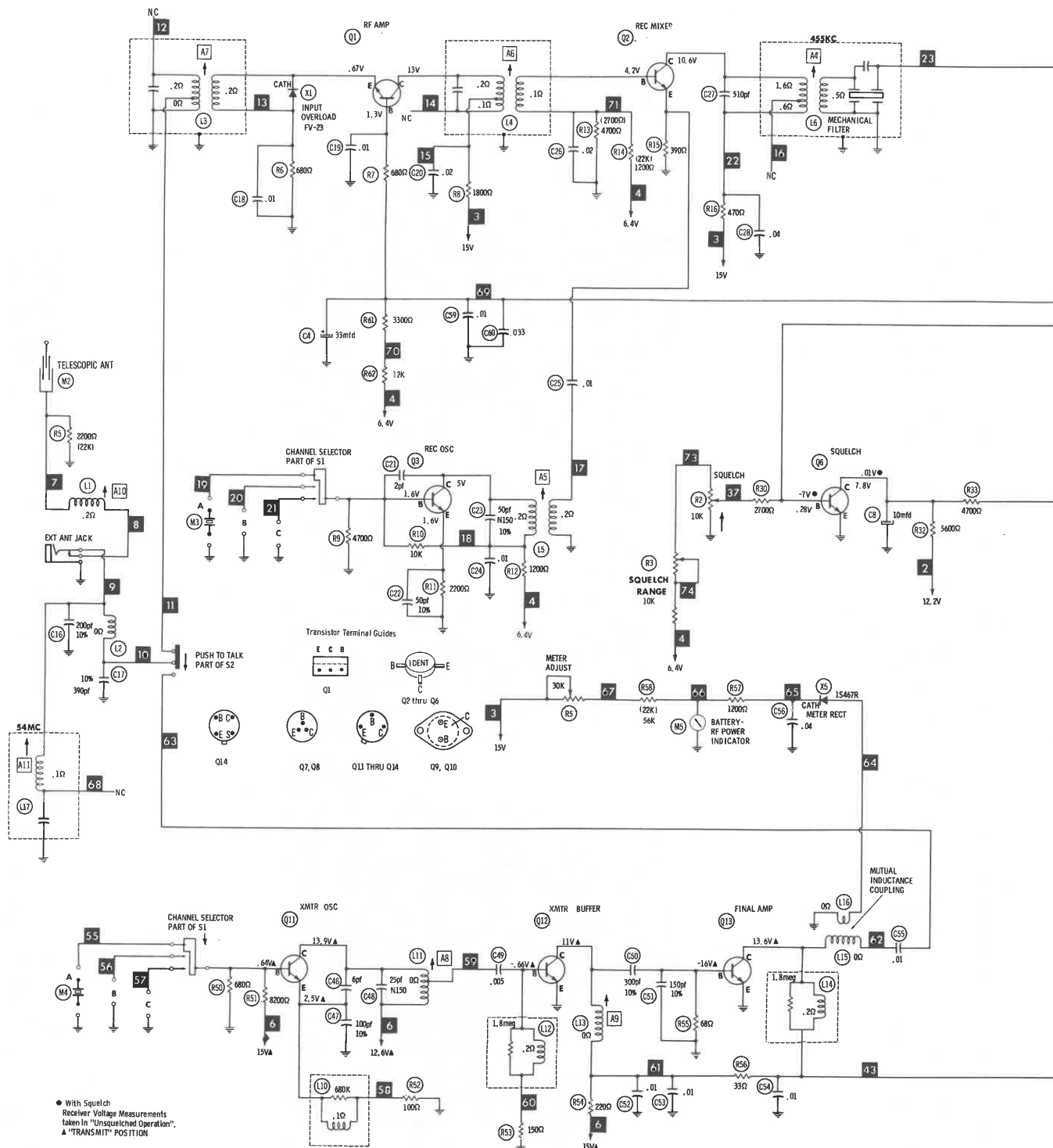












Resistors are 1/2W or less, 10% or 20%, unless otherwise indicated.
Supply voltage maintained at rated value for measurements.
Voltage and resistance measured with VTVM or equivalent meter,
no signal applied and controls adjusted for normal operation.
Controls viewed from actuator end. Arrow indicates clockwise rotation.
Numbers assigned to terminals may not be found on the unit.
Transistor resistances vary widely. No resistance measurements taken.

A PHOTOFACIT STANDARD NOTATION SCHEMATIC

with **CircuitTrac**

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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	2SC460 (2SC-F14)	RF Amp	1373-17	GE-11	1RTR-51	HEP53	SK3018	ECG 107
Q2	2SC184 (2SC-F11)	Rec. Mixer	1881-17	GE-20	TR-21	HEP56	SK3018	ECG 108
Q3	2SC183 (2SC-F11)	Rec. Oscillator	1880-17	GE-20	TR-22	HEP56	SK3020	ECG 108
Q4	2SC183 (2SC-F11)	1st IF Amp	1880-17	GE-20	TR-22	HEP56	SK3020	ECG 108
Q5	2SC183 (2SC-F11)	2nd IF Amp	1880-17	GE-20	TR-22	HEP56	SK3020	ECG 108
Q6	2SC183 (2SC-F11)	Squelch	1880-17	GE-20	TR-22	HEP56	SK3020	ECG 108
Q7	2SD77B (2SD-F1)	AF Amp		GE-8	TR-08	HEP641	SK3010	ECG 103
Q8	2SD37 (2SD-F1)	Driver	1349-17 1347-17	GE-2	TR-05	HEP250	SK3004	ECG 102
Q9	2SB466	Output-Modulator		GE-16	TR-01	HEP642	SK3009	ECG 131
Q10	2SB466	Output-Modulator		GE-16	TR-01	HEP642	SK3009	ECG 131
Q11	2SC315 (2SC-815)	Xmtr. Oscillator		GE-17	TR-21	HEP736	SK3046	ECG 123
Q12	2SC775	Xmtr. Buffer		GE-17	TR-22	HEPS3001	SK3047	ECG 128
Q13	2SCF8	Final Amp				HEPS3001	SK3048	ECG 128
Q14	FV-22	Voltage Regulator						

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	FV-23	1N34AS	1N34A	1N34A	ECG 109	
X2	1S446	1N34AS	1N34A	1N34A	ECG 109	
X3	1S446	1N34AS	1N34A	1N34A	ECG 109	
X4	1S446	1N34AS	1N34A	1N34A	ECG 109	
X5	1S467R	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	330 16V	1725-12						
C2	100 16V	1760-12						
C3	4.7 25V	1762-12	MCD-50	EP15-100	WBR10-16	MT1-19	MTA100E15	TE-1162
C4	33 16V	1766-12	MCD-110	EP30-5	PC5-100	MT1-3	MTA5D50	TE-1202
C5	10 10V	1768-12	MCD-70		PC30-35	MT1-13.5	MTV30CB25	TE-1158
C6	3.3 35V	1763-12	MCD-40	EP15-10	WBR10-25	MT1-5	MTA10D35	TE-1128
C7	33 16V	1766-12	MCD-110		PC5-100	MT1-3	MTA3D50	TE-1302
C8	10 25V	1768-12	MCD-70	EP30-10	PC30-35	MT1-13.5	MTV30CB25	TE-1158
C9	1 50V	1765-12	MCD-10		WBR10-25	MT1-5	MTA10D35	TE-1204
C10	33 16V	1766-12	MCD-110		AL1-50	MT1-1	MTV1CB50	TE-1300
C11	33 16V	1766-12	MCD-110		PC30-35	MT1-13.5	MTV30CB25	TE-1158
C13	1 50V	1765-12	MCD-10		AL1-50	MT1-1	MTV1CB50	TE-1300
C13	10 25V	1768-12	MCD-70	EP30-10	WBR10-25	MT1-5	MTA10D35	TE-1204
C14	33 16V	1766-12	MCD-110		PC30-35	MT1-13.5	MTV30CB25	TE-1158

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	200		GPD X5F201K	DM-201	GP200	CCD-201	GP320	10TS-T20
C17	390		GPD X5F391K	DD-391	GP390	CCD-391	GP339	10TS-T39
C18	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C19	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C20	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C21	2		NPO-DI 2.2	DTZ-2R2	NP02P2		CN0522	10TCC-V22
C22	50		NPO-DI 50	DTZ-50	NP050	CCT0-510	CN0450	10TCC-Q50
C23	50		NPO-DI 50	DTZ-50	NP050	CCT0-510	CN0450	10TCC-Q50
C24	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C25	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C26	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C27	510		TTP-02	CPR-510J		DM-16-511J	SX351	MS-351
C28	.04			DD-403			GP140	
C29	5							
C30	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C31	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C32	.04			DD-403			GP140	
C33	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C34	.04			DD-403			GP140	
C35	.082							
C36	.02	#1769-12	TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C37	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20

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.
C38	.001	#1773-12	GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C39	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C40	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C41	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C42	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C43	.056							
C44	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C45	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C46	6							10TCC-V56
C47	100		NPO-DI 100	DTZ-100	NPO100	CCO-101	CN0310	10TCC-T10
C48	25		NPO-DI 25	DTZ-25			CN0425	10TCC-Q25
C49	.005		TTP-005	CK-502	MGP005	CCD-502	TA250	TG-D50
C50	300		GPD X5F301K	DM-301	GP300	CCD-301	GP330	10TS-T30
C51	150		GPD X5F151K	DD-151	GP150	CCD-151	GP315	10TS-T15
C52	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C53	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C54	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C55	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C56	.04			DD-403			GP140	
C57	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C58	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C59	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C60	.033		TTP-03	CK-303		CCD-303	GP130	TG-S30
C61	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10

Lafayette Part Number

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.	MALLORY PART No.
R1	Volume/Switch	10K	1471-11			
R2	Squelch	10K	1472-11			
R3	Squelch Range	10K	2232-13	TSV-10K (1) or (T-10K) (1)		X201R103B (1) MTC14L1 (1)
R4	Range Boost Adjust	5000	1600-13	TSV-5K (1) or (T-5000) (1)		X201R502B (1) MTC53L1 (1)
R5	Meter Adjust	30K	1601-13	TSV-50K (1) or (T-50K) (1)		X201R503B (1) MTC54L1 (1)

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

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.
R44	28 (Cold)			R64	20K (Cold)		

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	Antenna Loading	1452-23			
L2	Pi Network	1454-23			
L3	Antenna Matching	1455-23			
L4	RF Amp				
L5	Rec. Oscillator				
L6	Input IF				
L7	Interstage IF				
L8	Interstage IF				
L9	Output IF	1457-23			
L10	RF Choke (.5uh)	1461-23 (1)	16-9033	8515	
L11	Xmtr. Oscillator	1458-23	16-9034	8515	
L12	RF Choke (6.5uh)	1462-23 (2)	16-9035	8515	
L13	Buffer	1459-23		4588 (3)	
L14	RF Choke (6.5uh)	1463-23 (2)		4610	
L15	Final Amp	1460-23		4610	
L16	Metering Takeoff				
L17	TVI Trap	1453-23			

(1) Wound on 680K Resistor.

