

PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index

NOTE

Repair or adjustment of transmitter circuits must be under supervision of a person with first-or second-class radiotelephone license.

(Refer to FCC Rules and Regulations Part 95, Subpart 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.



PACE MODEL CB161

MODEL CB161

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

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Printed in U. S. of America

7CY465

ALIGNMENT INSTRUCTIONS

CAUTION: Use isolation transformer or observe polarity when connecting test equipment.
 Maintain line voltage at 120V AC. Allow a 15-minute warm-up period.
 Adjustments made with 13.8-volt DC input.
 Connect low sides of test equipment to ground unless specified otherwise.
 Connect 50-ohm dummy load or antenna before keying transmitter.
 Suggested Alignment Tools: GC Electronics:
 L4,L7,L8,T3 thru T7,T15.....5009
 T1,T2,T8,T11,T12,T13,T14,T16.....9440
 C321.....5000

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Input of DC meter to CR24 cathode.	Ch. 7	T11	Adjust for 2.0 volts.
Input of frequency counter to antenna jack.	Ch. 13, Xmit	T8	Adjust for 27.115000MHz.
Input of RF VTVM to TP2.	Ch. 13	T16	Adjust for maximum.

RECEIVER ALIGNMENT

Connect an AC VTVM or AF wattmeter across speaker voice coil.
 Adjust volume control to obtain a suitable indication.
 Set generator output low enough to prevent AGC limiting.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to TP1. 455kHz,1000Hz @ 30% modulation.	Ch. 13	T7,T6,T5	Adjust for maximum output.
Output of signal generator thru .01uF to Q2 base. 10.795MHz,1000Hz @ 30% modulation.	Ch. 13	T4,T3	Adjust for maximum output.
Output of signal generator thru .01uF to antenna jack. 27.115MHz,1000Hz @ 30% modulation.	Ch. 13	T2,T1	Adjust for maximum output. Repeat above steps, if necessary.

RECEIVER ADJUSTMENTS

Connect an AC VTVM or AF wattmeter across speaker voice coil.
Adjust volume control to obtain a suitable indication.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to antenna jack. 27.115MHz, 1000Hz @ 30% modulation. Output 1000uV.	Ch. 13	R116	SQUELCH RANGE Turn Squelch Control R137 fully clockwise. Adjust R116 so that squelch just breaks.
Output of signal generator thru .01uF to antenna jack. 27.115MHz, 1000Hz @ 30% modulation. Output 1000uV.	Ch. 13	R133	S METER Adjust R133 for 9 on S scale of meter.

TRANSMITTER ALIGNMENT

Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.

NOTE: Be sure to check transmit frequency and power on all active channels after alignment of transmitter.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Input of spectrum analyzer to antenna jack.	Ch. 13	T13, T14, T15, L4, L7, L8	Adjust for maximum.
	Ch. 13	L8, L7	Adjust for 4 watts maximum.
	Ch. 13	C321	Adjust for MINIMUM at 54MHz.

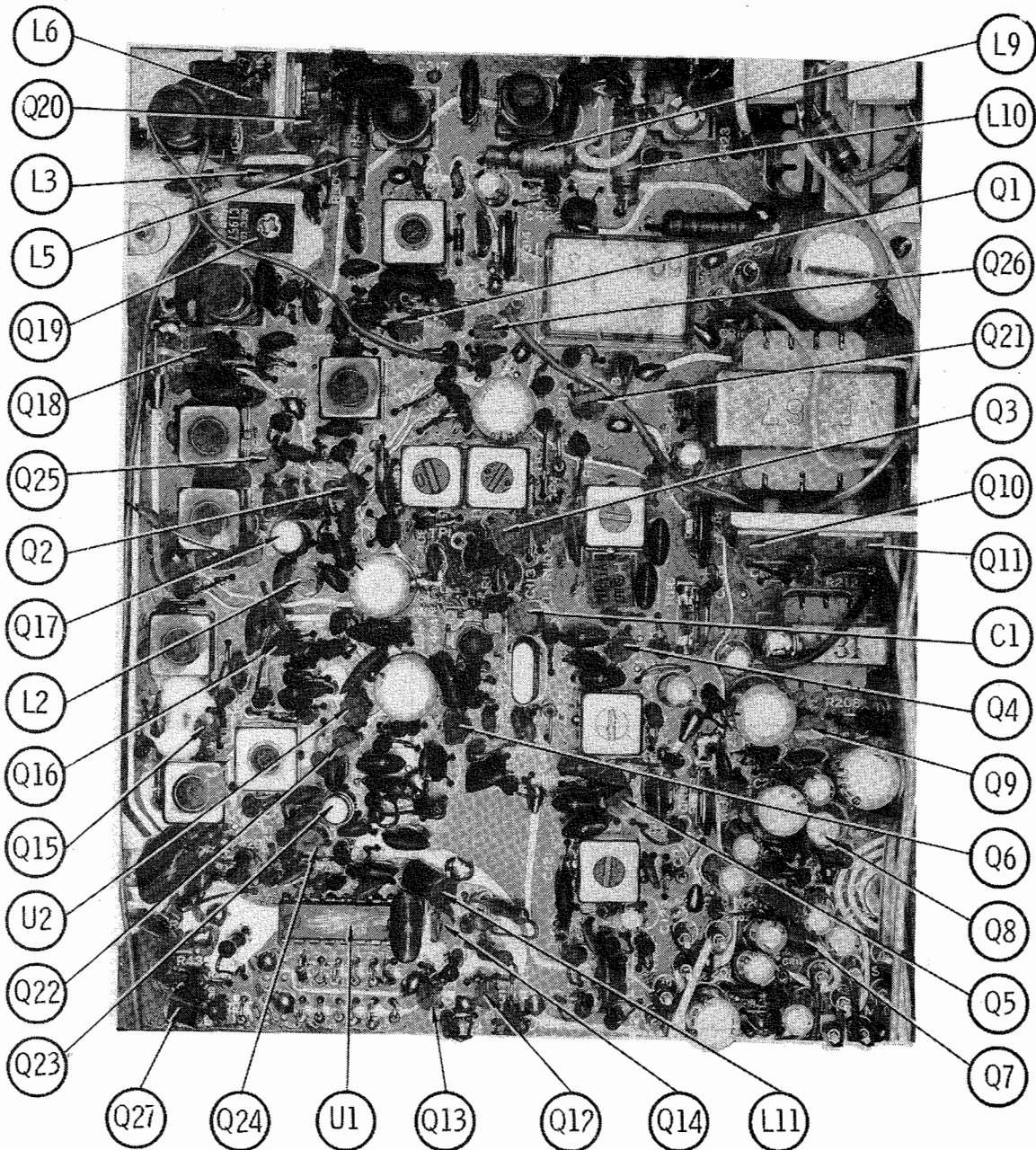
TRANSMITTER ADJUSTMENTS

Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.

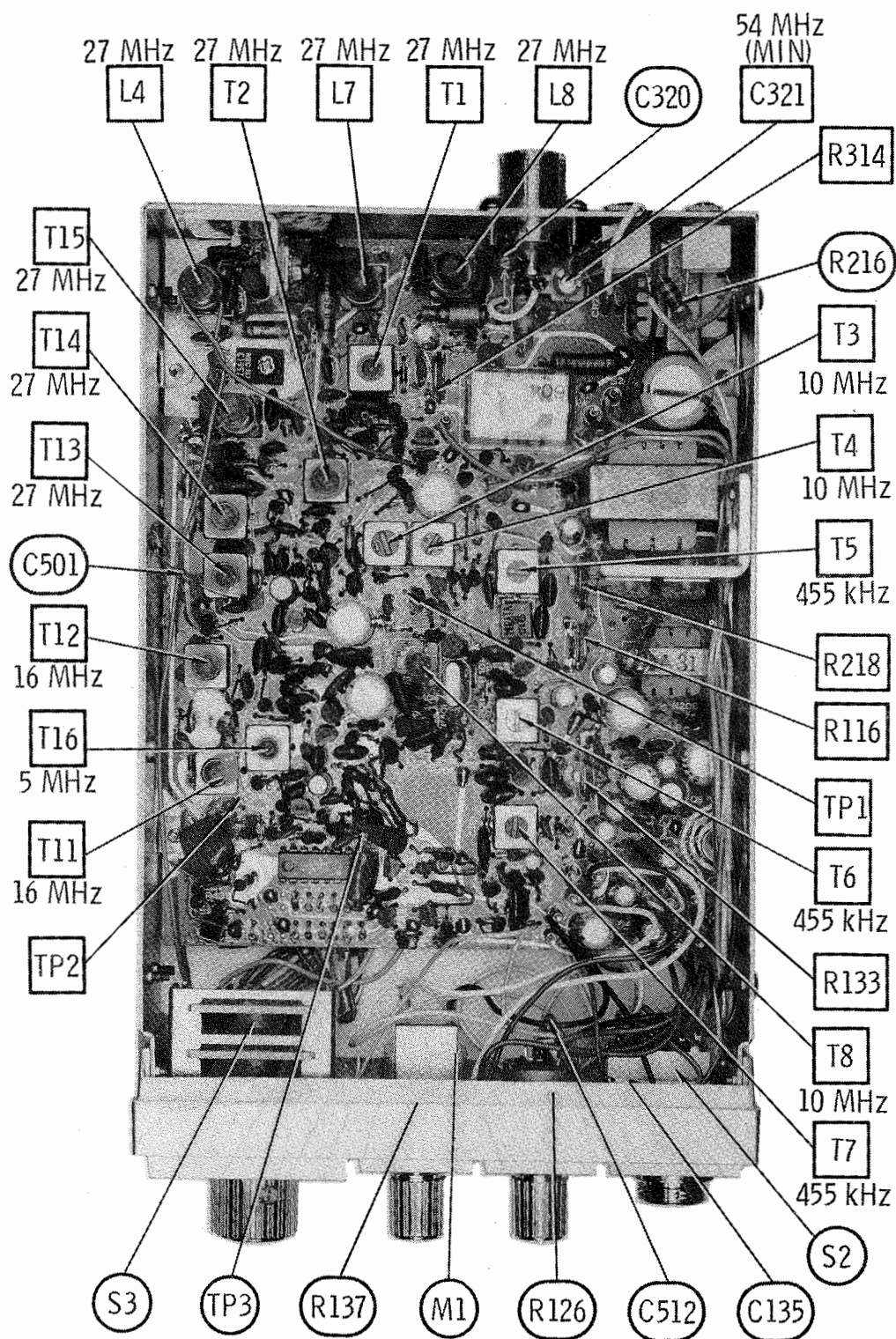
NOTE: Be sure to check transmit frequency and power on all active channels after adjustment of transmitter.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Modulation meter to antenna jack. Inject a 1000Hz signal at MIC input.	Ch. 13	R218	AMC Disconnect C215 to disable AMC. Adjust signal for overmodulation. Restore AMC operation. Adjust R218 for 100% modulation maximum.
	Ch. 13	R314	RF PANEL METER Adjust R314 so that panel RF meter agrees with RF wattmeter.

