

SAMS PHOTOFACT[®] CB RADIO SERIES



CB-38
38
FEBRUARY 1972



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



PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index

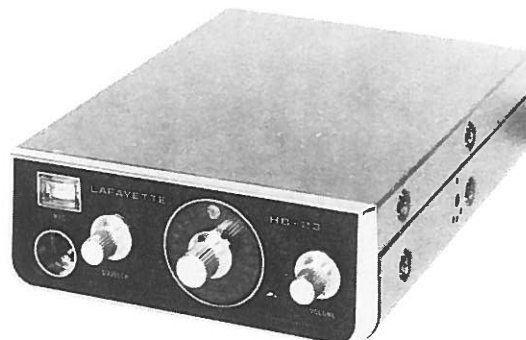
NOTE

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 HB-23A (99-32351WX)

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A1 thru A4, A6 & A19.....GENERAL CEMENT #8868, 9089

A5, A7 thru A18 & A20.....GENERAL CEMENT #8606L, 9440

RECEIVER

Connect an AC VTVM across speaker voice coil. Set Volume control fully clockwise, squelch control fully counterclockwise.

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side through .01mfd to  and low side to Chassis. Tune to 455KC (Mod)	Any	A1 thru A4	Adjust for maximum.
High side through .01mfd to antenna connector; low side to chassis. Tune to 27.065MC (Mod)	9	A5 thru A11	Adjust for maximum.

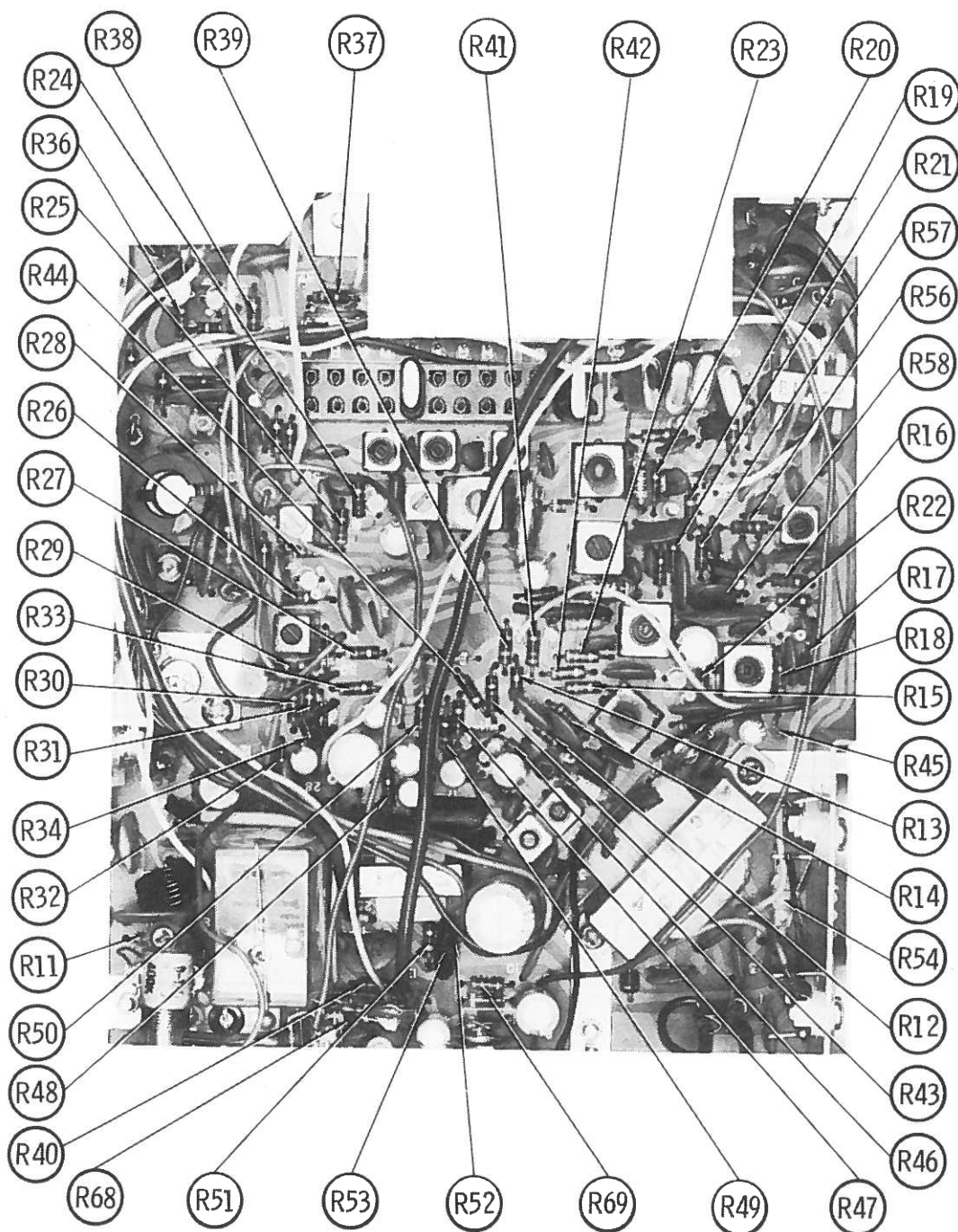
TRANSMITTER

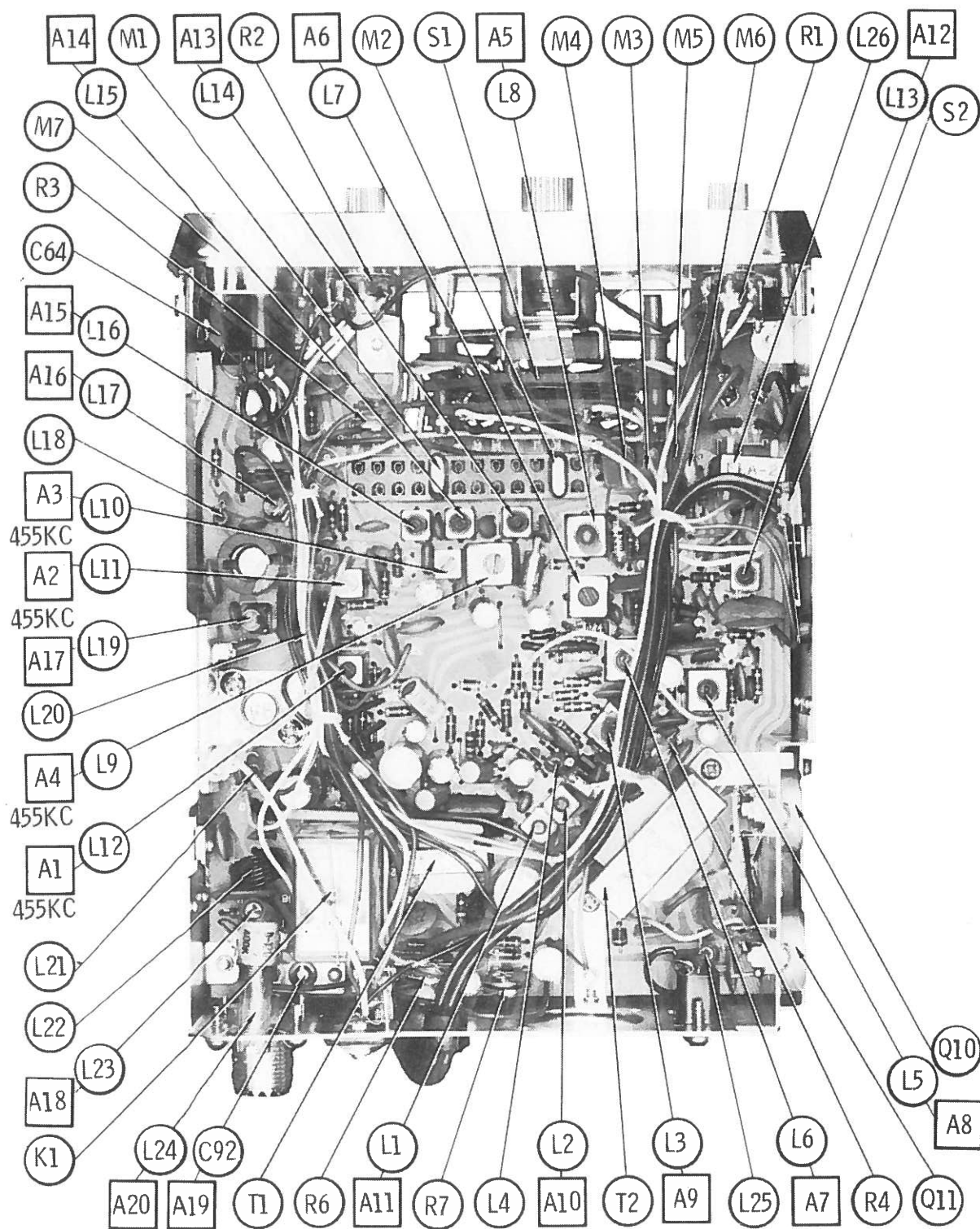
INDICATOR	ADJUST	REMARKS
RF Wattmeter or Field Strength meter.	A12 thru A19	Adjust for maximum.
0-500ma DC Ammeter	A18	Remove emitter lead of Q16 (Final Amp) and insert meter. Adjust for 5 watts input.
Television (Ch. 2)	A20	Key Transmitter and adjust for MINIMUM interference.

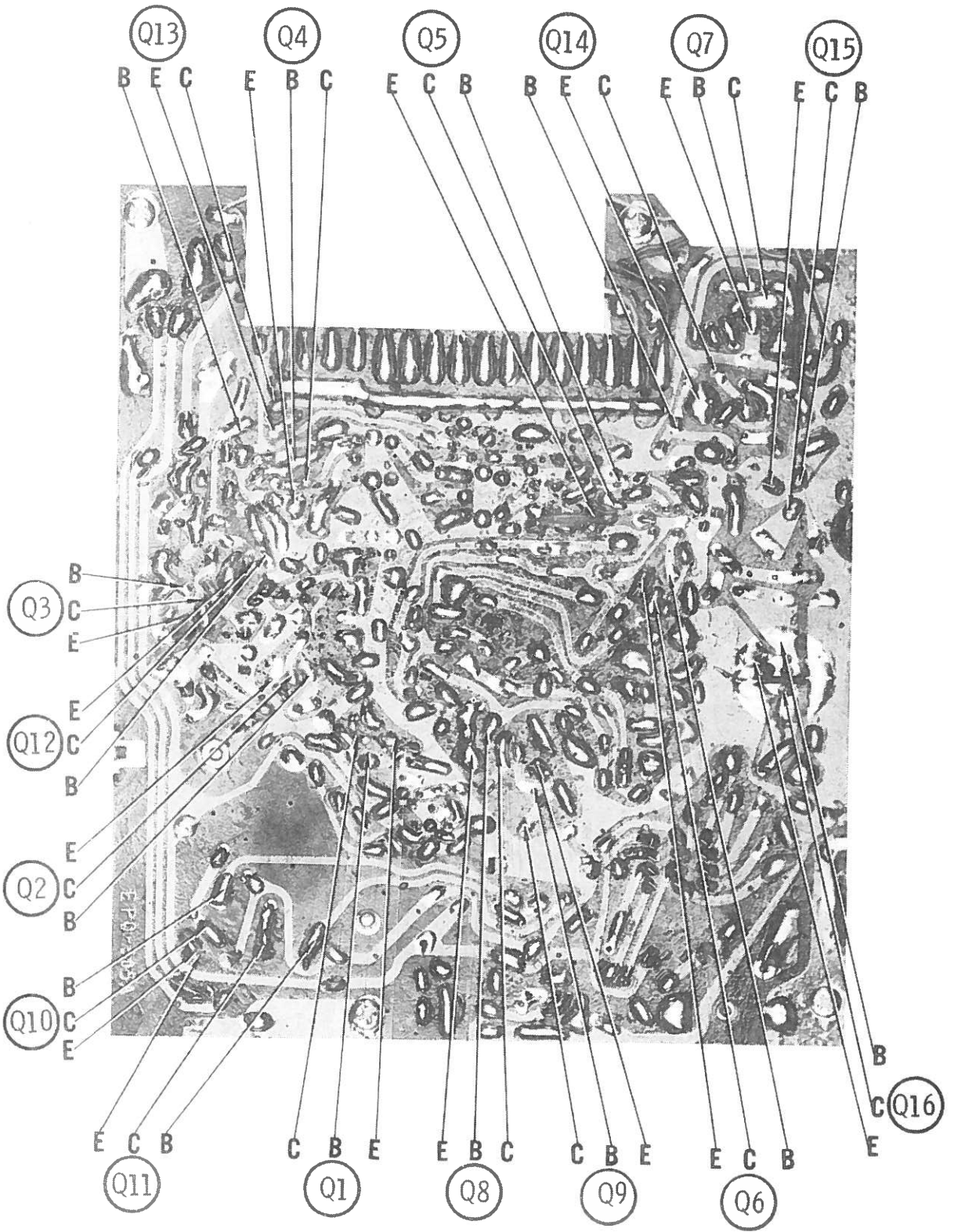
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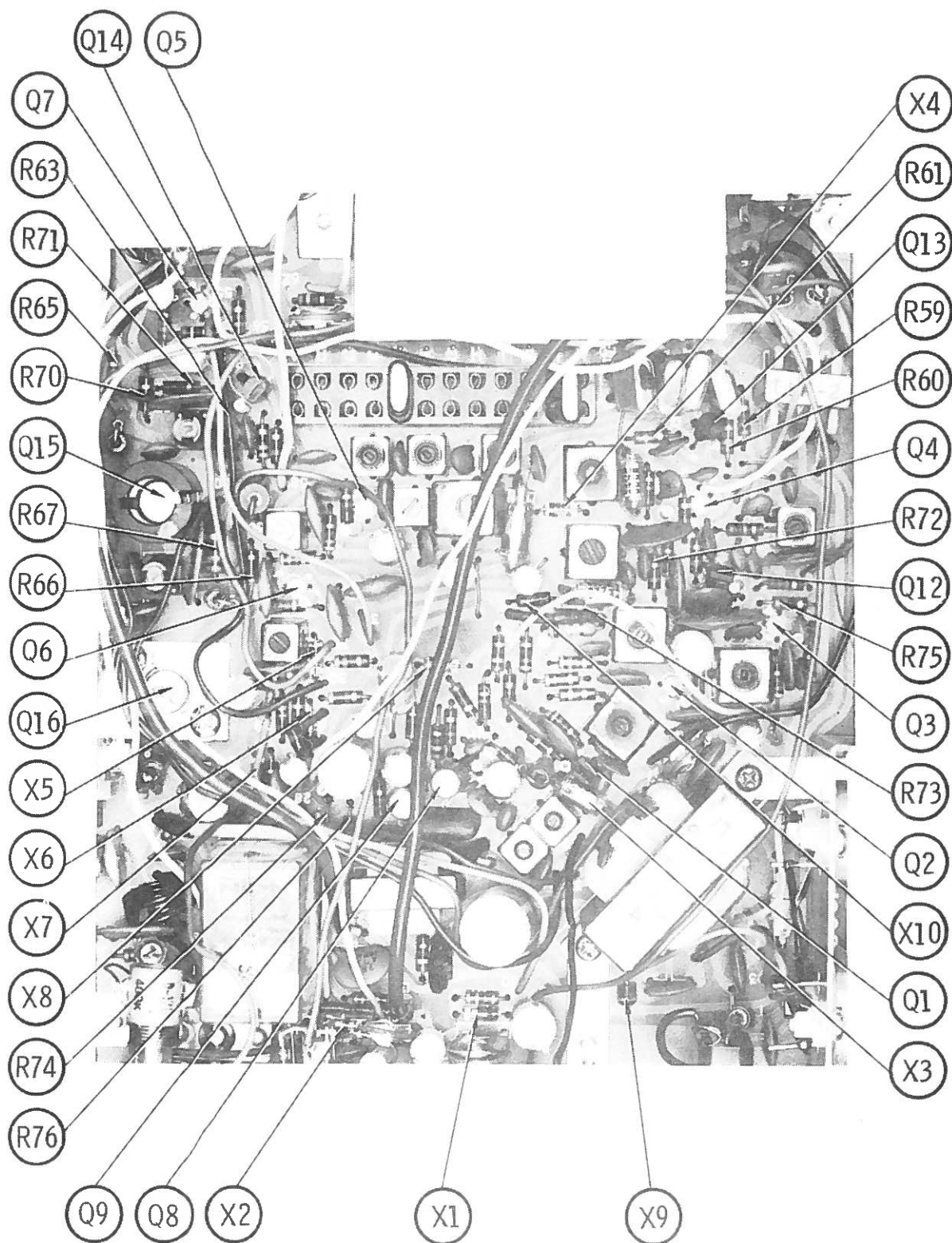
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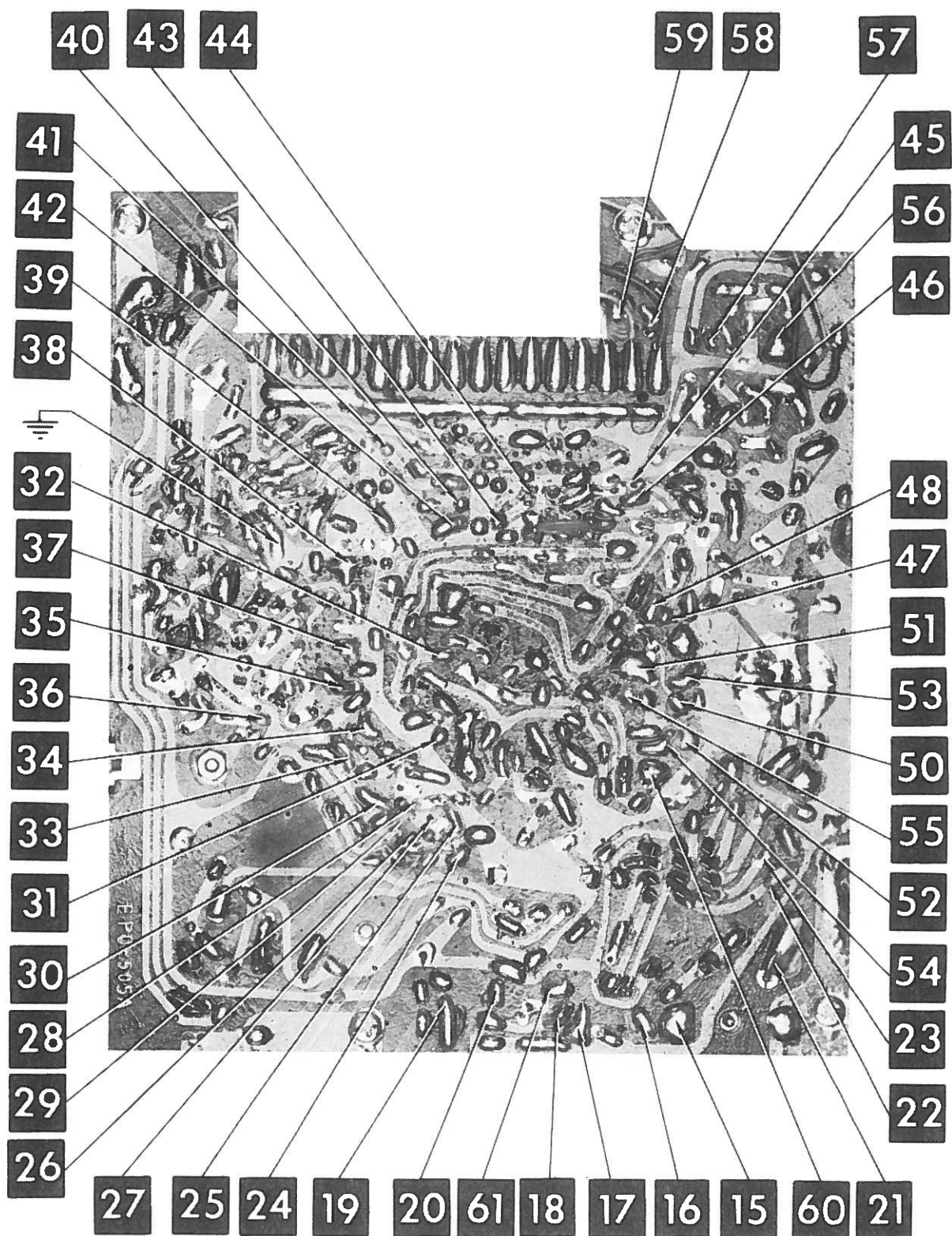
LAFAYETTE MODEL HB-23A





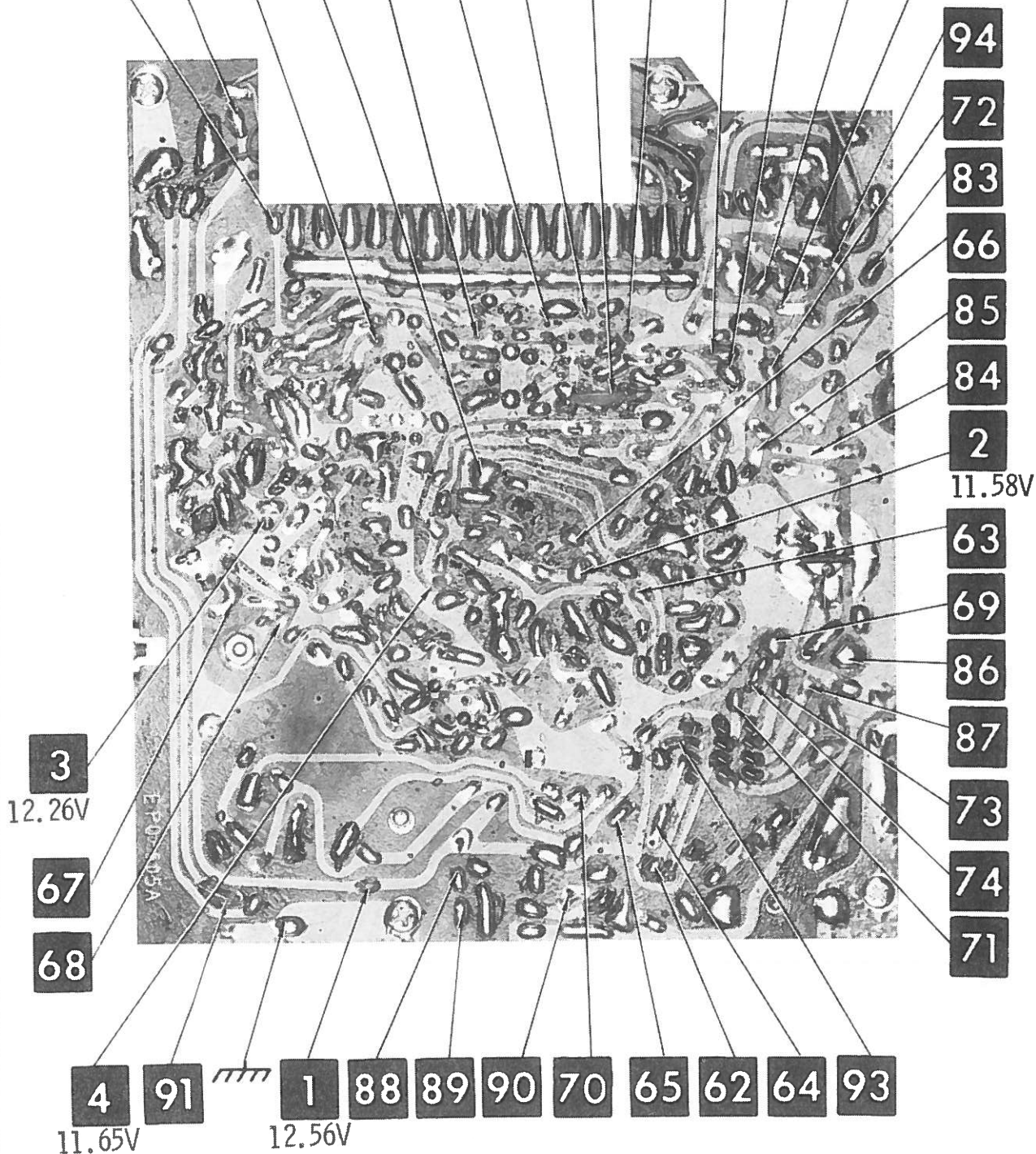




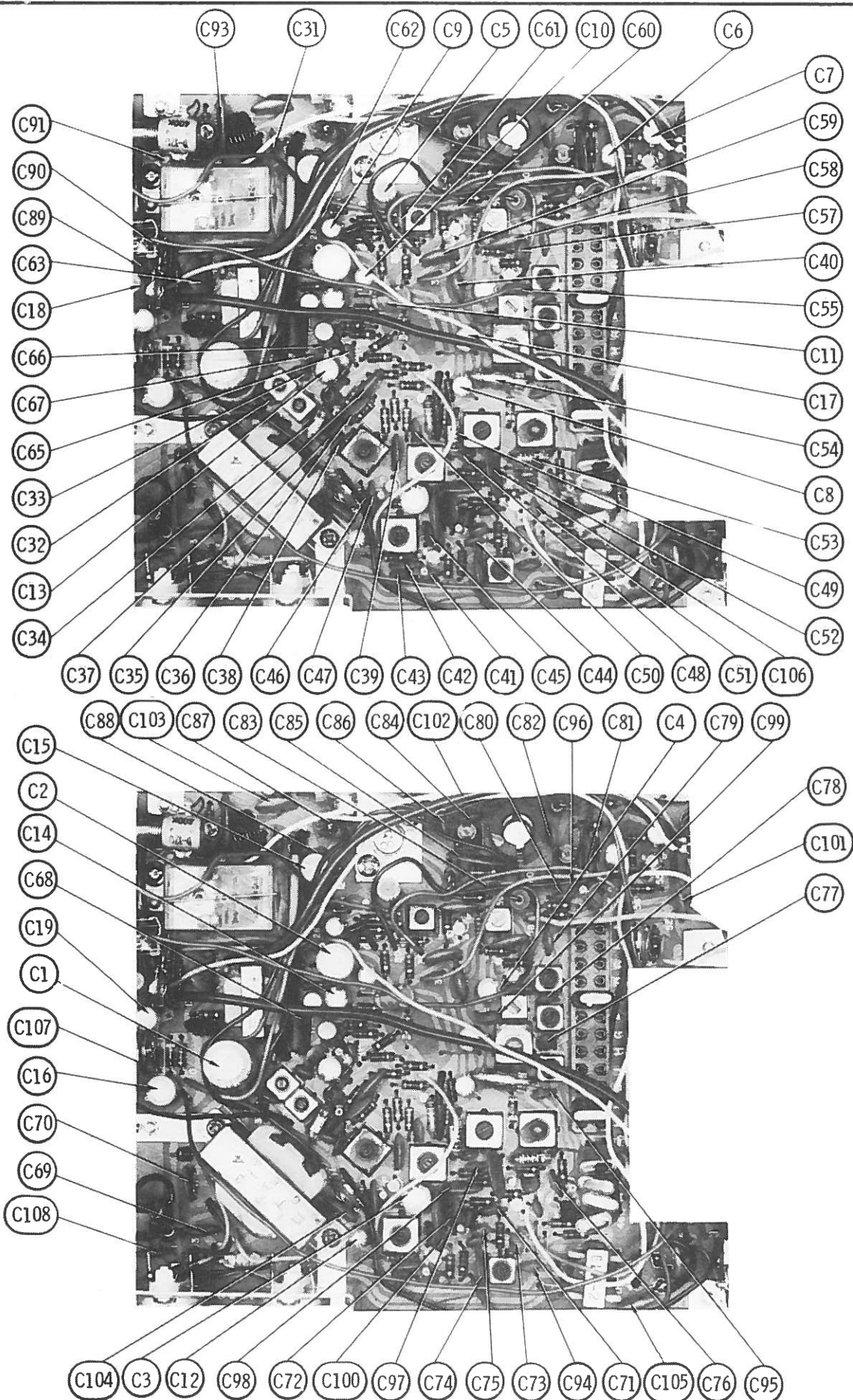


10.5V▲(B) 7.19V 7.81V 10.5V▲(A)

8 92 6 5 77 79 80 (C56) 81 76 75 7 82



LAFAYETTE MODEL HB-23A



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.)

