

SAMS PHOTOFACT[®] CB RADIO SERIES



CB-25
25
DECEMBER 1969



CONTENTS

TRADE NAME AND MODEL	PAGE	TRADE NAME AND MODEL	PAGE	TRADE NAME AND MODEL	PAGE
AUTOMATIC		JOHNSON			
MCE-6510, TRE-6500	5	239-0125 (Revised)	53		
PCR-6452	25				
		LAFAYETTE		REALISTIC	
COURIER		Dyna-Com 12 (99-3201L)		TRC-29 (21-135)	
Classic	27	Telsat 23 (99-3157WX)		99	
		MIDLAND		SEARS	
FANON		13-722		7203	
IC-5000	41	18-143C		115	

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.



FANON MODEL IC-5000

FANON MODEL IC-5000

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A1 thru A5, A7, A8, A9, A11, A12...GENERAL CEMENT #9087.....WALSCO #2528

A6, A10.....GENERAL CEMENT #8606L, 9440.....WALSCO #2501, 2544

RECEIVER

Connect an AC VTVM across speaker wire coil. Turn volume control fully clockwise. Turn squelch control fully counterclockwise.

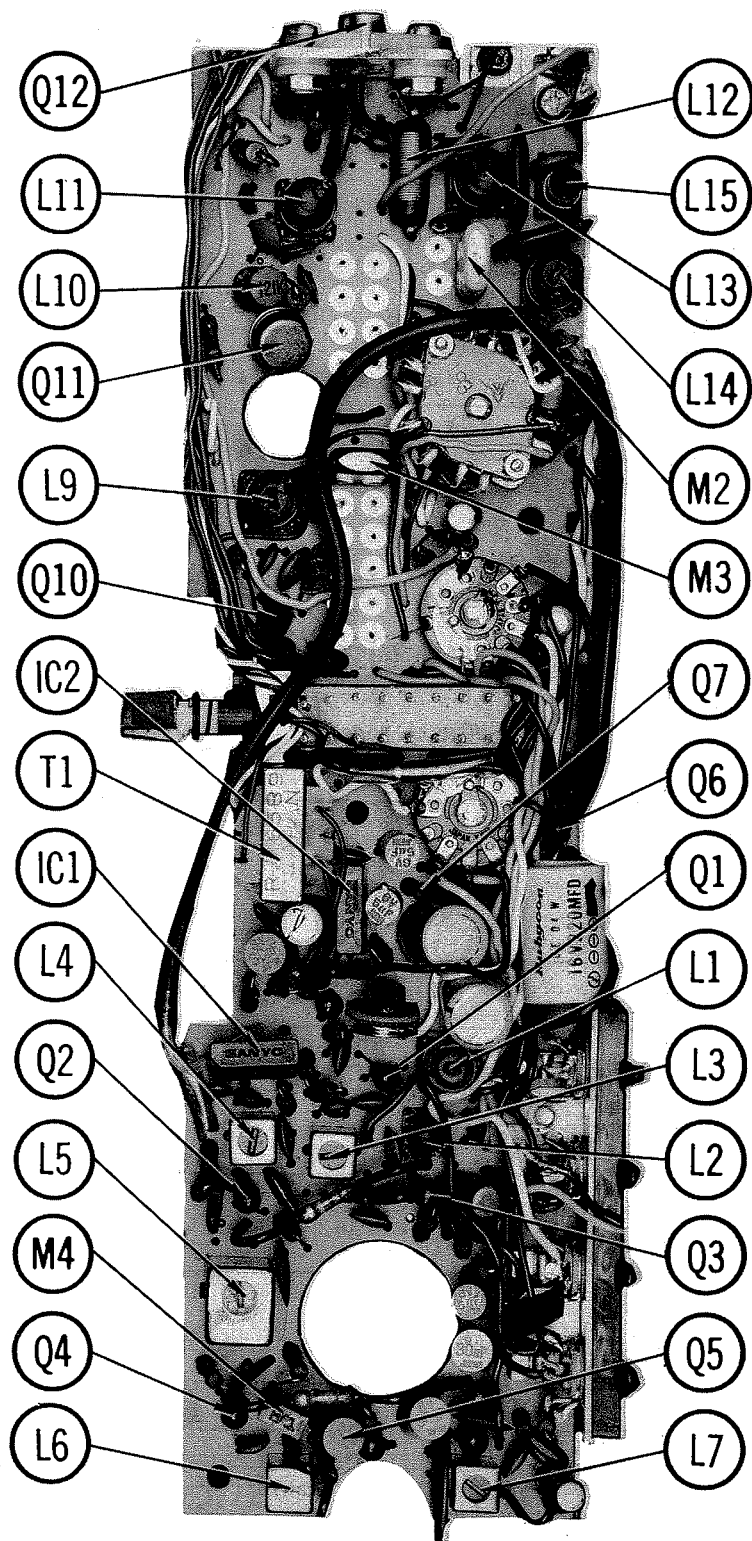
SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to base of Q2 (Rec. Mixer), low side to ground. Tune to 455KC.	Any	A1, A2, A3	Adjust for maximum.
High side thru .01mfd to external antenna jack, low side to ground. Tune to 27.065MC.	9	A4, A5, A6	Adjust for maximum.

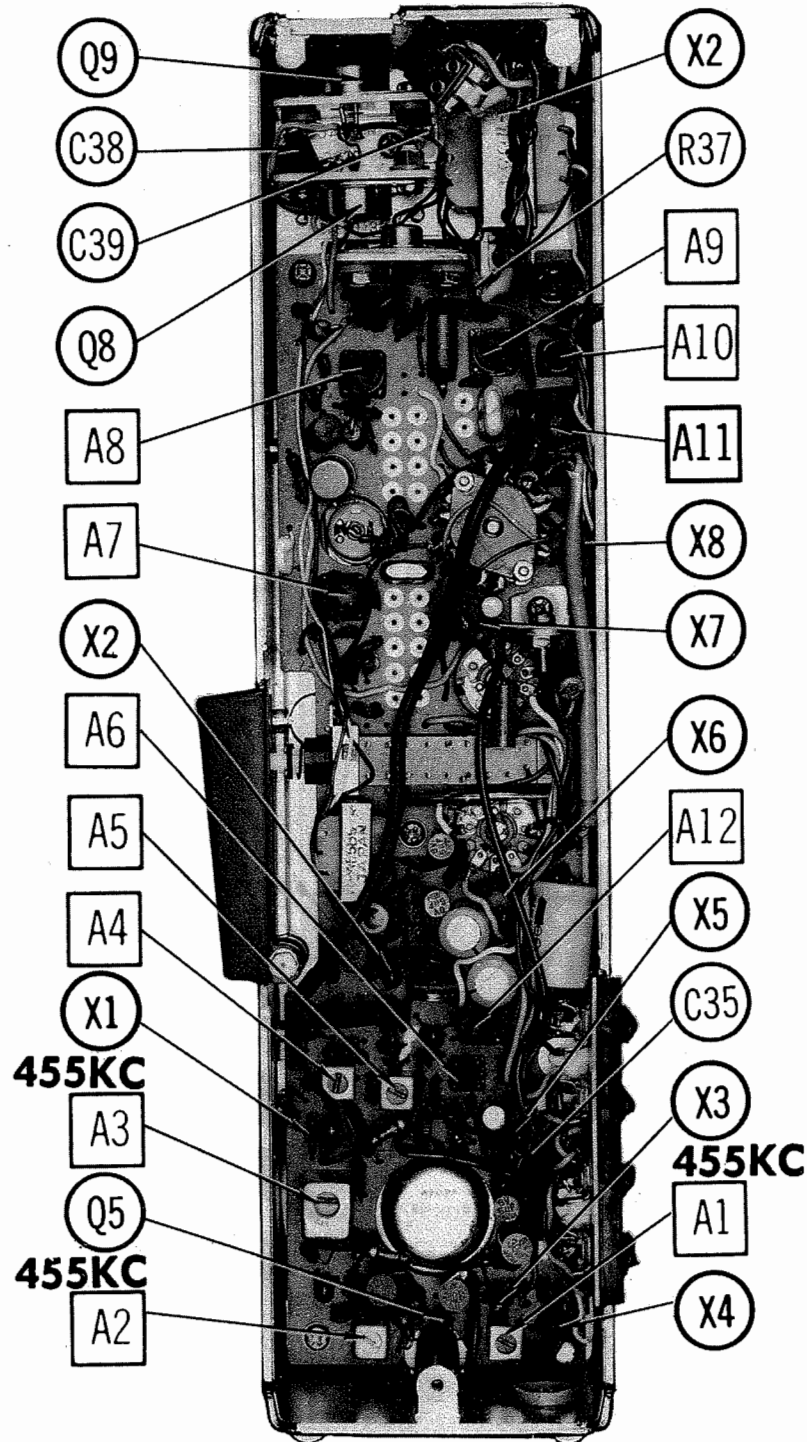
TRANSMITTER

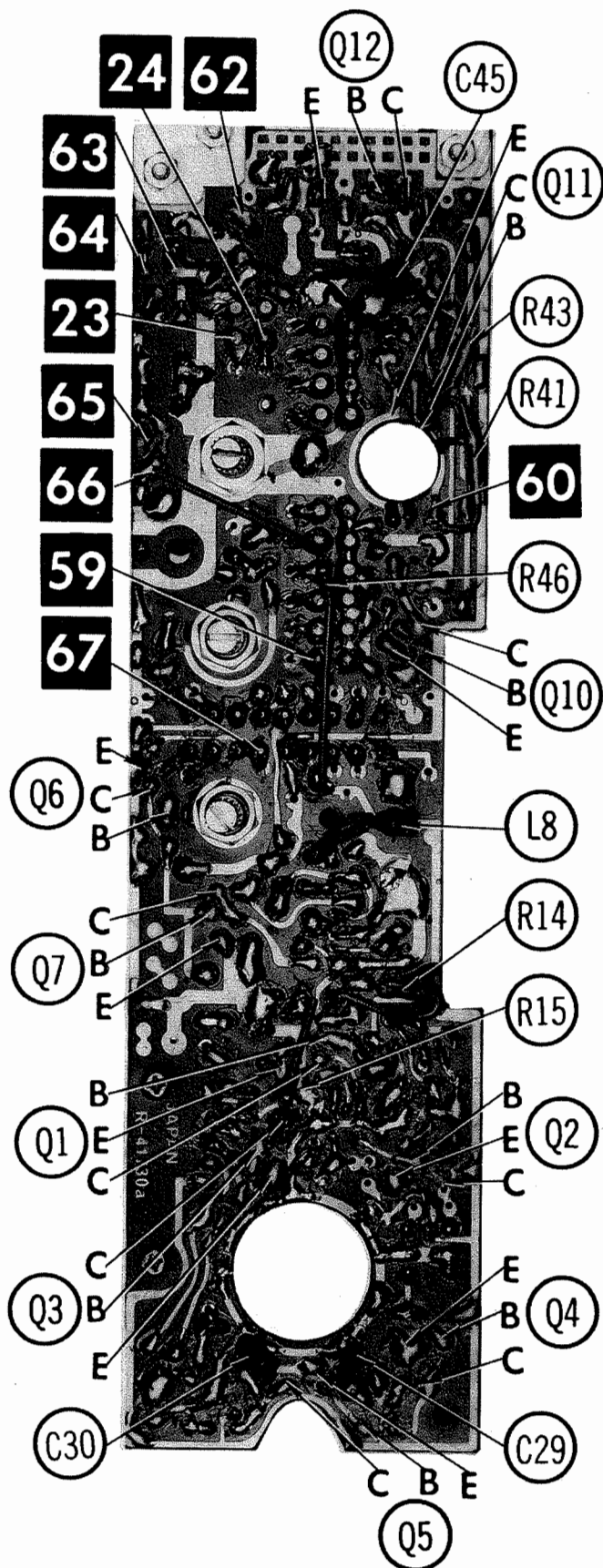
INDICATOR	ADJUST	REMARKS
RF Wattmeter or Field Strength Meter	A7 thru A12	Key Transmitter. Adjust for maximum power output.

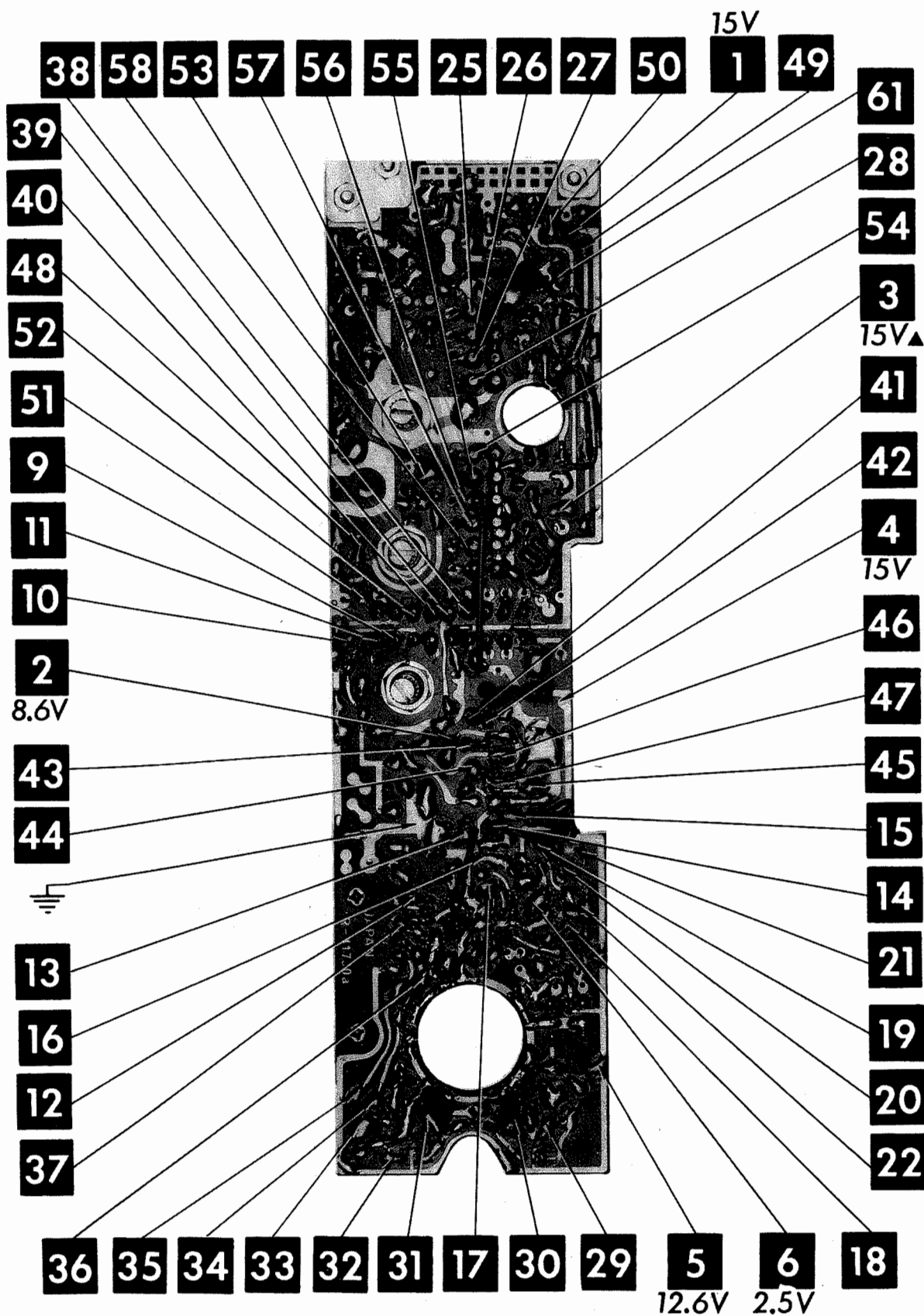
HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

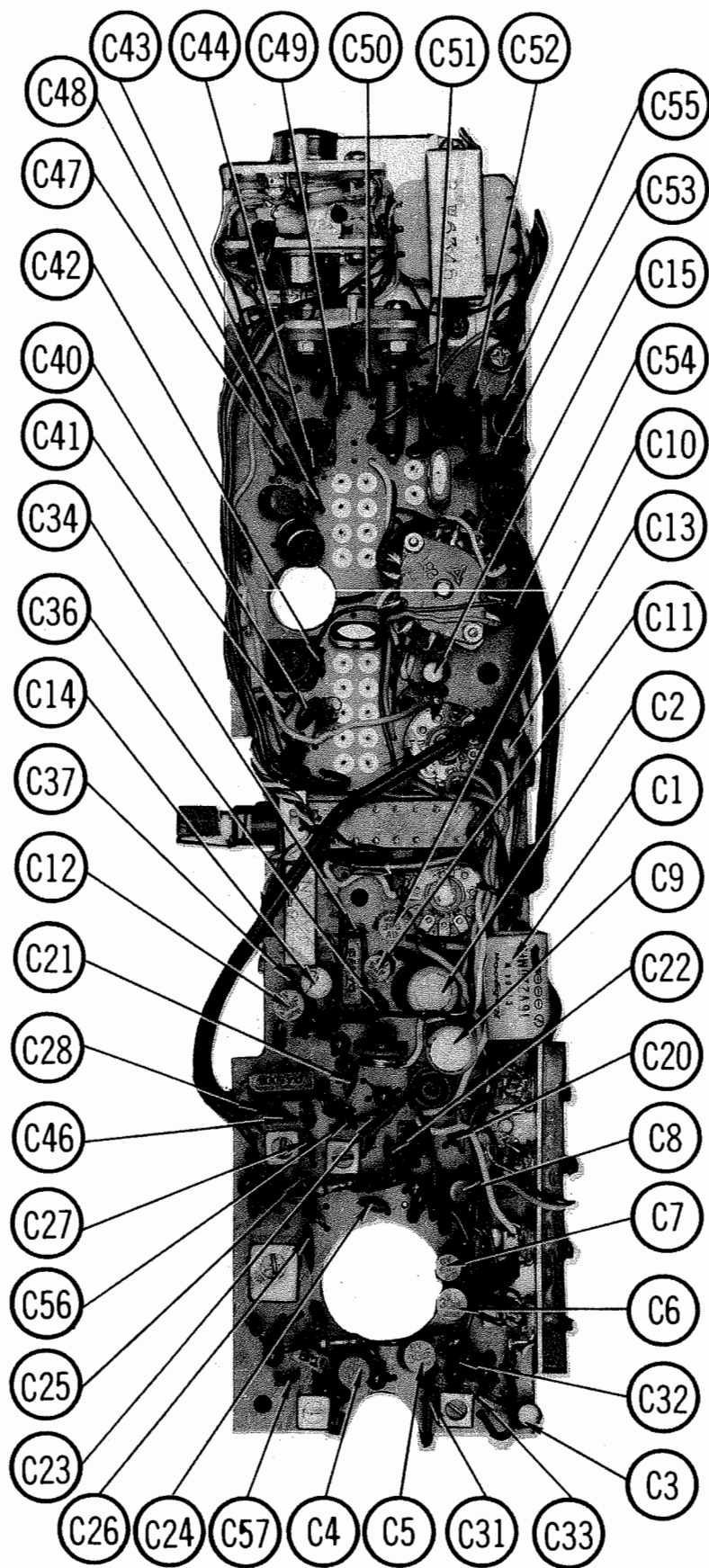
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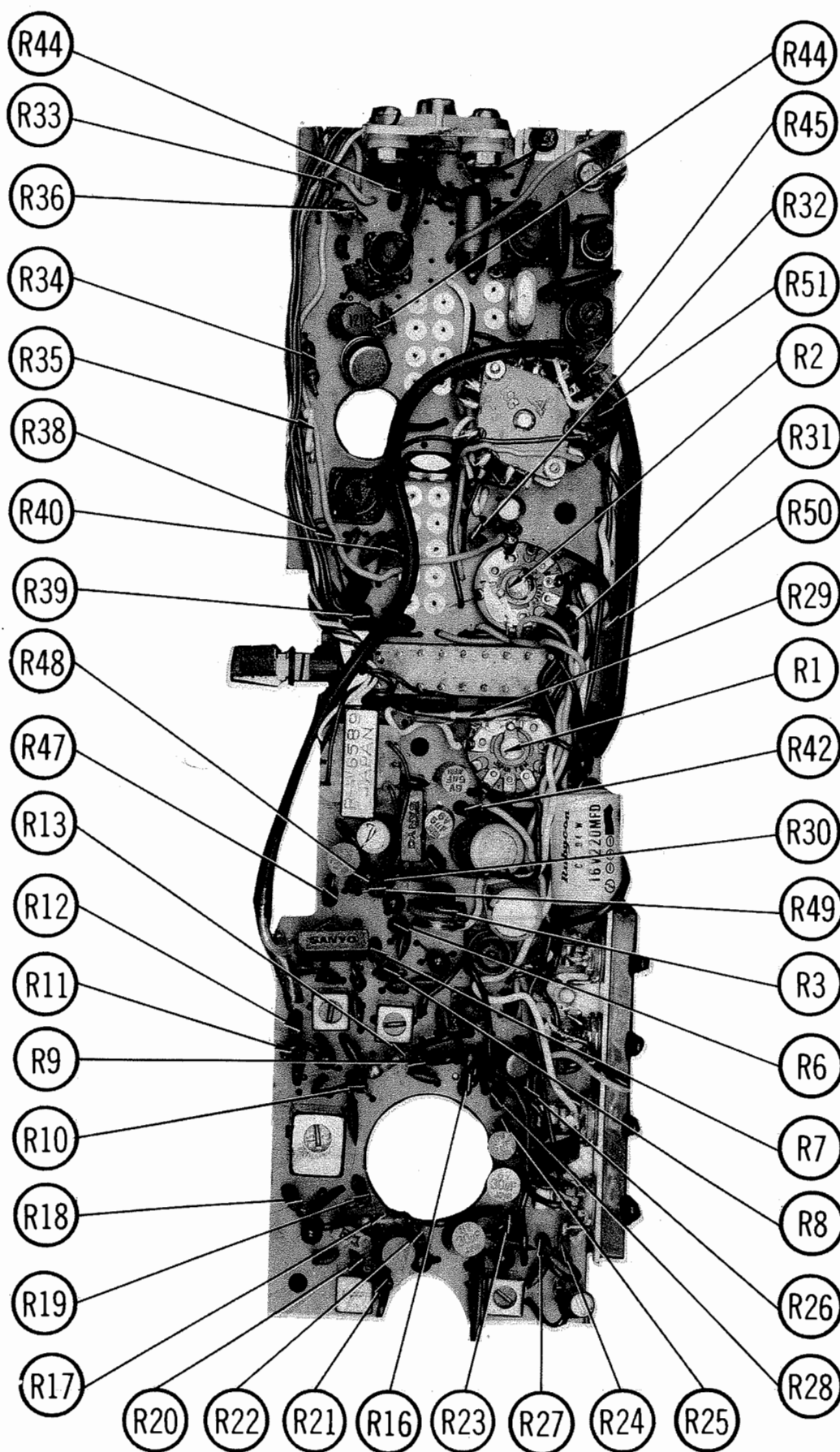


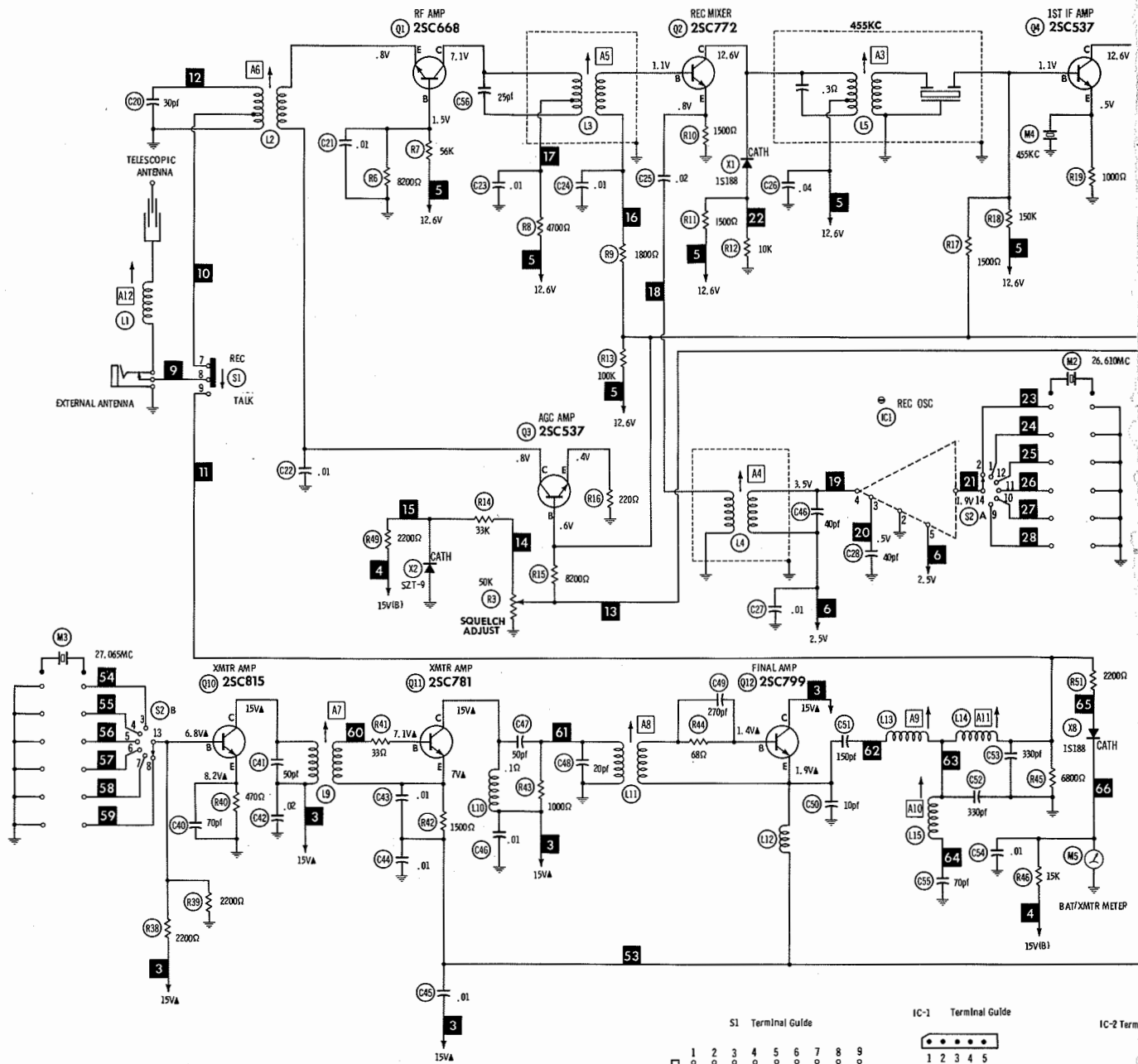












* SQUELCHED

▲ Transmit

○ See parts list for alternate value or application.

Measurements taken with switching in position shown unless otherwise indicated.

Resistors are 1/2W or less, 10% or 20%, unless otherwise indicated, nd.

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.

Numbers assigned to terminals may not be found on the unit.

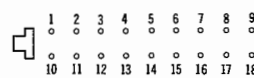
Transistor resistances vary widely. No resistance measurements taken.

A PHOTOFAC STANDARD NOTATION SCHEMATIC

with CIRCUITRACE

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S1 Terminal Guide



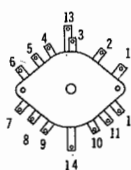
IC-1 Terminal Guide



IC-2 Term



S2 Terminal Guide

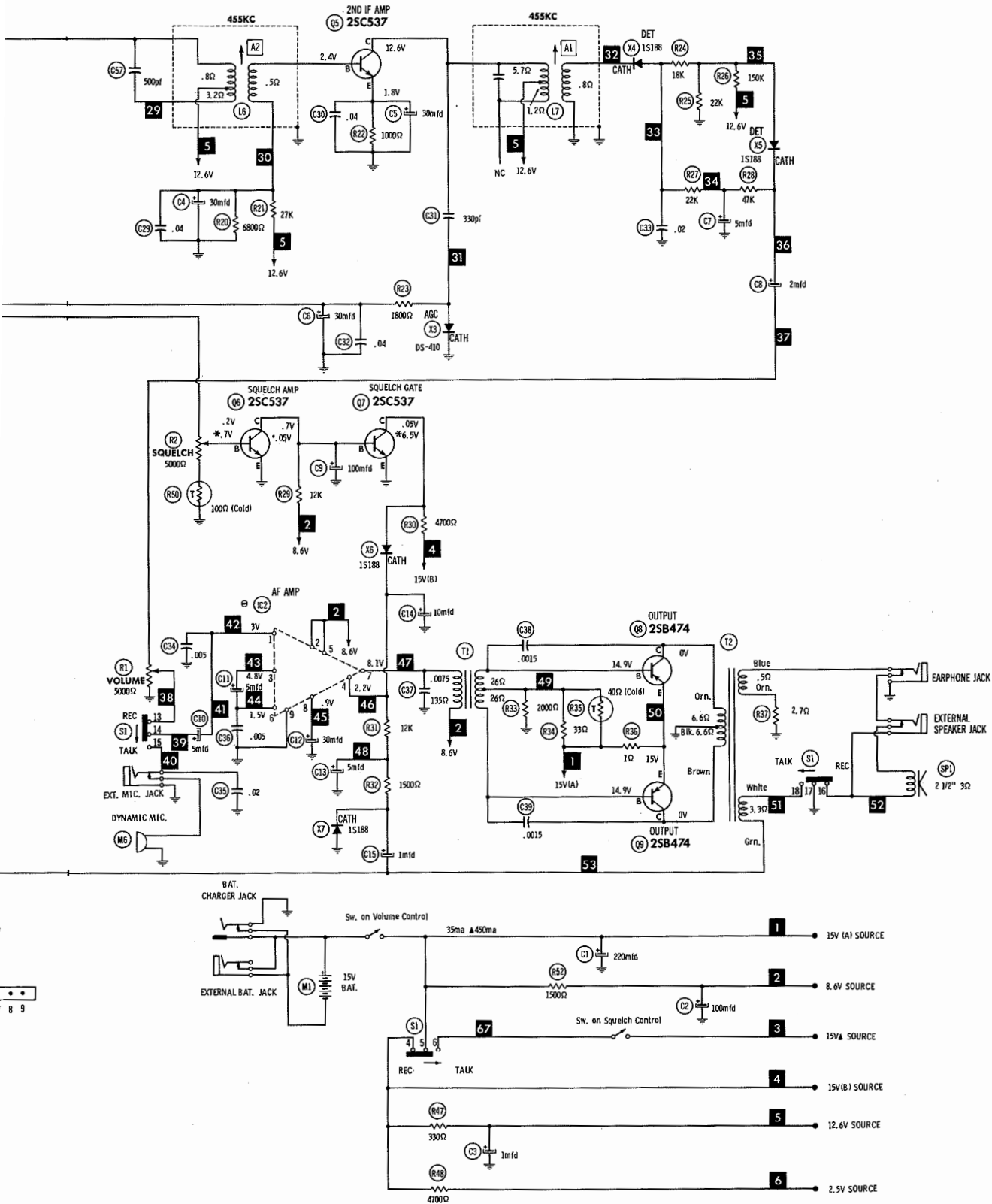


Q1 thru Q7



Transistor Terminal Guide





FANON MODEL IC-5000

PARTS LIST AND DESCRIPTION

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

WIRING DATA

General-use Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors
	8524 (Stranded) Available in 12 Colors
Shielded Antenna Lead	Use BELDEN No. 8214 Lowest-loss (RG-8/U Type)
	8237 Low-loss (RG-8/U)
	8240 (Solid) Miniature (RG-58/U)
	8259 (Stranded) Miniature (RG-58A/U)
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	2SC668	RF Amp			GE-20	TR-21	HEP54	SK3018	ECG 108
Q2	2SC772	Rec. Mixer			GE-20	TR-21	HEP54	SK3018	ECG 108
Q3	2SC537	AGC Amp			GE-20	TR-21	HEP54	SK3018	ECG 108
Q4	2SC537	1st IF Amp			GE-20	TR-21	HEP54	SK3018	ECG 108
Q5	2SC537	2nd IF Amp			GE-20	TR-21	HEP54	SK3018	ECG 108
Q6	2SC537	Squelch Amp			GE-10	TR-21	HEP54	SK3020	ECG 123
Q7	2SC537	Squelch Gate			GE-10	TR-21	HEP54	SK3020	ECG 123
Q8	2SB474	Output							ECG 131
Q9	2SB474	Output							ECG 131
Q10	2SC815	Xmtr. Osc			GE-20	TR-21	HEP736	SK3018	ECG 108
Q11	2SC781	Xmtr. Amp			GE-20	TR-21		SK3018	ECG 108
Q12	2SC799	Final Amp							ECG 108

INTEGRATED CIRCUITS

ITEM No.	FUNCTION	MFGR. PART No.	REMARKS
IC1	Receiver Oscillator	LD1020	
IC2	Audio Amplifier	LD3000	

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES			REPLACEMENT RECTIFIERS	NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.	RCA PART No.	
X1	1S188	1N60	1N60	ECG 109		
X2	SZT-9					
X3	DS-410					
X4	1S188	1N60	1N60	ECG 109		
X5	1S188	1N60	1N60	ECG 109		
X6	1S188	1N60	1N60	ECG 109		
X7	1S188	1N60	1N60	ECG 109		
X8	1S188	1N60	1N60	ECG 109		

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA						
		PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	220 16V	R-C9877	BCD15100		PC200-16			
C2	100 16V	R-C9570	BCD15025		PC100-25			
C3	1 15V	R-C9505	BCD15001	EP15-2	AL1-50	MT1-1		
C4	30 6V	R-C9105	BCD15025	EP6-25	PC30-35	MT1-13	TT6X30	TE-1132.1
C5	30 6V	R-C9105	BCD15025	EP6-25	PC30-35	MT1-13	TT6X30	TE-1132.1
C6	30 6V	R-C9105	BCD15025	EP6-25	PC30-35	MT1-13	TT6X30	TE-1132.1
C7	5 6V	R-C9078	CRE604A	EP6-5				
C8	2 10V	R-C9174	CRE751A	EP15-2	AL2-50	MT1-1		
C9	100 16V	R-C9570	BCD15100		PC100-25			
C10	5 6V	R-C9078	BCD25005	EP6-5				
C11	5 6V	R-C9078	BCD25005	EP6-5				
C12	30 6V	R-C9105	BCD15025	EP6-25	PC30-35	MT1-13	TT6X30	TE-1132.1
C13	5 10V	R-C9893	CRE604A	EP15-5				
C14	10 16V	R-C9889	BCD25010	EP15-10	AL10-25			
C15	1 15V	R-C9505	BCD50001	EP15-2	AL1-50	MT1-1		
C16	5 12V		BCD25005	EP15-5				

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.
C20	30	#R-CQ753M		TCZ-30		CCTO-300		10TCC-Q30
C21	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C22	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C23	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C24	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C25	.02		TTP-02	CK-203	HOY101ZV203P	CCD-203	TA120	TG-S20
C26	.04			DD-403			GP140	
C27	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C28	40		NPO-DI 33	DTZ-33	CS601CG330K	CCTO-330	CN0433	10TCC-Q33
C29	.04			DD-403			GP140	
C30	.04			DD-403			GP140	
C31	330		GPD X5F331K	DD-331	JBZ601YP331K	CCD-331	GP333	10TS-T33
C32	.04			DD-403			GP140	
C33	.02		TTP-02	CK-203	HOY101ZV203P	CCD-203	TA120	TG-S20
C34	.005		TTP-005	CK-502	HOY101ZV502P	CCD-502	TA250	TG-D50
C35	.02		TTP-02	CK-203	HOY101ZV203P	CCD-203	TA120	TG-S20
C36	.005		TTP-005	CK-502	HOY101ZV502P	CCD-502	TA250	TG-D50
C37	.0075							
C38	.0015		GPD X5F152K	DD-152		CCD-152	GP215	10TS-D15
C39	.0015		GPD X5F152K	DD-152		CCD-152	GP215	10TS-D15
C40	70		NPO-DI 68	DTZ-68	CX601CG680K	CCTO-680	CN0468	10TCC-Q68
C41	50		NPO-DI 50	DTZ-50		CCTO-500	CN0450	10TCC-Q50
C42	.02		TTP-02	CK-203	HOY101ZV203P	CCD-203	TA120	TG-S20
C43	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C44	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C45	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C46								
C47	50		NPO-DI 50	DTZ-50	CX601CG470K	CCTO-510	CN0450	10TCC-Q50
C48	20		NPO-DI 20	DTZ-20		CCTO-200	CN0420	10TCC-Q20
C49	270		GPD X5F271K	DD-271		CCD-271	GP327	10TS-T27
C50	10		NPO-DI 10	DTZ-10	CZ601CG100J	CCTO-100	CN0410	10TCC-Q10
C51	150		GPD X5F151K	DD-151		CCD-151	GP315	10TS-T15
C52	330		GPD X5F331K	DD-331	JBZ601YP331K	CCD-331	GP333	10TS-T33
C53	330		GPD X5F331K	DD-331	JBZ601YP331K	CCD-331	GP333	10TS-T33
C54	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C55	70		NPO-DI 68	DTZ-68	CX601CG680K	CCTO-680	CN0468	10TCC-Q68
C56	25		NPO-DI 25	DTZ-25			CN0425	10TCC-Q25
C57	500		GPD X5F501K	DM-501	JBZ601YP501K	CCD-501	GP350	10TS-T50

Fanon Part Number.

