



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.



MODEL XSSB-10

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools: GC ELECTRONICS
T8, T9, L5, T23 thru T25 5000, 8290
ALL other tuneable transformers and coils ..9440

XTAL MODEL XSSB-10

SYNTHESIZER

INDICATOR	CHANNEL	ADJUST	FREQUENCY	REMARKS
Input of frequency counter to TP5, common to ground.	1	C142	8.2485 MHz	Set to LSB
"	1	C146	8.2515 MHz	Set to USB
Input of RF VTVM to TP5, common to ground.	1	T15	8.2515 MHz	Adjust for maximum.
Input of frequency counter to TP3 common to ground.	1	C68	45.8515 MHz	Key transmitter
	5	C69	45.9015 MHz	Key transmitter.
	9	C70	45.9515 MHz	Key transmitter.
	13	C71	46.0015 MHz	Key transmitter.
	17	C72	46.0515 MHz	Key transmitter.
	21	C73	46.1015 MHz	Key transmitter.

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

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SYNTHESIZER(cont)

INDICATOR	CHANNEL	ADJUST	FREQUENCY	REMARKS
"	1	R60,R61	45.8515 MHz	Set clarifier, R61, to mechanical center position. Adjust R60 for exact frequency. R61 should have $\pm 800\text{Hz}$ range.
Input of RF VTVM to TP3, common to ground.	13	T10,T11	46.0015 MHz	Adjust for maximum.
Input of frequency counter to TP4, common to ground.	13	C77	10.635 MHz	Set to USB
	14	C76	10.625 MHz	
	15	C75	10.615 MHz	
	16	C74	10.595 MHz	
	17	C81	10.638 MHz	Set to LSB
	18	C80	10.628 MHz	
	19	C79	10.618 MHz	
	20	C78	10.598 MHz	
Input of RF VTVM to TP4, common to ground.	13	T12	10.638 MHz	Adjust for maximum.
Input of RF VTVM to TP3, Common to ground.	13	T13, T14		Adjust for maximum.

RECEIVER

Connect an AC VTVM or AF Wattmeter across speaker voice coil.
Adjustments made with 14-volt DC input.
Adjust volume control to obtain suitable reading.

SIGNAL GENERATOR	GEN FREQ	CHANNEL	ADJUST	REMARKS
High side thru .01uF to base of TR22, low side to ground.	455kHz, 1000Hz @30% modulation	Any	T23, T24, T25, T26	Set generator output level low enough to prevent AGC limiting. Adjust for maximum.
High side thru .01uF to antenna jack, low side to ground.	27.115MHz, 1000Hz @30% modulation.	13	T16, T17, T18, T22	Set generator output level low enough to prevent AGC limiting. Adjust for maximum.
High side thru .01uH to antenna jack, low side to ground.	27.1165Hz	13	T19,T20, T21	Set to USB Set generator output level low enough to prevent AGC limiting. Adjust for maximum.

RECEIVER ADJUSTMENTS

Connect an AC VTVM or AF Wattmeter across speaker voice coil.
Adjustments made with 14-volt DC input.
Adjust volume control to obtain suitable reading.

SIGNAL GENERATOR	GEN FREQ	CHANNEL	ADJUST	REMARKS
S Meter High side thru .01uF to antenna jack, low side to ground.	27.115MHz 1000Hz @30% modulation, output 100uV	13	R133	Adjust for a 9 reading on S scale.

TRANSMITTER

Connect an RF Wattmeter or 50-ohm, 25-watt dummy load to antenna connector.
Adjustments made with 14-volt DC input.

AM

INDICATOR	ADJUST	REMARKS
OUTPUT POWER RF Wattmeter	T8, T9, L5	Mode switch to AM. Key transmitter. Adjust for 3.5 watts output.

TRANSMITTER

Connect an RF Wattmeter or 50-ohm, 25-watt dummy load to antenna connector.
Adjustments made with 14-volt DC input.

SSB

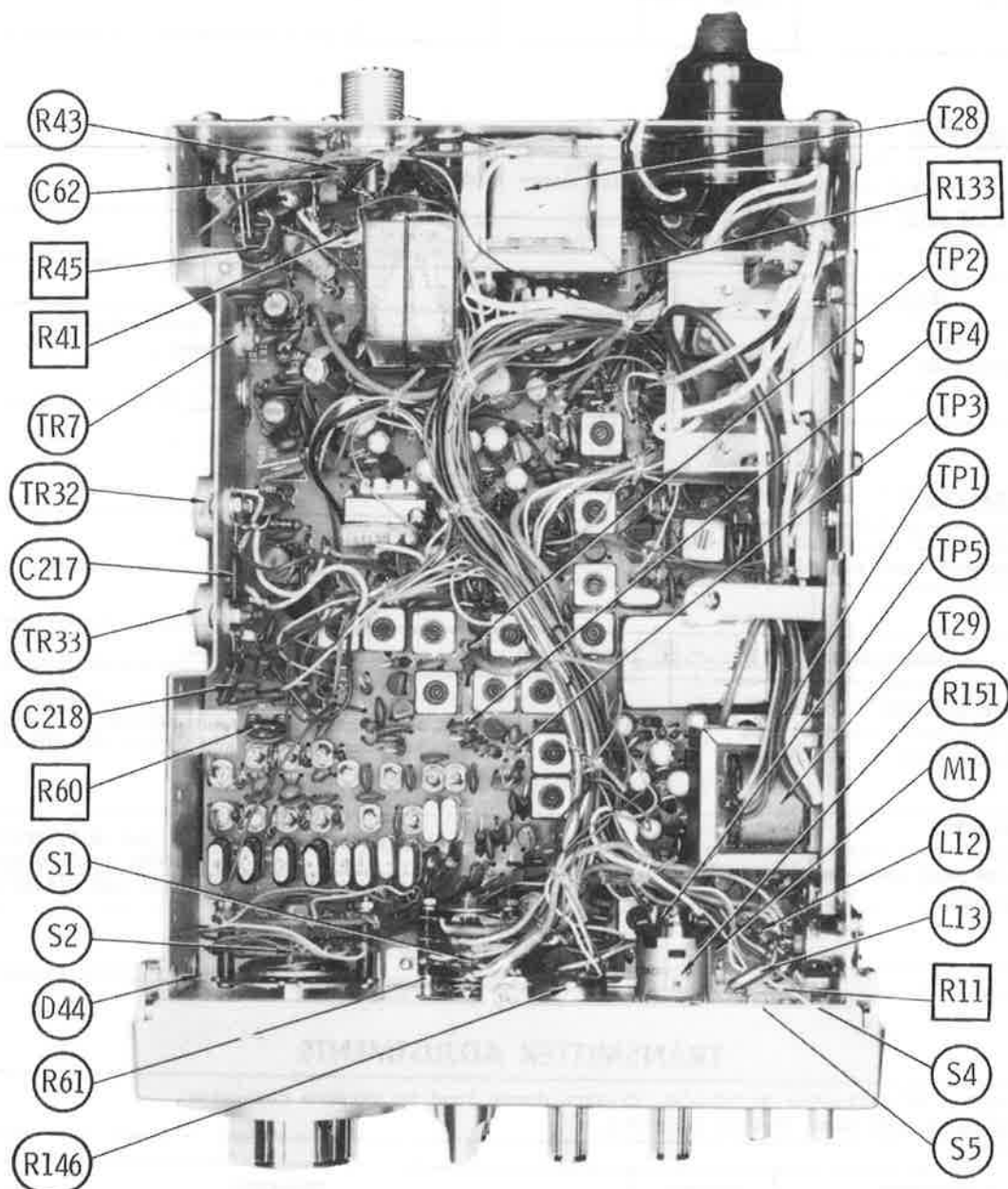
INDICATOR	ADJUST	REMARKS
CARRIER BALANCE Connect oscilloscope from antenna jack to ground.	R11,C14	Short mic input. Set mode switch to LSB or USB. Key transmitter and adjust for MINIMUM on scope.
SSB EXCITER Connect oscilloscope (usable to 30 MHz) from antenna jack to ground.	T10,T11, T12,T13, T14,T1,T2, T3,T4,T5, T6,T7,T8	Set channel selector to 13. Set mode switch to USB or LSB. Inject a 1000Hz audio signal at mic input. Key transmitter and adjust for maximum.

TRANSMITTER ADJUSTMENTS

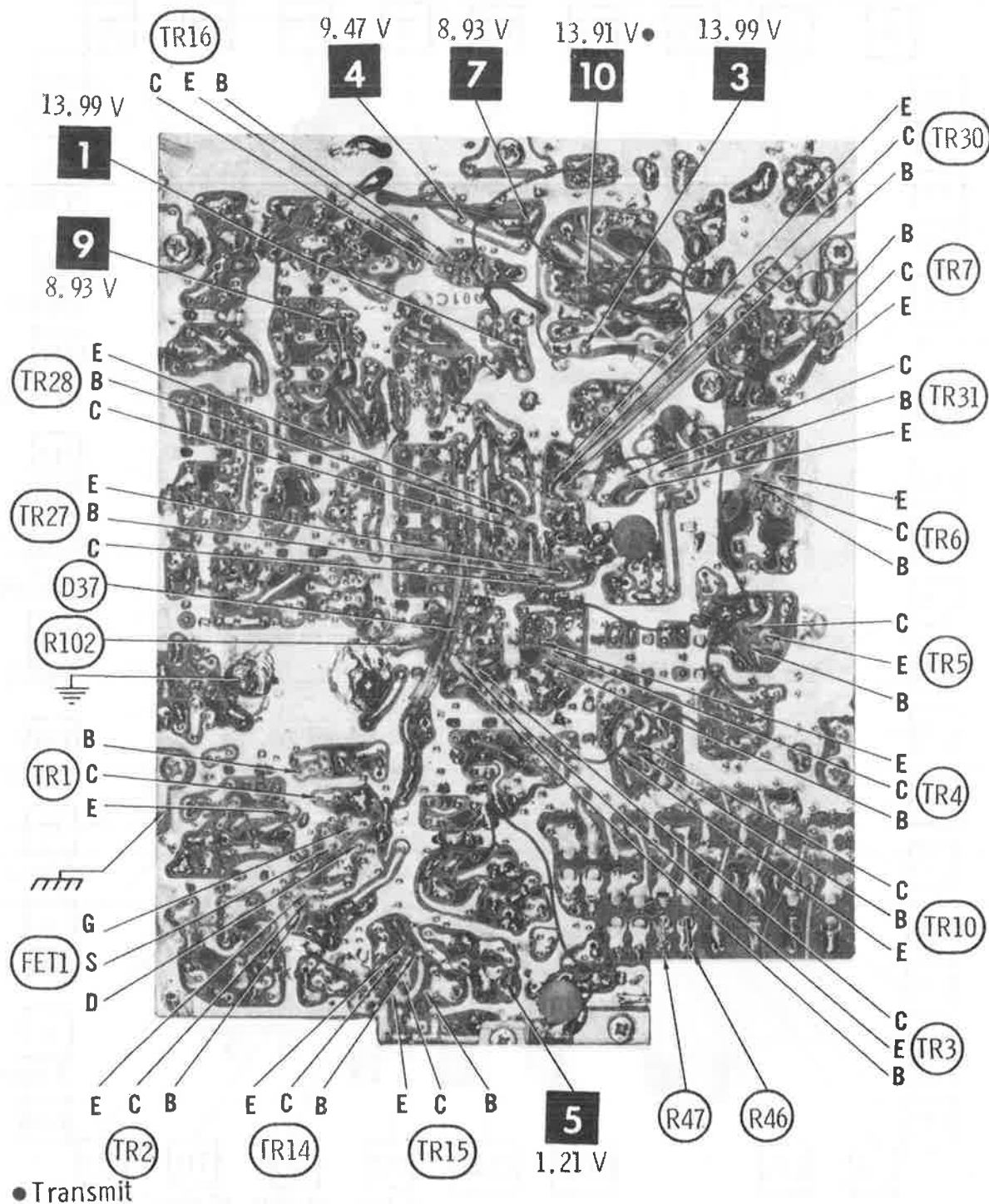
Connect an RF Wattmeter or 50-ohm, 25-watt dummy load to antenna connector.
Adjustments made with 14-volt DC input.

INDICATOR	ADJUST	REMARKS
ALC RF Wattmeter connected to antenna jack.	R41	Set mode switch to LSB. Inject a 1000Hz signal at mic input. Key transmitter. Adjust for 6 watts.
RF PANEL METER RF Wattmeter	R45	Set mode switch to AM. Key transmitter. Adjust so that panel RF meter agrees with RF wattmeter.