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	RF Amp	1373-17	GE-11	IRTR-51	HEP53	SK3018	ECG 107
Q2	2SC184	1st Receive Mixer	1634-17	GE-20	IRTR-53	HEP56	SK3018	ECG 108
Q3	2SC184	1st Rec-Xmtr Synth.Osc	1634-17	GE-20	IRTR-53	HEP56	SK3018	ECG 108
Q4	2SC183	2nd Receive Osc.	1210-17	GE-20	IRTR-53	HEP56	SK3020	ECG 107
Q5	2SC183	1st IF Amp	1210-17	GE-20	IRTR-53	HEP56	SK3020	ECG 107
Q6	2SC183	2nd IF Amp	1210-17	GE-20	IRTR-53	HEP56	SK3020	ECG 107
Q7	2SC183	Squelch	1210-17	GE-20	IRTR-53	HEP56	SK3020	ECG 107
Q8	2SD77	AF Amp	1906-17	GE-8	TR-08	HEP641	SK3010	ECG 103A
Q9	2SB77	Driver	1906-17	GE-2	TR-05	HEP250	SK3004	ECG 102A
Q10	2SB337	Output-Modulator	1559-17	GE-3		HEP232	SK3009	ECG 121
Q11	2SB337	Output-Modulator	1559-17	GE-3		HEP232	SK3009	ECG 121
Q12	2SC460	Xmtr. Oscillator	1373-17	GE-11	IRTR-62	HEP53	SK3046	ECG 107
Q13	2SC815 (2SCF5)	Xmtr. Mixer	1879-17	GE-20	IRTR-63	HEP736	SK3047	ECG 123A
Q14	2SC815 (2SCF5)	Xmtr Buffer	1879-17	GE-20	IRTR-63	HEP736	SK3047	ECG 123A
Q15	2SCF6	Xmtr Driver			IRTR-64	HEPS3001	SK3047	ECG 128
Q16	2SCF8	Final Amp	1068-17		IRTR-65	HEPS3001	SK3048	

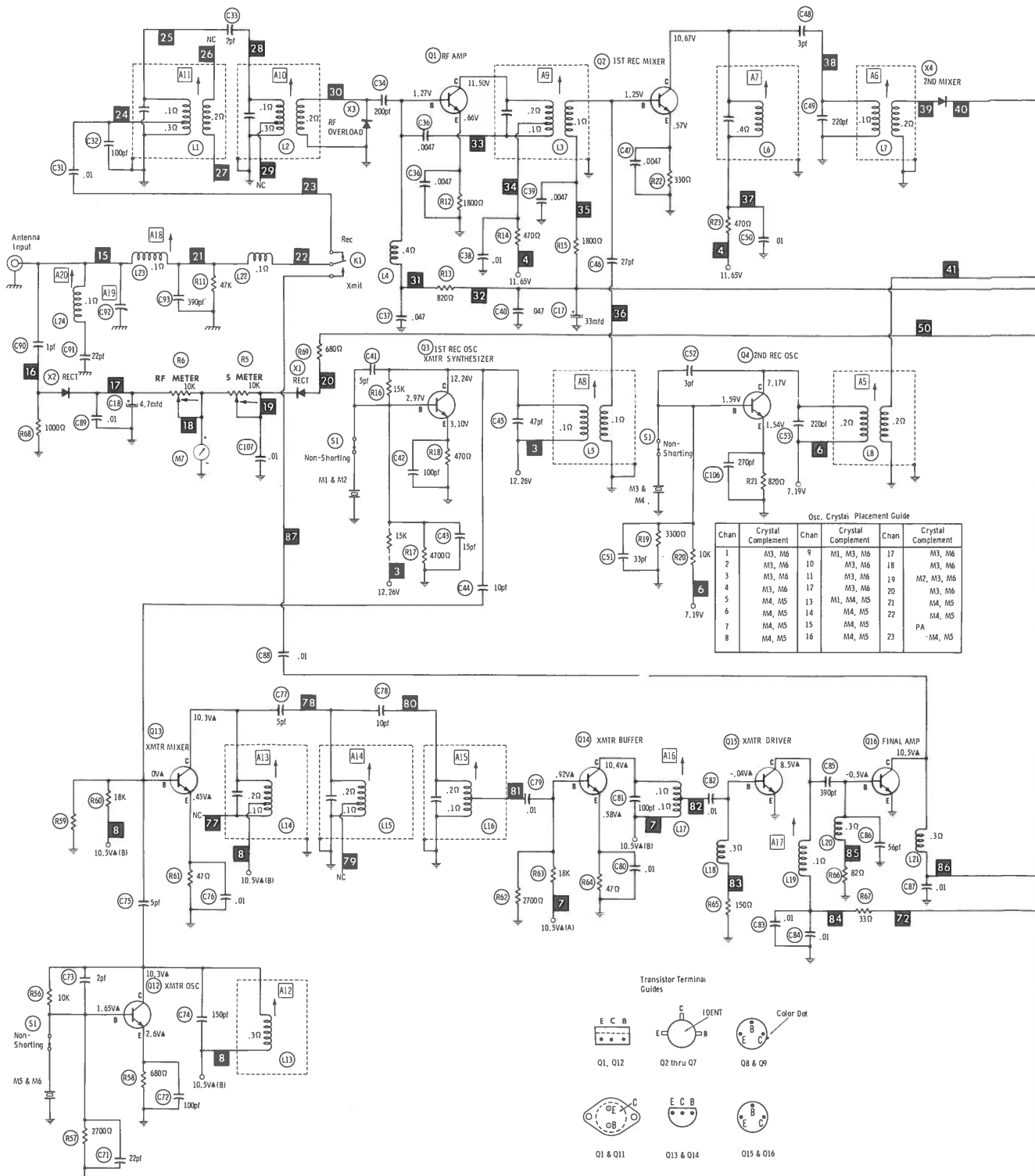
POWER RECTIFIERS & SIGNAL DIODES

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	1S-34	1N34AS	1N34A	SK3087	ECG 110	
X2	1S-34	1N34AS	1N34A	SK3087	ECG 110	
X3	1S-1555	GE-504A	8D4 or 5A4D	SK3030 or SK3031	ECG 116 or ECG 117	
X4	1S-34	1N34AS	1N34A	SK3087	ECG 110	
X5	1S-34	1N34AS	1N34A	SK3087	ECG 110	
X6	1S-34	1N34AS	1N34A	SK3087	ECG 110	
X7	1S-34	1N34AS	1N34A	SK3087	ECG 110	
X8	1S-34	1N34AS	1N34A	SK3087	ECG 110	
X9	V06C	GE-504A	8D4 or 5A4D	SK3030 or SK3031	ECG 116 or ECG 117	
X10	EDZ-2		Z1108	SK3059	ECG 138	7.8V Zener

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	470 16V	3204-12	PRS1220	EA15-500	WBR500-16	QT1-30A	MTV500DN15	TL-1166
C2	100 16V	3202-12	MCD-180	EP15-100	WBR100-16	MT1-19	MTV100CD15	TE-1162
C3	33 16V	3104-12	MCD-110	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	TE-1158
C4	10 25V		MCD-70	EP30-10	WBR10-25	MT1-5	MTV10CB50	TE-1204
C5	33 10V	3089-12	MCD-110	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	TE-1132.1
C6	3.3 50V	3245-12	MCD-50	EP30-5	WBR5-50	MT1-3	MTV5CB50	TE-1202
C7	33 10V	3089-12	MCD-110	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	TE-1132.1
C8	10 10V	3102-12	MCD-70	EP15-10	WBR10-25	MT1-5	MTV10CB50	TE-1128
C9	1 50V		MCD-10	EP50-2	WBR1-50	MT1-1	MTV1CB50	TE-1300
C10	1 50V		MCD-10	EP50-2	WBR1-50	MT1-1	MTV1CB50	TE-1300
C11	33 10V	3089-12	MCD-110	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	TE-1132.1
C12	1 50V		MCD-10	EP50-2	WBR1-50	MT1-1	MTV1CB50	TE-1300
C13	33 10V	3089-12	MCD-110	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	TE-1132.1
C14	33 10V	3089-12	MCD-110	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	TE-1132.1
C15	33 16V	3104-12	MCD-110	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	TE-1158
C16	33 16V	3104-12	MCD-110	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	TE-1158
C17	33 10V	3089-12	MCD-110	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	TE-1132.1
C18	4.7 25V		MCD-50	EP30-5	WBR5-50	MT1-3	MTV5CB50	TE-1202
C19	3.3 50V	3245-12	MCD-50	EP30-5	WBR5-50	MT1-3	MTV5CB50	TE-1202

(CONTINUED ON PAGE 70)



• Squelched
 ▲ Measured in "Transmit" position
 — Denotes ground. (Voltage reference unless otherwise indicated).
 - - Indicates connection used in some versions.
 * Indicates connection not used in some versions.
 * Omitted in some versions.
 • See parts list.
 Measurements taken with switching in position shown unless otherwise indicated.
 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 VVM or equivalent meter, no signal applied and controls adjusted for normal operation.
 Arrow on control indicates direction of advance.
 Numbers assigned to terminals may not be found on the unit.
 Transistor resistances vary widely. No resistance measurements taken.

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.
C31	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C32	100			DTZ-100	NP0100	CCT0-101	CN0310	10TCC-T10
C33	2		GPDC0J2R2K	DTZ-2R2	NP02P2	CCT0-2P2	CN0522	10TCC-V22
C34	200			CPR-200J		DM-15-201J	SX320	MS-32
C35	5		GPDC0H4R7K	DTZ-4R7	NP05	CCT0-050		10TCC-V50
C36	.0047		GPD X5R472K	DD-472G	GP4700	CCD-472	JF247	10TS-D47
C37	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C38	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C39	.0047		GPD X5R472K	DD-472G	GP4700	CCD-472	JF247	10TS-D47
C40	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C41	5		GPDC0H4R7K	DTZ-4R7	NP05	CCT0-050		10TCC-V50
C42	100			DTZ-100	NP0100	CCT0-101	CN0310	10TCC-T10
C43	15			DTZ-15	NP015	CCT0-150	CN0415	10TCC-Q15
C44	10		GPDC0H100K	DTZ-10	NP010	CCT0-100	CN0410	10TCC-Q10
C45	47			DTZ-47	NP047	CCT0-470	CN0447	10TCC-Q47
C46	27			TCZ-27	NP027	CCT0-270	CN0427	10TCC-Q27
C47	.0047		GPD X5R472K	DD-472G	GP4700	CCD-472	JF247	10TS-D47
C48	3		GPDC0J3R3K	DTZ-3R3	NP03P3	CCT0-3R3	CN0533	10TCC-V33
C49	220			CPR-220J		DM-15-221J	SX322	MS-322
C50	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C51	33		GPDP3K330K	DTN-33	N33	CCTN-330	CN7433	10TCU-Q33
C52	3		GPDC0J3R3K	DTZ-3R3	NP03P3	CCT0-3R3	CN0533	10TCC-V33
C53	220			CPR-220J		DM-15-221J	SX322	MS-322
C54	510			CPR-500J		DM-16-511J	SX351	MS-351
C55	.0047		GPD X5R472K	DD-472G	GP4700	CCD-472	JF247	10TS-D47
C56	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C57	3		GPDC0J3R3K	DTZ-3R3	NP03P3	CCT0-3R3	CN0533	10TCC-U33
C58	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C59	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C60	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C61	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C62	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C63	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C64	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C65	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C66	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C67	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C68	.056		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C69	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C70	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C71	22			DTZ-20	NP020	CCT0-200	CN0420	10TCC-Q20
C72	100			DTZ-100	NP0100	CCT0-101	CN0310	10TCC-T10
C73	2		GPDC0J2R2K	DTZ-2R2	NP02P2	CCT0-2R2	CN0522	10TCC-V22
C74	150		GPD X5F151K	DD-151	GP150	CCD-151	GP315	10TS-T15
C75	5		GPDC0H4R7K	DTZ-4R7	NP05	CCT0-Q50		10TCC-V50
C76	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C77	5		GPDC0H4R7K	DTZ-4R7	NP05	CCT0-050		10TCC-V50
C78	10		GPDC0H100K	DTZ-10	NP010	CCT0-100	CN0410	10TCC-Q10
C79	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C80	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C81	100			DTZ-100	NP0100	CCT0-101	CN0310	10TCC-T10
C82	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C83	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C84	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C85	390		GPD X5F391K	DD-391	GP390	CCD-391	GP339	10TS-T39
C86	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C87	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C88	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C89	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C90	1		GPDC0J1R0D	TCZ-1			CN0510	10TCC-V12
C91	22			DTZ-100	NP0100	CCT0-101	CN0310	10TCC-T10
C92		#3251-12						
C93	390		GPD X5F391K	DD-391	GP390	CCD-391	GP339	10TS-T39
C94	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C95	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C96	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C97	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C98	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C99	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C100	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C101	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C102	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C103	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C104	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C105	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C106	270		GPD X5F271K	DD-271	GP270	CCD-270	GP327	10TS-T27
C107	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C108	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20

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)

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	10K	1543-11 (EVH-B8BL15A14)				
R2	Squelch	10K	1542-11 (EVH-B8AL15C14)				
R3	Squelch Range	10K	2474-13 (EVL-T5AB14)	TSV-10K(1) or T-10K (1)		X201R103B (1)	MTC14L1 (1)
R4	Modulation Adjust	10K	2474-13 (EVL-T5AB14)	TSV-10K(1) or T-10K (1)		X201R103B (1)	MTC14L1 (1)
R5	"S" Meter Adjust	10K	2474-13 (EVL-T5AB14)	TSV-10K(1) or T-10K (1)		X201R103B (1)	MTC14L1 (1)
R6	"RF" Meter Adjust	10K	2474-13 (EVL-T5AB14)	TSV-10K(1) or T-10K (1)		X201R103B (1)	MTC14L1 (1)

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

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R34	47K (Cold)		2035-17 (14D47)

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R53	36 (Cold)		

LAFAYETTE MODEL HB-23A

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	Rec. Antenna Matching	2228-23			
L2	Rec. RF Input	2228-23			
L3	Rec. RF Output	2229-23			
L4	RF Choke	2342-23	19-1002	4606	T857
L5	1st Rec. Osc-Xmtr Synth Osc.	2355-23			
L6	Mixer	2044-24			
L7	IF Input	1946-24			
L8	2nd Rec. Oscillator	2230-23			
L9	Interstage IF	1950-24 (1)			
L10	Interstage IF	1942-24		8810	16-9033
L11	Interstage IF	1943-24		8811	16-9034
L12	IF Output	1944-24			
L13	Xmtr Oscillator	2356-23			
L14	Xmtr Mixer Input (Pri)	2354-23			
L15	Xmtr Mixer Input (Sec)	2354-23			
L16	Xmtr Mixer Output	2353-23			
L17	Xmtr Buffer	2225-23			
L18	RF Choke	2342-23	19-1002	4606	T857
L19	Xmtr. Driver	2226-23			
L20	RF Choke	2342-23	19-1002	4606	T857
L21	RF Choke	2342-23	19-1002	4606	T857
L22	Pi Filter	2227-23			
L23	Pi Filter Network				
L24	TVI				
L25	Hash Choke	2342-23	19-1002	4606	T857

(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.	
L26	480ma	.2	.2mh	1090-15				

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	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD Part No.	
T1	2:1	1CT		1596-15				

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA				NOTES
	PRI.	SEC.	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	92 CT	16 CT	1072-15				

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	3" x 5", 16 ohms	1203-36		

FUSE DEVICES

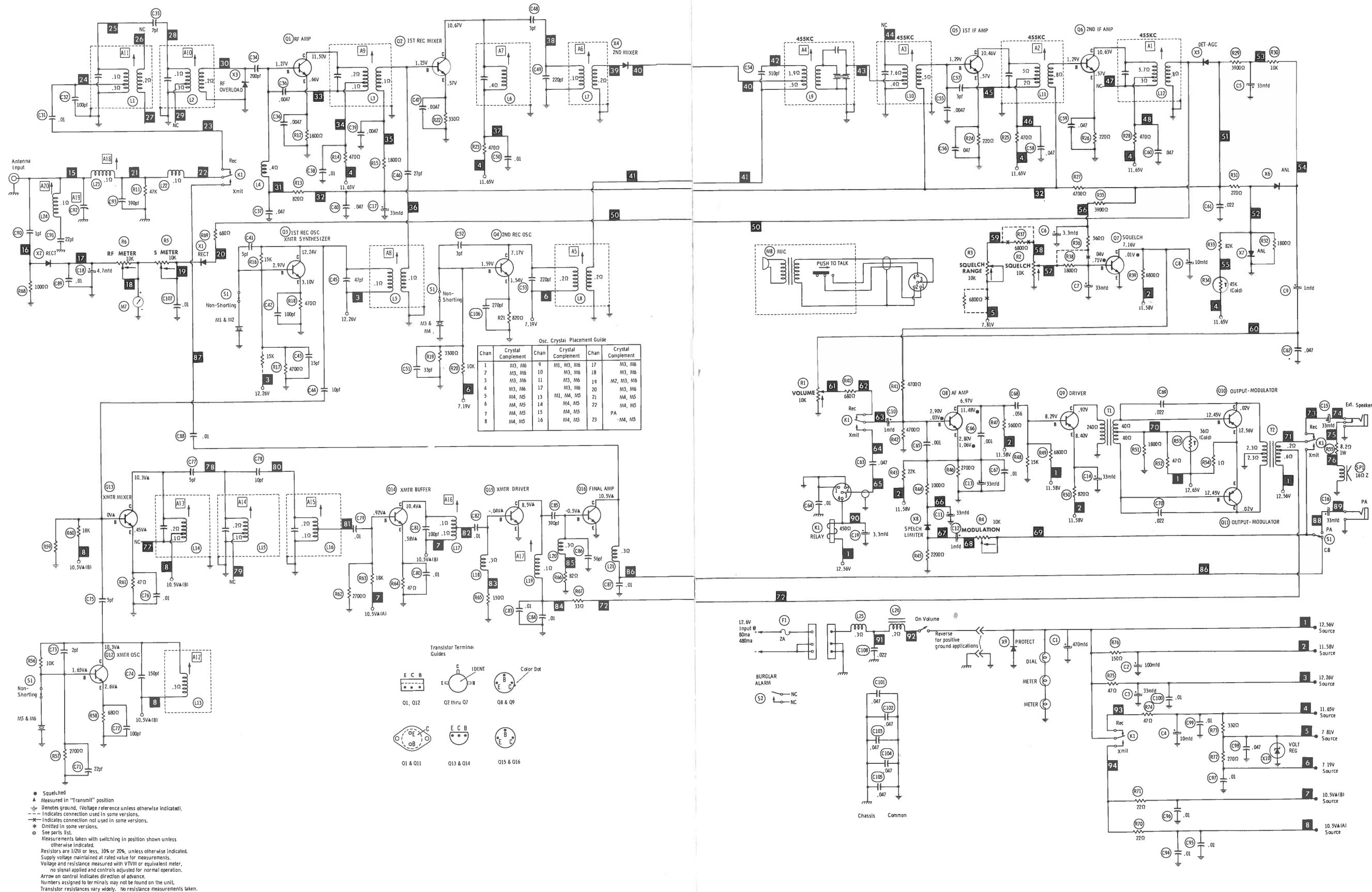
ITEM No.	DESCRIPTION	REPLACEMENT DATA						
		PART No.		BUSS PART No.		LITTELFUSE PART No.		WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE
F1	2A			AGC 2	HDJ	312002	150145	

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
K1	Relay	1050-37	
M1	Crystal	1188-35	38.375MC
M2	Crystal	1187-35	38.495MC
M3	Crystal	1192-35	11.765MC
M4	Crystal	1191-35	11.715MC
M5	Crystal	1189-35	11.260MC
M6	Crystal	1190-35	11.310MC
M7	Meter, RF & "S"	1156-27	
M8	Mic	1077-34	
S1	Switch, Selector	1738-14	
S2	Switch, Alarm	1739-14	

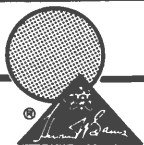
CABINETS & CABINET PARTS (When ordering specify model, chassis & color)

ITEM	PART No.	ITEM	PART No.
Cabinet (Bottom)	6745-10	Knob, Selector	1743-18
Cabinet (Front)	6749-10	Knob, Control	1742-18
Cabinet (Top)	6744-10		



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with **CIRCUITACE**
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LAFAYETTE MODEL HB-23A



PHOTOFACT[®] with

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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 TRC-100B (21-134)

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A1 thru A4
A5 thru A12

GENERAL CEMENT:

#8868, 9089
#8606L, 9440

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 through .01mfd to base of Q2 (Rec. Mixer), low side to ground. Tune to 455KC (Mod.).	Any	A1 thru A4	Adjust for maximum.
High side through .01mfd to Antenna connector, low side to ground. Tune to Channel Frequency.	(1)	A5 thru A7	(1) CHECK CRYSTAL (M2 & M3) FREQUENCIES AND SET GENERATOR ACCORDINGLY. Adjust for MAXIMUM.

TRANSMITTER

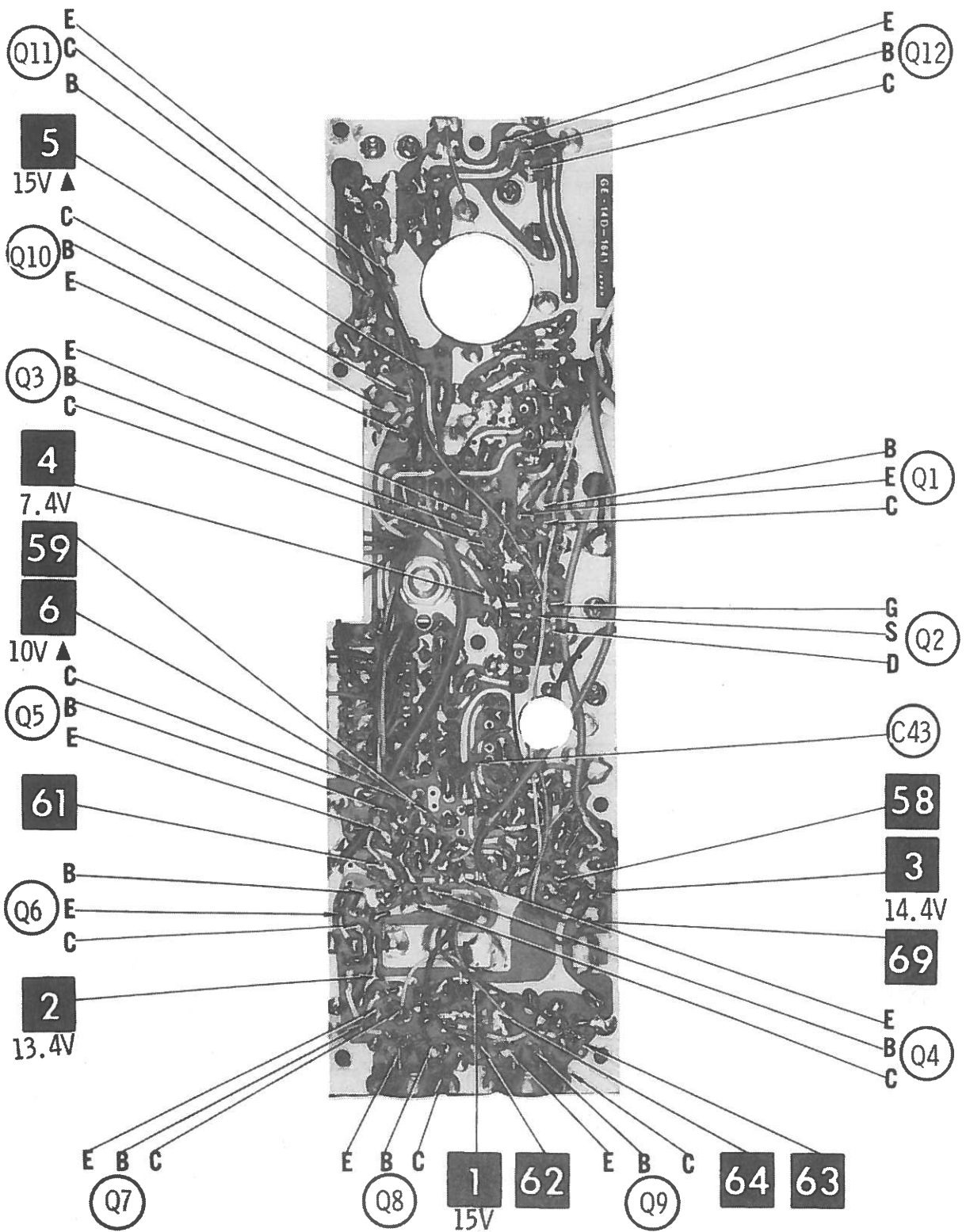
INDICATOR	ADJUST	REMARKS
AF Wattmeter or Field Strength Meter.	A8 thru	Adjust for maximum.
0-500ma DC Ammeter	A10	Remove meter jumper @ L11 and insert meter. Readjust A10 for 5 watts input to Q13 (Final Amp)
Television (Ch. 2)	A12	Adjust for minimum interference.