FANON MODEL IC-5000

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	5000	R-R116103				
R2	Squelch/PA, Switch	5000	R-R116104				
R3	Squelch	50K					

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	MFGR. PART No.
R35	Thermistor 40 (Cold)			SDT-04

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	MFGR. PART No.
R50	Thermistor 100 (Cold)			SDT-100

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	Antenna Loading	R-W1071			
L2	Antenna Coil	R-W2376			
L3	RF	R-W4055			
L4	Receiver Oscillator	R-W8281			
L5	Input IF	R-W3504			
L6	Interstage IF	R-W5T351	16-9027	2067	
L7	Output IF	R-W5T352	16-9028	2068	
L8	RF Choke (10uh)	R-W1070	19-2017	4622	T860
L9	Transmitter Oscillator	R-W8297			
L10	RF Choke (120uh)		19-2017	4622	T860
L11	RF Driver	R-W4056			
L12	RF Choke (12uh)	R-W1506			
L13	Pi Input	R-W9078			
L14	Pi Output	R-W9079			
L15	TVI Trap	R-W9080			

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.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	1.9	1 CT		R-W6589-1					

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	135	3.2	R-W6345					
		SEC. 2						
		3.3 DC Resistance						

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	2 1/4" PM 3 ohms	R-S6466	2A05	

BATTERIES

ITEM No.	VOLTAGE	MFGR. PART No.	REPLACEMENT DATA		NOTES
			EVEREADY	MALLORY	
M1	15V	R8-12	N46		10 Required

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M2	Crystal	R-H04103	Receiver Oscillator
M3	Crystal	R-H04102	Transmitter Oscillator
M4	Crystal	BF-445B-1	1st IF Amp Emitter Filter
M5	Meter	R-S5580	Battery - RF Power
M6	Mic	R-S6490	Dynamic
S1	Switch	R-S4442	Push-to-talk
S2	Switch	R-S4443	Channel Selector

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

ITEM	PART No.	ITEM	PART No.
External Speaker Socket	R-S2040	Knob, Talk-Listen	R-311026
External Antenna Socket	R-S2040	Knob, Control	R-S81720
Loaded Antenna	R-S3155	Battery Sleeveholder	R-35319



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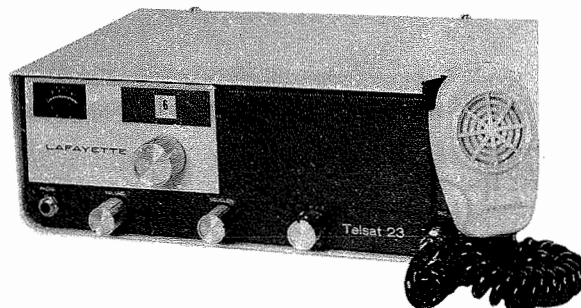
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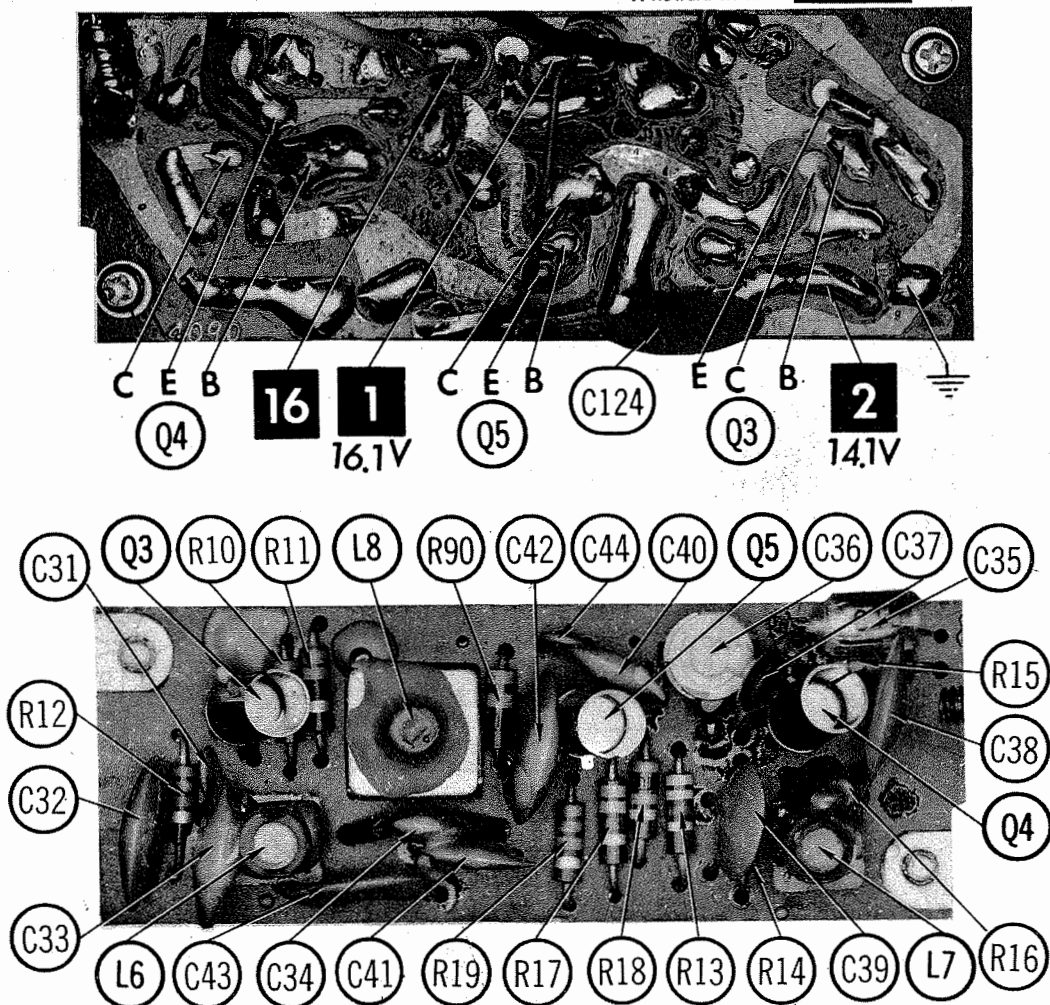
Best results will be obtained when adjusting the final RF output circuit if the antenna normally used is connected and the chassis is as nearly in the cabinet as possible.

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



LAFAYETTE MODEL TELSAT 23 (99-3157WX)

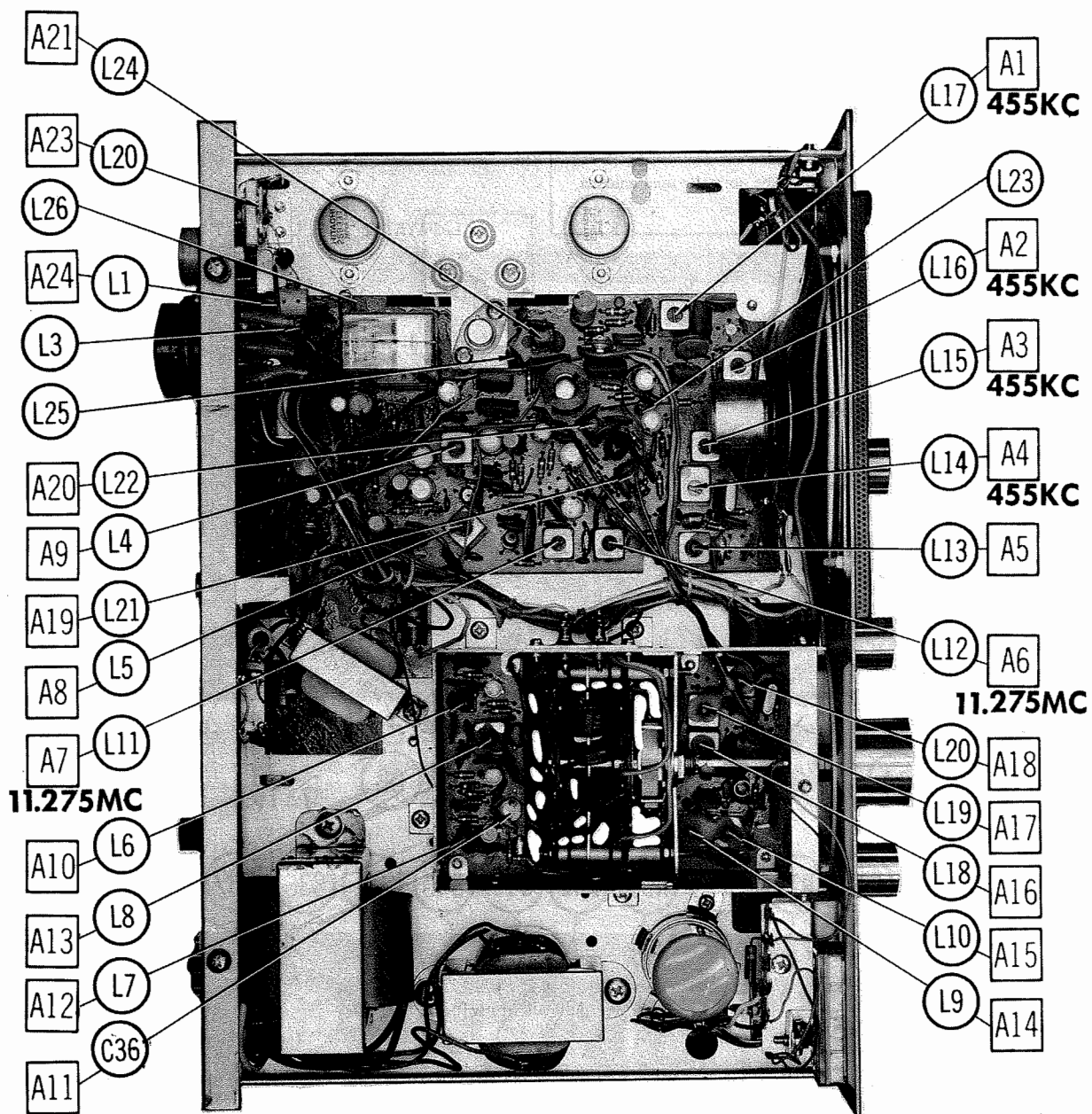
A Howard W. Sams CIRCUITRACE[®] Photo



LAFAYETTE MODEL TELSAT 23

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

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ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A1 thru A4,A6,A7,A11,A23.....GENERAL CEMENT #5009,8728A,8987..WALSCO #2531X,2536
 A8,A9,A10,A12,A13 thru A22....GENERAL CEMENT #9440WALSCO #2501
 A24GENERAL CEMENT #8606,8606L,8869..WALSCO #2543,2544,2588

RECEIVER

Connect an AC VTVM across speaker terminals. Turn Volume Control to Mid-Range, Squelch Control fully counterclockwise, Delta Switch to Center position.

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to point  (Cathode, X5, 2nd Rec. Mixer), low side to Chassis. Tune to 455KC (Mod.).	Any	A1,A2, A3,A4	Adjust for maximum.
High side thru .01mfd to Base of Q2 (1st Rec. Mixer), low side to Chassis. Tune to 11.275MC (Mod.).	Any	A5,A6, A7	Adjust for maximum. Turn A5 1/8 turn clockwise from peak.
High side thru .01mfd to antenna connector, low side to chassis. Tune to 27.115MC (Channel 13) (Mod.).	13	A8,A9	Adjust for maximum. (Alignment of Synthesizer Oscillators should be checked in conjunction with this step).

METER CALIBRATION

High side thru .01mfd to antenna connector, low side to chassis. Tune to 27.115MC (Mod.). Adjust for 100 microvolt output.	13	R4	Adjust for S-9 Reading on Meter (M16).
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TRANSMITTER

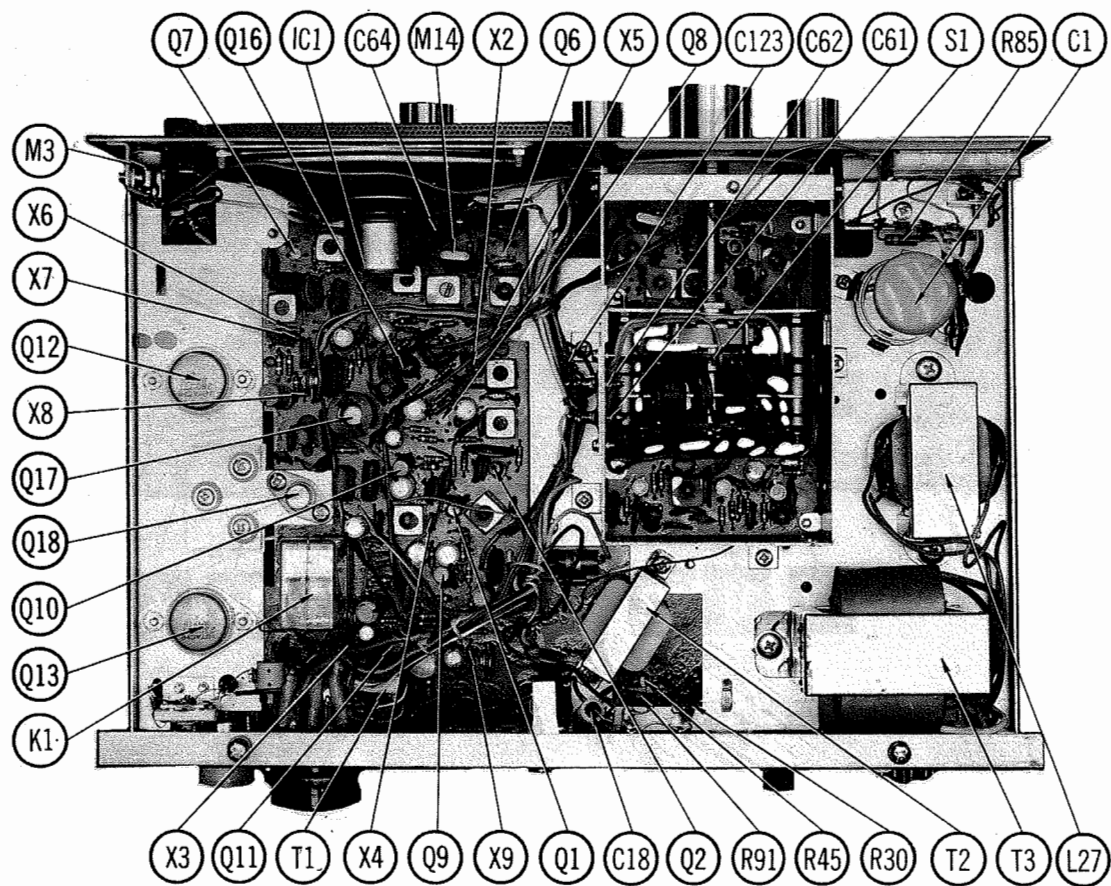
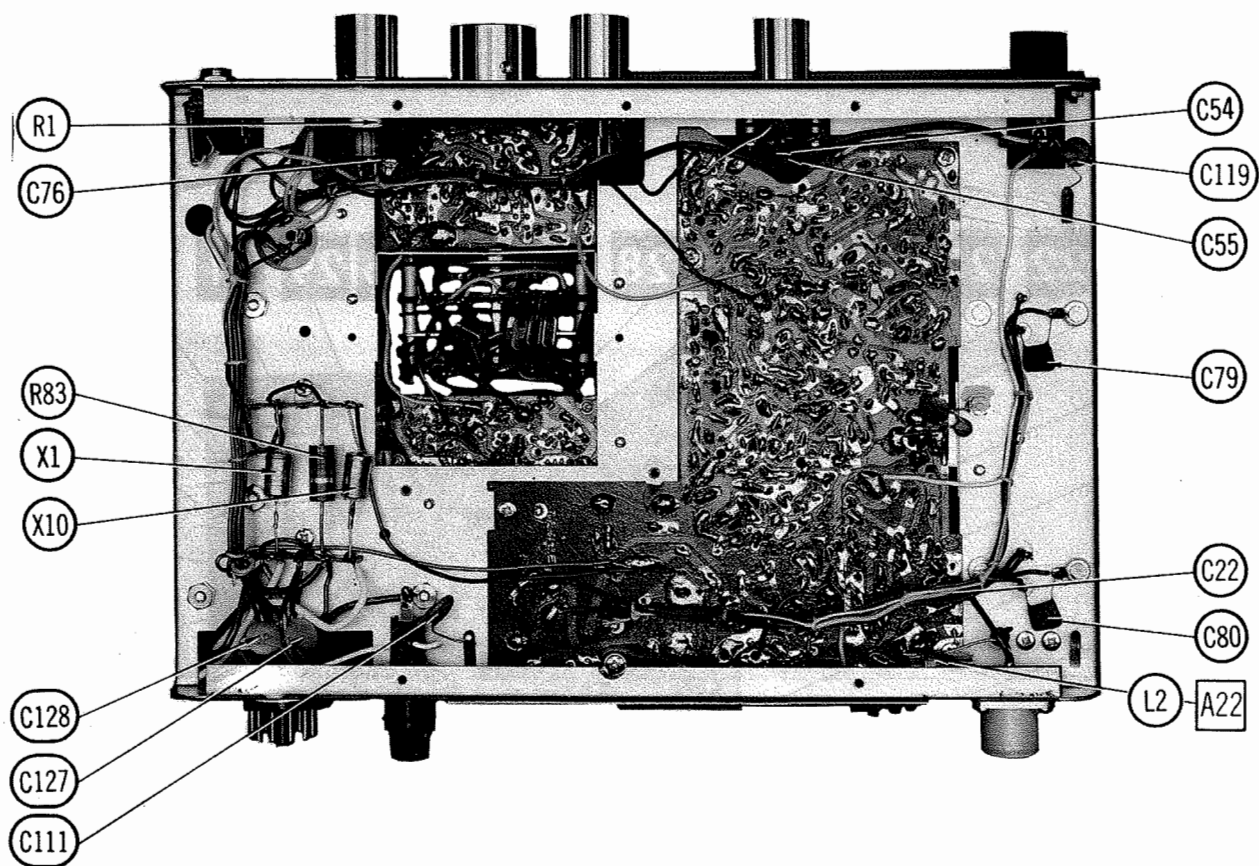
INDICATOR	ADJUST	REMARKS
Connect a DC VTVM from Emitter of Q3 (Local Osc.) to ground.	A10	Adjust for Reading of approximately 2.5V.
Connect a DC VTVM from Emitter of Q4 (Synthesizer Osc.) to ground.	A11,A12	Adjust for reading of approximately 1.3V.
RF Wattmeter or Field Strength Meter.	A13 thru A23	Adjust for equal power output on all channels and proper frequency. L3 may be adjusted by compressing or expanding the turns.
Nearby TV Tuned to Channel 2.	A24	Adjust for MINIMUM Interference.
RF Wattmeter	R5	Adjust for same reading on front panel meter as on External RF Wattmeter.

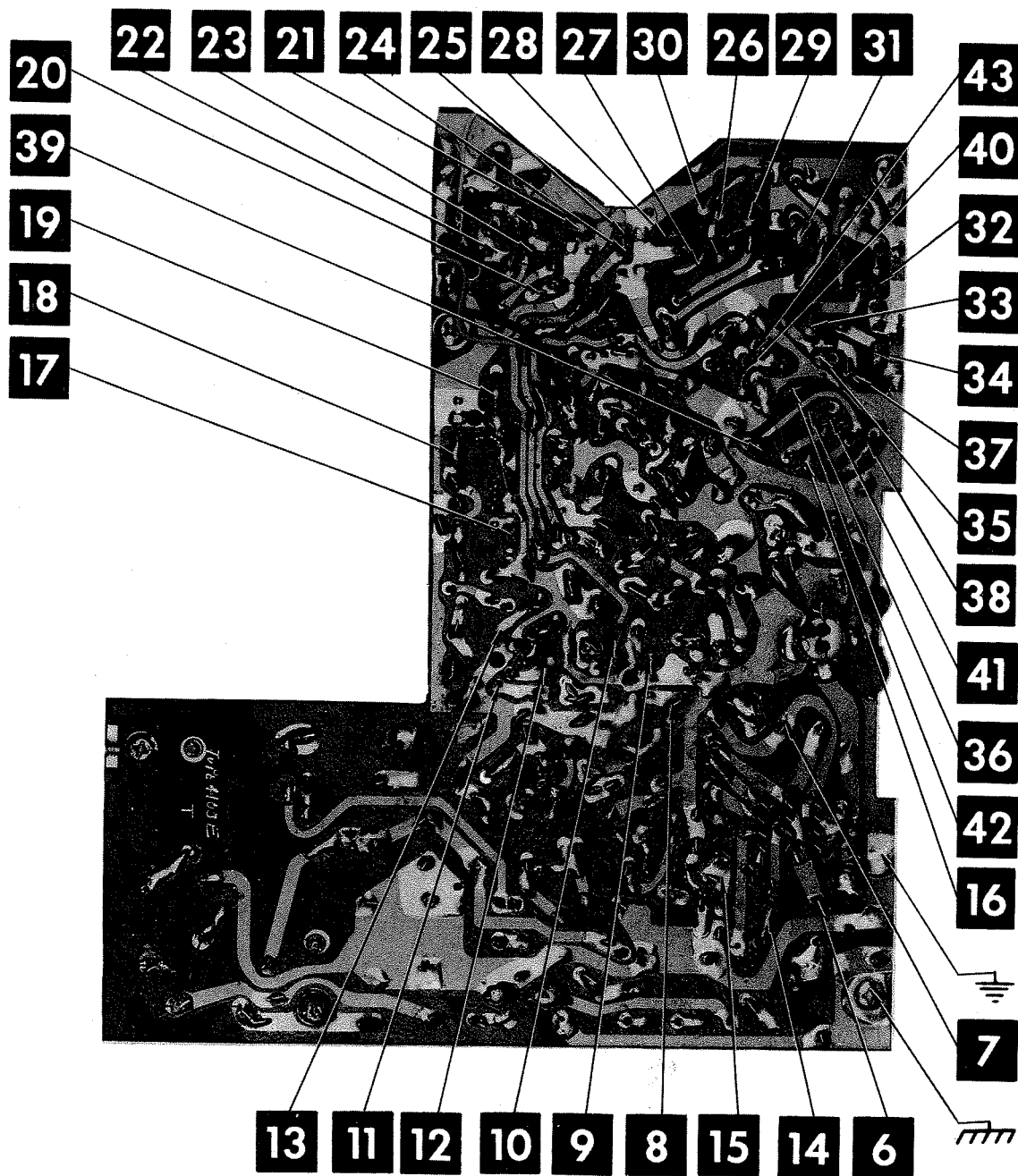
MODULATION ADJUSTMENT

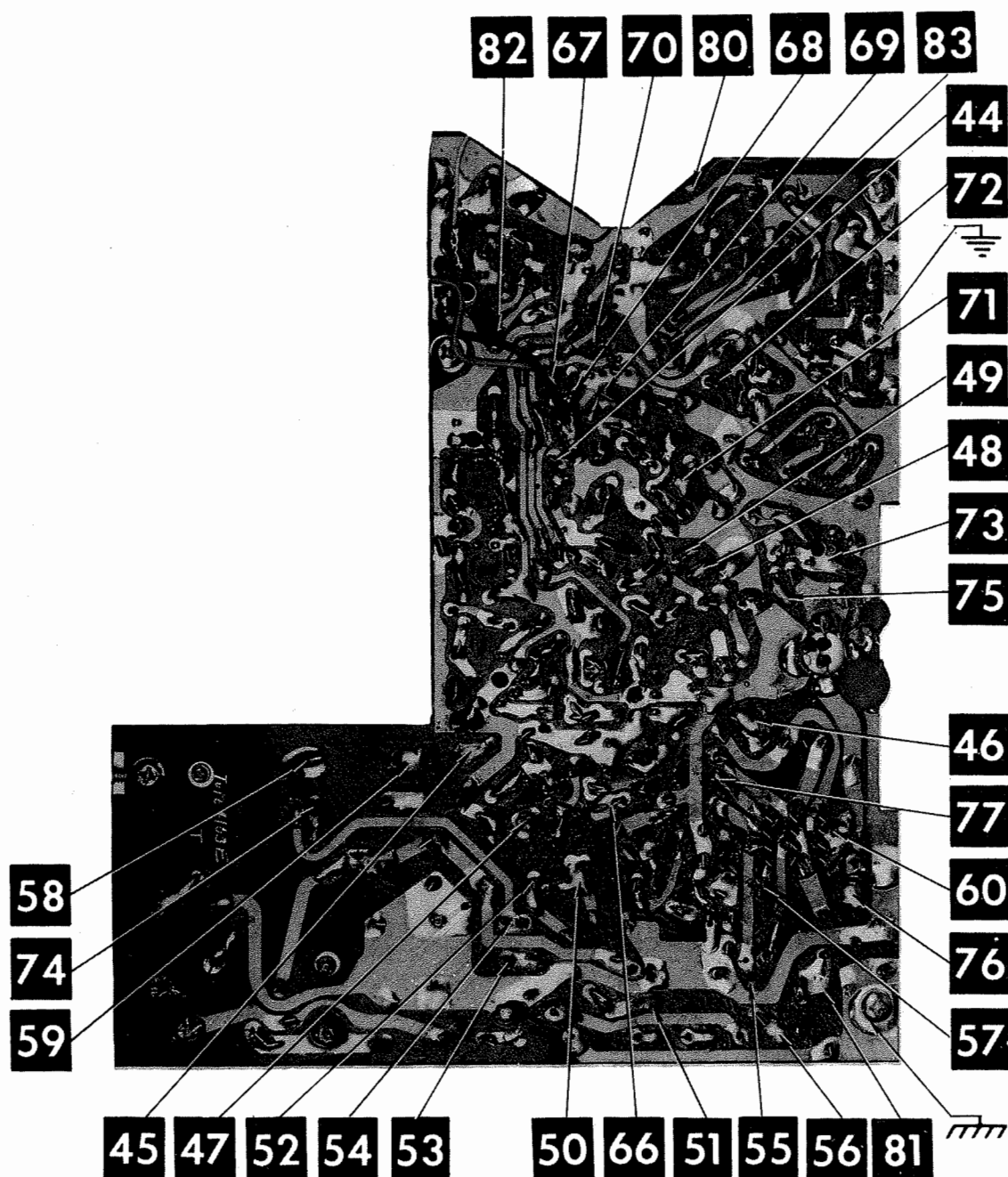
Modulation Monitor	R6	Connect Audio Generator to Pin #3 of Microphone Jack. Generator Frequency to 1000 cycles. Output Level to 10 Millivolts. Adjust R6 (Range Boost Adjust) for 80% modulation on monitor.
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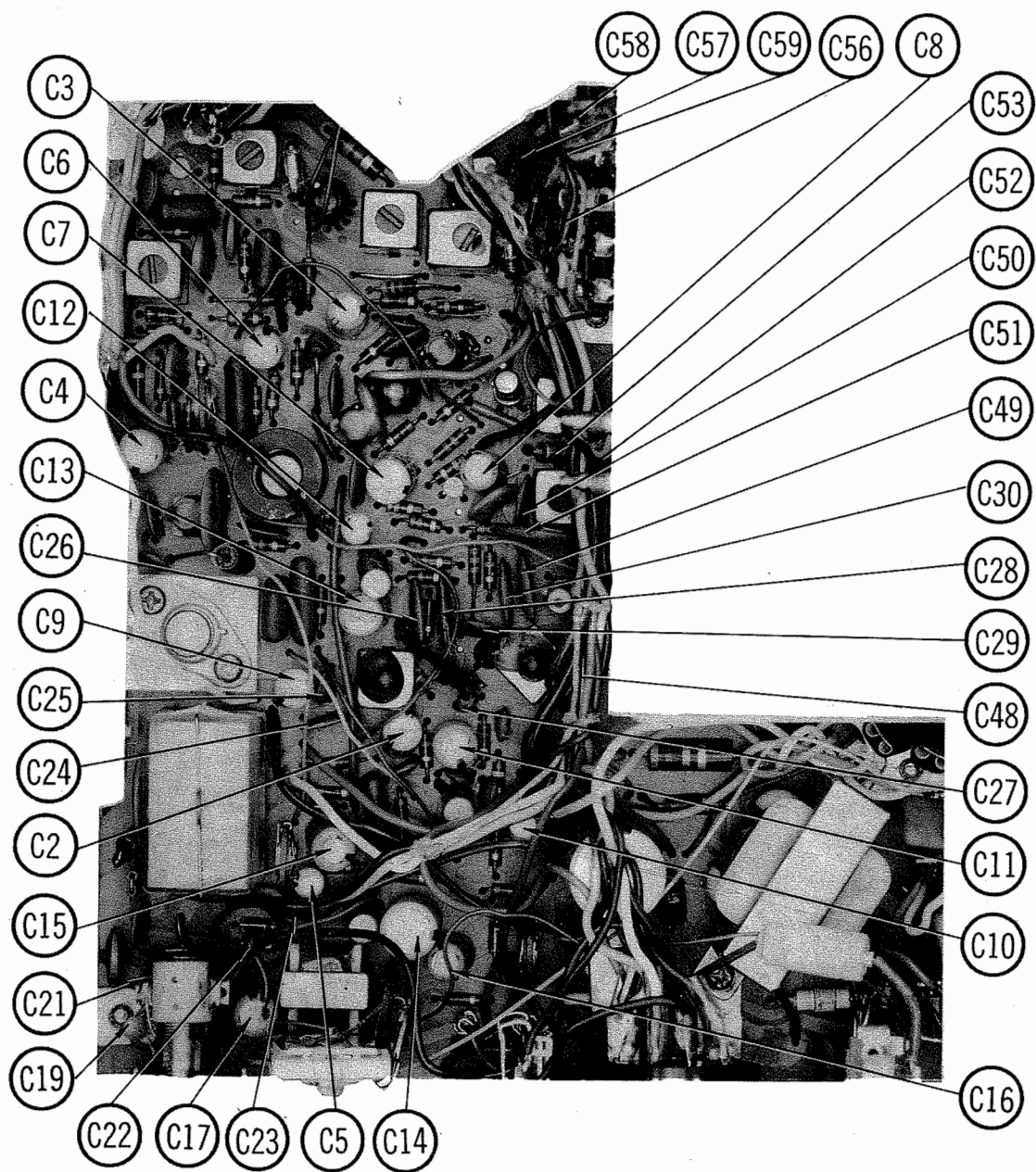
LAFAYETTE MODEL TELSAT 23