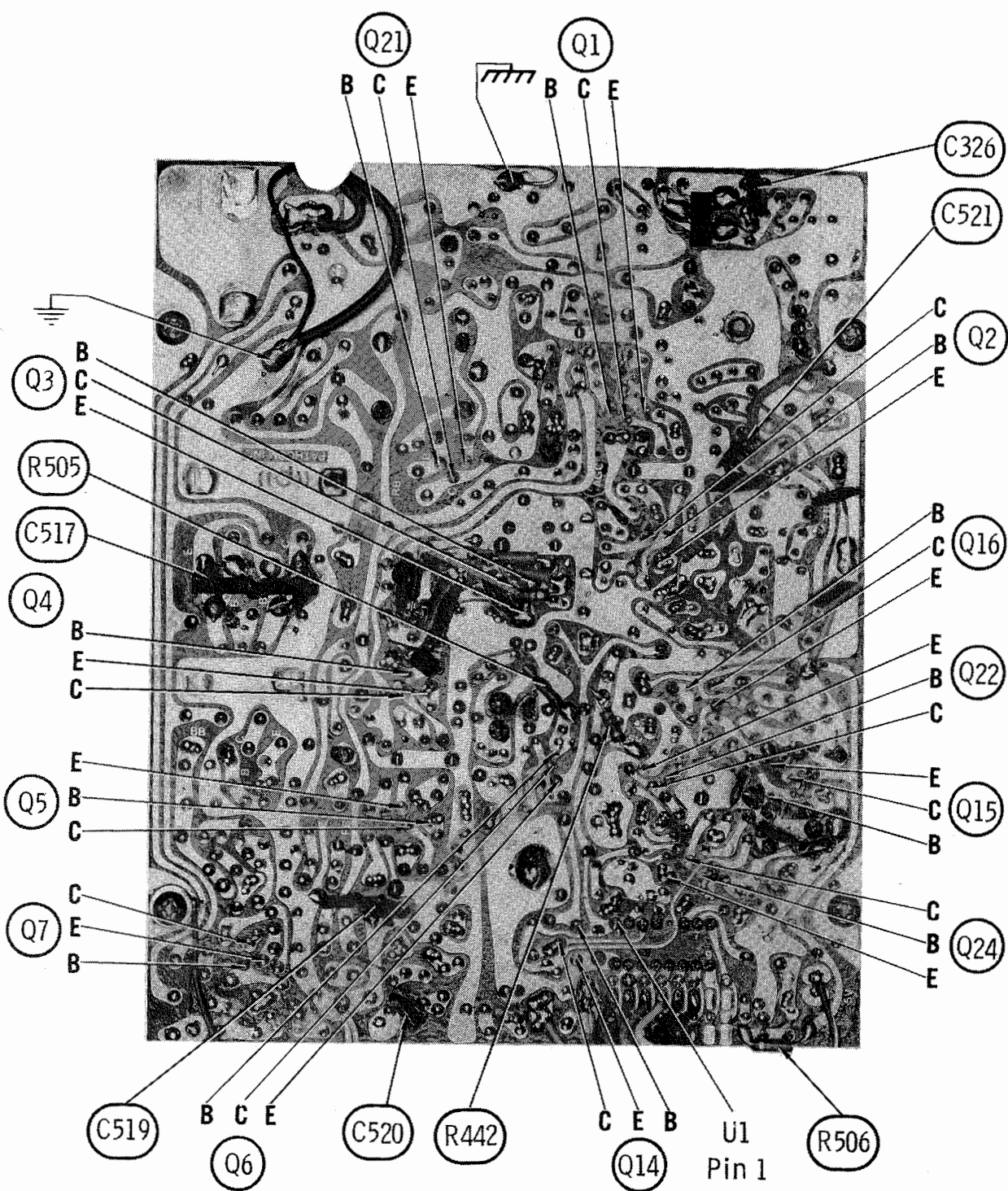
PAGE MODEL CB161



MAIN BOARD



CHASSIS-BOTTOM

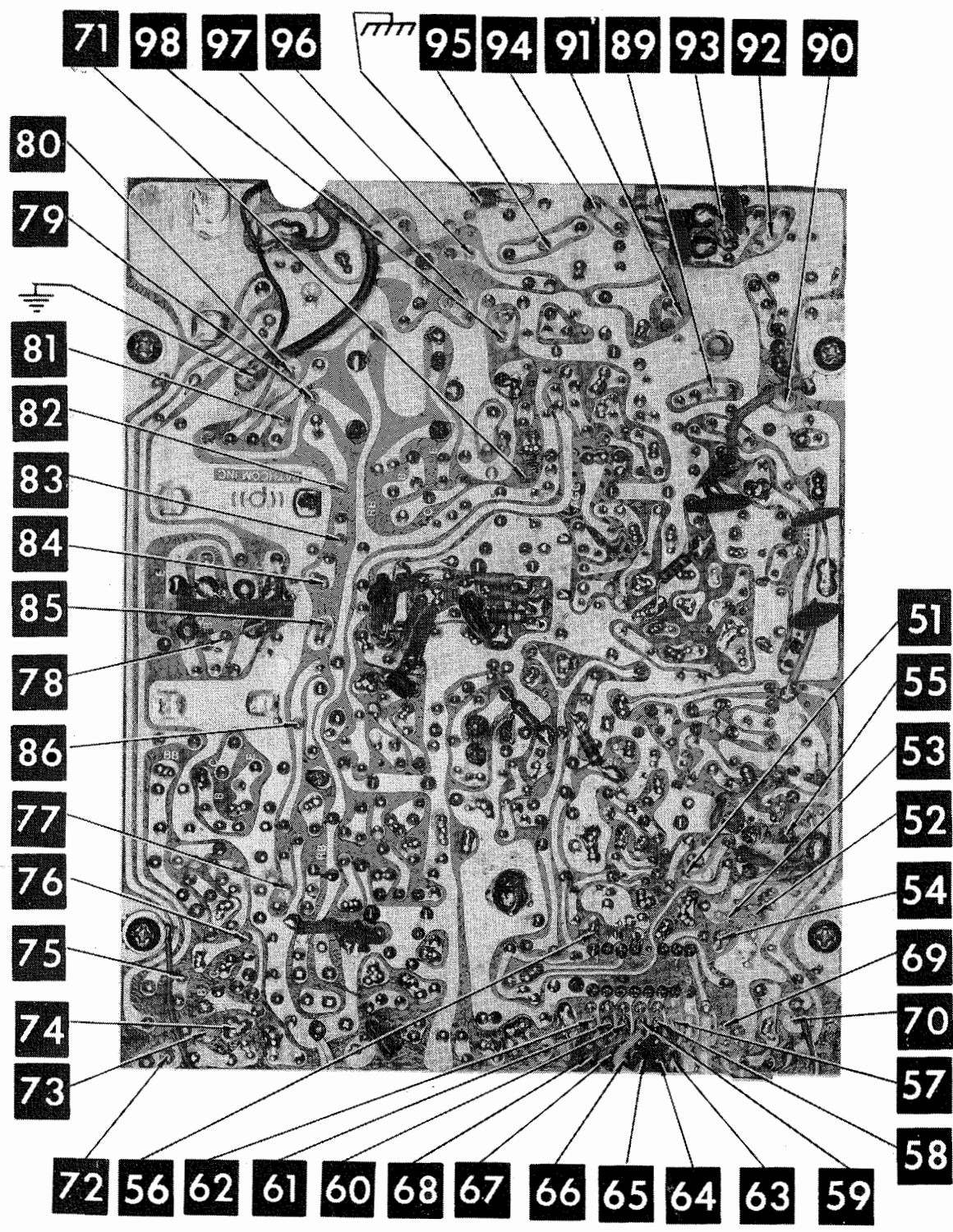


MAIN BOARD

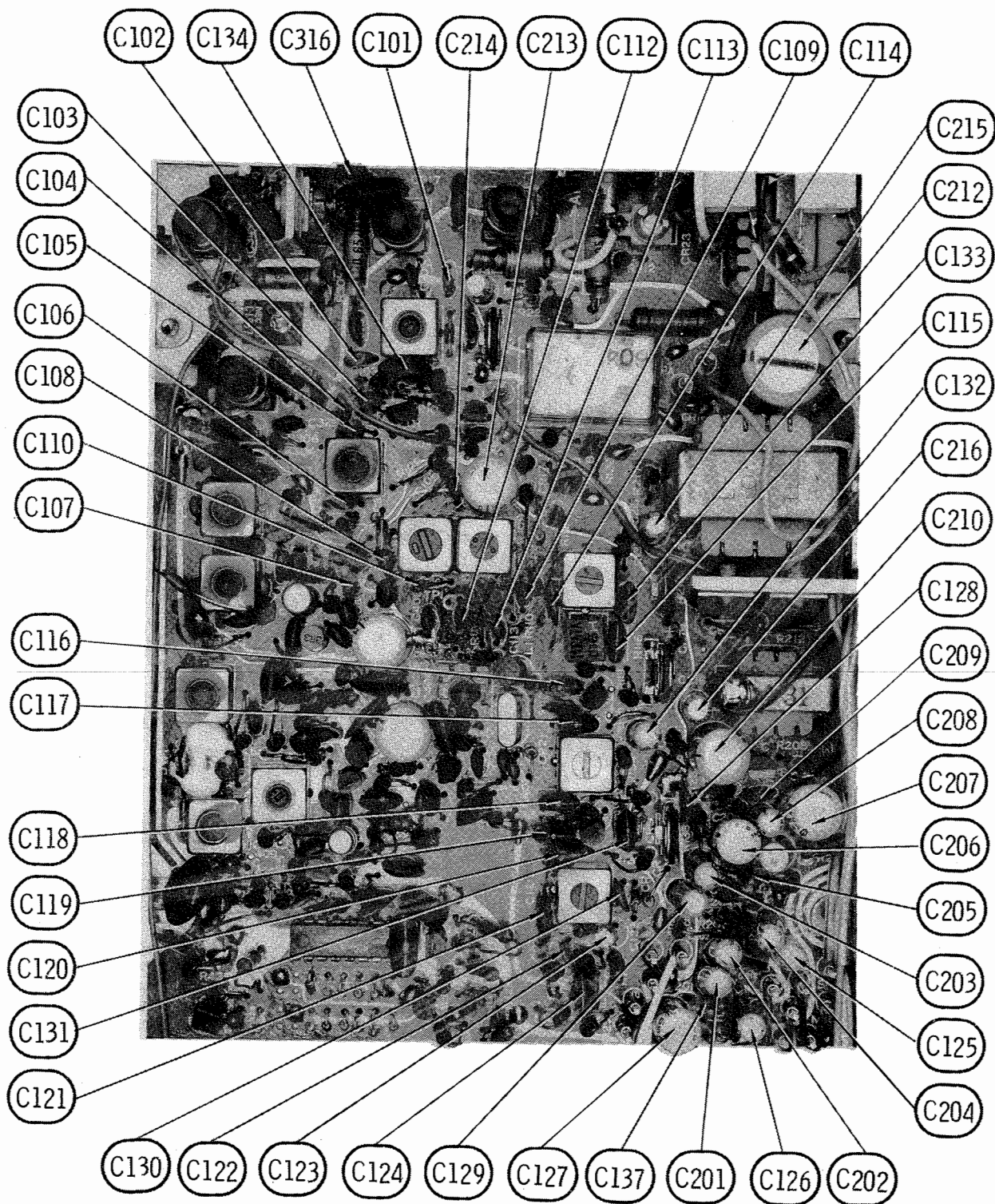


MAIN BOARD