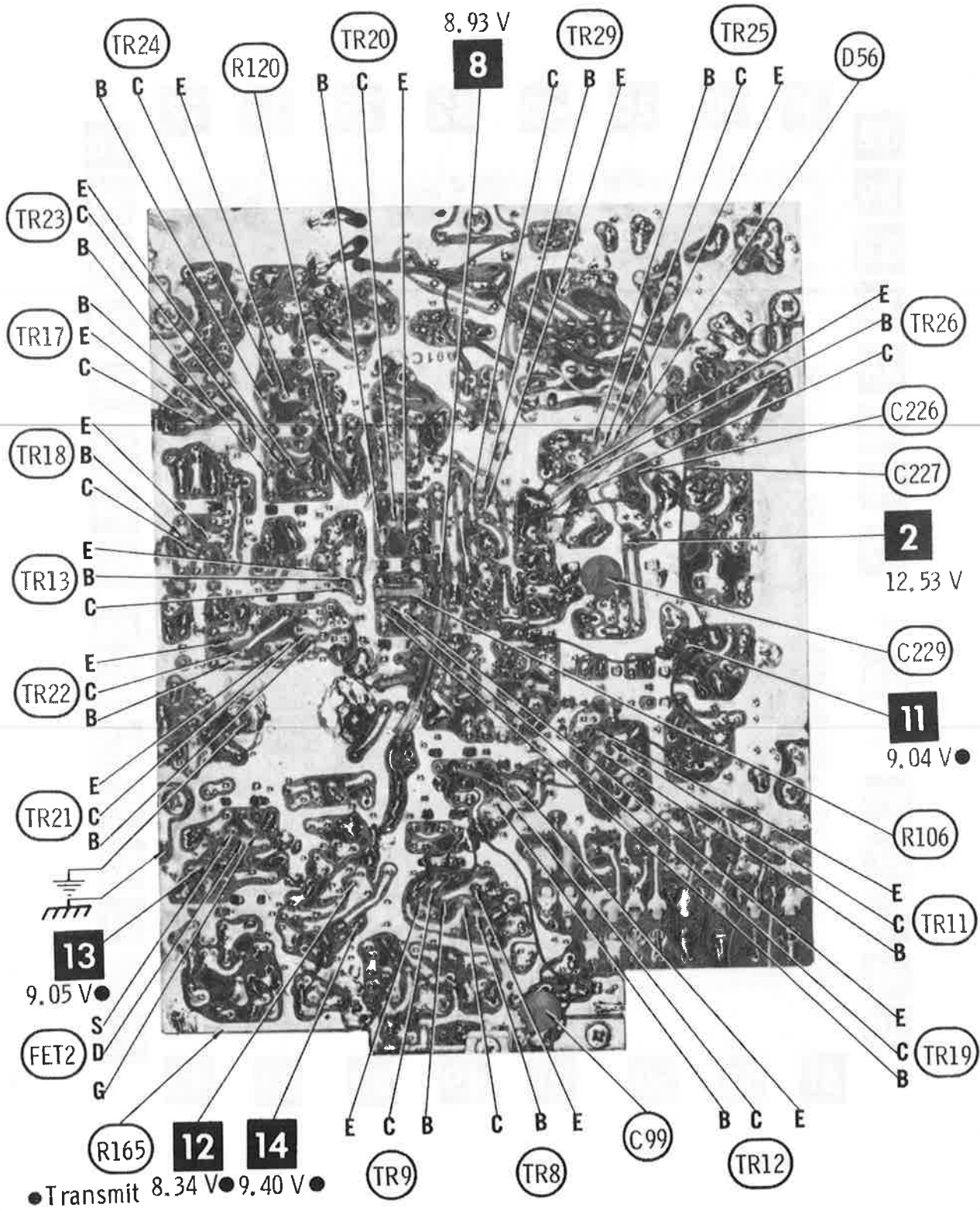
XTAL MODEL XSSB-10



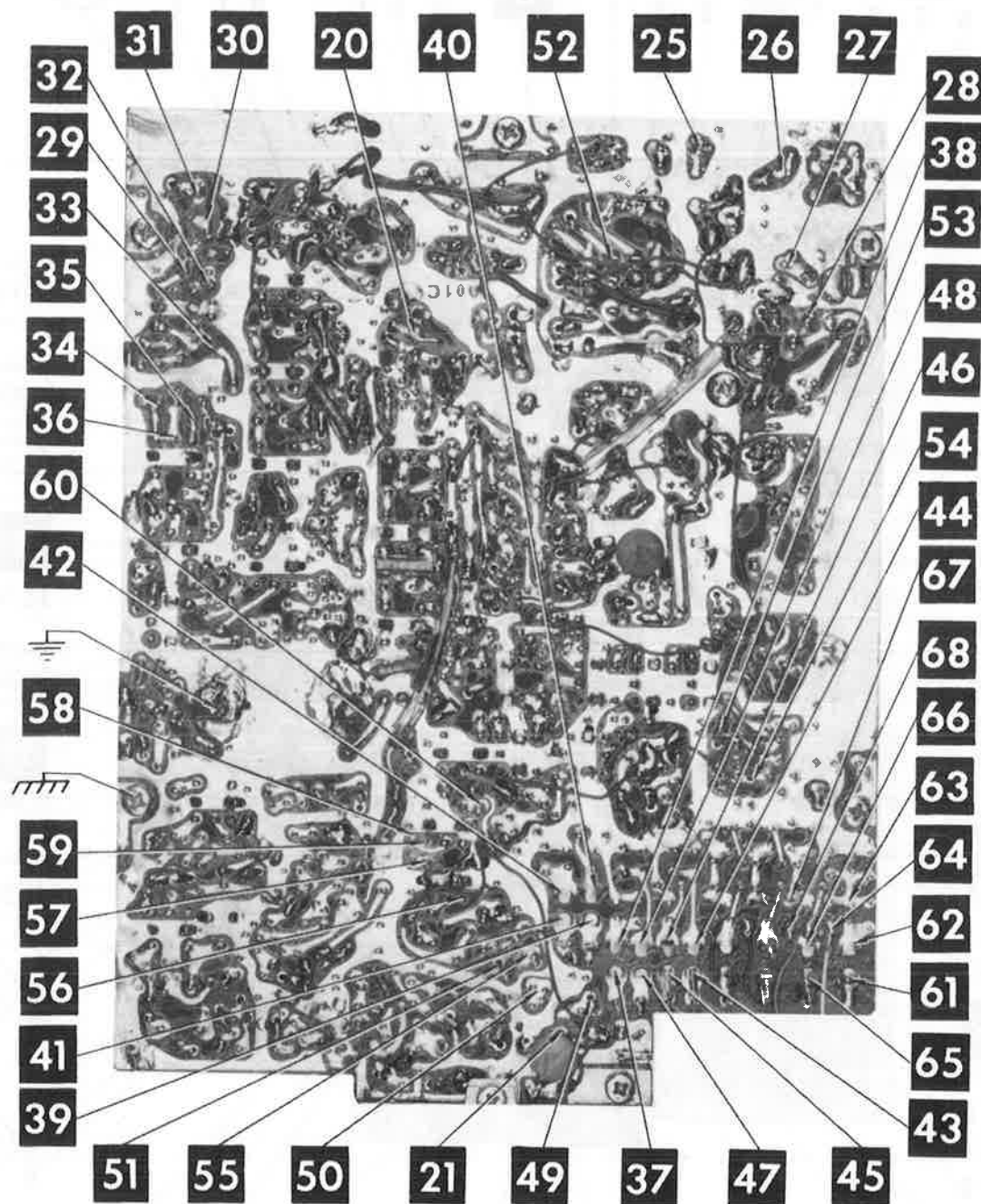
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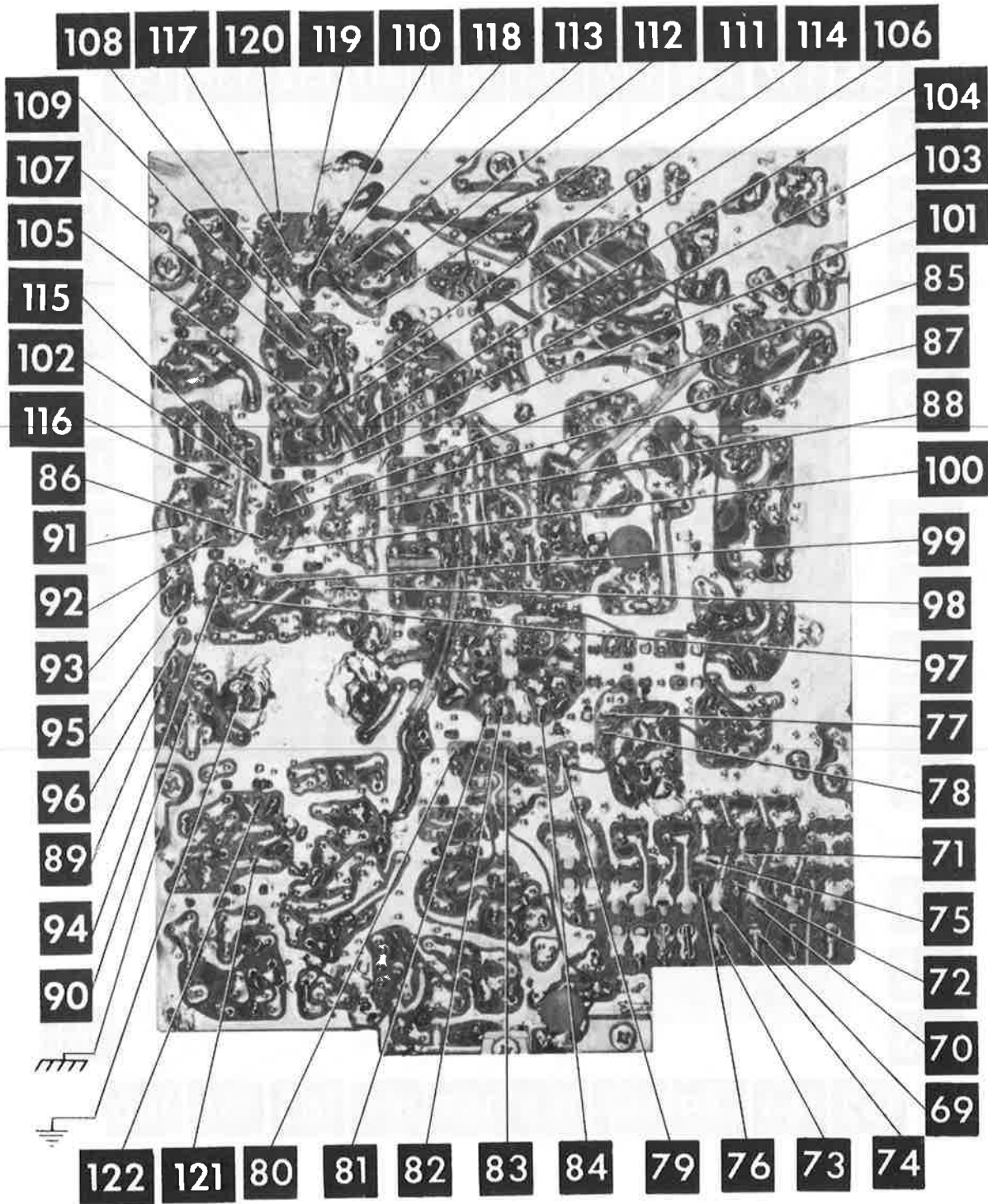
MAIN BOARD



MAIN BOARD

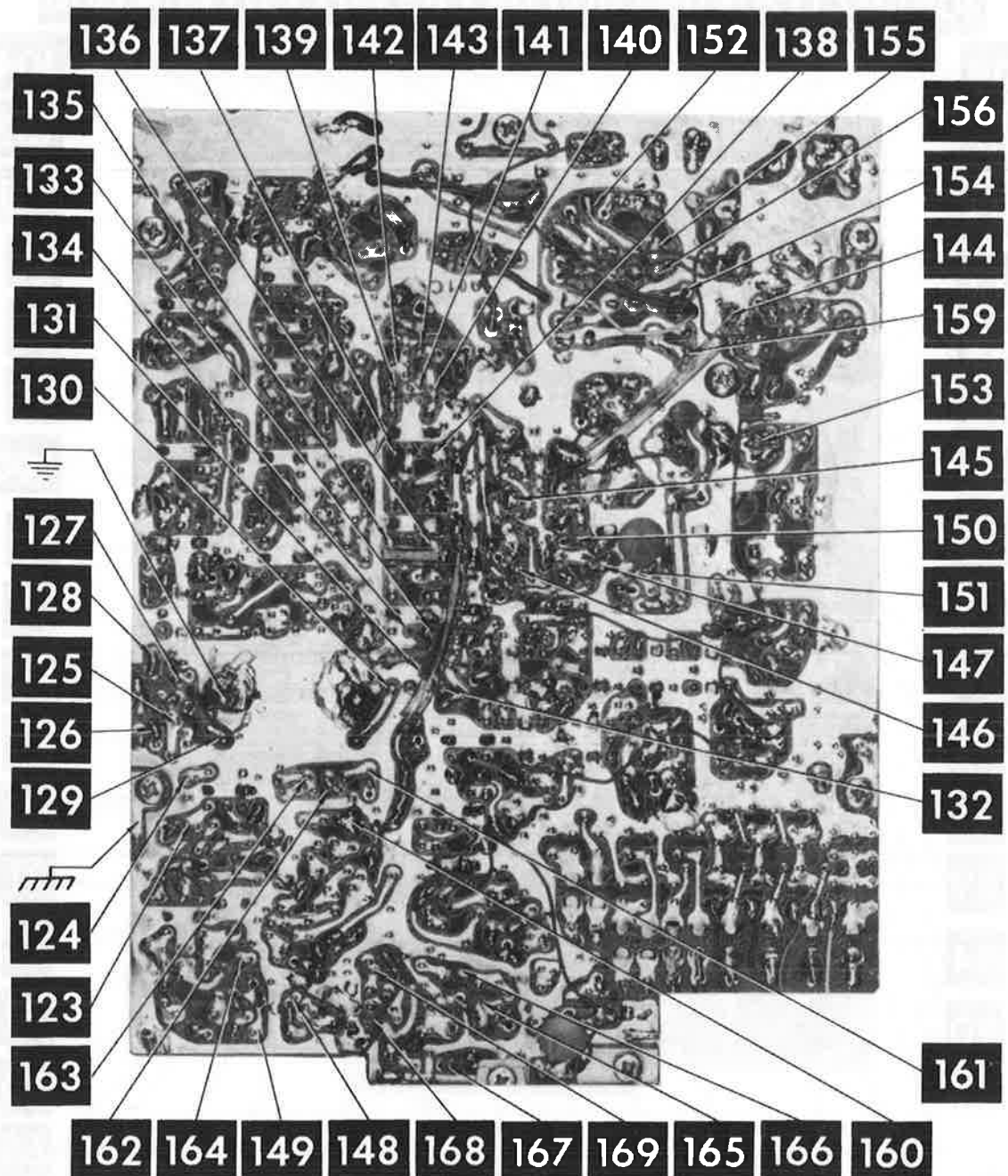


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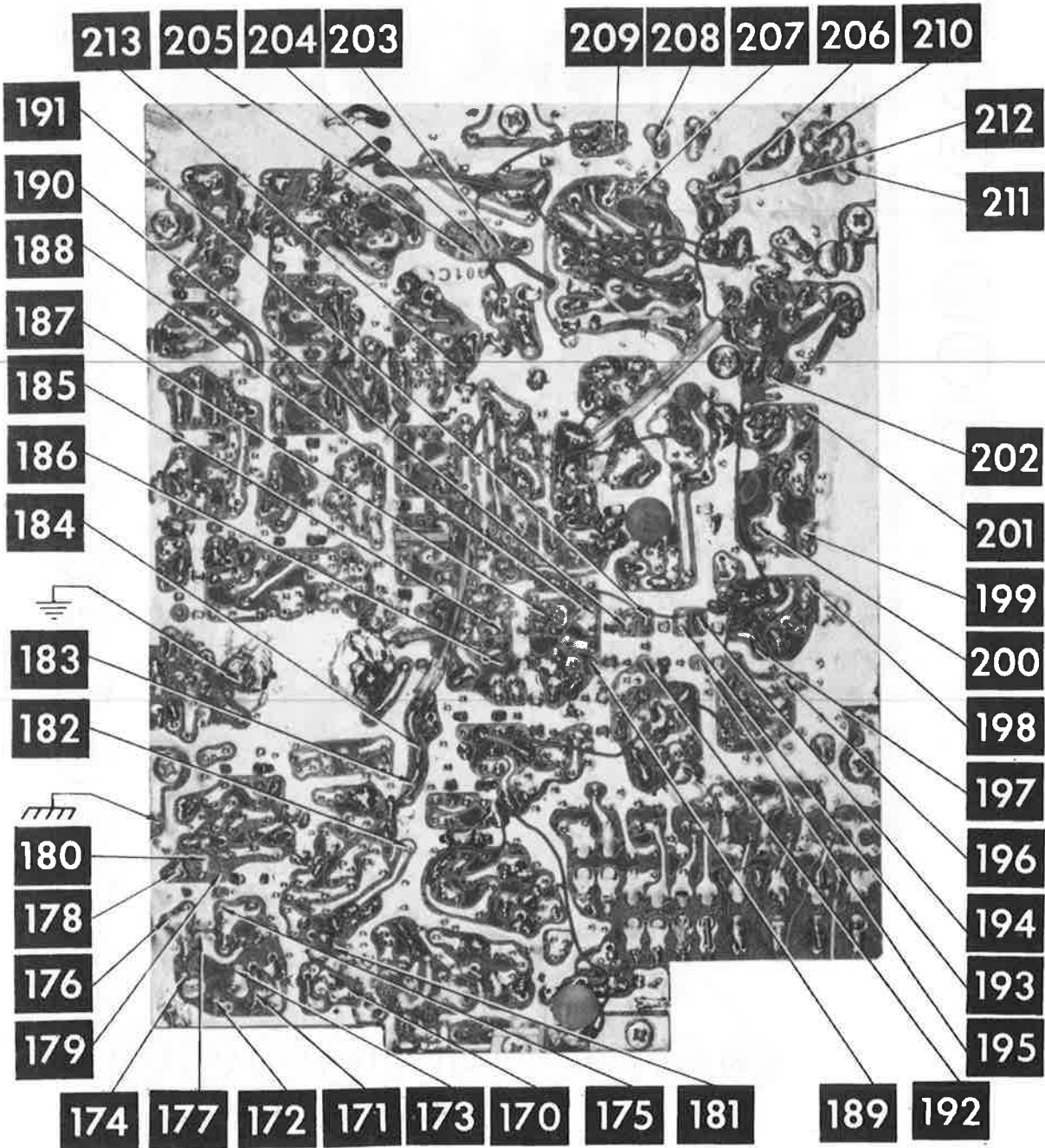