(2) Wound on 1.8meg Resistor.

(3) Shunt with 680K Resistor.

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	
T1	2.4	1		1194-5			

LAFAYETTE MODEL DYNA-COM 5a

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.	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	625	100	1193-15				

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	2 1/2" PM 100 ohms	1077-66		

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA					
		PART No.		BUSS PART No.		LITTELFUSE PART No.	
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	WORKMAN PART No.
F1	1.5 Amp					21201.6	

BATTERIES

ITEM No.	VOLTAGE	MFGR. PART No.	REPLACEMENT DATA		NOTES
			EVEREADY	MALLORY	
M1	15V		1015 or E91 or E9	M15R or MN1500 or ZM9	12 Required.

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M2	Crystal, Receive	42-4205C	26.630MC When ordering specify by Channel. 27.075MC When ordering specify by Channel. Battery-RF Power
M3	Crystal, Xmtr.	42-4204C	
M4	Meter	1030-27	
S1	Switch, Rec.-Xmit	1185-14	
S2	Switch, Selector	1186-14	
	Antenna, Telescopic	1075-39	

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

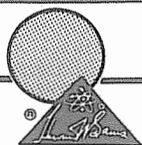
ITEM	PART No.	ITEM	PART No.
Cabinet, Top Front	3071-10	Knob - Volume	1218-18
Cabinet, Bottom Front	4971-10	Knob - Squelch	1219-18
Cabinet, Center	3072-10	Knob - Xmit	1220-18
Cabinet, Back	3073-10		

ACCESSORIES

ITEM	MFGR. PART No.	REMARKS
Battery Charger	99-3100	

WIRING DATA

General-use Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Antenna Lead	Use BELDEN No. 8214 Lowest-loss (RG-8/U Type) 8237 Low-loss (RG-8/U) 8240 (Solid) Miniature (RG-58/U) 8259 (Stranded) Miniature (RG-58A/U)
Coiled Microphone Cable	Use BELDEN No. 8499 Single-Conductor Shielded (Neoprene) 8498 Single-Conductor Shielded (Vinyl)
Ignition Noise Suppression	Use BELDEN No. 7300-Series Spark-Plug Sets
Bonding Strap	Use BELDEN No. 8661 (3/8 In.)



PHOTOFACT®

For Supplier Address See PHOTOFACT Index

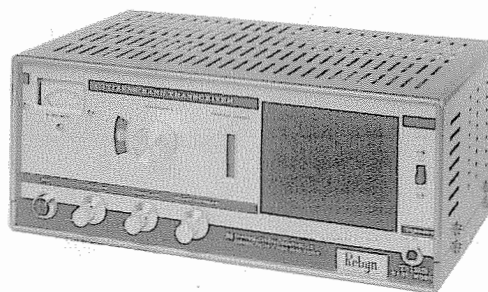
NOTE

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 T-123

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A1 thru A4, A7 thru A13, A15, A16, A19.....GENERAL CEMENT #8868, 9089
A5, A6, A14, A17, A18.....GENERAL CEMENT #8276, 8277, 8290

ROBYN MODEL T-123

RECEIVER

Connect an AC VTVM across speaker voice coil. Set Volume control fully clockwise and squelch control fully counter-clockwise. Set Band Spread at half mesh.

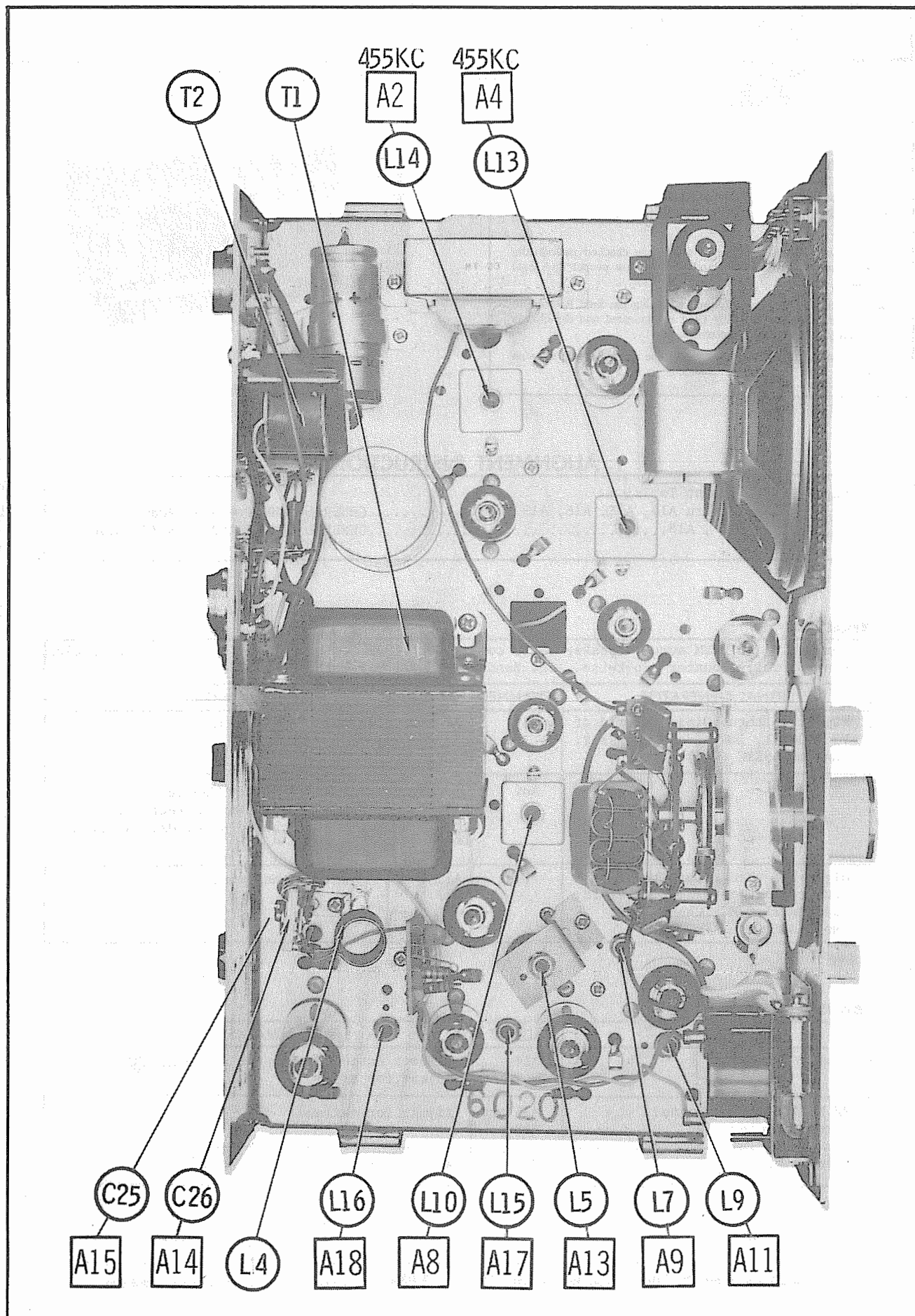
SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to grid of V3 (CONV.), low side to chassis. Tune to 455KC (Mod)	Any	A1 thru A6	Adjust for maximum.
	Any	A9 thru A11	Connect Frequency Counter to point Δ . Adjust for correct Freq. Check all channels for Osc. starting properly.
High side thru .01mfd to antenna receptacle, low side to chassis. Tune to 27.08MC (Channel 11) (Mod.)	11	A12 & A13	Adjust for maximum.