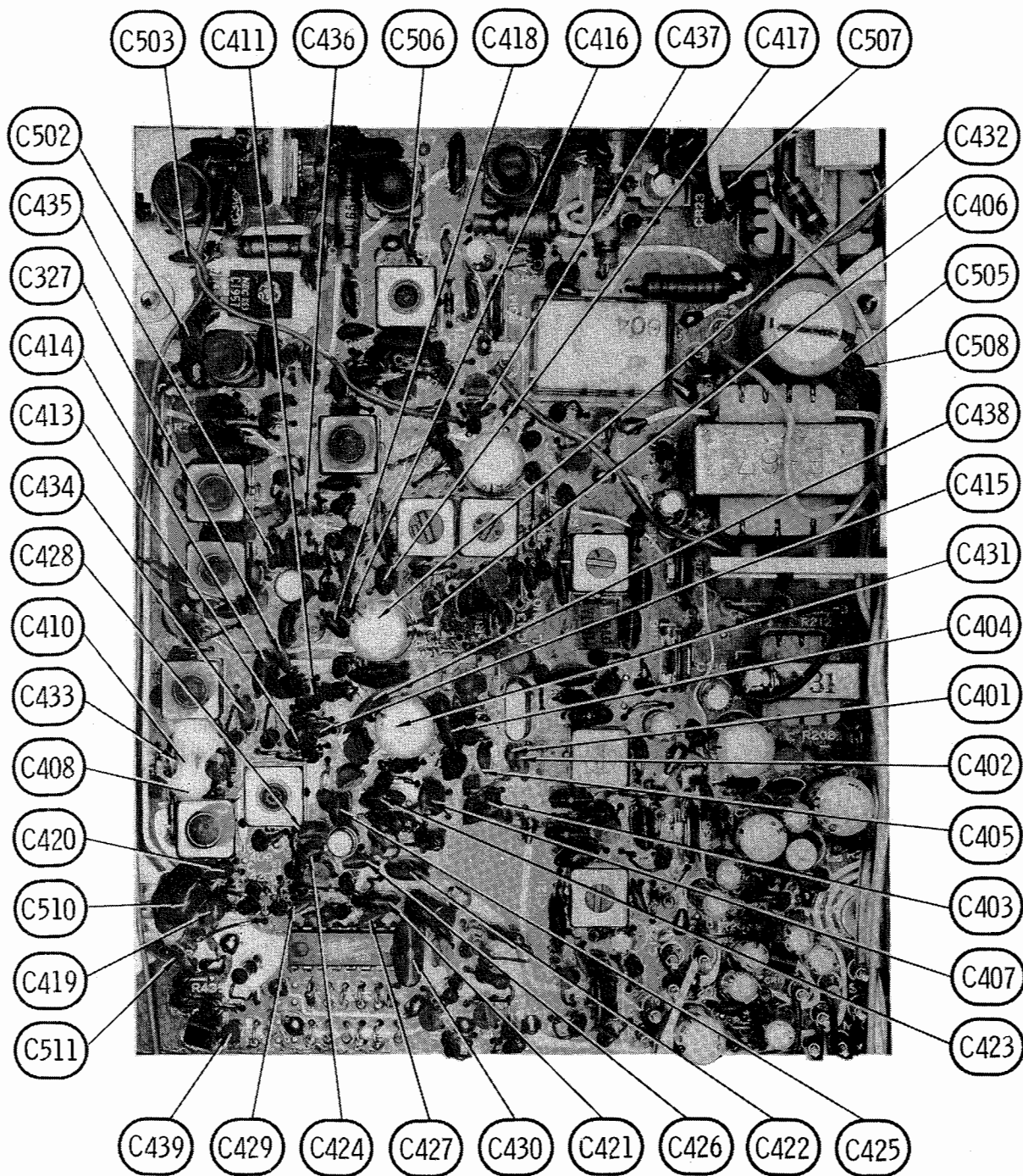
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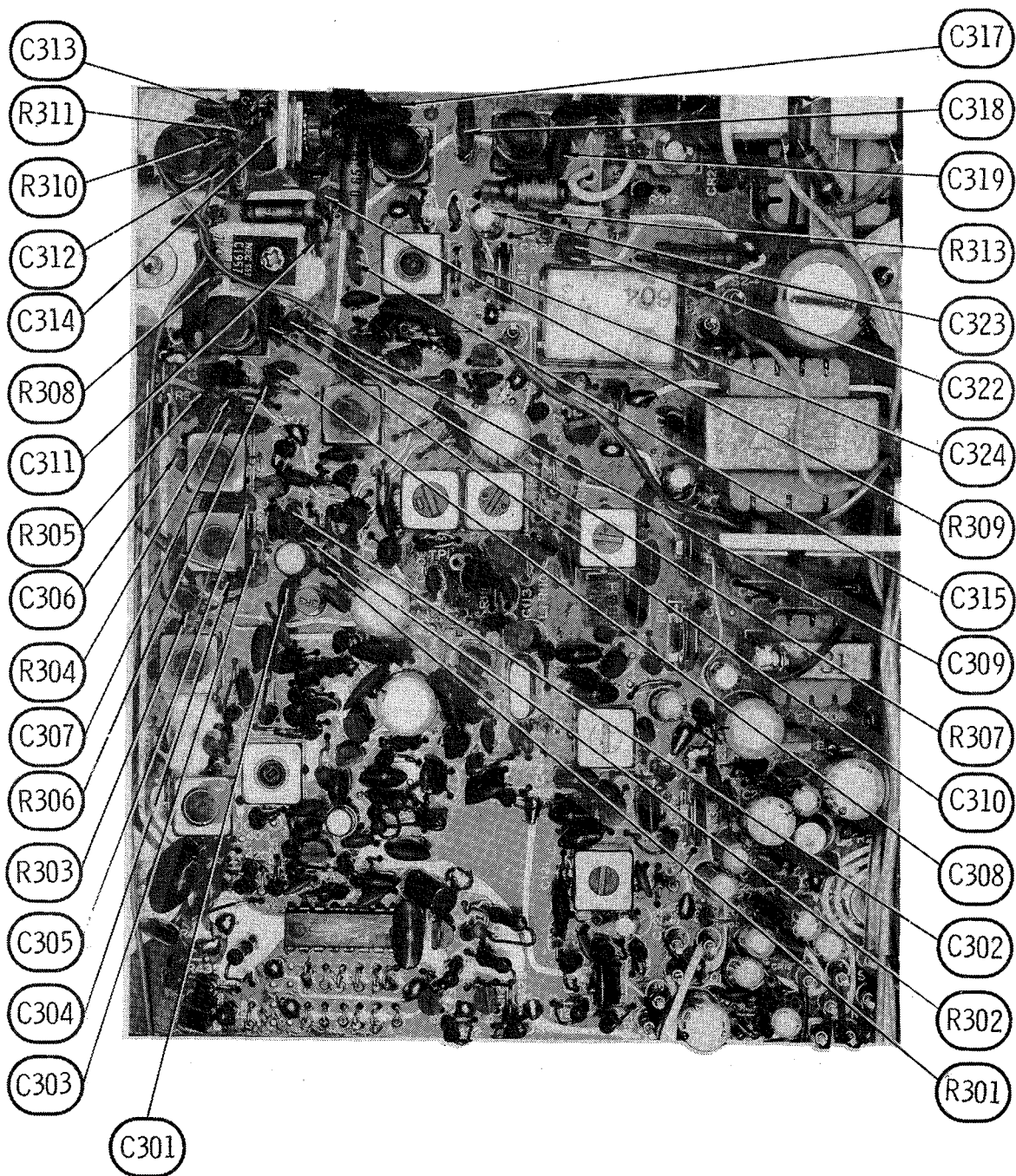
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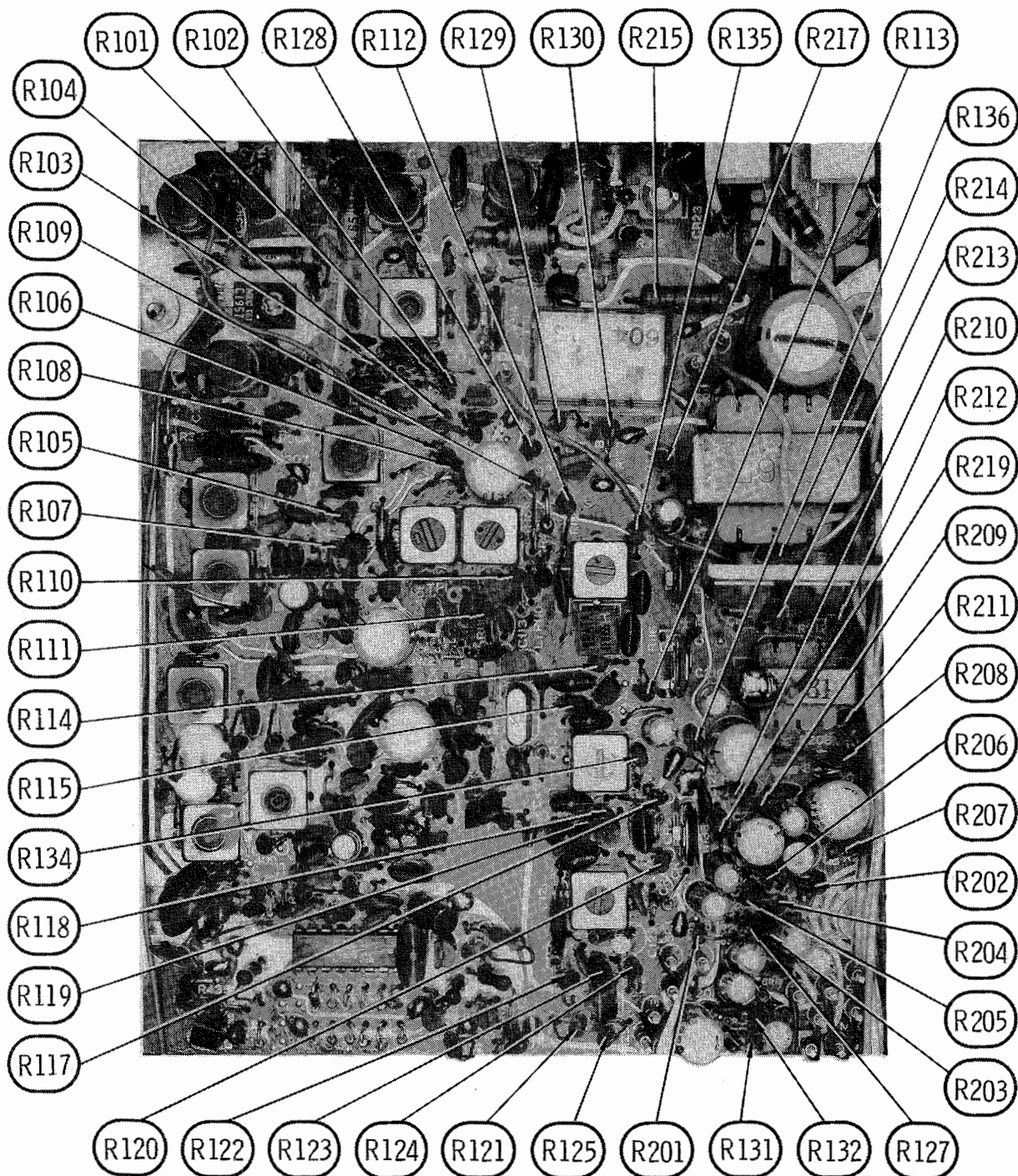