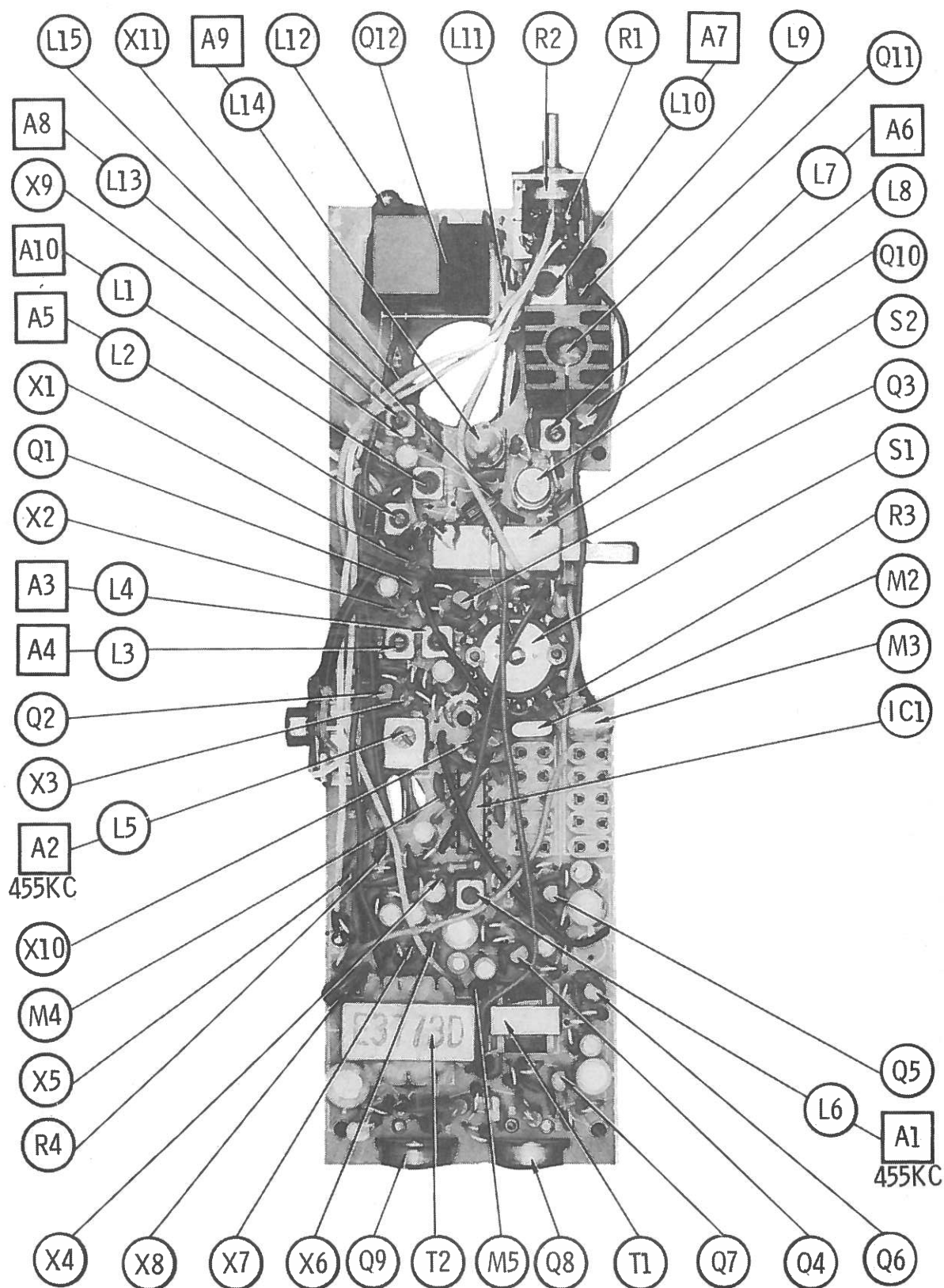
HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

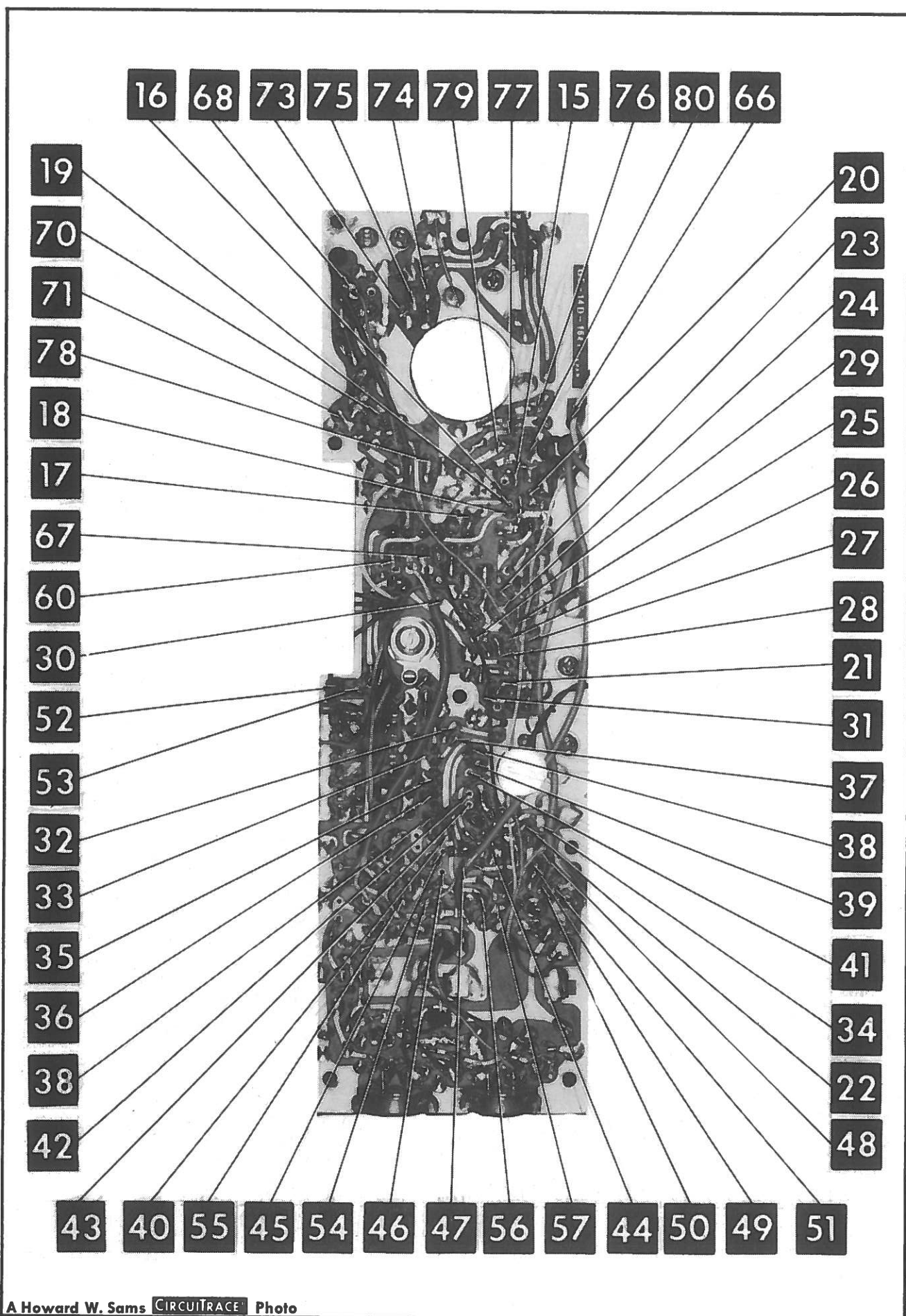
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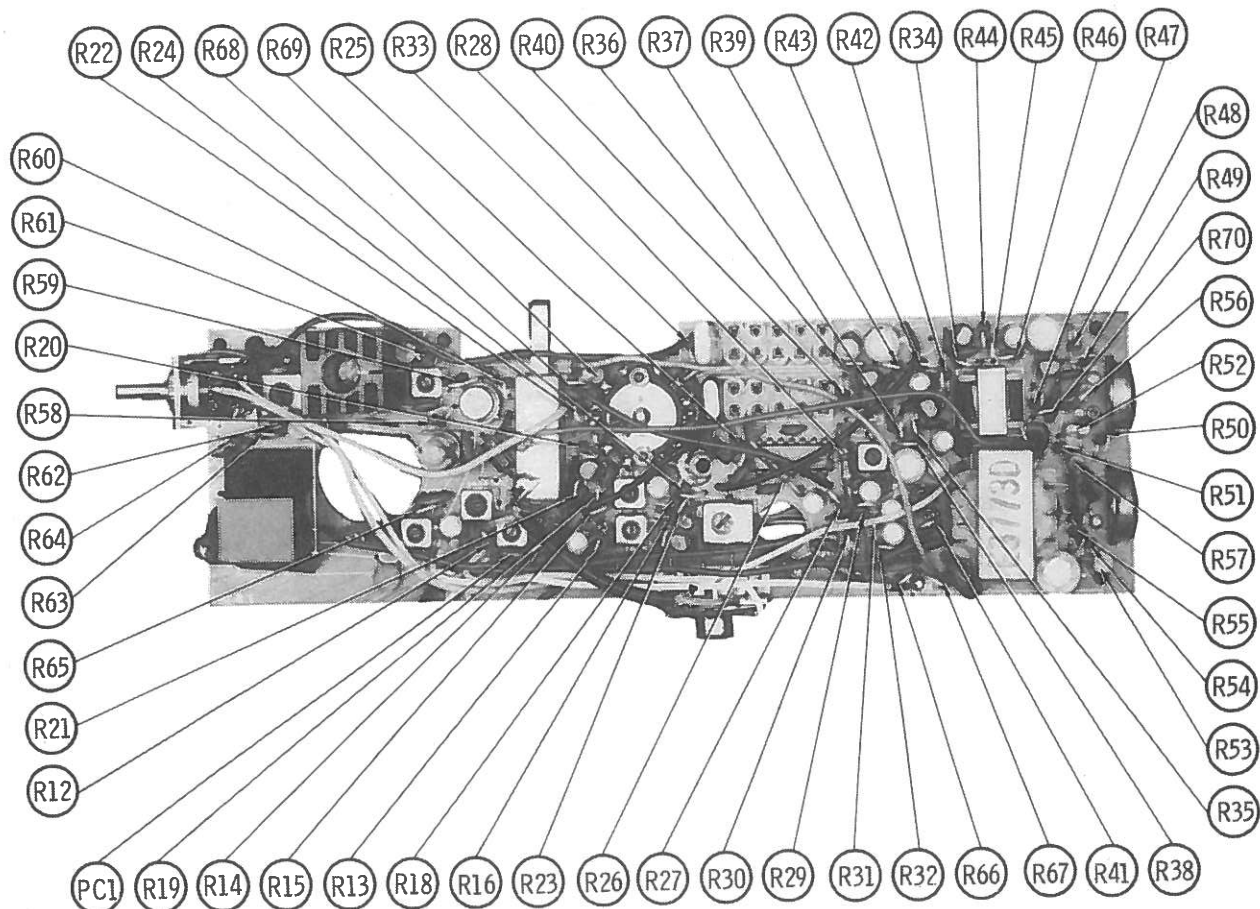
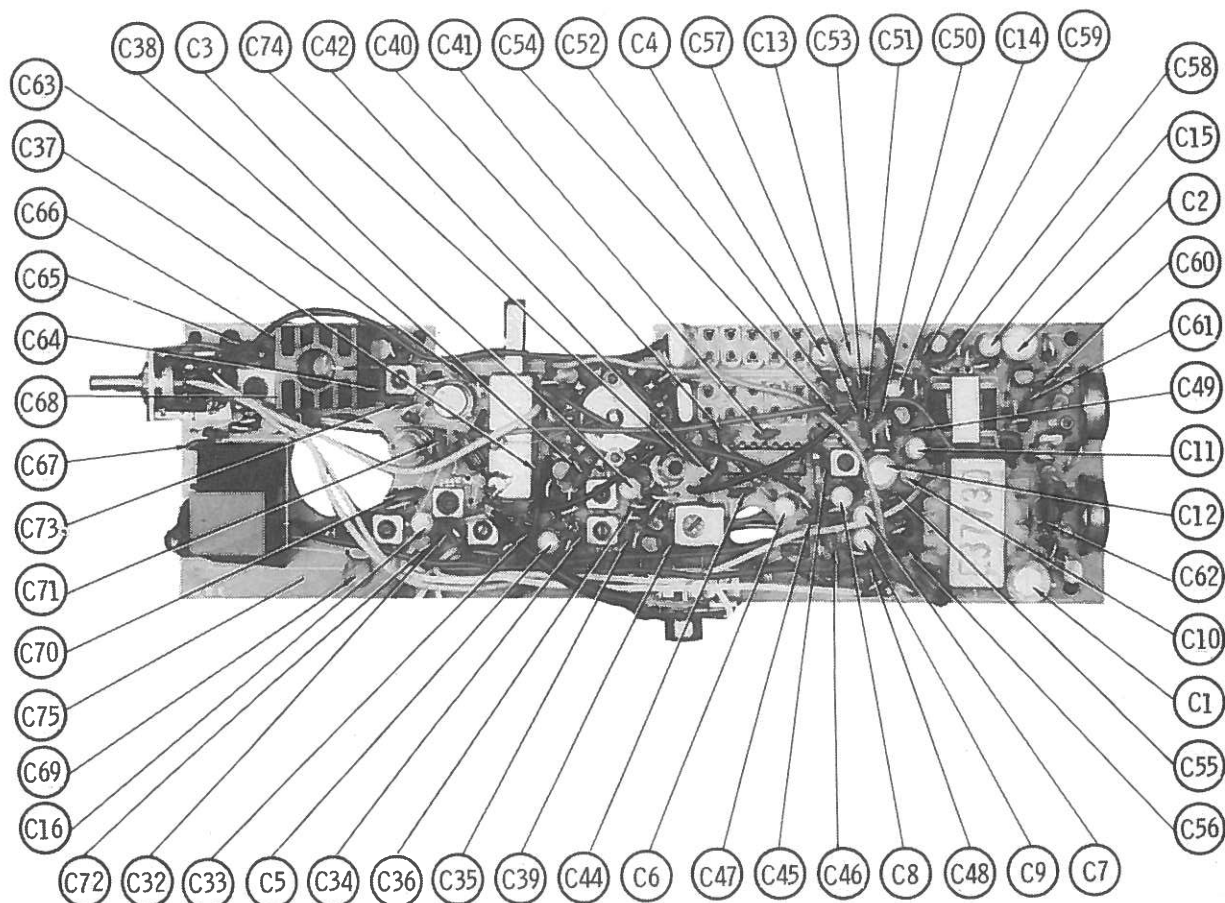
REALISTIC MODEL TRC-100B

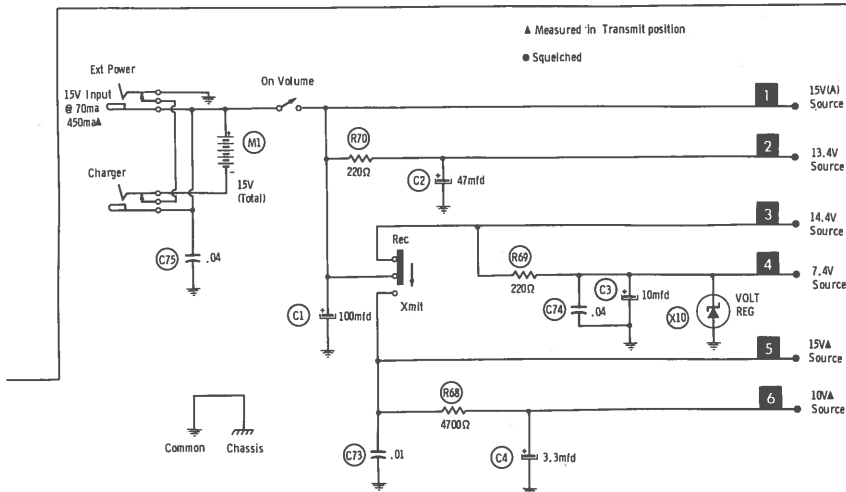
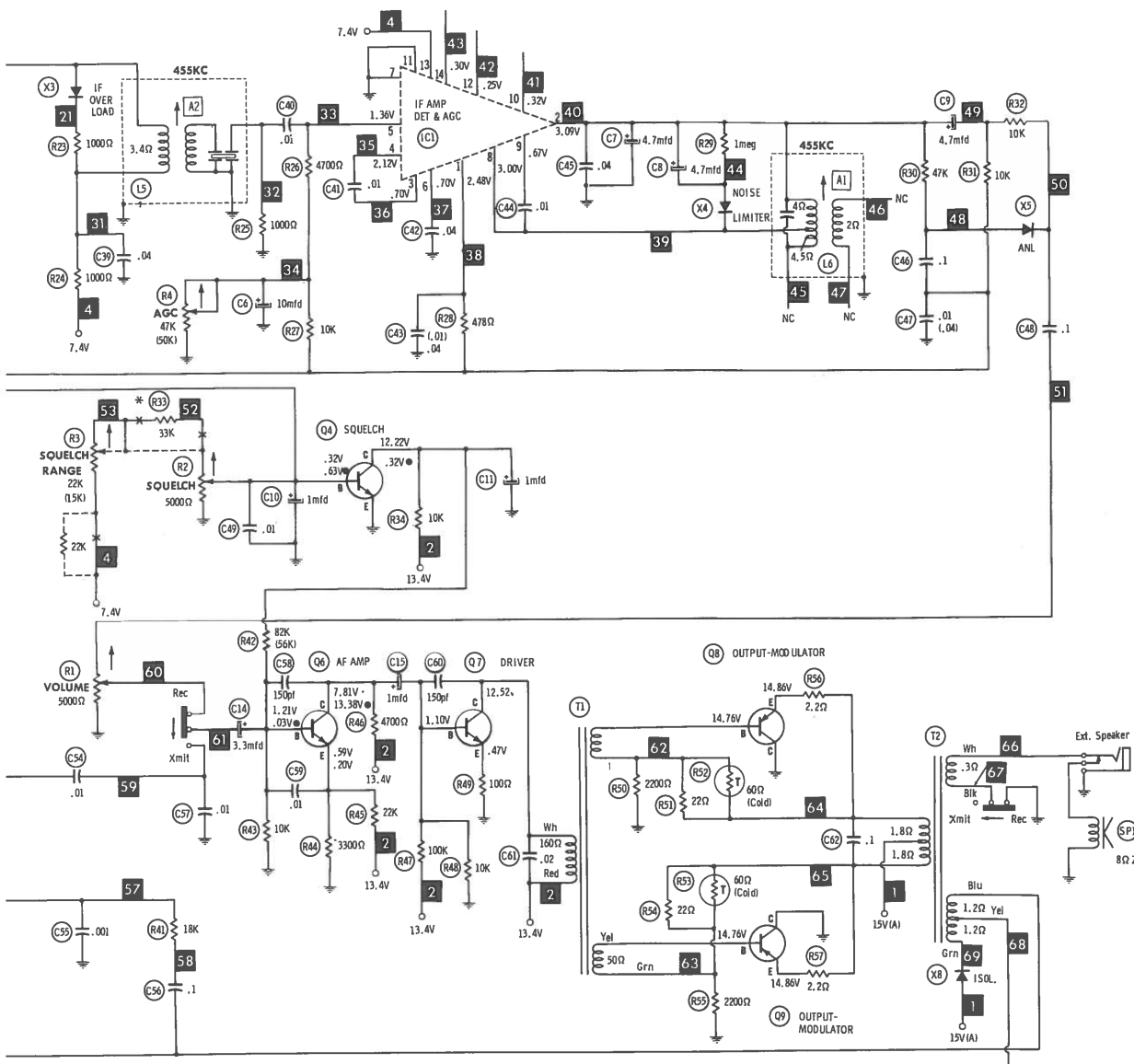






A Howard W. Sams CIRCUITRACE Photo





- * Denotes ground. (Voltage reference unless otherwise indicated).
- Indicates connection used in some versions.
- x- Indicates connection not used in some versions.
- * Omitted in some versions.
- o See parts list.

REALISTIC MODEL TRC-100B

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	2SC784	RF Amp		GE-17	TR-24	HEP56	SK3018	ECG 107
Q2	2SK19	Rec. Mixer		GE-FET-1	FE-100	HEP802		ECG 132
Q3	2SC370	Rec. Oscillator		GE-17	IRTR-51	HEP50	SK3018	ECG 123A
Q4	2SC373	Squelch		GE-17	IRTR-51	HEP55	SK3020	ECG 123A
Q5	2SC373	Mic. Preamp		GE-17	IRTR-51	HEP55	SK3020	ECG 123A
Q6	2SC373	AF Amp		GE-17	IRTR-51	HEP55	SK3020	ECG 123A
Q7	2SC373	Driver		GE-17	IRTR-51	HEP55	SK3020	ECG 123A
Q8	2SB367	Output-Modulator		GE-30		HEP642	SK3052	ECG 131
Q9	2SB367	Output-Modulator		GE-30		HEP642	SK3052	ECG 131
Q10	2SC423(E)	Xmtr. Oscillator		GE-10	IRTR-62	HEP53	SK3046	ECG 128
X11	2SC614D	Xmtr. Mixer		GE-20	IRTR-65	HEPS3001	SK3048	ECG 128
Q12	2SC614D	Final Amp		GE-20	IRTR-65	HEPS3001	SK3048	ECG 128

INTEGRATED CIRCUITS

ITEM No.	FUNCTION	MFGR. PART No.	REMARKS
IC1	IF Amp, Detector & AGC	LA1201	

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	1S73	1N34AS	1N34A	SK3087	ECG 109	
X2	1S1555	GE-504A	8D4 or 5A4D	SK3030 or SK3031	ECG 116 or ECG 117	
X3	1S188G	1N60	1N60	SK3088	ECG 109	
X4	1S73	1N34AS	1N34A	SK3087	ECG 109	
X5	1S188	1N60	1N60	SK3088	ECG 109	
X6	1S188	1N60	1N60	SK3088	ECG 109	
X7	1S188	1N60	1N60	SK3088	ECG 109	
X8	FR-1P (FR-2)	GE-504A	8D4 or 5A4D	SK3030 or SK3031	ECG 116 or ECG 117	
X9	1S188	1N60	1N60	SK3088	ECG 109	
X10	SZ-7		Z1106	SK3059	ECG 138	7.4 Zener

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	100 16V		MCD-180	EP15-100	WBR100-16	MT1-19	MTV100CD15	TE-1162
C2	47 16V		MCD-130	EP15-50	WBR50-25	MT1-16	MTV50CB15	TE-1160
C3	10 16V		MCD-70	EP15-10	WBR10-25	MT1-5	MTV10CB50	TE-1155
C4	3.3 35V		MCD-40	EP50-5	WBR5-50	MT1-3	MTV3CB50	TE-1302
C5	3.3 35V		MCD-40	EP50-5	WBR5-50	MT1-3	MTV3CB50	TE-1302
C6	10 16V		MCD-70	EP15-10	WBR10-25	MT1-5	MTV10CB50	TE-1155
C7	4.7 16V		MCD-50	EP15-5	WBR5-50	MT1-3	MTV5CB50	TE-1152
C8	4.7 16V		MCD-50	EP15-5	WBR5-50	MT1-3	MTV5CB50	TE-1152
C9	4.7 16V		MCD-50	EP15-5	WBR5-50	MT1-3	MTV5CB50	TE-1152
C10	1 50V		MCD-10	EP50-2	WBR1-50	MT1-1	MTV1CB50	TE-1300
C11	1 50V		MCD-10	EP50-2	WBR1-50	MT1-1	MTV1CB50	TE-1300
C12	33 16V		MCD-110	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	TE-1158
C13	33 16V		MCD-110	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	TE-1158
C14	3.3 35V		MCD-40	EP50-5	WBR5-50	MT1-3	MTV3CB50	TE-1302
C15	1 50V		MCD-10	EP50-2	WBR1-50	MT1-1	MTV1CB50	TE-1300
C16	1 50V		MCD-10	EP50-2	WBR1-50	MT1-1	MTV1CB50	TE-1300

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.
C32	100			DTZ-100	NP0100	CCT0-101	CN0310	10TCC-T10
C33	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C34	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C35	250		GPD X5F271K	DD-271	GP270	CCD-270	GP327	10TS-T27
C36	.001		GPD X5F102K	DD-102	GP1000	CCD-102	SM210	2SS-D10
C37	150		GPD X5F151K	DD-151	GP150	CCD-151	GP315	10TS-T15
C38	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C39	.04			DD-403			GP140	
C40	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C41	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C42	.04			DD-403			GP140	

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.
C43	.04		TTP-01	DD-403	MGP01	CCD-103	GP140	TG-S10
C44	.01			CK-103			TA110	
C45	.04			DD-403			GP140	
C46	.1		TTP-1	CK-104			TA010	TG-P10
C47	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C48	.1		TTP-1	CK-104			TA010	TG-P10
C49	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C50	100		GPD X5F101K	DD-101	GP100	CCD-101	GP310	10TS-T10
C51	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C52	150		GPD X5F151K	DD-151	GP150	CCD-151	GP315	10TS-T15
C53	.0001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C54	.01		GPD X5F102K	CK-103	MGP01	CCD-103	TA110	TG-S10
C55	.0001		TTP-01	DM-102	GP1000	CCD-102	SM210	2SS-D10
C56	.1		TTP-1	CK-104			TA010	TG-P10
C57	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C58	150		GPD X5F151K	DD-151	GP150	CCD-151	GP315	10TS-T15
C59	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C60	150		GPD X5F151K	DD-151	GP150	CCD-151	GP315	10TS-T15
C61	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C62	.1		TTP-1	CK-104			TA010	TG-P10
C63	100		GPD X5F101K	DD-101	GP100	CCD-101	GP310	10TS-T10
C64	500		GPD X5F501K	DM-501	GP500	CCD-501	GP350	10TS-T50
C65	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C66	50			DTZ-50	NP050	CCTO-510	CN0450	10TCC-Q50
C67	50			DTZ-50	NP050	CCTO-510	CN0450	10TCC-Q50
C68	500		GPD X5F501K	DM-501	GP500	CCD-501	GP350	10TS-T50
C69	100			DTZ-100	NP0100	CCTO-101	CN0310	10TCC-T10
C70	250		GPD X5F271K	DD-271	GP270	CCD-270	GP327	10TS-T27
C71	250		GPD X5F271K	DD-271	GP270	CCD-270	GP327	10TS-T27
C72	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C73	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C74	.04			DD-403			GP140	
C75	.04			DD-403			GP140	

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	5000	V12M4-IS-SJ16FHT5K				
R2	Squelch	5000	V12M4-1N16FHB5K				
R3	Squelch Range	22K	(1)				
R4	Squelch Range AGC Adjust	15K 47K (50K) (1)					

(1) May be used in some versions.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R52	61 (Cold)	FR-50	D-1E

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R53	61 (Cold)	FR-50	D1-E

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	Antenna Loading	113CN-2449HM			
L2	Rec. Antenna Match	74XH-1623A2			
L3	RF	74XH-1624A2			
L4	Rec. Osc.	74XC-2187			
L5	Input IF	MHF-70K (1)			
L6	Output IF	LMC-4202	16-9035	8812	
L7	Xmtr. Osc.	74XN-2229A02			
L8	RF Choke (10uh)		19-2014	4610	T859
L9	RF Choke (10uh)		19-2014	4610	T859
L10	Xmtr. Mixer	TKXN-14993			
L11	RF Choke (10uh)		19-2014	4610	T859
L12	RF Choke	4LCN-027	19-2001	4580	T956
L13	Final	74XN-2230			
C14	Pi Filter Network	7LNP-047			
L15	Meter Take-off (2)	4LNI-030			

(1) Includes Crystal.