XTAL MODEL XSSB-10

MAIN BOARD

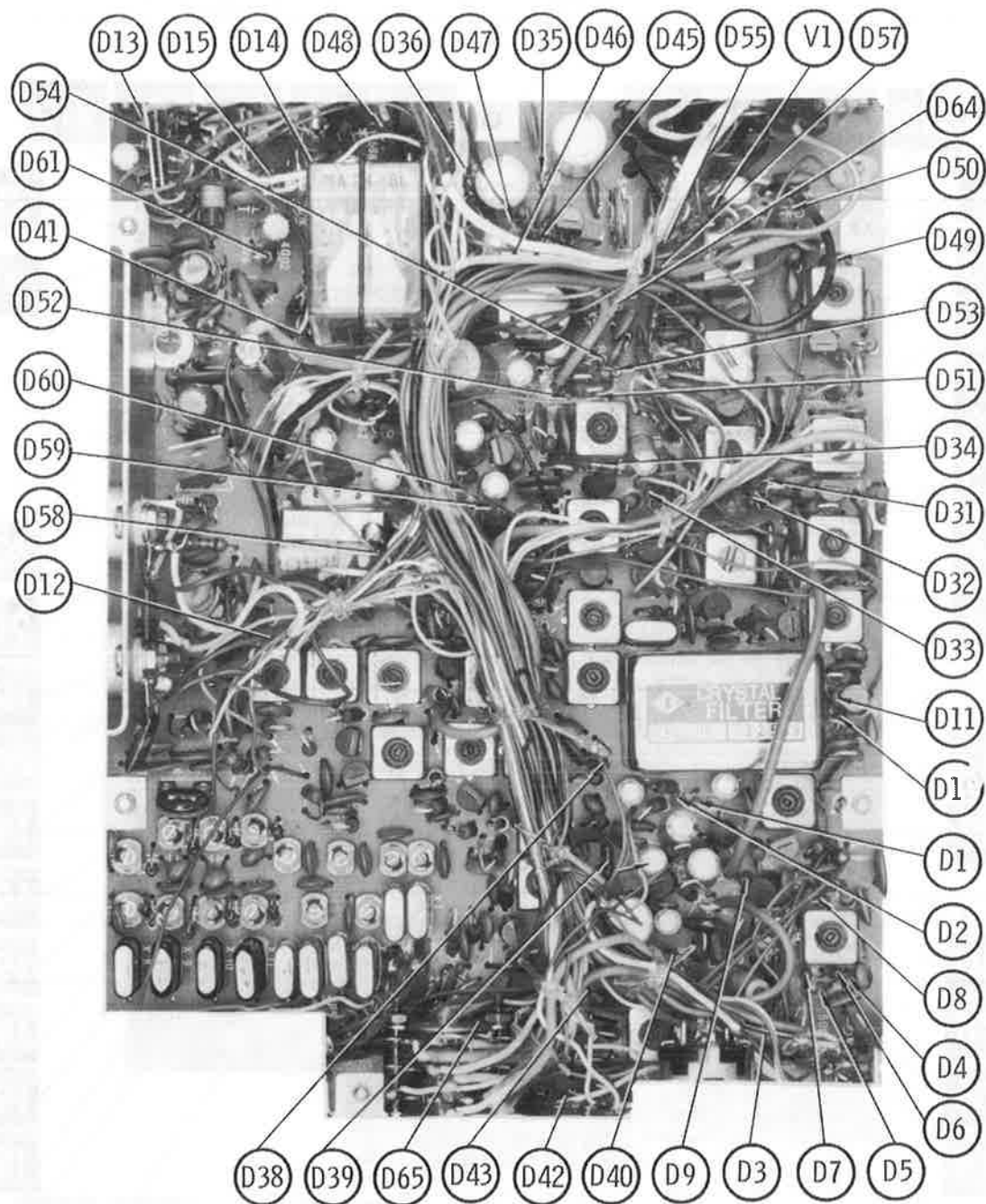


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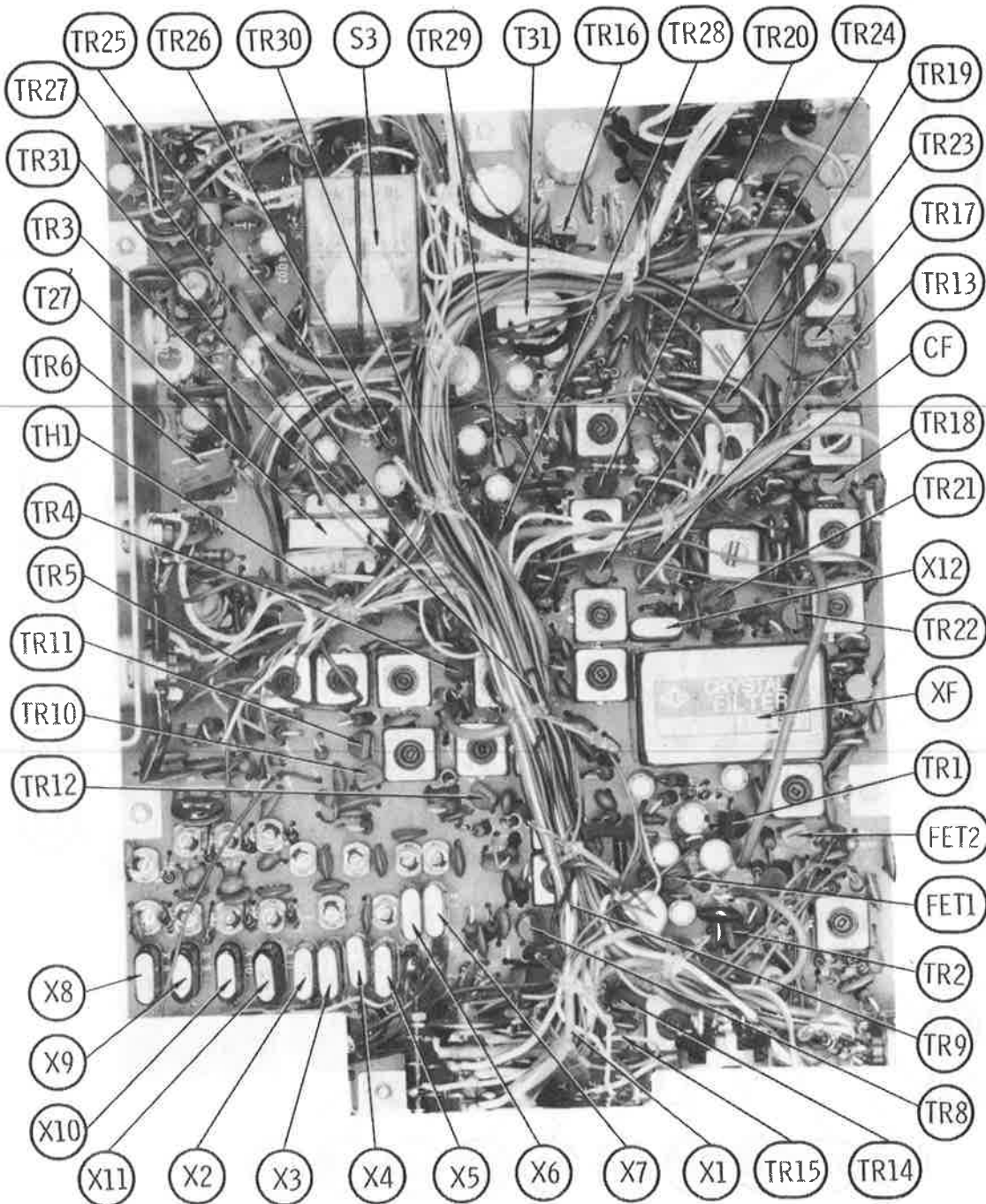