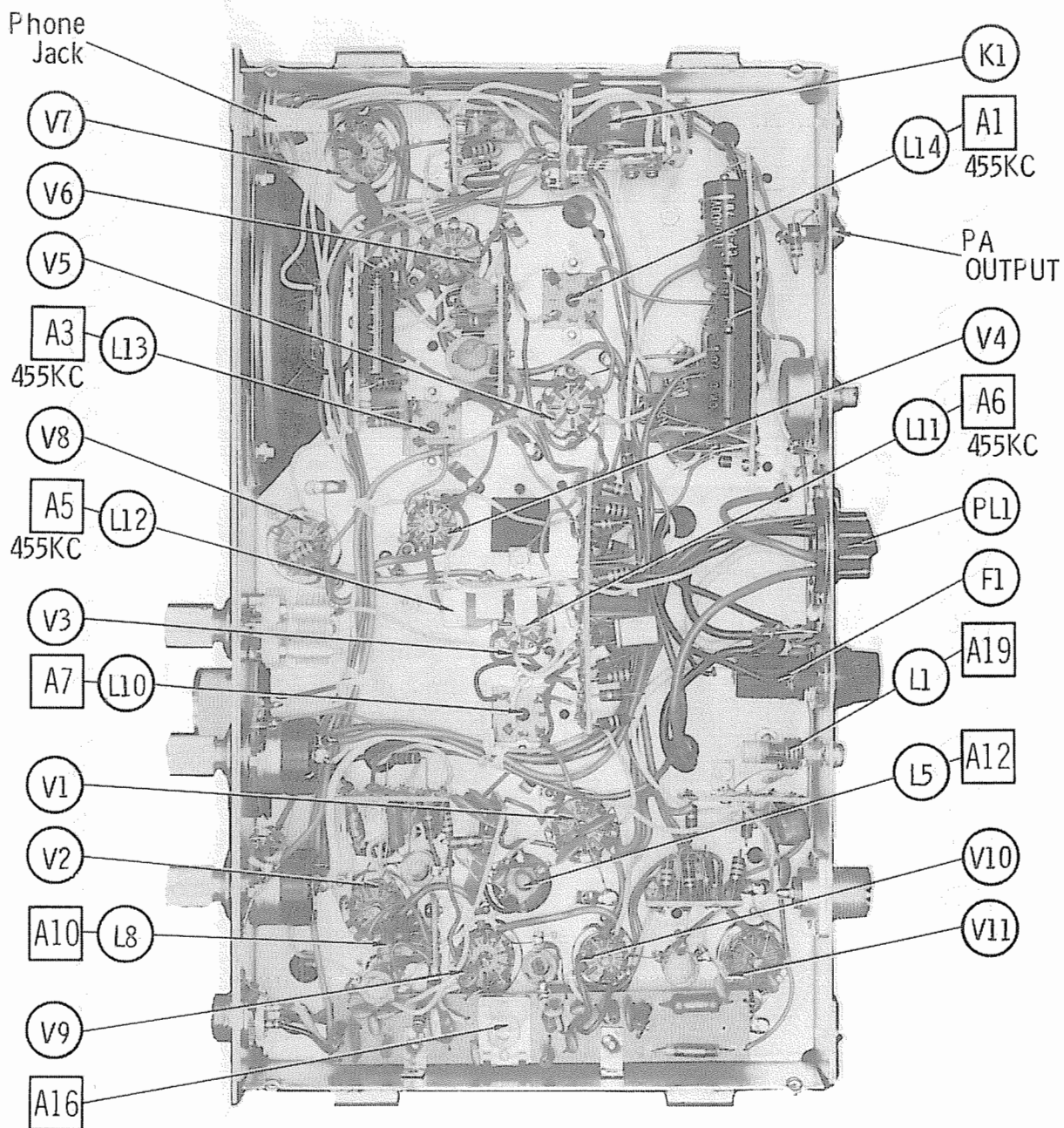
TRANSMITTER

INDICATOR	ADJUST	REMARKS
Frequency Counter	A14	Connect Frequency Counter to point Δ . Adjust for 6MC.
RF Watt Meter or Signal Strength Meter.	A15 thru A18	Adjust for maximum.
Television (Ch. 2)	A19	Adjust for MINIMUM interference.

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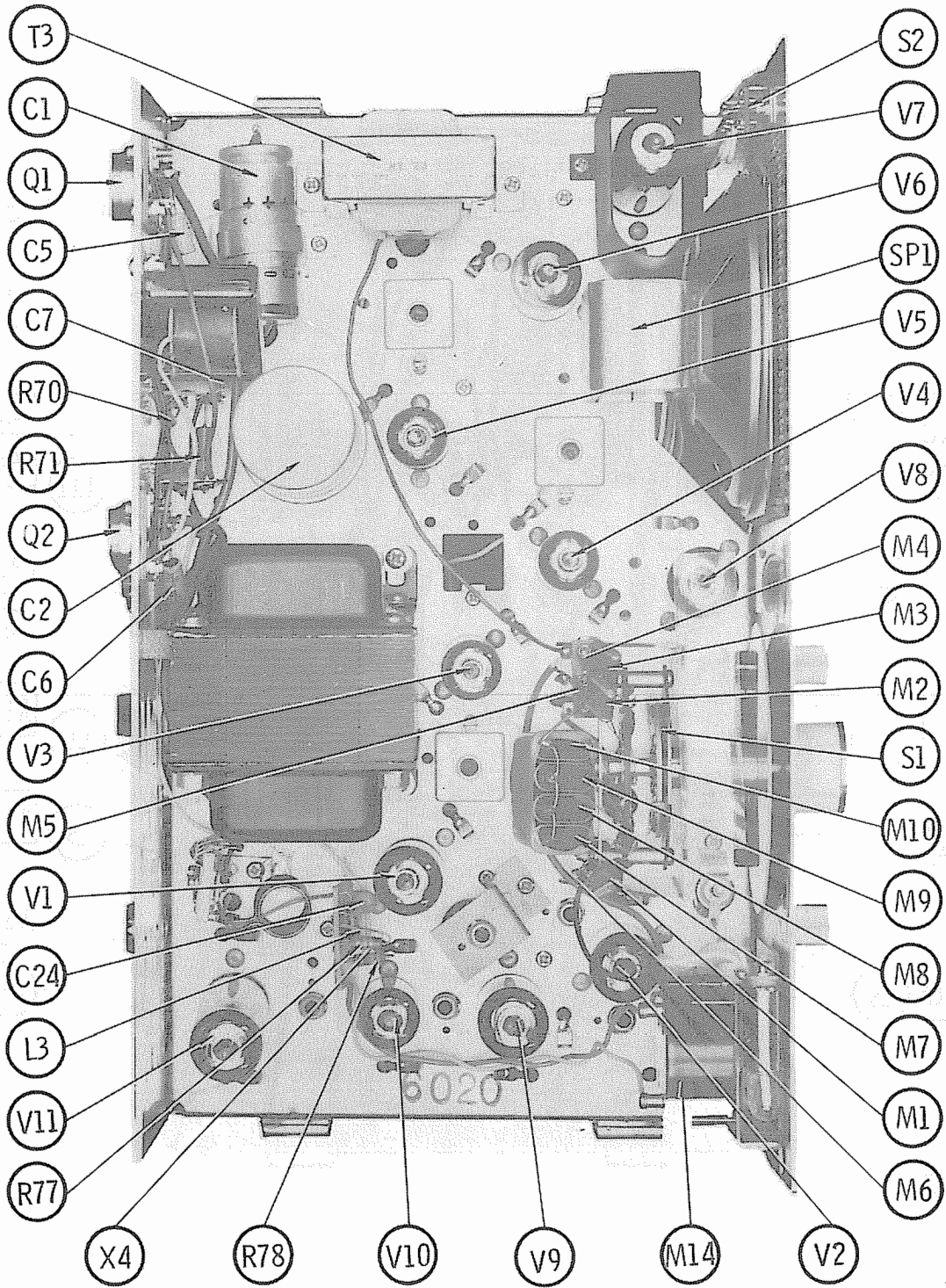
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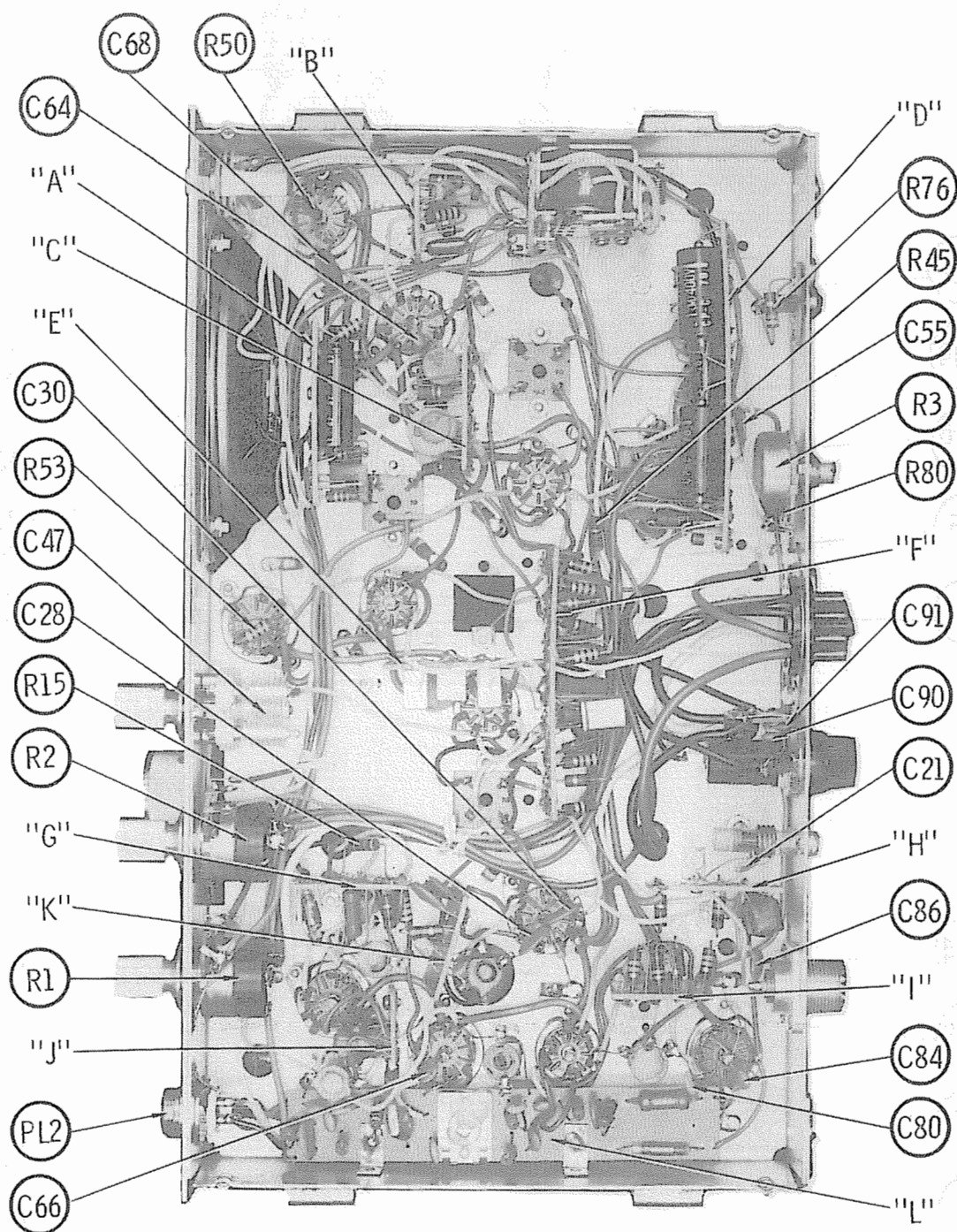