(2) 4 turns of wire on ferrite bead.

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	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD Part No.	
T1	2	1	1	E3774R				

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	64	8	E3773				
		SEC. 2					
		4.4 CT DC Resistance					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	2" Round, 8 ohms	57-52		

BATTERIES

ITEM No.	VOLTAGE	MFGR. PART No.	EVEREADY PART No.	NOTES
M1	15V		1015 915 CH500	10 Required. 10 Required 12 Required

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M2	Crystal (Rec)		
M3	Crystal (Xmit)		
M4	Meter	3E-5	Bat/RF
M5	Microphone	MC-3	
PC1	RF-(L2)		
S1	Switch, Channel	S18-1-2-6	
S2	Switch, Xmit-Rec	4PC-036	Telescopic
	Antenna	GE-12B-772	

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

ITEM	PART No.	ITEM	PART No.
Cabinet - Front	GE-13B-844A	Knob - Selector	GE-13D-G01
Cabinet - Rear	GE-13B-836A	Knob - Volume	GE-13D-902
Cover - Battery	GE-13B-837	Knob - Talk	GE-13D-844B

ACCESSORIES

ITEM	MFGR. PART No.	REMARKS
12VDC Power Pack	20-1500	
AC Adapter/Charger WT-117PS	21-115	

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. 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.)



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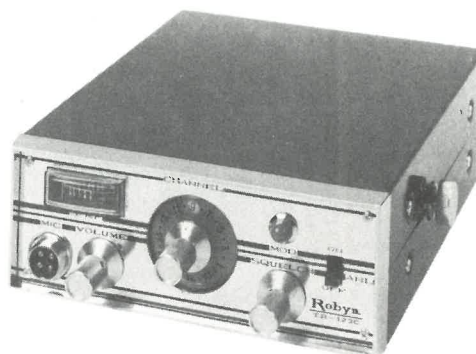
NOTE

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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 TR-123C

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A1, A2, A3, A5, A6, A16
A4, A7 thru A15

GENERAL CEMENT:

#8868, 9089
#8606L, 9440

RECEIVER

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

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side through .01mfd to base of TR14 (2nd Rec. Mixer), low side to ground. Tune to 455KC (Mod.).	Any	A1, A2, A3	Adjust for maximum.
High side through .01mfd to Antenna connector, low side to ground. Tune to 27.085MC (Mod.).	11	A4 thru A9	Adjust for maximum.

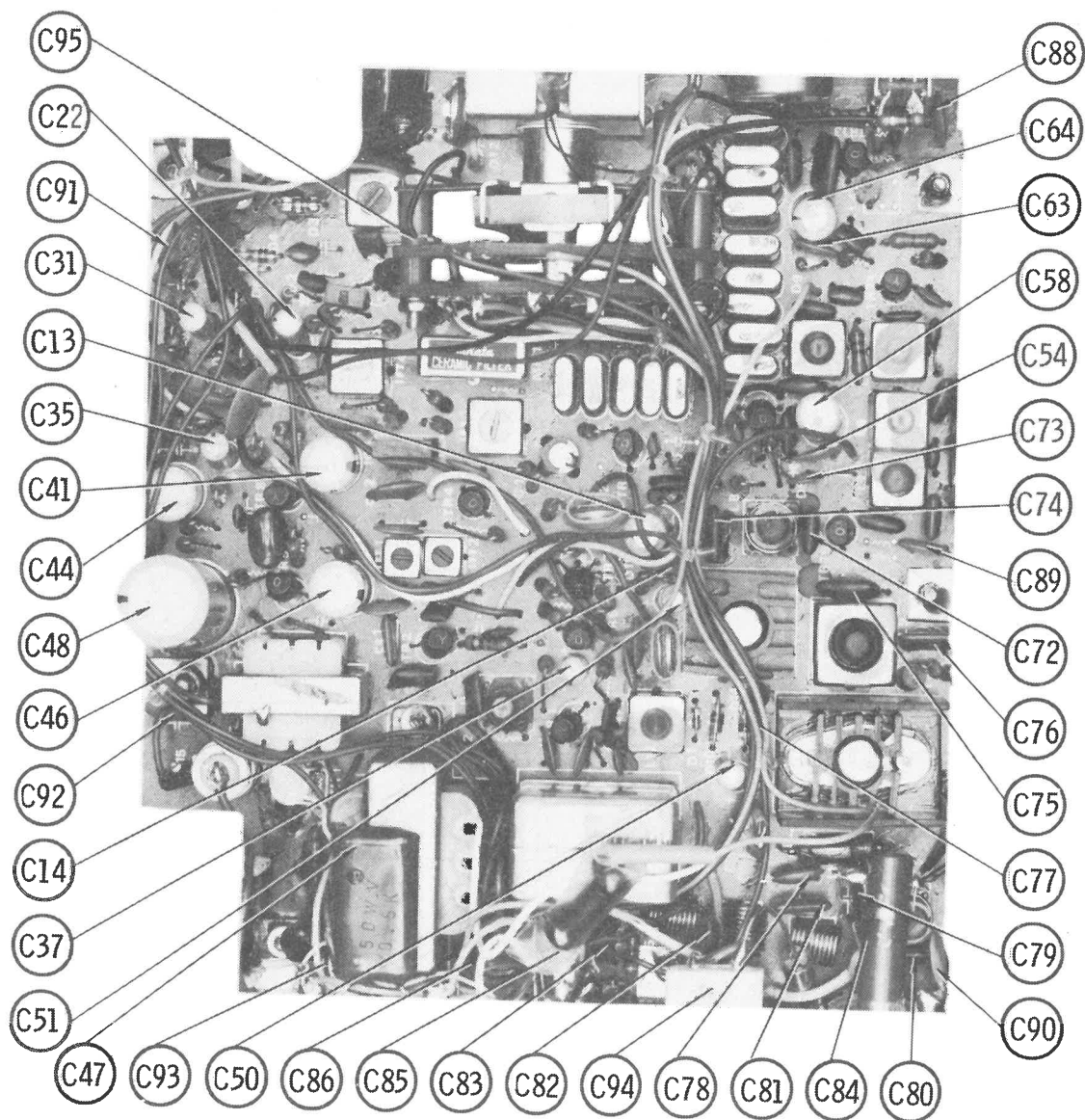
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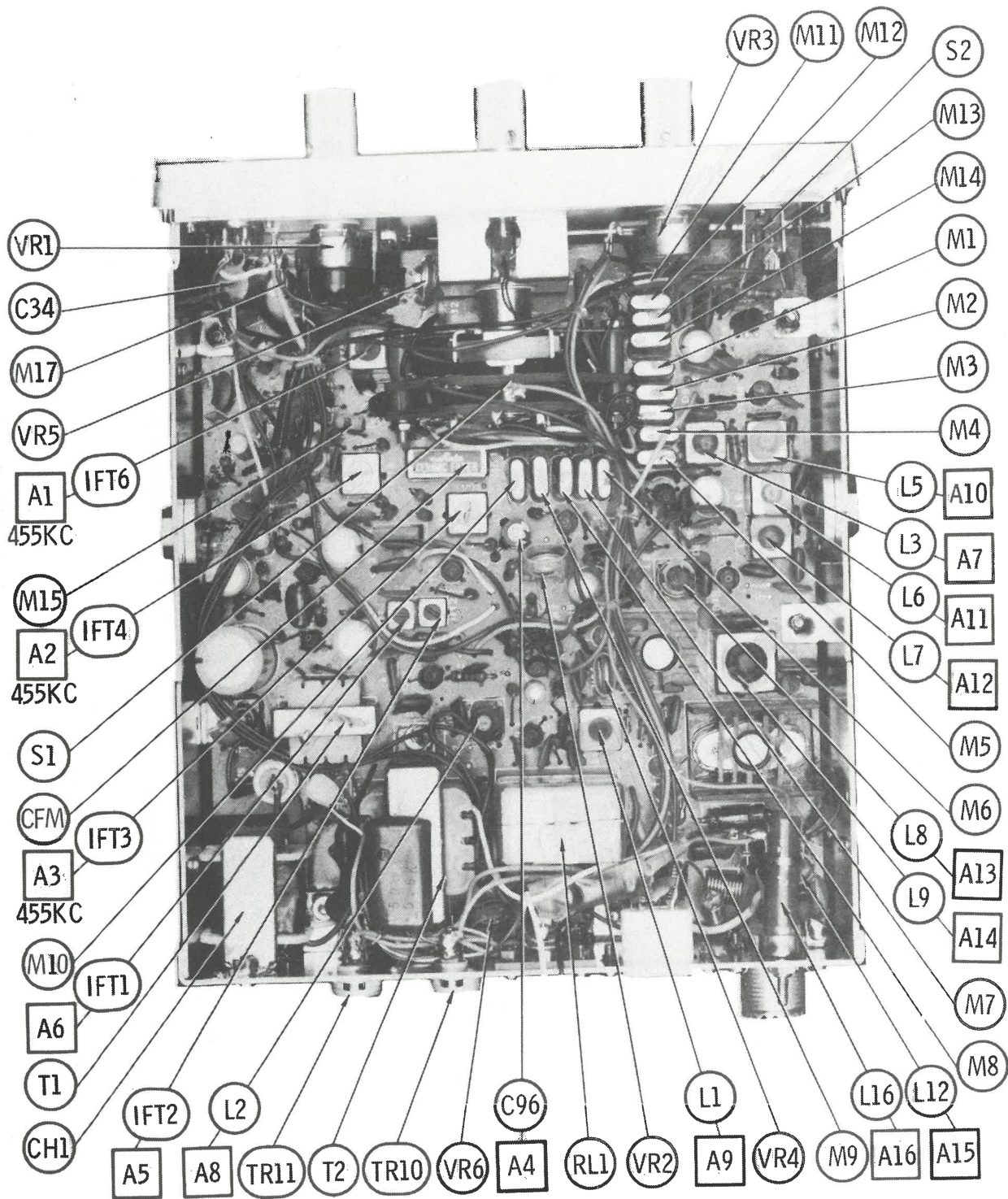
INDICATOR	ADJUST	REMARKS
RF Wattmeter or Field Strength Meter.	A10 thru A15	Adjust for maximum.
0-500ma Ammeter	A15	Disconnect meter mumper and insert meter. Readjust A15 for 5 watts Input to TR-17 (Final Amp)
Television (Ch. 2)	A16	Adjust for minimum interference.

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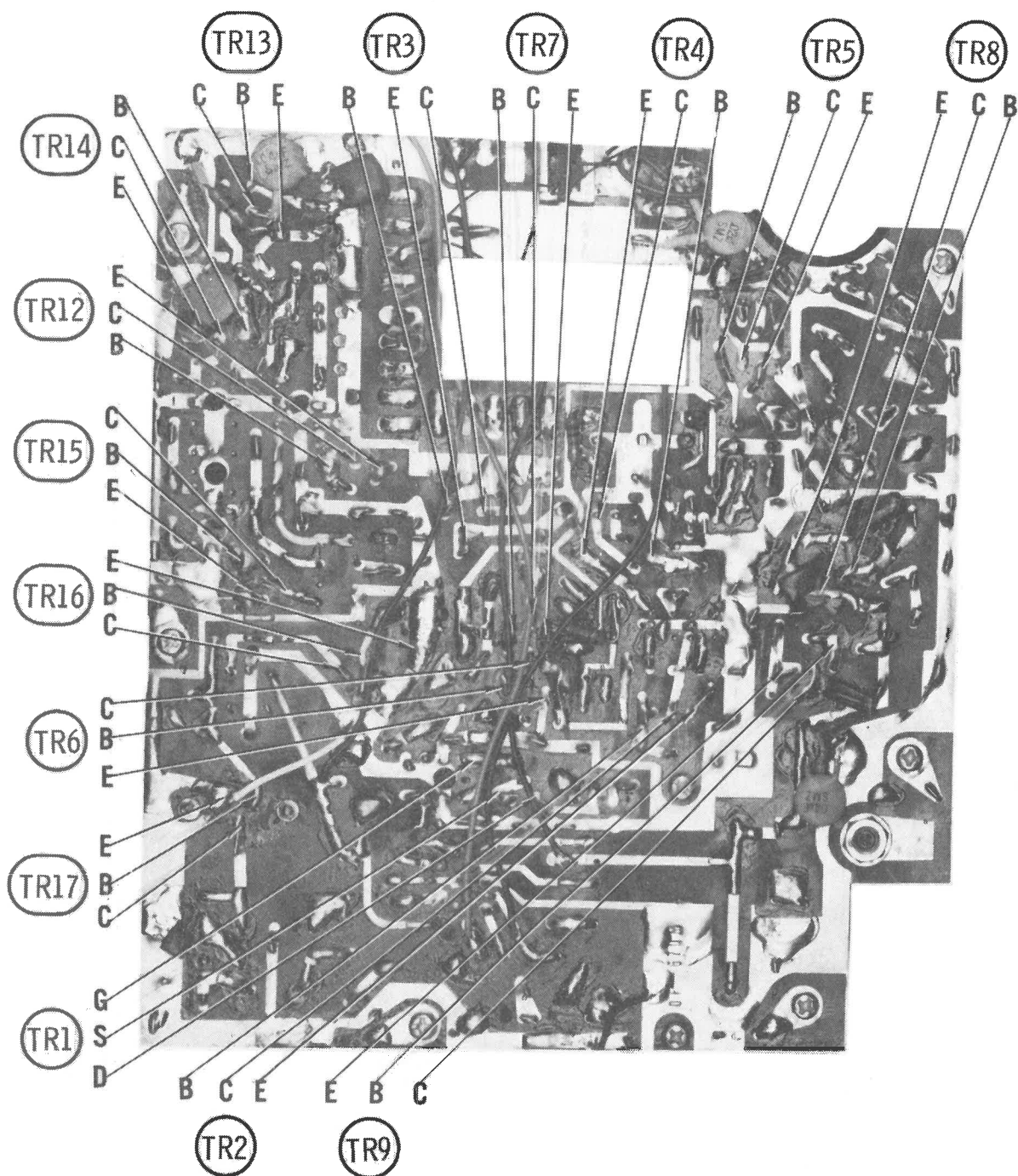
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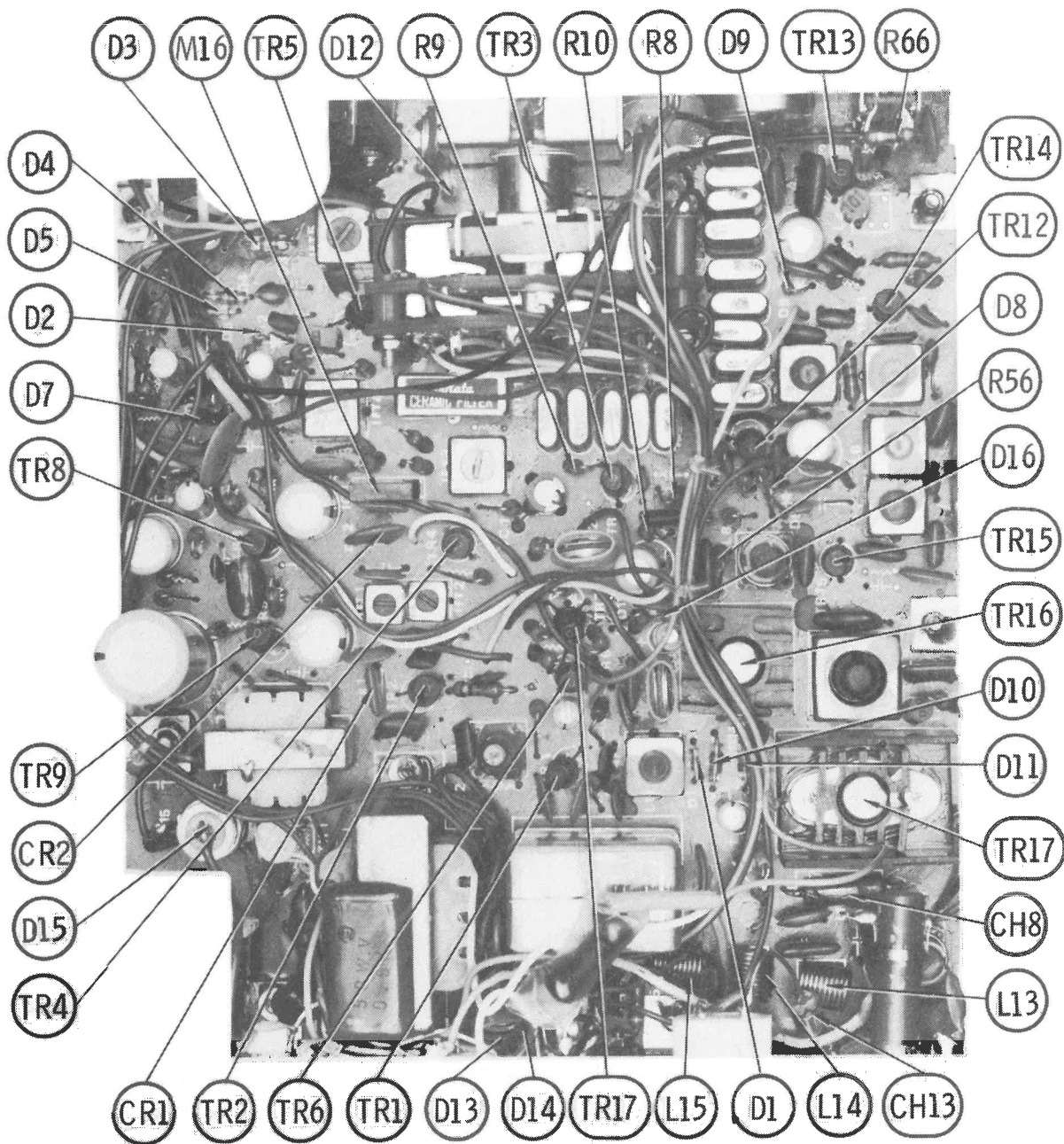
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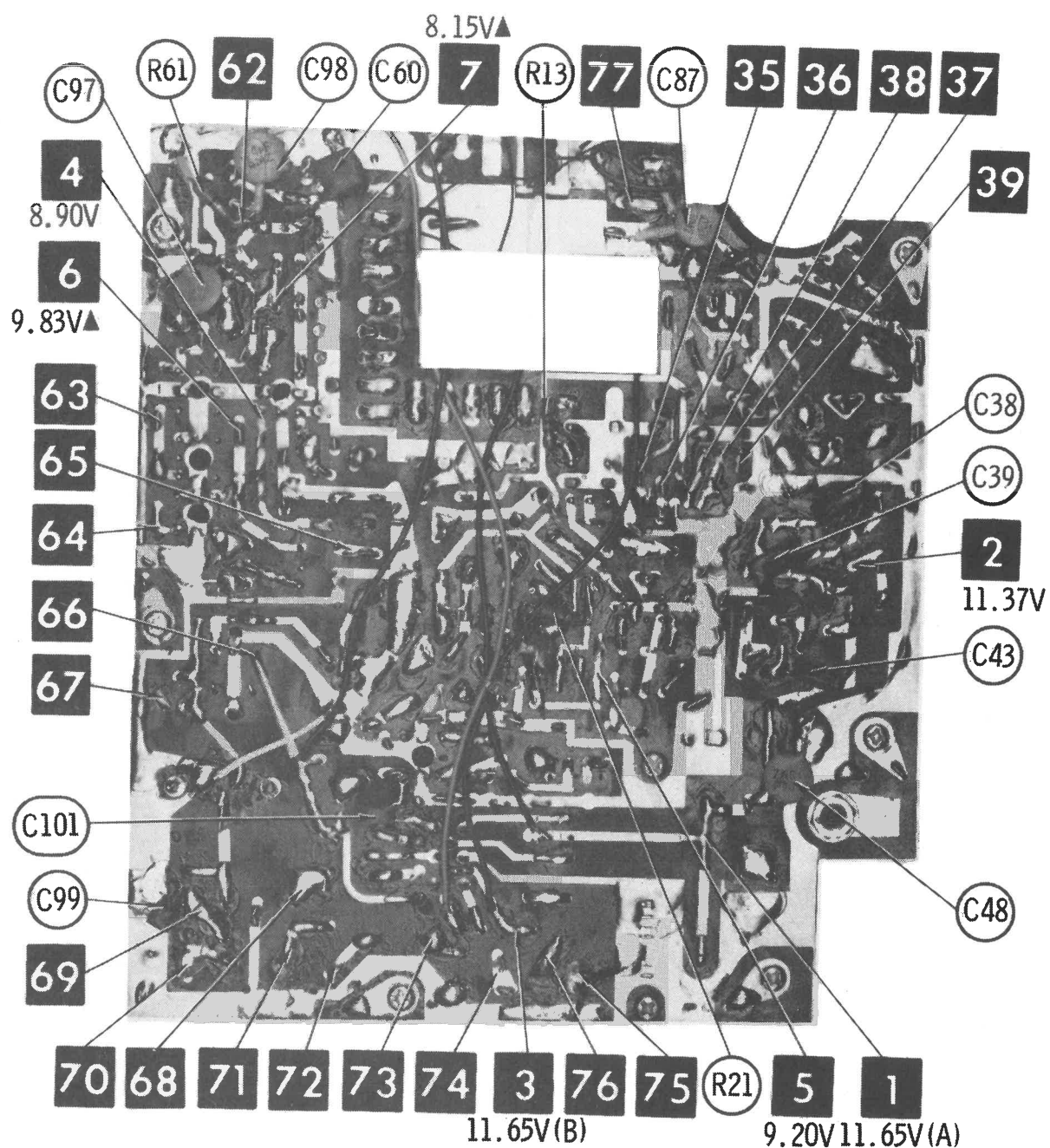