XTAL MODEL X55B-10

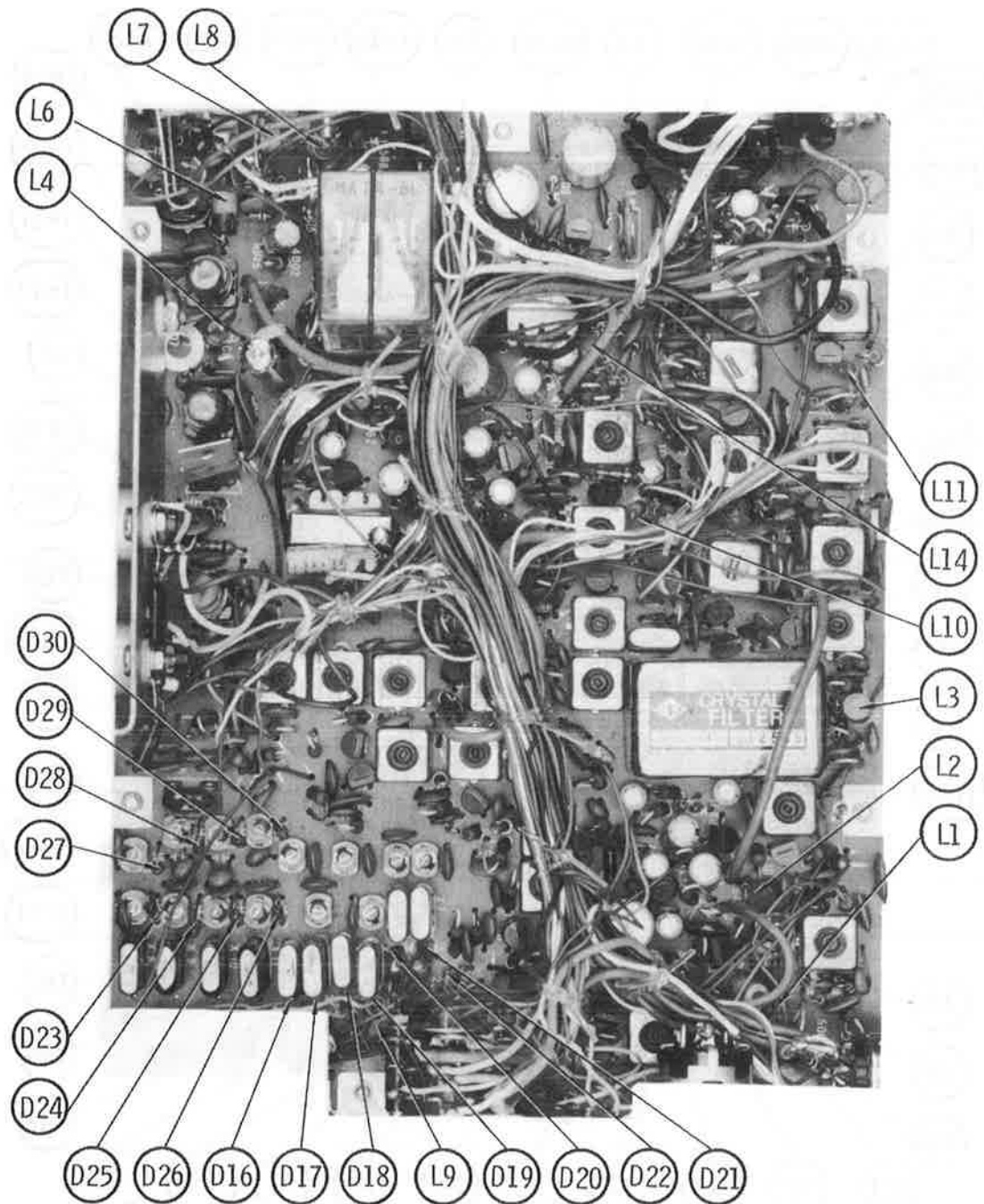
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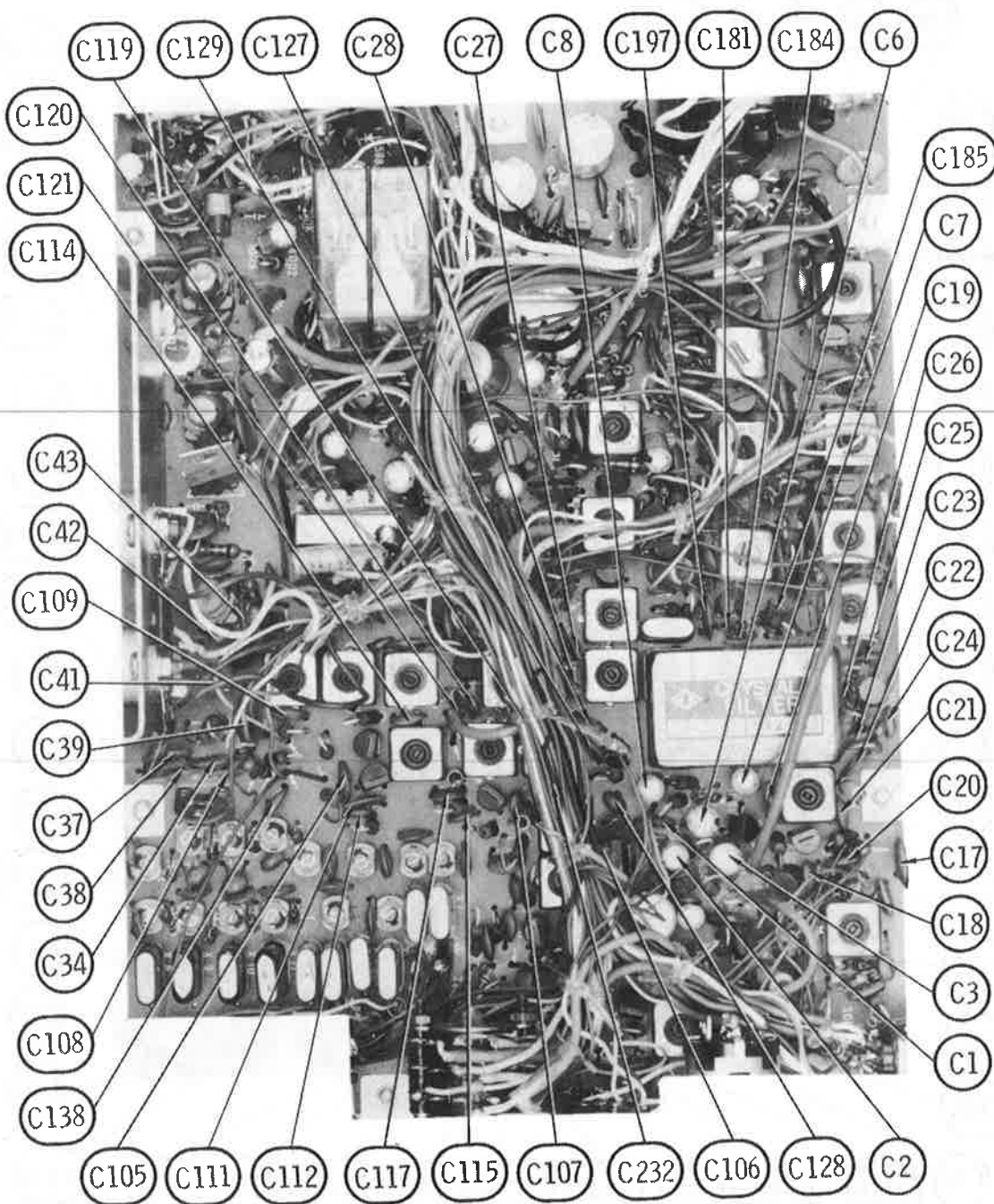
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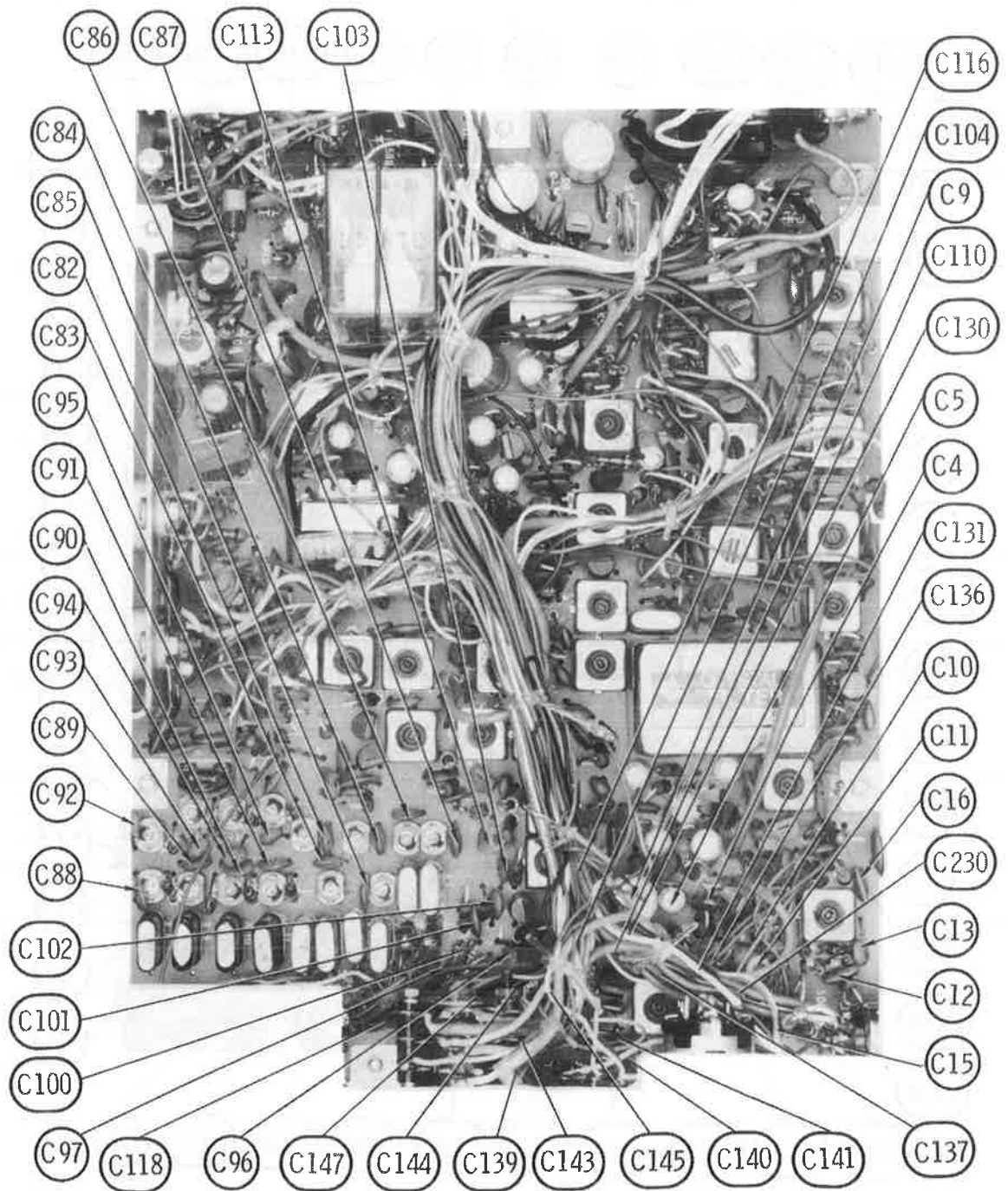
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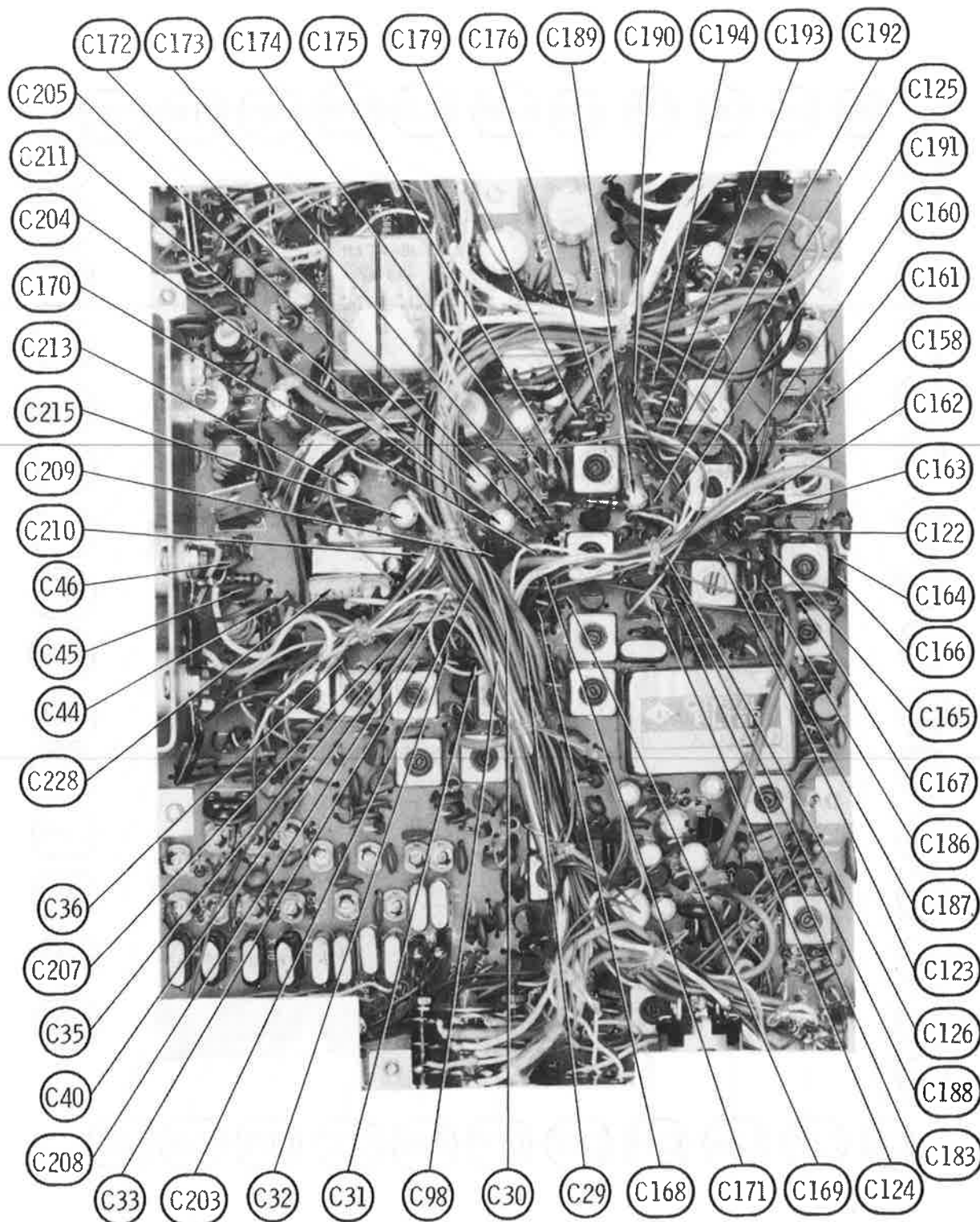
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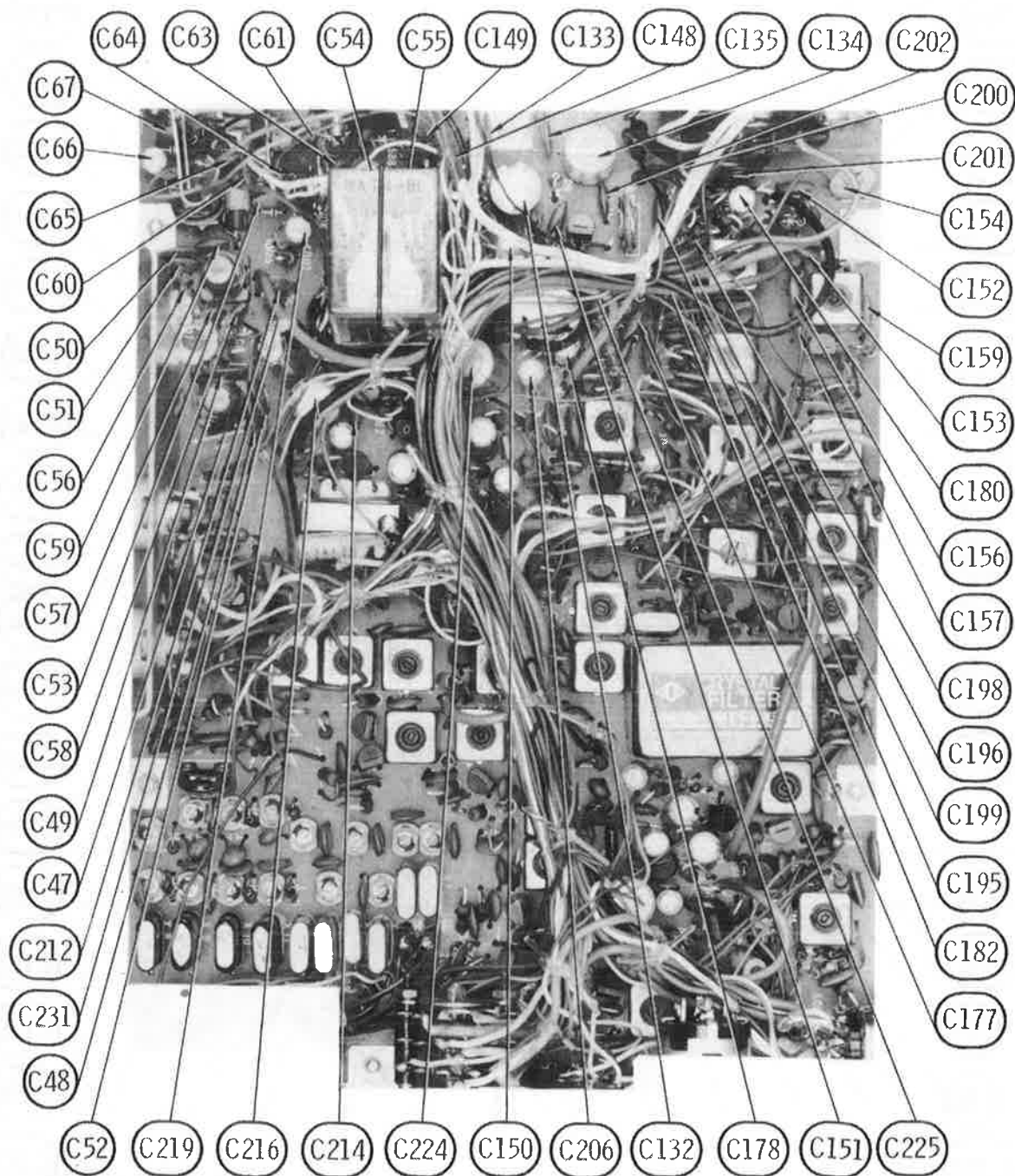