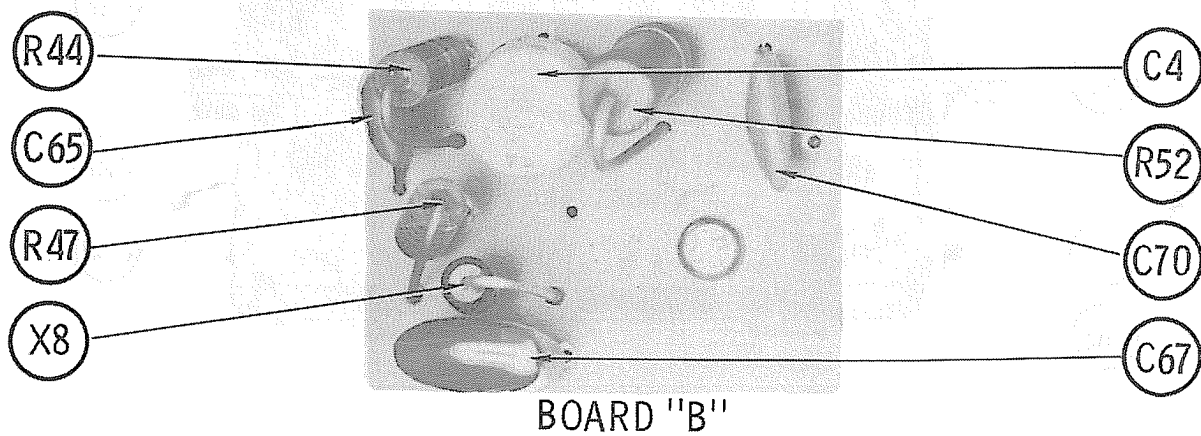
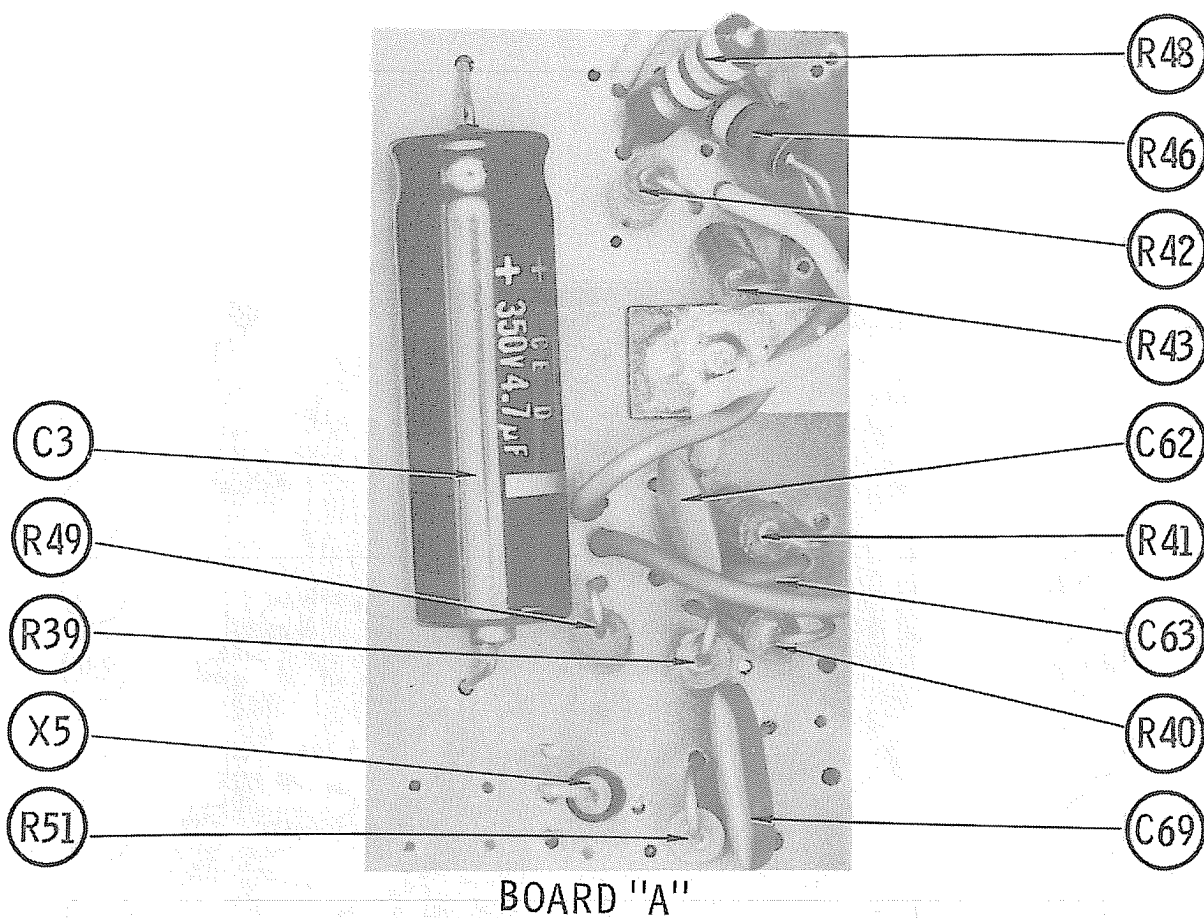


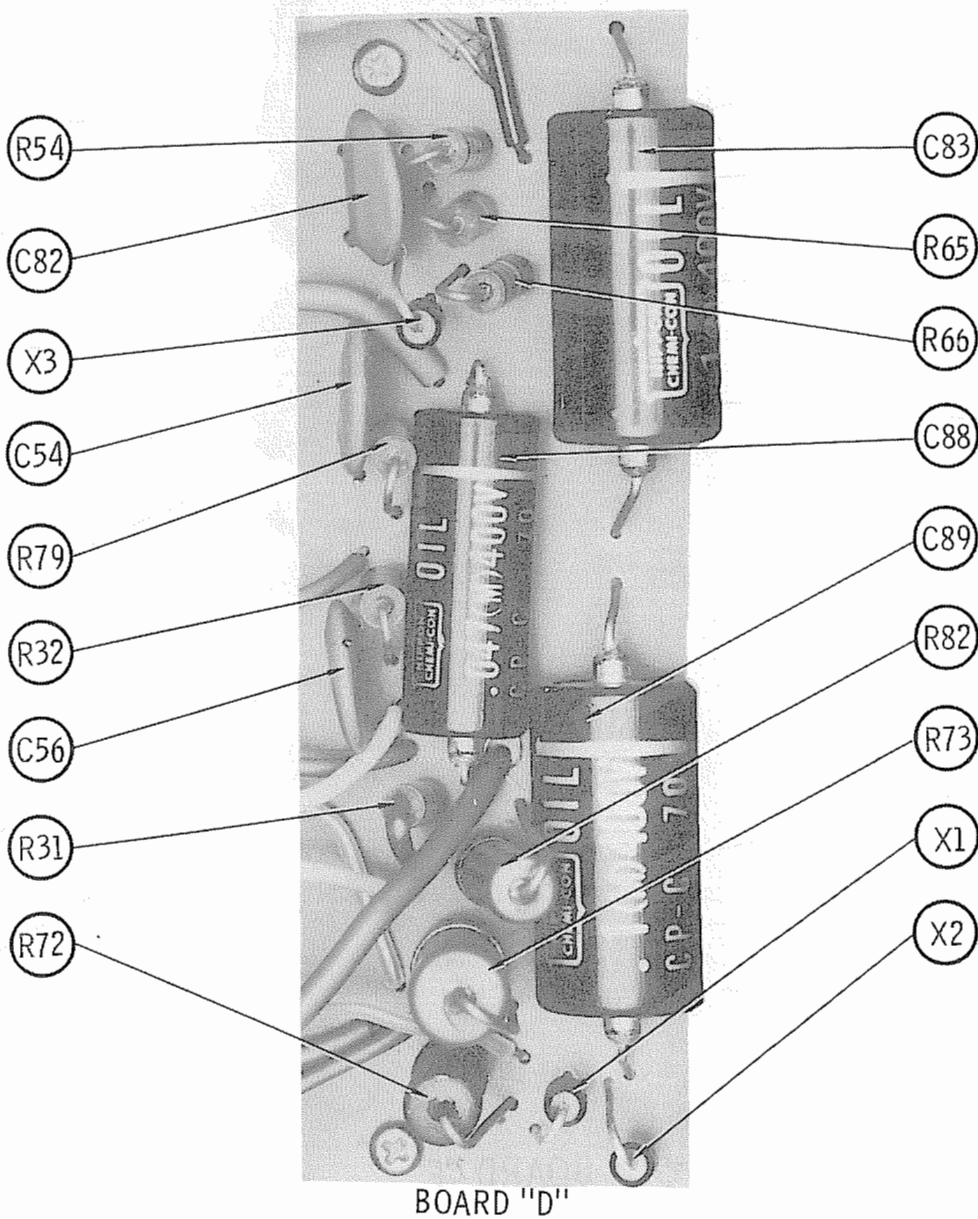
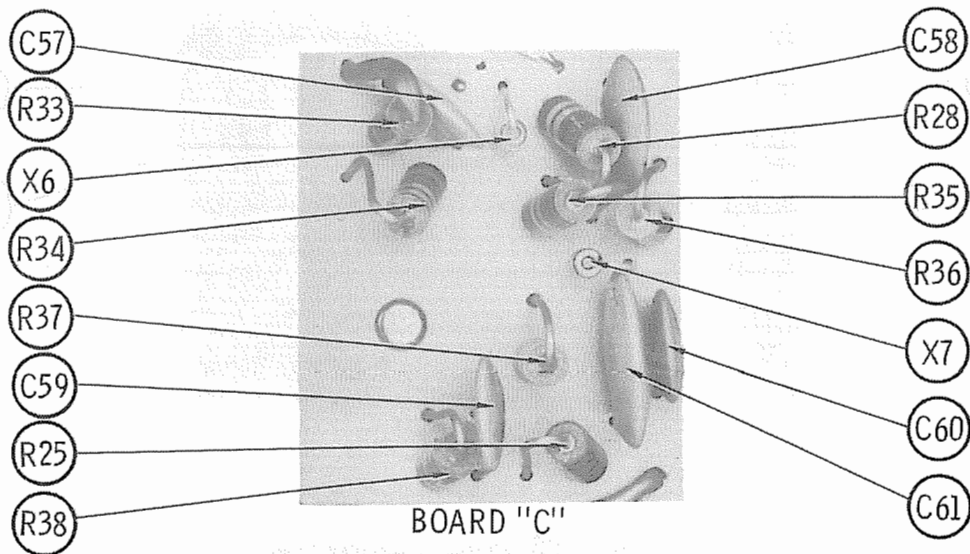
ROBYN MODEL T-123