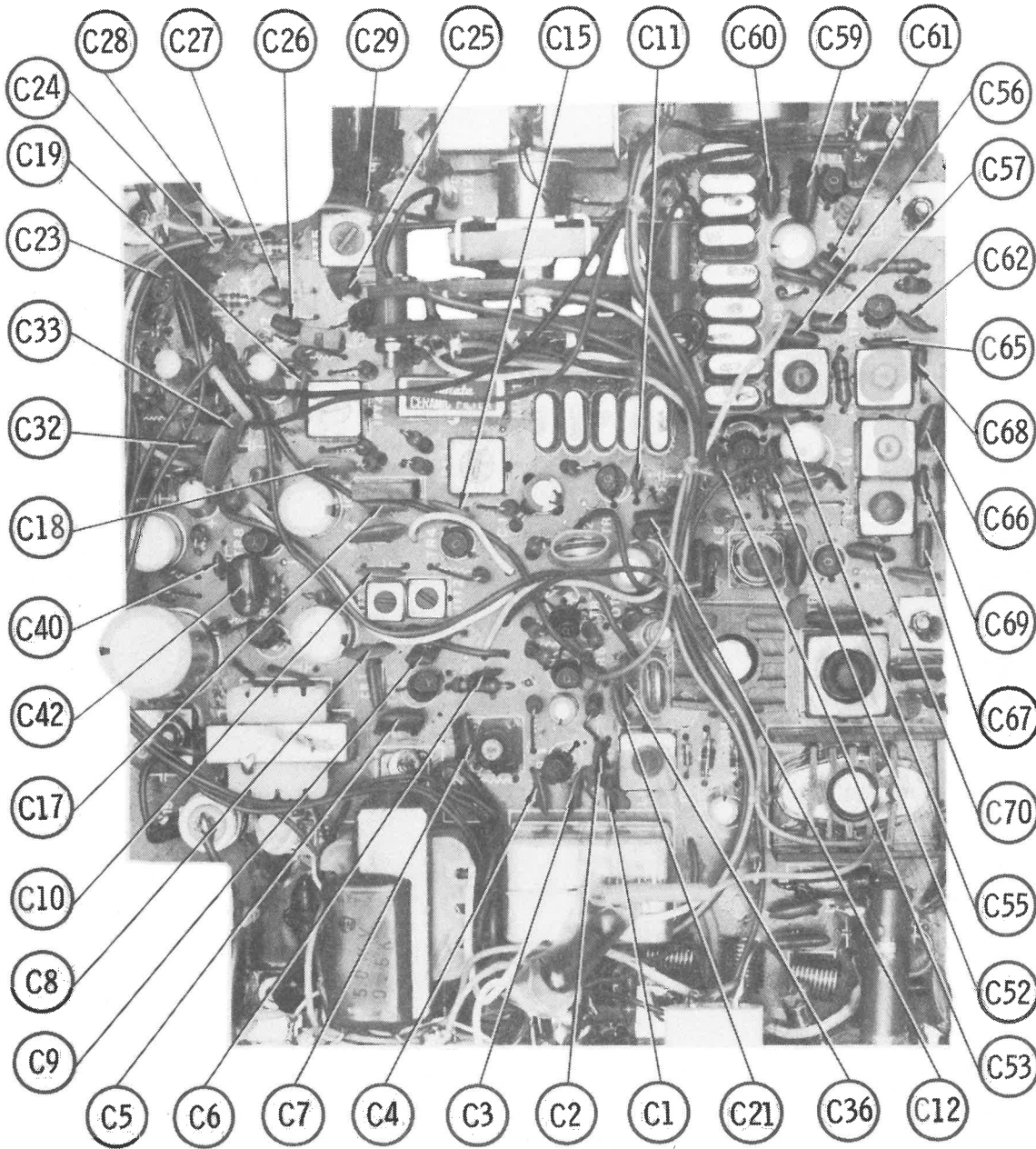
ROBYN MODEL TR-123C

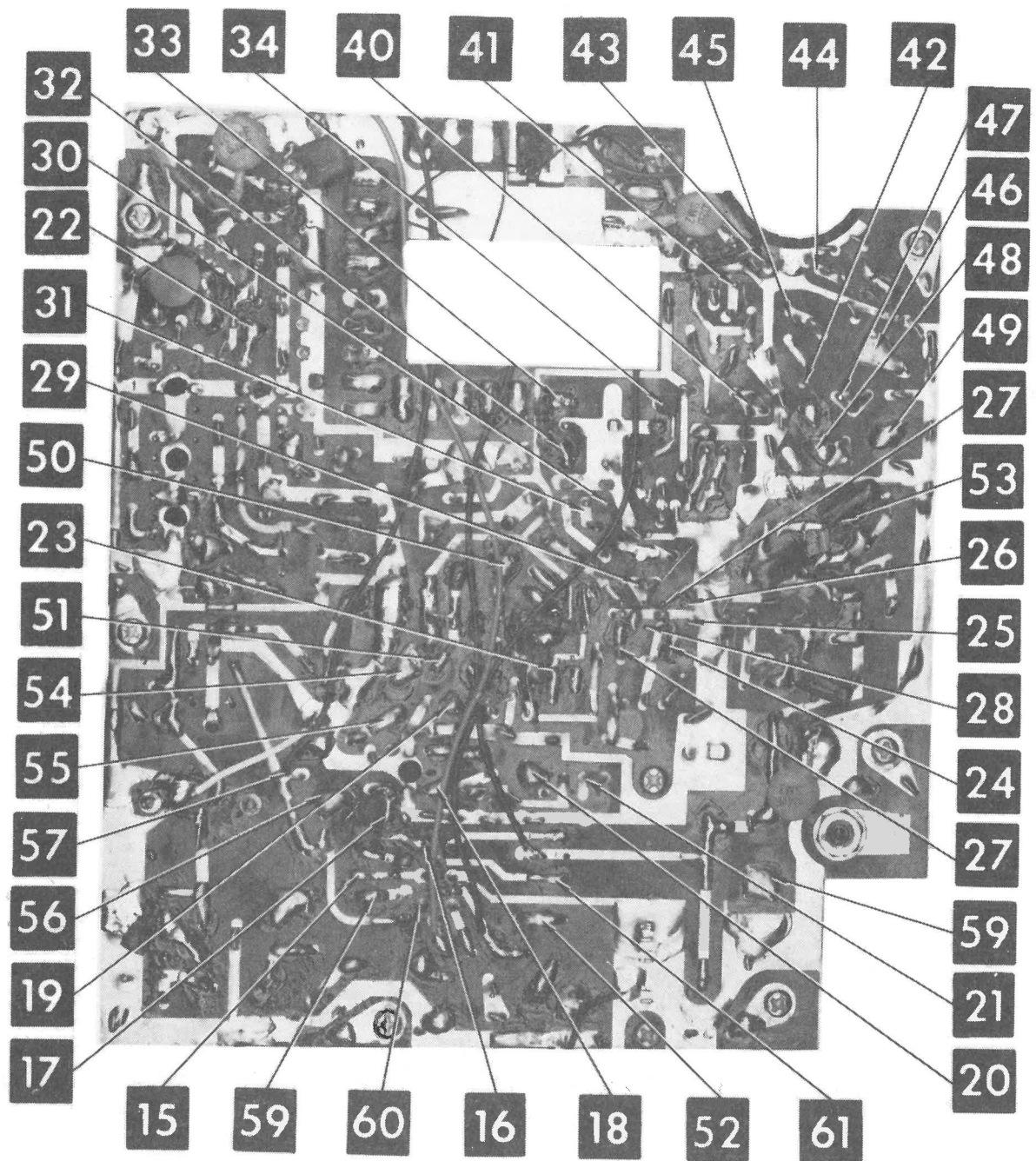




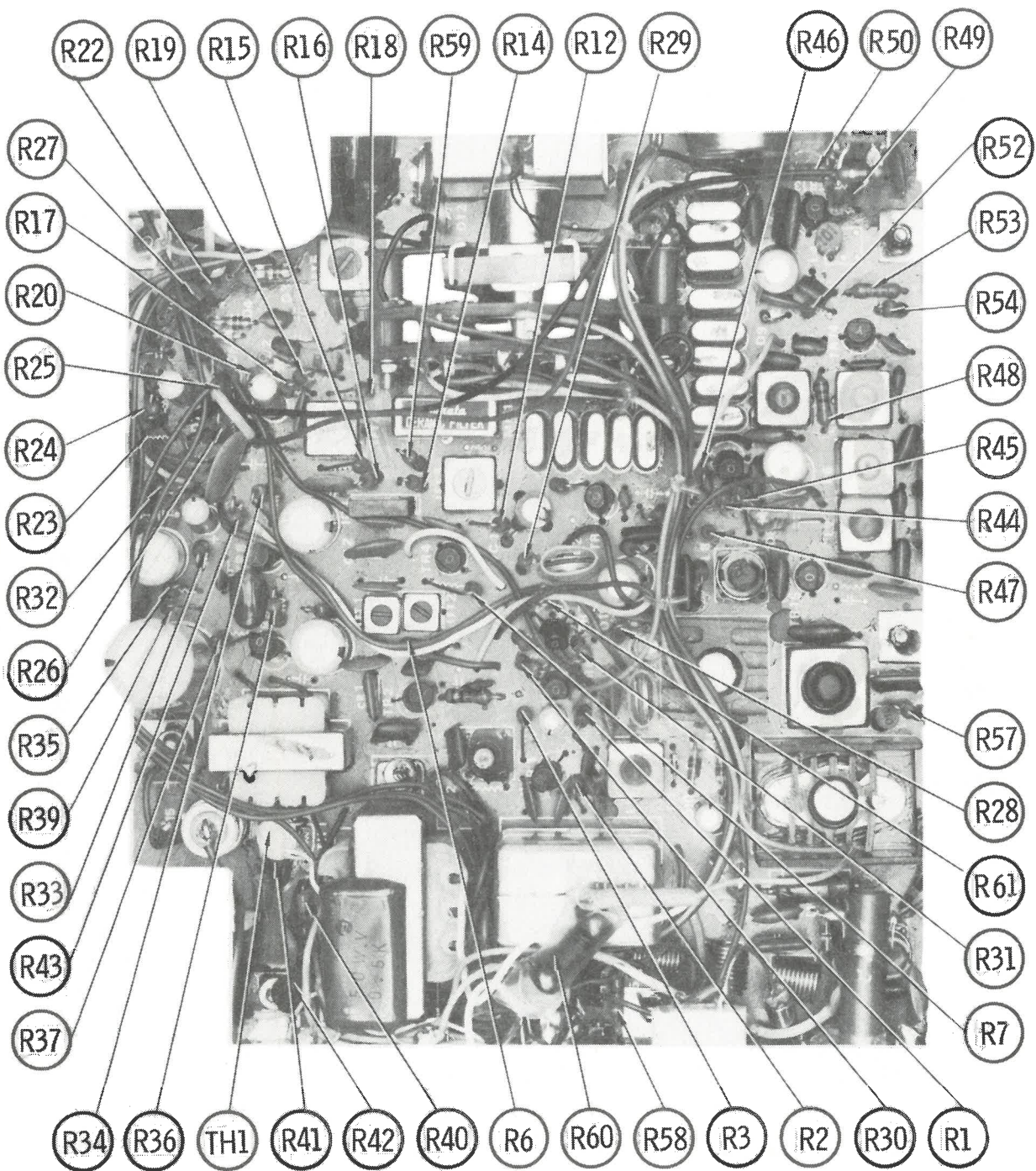
ROBYN MODEL TR-123C



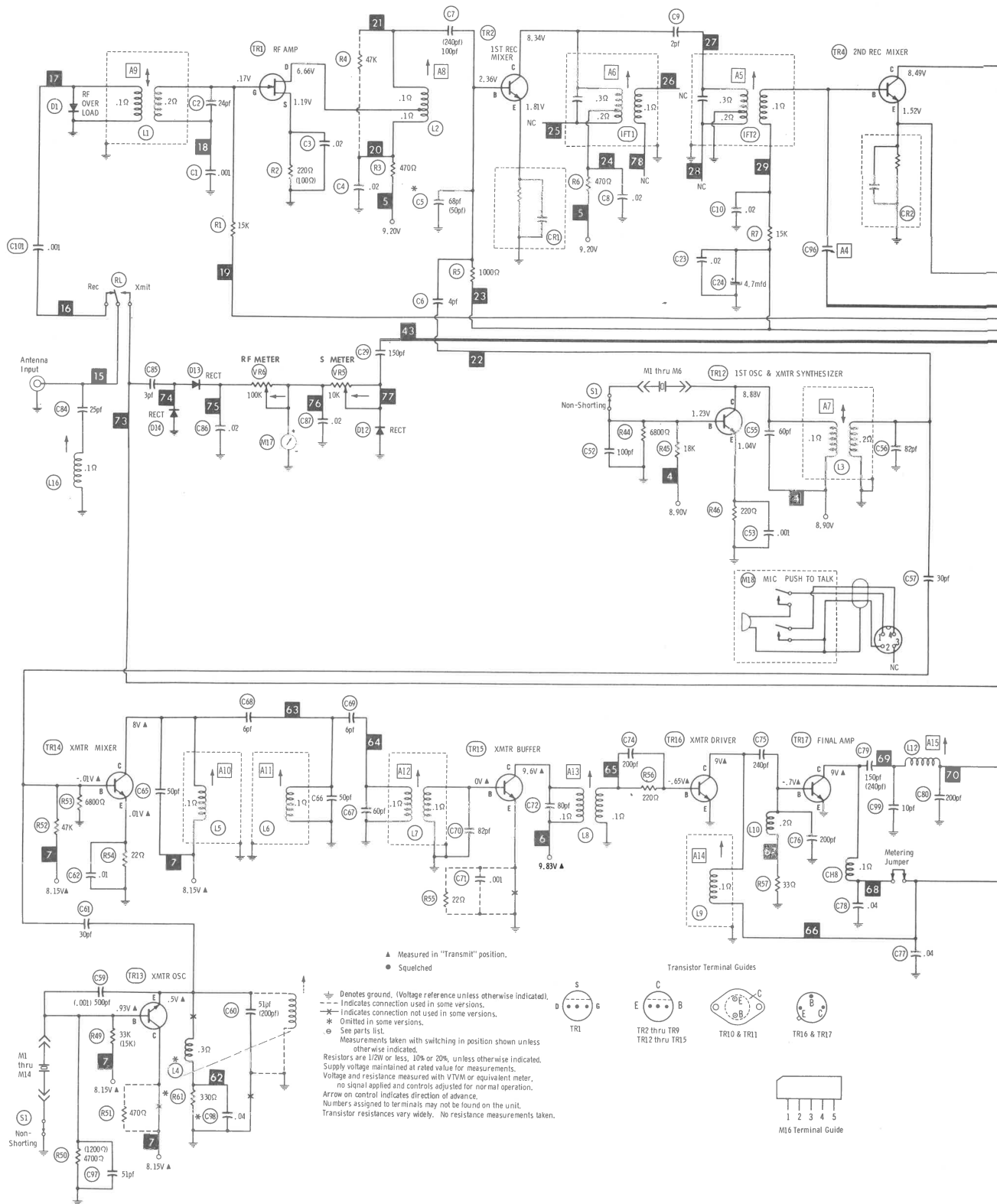




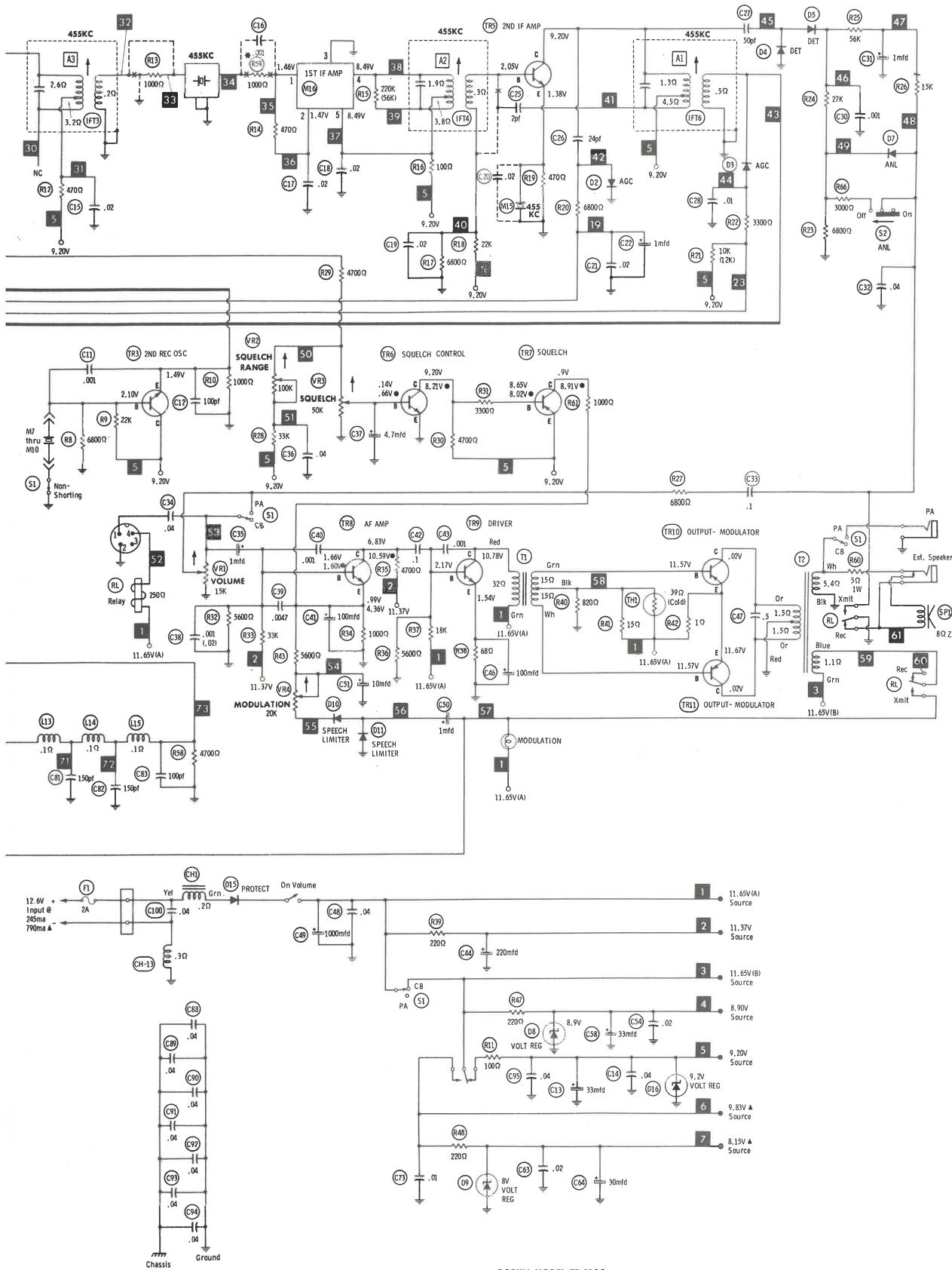
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ROBYN MODEL TR-123C



A PHOTOFAC STANDARD NOTATION SCHEMATIC
with **CIRCUITACE**
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ROBYN MODEL TR-123C

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.)

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.
TR1	2SK19GR	RF Amp		GE-FET-1	FE-100	HEP802		ECG 132
TR2	2SC394Y	1st Rec. Mixer		GE-17	TR-22	HEP53	SK3018	ECG 107
TR3	2SC3710	2nd Rec. Oscillator		GE-17	IRTR-51	HEP50	SK3018	ECG 123A
TR4	2SC3710	2nd Rec. Mixer		GE-17	IRTR-51	HEP50	SK3018	ECG 123A
TR5	2SC3710	2nd IF Amp		GE-17	IRTR-51	HEP50	SK3018	ECG 123A
TR6	2SC3720	Squelch Control		GE-10	IRTR-51	HEP50	SK3018	ECG 123A
TR7	2SA5620	Squelch		GE-22	TR-19	HEP51	SK3018	ECG 159
TR8	2SC1000Y (2SC373)	AF Amp		GE-18	TR-24	HEP721	SK3020	ECG 123A
TR9	2SC7350	Driver		GE-10	TR-21	HEP53	SK3024	ECG 123A
TR10	2SB463BL	Output-Modulator		GE-30		HEP643	SK3052	ECG 131
TR11	2SB463BL	Output-Modulator		GE-30		HEP643	SK3052	ECG 131
TR12	2SC3710	1st Rec. Osc.- Xmtr. Synthesizer Osc.		GE-17	IRTR-51	HEP50	SK3018	ECG 123A
TR13	2SC3710	Xmtr. Oscillator		GE-17	IRTR-62	HEP50	SK3046	ECG 123A
TR14	2SC394Y	Xmtr. Mixer			IRTR-62	HEP53	SK3046	ECG 107
TR15	2SC7350	Xmtr. Buffer		GE-10	IRTR-63	HEP53	SK3047	ECG 123A
TR16	2SC781	Xmtr. Driver		GE-20	IRTR-64	HEPS3001	SK3047	ECG 128
TR17	2SC799	Final Amp		GE-28	IRTR-65	HEPS3002	SK3048	

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	1S1588	GE-300			ECG 177	
D2	1N60	1N60	1N60	SK3088	ECG 109	
D3	1N60	1N60	1N60	SK3088	ECG 109	
D4	1N60	1N60	1N60	SK3088	ECG 109	
D5	1N60	1N60	1N60	SK3088	ECG 109	
D7	MC5321	GE-300			ECG 177	
D8	1S334	GEZD-9.1		SK3060	ECG 139	9.1V Zener
D9	1S334	GEZD-9.1		SK3060	ECG 139	9.1V Zener
D10	1N60	1N60	1N60	SK3088	ECG 109	
D11	1N60	1N60	1N60	SK3088	ECG 109	
D12	1N60	1N60	1N60	SK3088	ECG 109	
D13	1N60	1N60	1N60	SK3088	ECG 109	
D14	1N60	1N60	1N60	SK3088	ECG 109	
D15	1S1660	GEMR-2		SK3051		
D16	1S334	GEZD-9.1		SK3060	ECG 139	9.1V Zener

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.
C13	33 16V		MCD-110	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	TE-1158
C22	1 10V		MCD-10	EP50-2	WBR1-50	MT1-1	MTV1CB50	TE-1300
C24	4.7 10V		MCD-50	EP15-5	WBR5-50	MT1-3	MTV5CB50	TE-1127
C31	1 10V		MCD-10	EP50-2	WBR1-50	MT1-1	MTV1CB50	TE-1300
C35	1 10V		MCD-10	EP50-2	WBR1-50	MT1-1	MTV1CB50	TE-1300
C37	4.7 10V		MCD-50	EP15-5	WBR5-50	MT1-3	MTV5CB50	TE-1127
C41	100 10V		MCD-180	EP15-100	WBR100-16	MT1-19	MTV100CB10	TE-1135
C44	220 16V		CRE481A	EA15-250	WBR250-16	MT1-23	MTV200DE15	TE-1164
C46	100 10V		MCD-180	EP15-100	WBR100-16	MT1-19	MTV100CB10	TE-1135
C49	1000 16V		PRS1230	EA15-1000	WBR1000-16	QTL-32	TC1501B	TL-1166.5
C50	4.7 10V		MCD-50	EP15-5	WBR5-50	MT1-3	MTV5CB50	TE-1127
C51	10 10V		MCD-70	EP15-10	WBR10-25	MT1-5	MTV10CB50	TE-1128
C58	33 16V		MCD-110	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	TE-1158
C64	33 16V		MCD-110	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	TE-1158

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.
C1	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C2	24			DTZ-25			CN0425	10TCC-Q25
C3	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C4	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C5	68		ADM-15-680	CPR-68J		DM-15-680J	SX468	MS-468
C6	4		ADM-15-050			DM-15-050J	SX050	MS-55
C7	100		ADM-15-101	CPR-100J		DM-15-101J	SX310	MS-31
C8	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C9								
C10	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C11	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C12	100		ADM-15-101	CPR-100J		DM-15-101J	SX310	MS-31
C14	.04			DD-403			GP140	

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.
C15	.02		TTP-02	CK-203	MGPO2	CCD-203	TA120	TG-S20
C17	.02		TTP-02	CK-203	MGPO2	CCD-203	TA120	TG-S20
C18	.02		TTP-02	CK-203	MGPO2	CCD-203	TA120	TG-S20
C19	.02		TTP-02	CK-203	MGPO2	CCD-203	TA120	TG-S20
C21	.02		TTP-02	CK-203	MGPO2	CCD-203	TA120	TG-S20
C23	.02		TTP-02	CK-203	MGPO2	CCD-203	TA120	TG-S20
C25	2							
C26	24		ADM-15-240	CPR-24J		DM-15-240J	SX424	MS-424
C27	50		ADM-15-500	CPR-47J		DM-15-500J	SX447	MS-45
C28	.01		TTP-01	CK-103	MGPO1	CCD-103	TA110	TG-S10
C29	150		GPD X5F151K	DD-151	GP150	CCD-151	GP315	10TS-T15
C30	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C32	.04			DD-403			GP140	
C33	.1		TTP-1	CK-104			TA010	TG-P10
C34	.04			DD-493			GP140	
C36	.04			DD-403			GP140	
C38	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C39	.0047		GPD X5R472K	DD-472G	GP4700	CCD-472	JF247	10TS-D47
C40	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C42	.1		TTP-1	CK-104			TA010	TG-P10
C43	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C47	.5							
C48	.04			DD-403			GP140	
C52	100		ADM-15-101	CPR-100J		DM-15-101J	SX310	MS-31
C53	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C54	.02		TTP-02	CK-203	MGPO2	CCD-203	TA120	TG-S20
C55	60		ADM-15-620	CPR-62J		DM-15-620J	SX462	MS-462
C56	82		ADM-15-820	CPR-82J		DM-15-820J	SX482	MS-482
C57	30		ADM-15-300	CPR-30J		DM-15-300J	SX430	MS-43
C59	500			CPR-470J	CD15F471J500	DM-16-471	SX347	MS-347
C60	51		ADM-15-510			DM-15-510J		MS-451
C61	30		ADM-15-300	CPR-30J		DM-15-300J	SX430	MS-43
C62	.01		TTP-01	CK-103	MGPO1	CCD-103	TA110	TG-S10
C63	.02		TTP-02	CK-203	MGPO2	CCD-203	TA120	TG-S20
C65	50		ADM-15-500	CPR-47J		DM-15-500J	SX447	MS-45
C66	50		ADM-15-500	CPR-47J		DM-15-500J	SX447	MS-45
C67	50		ADM-15-500	CPR-47J		DM-15-500J	SX447	MS-45
C68	6		ADM-15-050			DM-15-050J	SX550	MS-55
C69	6		ADM-15-050			DM-15-050J	SX550	MS-55
C70	82		ADM-15-820	CPR-82J		DM-15-820J	SX482	MS-482
C72	82		ADM-15-820	CPR-82J		DM-15-820J	SX482	MS-482
C73	.01		TTP-01	CK-103	MGPO1	CCD-103	TA110	TG-S10
C74	200		ADM-15-201	CPR-200J		DM-15-201J	SX320	MS-32
C75	240		ADM-15-241	CPR-240J		DM-15-241J	SX324	MS-324
C76	200		ADM-15-201	CPR-200J		DM-15-201J	SX320	MS-32
C77	.04			DD-403			GP140	
C78	.04			DD-403			GP140	
C79	150		ADM-15-151	CPR-150J		DM-15-151J	SX315	MS-315
C80	200		ADM-15-201	CPR-200J		DM-15-201J	SX320	MS-32
C81	150		ADM-15-151	CPR-150J		DM-15-151J	SX315	MS-315
C82	150		ADM-15-151	CPR-150J		DM-15-151J	SX315	MS-315
C83	100		ADM-15-101	CPR-100J		DM-15-101J	SX310	MS-31
C84	30		ADM-15-300	CPR-30J		DM-15-30J	SX430	MS-43
C85	3							
C86	.02		TTP-02	CK-203	MGPO2	CCD-203	TA120	TG-S20
C87	.02		TTP-02	CK-203	MGPO2	CCD-203	TA120	TG-S20
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	.02		TTP-02	CK-203	MGPO2	CCD-203	TA120	TG-S20
C96								
C97	51		ADM-15-510			DM-15-510J		MS-451
C98	.04		ADM-15-100	DD-403		DM-15-100J	GP140	MS-41
C99	10						GP140	
C100	.04			DD-403			GP140	
C101	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10