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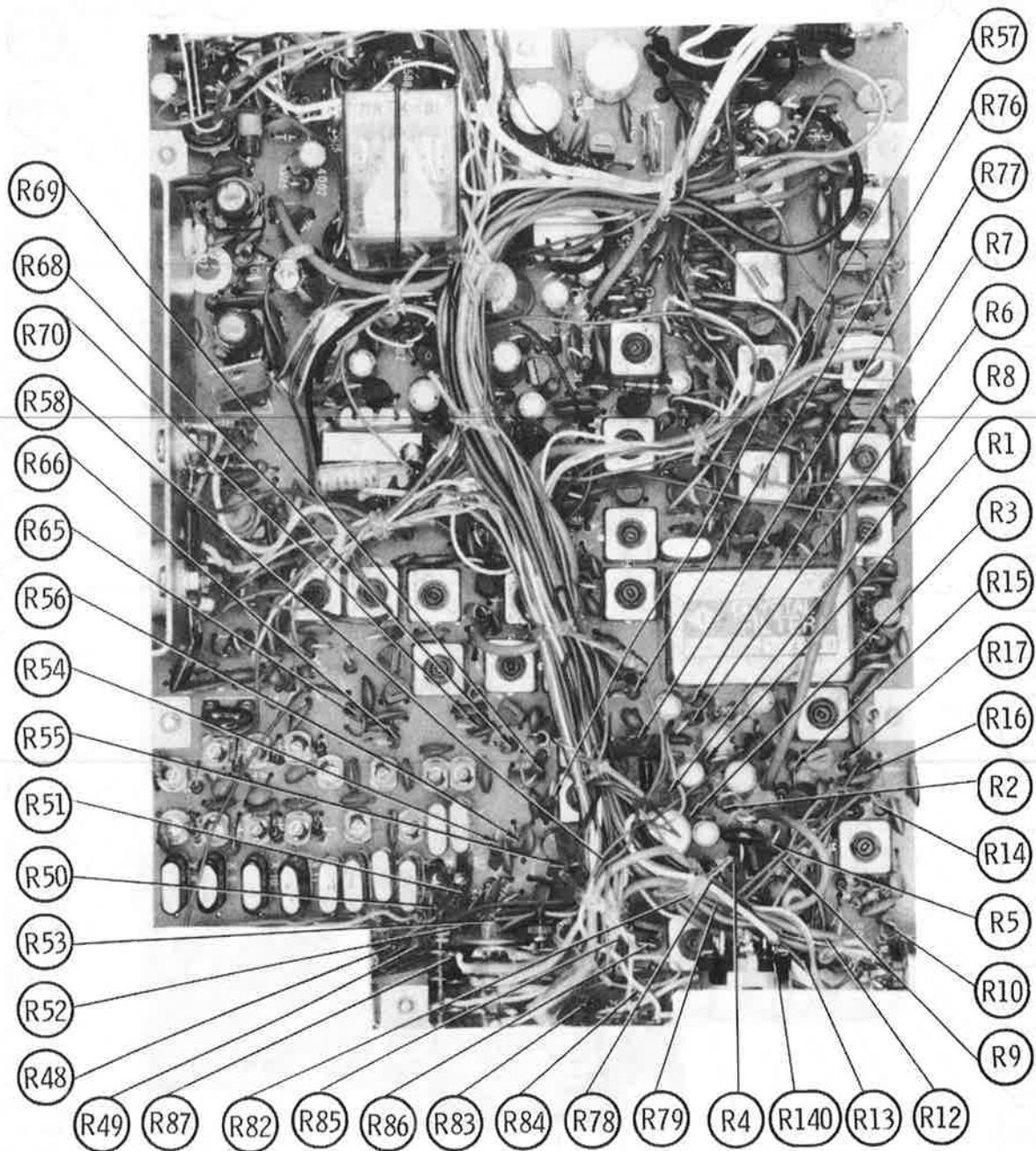
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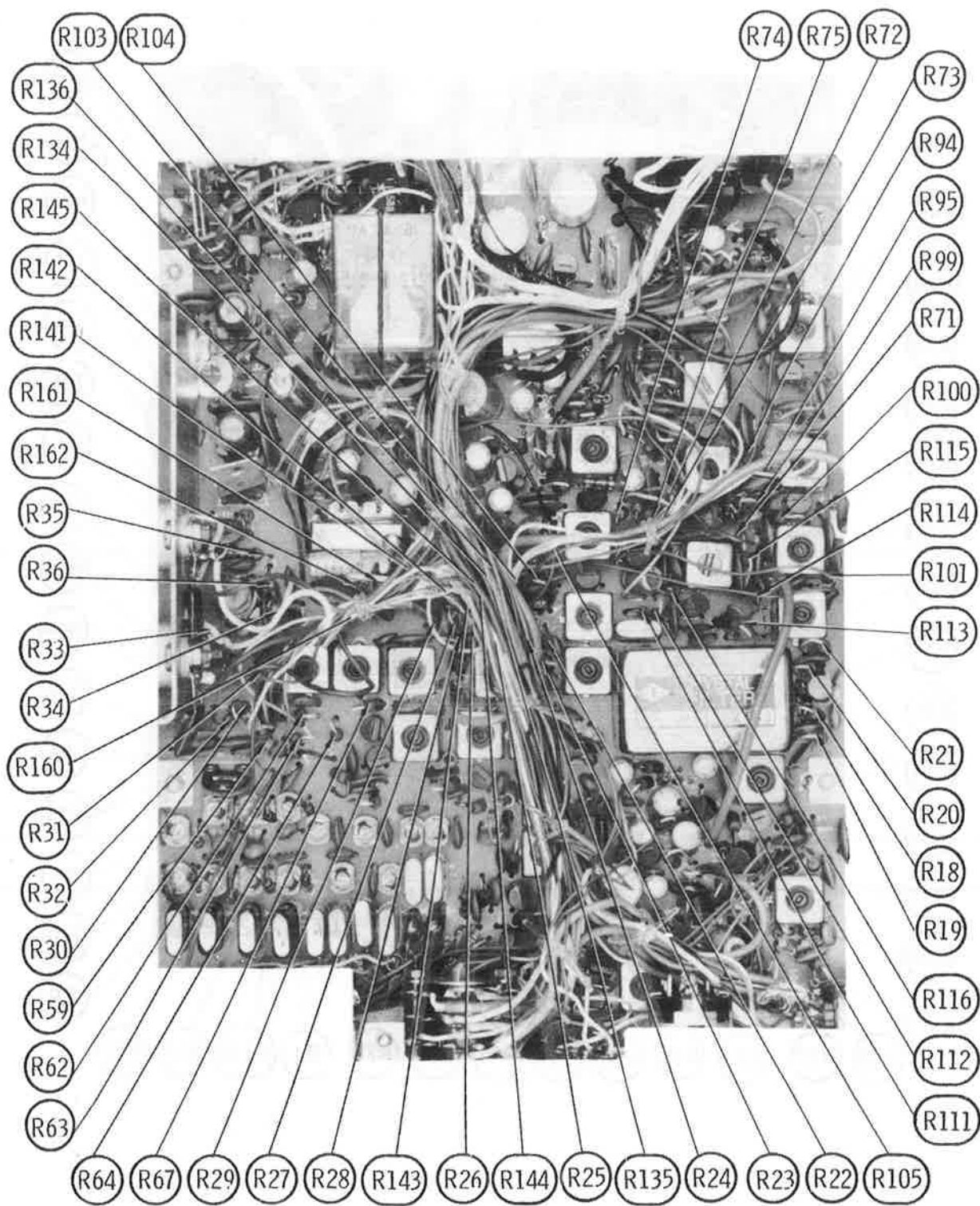
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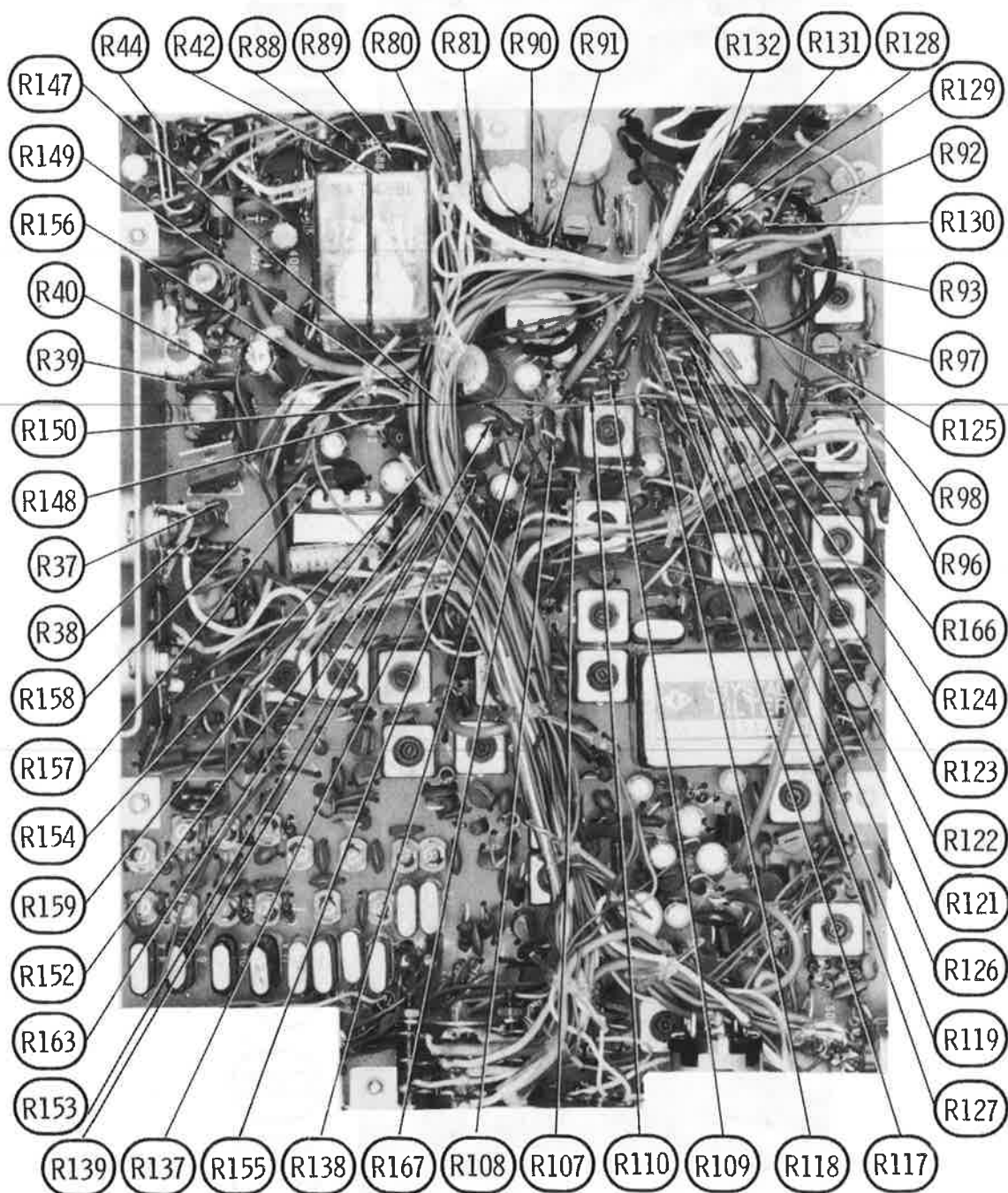
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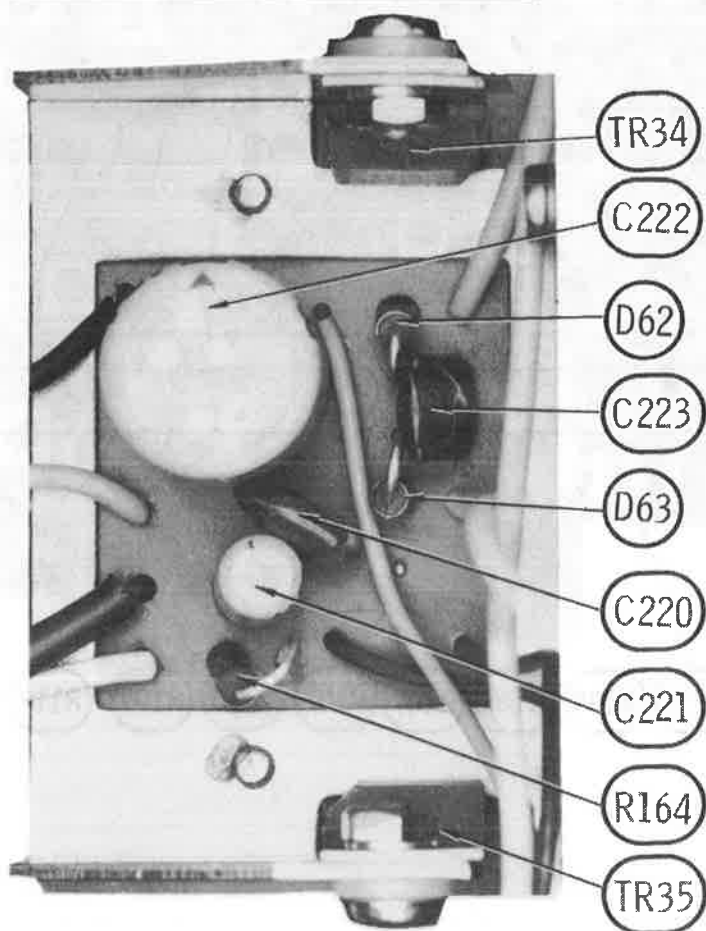
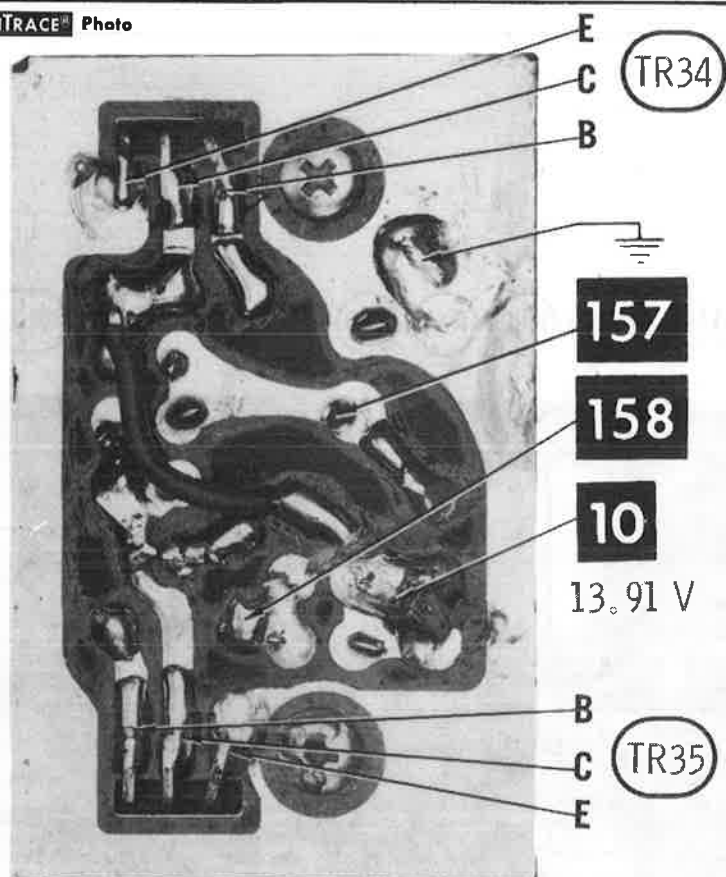
MAIN BOARD