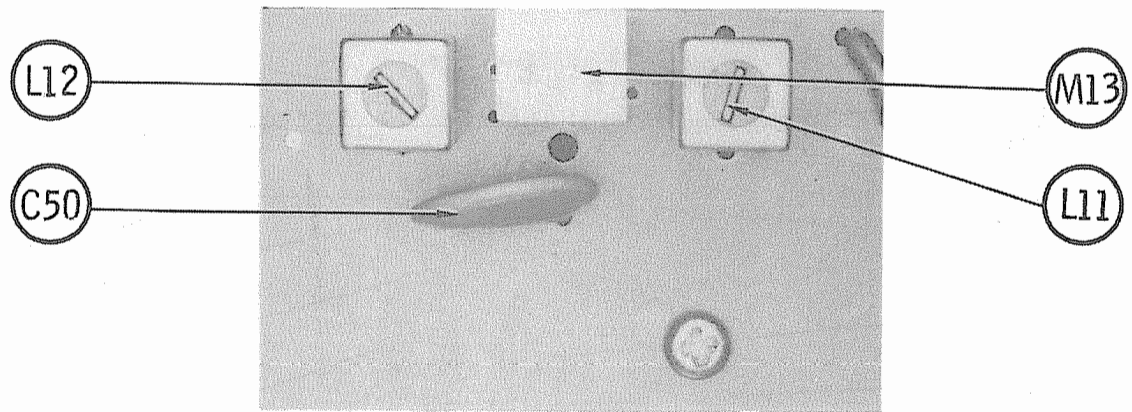
5020 10-22-84 4500



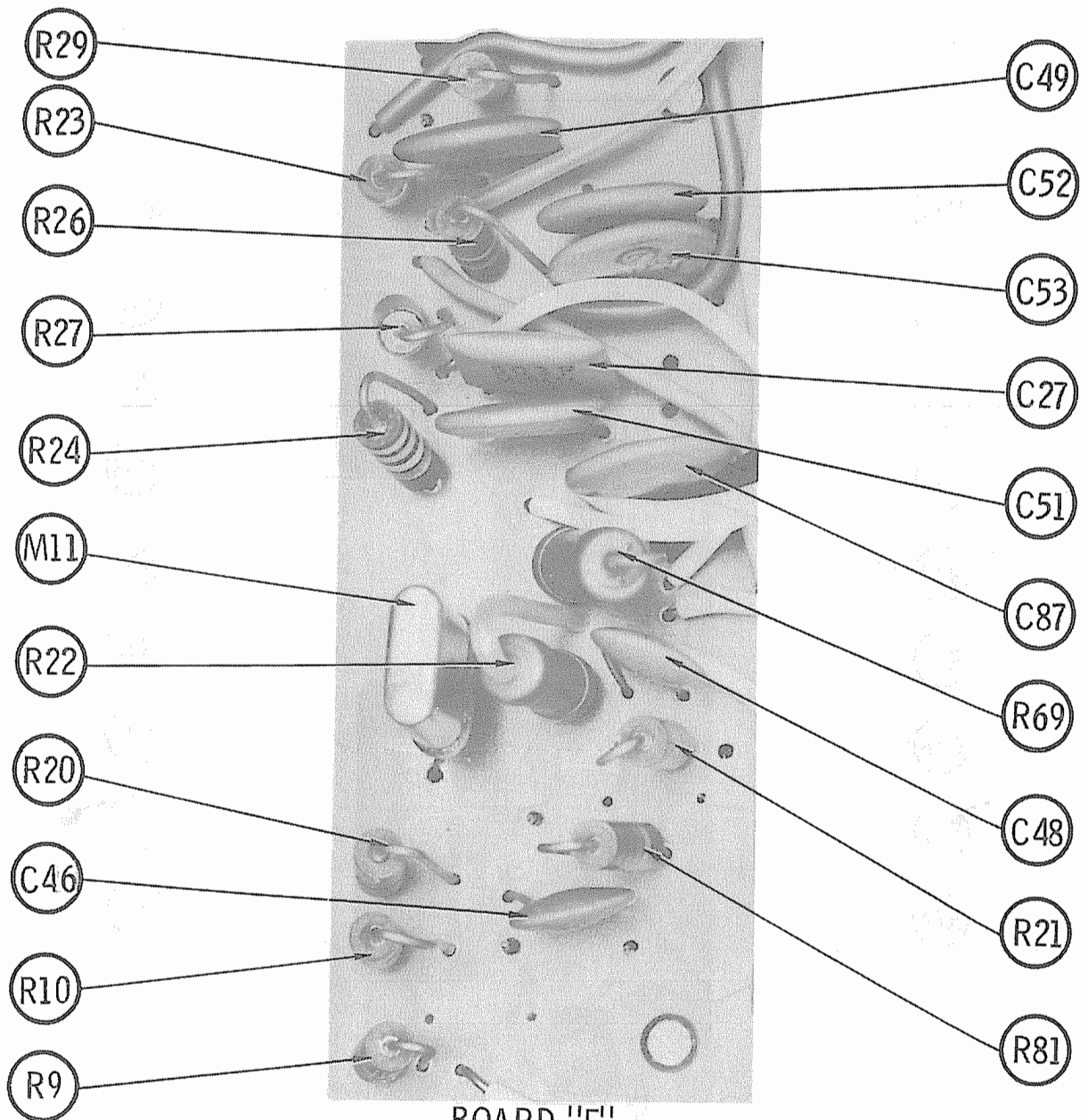




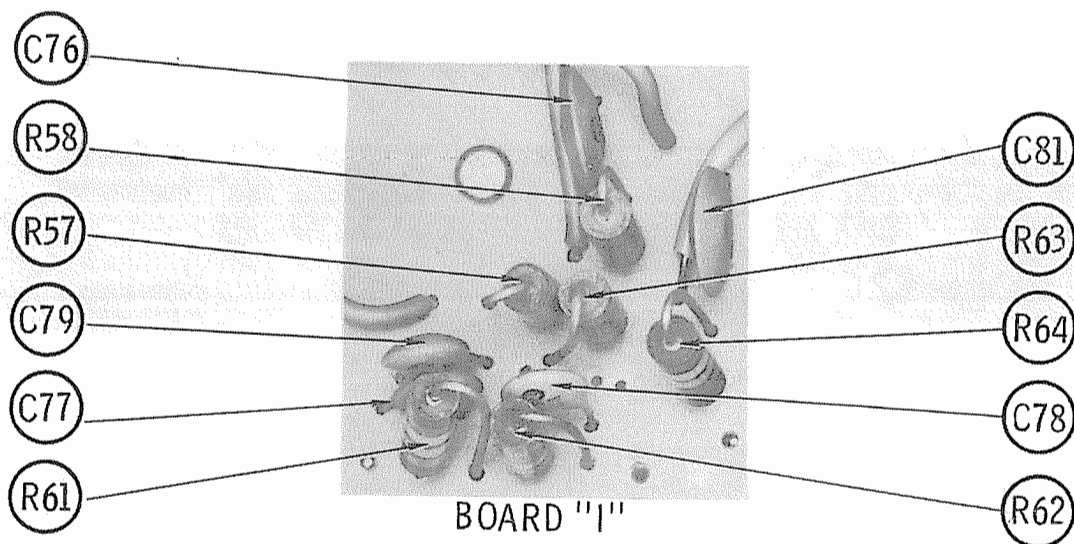
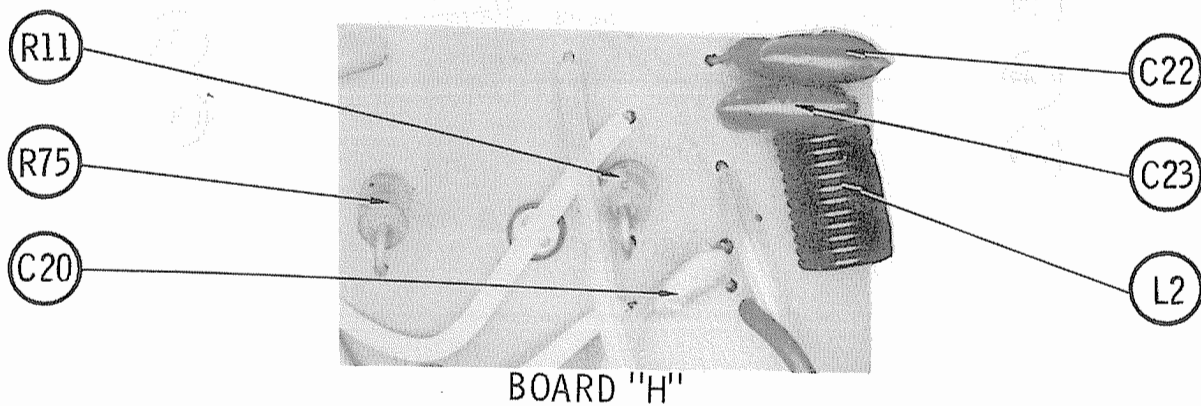
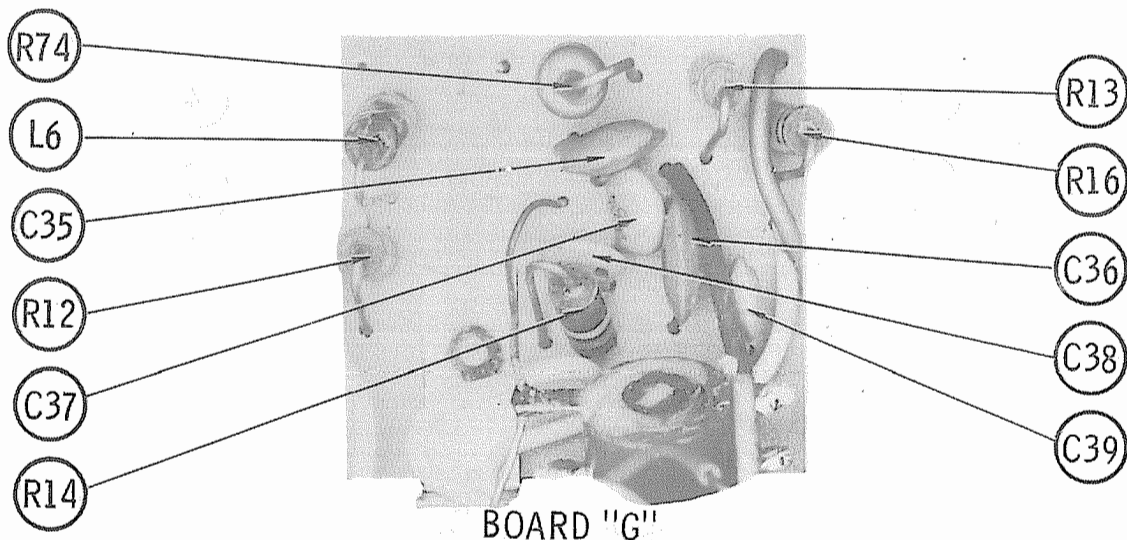


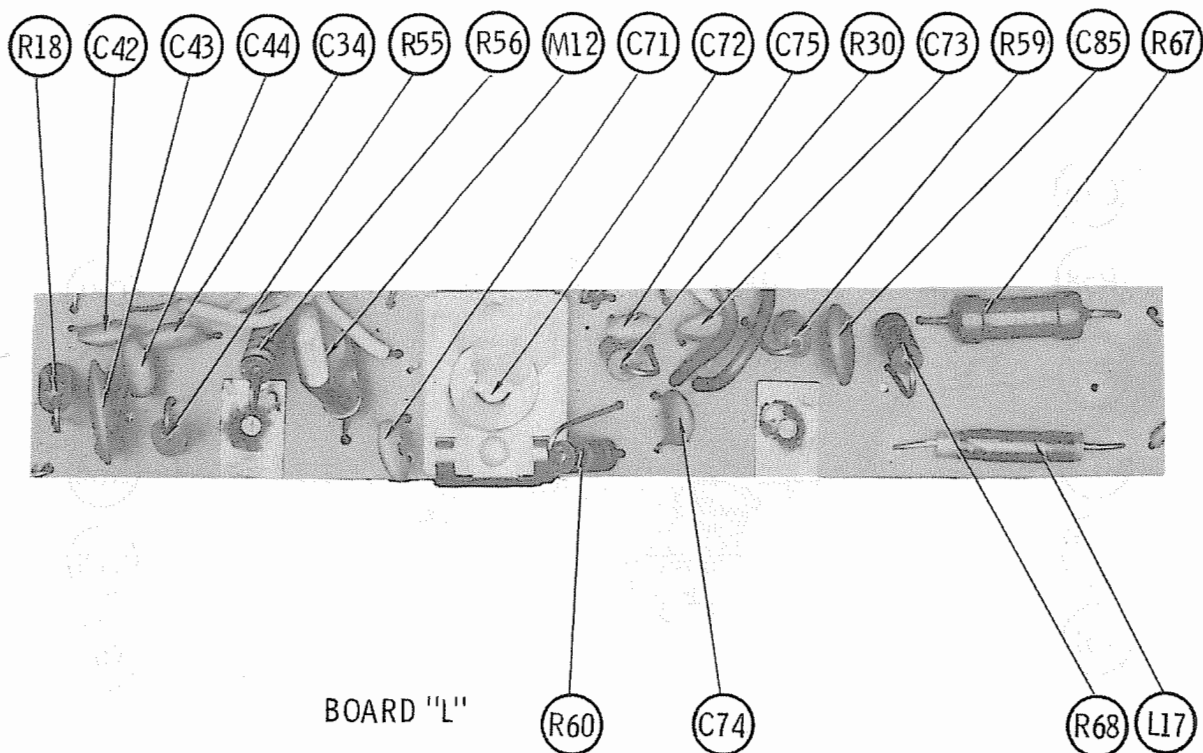
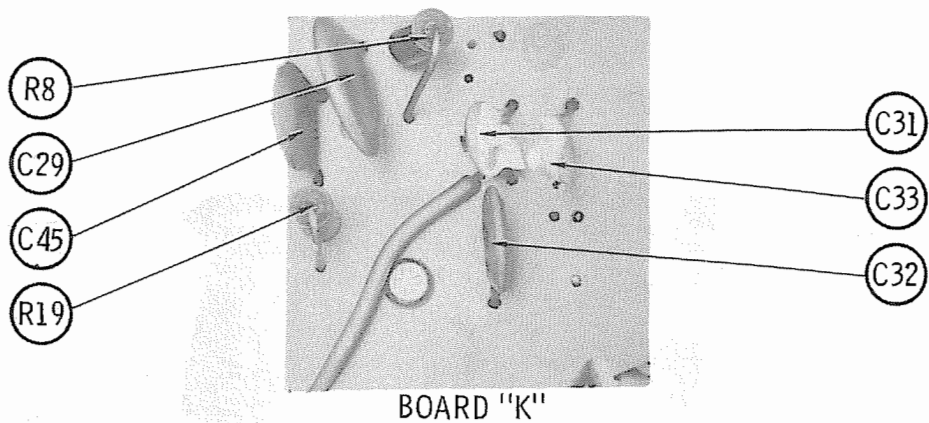
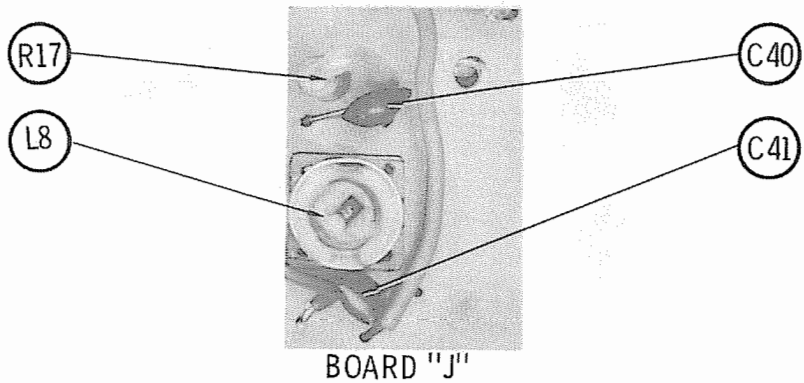


BOARD "E"



BOARD "F"





RESISTANCE MEASUREMENTS

ITEM	TUBE	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8	PIN 9
V1	6GH8	50K†	2meg	100K†	FIL	FIL	2000Ω†	100Ω	1000Ω	.5Ω
V2	6GH8	2000Ω†	100K	46K†	FIL	FIL	26K†	0Ω	0Ω	120K
V3	12BE6	15K	220Ω	FIL	FIL	70K†	35K†	1Ω		
V4	12BA6	1.6meg	100Ω	FIL	FIL	3K†	33K†	100Ω		
V5	12BA6	1meg	470Ω	FIL	FIL	3200Ω†	320K†	470Ω		
V6	12AX7	100K†	2meg	0Ω	FIL	FIL	500K†	6.5meg	0Ω	NC
V7	6BQ5/ EL84	500K	500K	130Ω	FIL	FIL	NC	170Ω†	NC	10K†
V8	6R-E13	600K	0Ω	1100ΩΔ	FIL	FIL	NC	5megΔ	NC	NC
V9	6GH8	75KΔ	100K	75KΔ	FIL	FIL	2000ΩΔ	0Ω	0Ω	55K
V10	6AU6	78K	150Ω	FIL	FIL	2000ΩΔ	33KΔ	150Ω		
V11	6BQ5/ EL84	2.4meg	2.4meg	0Ω	FIL	FIL	NC	470ΩΔ	NC	10KΔ
ITEM	TUBE	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8	PIN 9

† Measured from X1 Output.