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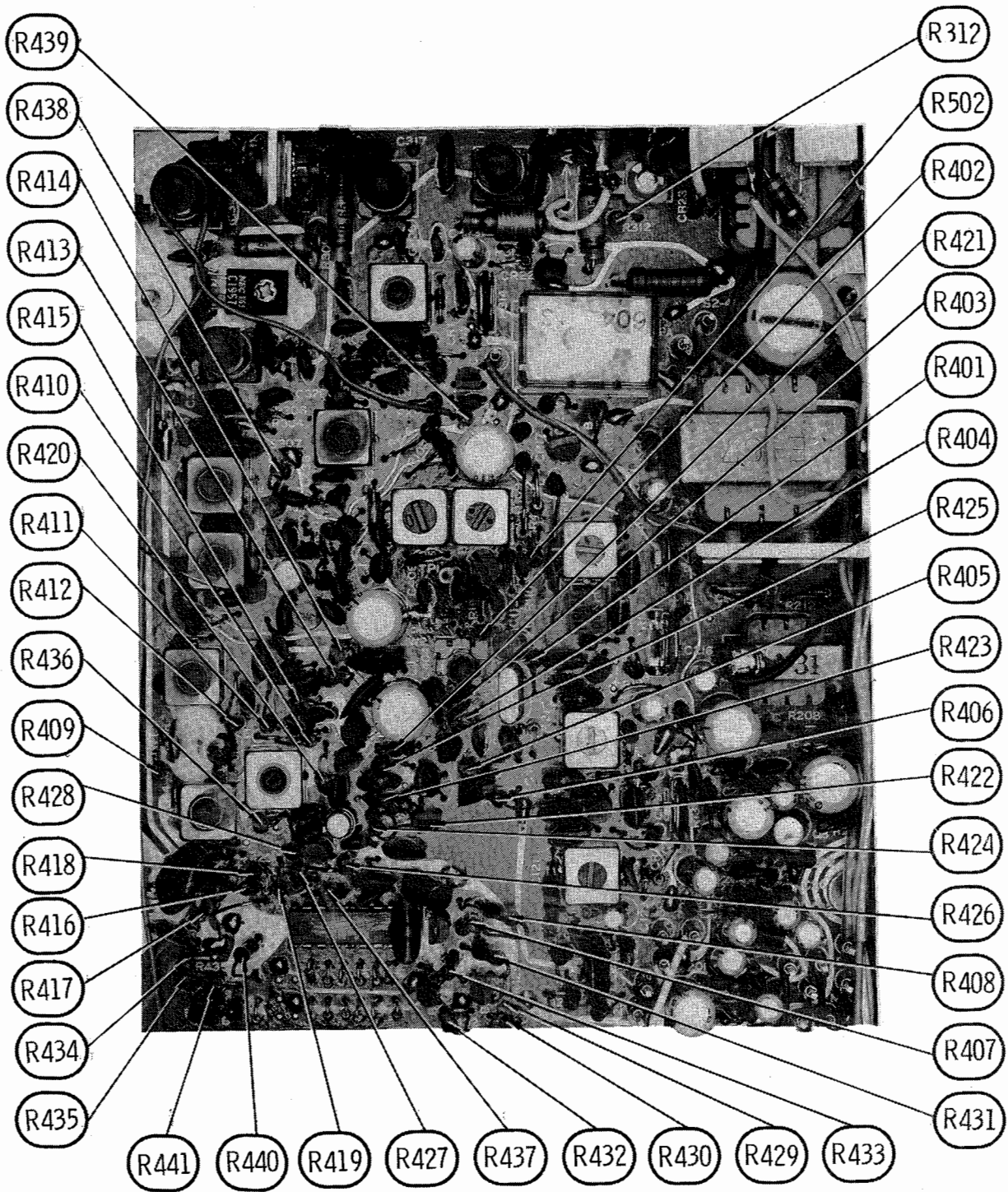
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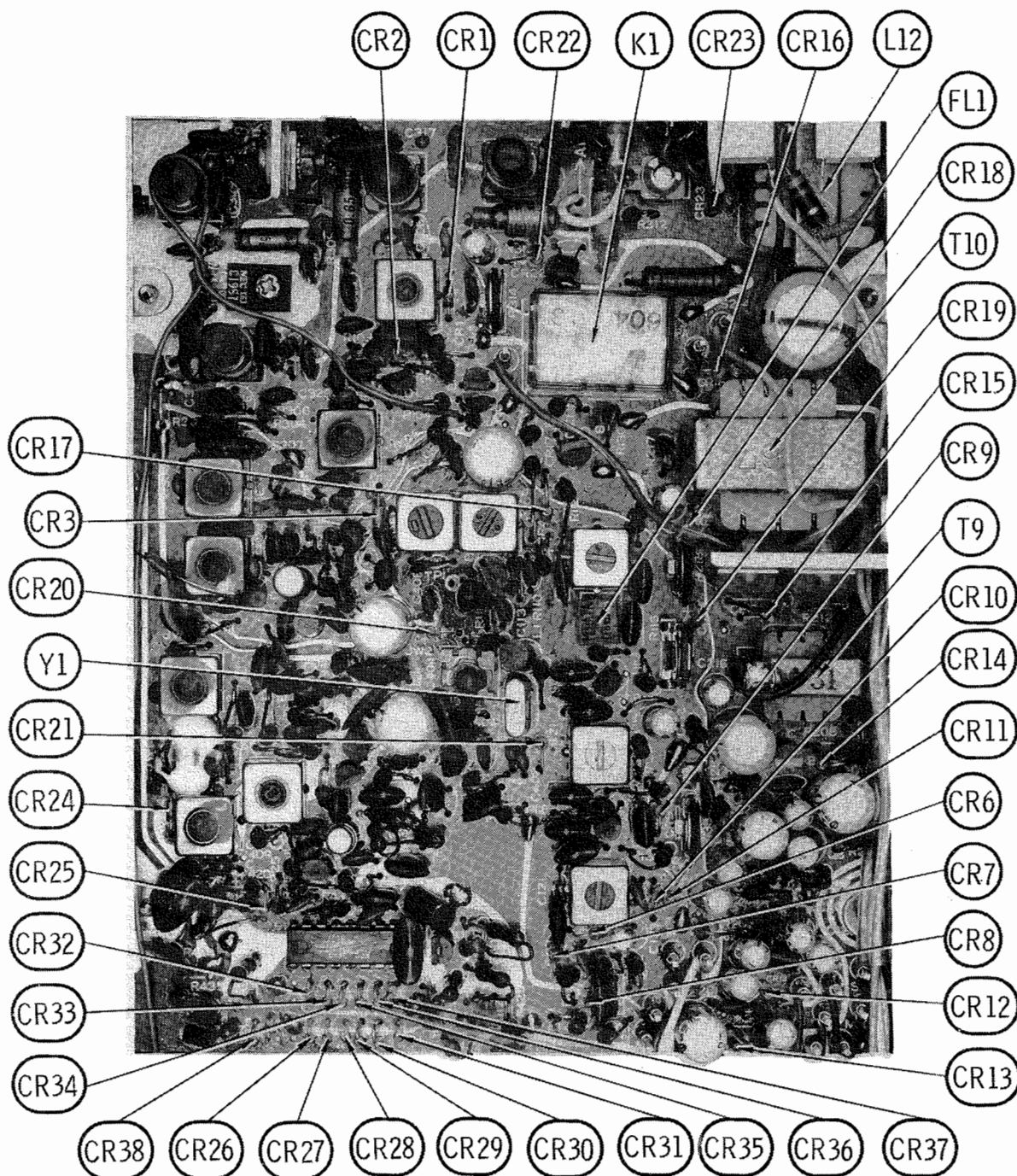
MAIN BOARD