MAIN BOARD



MAIN BOARD



POWER OSCILLATOR BOARD

PARTS LIST AND DESCRIPTION

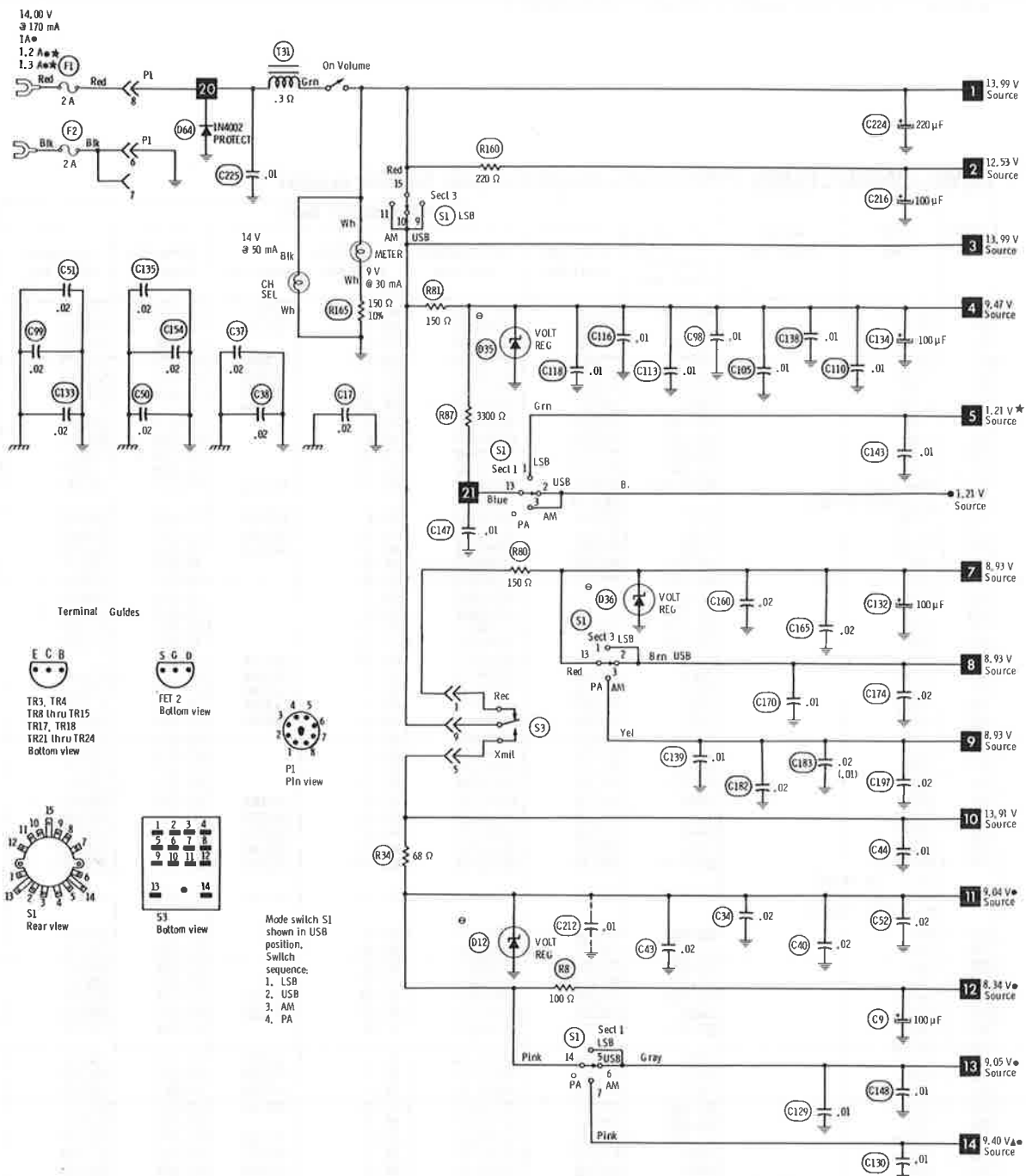
(When ordering parts, state Model, Part Number, and Description.)

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA						
			GENERAL ELECTRIC PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.
D1	1S1588		GE-504A	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D2	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D3	1S84		GE-300	PTC214	HEPR0602	RE 52		RT-218	ECG177
D4	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D5	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D6	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D7	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D8	1S84		GE-300	PTC214	HEPR0602	RE 52		RT-218	ECG177
D9	1S84		GE-300	PTC214	HEPR0602	RE 52		RT-218	ECG177
D10	1S84		GE-300	PTC214	HEPR0602	RE 52		RT-218	ECG177
D11	1S84		GE-300	PTC214	HEPR0602	RE 52		RT-218	ECG177
D12	AW-01-09 (9.0 Volt Zener)		GEZD-9.1	PTC505	HEPZ0412	RE 114	SK3060	RT-240	ECG139
D13	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D14	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D15	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D16	1S84		GE-300	PTC214	HEPR0602	RE 52		RT-218	ECG177
D17	1S84		GE-300	PTC214	HEPR0602	RE 52		RT-218	ECG177
D18	1S84		GE-300	PTC214	HEPR0602	RE 52		RT-218	ECG177
D19	1S84		GE-300	PTC214	HEPR0602	RE 52		RT-218	ECG177
D20	1S84		GE-300	PTC214	HEPR0602	RE 52		RT-218	ECG177
D21	1S84		GE-300	PTC214	HEPR0602	RE 52		RT-218	ECG177
D22	1S2688		GE-90	HEPR2503	RE 195		SK3126	RT-262	
D23	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D24	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D25	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D26	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D27	1S84		GE-300	PTC214	HEPR0602	RE 52		RT-218	ECG177
D28	1S84		GE-300	PTC214	HEPR0602	RE 52		RT-218	ECG177
D29	1S84		GE-300	PTC214	HEPR0602	RE 52		RT-218	ECG177
D30	1S84		GE-300	PTC214	HEPR0602	RE 52		RT-218	ECG177
D31	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D32	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D33	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D34	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D35	AW-01-09 (9.0 Volt Zener)		GEZD-9.1	ZB9.1A	HEPZ0412	RE 114	SK3060	RT-240	ECG139
D36	AW-01-09 (9.0 Volt Zener)		GEZD-9.1	ZB9.1A	HEPZ0412	RE 114	SK3060	RT-240	ECG139
D37	1S84		GE-300	PTC214	HEPR0602	RE 52		RT-218	ECG177
D38	1S84		GE-300	PTC214	HEPR0602	RE 52		RT-218	ECG177
D39	1S84		GE-300	PTC214	HEPR0602	RE 52		RT-218	ECG177
D40	1S84		GE-300	PTC214	HEPR0602	RE 52		RT-218	ECG177
D41	1N4002		GE-504A	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D42	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D43	1S84		GE-300	PTC214	HEPR0602	RE 52		RT-218	ECG177
D44	TLR105								
D45	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D46	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D47	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D48	1S1588		GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D49	1S84		GE-300	PTC214	HEPR0602	RE 52		RT-218	ECG177
D50	1S1588		GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D51	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D52	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D53	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D54	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D55	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D56	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D57	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D58	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D59	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D60	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D61	1N4002		GE-504A	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D62	1N4002		GE-504A	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D63	1N4002		GE-504A	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D64	1N4002		GE-504A	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D65	1S188		1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
FET1	2SK34		GE-FET-1	PTC151	HEPF0015	RE 46	SK3112	RT-176	ECG133
FET2	MK10		GE-FET-2	PTC152	HEPF0021	RE 45	SK3116	RT-175	ECG132
TR1	2SC712C		GE-20	PTC139	HEPS0011	RE 13	SK3124	RT-172	ECG123A
TR2	2SC712C		GE-20	PTC139	HEPS0011	RE 13	SK3124	RT-172	ECG123A
TR3	2SC710D		GE-211	PTC121	HEPS0016	RE 13	SK3018	RT-105	ECG123A
TR4	2SC710D		GE-211	PTC121	HEPS0016	RE 13	SK3018	RT-105	ECG123A
TR5	2SC710D		GE-211	PTC121	HEPS0016	RE 13	SK3018	RT-105	ECG123A
TR6	2SC1018	(10)							ECG299
TR7	2SC1307	(11)	GE-216	PTC186		RE 201			ECG236
TR8	2SC710D		GE-211	PTC121	HEPS0016	RE 13	SK3018	RT-105	ECG123A
TR9	2SC710D		GE-211	PTC121	HEPS0016	RE 13	SK3018	RT-105	ECG123A

(CONTINUED ON PAGE 119)

XTAL MODEL XSB-10



—*— Circuitry not used in some versions

--- Circuitry used in some versions

- ⊙ See parts list
- * Nominal value
- ⊥ Ground
- ⏏ Chassis

Measurements with switching as shown unless noted:

- Squelch fully clockwise
- ◆ 100% modulation
- Transmit
- ★ LSB
- ▲ AM

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.

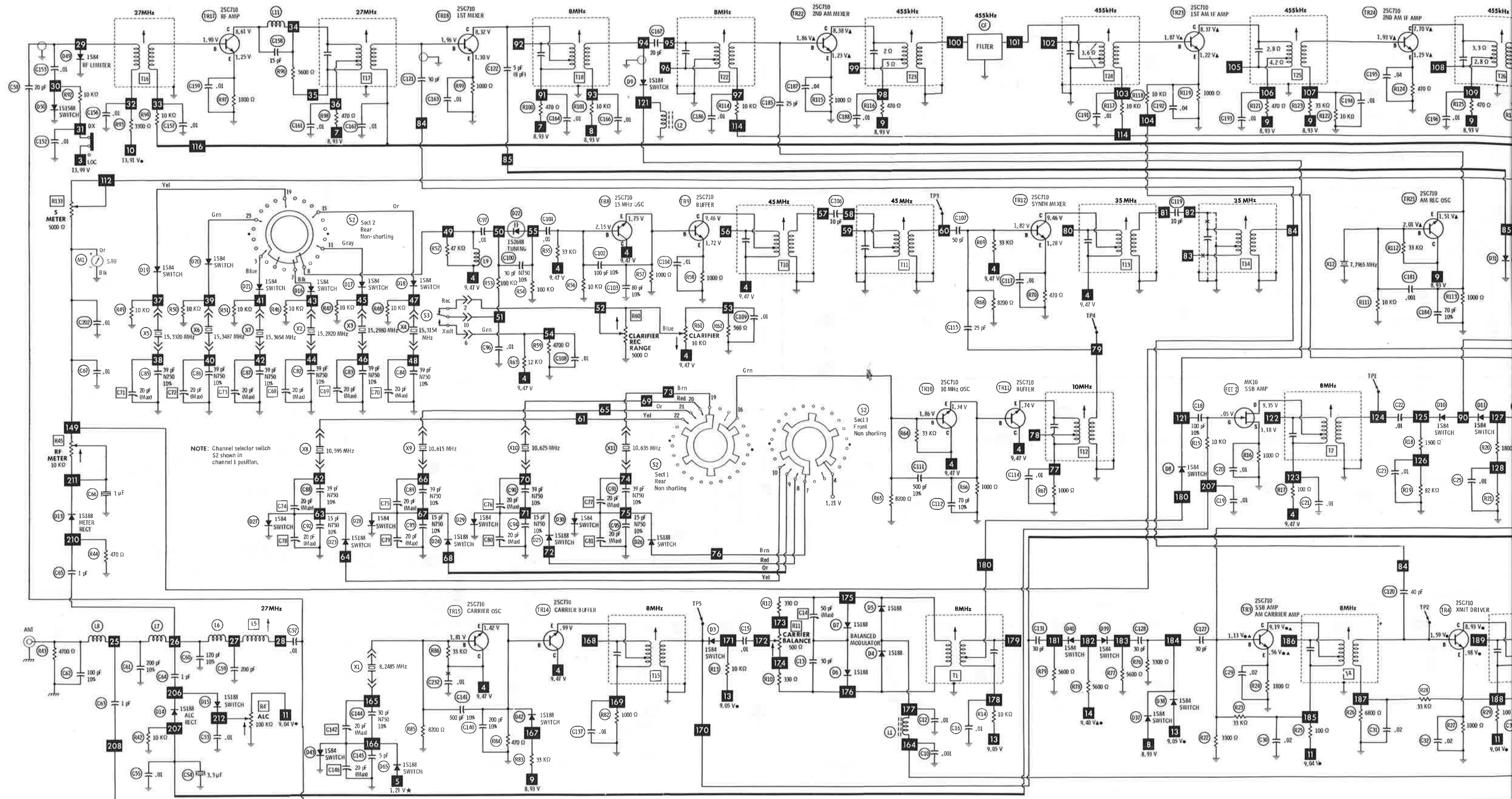
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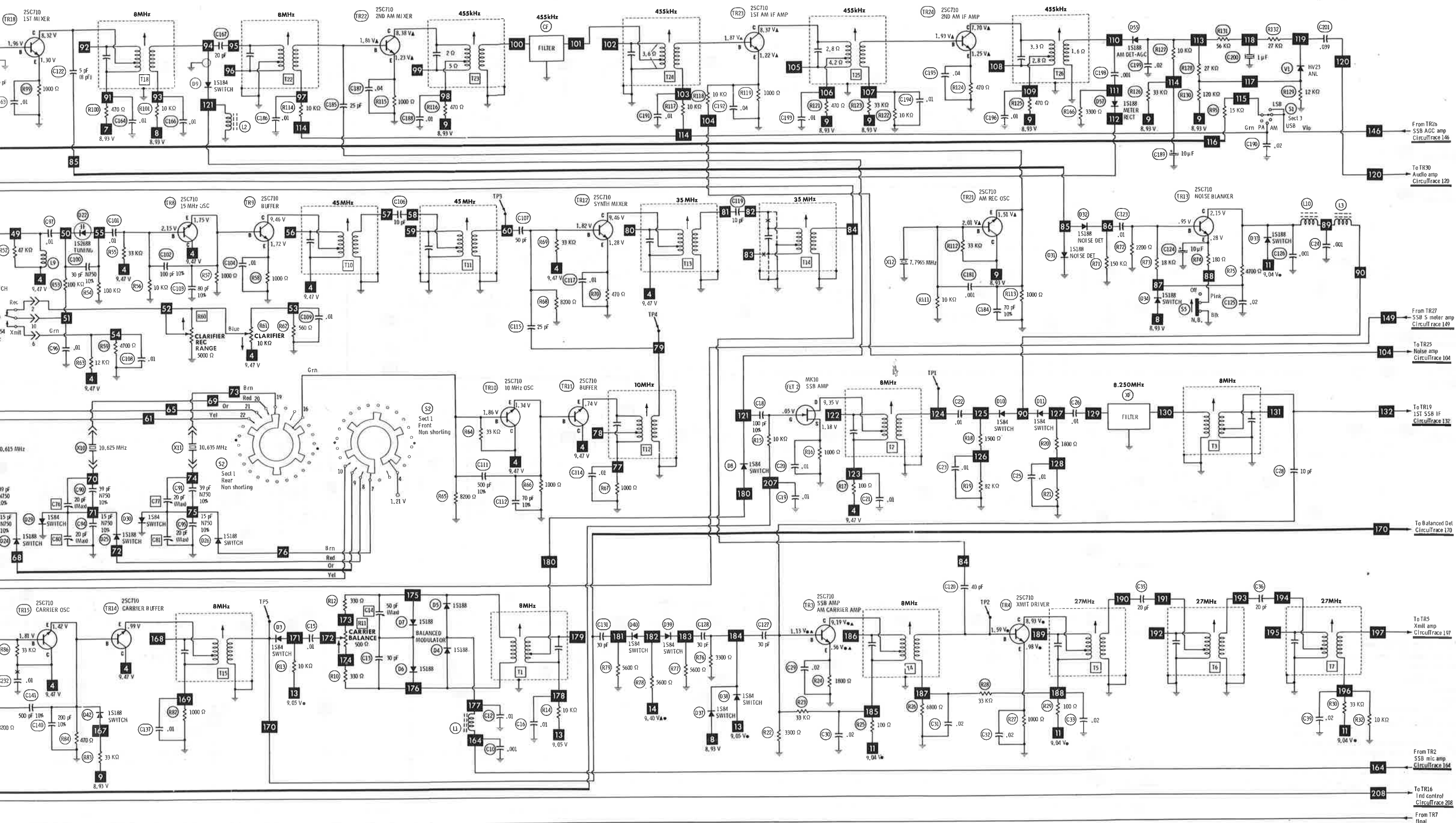
WITH CIRCUITRACE®