ROBYN MODEL TR-123C

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.
VR1	Volume/Switch	5000		TSV-100K (1)		X201R104B (1)
VR2	Squelch Range	100K		or (T-100K (1)		
VR3	Squelch	50K				
VR4	Modulation Adjust	20K		T-20K (1) or		X201R253B (1)
				TSV-25K (1)		
VR5	"S" Meter Adjust	10K		TSV-10K (1) or		X201R103B (1)
				T-10K (1)		
VR6	"RF" Meter Adjust	100K		TSV-100K (1)		X201R104B (1)
				or T-100K (1)		

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

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R60	5 1W		

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
TH1	39 (Co1d)		

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.	
CH8	RF Choke	(TKXN 21134)	19-1000	74F106AP	T855	
CH13	Hash Choke		16-9026 16-9027 16-9028	2066 2067 2068	5218	TA815
IFT1	1st Rec. Mixer					
IFT2	Input IF					
IFT3	Interstage IF					
IFT4	Interstage IF					
IFT6	Output IF					
L1	Rec. Antenna Matching		19-1000	74F106AP	T855	
L2	RF					
L3	1st Rec. Osc.-Xmtr.- Synthesizer Osc.					
L4	RF Choke					
L5	Xmtr. Input (Pri)	(010)	19-1000	74F126AP	T807	
L6	Xmtr. Input (Sec)					
L7	Xmtr. Mixer Output					
L8	Xmtr. Buffer					
L9	Xmtr. Driver					
L10	RF Choke					
L12	Pi Network					
L16	TVI Trap					

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.	
CH1	790ma	.2	.7mh					

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						

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	51	12					
		SEC. 2					
		1.5 DC Resistance					

SPEAKER

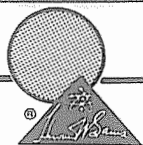
ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	4" PM, 8 ohms		4A1Z8	

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA						
		PART No.		BUSS PART No.		LITTELFUSE PART No.		WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE
F1	2A			AGC 2	HDJ	312002	150145	

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
CFM	Crystal Filter	(TA7060P)	455KC
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	Crystal		455KC
M16	Module		1st IF Amp
M17	Meter		RF & "S"
M18	Mic		
RY1	Relay		
SW1	Switch, Selector		
SW2	Switch, ANL		



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 13-874

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A1 thru A4 #8868, 9089
A5 thru A12 #8606L, 9440

GENERAL CEMENT:

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 through .01mfd to base of Q2 (Rec. Mixer), low side to ground. Tune to 455KC (Mod.).	Any	A1 thru A4	Adjust for maximum.
High side through .01mfd to Antenna connector, low side to ground. Tune to Channel Frequency.	(1)	A5 thru A7	(1) CHECK CRYSTAL (M1 & M2) FREQUENCIES AND SET GENERATOR ACCORDINGLY. ADJUST FOR MAXIMUM.

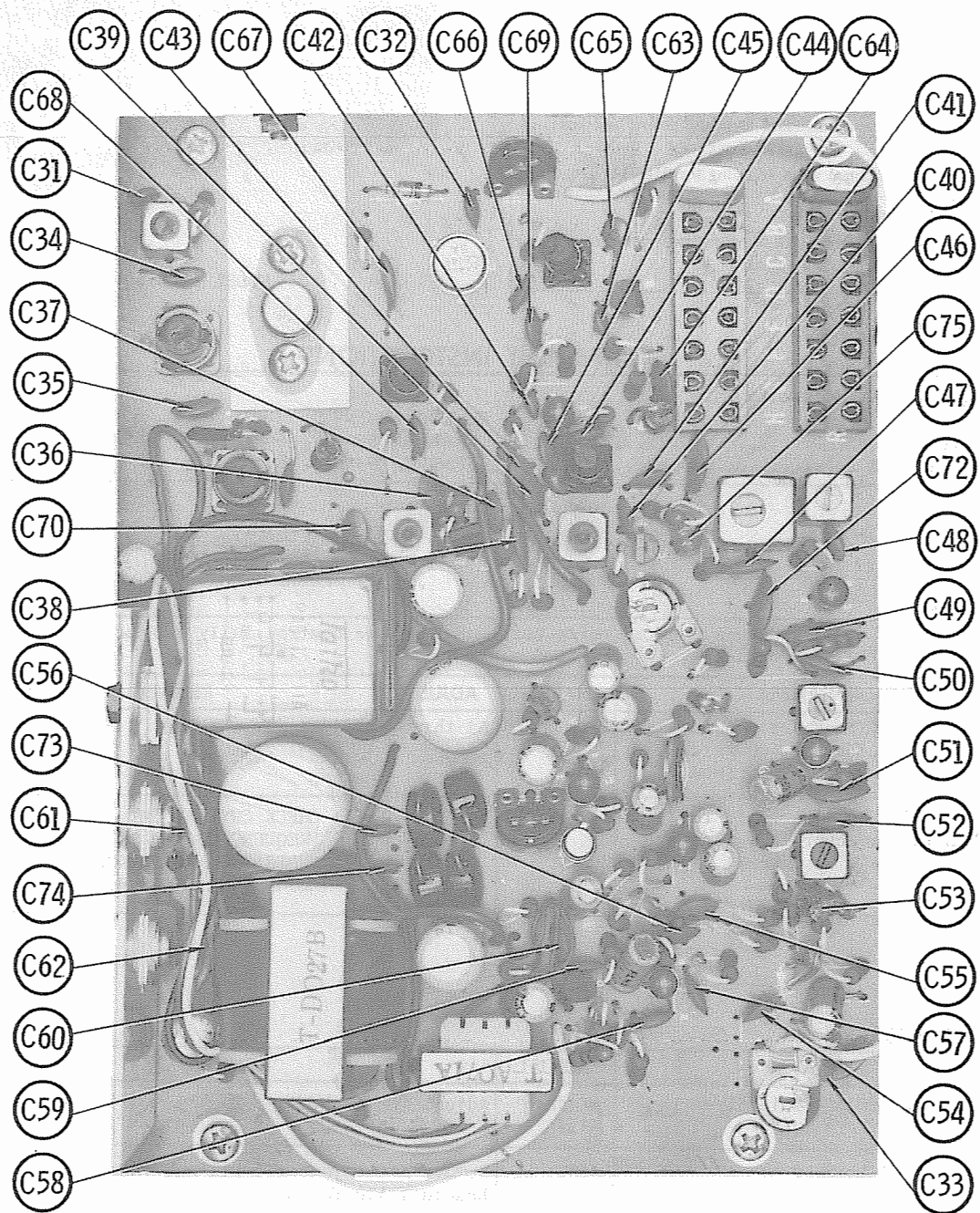
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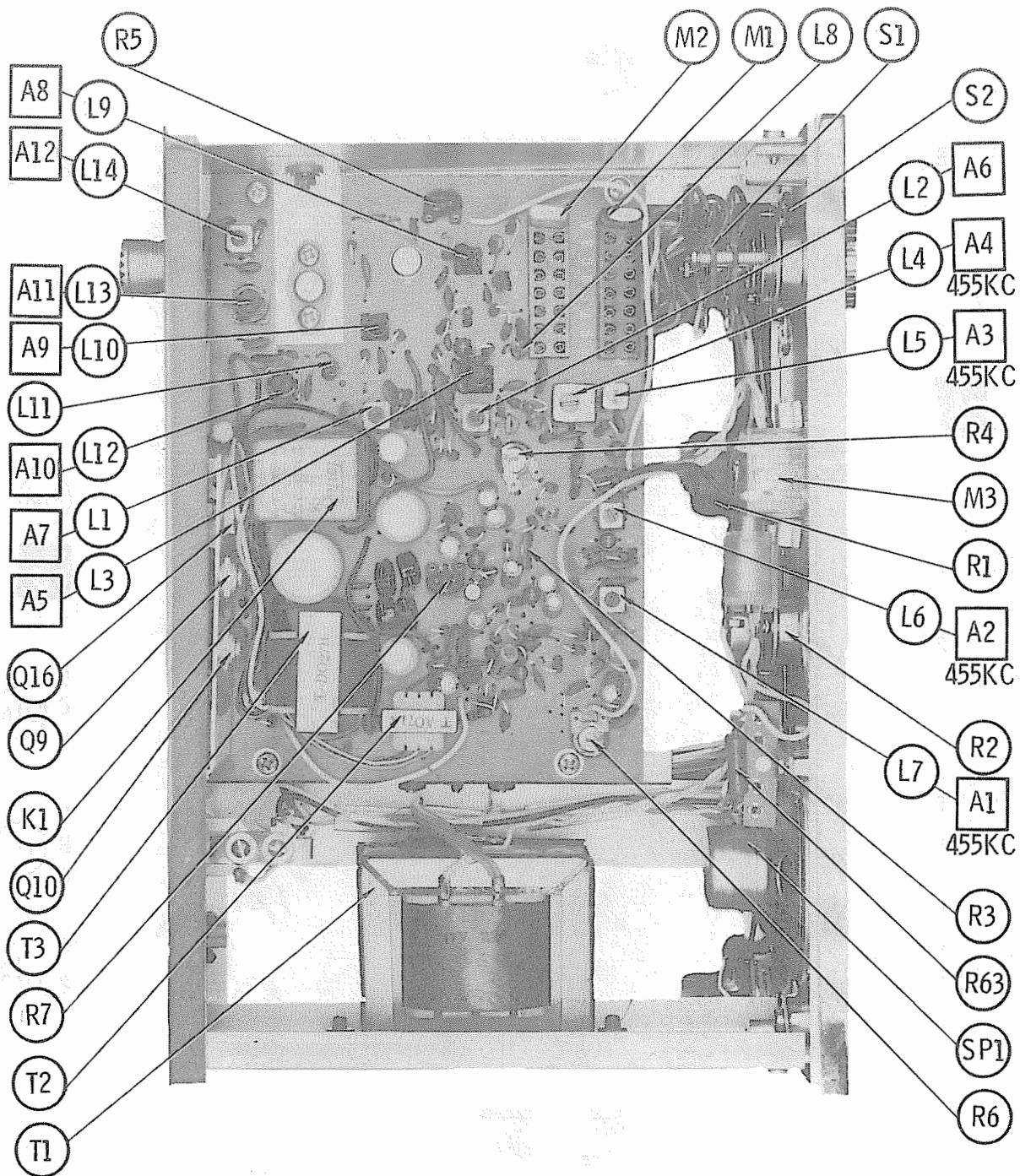
INDICATOR	ADJUST	REMARKS
RF Wattmeter or Field Strength Meter.	A8 thru A11	Adjust for maximum.
0-500ma DC Ammeter	A10	Remove meter jumper @ L11 and insert meter. Readjust A10 for 5 watts input to Q13 (Final Amp)
Television (Ch. 2)	A12	Adjust for minimum interference.

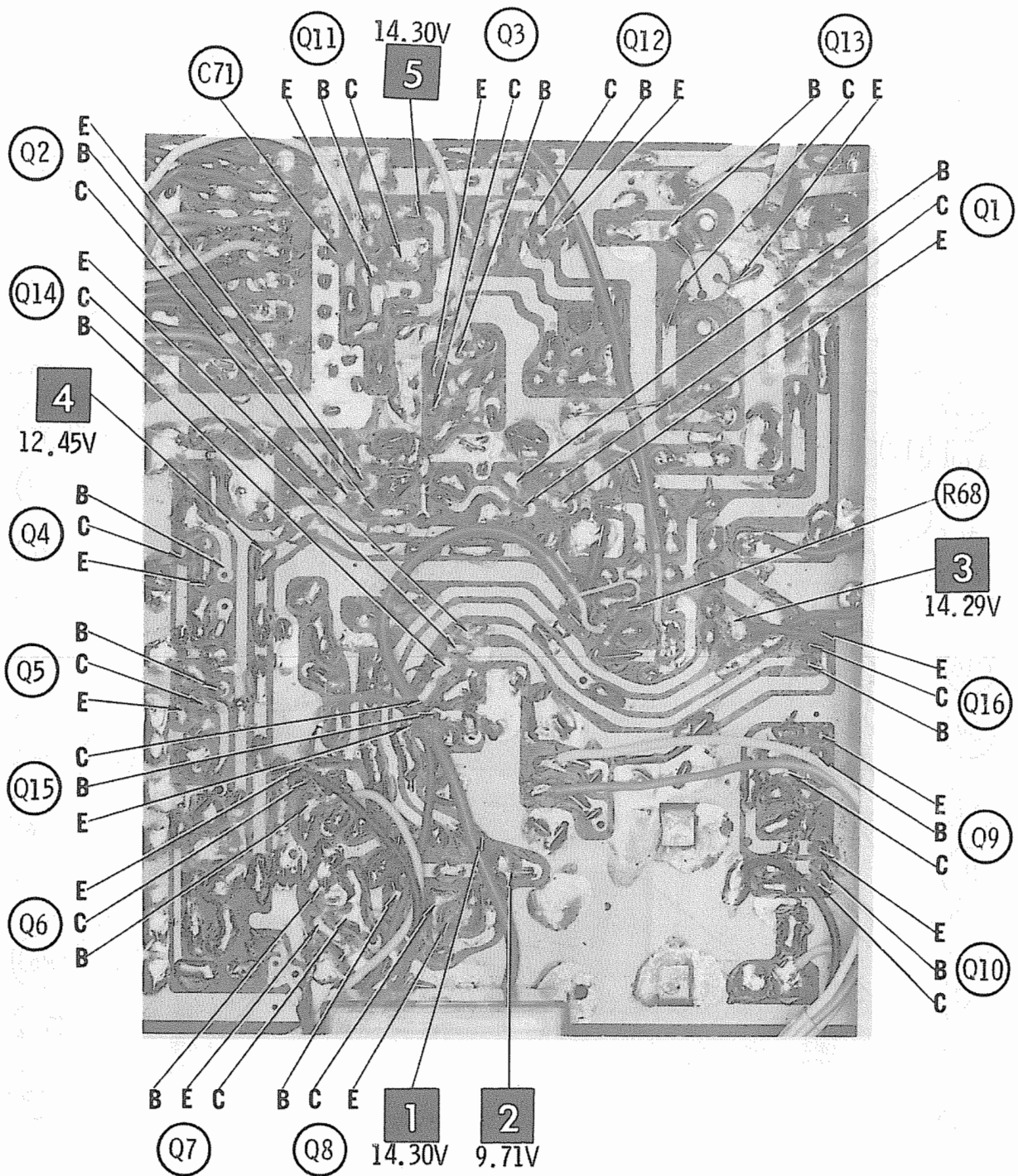
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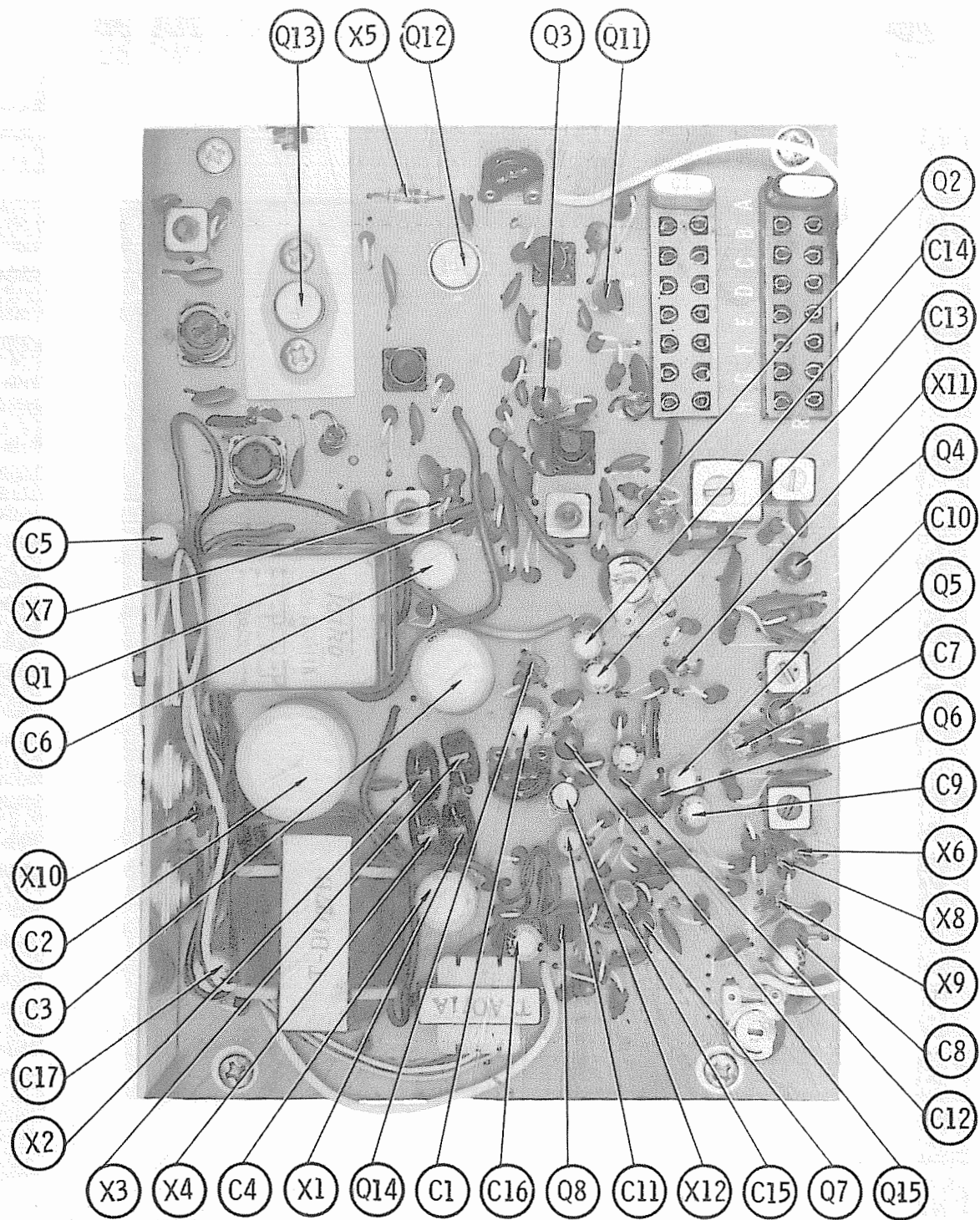
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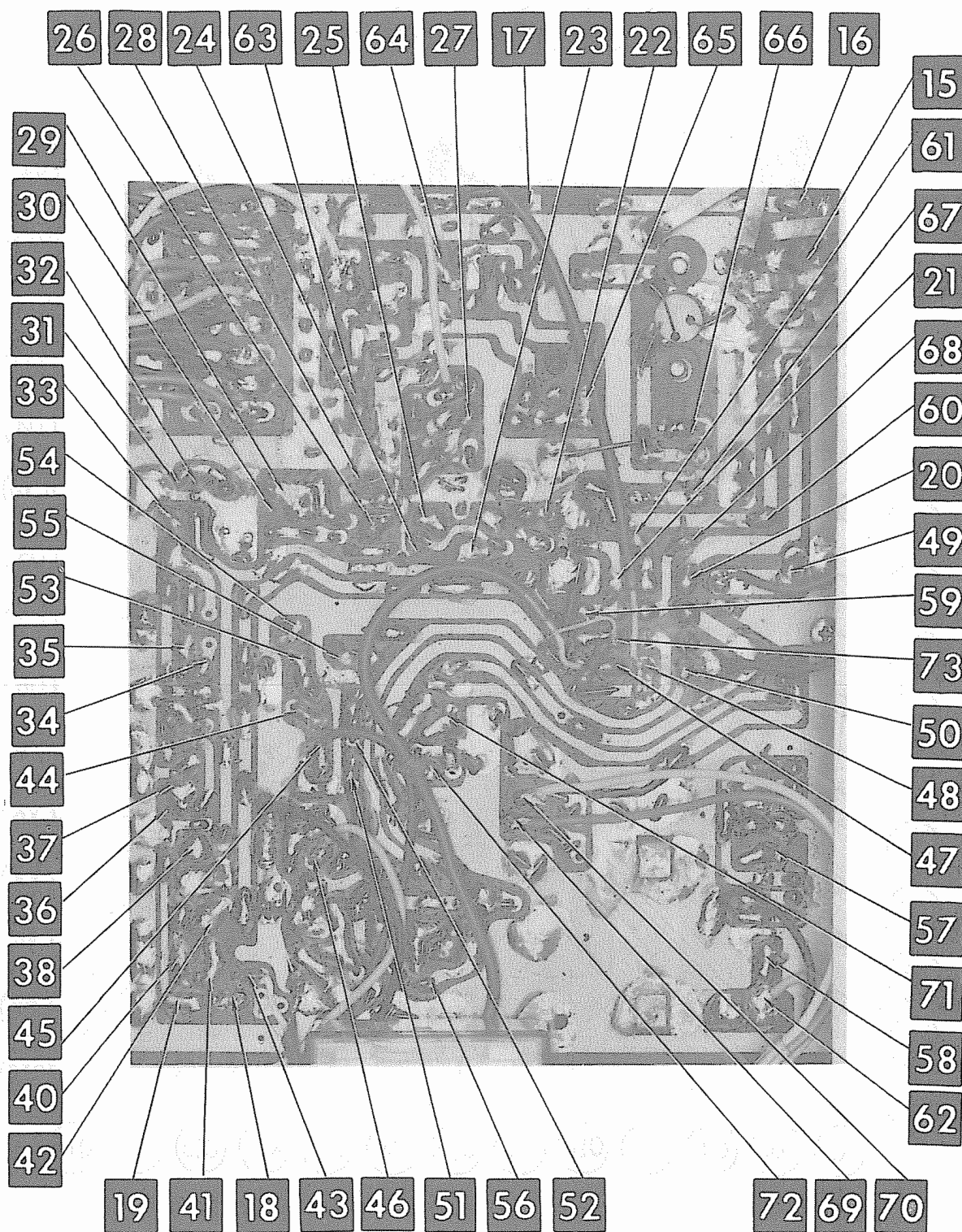
MIDLAND MODEL 13-874