MAIN BOARD

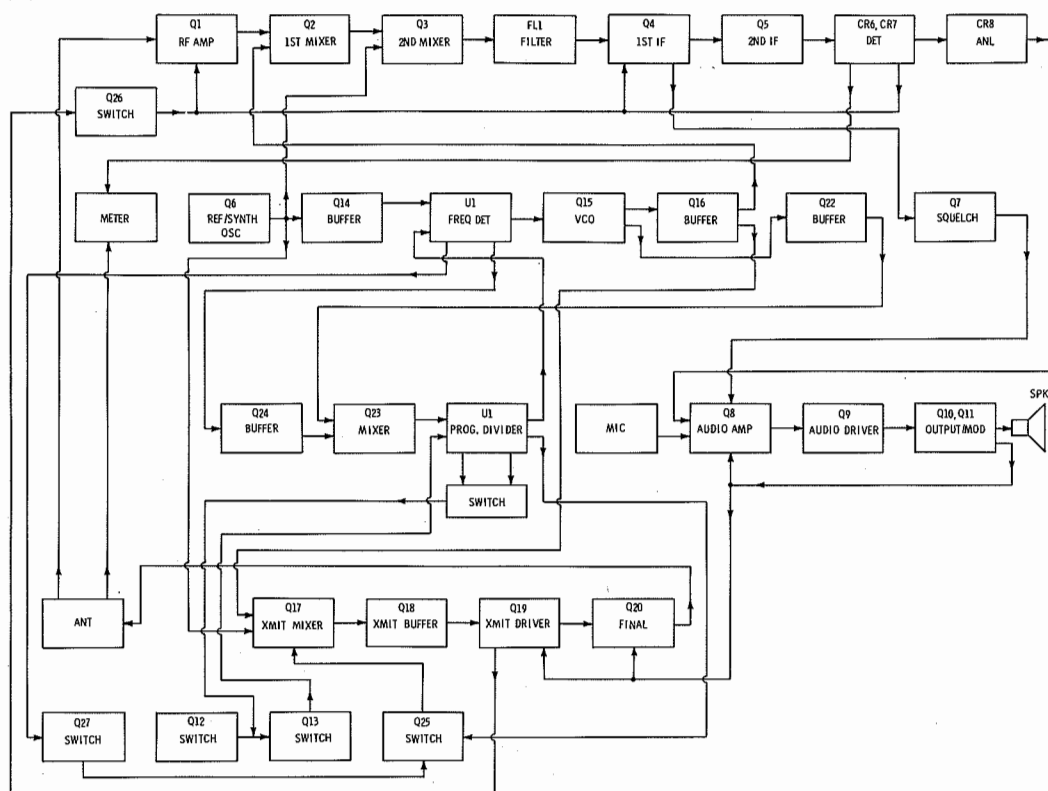


MAIN BOARD



MAIN BOARD

BLOCK DIAGRAM



PARTS LIST AND DESCRIPTION

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

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFG. PART No.	REPLACEMENT DATA							
			GENERAL ELECTRIC PART No.	IR WORKMAN PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.
CR1	1N4448	IP20-0216	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CR2	1N34A	IP20-0015	1N34AS	1N34A	PTC207	HEPR9134	RE 47	SK3087	RT-200	ECG109
CR3	1N34A	IP20-0015	1N34AS	1N34A	PTC207	HEPR9134	RE 47	SK3087	RT-200	ECG109
CR4	1N60	IP20-0060	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
CR5	1N60	IP20-0060	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
CR6	1N60	IP20-0060	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
CR7	1N60	IP20-0060	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
CR8	1N4448	IP20-0216	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
	1S2472	IP20-0021(1)	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CR9	1N60	IP20-0060	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
CR10	1N4448	IP20-0216	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
	1N60	IP20-0060(1)	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
CR11	1N60	IP20-0060	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
CR12	1N34A	IP20-0015	1N34AS	1N34A	PTC207	HEPR9134	RE 47	SK3087	RT-200	ECG109
CR13	1N4448	IP20-0216	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CR14	BZ090	IP20-0019	GEZD-9.1	ZB9.1B	PTC301		RE 114		RT-240	ECG139
CR15	1S1211	IP20-0023								
CR16	1N4002	IP20-0120	GE-504A	5A4D	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
CR17	BZ090	IP20-0019	GEZD-9.1	ZB9.1B	PTC301		RE 114		RT-240	ECG139
CR18	1N4448	IP20-0216	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CR19	1N34A	IP20-0015	1N34AS	1N34A	PTC207	HEPR9134	RE 47	SK3087	RT-200	ECG109
CR20	1N4448	IP20-0216	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CR21	1N34A	IP20-0015	1N34AS	1N34A	PTC207	HEPR9134	RE 47	SK3087	RT-200	ECG109
CR22	1N34A	IP20-0015	1N34AS	1N34A	PTC207	HEPR9134	RE 47	SK3087	RT-200	ECG109
CR23	1N4002	IP20-0120	GE-504A	5A4D	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
CR24	MY201	IP20-0204	GE-90	D201		HEPR2503	RE 195	SK3126	RT-262	
CR25	1N4448	IP20-0216	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CR26	1N4448	IP20-0216	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CR27	1N4448	IP20-0216	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CR28	1N4448	IP20-0216	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CR29	1N4448	IP20-0216	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CR30	1N4448	IP20-0216	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CR31	1N4448	IP20-0216	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CR32	1N4448	IP20-0216	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CR33	1N4448	IP20-0216	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CR34	1N4448	IP20-0216	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CR35	1N4448	IP20-0216	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CR36	1N4448	IP20-0216	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CR37	1N4448	IP20-0216	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CR38	1N4448	IP20-0216	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177

PARTS LIST AND DESCRIPTION (CONTINUED)