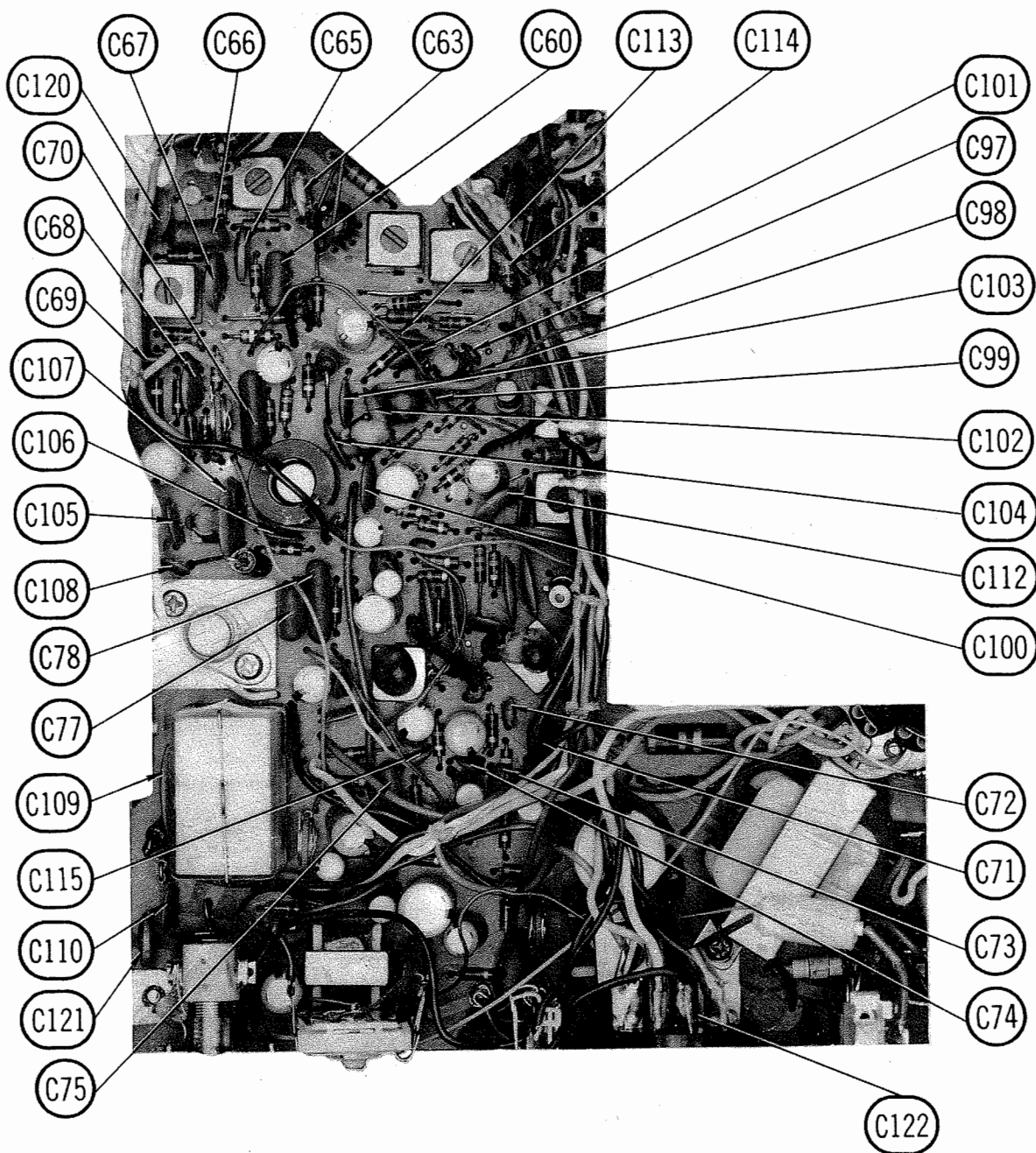


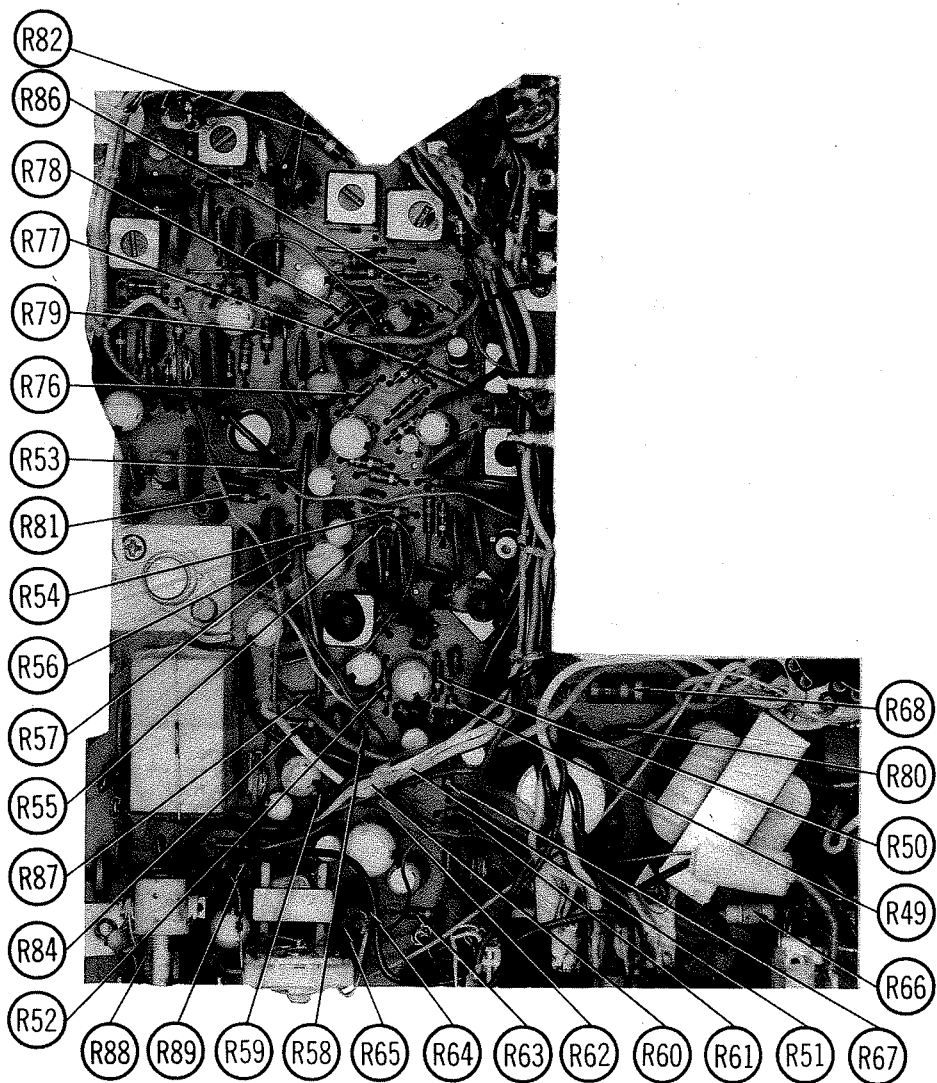
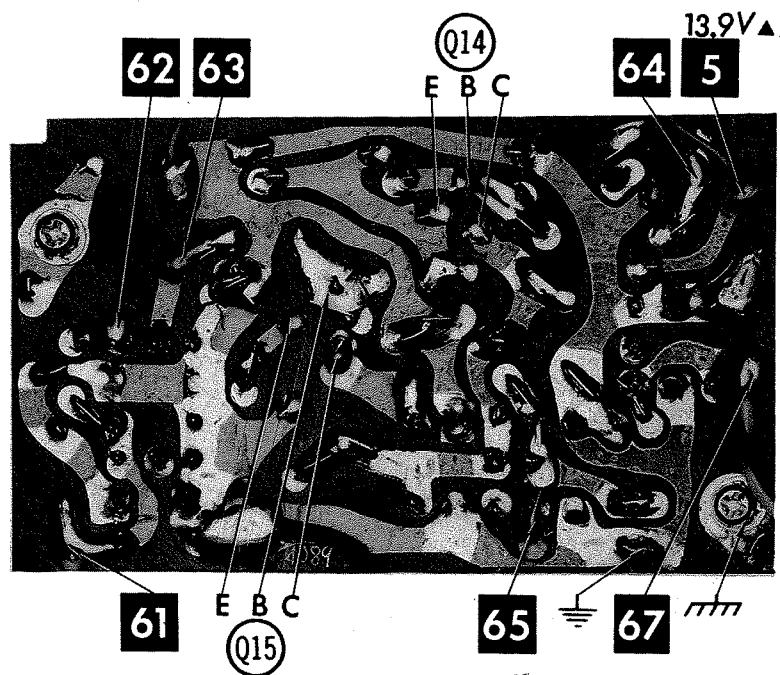


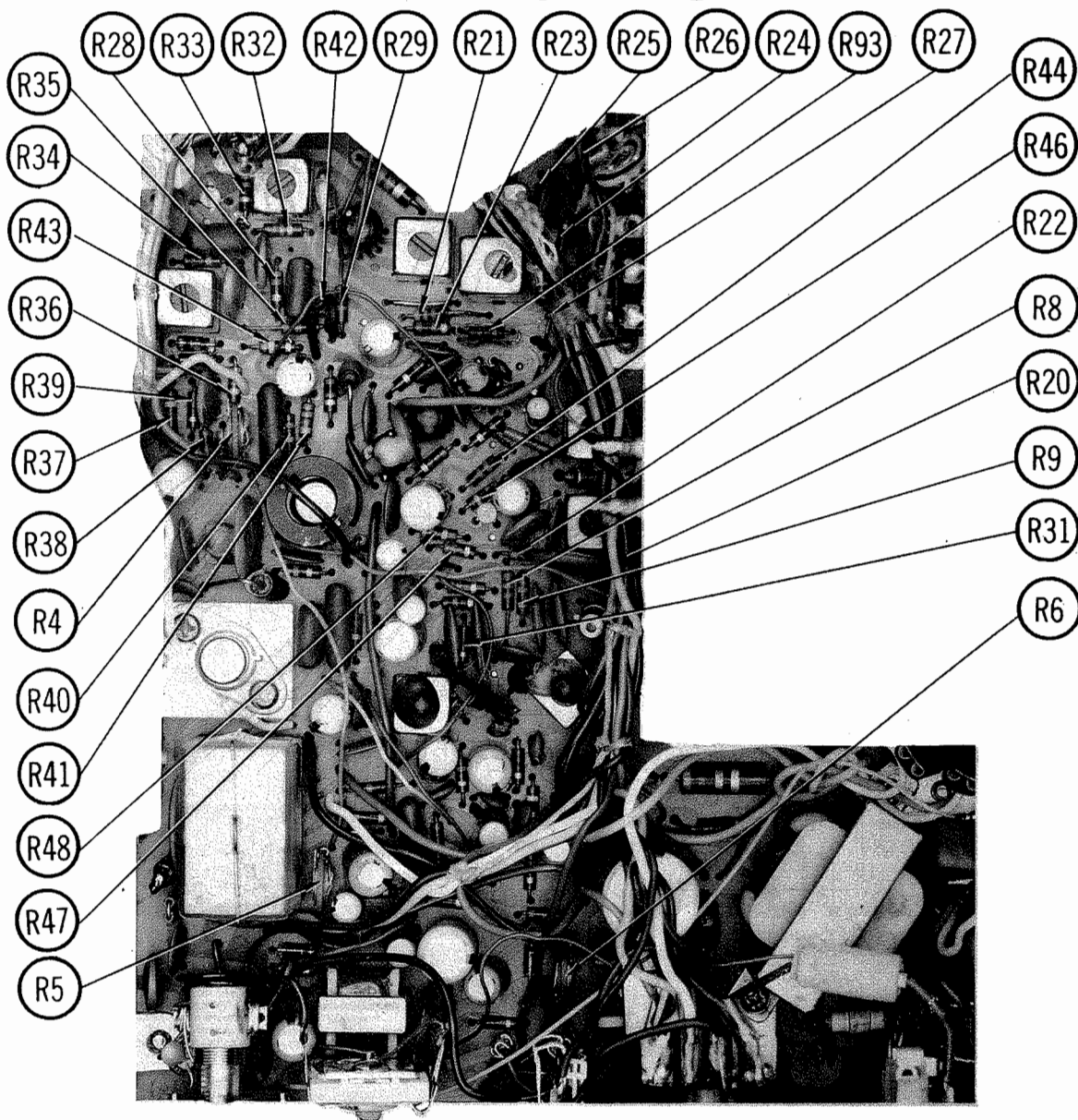
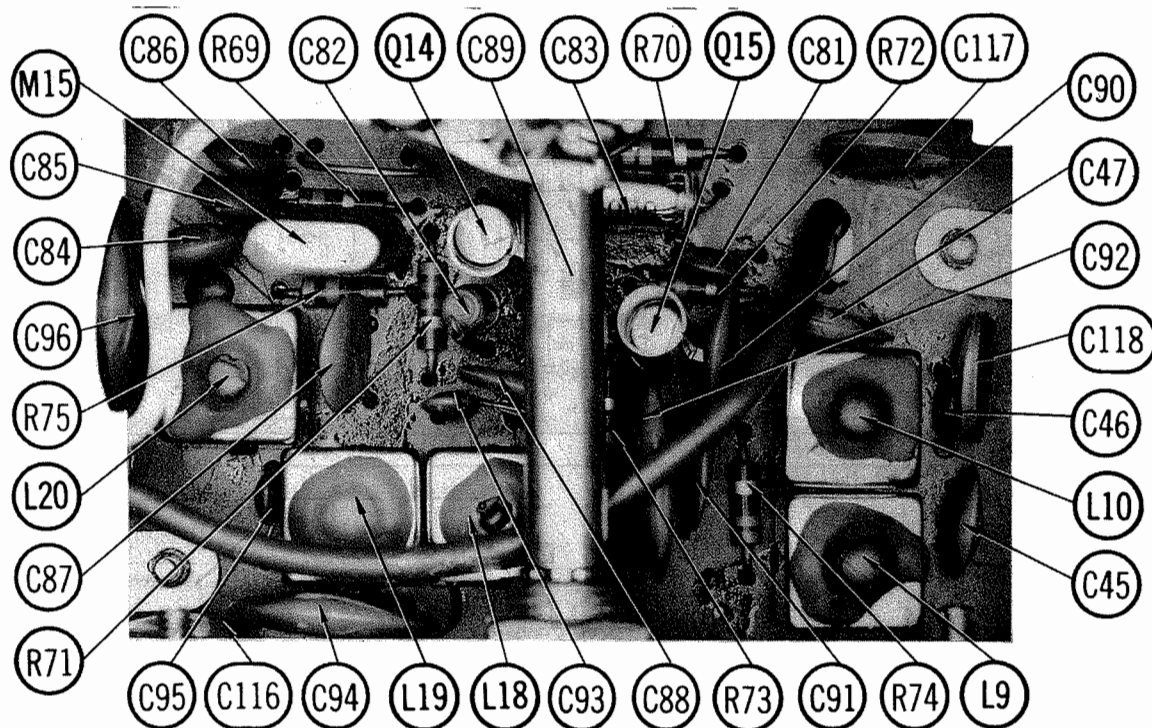












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PARTS LIST AND DESCRIPTION

(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	2SC839	RF Amp			GE-17	TR-22	HEP728	SK3018	ECG 108
Q2	2SC206	1st Rec Mixer	1016-17		GE-17	TR-22	HEP53	SK3018	ECG 108
Q3	2SC55	Local Osc	1020-17		GE-17	TR-22	HEP50	SK3018	ECG 108
Q4	2SC55	Synthesizer Osc	1020-17		GE-17	TR-22	HEP50	SK3018	ECG 108
Q5	2SC55	Synthesizer Mixer	1020-17		GE-17	TR-22	HEP50	SK3018	ECG 108
Q6	2SC183	Rec Osc			GE-20	TR-21	HEP56	SK3018	ECG 108
Q7	2SC183	IF Amp			GE-20	TR-21	HEP56	SK3018	ECG 108
Q8	2SC183	Squelch			GE-20	TR-21	HEP56	SK3018	ECG 108
Q9	2SB60	Mic Preamp	1021-17		GE-2	TR-05	HEP254	SK3004	ECG 102
Q10	2SD37	AF Amp	1371-17		GE-8	TR-09	HEP641	SK3010	ECG 101
Q11	2SB60A	Driver	1023-17		GE-2	TR-05	HEP254	SK3004	ECG 102
Q12	2SB337	Output-Modulator			GE-3	TR-01	HEP232	SK3009	ECG 121
Q13	2SB337	Output-Modulator			GE-3	TR-01	HEP232	SK3009	ECG 121
Q14	2SC55	Xmtr Osc	1020-17		GE-17	TR-22	HEP50	SK3018	ECG 108
Q15	2SC55	Xmtr Mixer	1020-17		GE-17	TR-22	HEP50	SK3018	ECG 108
Q16	CS1305	Xmtr Amp							
Q17	S20445	Xmtr Driver							
Q18	S20446	Final	1068-17						

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES			REPLACEMENT RECTIFIERS	NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.	RCA PART No.	
X1	DS-1P	GE-504A	8D4 or 5A4-D	ECG 117 or ECG 116	SK3030 or SK3031	Zener
X2	FV-21					
X3	1S446	1N34AS	1N34A	ECG 109		
X4	FV-23	1N34AS	1N34A	ECG 109		
X5	1S446	1N34AS	1N34A	ECG 109		
X6	1S446	1N34AS	1N34A	ECG 109		
X7	1S446	1N34AS	1N34A	ECG 109		
X8	1S446	1N34AS	1N34A	ECG 109		
X9	1S446	1N34AS	1N34A	ECG 109		
X10	DS-1P	GE-504A	8D4 or 5A4-D	ECG 116 or ECG 117	SK3030 or SK3031	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA						
		PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	1000 25V		AFH2-05-75		BB0040A	XC2-45	PWP-201.13A	TVL-2241
B	1000 25V							
C2	10 15V		BCD25010	EP15-10	NLW10-15	MT1-5	MTV10CB50	TE-1155
C3	33 6.3V		BCD15025	EP15-25	NLW30-15	MT1-14	MTV30CB25	TE-1132.1
C4	30 10V		BCD15025	EP15-25	NLW30-15	MT1-14	MTV30CB25	TE-1132.1
C5	1 25V		BCD50001		NLW1-50	MT1-1	MTV1CB50	TE-1200
C6	3 50V		BCD50003	EP50-2	NLW3-50	MT1-3	MTV3CB50	TE-1302
C7	30 10V		BCD15025	EP15-25	NLW30-15	MT1-14	MTV30CB25	TE-1132.1
C8	10 15V		BCD25010	EP15-10	NLW10-15	MT1-5	MTV10CB50	TE-1155
C9	3 50V		BCD50003	EP50-2	NLW3-50	MT1-3	MTV3CB50	TE-1302
C10	4.7 25V		BCD25005	EP30-5	NLW5-50	MT1-3	MTV5CB50	TE-1202
C11	30 15V		BCD15025	EP15-25	NLW30-15	MT1-14	MTV30CB25	TE-1158
C12	1 25V		BCD50001		NLW1-50	MT1-1	MTV1CB50	TE-1200
C13	30 10V		BCD15025	EP15-25	NLW30-15	MT1-14	MTV30CB25	TE-1132.1
C14	100 16V		BCD15100	EP15-100	NLW100-15	MT1-19	MTV100CF15	TE-1162
C15	30 15V		BCD15025	EP15-25	NLW30-15	MT1-14	MTV30CB25	TE-1158
C16	4.7 25V		BCD25005	EP30-5	NLW5-50	MT1-3	MTV5CB50	TE-1202
C17	30 15V		BCD15025	EP15-25	NLW30-15	MT1-14	MTV30CB25	TE-1158
C18	33 16V		CRE614A	EA30-25	NLW35-15	MT1-13.5	MTA35E35	TE-1159

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.
C19	25		NPO-DI 25	DTZ-25			CN0425	10TCC-Q25
C20	250							
C21	390 50V 10%		GPD X5F391K	DD-391		CCS-391	GP339	10TS-T39
C22	3		NPO-DI 3.0					10TCC-V30
C23	.005		TTP-005	CK-502	HOY101ZV502P	CCD-502	TA250	TG-D50
C24	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C25	100 10%		GPD X5F101K	DD-101	JBZ601YP101K	CCD-101	GP310	10TS-T10
C26	.01 50V		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C27	3		NPO-DI 3.3	DTZ-3R3			CN0533	10TCC-V33
C28	.01 50V		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C29	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C30	.01 50V		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C31	1		NPO-DI 1.0	TCZ-1			CN0510	10TCC-V10
C32	200 10%		GPD X5F201K	DD-201	JBZ601YP221K	CCD-201	GP320	10TS-T20
C33	100 N150 10%							10TCP-T10
C34	15 N150 10%							10TCP-Q15
C35	620							424ME6200J501
C36				CPR-620J	CD19F621K500	DM-15-621K	SX362	
C37	30 NPO 10%			TCZ-30		CCTO-300		10TCC-Q30
C38	70 N150 10%							10TCP-Q68
C39	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C40	60 N150 10%							10TCP-Q56
C41	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C42	100 N150 10%							10TCP-T10
C43	.02		TTP-02	CK-203	HOY101ZV203P	CCD-203	TA120	TG-S20
C44	3		NPO-DI 3.0					10TCC-V30
C45	50 N150 10%							10TCP-Q50
C46	3		NPO-DI 3.0					10TCC-V30
C47	100 N150 10%							10TCP-T10
C48	30 NPO 10%			TCZ-30		CCTO-300		10TCC-Q30
C49	.01 50V		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C50	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C51	200 N150 10%							10TCP-T20
C52	5		NPO-DI 5.0		CZ601CH5R0D			10TCC-V50
C53	220			CPR-2200J	CD19F222J500	DM-19-222J	SX222	424ME2201J501
C54	50		NPO-DI 50	DTZ-50	CX601CG470K	CCTO-510	CN0450	10TCC-Q50
C55	25		NPO-DI 25	DTZ-25			CN0425	10TCC-Q25
C56	.04			DD-403			GP140	
C57	250 10%		GPD X5F221K	DD-251		CCS-251	GP325	10TS-T25
C58	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C59	220		GPD X5F221K	DD-221	JBZ601YP221K	CCD-221	GP322	10TS-T22
C60	.047		V1612S47		DMF1S47	1DP-2-473	PVC1147	225P47391WD3
C61	.001							
C62	.001							
C63	220			CPR-2200J	CD19F222J500	DM-19-222J	SX222	424ME2201J501
C64	200			CPR-200J	CD15F201K500	DM-15-201K	SX320	424ME2000J501
C65	.04			DD-403			GP140	
C66	.047		V1612S47		DMF1S47	1DP-2-473	PVC1147	225P47391WD3
C67	.04			DD-403			GP140	
C68	.04			DD-403			GP140	
C69	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C70	.056		DBE6S56		WMF1S56	1DP-2-563	PVC1156	225P56391WD3
C71	.047		V1612S47		DMF1S47	1DP-2-473	PVC1147	225P47391WD3
C72	.001		GPD X5F102K	DD-102	JBZ601YP102K	CCD-102	GP210	10TS-D10
C73	.001		GPD X5F102K	DD-102	JBZ601YP102K	CCD-102	GP210	10TS-D10
C74	.001		GPD X5F102K	DD-102	JBZ601YP102K	CCD-102	GP210	10TS-D10
C75	.056		DBE6S56		WMF1S56	1DP-2-563	PVC1156	225P56391WD3
C76	.022		V1612S22		DMF1S22	1DP-1-223	PVC1122	225P22391WD3
C77	.047		V1612S47		DMF1S47	1DP-2-473	PVC1147	225P47391WD3
C78	.056		DBE6S56		WMF1S56	1DP-2-563	PVC1156	225P56391WD3
C79	.022		V1612S22		DMF1S22	1DP-1-223	PVC1122	225P22391WD3
C80	.022		V1612S22		DMF1S22	1DP-1-223	PVC1122	225P22391WD3
C81	70		GPD X5F680K	DD-680	JBZ601YP680K	CCD-680	GP468	10TS-Q68
C82	200			CPR-200J	CD15F201K500	DM-15-201K	SX320	424ME2000J501
C83	.001			CPR-1000J	CD19F102J500	DM-19-102J	SX210	424ME1001J501
C84	150		GPD X5F151K	DD-151		CCD-151	GP315	10TS-T15
C85	30			TCZ-30		CCTO-300		10TCC-Q30
C86	30			TCZ-30		CCTO-300		10TCC-Q30
C87	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C88	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C89	45		GPD X5F470K	DD-470	JBZ601YP470K	CCD-470	GP447	10TS-Q47
C90	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C91	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C92	150 N150 10%							10TCP-T15
C93	6							10TCC-V56
C94	150 N150 10%							10TCP-T15
C95	5		NPO-DI 5.0		CZ601CH5R0D			10TCC-V50
C96	150 N150 10%							10TCP-T15
C97	4 N150 10%							10TCP-V39
C98	60 N150 10%							10TCP-Q56
C99	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10

LAFAYETTE MODEL TELSAT 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.
C100	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C101	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C102	100 N150 10%							10TCP-T10
C103	.02		TTP-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C104	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C105	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C106	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C107	390 30V 10%		GPD X5F391K	DD-391		CCS-391	GP339	10TS-T39
C108	50		NPO-DI 50	DTZ-50	CX601CG470K	CCTO-510	CNO450	10TCC-Q50
C109	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C110	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C111	.0001		GPD X5F102K	DM-102	JBS601YP102K	CCD-102	SM210	2SS-D10
C112	.04			DD-403			GP140	
C113	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C114	510			CPR-510J	CD15F511K500	DM-15-511K	SX351	424ME5100J501
C115	.0001		GPD X5F102K	DM-102	JBS601YP102K	CCD-102	SM210	2SS-D10
C116	.04			DD-403			GP140	
C117	.04			DD-403			GP140	
C118	.04			DD-403			GP140	
C119	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C120	.04			DD-403			GP140	
C121	.04			DD-403			GP140	
C122	.04			DD-403			GP140	
C123	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C124	.04			DD-403			GP140	
C125	.0001		GPD X5F102K	DM-102	JBS601YP102K	CCD-102	SM210	2SS-D10
C126	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C127	.04			DD-403			GP140	
C128	.04			DD-403			GP140	

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 R2	Volume/Switch Squelch	10K 50K		F3-50K(1), SSK010		Q17-123(1) or [BU1(1),CF98, SS1,DC1]*	RU54R,SL36, SL3250 or [UA54R (1), SK750] or U34(1)
R4 R5 R6	"S" Meter Adjust RF Power Adjust Range Boost	10K 10K 10K		T-10K (2) T-10K (2) T-10K (2)		X201R103B(2) X201R103B(2) X201R103B(2)	MTC14L1(2) MTC14L1(2) MTC14L1(2)

* "SNAPTROL" (1) Enlarge Mounting Hole. (2) Cut off one of the end Terminals & bend to fit "PC" Board.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	MFGR. PART No.
R42	100K (Cold)			

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	MFGR. PART No.
R65	33 (Cold)			

PARTS LIST AND DESCRIPTION (CONTINUED)

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

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	TVI Trap			4201 (1)	
L2	Antenna Matching				
L3	RFC (4 turns)				
L4	Antenna Input	(256/089)			
L5	RF Amp	(256/073)			
L6	Local Osc	(256/203)			
L7	Synthesizer Osc				
L8	Synthesizer Mixer	(256/177)			
L9	Synthesizer Mixer	(256/177)			
L10	Synthesizer Mixer	(256/179)			
L11	1st Rec. Mixer	(256/182)			
L12	11.275MC IF	(256/183)			
L13	Rec Osc				
L14	Input IF	(257/014)			
L15	Interstage IF	(256/092)		8517	
L16	Interstage IF	(256/343)		8517	
L17	Output IF	(256/022)		8518	
L18	Xmtr Mixer	(256/177)			
L19	Xmtr Mixer	(256/177)			
L20	Xmtr Mixer	(256/177)			
L21	Xmtr Mixer				
L22	Xmtr Buffer				
L23	RFC * (2.2uh)			74F226AP (2)	T812 (2)
L24	Xmtr Driver				
L25	RFC * (2.2uh)			74F226AP (2)	T812 (2)
L26	RFC * (2.2uh)			74F226AP (2)	T812 (2)

* Wound on 820K Resistor.

(1) Solder into place. (2) Shunt with 820K Resistor.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L27	650ma	1	32.5mh	(256-354)					
			Low Tap .3mh						

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	MFR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	4	1							

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	MFR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	4.2 CT	.7 Tapped @ .2	1072-15 (TvBvTr4021)					

LAFAYETTE MODEL TELSAT 23

PARTS LIST AND DESCRIPTION (CONTINUED)

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

TRANSFORMER (Power)

ITEM No.	RATING		REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	MFR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T3	117VAC @ 150ma	24VAC CT @ 125ma	(256-053)					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFR. PART No.	QUAM PART No.	
SP1	3" x 5" PM 16 ohms	(12D51S)	35A05Z16	

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	.7 Amp			AGC 3/4	HKP	312750	342012	

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
K1	Relay		Xmit - Rec
M1	Meter Lamp		
M2	Dial Lamp		
M3	Xmit & Mod Lamp		
M4	Crystal		23.290MC
M5	Crystal		23.340MC
M6	Crystal		23.390MC
M7	Crystal		23.440MC
M8	Crystal		23.490MC
M9	Crystal		23.540MC
M10	Crystal		14.950MC
M11	Crystal		14.960MC
M12	Crystal		14.970MC
M13	Crystal		14.990MC
M14	Crystal		11.730MC
M15	Crystal		11.275MC
M16	Meter		RF Power "S" Units
M17	Microphone Assembly		
S1	Switch		Channel Selector -PA-Ext
S2	Switch		Delta Tune

WIRING DATA

General-use Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors
	8524 (Stranded) Available in 12 Colors
Shielded Antenna Lead	Use BELDEN No. 8214 Lowest-loss (RG-8/U Type)
	8237 Low-loss (RG-8/U)
	8240 (Solid) Miniature (RG-58/U)
	8259 (Stranded) Miniature (RG-58A/U)
Coiled Microphone Cable	Use BELDEN No. 8497 3-Conductor, 1 Shielded, for Press-to-Talk (Neoprene)
	8496 3-Conductor, 1 Shielded, for Press-to-Talk (Vinyl)
Ignition Noise Suppression	Use BELDEN No. 7300-Series Spark-Plug Sets
Bonding Strap	Use BELDEN No. 8661 (3/8 In.)



PHOTOFACT[®] with

CIRCUITRACE[®]

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.



AUTOMATIC MODELS MCE-6510, TRE-6500

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A4 thru A11.....GENERAL CEMENT #9440.....WALSCO #2501
A1 thru A3.....GENERAL CEMENT #5000WALSCO #2525

RECEIVER

Connect an AC VTVM across Speaker Voice Coil. Turn Volume Control fully clockwise, turn Squelch Control fully counterclockwise.