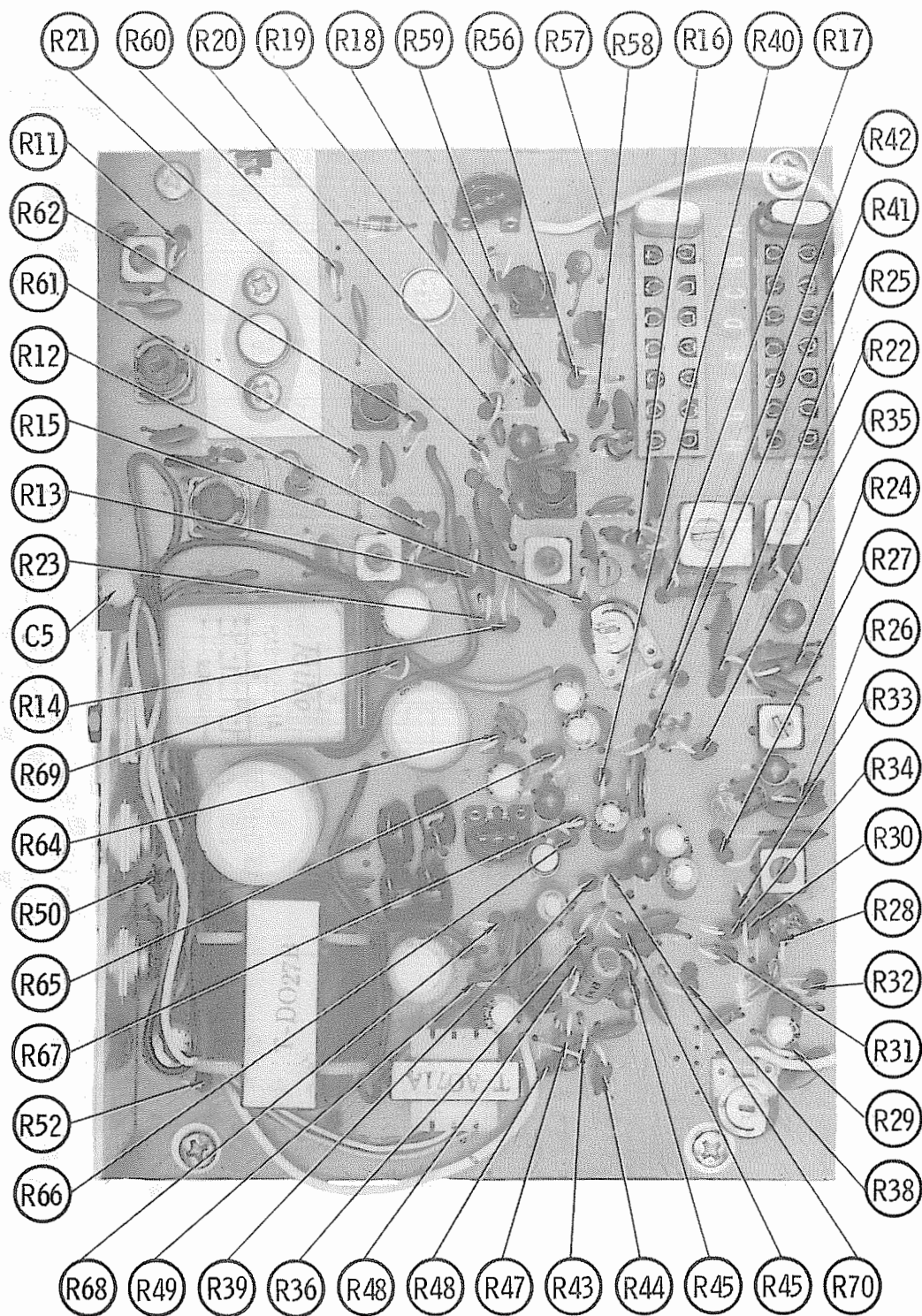


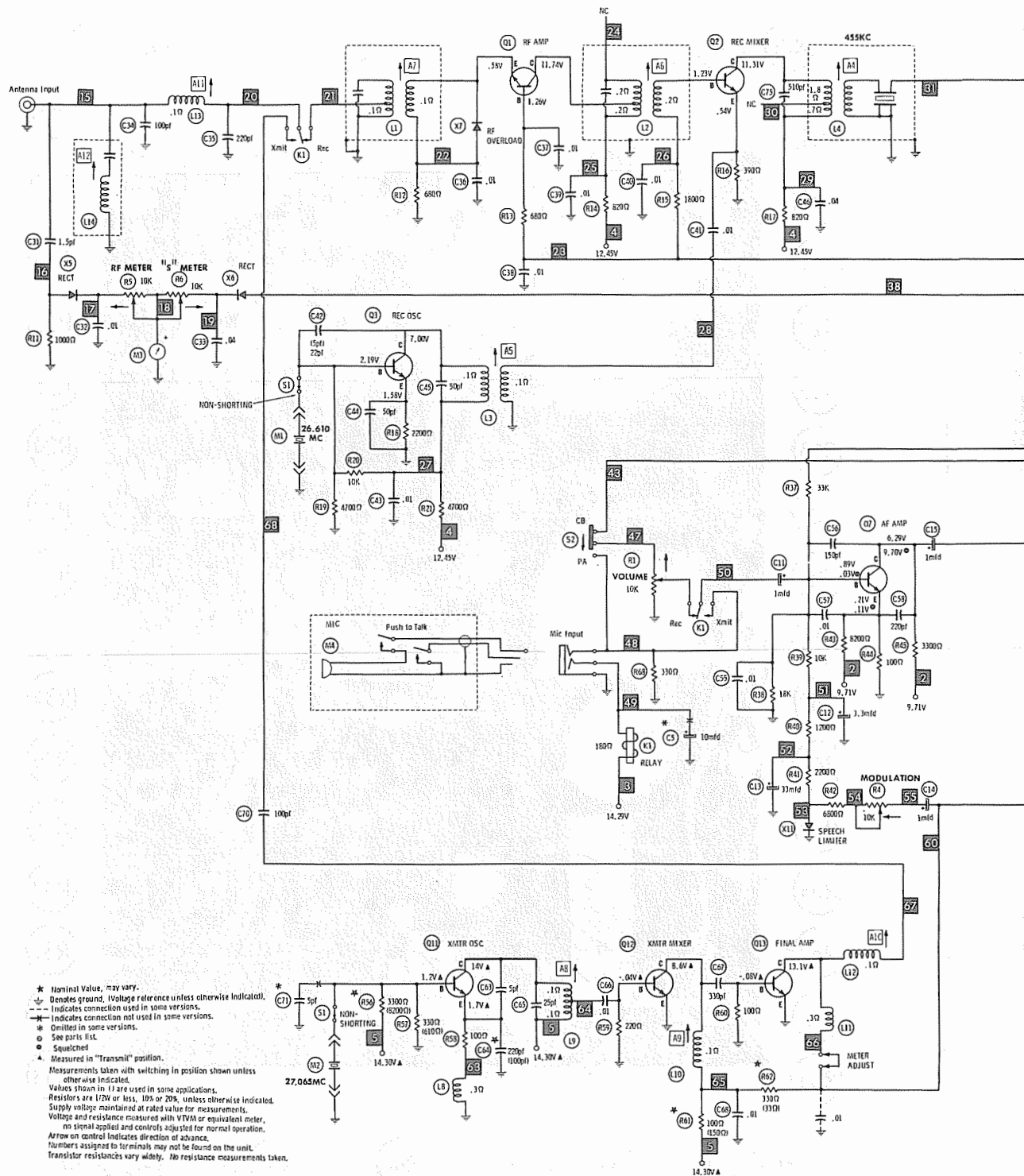


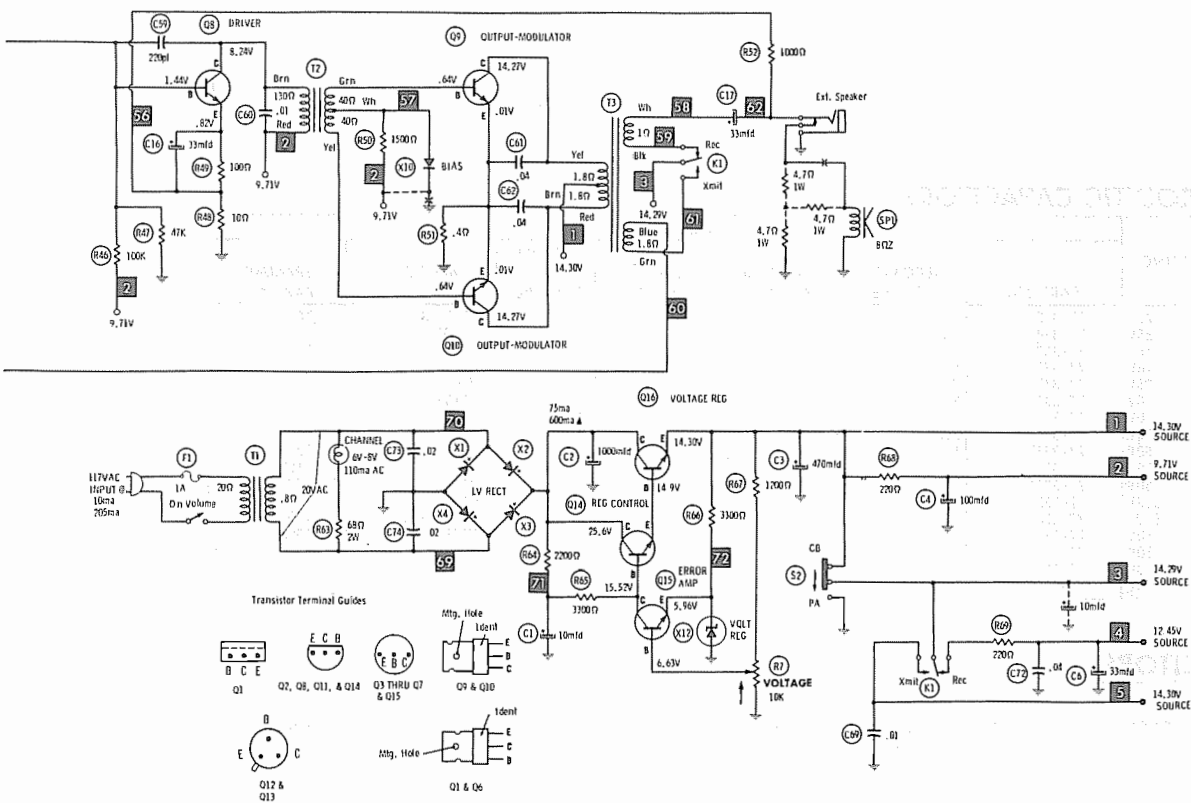












MIDLAND MODEL 13-874

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	RF Amp	09-302004	GE-11	IRTR-51	HEP53	SK3018	ECG 107
Q2	2SC1026	Rec. Mixer	09-302079	GE-17	TR-21	HEP50004	SK3018	ECG 107
Q3	2SC56	Rec. Oscillator	09-302014	GE-17	IRTR-65	HEP50	SK3020	ECG 107
Q4	2SC56	1st IF Amp	09-302014	GE-17	IRTR-65	HEP50	SK3020	ECG 107
Q5	2SC56	2nd IF Amp	09-302014	GE-17	IRTR-65	HEP50	SK3020	ECG 107
Q6	2SC56	Squelch	09-302014	GE-17	IRTR-65	HEP50	SK3020	ECG 107
Q7	2SC56	AF Amp	09-302014	GE-17	IRTR-65	HEP50	SK3020	ECG 107
Q8	2SC815	Driver	09-302062	GE-20	IRTR-53	HEP736	SK3024	ECG 123A
Q9	2SC1013	Output-Modulator	09-302080	GE-28	IRTR-55	HEP53020	SK3041	ECG 186
Q10	2SC1013	Output-Modulator	09-302080	GE-28	IRTR-55	HEP53020	SK3041	ECG 186
Q11	2SC815	Xmtr. Oscillator	09-302062	GE-20	IRTR-62	HEP736	SK3046	ECG 123A
Q12	2SC614E	Xmtr. Mixer	09-302081		IRTR-63	HEP53001	SK3047	
Q13	2SC866	Final Amp	09-302082		IRTR-65	HEP53001	SK3048	
Q14	2SC815	Reg. Control	09-302062	GE-20	IRTR-53	HEP736	SK3024	ECG 123A
Q15	2SC56	Error Amp	09-302014	GE-17	IRTR-65	HEP50	SK3020	ECG 107
Q16	2SC1061	Voltage Regulator	09-302083			HEP245		ECG 152

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	FR-2	GE-504A	804 or 5A40	SK3030 or SK3031	ECG 116 or ECG 117	
X2	FR-2	GE-504A	804 or 5A40	SK3030 or SK3031	ECG 116 or ECG 117	
X3	FR-2	GE-504A	804 or 5A40	SK3030 or SK3031	ECG 116 or ECG 117	
X4	FR-2	GE-504A	804 or 5A40	SK3030 or SK3031	ECG 116 or ECG 117	
X5	1S34	1N34AS	1N34A	SK3087	ECG 109	
X6	1S34	1N34AS	1N34A	SK3087	ECG 109	
X7	FV-23	1N34AS	1N34A	SK3087	ECG 109	
X8	1S34	1N34AS	1N34A	SK3087	ECG 109	
X9	1S34	1N34AS	1N34A	SK3087	ECG 109	
X10		GE-300			ECG 177	
X11	1S34	1N34AS	1N34A	SK3087	ECG 109	
X12	FV-24	GEZD-6.2		SK3058	ECG 137	5.96V Zener

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	10 25V	77-337106	MCD-70	EP30-10	WBR10-25	MT1-5	MTV10CB50	TE-1204
C2	1000 25V	77-339108	PRS1295	EA30-1000	WBR1000-25		MTA1000G25	TL-1218
C3	470 16V	77-3374477	PRS1220	EA15-500	WBR500-16	QT1-30A	MTV5000N15	TL-1166
C4	100 16V	77-337107	MCD-180	EP15-100	WBR100-16	MT1-19	MTV100CB015	TE-1162
C5	10 25V	77-337106	MCD-70	EP30-10	WBR10-25	MT1-5	MTV10CB50	TE-1204
C6	33 16V	77-337336	MCD-110	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	TE-1158
C7	10 10V	77-337106	MCD-70	EP15-10	WBR10-25	MT1-5	MTV10CB50	TE-1128
C8	10 10V	77-337106	MCD-70	EP15-10	WBR10-25	MT1-5	MTV10CB50	TE-1128
C9	1 50V	77-333105	MCD-10	EP50-2	WBR1-50	MT1-1	MTV1CB50	TE-1300
C10	10 16V	77-336106	MCD-70	EP15-10	WBR10-25	MT1-5	MTV10CB50	TE-1155
C11	1 50V	77-333105	MCD-10	EP50-2	WBR1-50	MT1-1	MTV1CB50	TE-1300
C12	3.3 6.3V	77-332335	MCD-40	EP6-5	WBR5-50	MT1-3	MTV3CB50	TE-1082
C13	33 6.3V	77-332336	MCD-110	EP6-25	WBR35-50	MT1-13	MTV30CB25	TE-1093
C14	1 50V	77-333105	MCD-10	EP50-2	WBR1-50	MT1-1	MTV1CB50	TE-1300
C15	1 50V	77-333105	MCD-10	EP50-2	WBR1-50	MT1-1	MTV1CB50	TE-1300
C16	33 6.3V	77-332336	MCD-110	EP6-25	WBR35-50	MT1-13	MTV30CB25	TE-1093
C17	33 16V	77-337336	MCD-110	EP15-25	WBR35-50	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.
C31	1.5		GPD C0J1R50	DTZ-1R5	NP01P5		CN0515	10TCC-V15
C32	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C33	.04			DD-403			GP140	
C34	100		GPD X5F101K	DD-101	GP100	CCD-101	GP310	10TS-T10
C35	220		GPD X5F221K	DD-221	GP220	CCD-221	GP322	10TS-T22
C36	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C37	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C38	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C39	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C40	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C41	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C42	22			DTZ-22	NP022	CCD-220	CN0422	10TC-Q22
C43	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C44	50		GPD X5F560K	DD-560		CCD-560	GP456	10TS-Q56
C45	50		GPD X5F560K	DD-560		CCD-560	GP456	10TS-Q56
C46	.04			DD-403			GP140	
C47	.04			DD-403			GP140	

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.
C48	50		GPD X5F560K	DD-560		CCD-560	GP456	10TS-Q56
C49	.04			DD-403			GP140	
C50	.04			DD-403			GP140	
C51	.04			DD-403			GP140	
C52	.04			DD-403			GP140	
C53	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C54	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C55	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C56	150		GPD X5F151K	DD-151	GP150	CCD-151	GP315	10TS-T15
C57	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C58	220		GPD X5F221K	DD-221	GP220	CCD-221	GP322	10TS-T22
C59	220		GPD X5F221K	DD-221	GP220	CCD-221	GP322	10TS-T22
C60	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C61	.04			DD-403			GP140	
C62	.04			DD-403			GP140	
C63	5		GPD CDH4R7K	DTZ-4R7	NPO5	CCT0-05D	CN0547	10TCC-V50
C64	220		GPD X5F221K	DD-221	GP220	CCD-221	GP322	10TS-T22
C65	25			DTZ-25		CCT0-24D	CN0425	10TCC-Q25
C66	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C67	330		GPD X5F331K	DD-331	GP330	CCD-331	GP333	10TS-T33
C68	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C69	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C70	100		GPD X5F101K	DD-101	GP100	CCD-101	GP310	10TS-T10
C71	5		GPD CDH4R7K	DTZ-4R7	NPO5	CCT0-05D	CN0547	10TCC-V50
C72	.04			DD-403			GP140	
C73	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C74	.02		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
C75	510			CPR-510J		DM-16-511J	SX351	MS-351

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	10K	13-160063	F2-10K (1), SSK010, KR-1	A47-10K-Z (1), KSS-3, SWE-12 or [NP-10K-Z (1), UP-C-400, NWE-12]	Q13-116 (1), 76-1 or [BU1 (1), CF61, SS1, GC]*	RU14A, SL36, SL3250, US41 or [UA14A (1), SK750, US41] or [U18 (1), US26]
R2	Squelch	10K	13-166025	F1-10K (1), SSK010	A47-10K-S (1), KSS-3 or [NP-10K-S (1), UP-C-400]	Q11-116 (1) or [BU1 (1), CF9, SS1, DC1]*	RU14L, SL36, SL3250 or [UA14L (1), SK750] or U2D (1)
R3	Squelch Range	10K	13-164012	TSV-10K (2) or T-10K (2)		X201R103B (2)	MTC14L1 (2)
R4	Modulation Level	10K	13-164012	TSV-10K (2) or T-10K (2)		X201R103B (2)	MTC14L1 (2)
R5	"RF" Meter Adjust	10K	13-164012	TSV-10K (2) or T-10K (2)		X201R103B (2)	MTC14L1 (2)
R6	"S" Meter Adjust	10K	13-164012	TSV-10K (2) or T-10K (2)		X201R103B (2)	MTC14L1 (2)
R7	Voltage Adjust	10K	13-164061	TSV-10K or (T-10K)		X201R103B	MTC14L1

* "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.
L1	Rec. Antenna Matching	13-176264			
L2	RF	13-176265			
L3	Rec. Oscillator	13-176267			
L4	Input IF (includes Crystal)	13-176266			
L5	Interstage IF	13-090170	16-9033	8515	
L6	Interstage IF	13-090171	16-9034	8515	
L7	Output IF	13-090172	16-9035	8212	
L8	RF Choke	13-178079	19-2005	4588	T958
L9	Xmtr. Oscillator	13-170153			
L10	Xmtr. Mixer	13-176270			
L11	RF Choke	13-178080	19-1001	74F156AP	T856
L12	Final	13-176271			
L13	Pi Filter	13-176269			
L14	TVI	13-176268			

TRANSFORMER (Power)

ITEM No.	RATING		REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	117VAC @ .2AMP	20VAC @ 1.3AMP	13-098007				

MIDLAND MODEL 13-874

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	MFR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD Part No.	
T2	2CT	1CT		13-096102				

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	MFR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T3	32	8	13-096103				
		SEC. 2					
		1.8 DC Resistance					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFR. PART No.	QUAM PART No.	
SP1	3" Round, 8 ohms	13-060060		

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	1 AMP	13-204001	13-159077	AGC 1	4405	312001	357001	

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
K1	Relay	13-105010	RF-"S"
M1	Crystal (Rec.)		
M2	Crystal (Xmit)		
M3	Meter	13-200027	
M4	Mic	13-038044	
S1	Switch, Selector	13-180055	
S2	Switch, PA-CB	13-183117	

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

ITEM	PART No.	ITEM	PART No.
Cabinet, Bottom	13-013080	Knob, Selector	13-1155026
Cabinet, Front	13-010124	Knob, Squelch-Volume	13-110098
Cabinet, Top	13-011015		

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 DYNA-COM 12a (99-32484)

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A1 thru A4	GENERAL CEMENT:
A5 thru A12	#8868, 9089
	#8606L, 9440

RECEIVER

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

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side through .01mfd to base of Q2 (Rec. Mixer), low side to ground. Tune to 455KC (Mod).	Any	A1 thru A4	Adjust to maximum.
High side through .01mfd to Antenna connector, low side to ground. Tune to crystal frequency.	10	A5 thru A8	Adjust to maximum.

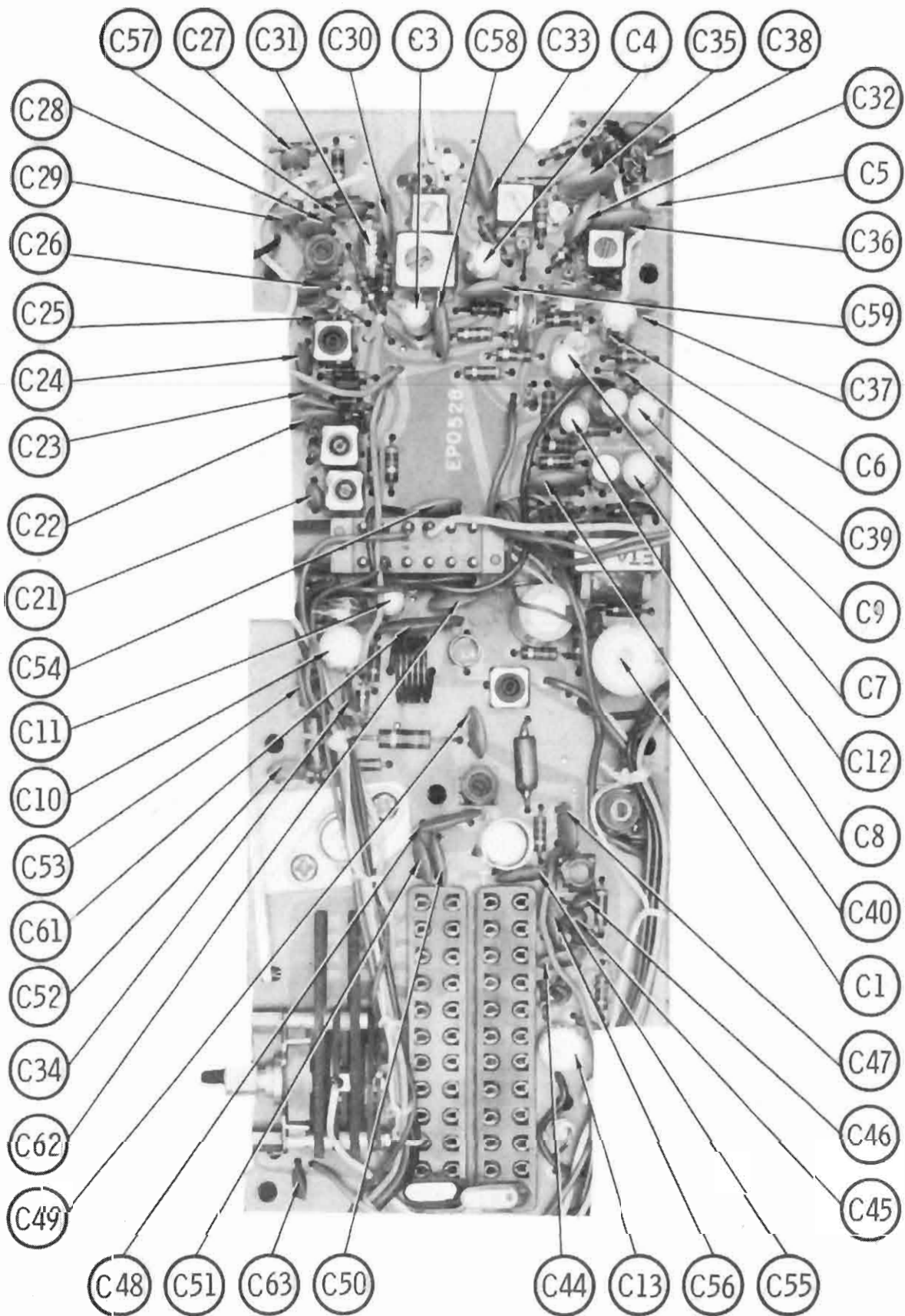
TRANSMITTER

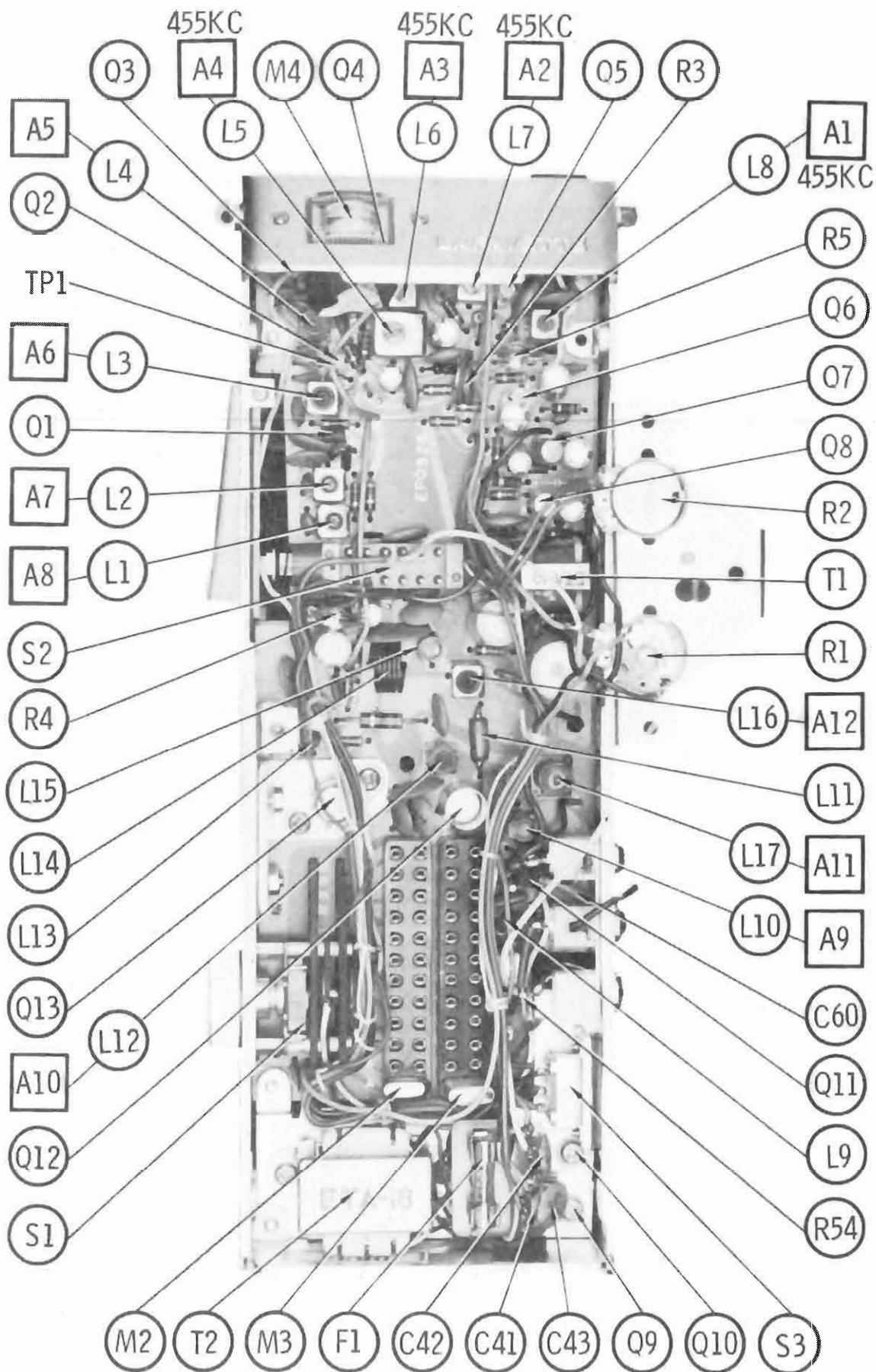
INDICATOR	ADJUST	REMARKS
RF Wattmeter or Field Strength Meter	A9 thru A11	Adjust for maximum.
Television (Ch. 2)	A12	Adjust for minimum interference.