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

SEMICONDUCTORS (Select replacement transistor for best results) (cont)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA							
			GENERAL ELECTRIC PART No.	IR WORKMAN PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.
CR39	1H4448	IP20-0216	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
Q1	2SC710C	IP20-0002	GE-211 *	(1R)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
Q2	2SC710C	IP20-0002	GE-211 *	(1R)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
Q3	2SC710C	IP20-0002	GE-211 *	(1R)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
Q4	2SC710C	IP20-0002	GE-211 *	(1R)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
Q5	2SC710C	IP20-0002	GE-211 *	(1R)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
Q6	2SC710C	IP20-0002	GE-211 *	(1R)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
Q7	2SA844C	IP20-0217	GE-21 *	TR-54 *	PTC103 *	HEPS0019 *	RE 18 *	SK3114	RT-126A *	ECG129 *
Q8	2SA495Y	IP20-0159(1)	GE-221 *	(1R)2SA495	PTC103 *	HEPS0013 *	RE 26 *	SK3114	RT-303	ECG159 *
Q9	2SD187R	IP20-0076	GE-59	TR-08	PTC134	HEPG6011	RE 6	SK3010	RT-119	ECG103A
	2SC16410		GE-20 *	TR-24 *	PTC136 *	HEPS0015 *	RE 13 *	SK3122	RT-107A	ECG123A *
	2SC372Y	IP20-0006(1)	GE-61 *	(1R)2SC372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
	2SC403C		GE-62	(1R)2SC403A	PTC121 *	HEPS0015 *	RE 13 *	SK3124	RT-302	ECG123A *
	(1)									
	2SC945(1)		GE-212	(1R)2SC945	PTC121 *	HEPS0015 *	RE 192	SK3124	RT-107A	ECG199
Q10	2SC1014D	IP20-0172	GE-273		PTC193	RE 213			RT-137	ECG210
Q11	2SC1014D	IP20-0172	GE-273		PTC193	RE 213			RT-137	ECG210
Q12	2SC710C	IP20-0002	GE-211 *	(1R)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
Q13	2SC710C	IP20-0002	GE-211 *	(1R)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
Q14	2SC710C	IP20-0002	GE-211 *	(1R)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
Q15	2SC710C	IP20-0002	GE-211 *	(1R)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
Q16	2SC710C	IP20-0002	GE-211 *	(1R)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
Q17	3SK45B	IP20-0157	GE-FET-4		PTC181 *	HEPF2004	RE 199	SK3050	RT-181	ECG222
	3SK41	IP20-0218(1)	GE-FET-4		PTC181 *	HEPF2004	RE 199	SK3050	RT-181	ECG222
Q18	2SC710C	IP20-0002	GE-211 *	(1R)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
Q19	2SC1957	IP20-0103			PTC180		RE 209		RT-162	ECG295
	2SC495T				PTC180		RE 209		RT-162	ECG295
	(12)(1)									
	2SC1449		GE-270		PTC180		RE 209		RT-162	ECG295
	(13)(1)									
	2SC2028		GE-270		PTC180		RE 209		RT-162	ECG295
	(1)									
Q20	2SC1306	IP20-0155(14)	GE-215		PTC186	HEPS3041	RE 203	SK3197	RT-146	ECG235
	2SC1676									ECG320
	(15)(1)									
	2SC1816		GE-216		PTC186		RE 201	SK3197	RT-146	ECG235
	(16)(1)									
	2SC2029		GE-215		PTC186		RE 203	SK3197	RT-146	ECG235
	(1)									
Q21	2SB525D	IP20-0211	GE-89	TR-88 *	PTC177 *	HEPS3012 *	RE 211 *	SK3024 *	RT-103 *	ECG298 *
Q22	2SC710C	IP20-0002	GE-211 *	(1R)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
Q23	3SK41L	IP20-0218	GE-FET-4		PTC181 *	HEPF2004	RE 199	SK3050	RT-181	ECG222
Q24	2SC710C	IP20-0002	GE-211 *	(1R)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
Q25	2SC710C	IP20-0002	GE-211 *	(1R)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
Q26	2SC710C	IP20-0002	GE-211 *	(1R)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
Q27	2SA844C	IP20-0217	GE-21 *	TR-54 *	PTC103 *	HEPS0019 *	RE 18 *	SK3114	RT-126A *	ECG129 *
U1	5M5107	IP20-0219								
U2	F78L06AC									
	78L05C	IP20-0220(1)								

* Lead Configuration may vary from original.

(1) Used in some versions.

(11) Rating, 7.0 Watt @ 1.5 Amp.

(12) Rating, 5.0 Watt @ 800mA.

(13) Rating, 750mW @ 2.0 Amp.

(14) Rating, 12 Watt @ 3.0 Amp.

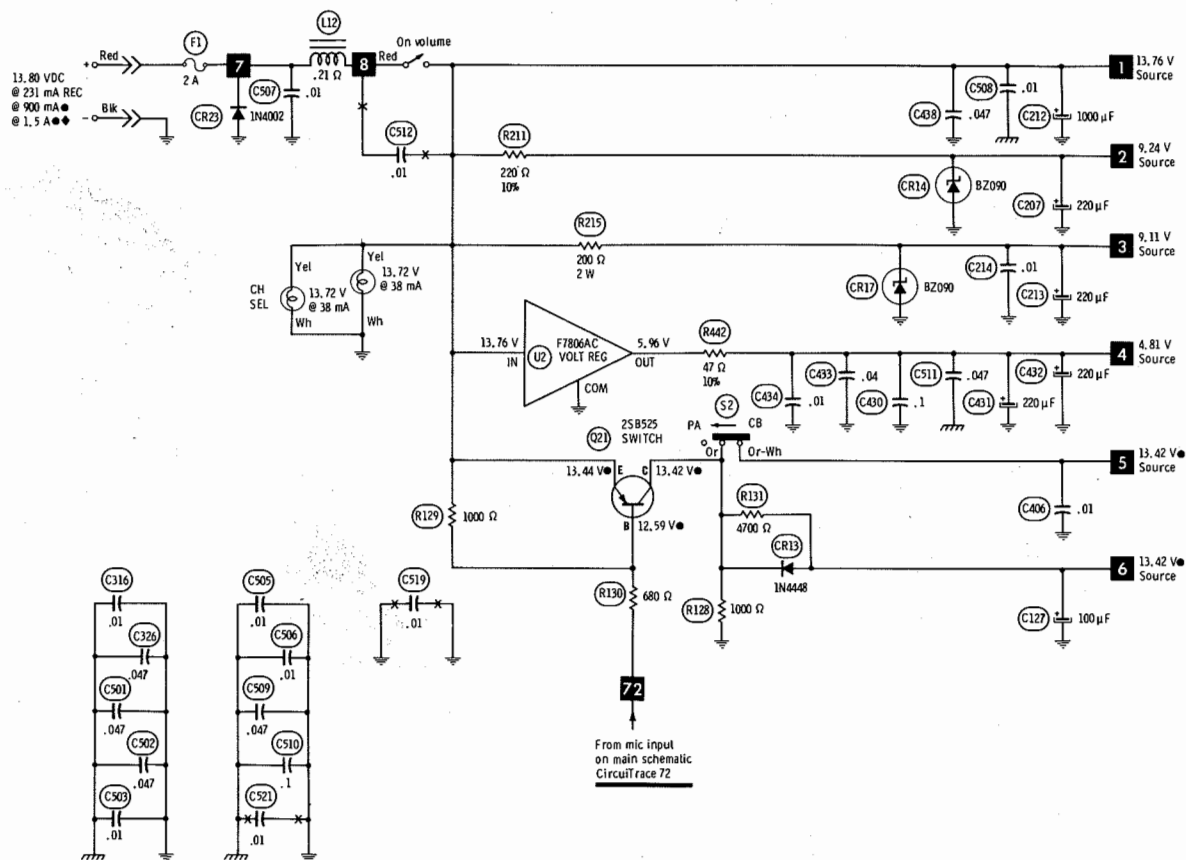
(15) Rating, 30 Watt @ 3.0 Amp.

(16) Rating, 16 Watt @ 4.0 Amp.

PAGE MODEL CB161

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA			
			CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C123	.22 25V	IP22-0044		TDC224M050EL	QDT1-10	SD50-R229
C125	1 50V	IP22-0001	PC1-50	VTT1B63	QV1-11	EV-1615
C126	1 50V	IP22-0001	PC1-50	VTT1B63	QV1-11	EV-1615
C127	100 16V	IP22-0008	PC100-16	VTT100F16	QV1-95	EV-1230
C129	1 50V	IP22-0001	PC1-50	VTT1B63	QV1-11	EV-1615
C132	10 16V	IP22-0004	PC10-25	VTT10A25	QV1-41	EV-1222
C201	4.7 35V	IP22-0003	PC5-50	VTT4R7A50	QV1-29	EV-1519
C202	4.7 35V	IP22-0003	PC5-50	VTT4R7A50	QV1-29	EV-1519
C203	4.7 35V	IP22-0003	PC5-50	VTT4R7A50	QV1-29	EV-1519
C204	1 50V	IP22-0001	PC1-50	VTT1B63	QV1-11	EV-1615
C206	47 16V	IP22-0006	PC50-16	VTT47D16	QV1-73	EV-1226
C207	220 16V	IP22-0009	PC250-25	VTT220G16	QV1-117	EV-1240
C208	1 50V	IP22-0001	PC1-50	VTT1B63	QV1-11	EV-1615
C210	220 16V	IP22-0009	PC250-25	VTT220G16	QV1-117	EV-1240
C212	1000 16V	IP22-0051	PC1000-16	VTT1000L16	QV1-183	EV-1260
C213	220 16V	IP22-0009	PC250-25	VTT220G16	QV1-117	EV-1240
C215	1 50V	IP22-0001	PC1-50	VTT1B63	QV1-11	EV-1615
C216	4.7 35V	IP22-0003	PC5-50	VTT4R7A50	QV1-29	EV-1519
C323	1 50V	IP22-0001	PC1-50	VTT1B63	QV1-11	EV-1615
C419	1 25V	IP22-0034		TDC105M035EL		SD35-19
C420	.22 35V	IP22-0025		TDC224M050EL	QDT1-10	SD50-R229
C431	220 16V	IP22-0009	PC250-25	VTT220G16	QV1-117	EV-1240
C432	220 16V	IP22-0009	PC250-25	VTT220G16	QV1-117	EV-1240
C439	.22 35V	IP22-0025		TDC224M050EL	QDT1-10	SD50-R229



— Circuitry not used in some versions

--- Circuitry used in some versions

⊙ See parts list

✱ Nominal value

⊕ Ground

⏏ Chassis

▽ Common tie point

Measurements with switching as shown unless noted:

■ Squelch fully clockwise ◆ 100% modulation

● Transmit

Supply voltage maintained as shown at input.

Voltages measured with digital meter, no signal.

Controls adjusted for normal operation.

Arrow at control indicates direction of advance.

Terminal identification may not be found on unit.

Resistors are 1/2W or less, 5% unless noted.

Value in () used in some versions.