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to Base of Q2 (Rec. Mix.), low side to chassis. Tune to 455KC (Mod.).	Any	A1, A2, A3	Adjust for maximum.
High side thru .01mfd to Antenna Receptacle. Low side to chassis. Set Frequency to 27.085MC (Channel 11).	11	A4, A5, A6	Adjust for maximum. Key Transmitter several times to ensure proper Oscillator starting.

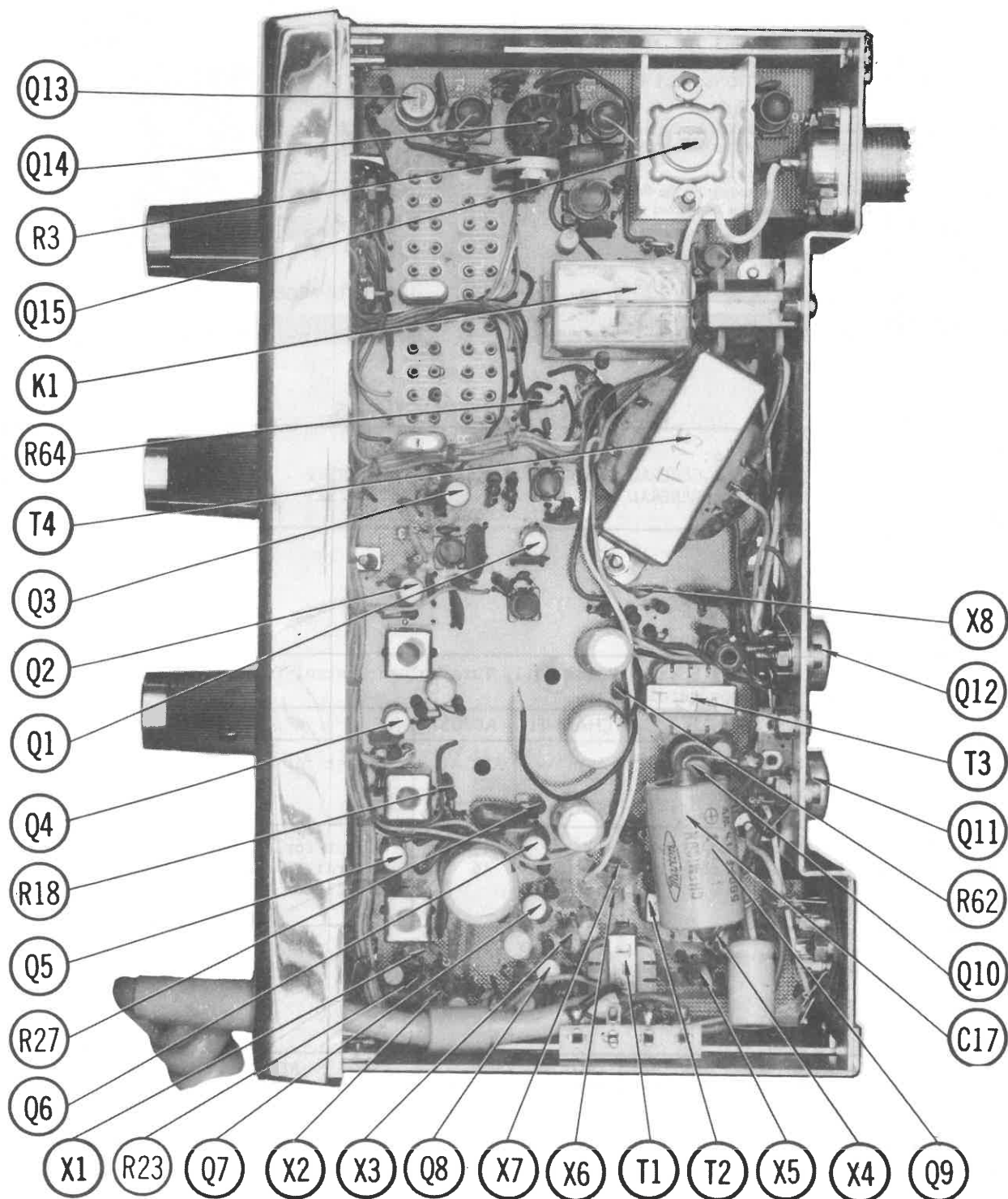
TRANSMITTER

INDICATOR	ADJUST	REMARKS
RF Field strength meter	A7 thru A11	Adjust for maximum.
Hetrodyne or Digital Frequency meter.		Check all channels for proper frequency.

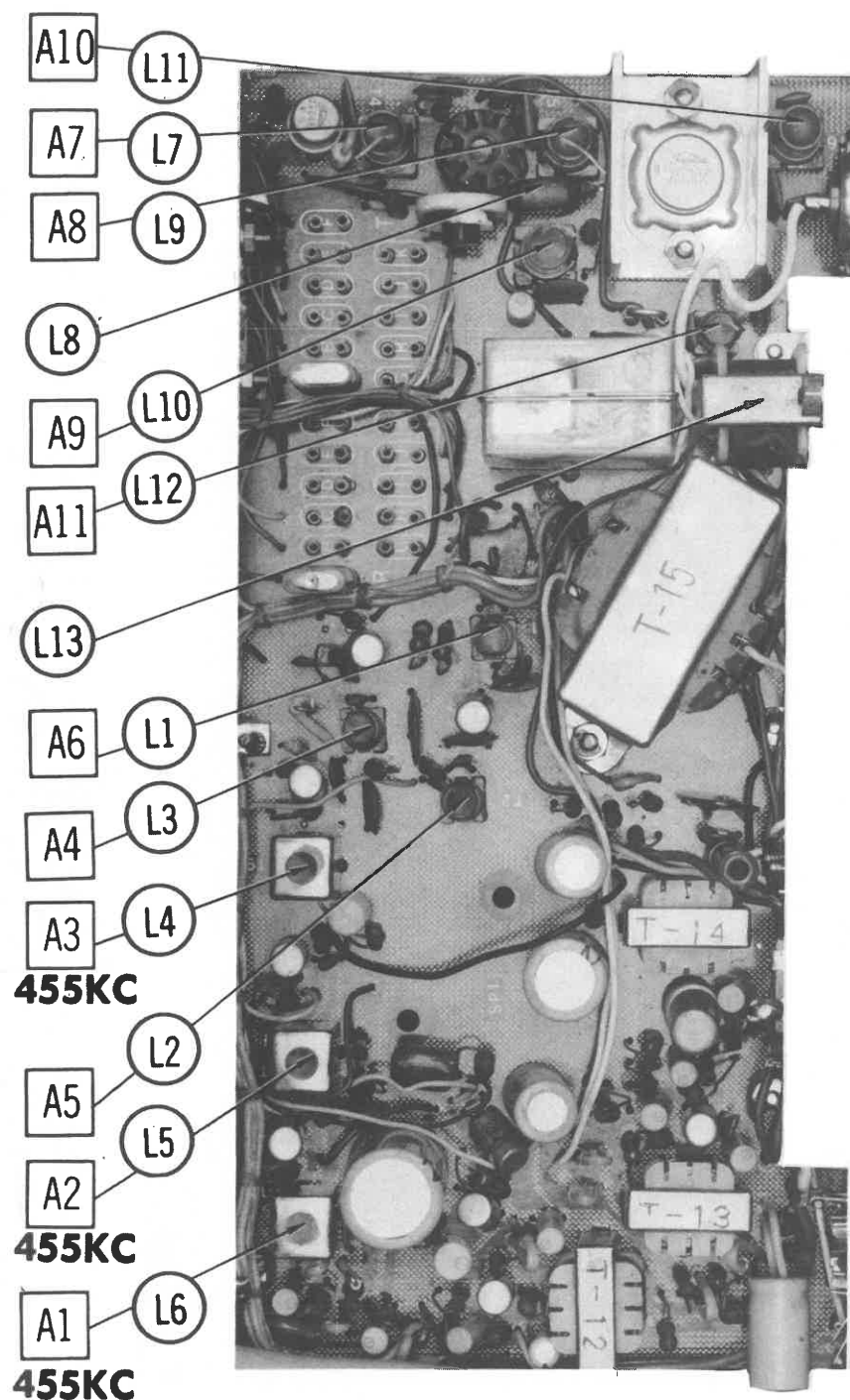
HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

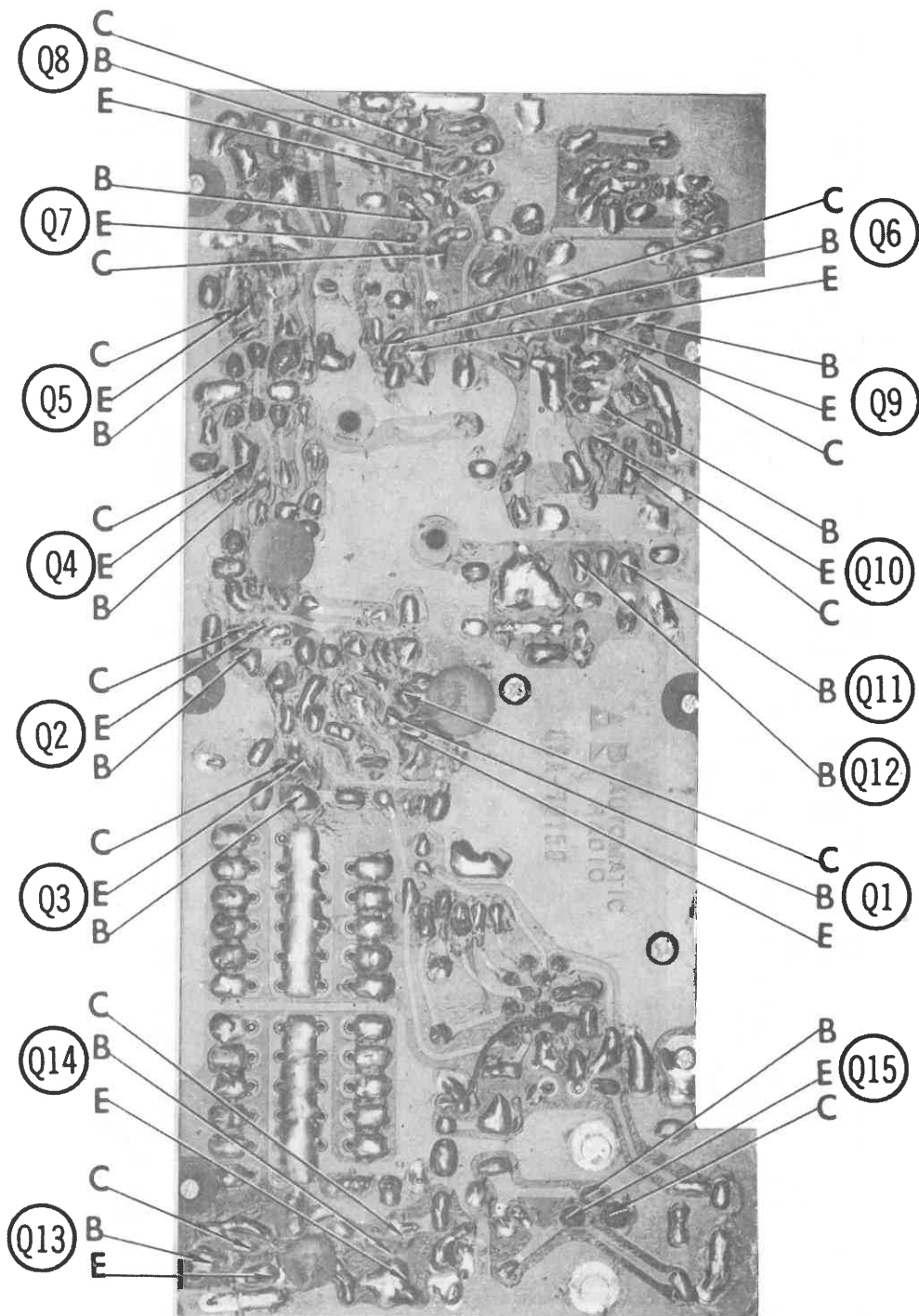
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AUTOMATIC MODELS MCE-6510, TRE-6500

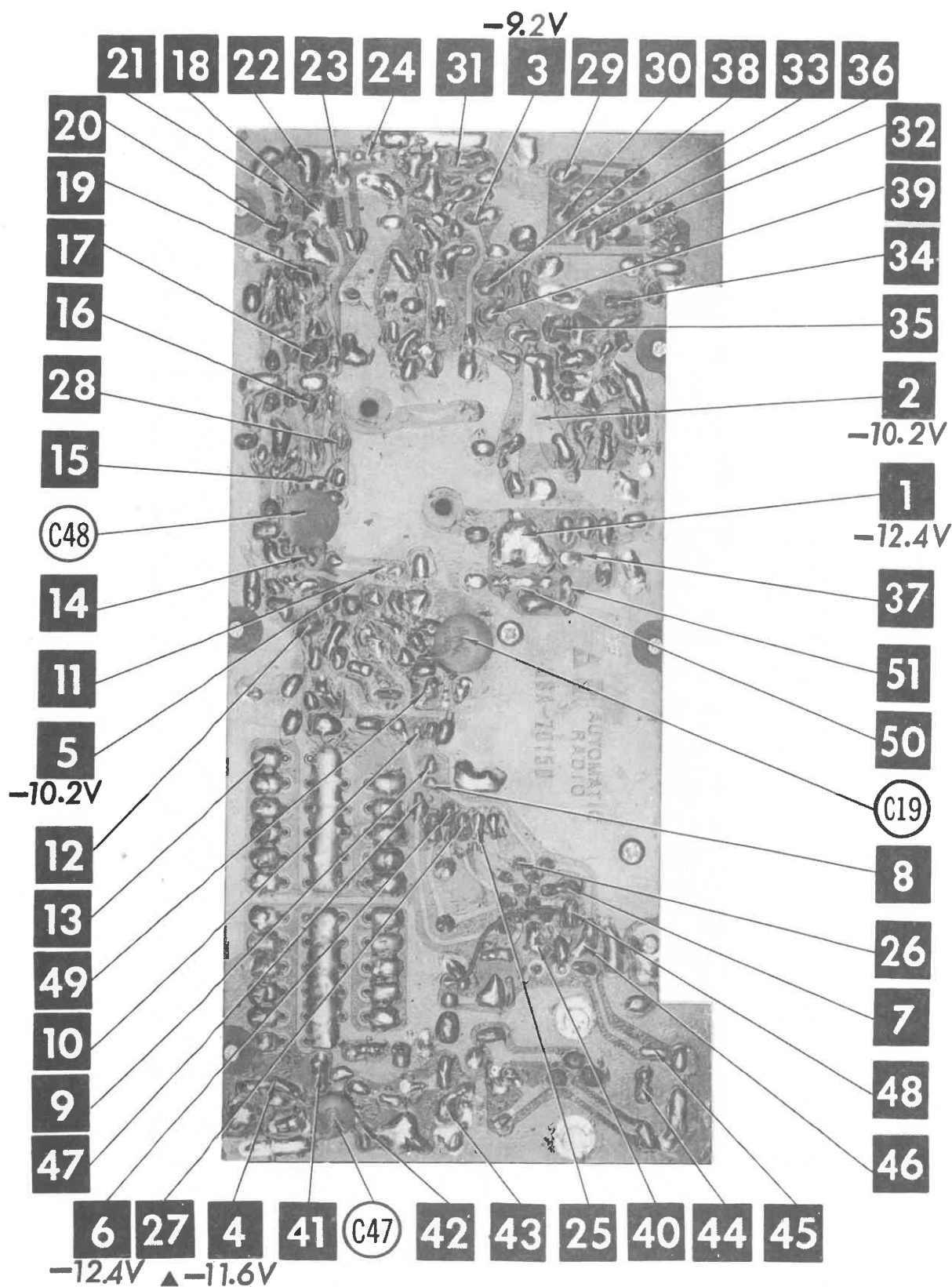


CB



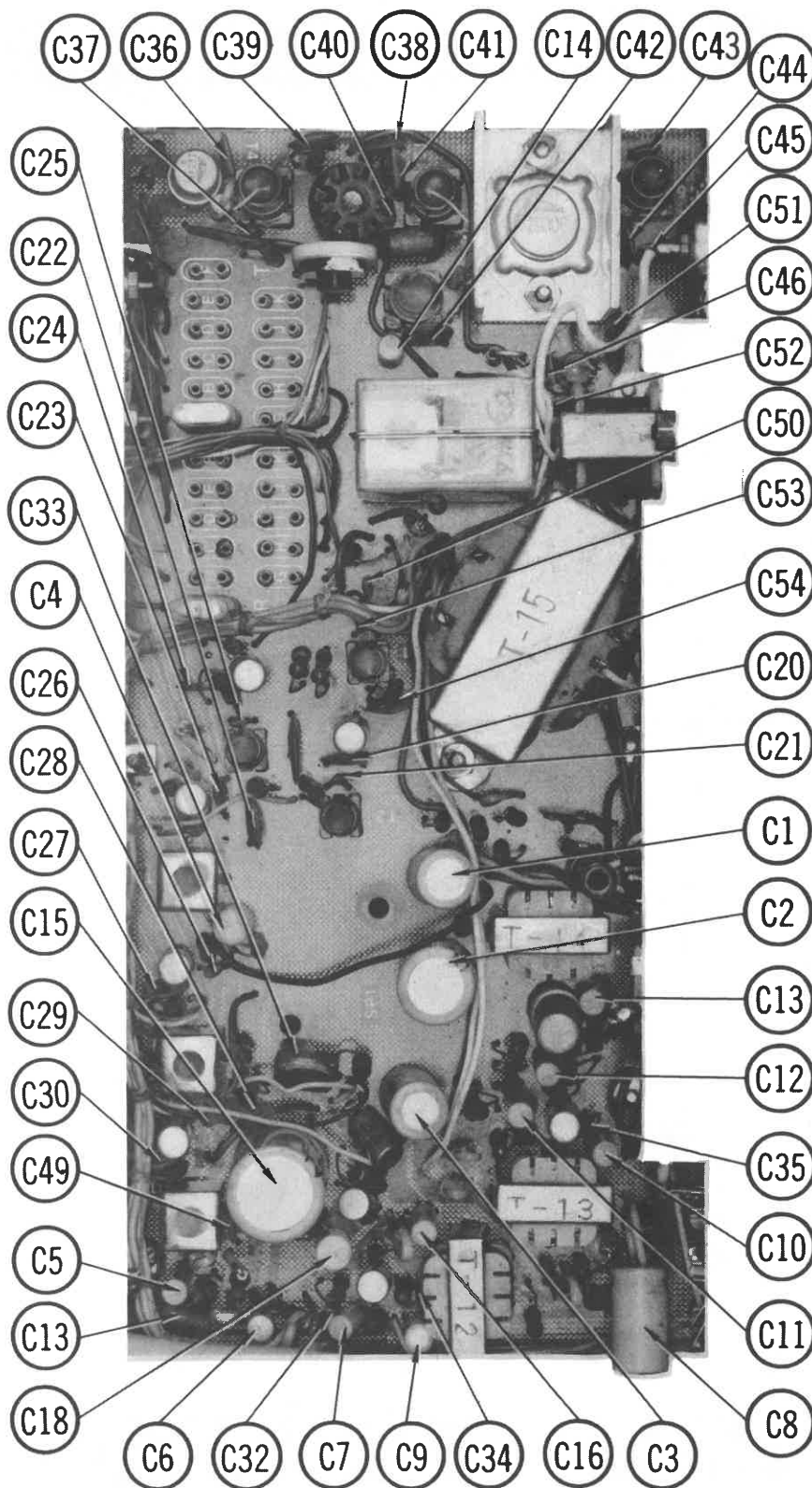


CB

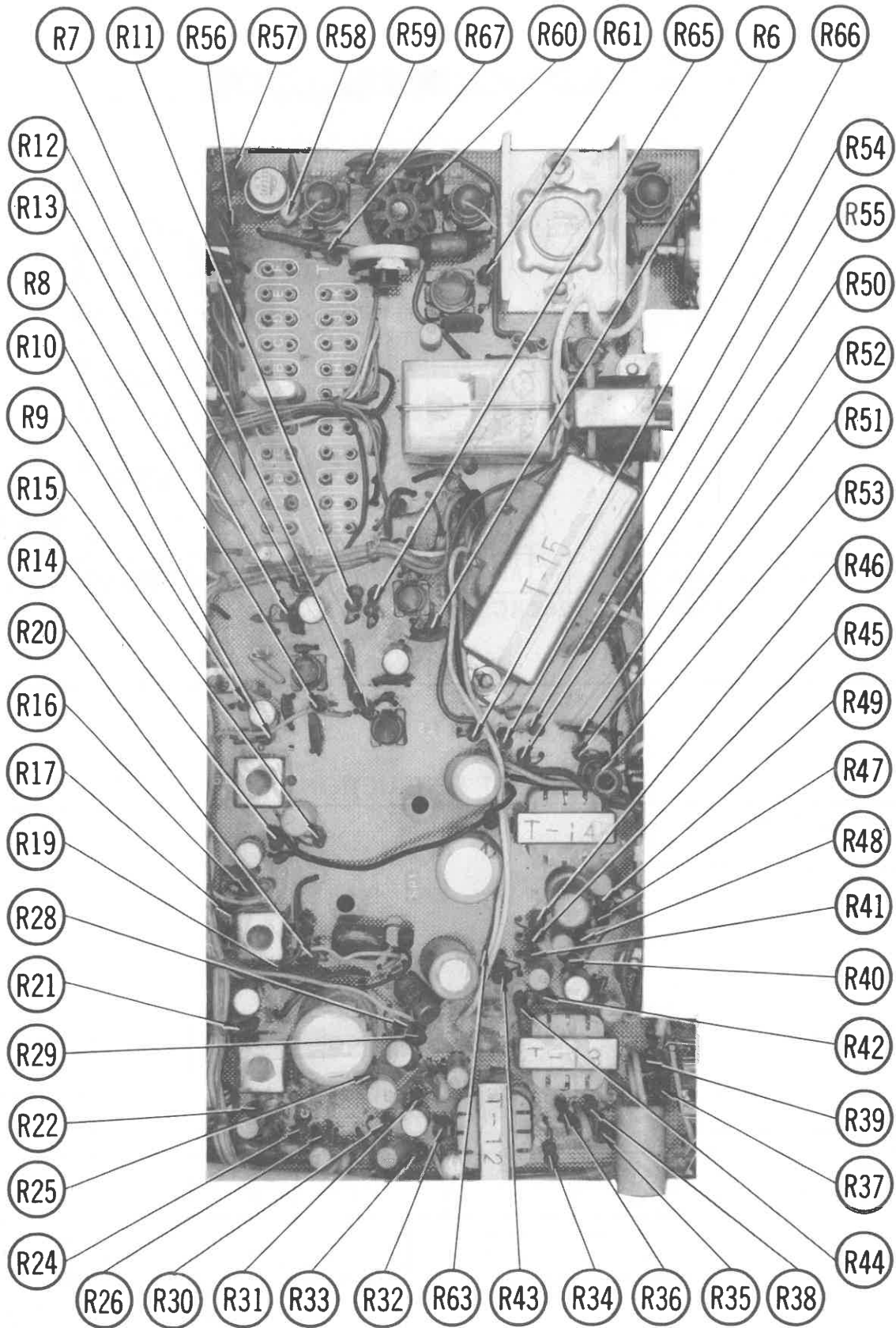


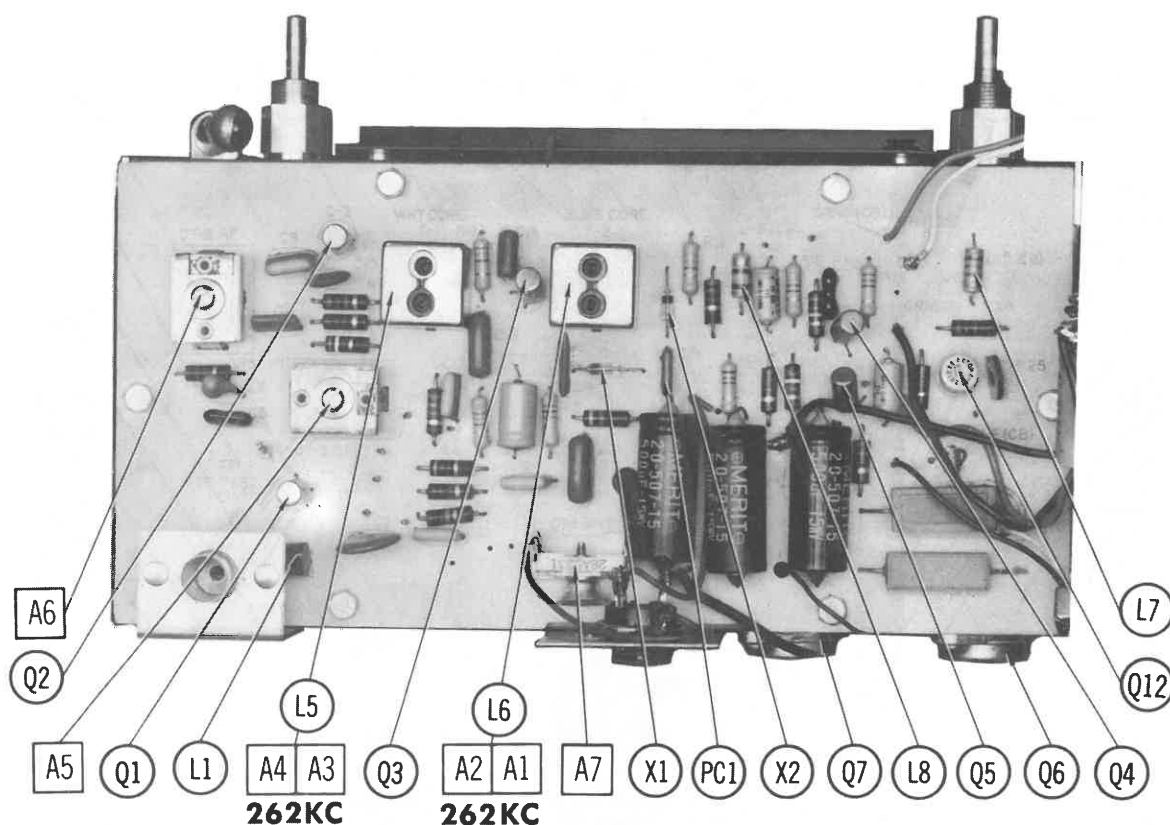
C B

A Howard W. Sams CIRCUITRACE Photo



CB





RADIO

ALIGNMENT INSTRUCTIONS

Check for specified source voltage.

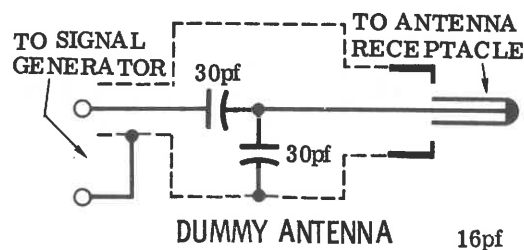
Use only enough generator output to provide a usable indication.

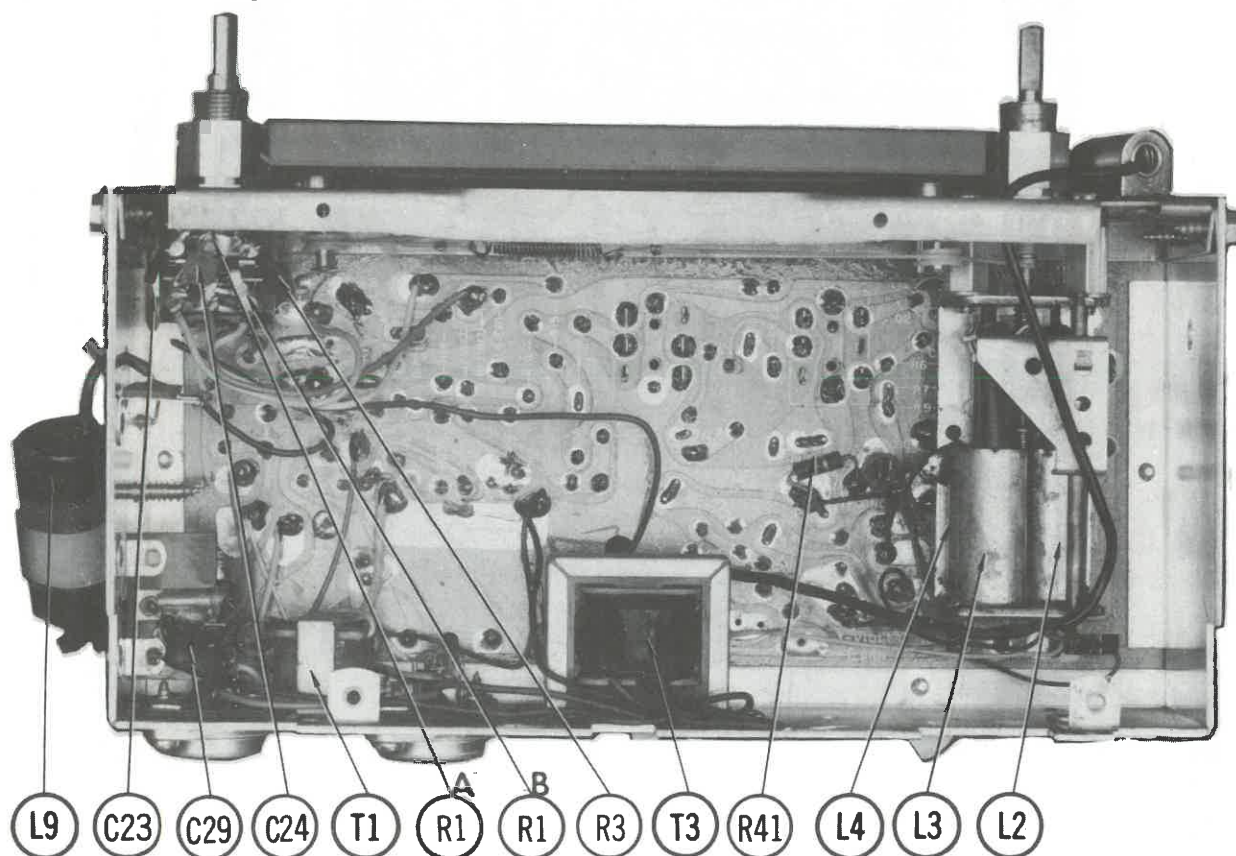
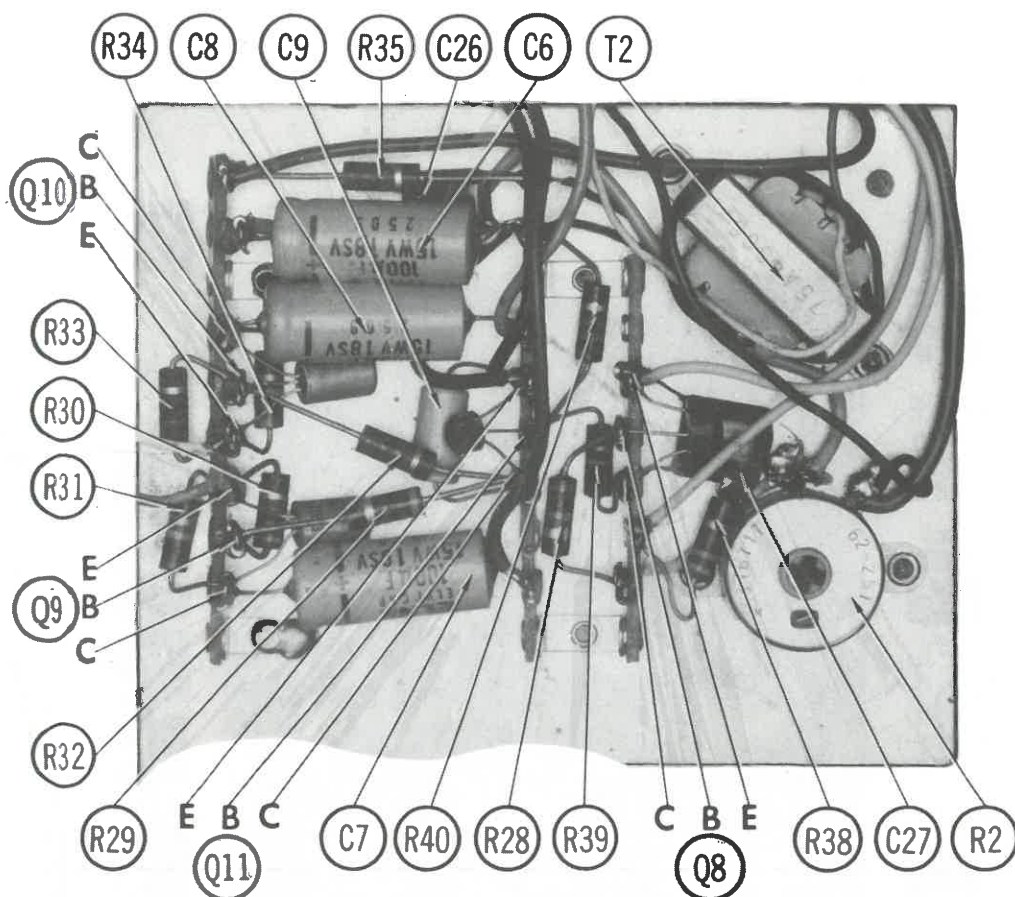
Suggested Alignment Tools:

A1 thru A7.....GENERAL CEMENT #9440
WALSCO #2501

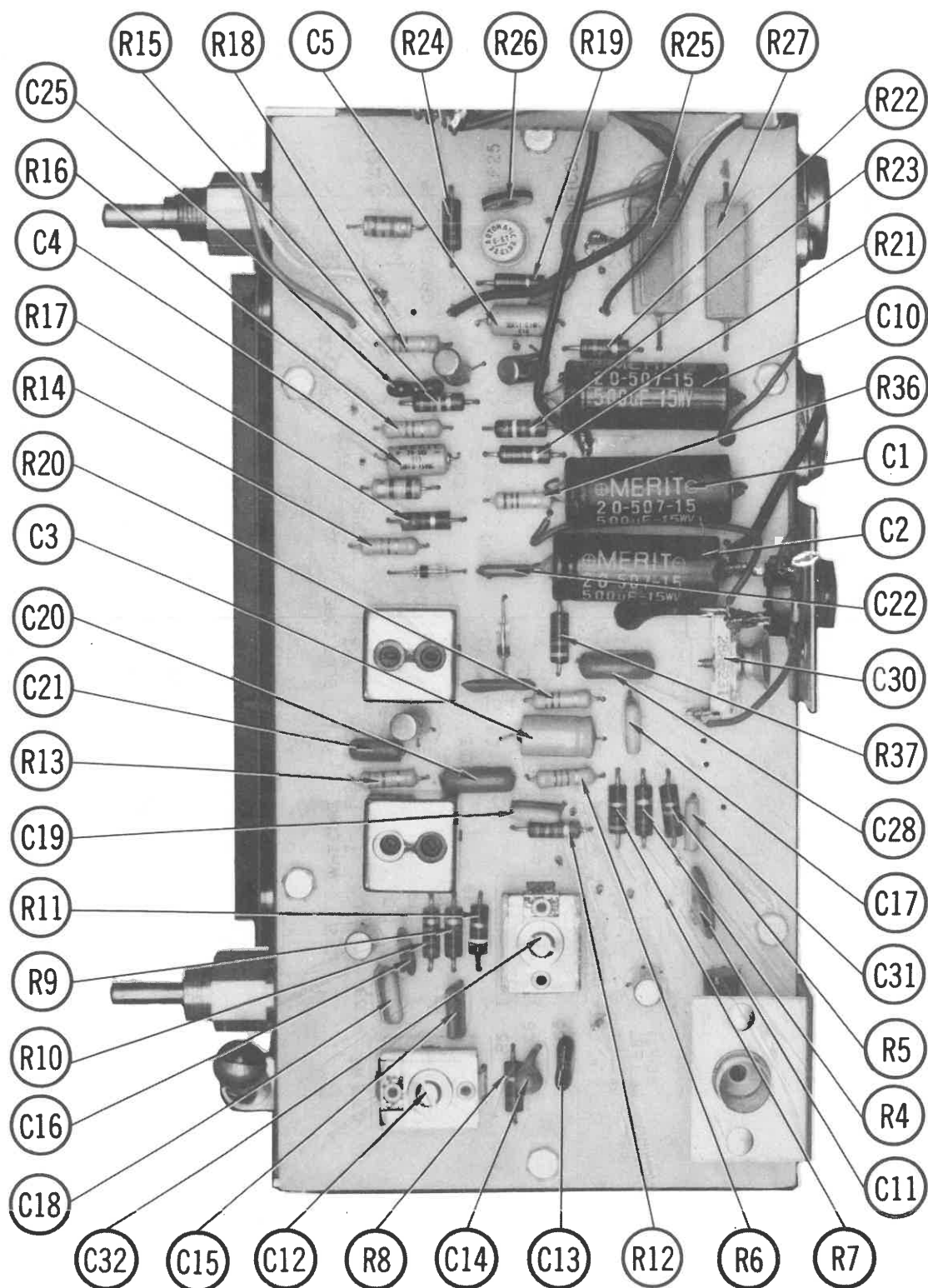
	GENERATOR COUPLING	GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mfd to point Δ , low side to ground.	262KC 400 cycle modulation	High freq. end stop.	Output meter across voice coil.	A1,A2, A3,A4	Adjust for maximum.
2.	Thru dummy antenna to antenna input.	1615KC	"	"	A5,A6, A7	"

With radio installed in car and antenna extended to desired height, tune in a weak station near 1400KC and adjust A7 for maximum output. Antenna adjustment (A7) is located center rear.