LAFAYETTE MODEL DYNA-COM 12a

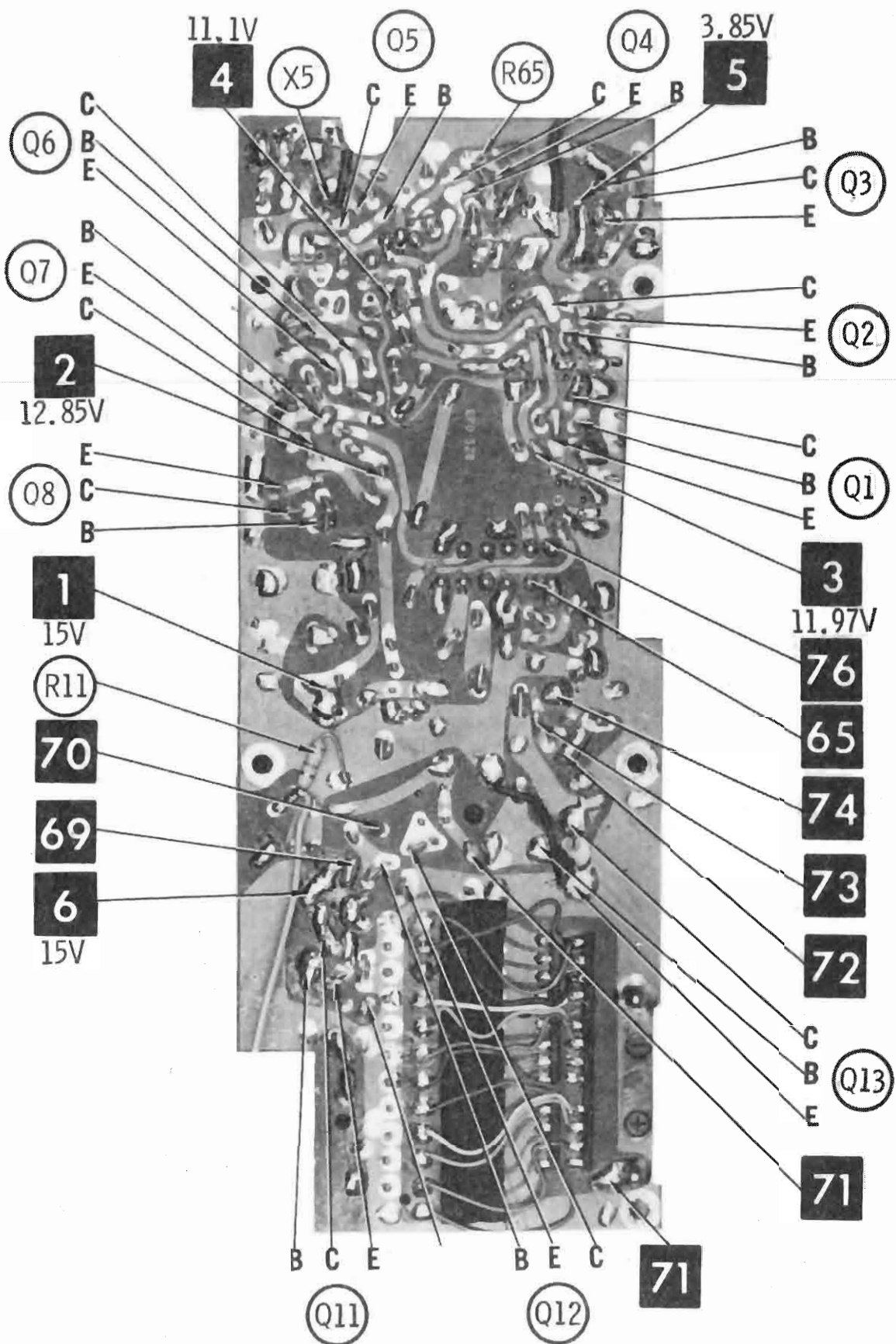
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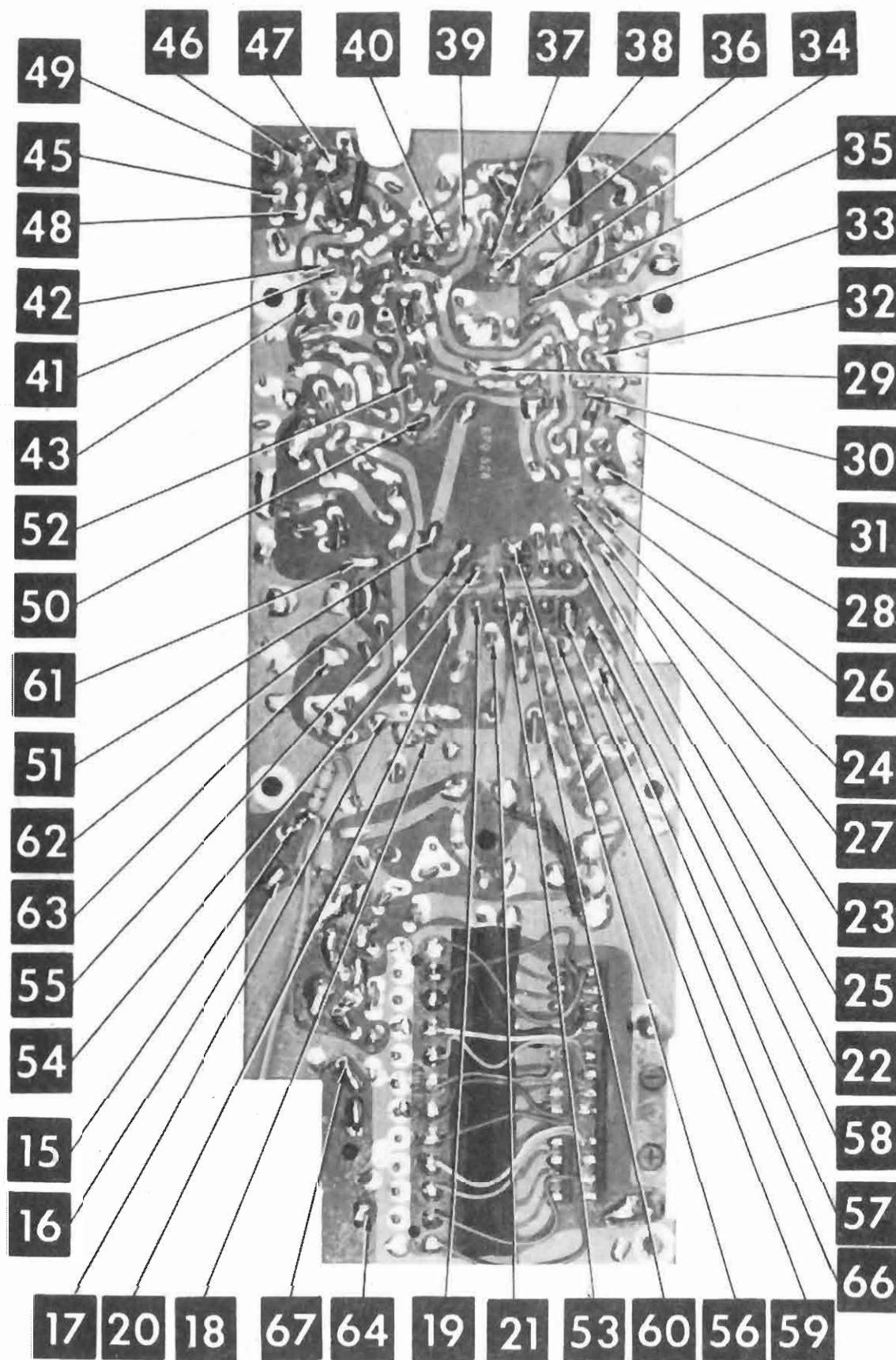
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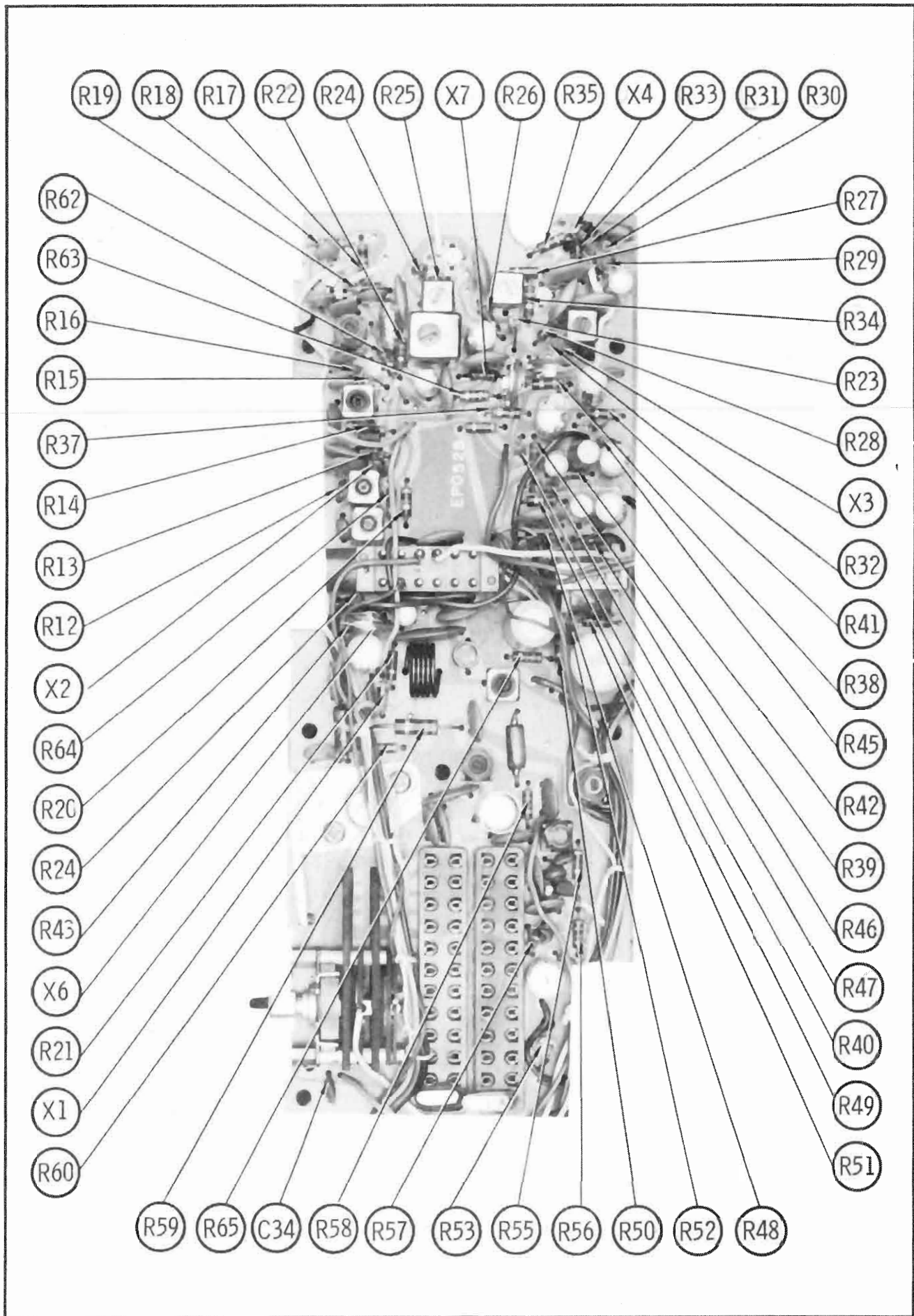




LAFAYETTE MODEL DYNA-COM 12a







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	RF Amp	1373-17	GE-11	IRTR-51	HEP53	SK3018	ECG 107
Q2	2SC184	Rec. Mixer	1634-17	GE-20	IRTR-53	HEP56	SK3018	ECG 108
Q3	2SC183R	Rec. Oscillator	1210-17	GE-20	IRTR-53	HEP56	SK3018	ECG 108
Q4	2SC183R	1st IF Amp	1210-17	GE-20	IRTR-53	HEP56	SK3018	ECG 108
Q5	2SC183R	2nd IF Amp	1210-17	GE-20	IRTR-53	HEP56	SK3018	ECG 108
Q6	2SC183R	Squelch	1210-17	GE-20	IRTR-53	HEP56	SK3018	ECG 108
Q7	2SD77	AF Amp	1906-17	GE-8	TR-08	HEP641	SK3010	ECG 103A
Q8	2SB77	Driver	1060-17	GE-2	TR-08	HEP250	SK3004	ECG 102A
Q9	2SC1013	Output-Modulator	1968-17	GE-28	IRTR-55	HEPS3020	SK3041	ECG 186
Q10	2SC1013	Output-Modulator	1968-17	GE-28	IRTR-55	HEPS3020	SK3041	ECG 186
Q11	2SC815	Xmtr. Oscillator	1879-17	GE-20	IRTR-62	HEP736	SK3046	ECG 123A
Q12	2SC781	Xmtr. Mixer	1482-17	GE-20	IRTR-63	HEPS3001	SK3047	ECG 128
Q13	2SCF8	Final Amp	1068-17		IRTR-65	HEPS3001	SK3048	

LAFAYETTE MODEL DYNA-COM 12A

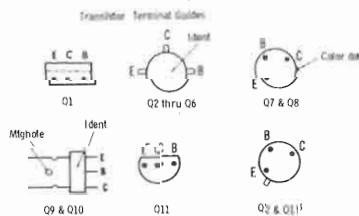
POWER RECTIFIERS & SIGNAL DIODES

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	1N60	1N60	1N60	SK3088	ECG 109	
X2	1S1555	GE-504A	5D4 or 5A4D	SK3030 or SK3031	ECG 116 or ECG 117	
X3	1N60	1N60	1N60	SK3088	ECG 109	
X4	1N60	1N60	1N60	SK3088	ECG 109	
X5	1N60	1N60	1N60	SK3088	ECG 109	
X6	1N60	1N60	1N60	SK3088	ECG 109	
X7	RD-9A(L)			SK3092	ECG 141	11.1V Zener

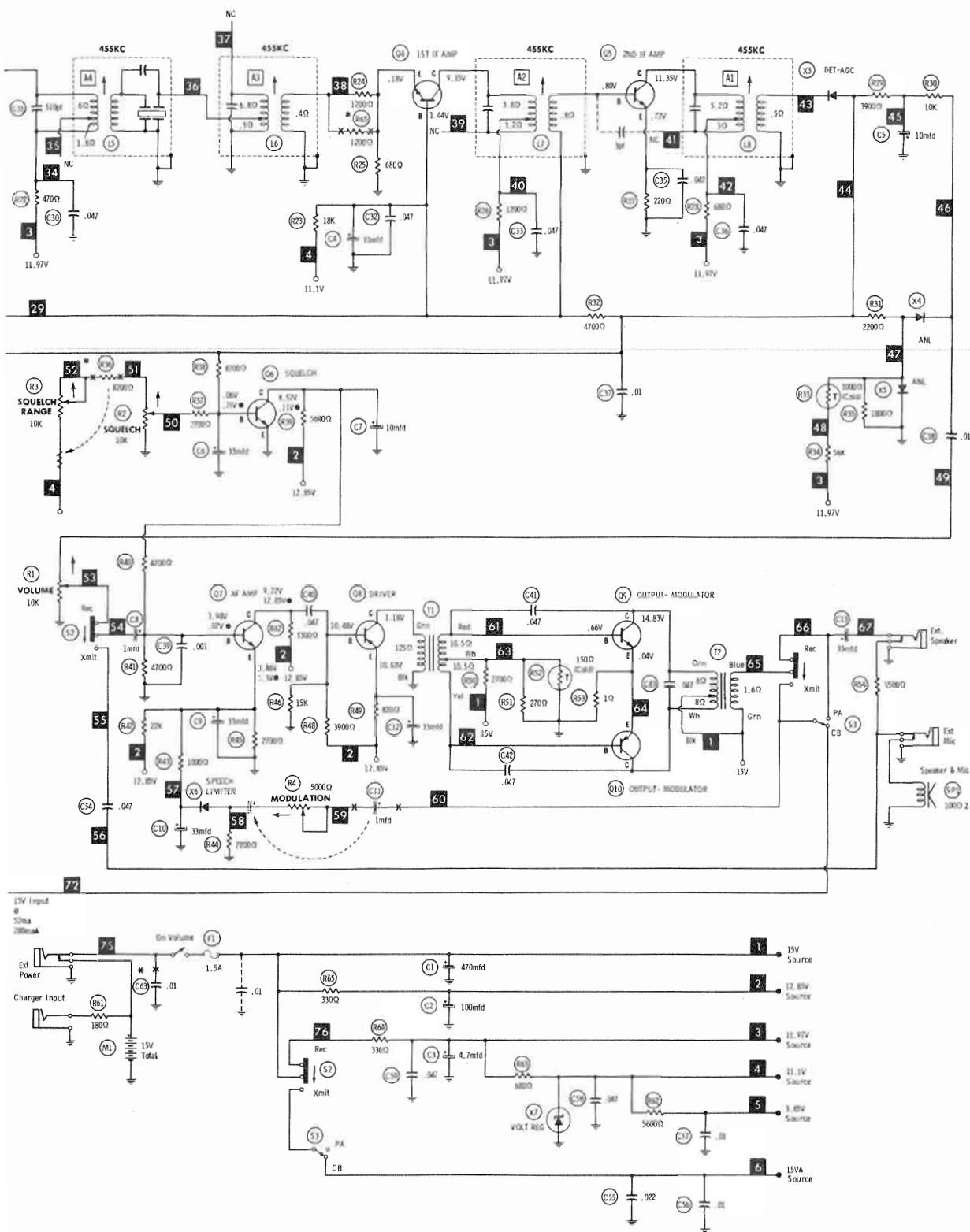
ELECTROLYTIC CAPACITORS

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	470 16V	3204-12	PR1220	EA15-500	WBR500-16	QT1-30A	MTV500DN15	TL-1166
C2	200 2.5V	3078-12	MCD-180	EP15-100	WBR100-16	MT1-19	MTV100CD15	TE-1162
C3	4.7 25V	3090-12	MCD-50	EP30-5	WBR5-50	MT1-3	MTV5CB50	TE-1202
C4	33 6.3V	3103-12	MCD-110	EP6-25	WBR35-50	MT1-13	MTV30CB25	TE-1093
C5	10 10V	3155-12	MCD-70	EP15-10	WBR10-25	MT1-5	MTV10CB50	TE-1128
C6	33 6.3V	3103-12	MCD-110	EP6-25	WBR35-50	MT1-13	MTV30CB25	TE-1093
C7	10 25V	2986-12	MCD-70	EP30-10	WBR10-25	MT1-5	MTV10CB50	TE-1204
C8	1 50V	3084-12	MCD-10	EP50-2	WBR1-50	MT1-1	MTV1CB50	TE-1300
C9	33 10V	3089-12	MCD-110	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	TE-1132.1
C10	33 16V	3104-12	MCD-110	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	TE-1158
C11	1 50V	3084-12	MCD-10	EP50-2	WBR1-50	MT1-1	MTV1CB50	TE-1300
C12	33 10V	3089-12	MCD-110	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	TE-1132.1
C13	33 16V	3104-12	MCD-110	EP15-25	WBR35-50	MT1-13.5	MTV30CB25	TE-1158

(CONTINUED ON PAGE 56)



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LAFAYETTE MODEL DYNA-COM 12a

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	2		GPD C0J2R2K	DTZ-2R2	NP02P2		CN0522	10TCC-V22
C22	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C23	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
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	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C27	2		GPD C0J2R2K	DTZ-2R2	NP02P2		CN0522	10TCC-V22
C28	47			DTZ-47	NP047	CCT0-470	CN0447	10TCC-Q47
C29	47			DTZ-47	NP047	CCT0-470	CN0447	10TCC-Q47
C30	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C31	510			CPR-470J	CD15F471J500	DM-16-471	SX347	MS-347
C32	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C33	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C34	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C35	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C36	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C37	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C38	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C39	.001		GPD X5F102K	DM-102	GP1000	CCD-102	SM210	2SS-D10
C40	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C41	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C42	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C43	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C44	100			DTZ-100	NP0100	CCT0-101	CN0310	10TCC-T10
C45	2		GPD C0J2R2K	DTZ-2R2	NP02P2		CN0522	10TCC-V22
C46	22			DTZ-20	NP020	CCT0-200	CN0420	10TCC-Q20
C47	100			DTZ-100	NP0100	CCT0-101	CN0310	10TCC-T10
C48	270		GPD X5F271K	DD-271	GP270	CCD-270	GP327	10TS-T27
C49	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C50	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C51	100			DTZ-100	NP0100	CCT0-101	CN0310	10TCC-T10
C52	56		GPD X5F560K	DD-560		CCD-560	GP456	10TS-Q56
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	.022		TTP-02	CK-203	MGP02	CCD-203	TA120	TG-S20
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	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C59	.047		TTP-05	CK-503	MGP05	CCD-503	TA150	TGL-S50
C60	220		GPD X5F221K	DD-221	GP220	CCD-221	GP322	10TS-T22
C61	390		GPD X5F391K	DD-391	GP390	CCD-391	GP339	10TS-T39
C62	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10
C63	.01		TTP-01	CK-103	MGP01	CCD-103	TA110	TG-S10

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	10K	1608-11 (EVH- B8BL15A14)				
R2	Squelch	10K	1609-11 (EVH- B8AL15A14)				
R3	Squelch Range	10K	2518-13 (EVL- T5AB14)	TSV-10K (1) or T-10K (1)		X201R103B (1)	MTC14L1 (1)
R4	Modulation	5000	2519-13 (EVL- T5AB58)	TSV-5K (1) or T-5000 (1)		X201R502B (1)	MTC53L1 (1)
R5	Meter Adjust	10K	2518-13 (EVL- T5AB14)	TSV-10K (1) or T-10K (1)		X201R103B (1)	MTC14L1 (1)

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

PARTS LIST AND DESCRIPTION (CONTINUED)

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

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R33	3000 (Cold)		2305-13

ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.
R52	150 (Cold)	FS926	1015-17 (240-26)

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	Rec. Antenna Matching	2228-23			
L2	Rec. Antenna Matching	2228-23			
L3	RF	2431-23			
L4	Rec. Oscillator	2234-23			
L5	Input IF (Includes Crystal)	1950-24			
L6	Interstage IF	1942-24	16-9033	8515	
L7	Interstage IF	1943-24	16-9034	8811	
L8	Output IF	1944-24	16-9035	8812	
L9	RF Choke	2241-23	19-2005	4588	T958
L10	Xmtr. Oscillator	2237-23			
L11	RF Choke	2344-23		74F226AP	T812
L12	Xmtr. Mixer	2427-23			
L13	RF Choke	2344-23		74F226AP	T812
L14	Final	2428-23			
L15	PI Filter	2429-23			
L16	TVI	2372-23			
L17	Antenna Loading	2430-23			

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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		1673-15				

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA				NOTES
	PRI.	SEC.	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2			1672-15				

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	2-3/4" Round PM, 100 ohms	1239-36		Spkr. & Mic.

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	1.5 Amp		1997-19						

BATTERIES

ITEM No.	VOLTAGE	MFGR. PART No.	EVEREADY PART No.	NOTES
M1	15V		E91 E9 1015 CF500	10 Required (Alkaline) 10 Required (Mercury) 10 Required (Carbon) 12 Required (Nickel Cadmium)

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M2	Crystal (Rec.)	1245-35	RF, "S" & Bat.
M3	Crystal (Xmit)	1244-35	
M4	Meter	1163-27	
S1	Switch, Selector	1773-14	
S2	Switch, Rec-Xmit	1774-14	
S3	Switch, PA	1753-14	
	Antenna, Telescopic	1166-39	

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

ITEM	PART No.	ITEM	PART No.
Cabinet, Front	6936-10	Knob, Selector	1778-18
Cabinet, Rear	6937-10	Knob, Control	1777-18
Chassis	6935-10		

ACCESSORIES

ITEM	MFGR. PART No.	REMARKS
Battery Charger	99-31007	For Nickel Cadmium Batteries

WIRING DATA

General-use Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors
Shielded Antenna Lead	8524 (Stranded) Available in 12 Colors
	Use BELDEN No. 8214 Lowest-loss (RG-8/U Type)
	8237 Low-loss (RG-8/U)
	8240 (Solid) Miniature (RG-58/U)
	8259 (Stranded) Miniature (RG-58A/U)
Coiled Microphone Cable	Use BELDEN No. 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.)