A PHOTOFAC STANDARD NOTATION SCHEMATIC

WITH **CIRCUITRACE**

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Terminal Guides

OUT COM 1N



Bottom view

G2



Bottom view

G1



Bottom view

B C E



Bottom view

E C B



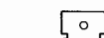
Bottom view



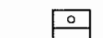
Front view



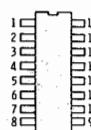
Front view



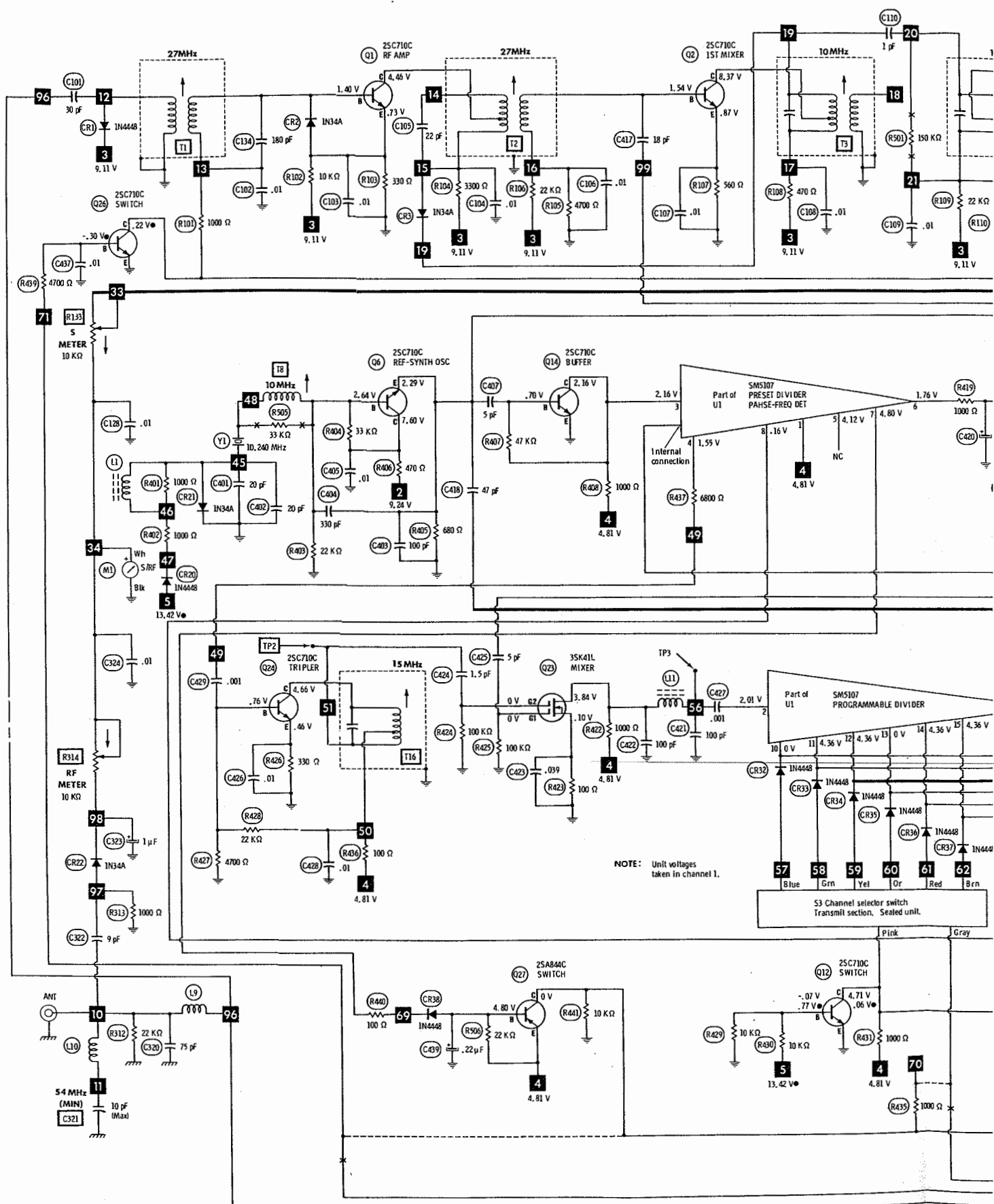
Front view

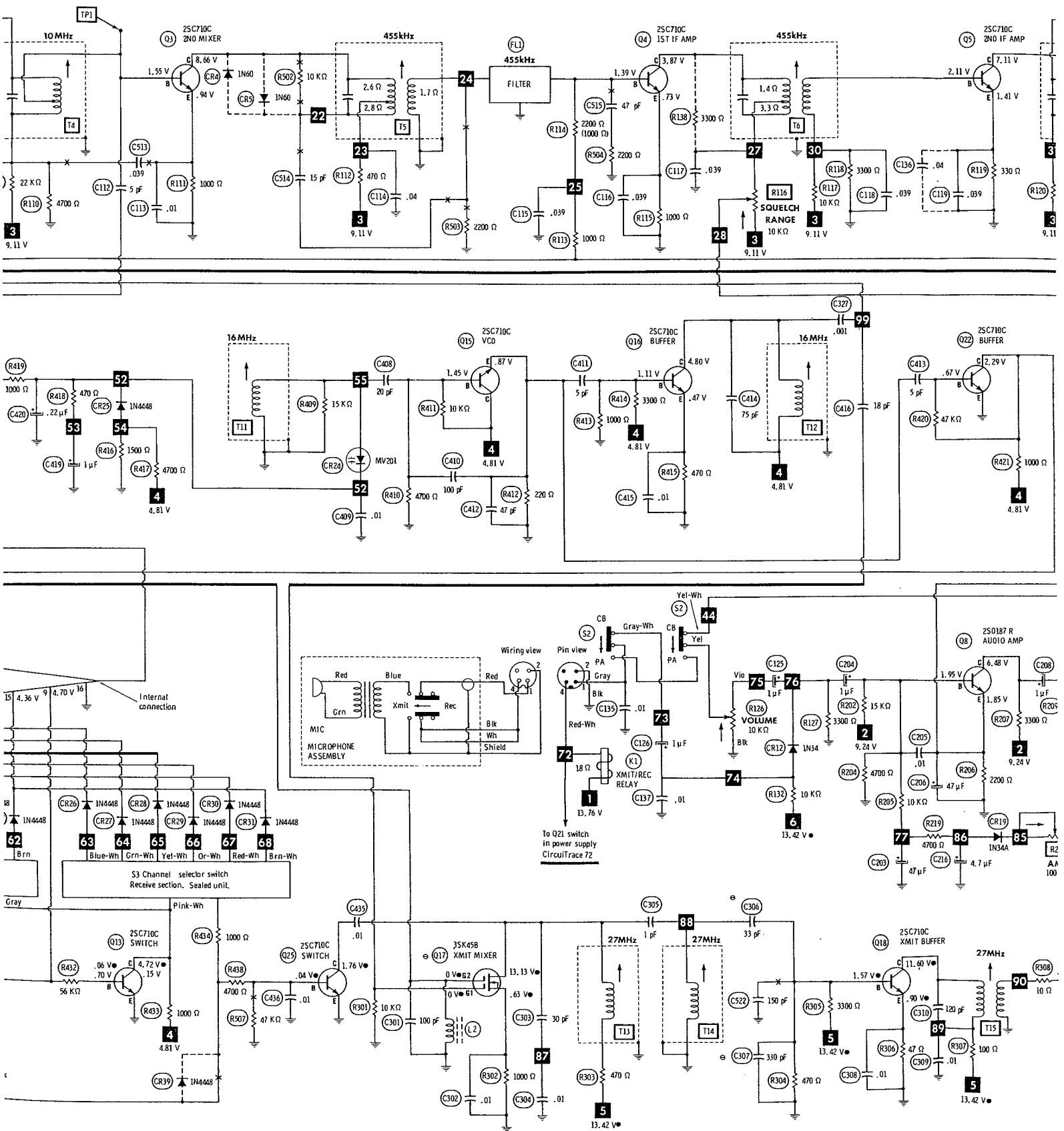


Front view



Top view





PARTS LIST AND DESCRIPTION (CONTINUED)