Δ Measured in Xmit position from X1 Output

PARTS LIST AND DESCRIPTION

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

TUBES

AMPEREX			GENERAL ELECTRIC			RCA			SYLVANIA		
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V1	RF Amp - Mixer	6GH8A	V7	Output - Modulator	6BQ5/EL84						
V2	Synthesizer Osc. - Rec. Osc.	6GH8A	V8	Modulation	6R-E13						
V3	Converter	12BE6	V9	Xmtr. Osc. - Xmtr. Mixer	6GH8A						
V4	1st IF Amp	12BA6	V10	Xmtr. Driver	6AU6						
V5	2nd IF Amp	12BA6	V11	Final Amp	6BQ5/EL84						
V6	Microphone Preamp-AF Amp	12AX7									

TRANSISTORS

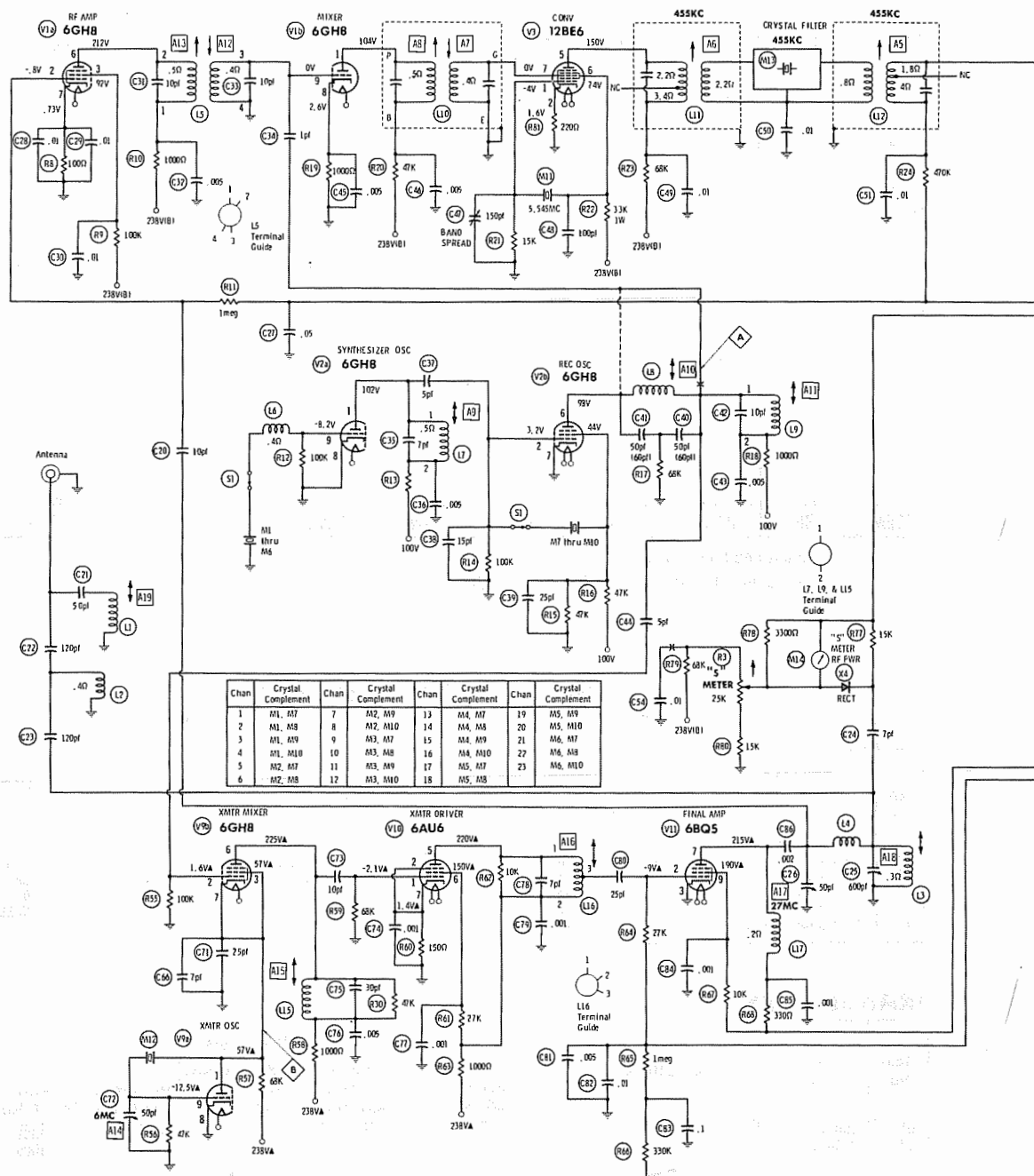
ITEM No.	TYPE No.	FUNCTION	REPLACEMENT DATA					
			MFGR. PART No.	GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MOTOROLA PART No.	RCA PART No.	SYLVANIA PART No.
Q1	2SB407	Oscillator		GE-3	TR-01	HEP230	SK3009	ECG 104
Q2	2SB407	Oscillator		GE-3	TR-01	HEP230	SK3009	ECG 104

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	1R0F (SM150A)	GE-504A	8D6 or 5A6D	SK3017A or SK3032	ECG 116 or ECG 117	
X2	1R0F (SM150A)	GE-504A	8D6 or 5A6D	SK3017A or SK3032	ECG 116 or ECG 117	
X3	1R0F (SM150A)	GE-504A	8D6 or 5A6D	SK3017A or SK3032	ECG 116 or ECG 117	
X4	1N60	1N60	1N60	1N60	ECG 109	
X5	1R0E (SM150A)	GE-504A	8D6 or 5A6D	SK3017A or SK3032	ECG 177	
X6	1N60	1N60	1N60	1N60	ECG 109	
X7	1S3585 (1N60)	1N60	1N60	1N60	ECG 109	
X8	1R0F	GE-504A	8D6 or 5A6D	SK3017A or SK3032	ECG 116 or ECG 117	

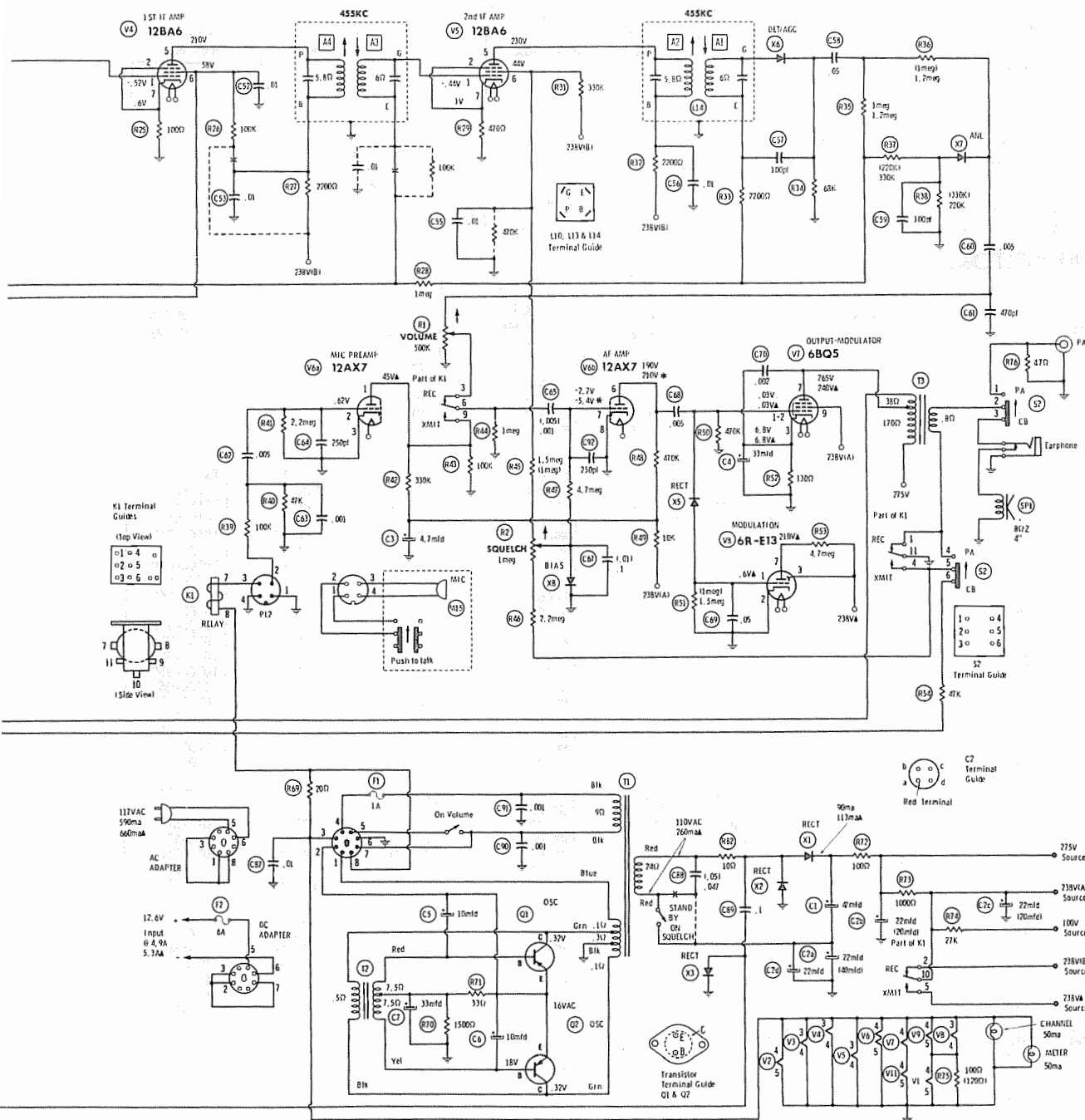
(CONTINUED ON PAGE 108)