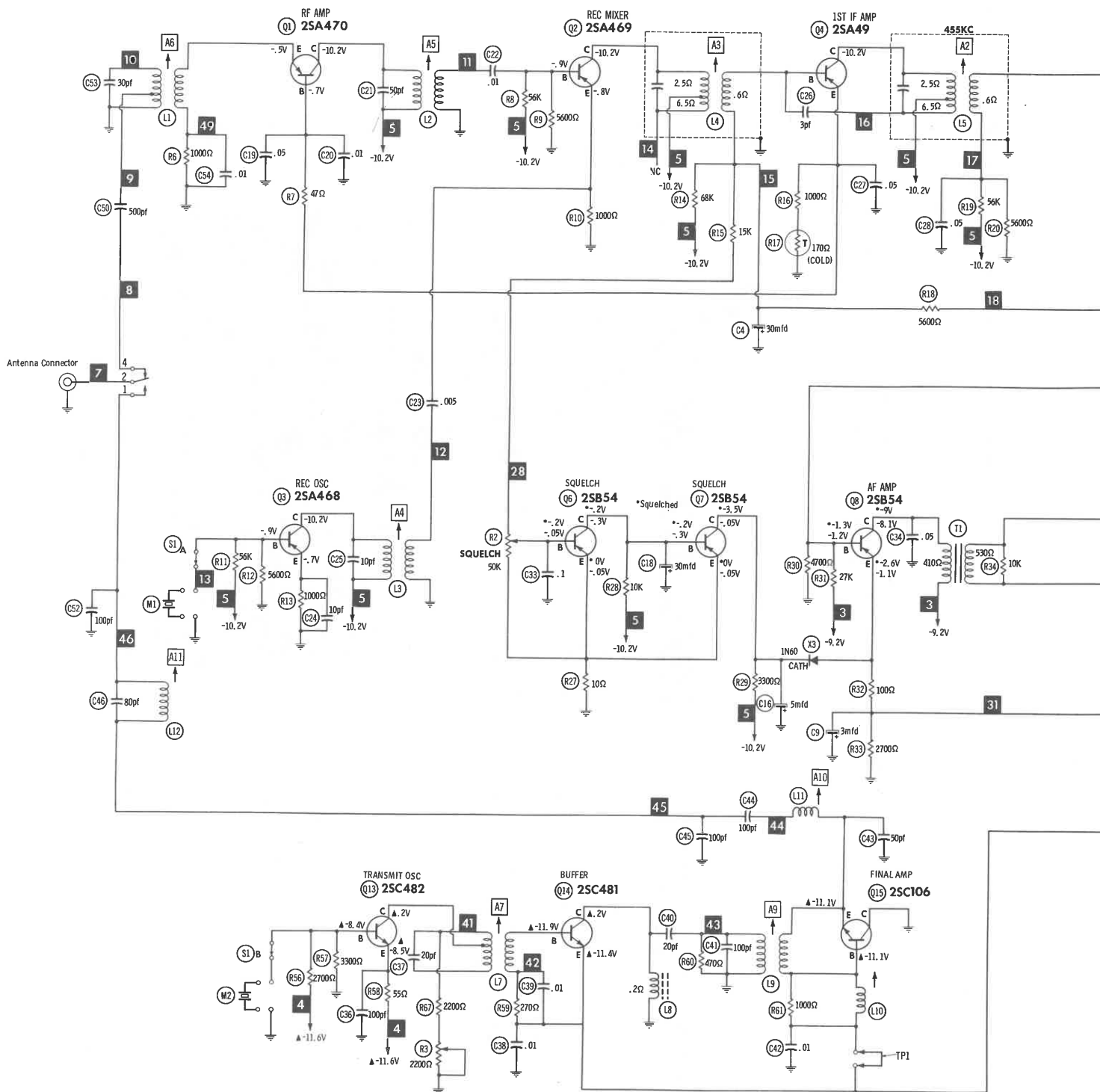




RADIO



RADIO



K1 shown in receive position

NC No Connection

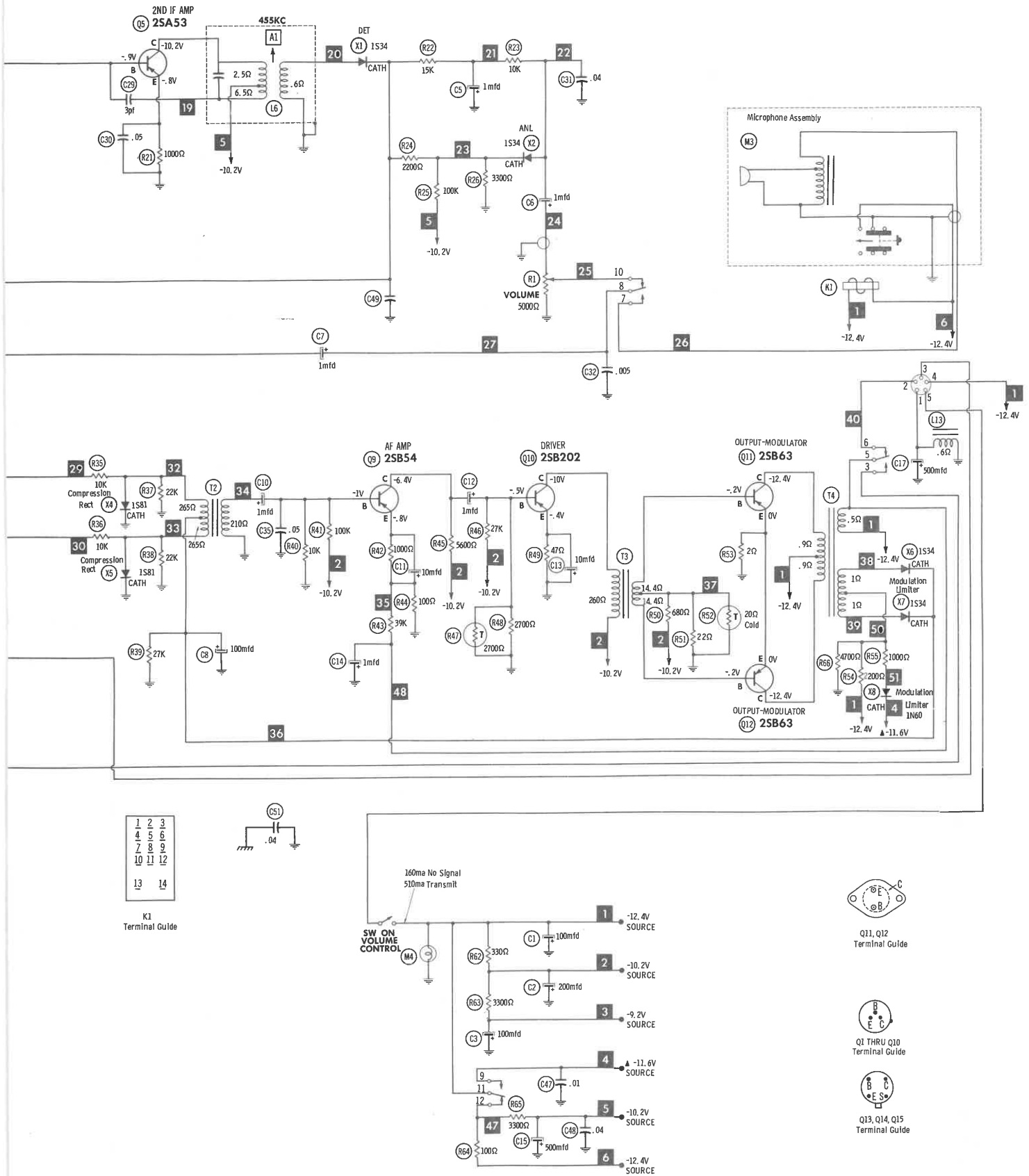
▲ Measured in "Transmit" position

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

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

A PHOTOFAC STANDARD NOTATION SCHEMATIC
with **CIRCUITRACE**

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AUTOMATIC MODEL MCE-6510

PARTS LIST AND DESCRIPTION

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

C B

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.)

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	2SA470	RF Amp		GE-9	TR-12	HEP639	SK3006	ECG 126
Q2	2SA469	Rec Mixer		GE-9	TR-12	HEP639	SK3006	ECG 126
Q3	2SA468	Rec Osc		GE-9	TR-12	HEP639	SK3006	ECG 126
Q4	2SA49	1st IF Amp		GE-9	TR-12	HEP639	SK3005	ECG 100
Q5	2SA53	2nd IF Amp		GE-9	TR-12	HEP639	SK3005	ECG 100
Q6	2SB54	Squelch		GE-2	TR-05	HEP633	SK3004	ECG 102
Q7	2SB54	Squelch		GE-2	TR-05	HEP633	SK3004	ECG 102
Q8	2SB54	AF Amp		GE-2	TR-05	HEP633	SK3004	ECG 102
Q9	2SB54	AF Amp		GE-2	TR-05	HEP633	SK3004	ECG 102
Q10	2SB202	Driver		GE-2	TR-05	HEP254	SK3004	ECG 102
Q11	2SB63	Output (1)						ECG 131MP*
Q12	2SB63	Output (1)						
Q13	2SC482	Xmtr Osc.			TR-21	HEP243		ECG 128
Q14	2SC481	Buffer			TR-21			ECG 128
Q15	2SC106	Final Amp						

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

* Matched Pair.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES			REPLACEMENT RECTIFIERS	NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.	RCA PART No.	
X1	1S34	1N34AS	1N34A	ECG 109		
X2	1S34	1N34AS	1N34A	ECG 109		
X3	1N60	1N60	1N60	ECG 109		
X4	1S81	GE-504A	8D4 or 5A4-D	ECG 116		
X5	1S81	GE-504A	8D4 or 5A4-D	ECG 116		
X6	1S34	1N34AS	1N34A	ECG 109		
X7	1S34	1N34AS	1N34A	ECG 109		
X8	1N60	1N60	1N60	ECG 109		

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA						
		PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	100 15V		BCD15100	EP15-100	PC100-16	MT1-19	MTV100CF15	TE-1162
C2	200 15V		BCD20200	EA15-250	PC200-16	MT1-23	MTV200CK15	TE-1164
C3	100 15V		BCD15100	EP15-100	PC100-16	MT1-19	MTV100CF15	TE-1162
C4	30 6V		BCD15025	EP6-25	PC30-35	MT1-13	MTV30CB25	TE-1132.1
C5	1 35V		BCD50001		PC1-100	MT1-1	MTV1CB50	TE-1200
C6	1 35V		BCD50001		PC1-100	MT1-1	MTV1CB50	TE-1200
C7	10 3V		BCD25010	EP6-10	PC10-50	MT1-5	MTV10CB50	TL-1053
C8	100 15V		BCD15100	EP15-100	PC100-16	MT1-19	MTV100CF15	TE-1162
C9	3 15V		BCD50003	EP30-2	PC5-100	MT1-3	MTV3CB50	TL-1150
C10	1 35V		BCD50001		PC1-100	MT1-1	MTV1CB50	TE-1200
C11	10 3V		BCD25010	EP6-10	PC10-50	MT1-5	MTV10CB50	TL-1053
C12	1 35V		BCD50001		PC1-100	MT1-1	MTV1CB50	TE-1200
C13	10 3V		BCD25010	EP6-10	PC10-50	MT1-5	MTV10CB50	TL-1053
C14	1 35V		BCD50001		PC1-100	MT1-1	MTV1CB50	TE-1200
C15	500 15V		BCD15500	EA15-500	PC500-16	QT1-30A	MTV500DN15	TL-1166
C16	5 10V		BCD25005	EP15-5	PC5-100	MT1-3	MTV5CB50	TE-1127
C17	500 15V		PRS1220	EA15-500	WBR500-35	QT1-30A	TC1505A	TL-1166
C18	30 6V		BCD15025	EP6-25	PC30-35	MT1-13	MTV30CB25	TE-1132.1

AUTOMATIC MODELS MCE-6510, TRE-6500

PARTS LIST AND DESCRIPTION (CONTINUED)

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

CB

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.
C19	.05		TTP-05	CK-503	HOV101ZV503Z	CCD-503	TA150	TGL-S50
C20	.05		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C21	50		NPO-DI 50	DTZ-50	CX601CG470K	CCTO-510	CN0450	10TCC-Q50
C22	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C23	.005		TTP-005	CK-502	HOY101ZV502P	CCD-502	TA250	TG-D50
C24	10		NPO-DI 10	DTZ-10	CZ601CG100J	CCTO-100	CN0410	10TCC-Q10
C25	10		NPO-DI 10	DTZ-10	CZ601CG100J	CCTO-100	CN0410	10TCC-Q10
C26	3		NPO-DI 3.0					10TCC-V30
C27	.05		TTP-05	CK-503	HOV101ZV503Z	CCD-503	TA150	TGL-S50
C28	.05		TTP-05	CK-503	HOV101ZV503Z	CCD-503	TA150	TGL-S50
C29	3		NPO-DI 3.0					10TCC-V30
C30	.05		TTP-05	CK-503	HOV101ZV503Z	CCD-503	TA150	TGL-S50
C31	.04			DD-403			GP140	
C32	.005		TTP-005	CK-502	HOY101ZV502P	CCD-502	TA250	TG-D50
C33	.1		TTP-1	CK-104	HOV101ZV104Z		TA010	TG-P10
C34	.05		TTP-05	CK-503	HOV101ZV503Z	CCD-503	TA150	TGL-S50
C35	.05		TTP-05	CK-503	HOV101ZV503Z	CCD-503	TA150	TGL-S50
C36	100		NPO-DI 100	DTZ-100	CV601CG101K	CCTO-101	CN0310	10TCC-T10
C37	20		NPO-DI 20	DTZ-20		CCTO-200	CN0420	10TCC-Q20
C38	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C39	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C40	20		NPO-DI 20	DTZ-20		CCTO-200	CN0420	10TCC-Q20
C41	100		NPO-DI 100	DTZ-100	CV601CG101K	CCTO-101	CN0310	10TCC-T10
C42	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C43	50		NPO-DI 50	DTZ-50	CX601CG470K	CCTO-510	CN0450	10TCC-Q50
C44	100		NPO-DI 100	DTZ-100	CV601CG101K	CCTO-101	CN0310	10TCC-T10
C45	100		NPO-DI 100	DTZ-100	CV601CG101K	CCTO-101	CN0310	10TCC-T10
C46	80			DTZ-82		CCTO-820	CN0482	10TCC-Q82
C47	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C48	.04			DD-403			GP140	
C49	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C50	500		GPD X5F501K	DM-501	JBZ601YP501K	CCD-501	GP350	10TS-T50
C51	.04			DD-403			GP140	
C52	100		NPO-DI 100	DTZ-100	CV601CG101K	CCTO-101	CN0310	10TCC-T10
C53	30			TCZ-30		CCTO-300		10TCC-Q30
C54	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10

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

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS—IRC PART No.	MALLORY PART No.
R1	Volume/Switch	5000		F2-5000 (1), SSK010,KR-4		B13-114,SK3(1), 76-1 or [BU1(1), CF60,SS3,GC]*	UA53A(1), SK750,US41 or [RU53A,SL38(1), SK750,US41]or [U35(1),US26]
R2	Squelch	50K		F1-50K(1), SSK010	A47-50K-S(1), KSS-3 or [NP-50K-S(1), UP-C-400]	B11-123,SK3(1), or [BU1(1),CF12, SS3,DC1]*	UA54L(1), SK750 or [RU54L,SL38(1), SK750] or U35 (1)
R3	Bias	2200		T-2500		X201R252B	MTC252L1

* "SNAPTROL"

(1) Enlarge Mounting Hole.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	MFGR. PART No.
R17 R47	170 (CoId) 2700 (CoId)			

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	MFGR. PART No.
R52	20 (CoId)			

PARTS LIST AND DESCRIPTION (CONTINUED)

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

C B

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12	Rec Antenna Rec RF Rec Osc Input IF Interstage IF Output IF Xmtr Osc RF Choke (13uh) Buffer Final Pi Network TVI Trap			2066 2067 2068 4624	

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L13	160ma 510ma *	.6	5mh						* Transmit

TRANSFORMER

ITEM No.	TURNS RATIO			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD Part No.	
T1 T2	1 1.25	.8 1							

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD Part No.	
T3	1.4	1							

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T4	20 CT	8						
		SEC.2						
		DC Resis- tance 2 CT						

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
K1 M1 M2 M3 M4 S1	Relay Crystal, Rec. Osc. Crystal, Xmtr. Osc. Mic Assembly Indicator Lamp Switch, Selector		

AUTOMATIC MODELS MCE-6510, TRE-6500

PARTS LIST AND DESCRIPTION

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

RADIO

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	2N1637	RF Amp		GE-9	TR-12	HEP636	SK3008	ECG 126
Q2	2N1639	Converter		GE-9	TR-12	HEP636	SK3008	ECG 126
Q3	2N1638	IF Amp		GE-9	TR-12	HEP636	SK3008	ECG 126
Q4	2N591	AF Amp		GE-2	TR-14	HEP254	SK3004	ECG 102
Q5	2N591	Driver		GE-2	TR-14	HEP254	SK3004	ECG 102
Q6	2N176	Output (1)						
Q7	2N176	Output (1)		GE-13MP*	TR-01	HEP623	SK3013 *	ECG 104MP*
Q8	2N3638	Preamp						
Q9	2N591	Audio Gate		GE-22	TR-19	HEP716	SK3025	ECG 129
Q10	2N591	Audio Gate		GE-2	TR-14	HEP254	SK3004	ECG 102
Q11	SE4010	Gate Driver		GE-2	TR-14	HEP254	SK3004	ECG 102
Q12	1N2326	Bias Regulator		GE-20	TR-21	HEP55	SK3020	ECG 123

(1) When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.
 * Matched Pair.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES			REPLACEMENT RECTIFIERS	NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.	RCA PART No.	
X1	1GD2	1N34AS	1N34A	ECG 109		
X2	1GD2	1N34AS	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	500	15V	20-507-15	PRS1220	EA15-500	BR500-15	QT1-30A	TC1505A	TL-1166
C2	500	15V	20-507-15	PRS1220	EA15-500	BR500-15	QT1-30A	TC1505A	TL-1166
C3	25	15V	20-256-15	PTT117	EA15-25	AL25-16	MT1-10	MTA25D20	TL-1157.1
C4	5	15V	20-505-15	PTT112	EA15-5	NLW5-15	MT1-3	MTA5D50	TE-1152
C5	5	15V	20-505-15	PTT112	EA15-5	NLW5-15	MT1-3	MTA5D50	TE-1152
C6	100	15V	20-107-15	CRE473A	EA15-100	AL100-16	MT1-19	MTA100E15	TE-1162
C7	100	15V	20-107-15	CRE473A	EA15-100	AL100-16	MT1-19	MTA100E15	TE-1162
C8	100	15V	20-107-15	CRE473A	EA15-100	AL100-16	MT1-19	MTA100E15	TE-1162
C9	5	15V	20-505-15	PTT112	EA15-5	NLW5-15	MT1-3	MTA5D50	TE-1152
C10	500	15V	20-507-15	PRS1220	EA15-500	BR500-15	QT1-30A	TC1505A	TL-1166

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.
C11	1mf	#28A5232		UK-105			MAG31	HY-135
C12								
C13	270							
C14	.0033		ADM-15-271	CPR-270J	JBV601YP332K	DM-10-271	SX327	MS-327
C15	.02		GPD X5R332K	DD-332	HOR101ZV203P	CCD-332	JF233	2SS-D33
C16	100 N750		TTP-02	CK-203	N100	CCD-203	TA120	TG-S20
C17	.05		N750-DI 100	DTN-100	HOV101ZV503Z	CCTN-101	CN7310	10TCT-T10
C18	.0047		TTP-05	CK-503	HOY101ZV502P	CCD-503	TA150	TGL-S50
C19	.05		TTP-005	CK-503	HOY101ZV502P	CCD-502	TA250	TG-D50
C20	.22		TTP-05	CK-503	HOV101ZV503Z	CCD-503	TA150	TGL-S50
C21	.1			UK20-204			MAG12022	HY-325
C22	.01		TTP-1	CK-104	HOV101ZV104Z		TA010	TG-P10
C23	.22		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C24	.22			UK20-204			MAG12022	HY-325
C25	270			UK20-204			MAG12022	HY-325
C26	.05		ADM-15-271	CPR-270J	CD15FD271J03	DM-10-271	SX327	MS-327
C27	.1		TTP-05	CK-503	HOV101ZV503Z	CCD-503	TA150	TGL-S50
C28	.22		TTP-1	CK-104	HOV101ZV104Z		TA010	TG-P10
C29	.05			UK20-204			MAG12022	HY-325
C30		#28A5231		CK-503	HOV101ZV503Z	CCD-503	TA150	TGL-S50
C31			TTP-05					
C32	.05	#28A5233	TTP-05	CK-503	HOV101ZV503Z	CCD-503	TA150	TGL-S50

PARTS LIST AND DESCRIPTION (CONTINUED)

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

RADIO

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

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA				
			MFR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A B	Tone Volume/Switch	10K 7500 Tap @ 4500	80A3923B (80A3923)	F1-10K, R14-7500, FFS101, RFS109, BB014, KR-4		* QJ-2628A	P14L, 4100, RU752T53, OX1062, IS1562, US41 MR250F
R2	Bias	250 2W	62-251	V-300	U39-300	117R251A	

* "CONCENTRIKIT" Equivalent: KB Kit with Base Elements and shafts: B11-116, P15-103 (Panel) ..B21-115X, R9-115 (Rear),
S6 (1) (Bushing), 76-1 (Switch)

"SNAPTROL" Equivalent: BU8 (1), CF9, CR48T, SF7, SR7, GC.

(1) Alter Bushing to meet Requirements.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	MFR. PART No.			IRC PART No.	WORKMAN PART No.	MFR. PART No.
R25	160 5W (PTC)			61-761-5S	R27	.27 3W (PTC)			60-.27-3S
R25	33 (CoId)			5-32.35					

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	RF Choke (6.2uh)	14-6.2	19-1004	4610	T859
L2	Antenna	(1)			
L3	RF	(1)			
L4	Osc	(1)			
L5	Input IF	14A3233B	16-6718	6570	
L6	Output IF	14A3234B		6571	
L7	RF Choke (6.8uh)	14-6.8	19-1004	74F686AP	T859
L8	RF Choke (24uh)	14-24	19-6022	74F225AP	T863

(1) Part of M1.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L9	.8A	.5	1.5mh	75A3764					

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD Part No.	
T1	2.45	1		75A4365					
T2	2.45	1		75A4365					

CHOKE (Audio Output)

ITEM No.	INDUCTANCE	REPLACEMENT DATA					NOTES
		PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T3	20mh	75A4722					

AUTOMATIC MODELS MCE-6510, TRE-6500

PARTS LIST AND DESCRIPTION (CONTINUED)

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

RADIO

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA			NOTES
		PART No.	JENSEN PART No.	QUAM PART No.	
SP1	4" x 8" PM 8 ohms	73B4904		48A2Z20CT	

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	AGW 4 Amp	108-400	12A4215	AGW 4	HHH	303004	150145	
F2	AGC 2 Amp	108-202	12A5771	AGC 2	HDJ	312002	150145	

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
M1	Tuner	78A5247	
M2	Dial Lamp		#1891
PC1	AVC Network	89A2701PC	

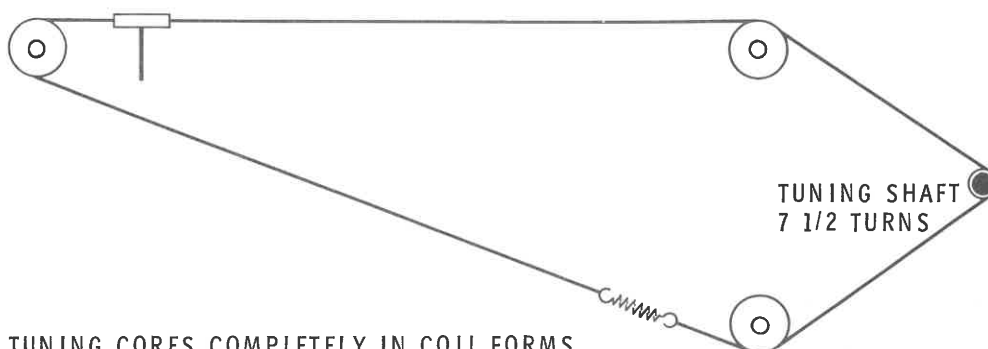
CABINETS & CABINET PARTS (When ordering specify model, chassis & color)

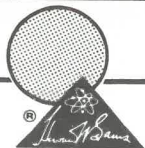
ITEM	PART No.	ITEM	PART No.
Knob, Tuning or Volume	47-50B	Knob, Dummy	48A15221
Knob, Tone	48A1522	Antenna	10-FG-27

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors
	8524 (Stranded) Available in 12 Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Rear Seat Speaker Extension Cable	Use BELDEN No. 8782 (Stranded) Coded Parallel Leads
Bonding Strap	Use BELDEN No. 8661 (3/8 In.) or 8670 (3/4 In.)

DIAL CORD—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.



REALISTIC MODEL TRC-29 (21-135)

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

A1 thru A4, A14.....GENERAL CEMENT #8868, 9089.....WALSCO #2541, 2587
A5 thru A13, A15.....GENERAL CEMENT #8606L, 9440.....WALSCO #2501, 2544

RECEIVER

Connect an AC VTVM across speaker terminals. Turn Volume control to mid-range, squelch control fully counterclockwise, Delta Switch to center position, Noise Blank & Limit to Off.