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

CAPACITORS

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA				
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
						Q-LINE	GENERAL LINE
C101	30 H470	(1)	UK50-103	H20	*		10TCT-Q30
C102	.01		UK50-103		MAG5011		
C103	.01		UK50-103		MAG5011		
C104	.01		UK50-103		MAG5011		
C105	20 H750		DTN-20		CN7420		10TCU-Q20
C106	.01		UK50-103		MAG5011		
C107	.01		UK50-103		MAG5011		
C108	.01		UK50-103		MAG5011		
C109	.01		UK50-103		MAG5011		
C110	1 NPO				CN0510		10TCC-V10
C112	5			C015CD050003		QW1-2	MWA-050
C113	.01		UK50-103		MAG5011		
C114	.04				M192P3939R8		192P3939R8
C115	.039				M192P3939R8		192P3939R8
C116	.039				M192P3939R8		192P3939R8
C117	.039				M192P3939R8		192P3939R8
C118	.039				M192P3939R8		192P3939R8
C119	.039				M192P3939R8		192P3939R8
C120	.039				M192P3939R8		192P3939R8
C121	100 10%				M192P3939R8		192P3939R8
C122	.001		00-102G	GP1000	SX310	QW1-27	MWA-101
C124	.039				GP210	QC2-81	5GA-010
C128	.01		UK50-103		M192P3939R8		192P3939R8
C130	.001		DD-102G		MAG5011		
C131	.039				GP210	QC2-81	5GA-010
C133	.039				M192P3939R8		192P3939R8
C134	180 10%				M192P3939R8		192P3939R8
C135	.01		UK50-103		SX318	QW1-33	MWA-181
C137	.01		UK50-103		MAG5011		
C205	.01		UK50-103		MAG5011		
C209	.01		UK50-103		MAG5011		
C214	.01		UK50-103		MAG5011		
C301	100 10%			CD15FD101J03	SX310	QW1-27	MWA-101
C302	.01		UK50-103		MAG5011		
C303	30 H470				*		10TCT-Q30
C304	.01		UK50-103		MAG5011		
C305	1 NPO				CN0510		10TCC-V10
C306	30 H470				*		10TCT-Q30
C307	180 5%				C015FD181J03	QW1-33	MWA-181
	330				C015FD331J03	QW1-39	MWA-331
C308	.01		UK50-103		SX333		
C309	.01		UK50-103		MAG5011		
C310	120 10%			C015FD121J03	MAG5011	QW1-29	MWA-121
C311	.01		UK50-103		SX312		
C312	24				MAG5011	QW1-12	MWA-240
C313	100				SX424	QW1-27	MWA-101
C314	30				SX310	QW1-14	MWA-300
C315	.01		UK50-103		SX430		
C316	.01		UK50-103		MAG5011		
C317	300				MAG5011	QW1-38	MWA-301
C318	220 10%				SX330	QW1-35	MWA-221
C319	180 10%				SX322	QW1-33	MWA-181
C320	75 5%	IP22-0045		CD15ED750J03	SX318	QW1-24	MWA-750
C321	10				SX475		
C322	9				CD15C0090003		MWA-090
C324	.01		UK50-103		MAG5011		
C326	.047		UK25-503		MAG2515		HY-735
C327	.001		DD-102G		GP1000	QC2-81	5GA-D10
C401	20 H750		DTN-20		N20		10TCU-Q20
C402	20 H750		DTN-20		H20		10TCU-Q20
C403	100 10%			CD15F0101J03	CN7420	QW1-27	MWA-101
C404	150 10%				CN7420	QW1-31	MWA-151
	330				SX310	QW1-39	MWA-331
C405	.01		UK50-103		SX315		
C406	.01		UK50-103		SX333		
C407	5				MAG5011	QW1-2	MWA-050
C408	20 H750		DTN-20		MAG5011		10TCU-Q20
C409	.01		UK50-103		CN7420		
C410	100 10%			CD15F0101J03	MAG5011	QW1-27	MWA-101
C411	5				SX310	QW1-2	MWA-050
C412	47 10% H470				*		10TCT-Q47
C413	5				C015C0050003	QW1-2	MWA-050
C414	75 5%				CD15ED750J03	QW1-24	MWA-750
C415	.01		UK50-103		SX475		
C416	18			CD15C0180J03	MAG5011	QW1-9	MWA-180
C417	18				CD15C0180J03	QW1-9	MWA-180
C418	47				CD15ED470J03	QW1-19	MWA-470
C421	100 10%				CD15F0101J03	QW1-27	MWA-101
C422	100 10%				CD15F0101J03	QW1-27	MWA-101
C423	.039				SX310		192P3939R8
C424	1.5				M192P3939R8		
C425	5			C015CD050003		QW1-2	MWA-050
C426	.01		UK50-103		MAG5011		
C427	.001		DD-102G		GP210	QC2-81	5GA-010
C428	.01		UK50-103		MAG5011		
C429	.001		DD-102G		GP210	QC2-81	5GA-010
C430	.1				EW1A010	QF1-215	1PB-P10
C433	.039				M192P3939R8		192P3939R8
C434	.01		UK50-103		MAG5011		
C435	.01		UK50-103		MAG5011		
C436	.01		UK50-103		MAG5011		
C437	.01		UK50-103		MAG5011		
C438	.047		UK25-503		MAG2515		HY-735
C501	.047		UK25-503		MAG2515		HY-735
C502	.047		UK25-503		MAG2515		HY-735
C503	.01		UK50-103		MAG5011		
C505	.01		UK50-103		MAG5011		
C506	.01		UK50-103		MAG5011		
C507	.01		UK50-103		MAG5011		

PARTS
(When ord

CAPAC

ITEM No.
C508
C509
C510
C511
C512
C513
C514
C515
C516
C517
C518
C519
C520
C521
C522

* Not
(1) Use

CONT

ITEM No.
R116
R126
R133
R137
R218
R314

(2) C.

COILS

ITEM No.
L1
L2
L3
L4
L5
L6
L7
L8
L9
L10
L11
T1
T2
T3
T4
T5
T6
T7
T8
T11
T12
T13
T14
T15
T16

FILTEI

ITEM No.	CT (M)
L12	

PARTS LIST AND DESCRIPTION (CONTINUED)

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

CAPACITORS (cont)

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA				
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
						Q-LINE	GENERAL LINE
C508	.01		UK50-103		MAG5011		
C509	.047		UK25-503		MAG2515		
C510	.1			OPMS2P1	EW1A010	QF1-215	HY-735
C511	.04				M192P3939R8		1PB-P10
C512	.01		UK50-103		MAG5011		192P3939R8
C513	.039				M192P3939R8		192P3939R8
C514	15						
C515	47			C015CD150J03	SX447	QW1-8	MMA-150
C516	.01		UK50-103	CD15ED470J03	MAG5011	QW1-19	MMA-470
C517	.01		UK50-103		MAG5011		
C518	.01		UK50-103		MAG5011		
C519	.01		UK50-103		MAG5011		
C520	.039				M192P3939R8		192P3939R8
C521	.01		UK50-103		MAG5011		
C522	150 10%			CD15FD151J03	SX315	QW1-31	MMA-151

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

(1) Used in some versions.

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.	MALLORY PART No.	TRW PART No.
R116	Squelch Range	10K	IP24-0003	T-10K	C-103	MTC14L1	X201R103B
R126	Volume/Switch	10K	IP24-0049				
R133	S Meter	10K	IP24-0005	T-10K (2)	C-103 (2)	MTC14L1 (2)	X201R103B (2)
R137	Squelch	10K	IP24-0017				
R218	AMC	10K	IP24-0005	T-10K (2)	C-103 (2)	MTC14L1 (2)	X201R103B (2)
R314	RF Meter	100K	IP24-0002	T-100K (2)	C-104 (2)	MTC15L1 (2)	X201R104B (2)

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

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	RF Choke (22uH)	IP21-0072	220		
L2	RF Choke (3.3uH)	IP21-0183	3R3		
L3	RF Choke (2.5uH)	IP21-0227			
L4	Xmit Driver (27MHz)	IP21-0282			
L5	RF Choke (.65uH)	IP21-0071			
L6	RF Choke (10uH)	IP21-0073			
L7	Final (27MHz)	IP21-0096			
L8	Final (27MHz)	IP21-0096			
L9	Antenna Hatch (22uH)	IP21-0098			
L10	TVI Trap (.85uH)	IP21-0099			
L11	RF Choke (100uH)	IP21-0290	101		
T1	Rec Antenna (27MHz)	IP21-0236	2945DF7		
T2	Rec RF (27MHz)	IP21-0277	C337		
T3	Rec Mixer (10MHz)	IP21-0239	F001A9164D2		
T4	Rec Mixer (10MHz)	IP21-0291			
T5	IF (455kHz)	IP21-0243	A088AD		
T6	IF (455kHz)	IP21-0244	E1A227B		
T7	IF (455kHz)	IP21-0278	A293AP		
T8	Ref Synth Osc (10MHz)	IP21-0279	353		
T11	VCO (16MHz)	IP21-0281	355		
T12	VCO Buffer (16MHz)	IP21-0280	354		
T13	Xmit Mixer (27MHz)	IP21-0280	354		
T14	Harmonic Suppressor (27MHz)	IP21-0280	354		
T15	Xmit Buffer (27MHz)	IP21-0093	42D		
T16	Tripler Buffer (15MHz)	IP21-0078	Z1761T6314		

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFR. PART No.	THORDARSON PART No.	TRIAD PART No.	
L12	1.5A	.214	1.7mH	IP21-0112 K-18 (1)	TR555		(1) Number on unit.

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.	THORDARSON PART No.	TRIAD PART No.	
T9	1.4	1		IP21-0075 A-31 (1)	TR651		(1) Number on unit.

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE			REPLACEMENT DATA			NOTES
	PRI.	SEC.		MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T10	32	1 8	2 13.5	IP21-0283 E-67 (1)	TR822		(1) Number on unit.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	3" PM 8 Ohms	IP29-0017	30A05Z8R	

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	IP36-0002		AGC2	HDJ	312002	150145	F62-2	

MICROPHONE

ITEM No.	REPLACEMENT DATA				CONNECTION DATA							
	MFGR. PART No.	GC PART No.	GC NOISE CANCEL	GC POWER	GC CONNECTOR	GC Red	GC Shield	GC Yellow	GC Blue	GC White	GC Black	
MIC	IP29-0016	18-032	18-034	18-010	13-092	1	2	4	NC	NC	2	

CRYSTALS

ITEM No.	CRYSTAL FREQUENCY IN MHz	MFGR. PART No.	CTS KNIGHTS PART No.	CHANNEL	ITEM No.	CRYSTAL FREQUENCY IN MHz	MFGR. PART No.	CTS KNIGHTS PART No.	CHANNEL
X1	10.240	IP31-0090	CB5W10.240	REF. OSC.					

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

ITEM	PART No.	ITEM	PART No.
Bezel, Front	IP30-0177	Cabinet, Upper	IP30-0180
Panel, CB161	IP30-0179	Knob, Channel Selector	IP30-0165
Cabinet, Lower	IP30-0181	Knob, Control	IP30-0166

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
FL1	Ceramic Filter	IP31-0048	455kHz (CFU455)
K1	Relay	IP32-0007	Xmit/Rec (60413)
M1	Meter	IP27-0012	S/R
S2	Switch	IP25-0034	PA/CB
S3	Switch	IP25-0043	Channel Selector
	Bracket	IP30-0182	Mobile Mount

WIRING DATA

General-use Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 13 Colors
Shielded Antenna Lead	8524 (Stranded) Available in 13 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)
	8491 4-Conductor (2 shielded, 2 unshielded) Neoprene
Bonding Strap	Use BELDEN No. 8661 (3/8 inch)