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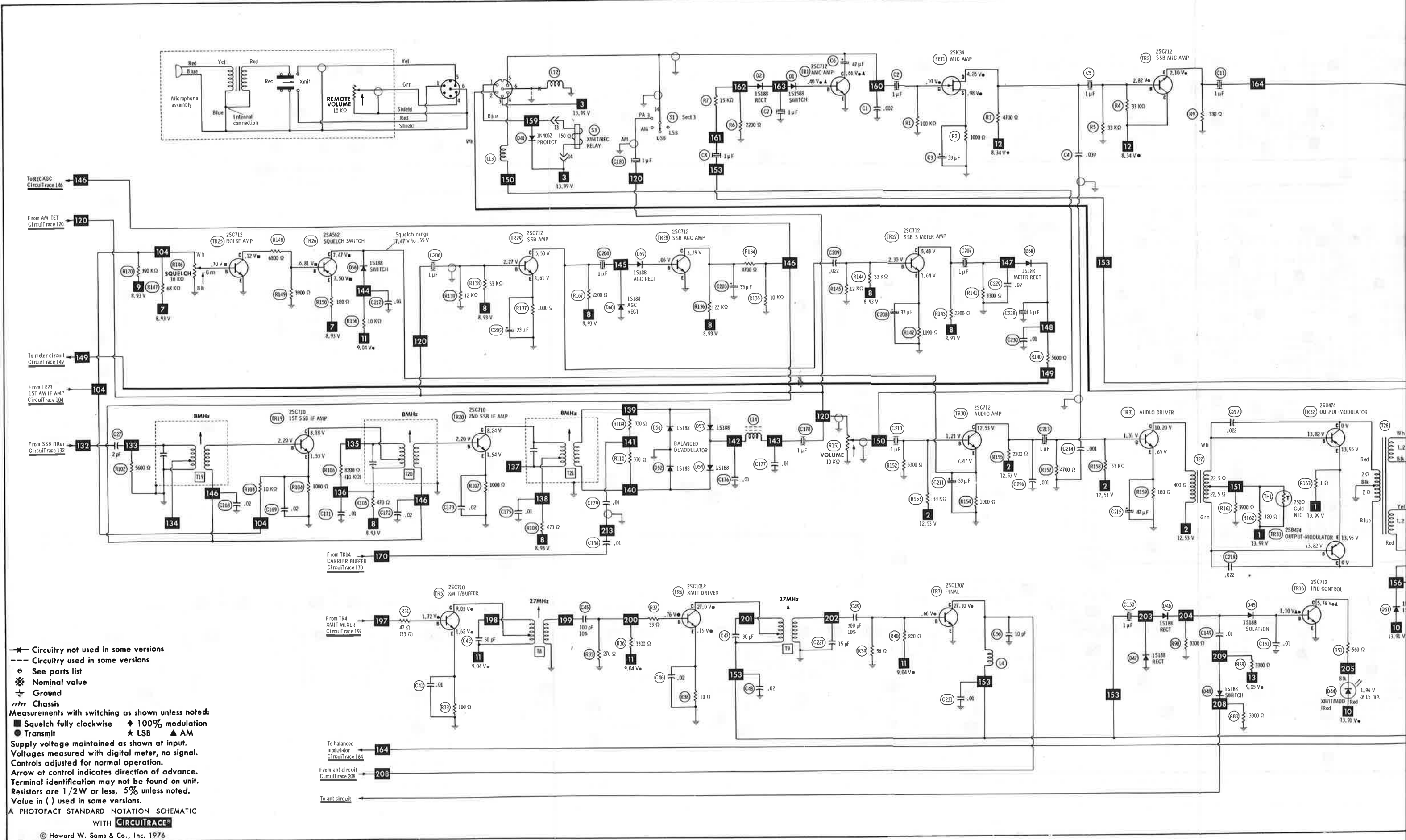
AM USB					
Chan	Crystal Complement	Chan	Crystal Complement	Chan	Crystal Complement
1	X2, X11, X1	7	X3, X9, X1	13	X5, X11, X1
2	X2, X10, X1	8	X3, X8, X1	14	X5, X10, X1
3	X2, X9, X1	9	X4, X11, X1	15	X5, X9, X1
4	X2, X8, X1	10	X4, X10, X1	16	X5, X8, X1
5	X3, X11, X1	11	X4, X9, X1	17	X6, X11, X1
6	X3, X10, X1	12	X4, X8, X1	18	X6, X10, X1
				19	X6, X9, X1
				20	X6, X8, X1
				21	X7, X11, X1
				22	X7, X10, X1
				23	X7, X8, X1

LSB					
Chan	Crystal Complement	Chan	Crystal Complement	Chan	Crystal Complement
1	X2, X11, X1	7	X3, X9, X1	13	X5, X11, X1
2	X2, X10, X1	8	X3, X8, X1	14	X5, X10, X1
3	X2, X9, X1	9	X4, X11, X1	15	X5, X9, X1
4	X2, X8, X1	10	X4, X10, X1	16	X5, X8, X1
5	X3, X11, X1	11	X4, X9, X1	17	X6, X11, X1
6	X3, X10, X1	12	X4, X8, X1	18	X6, X10, X1
	</				





XTAL MODEL X55B-10



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.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.
TR10	2SC710D		GE-211	PTC121	HEPS0016	RE 13	SK3018	RT-105	ECG123A
TR11	2SC710D		GE-211	PTC121	HEPS0016	RE 13	SK3018	RT-105	ECG123A
TR12	2SC710D		GE-211	PTC121	HEPS0016	RE 13	SK3018	RT-105	ECG123A
TR13	2SC710D		GE-211	PTC121	HEPS0016	RE 13	SK3018	RT-105	ECG123A
TR14	2SC710D		GE-211	PTC121	HEPS0016	RE 13	SK3018	RT-105	ECG123A
TR15	2SC710D		GE-211	PTC121	HEPS0016	RE 13	SK3018	RT-105	ECG123A
TR16	2SC712C		GE-20	PTC139	HEPS0011	RE 13	SK3124	RT-172	ECG123A
TR17	2SC710D		GE-211	PTC121	HEPS0016	RE 13	SK3018	RT-105	ECG123A
TR18	2SC710D		GE-211	PTC121	HEPS0016	RE 13	SK3018	RT-105	ECG123A
TR19	2SC710D		GE-211	PTC121	HEPS0016	RE 13	SK3018	RT-105	ECG123A
TR20	2SC710D		GE-211	PTC121	HEPS0016	RE 13	SK3018	RT-105	ECG123A
TR21	2SC710D		GE-211	PTC121	HEPS0016	RE 13	SK3018	RT-105	ECG123A
TR22	2SC710D		GE-211	PTC121	HEPS0016	RE 13	SK3018	RT-105	ECG123A
TR23	2SC710D		GE-211	PTC121	HEPS0016	RE 13	SK3018	RT-105	ECG123A
TR24	2SC710D		GE-211	PTC121	HEPS0016	RE 13	SK3018	RT-105	ECG123A
TR25	2SC712C		GE-20	PTC139	HEPS0011	RE 13	SK3124	RT-172	ECG123A
TR26	2SA562-0		GE-21	PTC103	HEPS0012	RE 26	SK3114	RT-115	ECG290
TR27	2SC712C		GE-20	PTC139	HEPS0011	RE 13	SK3124	RT-172	ECG123A
TR28	2SC712C		GE-20	PTC139	HEPS0011	RE 13	SK3124	RT-172	ECG123A
TR29	2SC712C		GE-20	PTC139	HEPS0011	RE 13	SK3124	RT-172	ECG123A
TR30	2SC712C		GE-20	PTC139	HEPS0011	RE 13	SK3124	RT-172	ECG123A
TR31	2SC712C		GE-20	PTC139	HEPS0011	RE 13	SK3124	RT-172	ECG123A
TR32	2SB474	(12)	GE-49	PTC120	HEPG6016	RE 83	SK3082	RT-132	ECG226
TR33	2SB474	(12)	GE-49	PTC120	HEPG6016	RE 83	SK3082	RT-132	ECG226
TR34	2SC1096M	(13)	GE-28	PTC110	HEPS5027	RE 42	SK3054	RT-197	ECG186A
TR35	2SC1096M	(13)	GE-28	PTC110	HEPS5027	RE 42	SK3054	RT-197	ECG186A
V1	HV-23 (Varistor)								

(10) Rating, 4.0 watt @ 1.0 amp.

(11) Rating, 25 watt @ 8.0 amp.

(12) Rating, 12 watt @ 2.0 amp.

(13) Rating, 10 watt @ 2.0 amp.

XTAL MODEL XSSB-10

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA			
		MFR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C2	1 50V NP		WNP1-50	TCN501A	TVAN-1560
C3	33 10V		PC30-25	VTT33A10	EV-1125
C5	1 50V NP		WNP1-50	TCN501A	TVAN-1560
C6	47 6.3V		PC50-10	VTT47A6	EV-1026
C7	1 50V NP		WNP1-50	TCN501A	TVAN-1560
C8	1 50V NP		WNP1-50	TCN501A	TVAN-1560
C9	100 16V		PC100-16	VTT100F16	EV-1230
C11	1 50V NP		WNP1-50	TCN501A	TVAN-1560
C54	3.3 25V NP		WNP4-50	TCN503A	TVAN-1302.1
C66	1 50V NP		WNP1-50	TCN501A	TVAN-1560
C124	10 16V		PC10-25	VTT10A25	EV-1222
C132	100 16V		PC100-16	VTT100F16	EV-1230
C134	100 16V		PC100-16	VTT100F16	EV-1230
C150	1 50V NP		WNP1-50	TCN501A	TVAN-1560
C178	1 50V NP		WNP1-50	TCN501A	TVAN-1560
C180	1 50V NP		WNP1-50	TCN501A	TVAN-1560
C189	10 16V		PC10-25	VTT10A25	EV-1222
C200	1 50V NP		WNP1-50	TCN501A	TVAN-1560
C203	33 10V		PC30-25	VTT33A10	EV-1125
C204	1 50V NP		WNP1-50	TCN501A	TVAN-1560
C205	33 10V		PC30-25	VTT33A10	EV-1125
C206	1 50V NP		WNP1-50	TCN501A	TVAN-1560
C207	1 50V NP		WNP1-50	TCN501A	TVAN-1560
C208	33 16V		PC30-25	VTT33D25	EV-1325
C210	1 50V NP		WNP1-50	TCN501A	TVAN-1560
C211	33 10V		PC30-25	VTT33A10	EV-1125
C213	1 50V NP		WNP1-50	TCN501A	TVAN-1560
C215	47 6.3V		PC50-10	VTT47A6	EV-1026
C216	100 16V		PC100-16	VTT100F16	EV-1230
C219	3.3 25V		PC5-50	VTT3R3A50	EV-1318
C221	3.3 25V		PC5-50	VTT3R3A50	EV-1318
C222	100 50V		PC100-50	VTT100H50	EV-1530
C224	220 16V		PC250-25	VTT220G16	EV-1240
C228	1 50V NP		WNP1-50	TCN501A	TVAN-1560

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.
C1	.002		DD-202	GP2000	GP220	2SS-D20
C4	.049 10%			DPMS6S39	PVC6139	6PS-S39
C10	.001		DD-102	GP1000	GP210	2SS-D10
C12	.01		DC-103	GP10000	MAG5011	2SS-S10
C13	30					10TCC-Q30
C14	50 Max					
C15	.01		DC-103	GP10000	MAG5011	2SS-S10
C16	.01		DC-103	GP10000	MAG5011	2SS-S10
C17	.02		DC-203		MAG5012	2SS-S20
C18	100 10%		DTZ-100	NP0100	CN0310	10TCC-T10
C19	.01		DC-103	GP10000	MAG5011	2SS-S10
C20	.01		DC-103	GP10000	MAG5011	2SS-S10
C21	.01		DC-103	GP10000	MAG5011	2SS-S10
C22	.01		DC-103	GP10000	MAG5011	2SS-S10
C23	.01		DC-103	GP10000	MAG5011	2SS-S10
C24	.001		DD-102	GP1000	GP210	2SS-D10
C25	.01		DC-103	GP10000	MAG5011	2SS-S10
C26	.01		DC-103	GP10000	MAG5011	2SS-S10
C27	2		DTZ-2R2	NP02P2	CN0522	10TCC-V22
C28	10		DTZ-10	NP010	CN0410	10TCC-Q10
C29	.02		DC-203		MAG5012	2SS-S20
C30	.02		DC-203		MAG5012	2SS-S20
C31	.02		DC-203		MAG5012	2SS-S20
C32	.02		DC-203		MAG5012	2SS-S20
C33	.02		DC-203		MAG5012	2SS-S20
C34	.02		DC-203		MAG5012	2SS-S20
C35	20		DTZ-20	NP020	CN0420	10TCC-Q20
C36	20		DTZ-20	NP020	CN0420	10TCC-Q20
C37	.02		DC-203		MAG5012	2SS-S20
C38	.02		DC-203		MAG5012	2SS-S20
C39	.02		DC-203		MAG5012	2SS-S20
C40	.02		DC-203		MAG5012	2SS-S20
C41	.01		DC-203		MAG5012	2SS-S20
C42	30		DC-103	GP10000	MAG5011	2SS-S10
C43	.02		DTZ-20	NP020	CN0420	10TCC-Q20
			DC-203		MAG5012	2SS-S20
C44	.01		DC-103	GP10000	MAG5011	2SS-S10
C45	100 10%		DTZ-100	NP0100	CN0310	10TCC-T10
C46	.02		DC-203		MAG5012	2SS-S20
C47	30					10TCC-Q30
C48	.02		DC-203		MAG5012	2SS-S20
C49	330 10%		DD-301	GP300	GP330	10TS-T30
C50	.02		DC-203		MAG5012	2SS-S20
C51	.02		DC-203		MAG5012	2SS-S20
C52	.02		DC-203		MAG5012	2SS-S20
C53	.01		DC-203		MAG5012	2SS-S20
C55	.01		DC-103	GP10000	MAG5011	2SS-S10
C56	10		DC-103	GP10000	MAG5011	2SS-S10
C57	.01		DTZ-10	NP010	CN0410	10TCC-Q10
C58	20		DC-103	GP10000	MAG5011	2SS-S10
C59	200		DTZ-200	NP020	CN0420	10TCC-Q20
C60	120 10%		DTZ-120		CN0312	10TCC-T20
C61	200 10%		DTZ-200			10TCC-T12
C62	100 10%		DTZ-100			10TCC-T20
C63	1			NP0100	CN0310	10TCC-T10
C64	1				CN0510	10TCC-V10
C65	1				CN0510	10TCC-V10
C67	.01		DC-103	GP10000	CN0510	10TCC-V10
C68	20 Max				MAG5011	2SS-S10
C69	20 Max					
C70	20 Max					
C71	20 Max					
C72	20 Max					
C73	20 Max					
C74	20 Max					
C75	20 Max					
C76	20 Max					
C77	20 Max					
C78	20 Max					
C79	20 Max					
C80	20 Max					