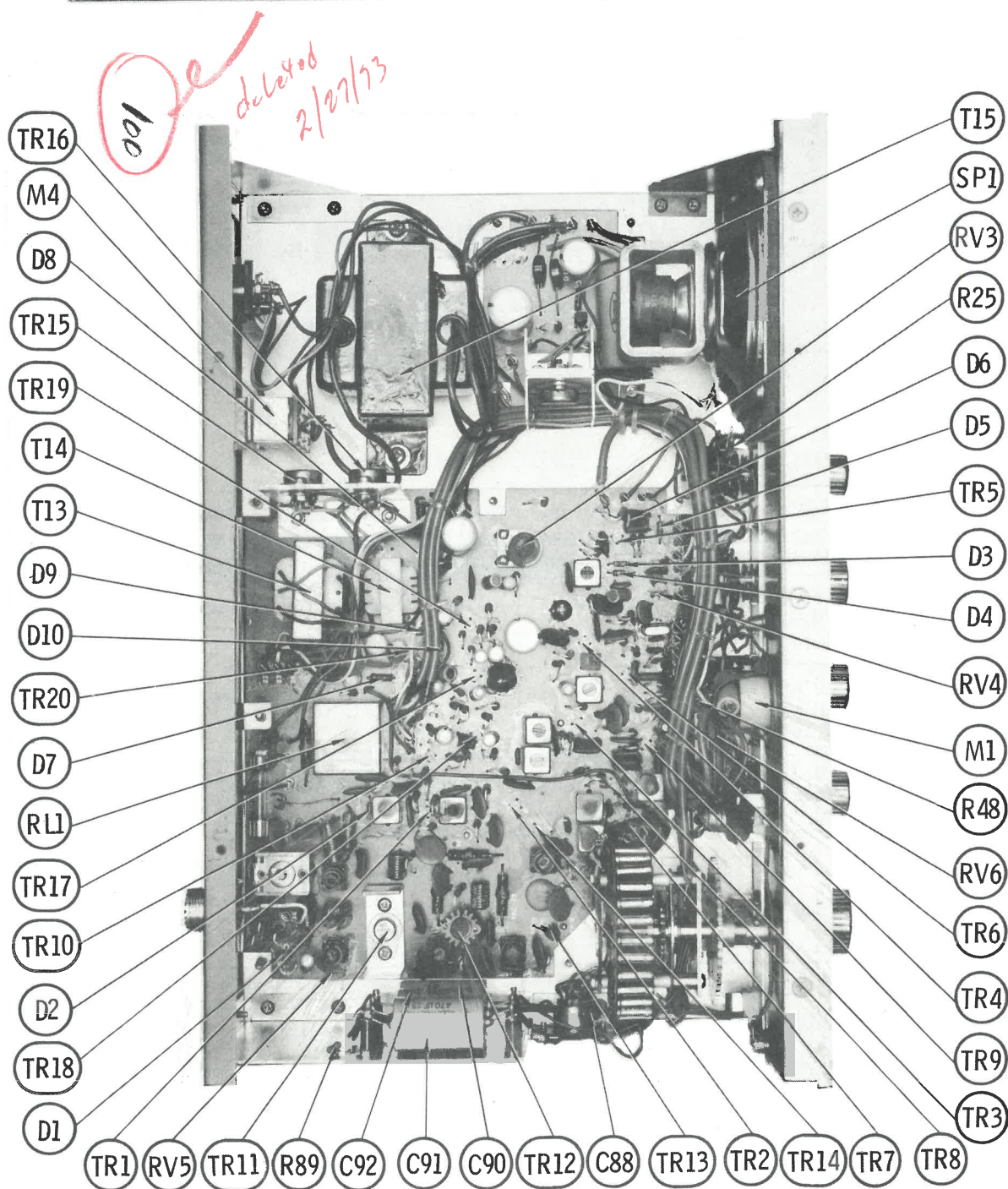
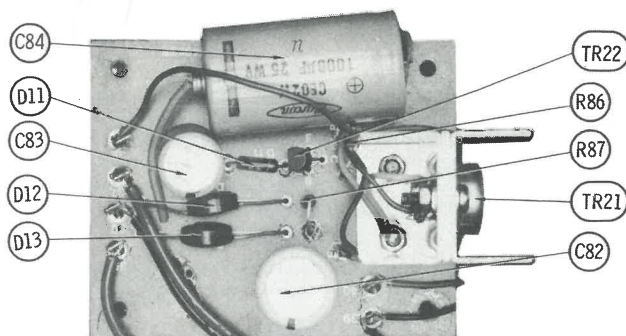
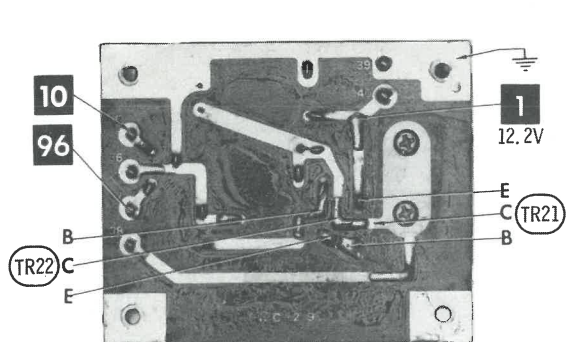
SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01mfd to TP2 (Base, 2nd Rec. Mixer), low side to chassis. Tune to 455KC (Mod.).	Any	A1, A2	Adjust for maximum.
High side thru .01mfd to TP1 (Base, 1st Rec. Mixer), low side to chassis. Tune to 6.2MC (Mod.).	Any	A3, A4	Adjust for maximum.
High side thru .01mfd to antenna connector, low side to chassis. Tune to 27.085MC (Channel 11).	11	A5, A6, A7	Adjust for maximum.

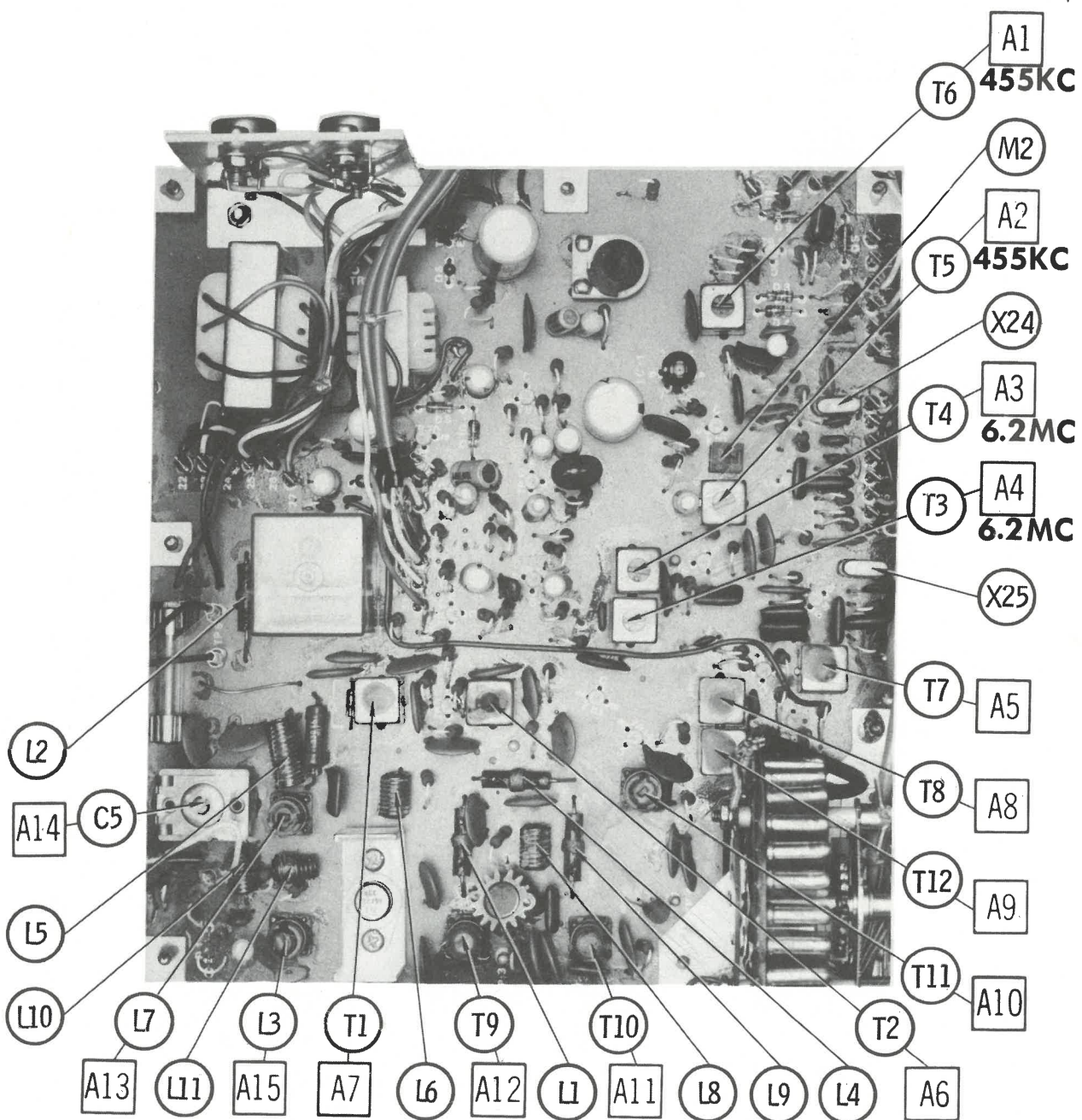
TRANSMITTER

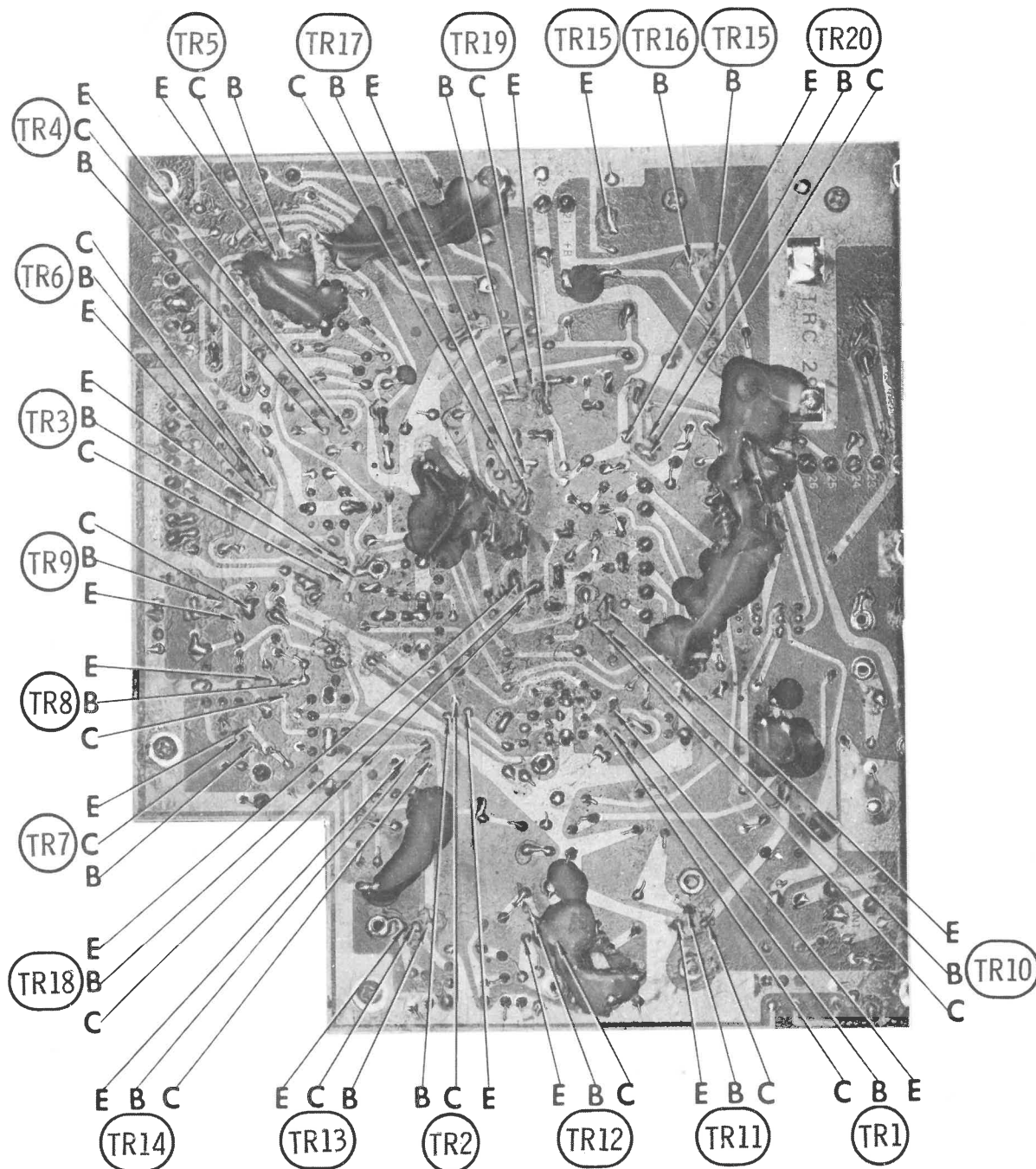
INDICATOR	ADJUST	REMARKS
RF Wattmeter or Field Strength Meter.	A8 thru A15	Adjust for maximum.

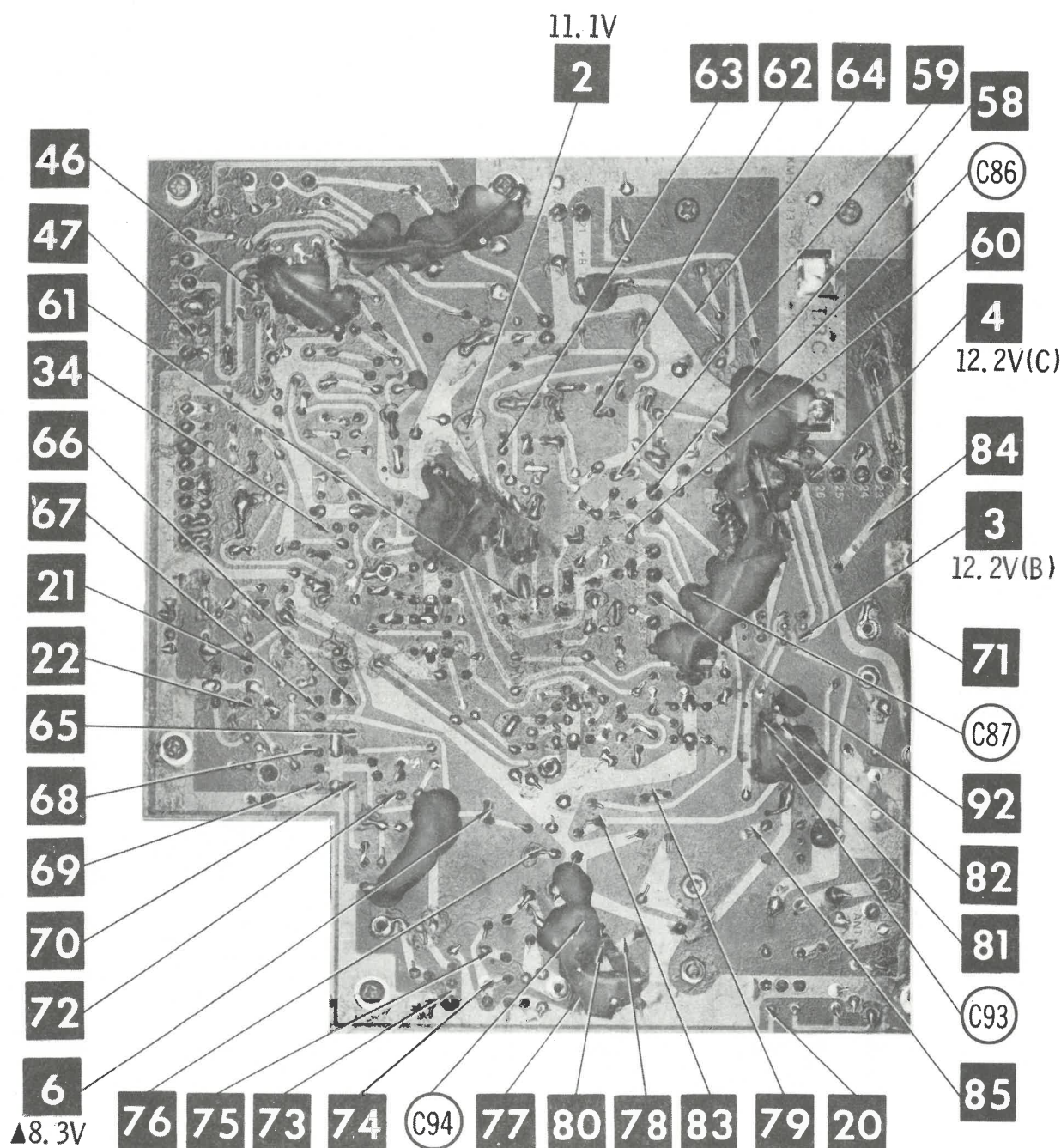
HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

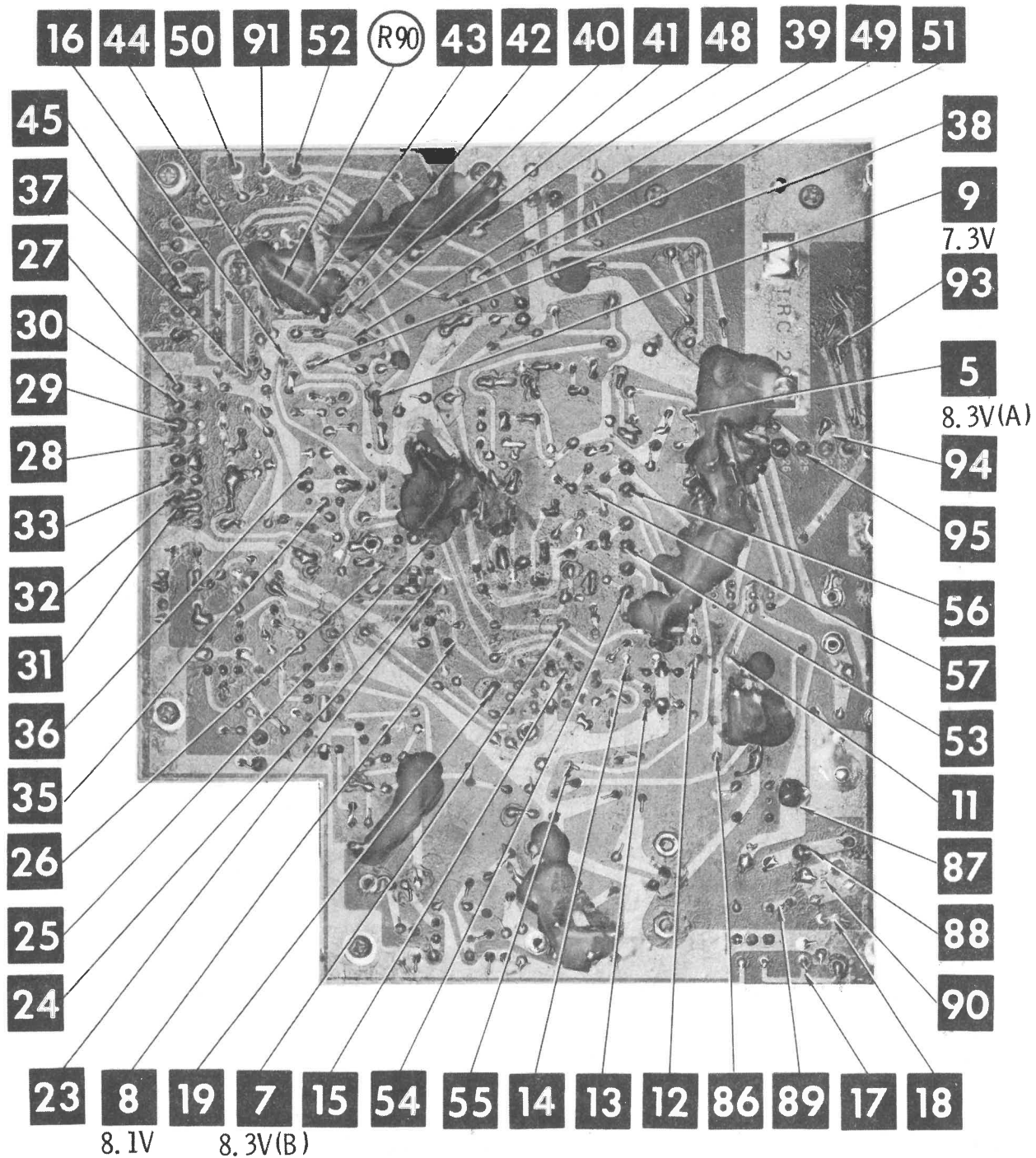
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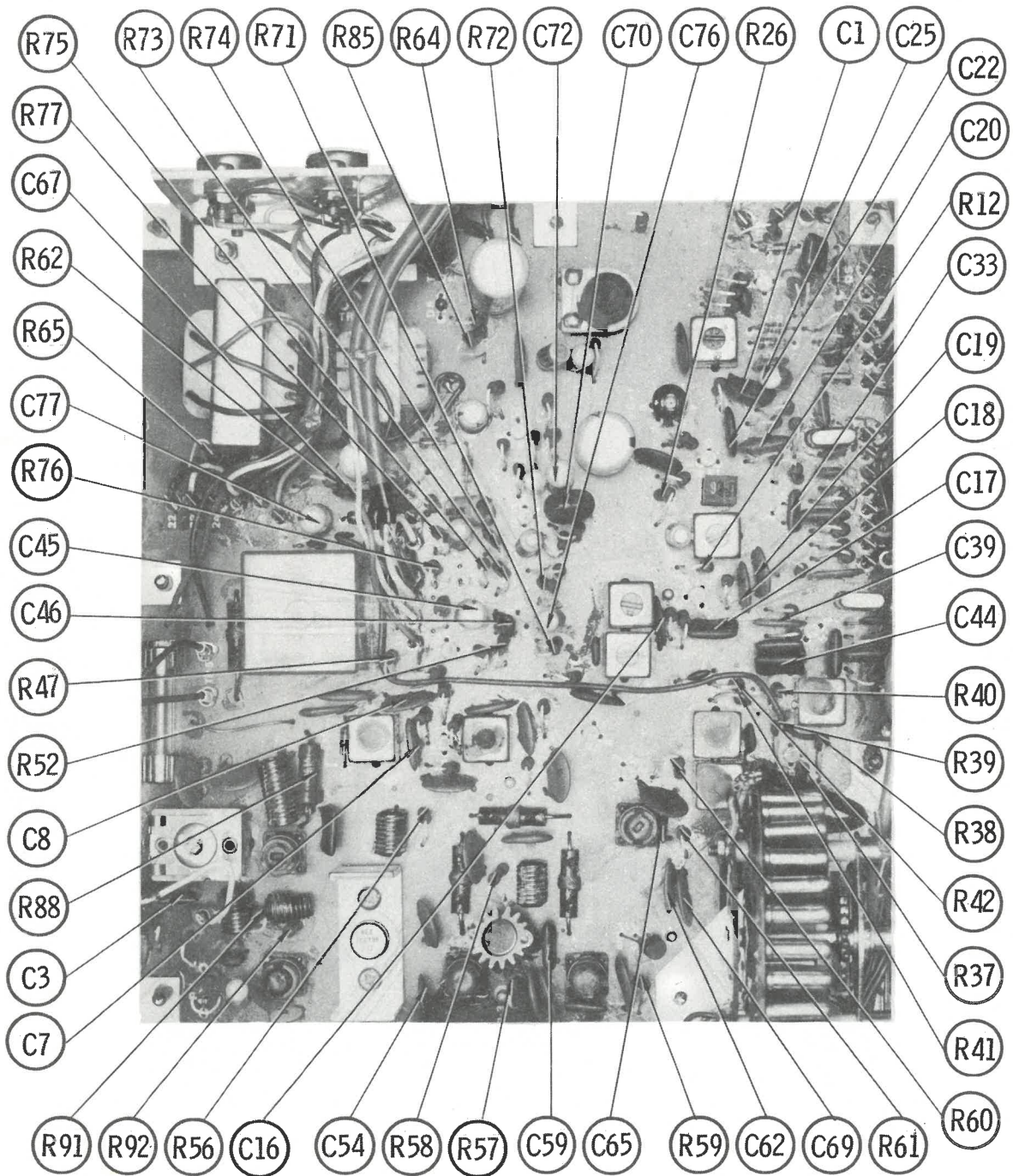


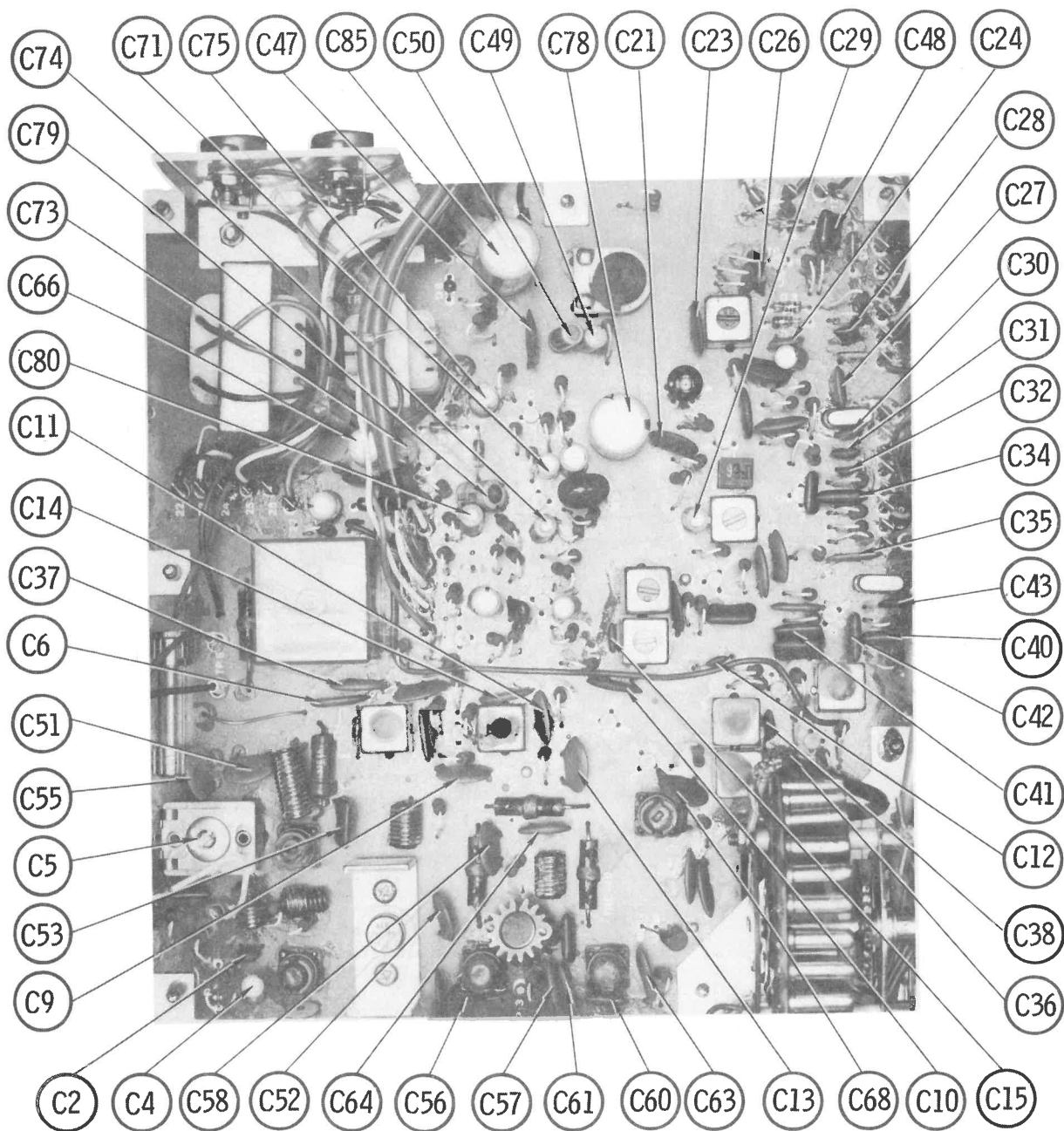


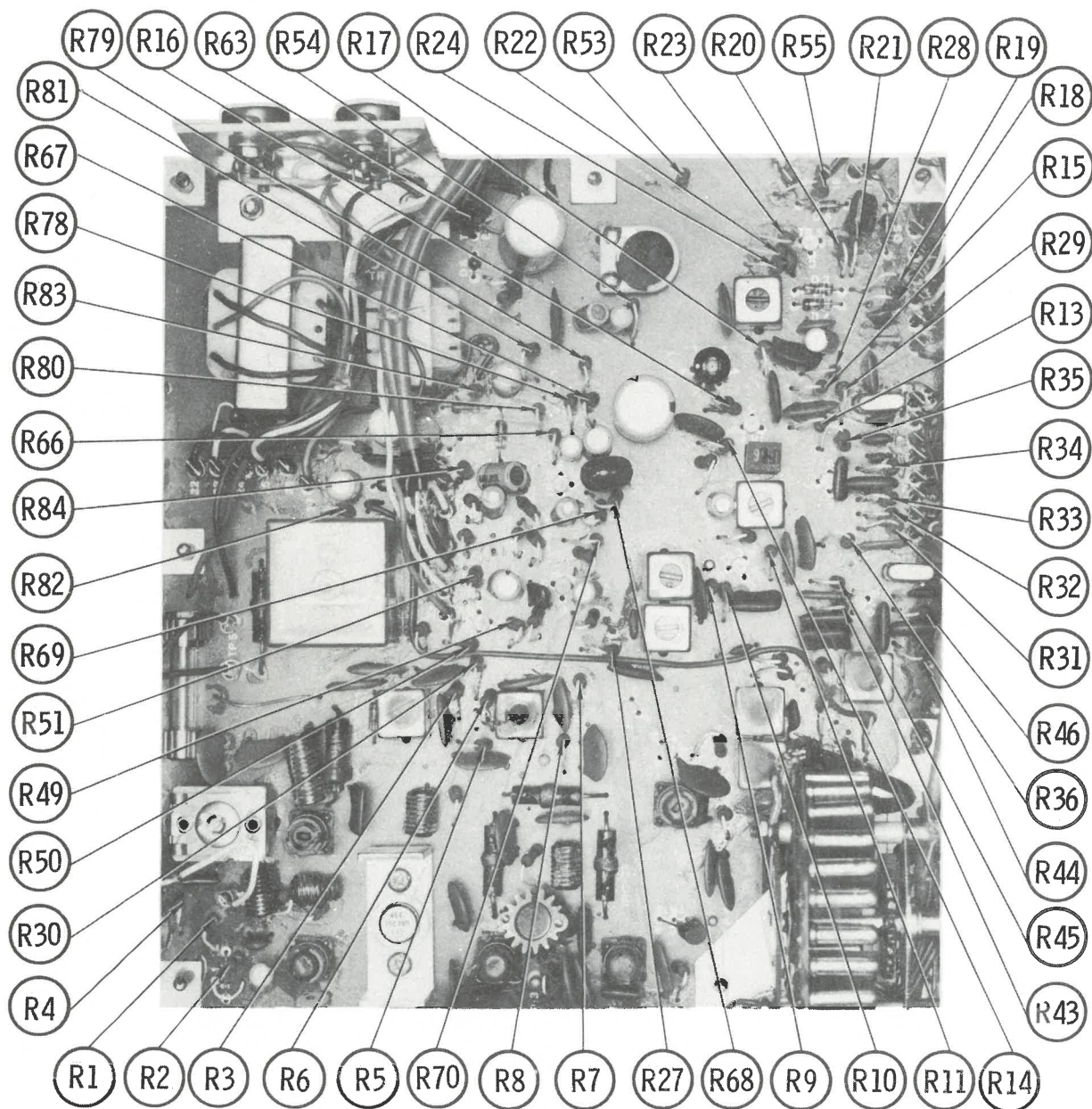


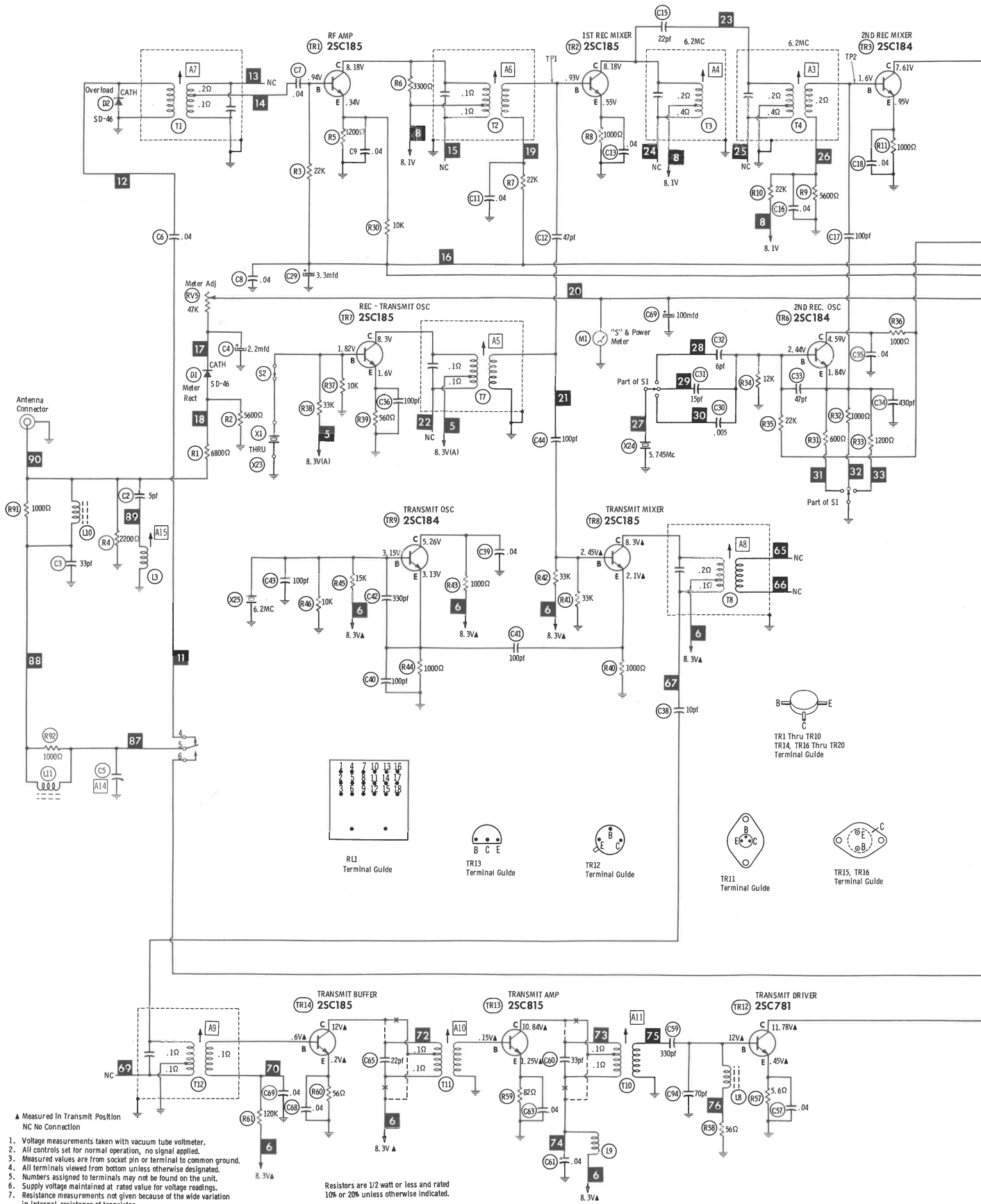
















PARTS LIST AND DESCRIPTION

(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.
TR1	2SC185	RF Amp		GE-17	TR-21	HEP56	SK3019	ECG 108
TR2	2SC185	1st Rec Mixer		GE-17	TR-21	HEP56	SK3019	ECG 108
TR3	2SC184	2nd Rec Mixer		GE-17	TR-21	HEP56	SK3018	ECG 108
TR4	2SC183	1st IF Amp		GE-20	TR-21	HEP56	SK3018	ECG 108
TR5	2SC183	Noise Blanking		GE-20	TR-21	HEP56	SK3018	ECG 108
TR6	2SC184	2nd Rec Osc.		GE-17	TR-21	HEP56	SK3018	ECG 108
TR7	2SC185	1st Rec Osc.		GE-17	TR-21	HEP56	SK3019	ECG 108
TR8	2SC185	Xmtr Mixer		GE-17	TR-21	HEP56	SK3019	ECG 108
TR9	2SC184	Xmtr Osc.		GE-17	TR-21	HEP56	SK3018	ECG 108
TR10	2SC182	Squelch		GE-20	TR-21	HEP56	SK3020	ECG 123
TR11	2SC799	Final Amp						
TR12	2SC781	Xmtr Driver		GE-17	TR-21		SK3018	ECG 108
TR13	2SC815	Xmtr Amp		GE-17	TR-21	HEP736	SK3018	ECG 108
TR14	2SC185	Buffer		GE-17	TR-21	HEP56	SK3019	ECG 108
TR15	2SD150	Output *		GE-24MP*	TR-23	HEP703	SK3028*	ECG 124
TR16	2SD150	Output *			TR-23	HEP703	SK3028*	ECG 124
TR17	2SC182	Driver		GE-20	TR-21	HEP56	SK3020	ECG 123
TR18	2SC183	AF Amp		GE-20	TR-21	HEP56	SK3018	ECG 108
TR19	2SC183	Compression Amp		GE-20	TR-21	HEP56	SK3018	ECG 108
TR20	2SC183	Compression Amp		GE-20	TR-21	HEP56	SK3018	ECG 108
TR21	2SD150	Voltage Regulator(1)		GE-23	TR-23	HEP703	SK3026	ECG 124
TR22	2SC815	Voltage Regulator(1)		GE-17	TR-21	HEP56	SK3018	ECG 108

(1) When replacing, apply silicone grease to both sides of insulator. Tighten mounting screws securely.
* Matched Pair.