ROBYN MODEL T-123



n/n Denotes chassis
 - Denotes ground
 - - Indicates connection used in some versions.
 * Indicates connection not used in some versions.
 * Squelched.
 ▲ Measured in "Transmit" position.
 Resistors are 120W or less, 10% or 20%, unless otherwise indicated.
 Supply voltage maintained at rated value for measurements.
 Voltage and resistance measured with VTVM or equivalent meter,
 no signal applied and controls adjusted for normal operation.
 Controls viewed from actuator end. Arrow indicates clockwise rotation.
 Numbers assigned to terminals may not be found on the unit.
 Transistor resistances vary widely. No resistance measurements taken.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
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ROBYN MODEL T-123

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.
C1	47 350V		PRS1680		WBR50-450	QT1-16	TC67A	TVA-1611
C2a	22 450V		AFH4-14		DD0179.5A		FP444A	TVL-4834
b	22 450V							
c	22 450V							
d	22 450V							
C3	4.7 350V		PRS1600		WBR5-450	QT1-3.5	TC60A	TE-1159
C4	33 16V		BCD-15035	EP15-50	PC50-16	MT1-135	MTV30CB25	TE-1204
C5	10 25V		BCD-25010	EA30-10	PC10-50	MT1-5	MTV10CB50	TE-1204
C6	10 25V		BCD-2510	EA30-10	PC10-50	MT1-5	MTV10CB50	TE-1204
C7	33 16V		BCD-150-35	EP15-50	PC50-16	MT1-13.5	MTV30CB25	TE-1159

CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENDO PART No.	MALLORY PART No.	SPRAGUE PART No.
C20	10		NPO-DI 10	DTZ-10	NPO10	CCT0-100	CN0410	10TCC-Q10
C21	50		NPO-DI 50	DTZ-50	NPO50	CCT0-510	CN0450	10TCC-Q50
C22	120		ADM-15-121	CPR-1205	CD15F121J500	DM15-121	SX312	MS-312
C23	120		ADM-15-121	CPR-1205	CD15F121J500	DM15-121	SX312	MS-312
C24	7		NPO-DI 6.8	DTZ-6R8	NPO6P8		CN0568	10TCC-V68
C25								
C26								
C27	.05		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C28	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C29	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C30	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C31	10		NPO-DI 10	DTZ-10	NPO10	CCT0-100	CN0410	10TCC-Q10
C32	.005		TTP-005	CK-502	MGP005	CCD-502	TA250	TG-D50
C33	10		NPO-DI 10	DTZ-10	NPO10	CCT0-100	CN0410	10TCC-Q10
C34	1		NPO-DI 1.0	TCZ-1			CN0510	10TCC-V10
C35	7		NPO-DI 6.8	DTZ-6R8	NPO6P8		CN0568	10TCC-V68
C36	.005		TTP-005	CK-502	MGP005	CCD-502	TA250	TG-D50
C37	5							10TCC-V56
C38	15		NPO-DI 15	DTZ-15	NPO15	CCT0-150	CN0415	10TCC-Q15
C39	25		NPO-DI 25	DTZ-25			CN0425	10TCC-Q25
C40	50		NPO-DI 50	DTZ-50	NPO50	CCT0-510	CN0450	10TCC-Q50
C41	50		NPO-DI 50	DTZ-50	NPO50	CCT0-510	CN0450	10TCC-Q50
C42	10		NPO-DI 10	DTZ-10	NPO10	CCT0-100	CN0410	10TCC-Q10
C43	.005		TTP-005	CK-502	MGP005	CCD-502	TA250	TG-D50
C44	5		NPO-DI 5.0		NPO5			10TCC-V50
C45	.005		TTP-005	CK-502	MGP005	CCD-502	TA250	TG-D50
C46	.005		TTP-005	CK-502	MGP005	CCD-502	TA250	TG-D50
C47								
C48	100		NPO-DI 100	DTZ-100	NPO100	CCT0-101	CN0310	10TCC-T10
C49	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C50	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
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	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C54	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C55	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C56	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C57	100		NPO-DI 100	DTZ-100	NPO100	CCT0-101	CN0310	10TCC-T10
C58	.05		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C59	100		NPO-DI 100	DTZ-100	NPO100	CCT0-101	CN0310	10TCC-T10
C60	.005		GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C61	470		GPD X5F471K	DD-471	GP470	CCD-471	GP347	10TS-T47
C62	.005		GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C63	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C64	250		GPD X5F251K	DD-251	GP251	CCD-251	GP325	10TS-T25
C65	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C66	7		NPO-DI 6.8	DTZ-6R8	NPO6P8		CN0568	10TCC-V68
C67	.1		TTP-1	CK-104			TA010	TG-P10
C68	.005		GPD X5R502K	DD-502	GP5000	CCD-502	JF250	10TS-D50
C69	.05		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C70	.002		GPD X5F202K	DM-202	GP2000	CCD-202	GP220	2SS-D20
C71	25		NPO-DI 25	DTZ-25			CN0425	10TCC-Q25
C72								
C73	10		NPO-DI 10	DTZ-10	NPO10	CCT0-100	CN0410	10TCC-Q10
C74	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C75	30			TCZ-30		CCT0-300		10TCC-Q30
C76	.005		TTP-005	CK-502	MGP005	CCD-502	TA250	TG-D50
C77	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C78	7		NPO-DI 6.8	DTZ-6R8	NPO6P8		CN0568	10TCC-V68
C79	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C80	25		NPO-DI 25	DTZ-25			CN0425	10TCC-Q25
C81	.005		TTP-005	CK-502	MGP005	CCD-502	TA250	TG-D50
C82	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C83	.1		DBE4P1		DPMS4P1	4DP-3-104	PVC401	4PS-P10
C84	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C85	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C86	.002		GPD X5F202K	DM-202	GP2000	CCD-202	GP220	2SS-D20
C87	.01		GPD X5S103K	DD-103	GP10000	CCD-103	JF110	10TS-S10
C88	.047		DBE6S47		DPMS6S47	4DP-3-473	PVC4147	4PS-S47
C89	.1		DBE4P1		DPMS4P1	4DP-3-104	PVC401	4PS-P10
C90	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C91	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10

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/On-Off Switch	500K		F2-500K (1), SSK014, KR-1	A47-500K-Z (1), KSS-3,SWE-12 or [NP-500K-Z(1), UP-C-400, NWE-12]	Q13-133(1), 76-1 or [BU1(1), CF25, SS1,GC]*	RU55A, SL36, SL3250, US41 or [UA55A(1), SK1000, US41] or [U48(1), US26]
R2	Squelch/Standby	1meg		F1-1meg(1), SSK014, KR-1	A47-1meg-S(1), KSS-3,SWE-12 or [NP-1meg-S(1), UP-C-400,NWE-12]	Q11-137(1), 76-1 or [BU1(1), CF17,SS1,GC]*	RU162, SL36, SL3250,US41 or [UA16L(1), SK1000,US41] or U54(1), US26]
R3	Meter	25K		F1-25K(1), SRS008	A47-25K-S(1), FKS-1/2 or [NP-25K-S(1), UP-S-014]	B11-120,SK2(1) or [BU1(1), CF11,SS2,DC1]*	RU253L,SL36, SL3250 or [UA253L(1), SK1000] or U29 (1)

* "SNAPTROL"

(1) Enlarge Mounting Hole

ROBYN MODEL T-123

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	TVI Trap				
L2	RF Choke				
L3	RF Choke (6uh)		19-1004	4610	T821
L4	Pi Network				
L5	RF				
L6	RF Choke (.9uh)			5220	T980
L7	Synthesizer Output				
L8	Receiver Oscillator				
L9	Oscillator				
L10	Input IF				
L11	Interstage IF		16-9033	8810	
L12	Interstage IF		16-9034	8811	
L13	Interstage IF				
L14	Output IF				
L15	Xmtr. Mixer				
L16	Xmtr. Driver				
L17	RF Choke (26uh)			72F275AI	

SPEAKER

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

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.		WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE
F1	1A			AGC-1	HKP	312001	442001A	
F2	6A			MTH-6	HHJ	311006	150145	

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
K1	Relay		
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		4.635MC
M8	Crystal		4.625MC
M9	Crystal		4.615MC
M10	Crystal		4.595MC
M11	Crystal		5.545MC
M12	Crystal		6MC
M13	Mechanical Filter		455KC
M14	Meter		"S"
S1	Switch		Selector
S2	Switch		PA-CB

MICROPHONE

ITEM No.	REPLACEMENT DATA			REMARKS
	MFGR. PART No.	RCA REPLACEMENT	RCA STEP UP REPLACEMENT	
M15		HK-107	HK-101 (1) HK-113 (1)	(1)(For Base Station only)

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.)