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.
C81	20 Max					
C82	39 10% N750				CN7439	10TCU-Q39
C83	39 10% N750				CN7439	10TCU-Q39
C84	39 10% N750				CN7439	10TCU-Q39
C85	39 10% N750				CN7439	10TCU-Q39
C86	39 10% N750				CN7439	10TCU-Q39
C87	39 10% N750				CN7439	10TCU-Q39
C88	39 10% N750				CN7439	10TCU-Q39
C89	39 10% N750				CN7439	10TCU-Q39
C90	39 10% N750				CN7439	10TCU-Q39
C91	39 10% N750				CN7439	10TCU-Q39
C92	15 10% N750		DTN-15	N15	CN7415	10TCU-Q15
C93	15 10% N750		DTN-15	N15	CN7415	10TCU-Q15
C94	15 10% N750		DTN-15	N15	CN7415	10TCU-Q15
C95	15 10% N750		DTN-15	N15	CN7415	10TCU-Q15
C96	.01		DC-103	GP10000	MAG5011	2SS-S10
C97	.01		DC-103	GP10000	MAG5011	2SS-S10
C98	.01		DC-103	GP10000	MAG5011	2SS-S10
C99	.02		DC-203		MAG5012	2SS-S20
C100	30 10% N750		DTN-33	N33	CN7433	10TCU-Q33
C101	.01		DC-103	GP10000	MAG5011	2SS-S10
C102	100 10%		DTZ-100	NP0100	CN0310	10TCC-T10
C103	80 10%		DTZ-82	NP082	CN0402	10TCC-Q02
C104	.01		DC-103	GP10000	MAG5011	2SS-S10
C105	.01		DC-103	GP10000	MAG5011	2SS-S10
C106	10		DTZ-10	NP010	CN0410	10TCC-Q10
C107	50		DTZ-50	NP050	CN0450	10TCC-Q50
C108	.01		DC-103	GP10000	MAG5011	2SS-S10
C109	.01		DC-103	GP10000	MAG5011	2SS-S10
C110	.01		DC-103	GP10000	MAG5011	2SS-S10
C111	500 10%		DD-501	GP500	GP350	10TS-T50
C112	70 10%		DTZ-75	NP075	CN0475	10TCC-Q75
C113	.01		DC-103	GP10000	MAG5011	2SS-S10
C114	.01		DC-103	GP10000	MAG5011	2SS-S10
C115	.25		DTZ-25	NP025	CN0425	10TCC-Q25
C116	.01		DC-103	GP10000	MAG5011	2SS-S10
C117	.01		DC-103	GP10000	MAG5011	2SS-S10
C118	.01		DC-103	GP10000	MAG5011	2SS-S10
C119	10		DTZ-10	NP010	CN0410	10TCC-Q10
C120	40				CN0439	10TCC-Q39
C121	30					10TCC-Q30
C122	5					10TCC-V50
C123	.01		DC-103	GP10000	MAG5011	2SS-S10
C125	.02		DC-203		MAG5012	2SS-S20
C126	.001		DD-102	GP1000	GP210	2SS-D10
C127	30					10TCC-Q30
C128	30					10TCC-Q30
C129	.01		DC-103	GP10000	MAG5011	2SS-S10
C130	.01		DC-103	GP10000	MAG5011	2SS-S10
C131	30					10TCC-Q30
C133	.02		DC-203		MAG5012	2SS-S20
C135	.02		DC-203		MAG5012	2SS-S20
C136	.01		DC-103	GP10000	MAG5011	2SS-S10
C137	.01		DC-103	GP10000	MAG5011	2SS-S10
C138	.01		DC-103	GP10000	MAG5011	2SS-S10
C139	.01		DC-103	GP10000	MAG5011	2SS-S10
C140	200 10%		DTZ-200			10TCC-T20
C141	500 10%		DD-501	GP500	GP350	10TS-T50
C142	20					
C143	.01		DC-103	GP10000	MAG5011	2SS-S10
C144	30 10% N750		DTN-33	N33	CN7433	10TCU-Q33
C145	20					
C146	20					
C147	.01		DC-103	GP10000	MAG5011	2SS-S10
C148	.01		DC-103	GP10000	MAG5011	2SS-S10
C149	.01		DC-103	GP10000	MAG5011	2SS-S10
C150	.01		DC-103	GP10000	MAG5011	2SS-S10
C151	.01		DC-103	GP10000	MAG5011	2SS-S10
C152	.01		DC-103	GP10000	MAG5011	2SS-S10
C153	.01		DC-103	GP10000	MAG5011	2SS-S10
C154	.02		DC-203		MAG5012	2SS-S20
C156	.01		DC-103	GP10000	MAG5011	2SS-S10
C157	.01		DC-103	GP10000	MAG5011	2SS-S10
C158	15		DTZ-15	NP015	CN0415	10TCC-Q15
C159	.01		DC-103	GP10000	MAG5011	2SS-S10
C160	.02		DC-203		MAG5012	2SS-S20
C161	.01		DC-103	GP10000	MAG5011	2SS-S10
C162	.01		DC-103	GP10000	MAG5011	2SS-S10
C163	.01		DC-103	GP10000	MAG5011	2SS-S10
C164	.01		DC-103	GP10000	MAG5011	2SS-S10

XTAL MODEL XSSB-10

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.
C165	.02		DC-203		MAG5012	2SS-S20
C166	.01		DC-103	GP10000	MAG5011	2SS-S10
C167	200		DTZ-200			10TCC-T20
C168	.02		DC-203		MAG5012	2SS-S20
C169	.02		DC-203		MAG5012	2SS-S20
C170	.01		DC-103	GP10000	MAG5011	2SS-S10
C171	.01		DC-103	GP10000	MAG5011	2SS-S10
C172	.02		DC-203		MAG5012	2SS-S20
C173	.02		DC-203		MAG5012	2SS-S20
C174	.02		DC-203		MAG5012	2SS-S20
C175	.01		DC-103	GP10000	MAG5011	2SS-S10
C176	.01		DC-103	GP10000	MAG5011	2SS-S10
C177	.01		DC-103	GP10000	MAG5011	2SS-S10
C179	.01		DC-103	GP10000	MAG5011	2SS-S10
C181	.001			DPMS6D1	EWFA210	1PB-D10
C182	.02		DC-203		MAG5012	2SS-S20
C183	.02		DC-203		MAG5012	2SS-S20
C184	70 10%		DTZ-75	NP075	CN0475	10TCC-Q75
C185	25		DTZ-25	NP025	CN0425	10TCC-Q25
C186	.01		DC-103	GP10000	MAG5011	2SS-S10
C187	.04				GP140	5GA-S40
C188	.01		DC-103	GP10000	MAG5011	2SS-S10
C190	.02		DC-203		MAG5012	2SS-S20
C191	.01		DC-103	GP10000	MAG5011	2SS-S10
C192	.04				GP140	5GA-S40
C193	.01		DC-103	GP10000	MAG5011	2SS-S10
C194	.01		DC-103	GP10000	MAG5011	2SS-S10
C195	.04				GP140	5GA-S40
C196	.01		DC-103	GP10000	MAG5011	2SS-S10
C197	.02		DC-203		MAG5012	2SS-S20
C198	.001		DD-102	GP1000	GP210	2SS-D10
C199	.02		DC-203		MAG5012	2SS-S20
C201	.039 10%			DPMS6S39	PVC6139	6PS-S39
C202	.01		DC-103	GP10000	MAG5011	2SS-S10
C209	.022 10%			DPMS2S22	EWFA122	1PB-S22
C212	.01		DC-103	GP10000	MAG5011	2SS-S10
C214	.001		DD-102	GP1000	GP210	2SS-D10
C217	.022 100V			DPMS2S22	EWFA122	1PB-S22
C218	.022 100V			DPMS2S22	EWFA122	1PB-S22
C220	.033 10%			DPMS6S33	EWFA122	1PB-S22
C223	.022 10%			DPMS2S22	EWFA122	1PB-S22
C225	.01		DC-103	GP10000	MAG5011	2SS-S10
C226	.001		DD-102	GP1000	GP210	2SS-D10
C227	15					
C229	.02		DC-203		MAG5012	2SS-S20
C230	.01		DC-103	GP10000	MAG5011	2SS-S10
C231	.01		DC-103	GP10000	MAG5011	2SS-S10
C232	.01		DC-103	GP10000	MAG5011	2SS-S10

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.	TRW PART No.
R11	Carrier Balance	500		T-500	C-501	MTC52L1
R41	ALC	100K		T-100K	C-104	MTC15L1
R45	RF Meter	10K		T-10K (2)	C-103 (2)	MTC14L1 (2)
R60	Clarifier Rec. Range	5000		T-5000 (2)	C-502 (2)	MTC53L1 (2)
R61	Clarifier	10K				
R133	S Meter	5000		T-5000 (2)	C-502 (2)	MTC53L1 (2)
R146	Squeitch	10K				
R151	Volume/Power Switch	10K				

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

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFR. PART No.			WORKMAN PART No.	MFR. PART No.
TH1	750 Cold NTC						

PARTS LIST AND DESCRIPTION (CONTINUED)

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

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	RF Choke		330		
L2	RF Choke		330		
L3	RF Choke		151		
L4	RF Choke				
L5	Final Tank (27mH)				
L6	Pi Filter				
L7	Pi Filter				
L8	Pi Filter				
L9	RF Choke		151		
L10	RF Choke		330		
L11	RF Choke				
L12	RF Choke				
L13	RF Choke				
L14	RF Choke		330		
T1	Balance Mod. (8MHz)		TKAC-21793-HB		
T2	SSB Amp (8MHz)		TRAC-21793HB		
T3	SSB (8MHz)				
T4	SSB (8MHz)		TKAC-21794-HB		
T5	Xmit Mixer (27MHz)		KXC-7343-CDE		
T6	Xmit Mixer (27MHz)		KXC-7343-CDE		
T7	Xmit Mixer (27MHz)		KXC-7343-CDE		
T8	Xmit Buffer (27MHz)				
T9	Xmit Driver (27MHz)				
T10	Buffer (45MHz)				
T11	Buffer (45MHz)		TKXC-23017A		
T12	Buffer (10MHz)		TKAC-21793-HB		
T13	Synth Mixer (35MHz)		TKXC-23477-F		
T14	Synth Mixer (35MHz)		TKXC-23477-F		
T15	Carrier Buffer (8MHz)		TKAC-21793-HB		
T16	Rec Ant (27MHz)		KXN1669BZ		
T17	Rec RF (27MHz)		KAC7343CDE		
T18	Rec Mixer (8MHz)		TKN-21794-HE		
T19	SSB (8MHz)		TKAC21794-HB		
T20	SSB (8MHz)		TKAC71295-HB		
T21	SSB (8MHz)		TKAC21793-HB		
T22	Rec Mixer (8MHz)		TKAC-2173-HB		
T23	IF (455kHz)		YDC-15403-F		
T24	IF (455kHz)		YDE-1504-JK		
T25	IF (455kHz)		YDC15001-N		
T26	IF (455kHz)		YMC-15002-A		

XTAL MODEL XSSB-10

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T31	1.3A	.3	.4mH				

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T27	1	1					

PARTS LIST AND DESCRIPTION (CONTINUED)

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

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE:		REPLACEMENT DATA			NOTES
	PRI.	SEC.	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T28	32	8				

TRANSFORMER (POWER OSC)

ITEM No.	TURNS RATIO			REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T29	3	1					

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP	4 x 3 5/8 PM 8 Ohms			

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	2 Amp Fast acting			AGC2	HDJ	312002	150145	FG2-2	
F2	2 Amp Fast acting			AGC2	HDJ	312002	150145	FG2-2	

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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	8.2485		AXC80M8.2485	Carrier Osc.	X7	15.3654		AXASM15.3654	21,22,23
X2	15.2820		AXASM15.2820	1, 2,3,4	X8	10.595		AXB90M10.595	4,8,12,16,20,23
X3	15.2980		AXASM15.2980	5,6,7,8	X9	10.615		AXB90M10.615	3,7,11,15,19
X4	15.3154		AXASM15.3154	9,10,11,12	X10	10.625		AXB90M10.625	2,6,10,14,18,22
X5	15.3320		AXASM15.3320	13,14,15,16	X11	10.635		AXB90M10.635	1,5,9,13,17,21
X6	15.3487		AXASM15.3487	17,18,19,20	X12	7.7965		AXC80M7.7965	AM,REC,OSC.

XTAL MODEL XSSB-10

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
CF	Filter		455kHz
XC	Filter		8.250MHz
M1	Meter		S/R
S1	Switch		LSB/USB/AM/PA
S2	Switch		Channel Selector
S3	Relay		
S4	Switch		
S5	Switch		NB

WIRING DATA

General-use Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors
Power Cord, 2-Wire	8524 (Stranded) Available in 12 Colors
Shielded Antenna Lead	Use BELDEN No. 17106 (Plastic) or 17126 (Rubber) -6 feet
	17109 (Plastic) or 17129 (Rubber) -9 feet
	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. 8491 4-Conductor (2 shielded, 2 unshielded) Neoprene
Ignition Noise Suppression	Use BELDEN No. 7300-Series Spark-Plug Sets