INTEGRATED CIRCUITS

ITEM No.	FUNCTION	MFGR. PART No.	REMARKS
IC1	IF Amp	UA703E	

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES			REPLACEMENT RECTIFIERS	NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.	RCA PART No.	
D1	SD-46	1N34AS	1N34A	ECG 109		
D2	SD-46	1N34AS	1N34A	ECG 109		
D3	SD-46	1N34AS	1N34A	ECG 109		
D4	SD-46	1N34AS	1N34A	ECG 109		
D5	SD-46	1N34AS	1N34A	ECG 109		
D6	SD-46	1N34AS	1N34A	ECG 109		
D7	RD-9A	GE-ZD-9.1	1ZM9.1	ECG 139	KD2504	Zener (8.7V @ 2 Watt)
D8	1S1209					
D9	SD-46	1N34AS	1N34A	ECG 109		
D10	SD-46	1N34AS	1N34A	ECG 109		
D11	RD-13A	GE-ZD-12	1ZM12	ECG 143	KD2505	Zener (12.8V @ .2 Watt)
D12	SD-1	GE-504A	5A4D	ECG 116	SK3016	
D13	SD-1	GE-504A	5A4D	ECG 116	SK3016	

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.
C4	2.2 16V		BCD50002	EP15-2	PC2-100	MT1-1	MTV2CB50	TL-1149
C25	3.3 35V		BCD50003	EP30-2	PC5-100	MT1-3	MTV3CB50	TL-1302
C29	3.3 35V		BCD50003	EP30-2	PC5-100	MT1-3	MTV3CB50	TL-1302
C45	10 16V		BCD25010	EP15-10	PC10-50	MT1-5	MTV10CB50	TE-1155
C49	3.3 35V		BCD50003	EP30-2	PC5-100	MT1-3	MTV3CB50	TL-1302
C50	3.3 35V		BCD50003	EP30-2	PC5-100	MT1-3	MTV3CB50	TL-1302
C66	33 16V		BCD15025	EP15-25	PC30-35	MT1-13.5	MTV30CB25	TE-1158
C69	100 16V		CRE473A	EA15-100	AL100-16	MT1-19	MTA100E15	TE-1162
C71	3.3 35V		BCD50003	EP30-2	PC5-100	MT1-3	MTV3CB50	TL-1302
C72	10 16V		BCD25010	EP15-10	PC10-50	MT1-5	MTV10CB50	TE-1155
C73	10 16V		BCD25010	EP15-10	PC10-50	MT1-5	MTV10CB50	TE-1155
C74	2.2 16V		BCD50002	EP15-2	PC2-100	MT1-1	MTV2CB50	TL-1149
C75	10 16V		BCD25010	EP15-10	PC10-50	MT1-5	MTV10CB50	TE-1155
C76	3.3 35V		BCD50003	EP30-2	PC5-100	MT1-3	MTV3CB50	TL-1302
C77	10 16V		BCD25010	EP15-10	PC10-50	MT1-5	MTV10CB50	TE-1155
C78	220 16V		BCD20200	EA15-250	PC200-16	MT1-23	MTV200CK15	TE-1164
C79	10 16V		BCD25010	EP15-10	PC10-50	MT1-5	MTV10CB50	TE-1155
C80	2.2 16V		BCD50002	EP15-2	PC2-100	MT1-1	MTV2CB50	TL-1149
C82	1000 16V		PRS1230	EA15-1000	WBR1000-16	QT1-32	TC1501A	TL-1166.5
C83	220 16V		BCD20200	EA15-250	PC200-16	MT1-23	MTV200CK15	TE-1164
C84	1000 25V		PRS1395	EA50-1000	WBR1000-35		TC50100A	TL-1317
C85	220 25V		PRS1280	EA30-250	PC250-25	QT1-28	MTV250DN25	TL-1214
C90	470 25V		PRS1290	EA30-500	WBR500-35	QT1-30A	TC2505B	TL-1217
C91	470 25V		PRS1290	EA30-500	WBR500-35	QT1-30A	TC2505B	TL-1217
C92	470 25V		PRS1290	EA30-500	WBR500-35	QT1-30A	TC2505B	TL-1217

REALISTIC MODEL TRC-29

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.
C1	.04			DD-403			GP140	
C2	5		NPO-DI 5.0		CZ601CH5R0D			10TCC-V50
C3	33		NPO-DI 33	DTZ-33	CS601CG330K	CCT0-330	CN0433	10TCC-Q33
C5								
C6	.04			DD-403			GP140	
C7	.04			DD-403			GP140	
C8	.04			DD-403			GP140	
C9	.04			DD-403			GP140	
C10	.04			DD-403			GP140	
C11	.04			DD-403			GP140	
C12	47		NPO-DI 50	DTZ-50	CX601CG470K	CCT0-510	CN0450	10TCC-Q50
C13	.04			DD-403			GP140	
C14	.04			DD-403			GP140	
C15	22		NPO-DI 20	DTZ-20		CCT0-200	CN0420	10TCC-Q20
C16	.04			DD-403			GP140	
C17	100		NPO-DI 100	DTZ-100	CV601CG101K	CCT0-101	CN0310	10TCC-T10
C18	.04			DD-403			GP140	
C19	.04			DD-403			GP140	
C20	.04			DD-403			GP140	
C21	.04			DD-403			GP140	
C22	.04			DD-403			GP140	
C23	.04			DD-403			GP140	
C24	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C26	.001		GPD X5F102K	DM-102	JBS601YP102K	CCD-102	SM210	2SS-D10
C27	.02		TTP-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C28	.01		TTP-01	CK-103	HOY101ZV103P	CCD-103	TA110	TG-S10
C30	.005		TTP-005	CK-502	HOY101ZV502P	CCD-502	TA250	TG-D50
C31	15		NPO-DI 15	DTZ-15	CZ601CG150J	CCT0-150	CN0415	10TCC-Q15
C32	6							10TCC-V56
C33	47		NPO-DI 50	DTZ-50	CX601CG470K	CCT0-510	CN0450	10TCC-Q50
C34	430		GPD X5F471K	DD-471	JBZ601YP471K	CCD-471	GP347	10TS-T47
C35	.04			DD-403			GP140	
C36	100		NPO-DI 100	DTZ-100	CV601CG101K	CCT0-101	CN0310	10TCC-T10
C37	.04			DD-403			GP140	
C38	10		NPO-DI 10	DTZ-10	CZ601CG100J	CCT0-100	CN0410	10TCC-010
C39	.04			DD-403			GP140	
C40	100		NPO-DI 100	DTZ-100	CV601CG101K	CCT0-101	CN0310	10TCC-T10
C41	100		NPO-DI 100	DTZ-100	CV601CG101K	CCT0-101	CN0310	10TCC-T10
C42	330		GPD X5F331K	DD-331	JBZ601YP331K	CCD-331	GP333	10TS-T33
C43	100		NPO-DI 100	DTZ-100	CV601CG101K	CCT0-101	CN0310	10TCC-T10
C44	100		NPO-DI 100	DTZ-100	CV601CG101K	CCT0-101	CN0310	10TCC-T10
C46	.0022		GPD X5F222K	DD-222	JBX601YP222K	CCD-222	GP222	10TS-D22
C47	.1		TTP-1	CK-104	HOV101ZV104Z		TA010	TG-P10
C48	.047		TTP-05	CK-503	HOV101ZV503Z	CCD-503	TA150	TGL-S50
C51	.04			DD-403			GP140	
C52	.0012		GPD X5F152K	DD-152		CCD-152	GP215	10TS-D15
C53	330		GPD X5F331K	DD-331	JBZ601YP331K	CCD-331	GP333	10TS-T33
C54	.04			DD-403			GP140	
C55	.04			DD-403			GP140	
C56	22		NPO-DI 20	DTZ-20		CCT0-200	CN0420	10TCC-Q20
C57	.04			DD-403			GP140	
C58	.04			DD-403			GP140	
C59	330		GPD X5F331K	DD-331	JBZ601YP331K	CCD-331	GP333	10TS-T33
C60	33		NPO-DI 33	DTZ-33	CS601CG330K	CCT0-330	CN0433	10TCC-Q33
C61	.04			DD-403			GP140	
C62	.04			DD-403			GP140	
C63	.04			DD-403			GP140	
C64	.04			DD-403			GP140	
C65	22		NPO-DI 20	DTZ-20		CCT0-200	CN0420	10TCC-Q20
C67	.04			DD-403			GP140	
C68	.04			DD-403			GP140	
C70	.1		TTP-1	CK-104	HOV101ZV104Z		TA010	TG-P10
C86	.02		TTP-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C87	.02		TTP-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C88	.04			DD-403			GP140	
C93	8		NPO-DI 8.2					10TCC-V82
C94	70		NPO-DI 68	DTZ-68	NPO-68	CCT0-680	CN0468	10TCC-Q68

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.
RV1	Volume/Switch	50K	6708A1	F2-50K(1), SSK102,KR-2	A47-50K-Z(1), KSS-3,SWE-20 or [NP-50K-Z(1), UP-C-400, NWE-20]	Q13-123(1),76-2, or [BU1(1),CF63, SS1,Wf]*	RU54A,SL36, SL3250,US42 or [UA54A(1), SK3500,US42]or [U33(1),US27]
RV2	Squelch/PA Switch	2000	6707A1				
RV3	ANL Adjust	50K		T-50K (2)		X201R503B (2)	MTC54L1 (2)
RV4	Meter Adjust	4700		T-5000 (3)		X201R502B (3)	MTC53L1 (3)
RV5	Meter Adjust	50K		T-50K (3)		X201R503B (3)	MTC54L1 (3)
RV6	Squelch Limit	4700		T-5000 (3)		X201R502B (3)	MTC53L1 (3)

* "SNAPTROL" (1) Enlarge Mounting Hole.

(2) For horizontal mount, bend the two outside terminals to fit "PC" board. Use jumper wire to connect center terminal to "PC" board.

(3) 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		
		IRC PART No.	WORKMAN PART No.	MFGR. PART No.
R63	.3			

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	MFGR. PART No.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	RF Choke (33uh)		19-6033	72F335AP	
L2	RF Choke (33uh)		19-6033	72F335AP	
L3	TVI Trap				
L4	RF Choke (33uh)		19-6033	72F335AP	
L5	RF Choke				
L6	RF Choke				
L7	Final				
L8	RF Choke				
L9	RF Choke (33uh)		19-6033	72F335AP	
L10	Pi Network				
L11	Pi Network				
T1	Antenna Input				
T2	RF				
T3	Input IF				
T4	Interstage IF				
T5	Interstage IF				
T6	Output IF				
T7	Rec Osc				
T8	Xmtr Mixer				
T9	Xmtr Mixer				
T10	Buffer				
T11	Buffer Interstage				
T12	Driver				

NOT Dotted 2/27/73

4606 → 4602

2068
2068

REALISTIC MODEL TRC-29

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T13	20 CT	8						
		SEC. 2						
		1.7 Tap @ .2 & 4.7 DC						
		SEC. 3						
		1000 DC						

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD Part No.	
T14	3	1							

TRANSFORMER (Power)

ITEM No.	RATING		REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	MFGR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T15	117VAC	32VAC CT @ 120ma DC 820ma DC *						* Transmit

PARTS LIST AND DESCRIPTION (CONTINUED)

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

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA			NOTES
		PART No.	JENSEN PART No.	QUAM PART No.	
SP1	4" PM 8 ohms		4A05Z8		

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			AGC1		312001		FA1
F2	Circuit Breaker					815001		
F3	Break 1 Amp Hold .65 Amp 2 Amp			AGC2	HDJ	312002	155000	

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
X1	Crystal, Rec-Xmit Osc		33.165MC
X2	"		33.175MC
X3	"		33.185MC
X4	"		33.205MC
X5	"		33.215MC
X6	"		33.225MC
X7	"		33.235MC
X8	"		33.255MC
X9	"		33.265MC
X10	"		33.275MC
X11	"		33.285MC
X12	"		33.305MC
X13	"		33.315MC
X14	"		33.325MC
X15	"		33.335MC
X16	"		33.355MC
X17	"		33.365MC
X18	"		33.375MC
X19	"		33.385MC
X20	"		33.405MC
X21	"		33.415MC
X22	"		33.425MC
X23	"		33.455MC
X24	Crystal, 2nd Rec		5.745MC
X25	Osc., Xmitr. Crystal		6.2MC
M1	Meter		
M2	Mechanical Filter		
M3	Mic Assembly		
RL1	Relay		
S1	Switch, Tune		
S2	Switch, Channel		
S3	Switch, Noise Blank		

WIRING DATA

General-use Hook-up Wire	Use BELDEN No.	8530 (Solid) Available in 12 Colors
		8524 (Stranded) Available in 12 Colors
Shielded Antenna Lead	Use BELDEN No.	8214 Lowest-loss (RG-8/U Type)
		8237 Low-loss (RG-8/U)
		8240 (Solid) Miniature (RG-58/U)
		8259 (Stranded) Miniature (RG-58A/U)
Coiled Microphone Cable	Use BELDEN No.	8497 3-Conductor, 1 Shielded, for Press-to-Talk (Neoprene)
		8496 3-Conductor, 1 Shielded, for Press-to-Talk (Vinyl)
Ignition Noise Suppression	Use BELDEN No.	7300-Series Spark-Plug Sets
Bonding Strap	Use BELDEN No.	8661 (3/8 In.)



PHOTOFACT[®] with

CIRCUITRACE[®]

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.



COURIER MODEL CLASSIC

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools: A1 thru A7, A11...GENERAL CEMENT #8868, 8987, 9089
WALSCO #2531-X, 2541, 2587 & Fabricate Tools
A8 thru A12....GENERAL CEMENT #8606L, 8606 & Fabricate Tools
A13,A14,A15,A17,A18...GENERAL CEMENT #8606,8606L,8869..WALSCO #2543, 2544, 2588

RECEIVER

Connect a VTVM from point $\diamond A$ to ground. Set R4 (IF Gain) to indicate -.3 Volts (No Signal) before alignment. Turn Volume Control fully clockwise, turn Squelch fully Counterclockwise.

SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
High side thru .01 to base of Q4 (2nd Rec. Mixer), low side to Chassis. Tune to 455KC (Unmod.).	Any	A1 thru A7	Adjust VTVM for maximum at Point $\diamond A$.
High side thru .01 to Antenna Coax Connector, low side to Chassis. Tune to 27.085AC (CH-11) (Unmod.).	11	A8 thru A12,A19	"

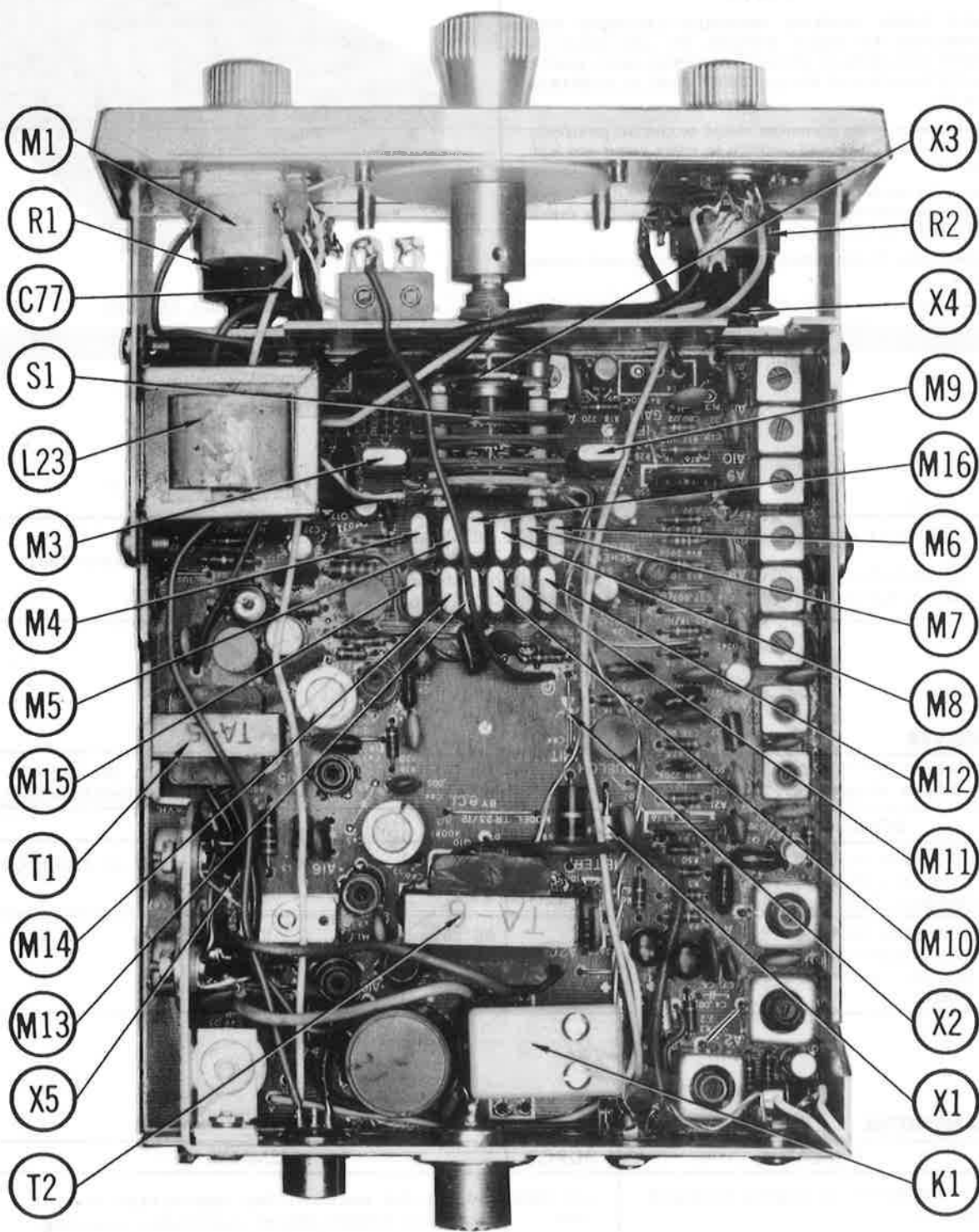
TRANSMITTER

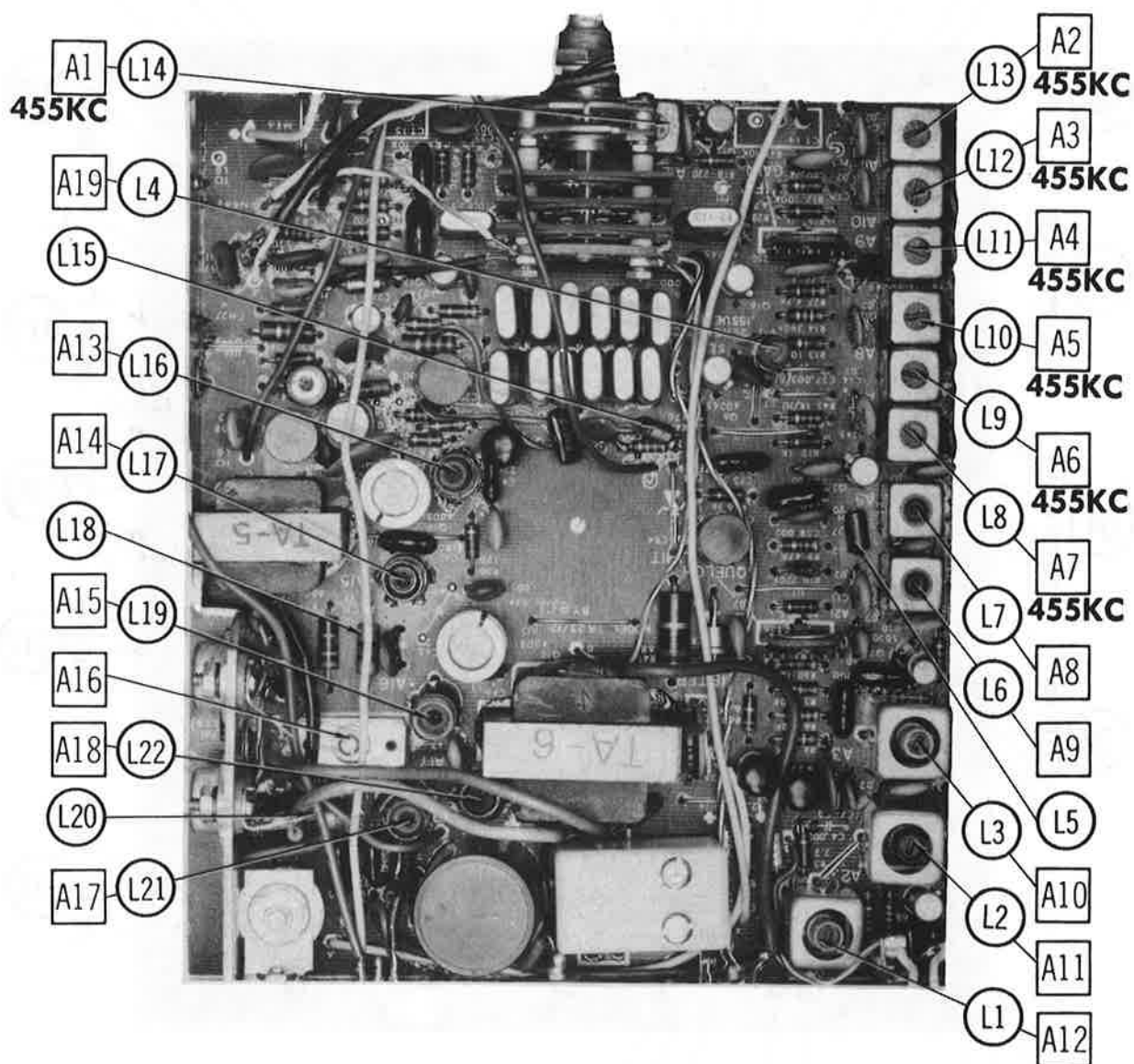
INDICATOR	ADJUST	REMARKS
RF Wattmeter or Signal Strength Meter.	A13 thru A18	Adjust for maximum. Key transmitter several times to ensure proper oscillator starting.

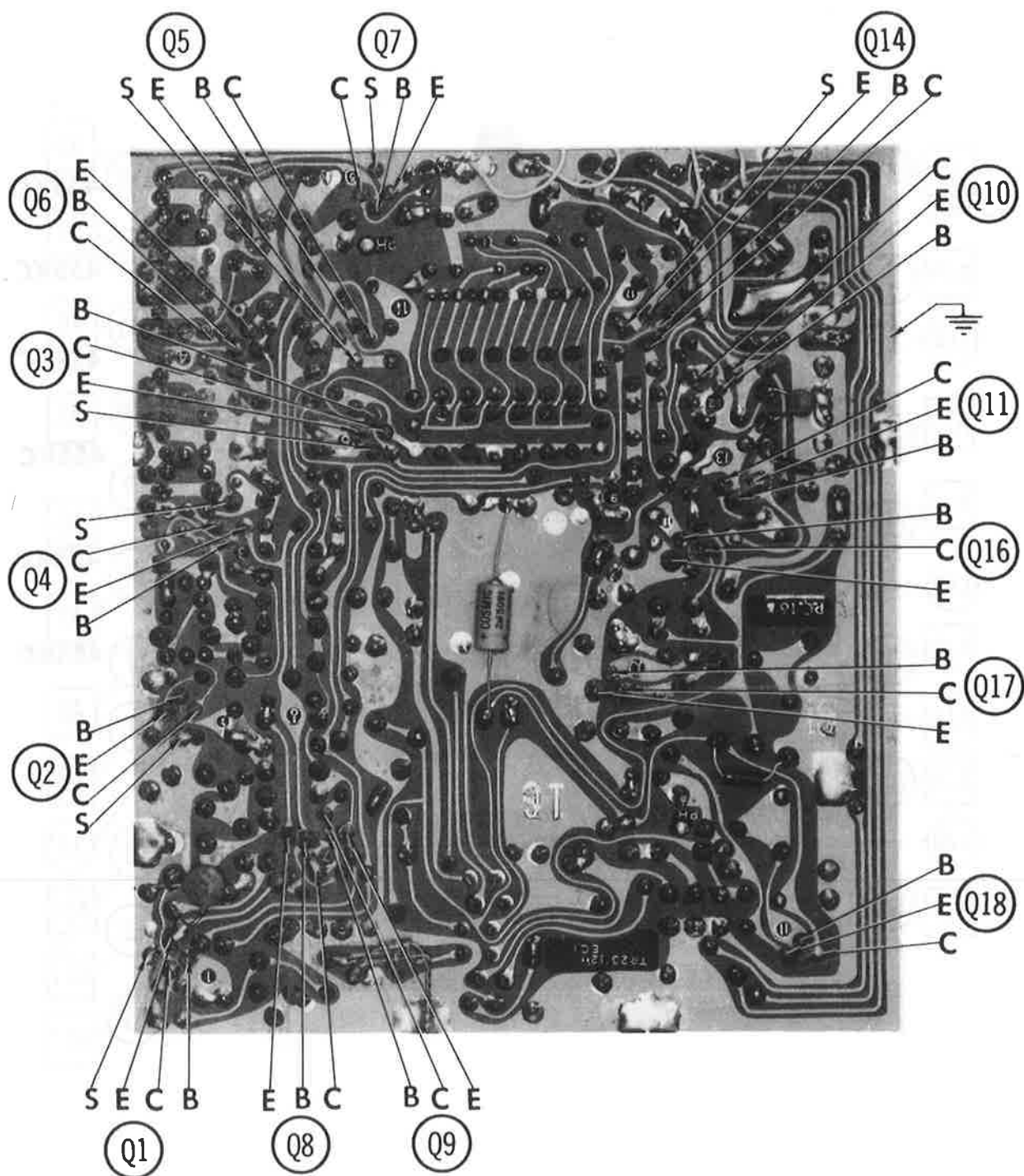
HOWARD W. SAMS & CO., INC., Indianapolis, Indiana 46206

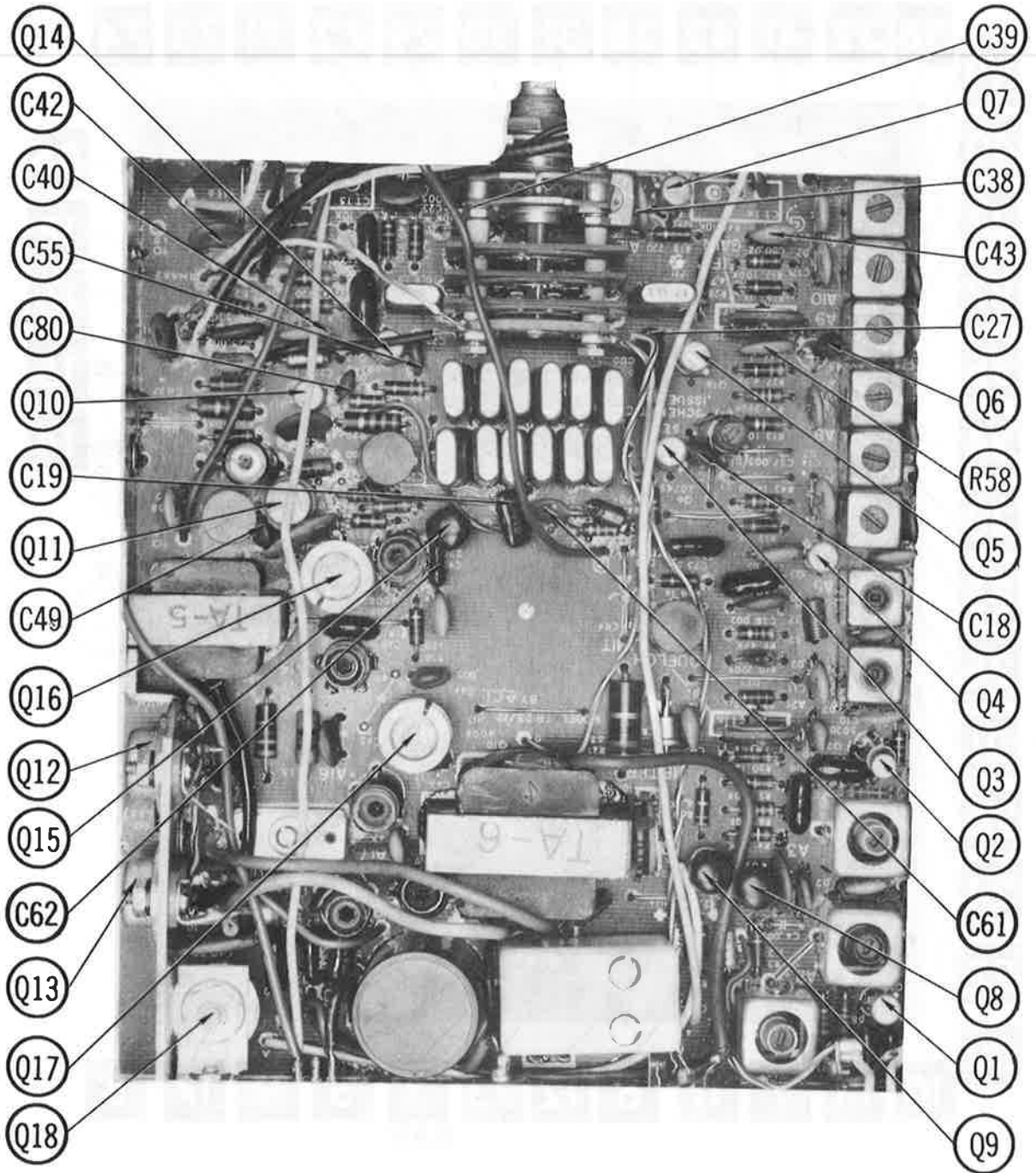
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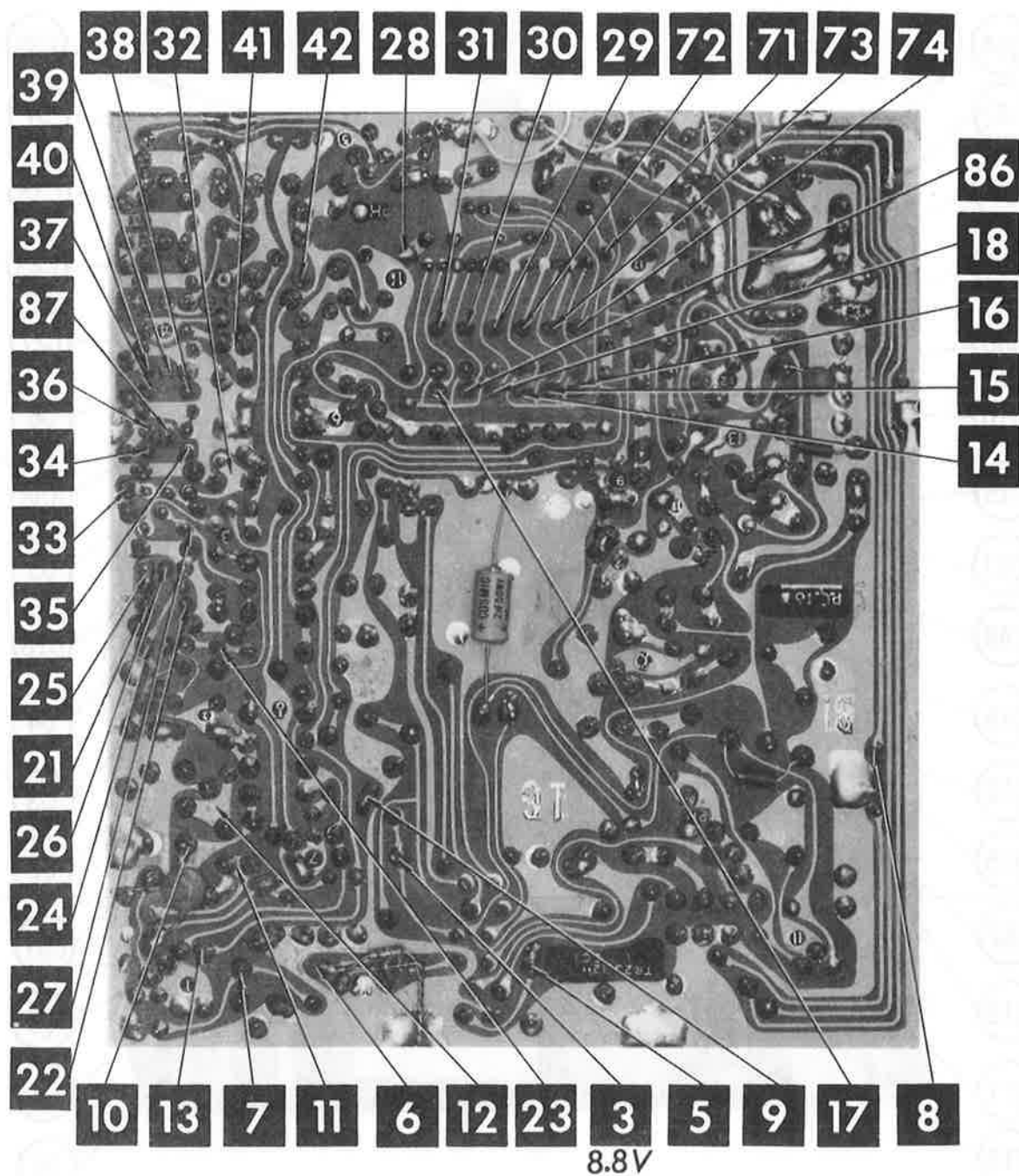
COURIER MODEL CLASSIC

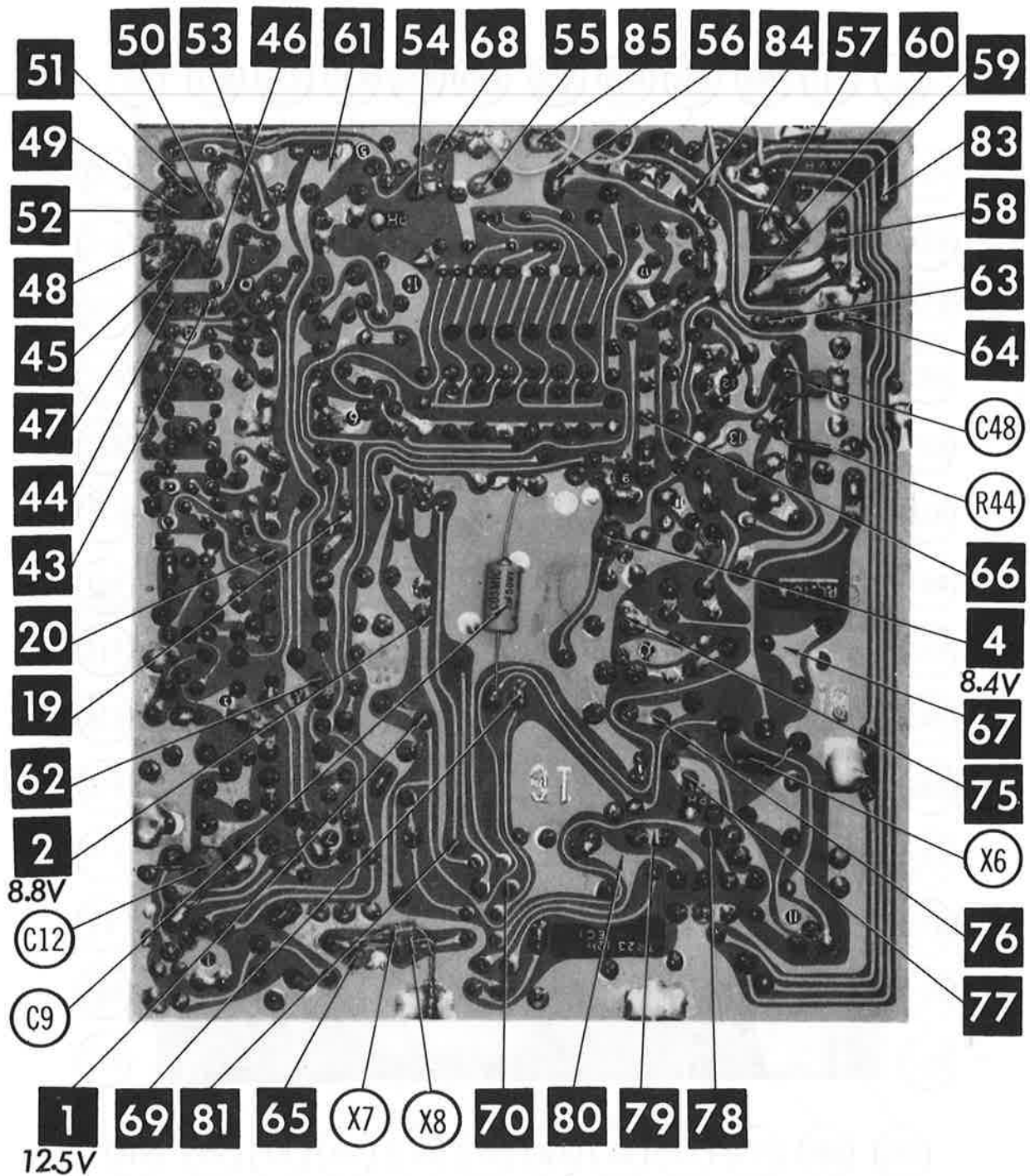


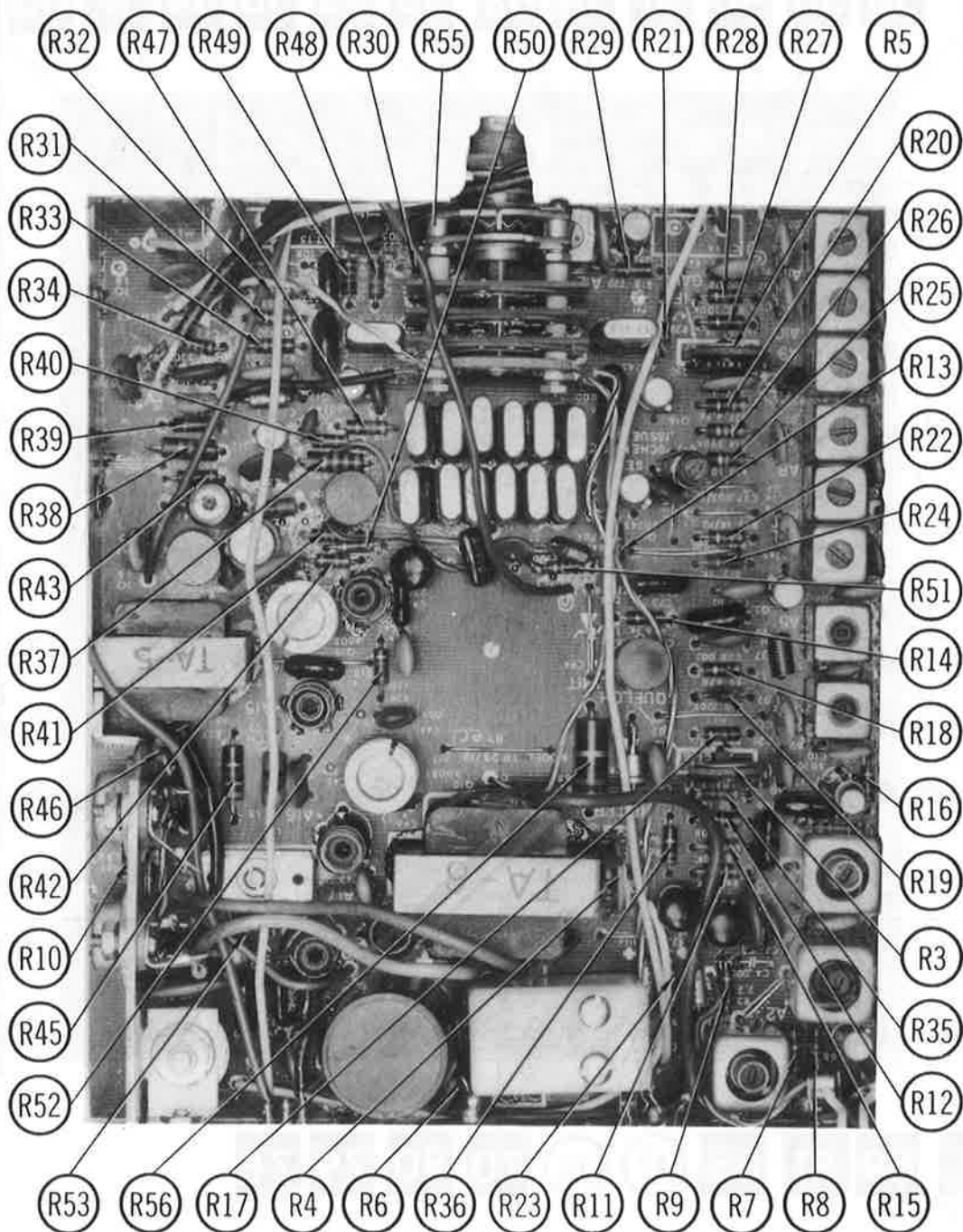


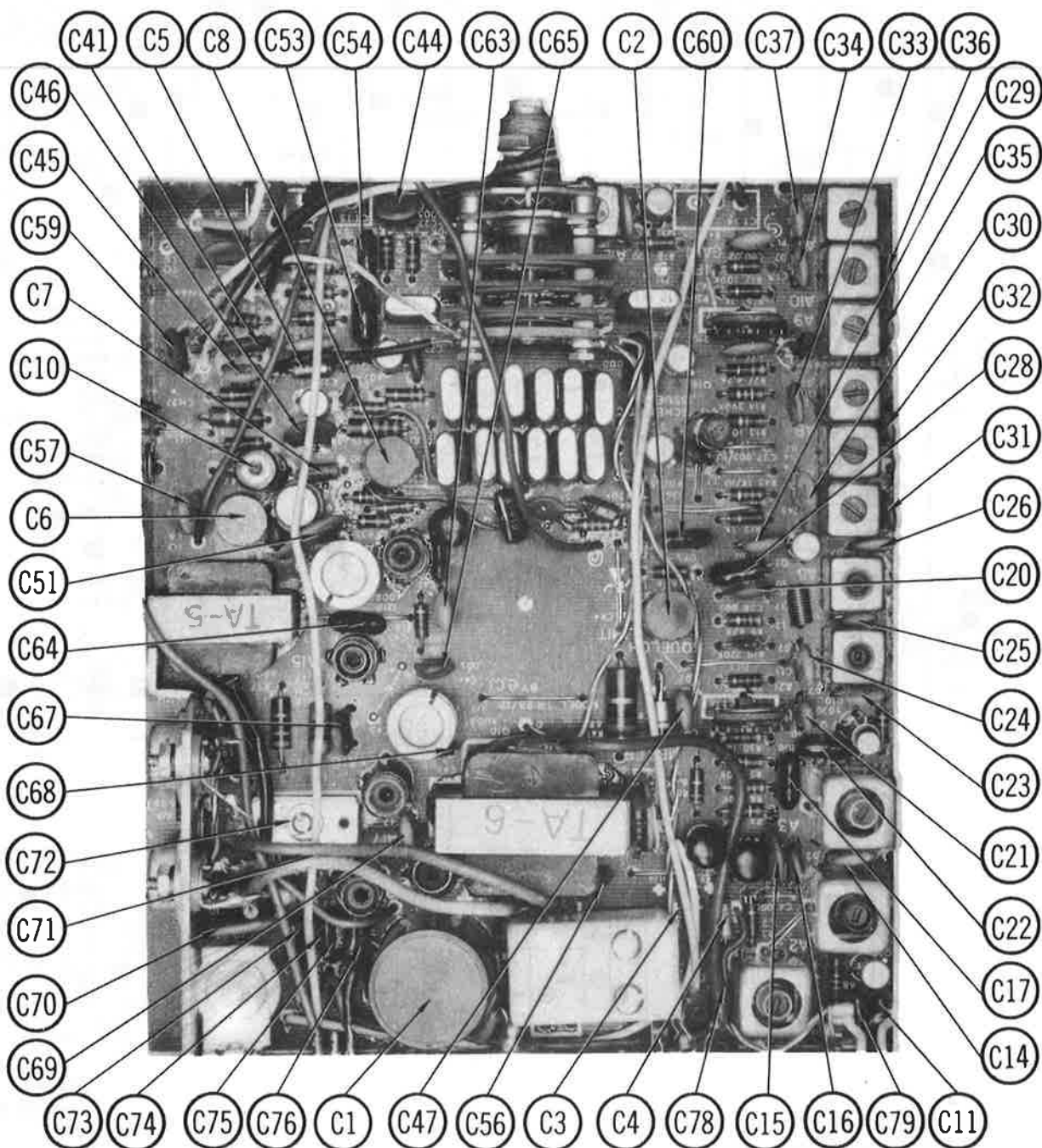


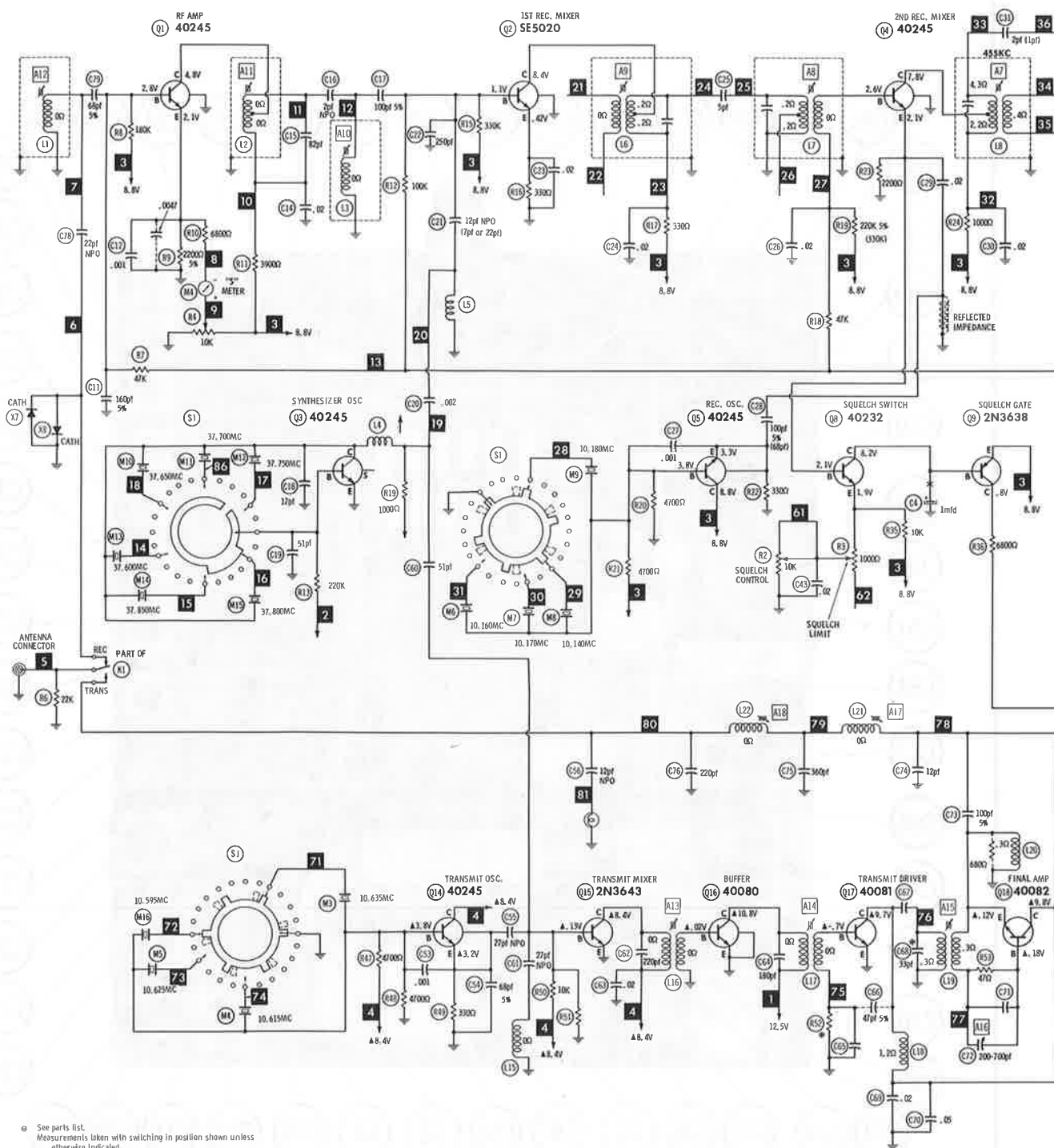












A PHOTOFACT STANDARD NOTATION SCHEMATIC
with CIRCUTRACE

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PARTS LIST AND DESCRIPTION

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

WIRING DATA

General-use Hook-up Wire	Use BELDEN No.	8530 (Solid) Available in 12 Colors
		8524 (Stranded) Available in 12 Colors
Shielded Antenna Lead	Use BELDEN No.	8214 Lowest-loss (RG-8/U Type)
		8237 Low-loss (RG-8/U)
		8240 (Solid) Miniature (RG-58/U)
		8259 (Stranded) Miniature (RG-58A/U)
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	40245	RF Amp		GE-17	TR-21	HEP55	SK3018	ECG 108
Q2	SE5020	1st Rec. Mixer		GE-17	TR-21	HEP709	SK3018	ECG 108
Q3	40245	Sync Oscillator		GE-17	TR-21	HEP55	SK3018	ECG 108
Q4	40245	2nd Rec. Mixer		GE-17	TR-21	HEP55	SK3018	ECG 108
Q5	40245	Rec. Oscillator		GE-17	TR-21	HEP55	SK3018	ECG 108
Q6	40245	1st IF Amp		GE-17	TR-21	HEP55	SK3018	ECG 108
Q7	40245	2nd IF Amp		GE-17	TR-21	HEP55	SK3018	ECG 108
Q8	40232	Squelch Gate		GE-17	TR-22	HEP50	SK3020	ECG 108
Q9	2N3638	Squelch Switch		GE-22	TR-20	HEP716	SK3025	ECG 129
Q10	40232	AF Amp		GE-17	TR-22	HEP50	SK3020	ECG 108
Q11	40315	Driver		GE-20	TR-21	HEP53	SK3024	ECG 128
Q12	40250	Output (1)		GE-24MP *	TR-23	HEP241	SK3028*	ECG 124
Q13	40250	Output (1)			TR-23	HEP241		ECG 124
Q14	40245	Xmtr Oscillator		GE-17	TR-21	HEP55	SK3018	ECG 108
Q15	2N3643	Xmtr Mixer		GE-18	TR-25	HEP55	SK3024	ECG 108
Q16	40080	Buffer		GE-20	TR-21	HEP53	SK3018	ECG 123
Q17	40081	Xmtr Driver		GE-20	TR-21	HEP243	SK3018	ECG 123
Q18	40082	Final Amp				HEP243		

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

* Matched Pair.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MFGR. PART OR TYPE No.	REPLACEMENT RECTIFIERS & DIODES			REPLACEMENT RECTIFIERS	NOTES
		GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	SYLVANIA PART No.		
X1	DI-7	GE-504A	8D4	ECG 116	SK3016	Zener (9.1V)
X2	DI-8	GE-ZD-901	1ZM9.1	ECG 139	KD2504	
X3	1N295	1N295	1N295	ECG 109		
X4	1N662	1N82A	1N82A	ECG 112		
X5	RE-2	GE-504A	8D4	ECG 116	SK3017A	Zener (36V @ 250ma)
X6	DI-13		Z-1124	ECG 147		
X7	1N295	1N295	1N295	ECG 109		
X8	1N295	1N295	1N295	ECG 109		

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA						
		PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	1000 20V		PRS1295	EA15-1000	WBR1000-16	QT1-32	TC1501A	TVA-1163
C2	60 12V		BCD25050	EP15-100	PC100-16	MT1-19	MTV60CB15	TE-1133.5
C3	1 25V		CRE750A		NLW1-50	MT1-1	MTV1CB50	TE-1200
C4	1 25V		CRE750A		NLW1-50	MT1-1	MTV1CB50	TE-1200
C5	1 25V		CRE750A		NLW1-50	MT1-1	MTV1CB50	TE-1200
C6	60 12V		BCD25050	EP15-100	PC100-16	MT1-19	MTV60CB15	TE-1133.5
C7	1 25V		CRE750A		NLW1-50	MT1-1	MTV1CB50	TE-1200
C8	60 12V		BCD25050	EP15-100	PC100-16	MT1-19	MTV60CB15	TE-1133.5
C9	2 25V		CRE751A	EP30-2	NLW2-50	MT1-1	MTV2CB50	TE-1201
C10	100 6V		BCD10100	EP6-100	PC100-16	MT1-21	MTV100CB6	TE-1102

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.
C11	160		ADM-10-161	CPR-160J		DM-15-161	SX316	MS-316
C12	.02		TTP-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C14	.02		TTP-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C15	82			DTZ-82		CCD-820	CN0482	10TCC-Q82
C16	2		NPO-DI 2.2	DTZ-2R2	CZ601CJ2R2D		CN0522	10TCC-V22
C17	100		ADM-10-101	CPR-100J	CD15FD101J03	DM-15-101	SX310	MS-31
C18	12		NPO-DI 10	DTZ-10	CZ601CG100J	CCD-100	CN0410	10TCC-Q10
C19	51		ADM-10-510		CD15ED501J03	DM-15-510		MS-451
C20	.002		GPD XSF202K	DM-202	JBX601YP202K	CCD-202	GP220	2SS-D20
C21	7 NPO		NPO-DI 6.8	DTZ-6R8	CZ601CH6R8D		CN0568	10TCC-V68
C22	250		ADM-10-251			DM-15-251		MS-325
C23	.02		TTP-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C24	.02		TTP-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C25	5		NPO-DI 5.0		CZ601CH5R0D			10TCC-V50
C26	.02		TTP-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C27	.001		ADM-20-102	CPR-1000J	CD19FD102J03	DM-19-102	SX210	MS-211
C28	100		ADM-10-101	CPR-100J	CD15FD101J03	DM-15-101	SX310	MS-31
C29	.02		TTP-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C30	.02		TTP-02	CK-203	HOR101ZV203P	CCD-203	TA120	TG-S20
C31	2		NPO-DI 2.2	DTZ-2R2	CZ601CJ2R2D		CN0522	10TCC-V22
C32	2		NPO-DI 2.2	DTZ-2R2	CZ601CJ2R2D		CN0522	10TCC-V22

PARTS LIST AND DESCRIPTION (CONTINUED)

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

CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C33	.02		TTP-02	CK-203	H0R101ZV203P	CCD-203	TA120	TG-S20
C34	.02		TTP-02	CK-203	H0R101ZV203P	CCD-203	TA120	TG-S20
C35	2		NPO-D1 2.2	DTZ-2R2	CZ601CJ2R2D		CN0522	10TCC-Q22
C36	2		NPO-D1 2.2	DTZ-2R2	CZ601CJ2R2D		CN0522	10TCC-Q22
C37	.02		TTP-02	CK-203	H0R101ZV203P	CCD-203	TA120	TG-S20
C38	.1		TTP-1	CK-104	H0V101ZV104Z		TA010	TG-P10
C39	.005		TTP-005	CK-502	H0V101ZV502P	CCD-502	TA250	TG-D50
C40	.1		TTP-1	CK-104	H0V101ZV104Z		TA010	TG-P10
C41	.005		TTP-005	CK-502	H0Y101ZV502P	CCD-502	TA250	TG-D50
C42	.005		TTP-005	CK-502	H0Y101ZV502P	CCD-502	TA250	TG-D50
C43	.02		TTP-02	CK-203	H0R101ZV203P	CCD-203	TA120	TG-S20
C44	.001		GPD X5F102K	DM-102	JBS601YP102K	CCD-102	SM210	2SS-D10
C45	.02		TTP-02	CK-203	H0R101ZV203P	CCD-203	TA120	TG-S20
C46	.005		TTP-005	CK-502	H0Y101ZV502P	CCD-502	TA250	TG-D50
C47	.02		TTP-02	CK-203	H0R101ZV203P	CCD-203	TA120	TG-S20
C48	.001		GPD X5F102K	DM-102	JBS601YP102K	CCD-102	SM210	2SS-D10
C49	.001		GPD X5F102K	DM-102	JBS601YP102K	CCD-102	SM210	2SS-D10
C51	.05		TTP-05	CK-503	H0V101ZV503Z	CCD-503	TA150	TGL-S50
C53	.001			CPR-1000J	CD19F102J500	DM-19-102J	SX210	424ME1001J501
C54	68		ADM-10-680		CD15ED680J03	DM-15-680	SX468	MS-468
C55	27		NPO-D1 25	DTZ-25			CN0425	10TCC-Q25
C56	12		NPO-D1 10	DTZ-10	CZ601CG100J	CCTO-100	CN0410	10TCC-Q10
C57	.02		TTP-02	CK-203	H0R101ZV203P	CCD-203	TA120	TG-S20
C58	.1		TTP-1	CK-104	H0V101ZV104Z		TA010	TG-P10
C59	.001		GPD X5F102K	DM-102	JBS601YP102K	CCD-102	SM210	2SS-D10
C60	51		ADM-10-510			DM-15-510	MS-451	
C61	27		NPO-D1 25	DTZ-25			CN0425	10TCC-Q25
C62	220		ADM-10-221	CPR-180J	CD15FD201J03	DM-15-221	SX322	TG-S20
C63	.02		TTP-02	CK-203	H0R101ZV203P	CCD-203	TA120	MS-318
C64	180		ADM-10-181	CPR-180J	CD15FD181J03	DM-15-181	SX318	10TCC-Q50
C65	330		GPD X5F331K	DD-331	JBZ601YP331K	CCD-331	GP333	10TCC-Q20
C66	47		NPO-D1 50	DTZ-50	CK601CG470K	CCTO-510	CN0450	10TCC-Q33
C67	22 NPO		NPO-D1 20	DTZ-20		CCTO-200	CN0420	TG-S20
C68	33		NPO-D1 33	DTZ-33	CS601CG330K	CCTO-330	CN0433	TGL-S50
C69	.02		TTP-02	CK-203	H0R101ZV203P	CCD-203	TA120	MS-336
C70	.05		TTP-05	CK-503	H0V101ZV503Z	CCD-503	TA150	
C71	360		ADM-15-361	CPR-360J	CD15FD361J03	DM-15-361	SX336	
C72	200-700							
C73	100		ADM-10-101	CPR-100J	CD15FD101J03	DM-15-101	SX310	MS-31
C74	12		NPO-D1 10	DTZ-10	CZ601CG100J	CCTO-100	CN0410	10TCC-Q10
C75	360		ADM-15-361	CPR-360J	CD15FD361J03	DM-15-361	SX336	MS-336
C76	220		ADM-10-221	CPR-220J	CD15FD201J03	DM-15-221	SX322	
C77	.01		TTP-01	CK-103	H0Y101ZV103P	CCD-103	TA110	TG-S10
C78	22		NPO-D1 20	DTZ-20		CCTO-200	CN0420	10TCC-Q20
C79	68		ADM-10-680	CPR-68J	CD15ED680J03	DM-15-680	SX468	MS-468
C80	.001		GPD X5F102K	DM-102	JBS601YP102K	CCD-102	SM210	2SS-D10

COURIER MODEL CLASSIC

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	CT-20	F1-10K,SPU304, KR-8	NP-10K-S, UPP-A-400, PPAP,NWG-18	QCB1(1),811-116, SK7 or [BU2, CF9,SS10,K]*	RUP14L,SL41(2), SL250
R2	Squelch/PA Switch	10K	CT-20	F1-10K,SPU304, KR-8	NP-10K-S, UPP-A-400, PPAP,NWG-18	QCB1(1),811-116, SK7 or [BU2, CF9,SS10,K]*	RUP14L,SL41(2), SL250
R3	Squelch Limit	1000	CT-16	T-1000		X201R102B	MTC13L1
R4	"S" Meter Adjust	10K	CT-19	T-10K		X201R103B	MTC14L1
R5	IF Gain	250	CT-17	T-300		X201R251B	MTC251L1

* "SNAPTROL" (1) Use QCB1 Bushing instead of Bushing in SK7 Kit. (2) Alter Bushing to meet Requirements.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			
		PART No.	MEISSNER PART No.	MILLER PART No.	WORKMAN PART No.
L1	Rec. Antenna (27mc)	CO-33			
L2	RF	CO-34			
L3	Mixer	CO-33			
L4	Syn. Osc				
L5	RF Choke (.17uh)	CH-20	19-2002	4582	T957
L6	Input IF				
L7	Interstage IF				
L8	Interstage IF		16-9026	8517	
L9	Interstage IF		16-9027	8517	
L10	Interstage IF		16-9027	8517	
L11	Interstage IF		16-9027	8517	
L12	Interstage IF		16-9027	8517	
L13	Interstage IF		16-9027	8517	
L14	Output IF		16-9028	8518	
L15	RF Choke (1uh)	CH-21	19-2009	4602	T8258
L16	Xmtr Interstage	CO-45			
L17	Xmtr Interstage	CO-45			
L18	RF Choke (15uh)	CH-23		72F155AP	
L19	Xmtr Interstage	CO-35			
L20	RF Choke (10uh)	CH-24	19-1005	72F105AP	T860
L21	Pi Input	CO-36			
L22	Pi Output	CO-37			

PARTS LIST AND DESCRIPTION (CONTINUED)

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

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
L23	700ma	.5	3.5mh	CH-27	C-4095	TC-2	TR-158	TY17XT	

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD Part No.	
T1	3.3	1 CT		TA-5					

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	MFR. PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	22 CT	4	TA-6					
		SEC. 2						
		2.2 DC Resistance						

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA			NOTES
		PART No.	JENSEN PART No.	QUAM PART No.	
SP1	3" x 5" PM 4 ohms	SP42		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	AGX 2 Amp		LC-7A	AGX2	HDI	362002	150145		

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
K1	Relay	RL-13	
M1	Meter		
M2	Mic Assembly	MI-8	
M3	Crystal	CR-635	10.635MC
M4	Crystal	CR-615	10.615MC
M5	Crystal	CR-625	10.625MC
M6	Crystal	CR-160	10.160MC
M7	Crystal	CR-170	10.170MC
M8	Crystal	CR-140	10.140MC
M9	Crystal	CR-180	10.180MC
M10	Crystal	CR-3765	37.650MC
M11	Crystal	CR-3770	37.700MC
M12	Crystal	CR-3775	37.750MC
M13	Crystal	CR-3760	37.600MC
M14	Crystal	CR-3785	37.850MC
M15	Crystal	CR-3780	37.800MC
M16	Crystal	CR-595	10.595MC
M17	Meter Lamp	BU-7	
M18	Power Indicator	BU-7	
S1	Switch, Selector	SW-24	

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

ITEM	PART No.	ITEM	PART No.
Knob, Selector	KN-27	Knob, Control	KN-28