



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.



COBRA MODEL 32XLR

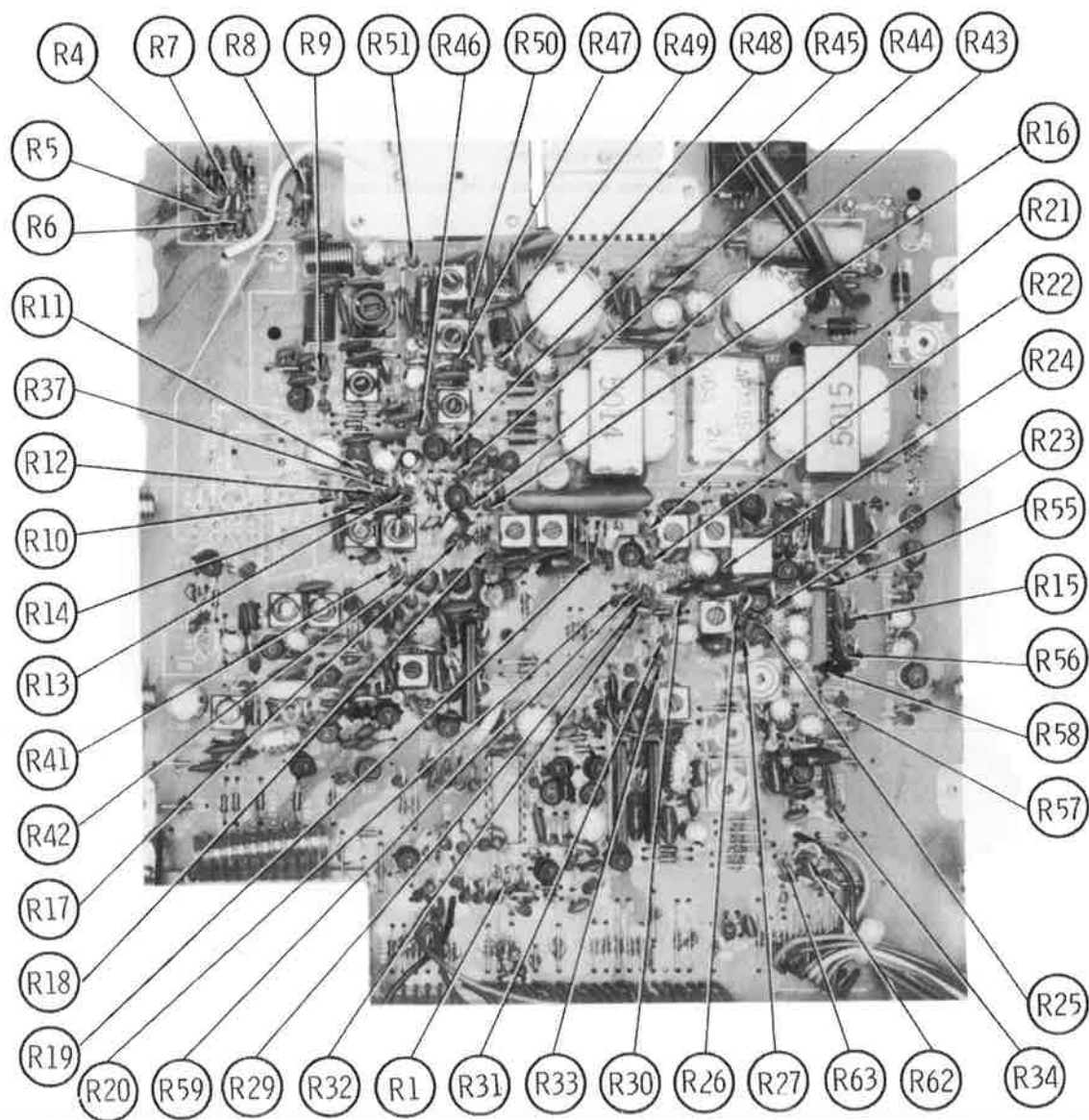
MODEL 32XLR

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

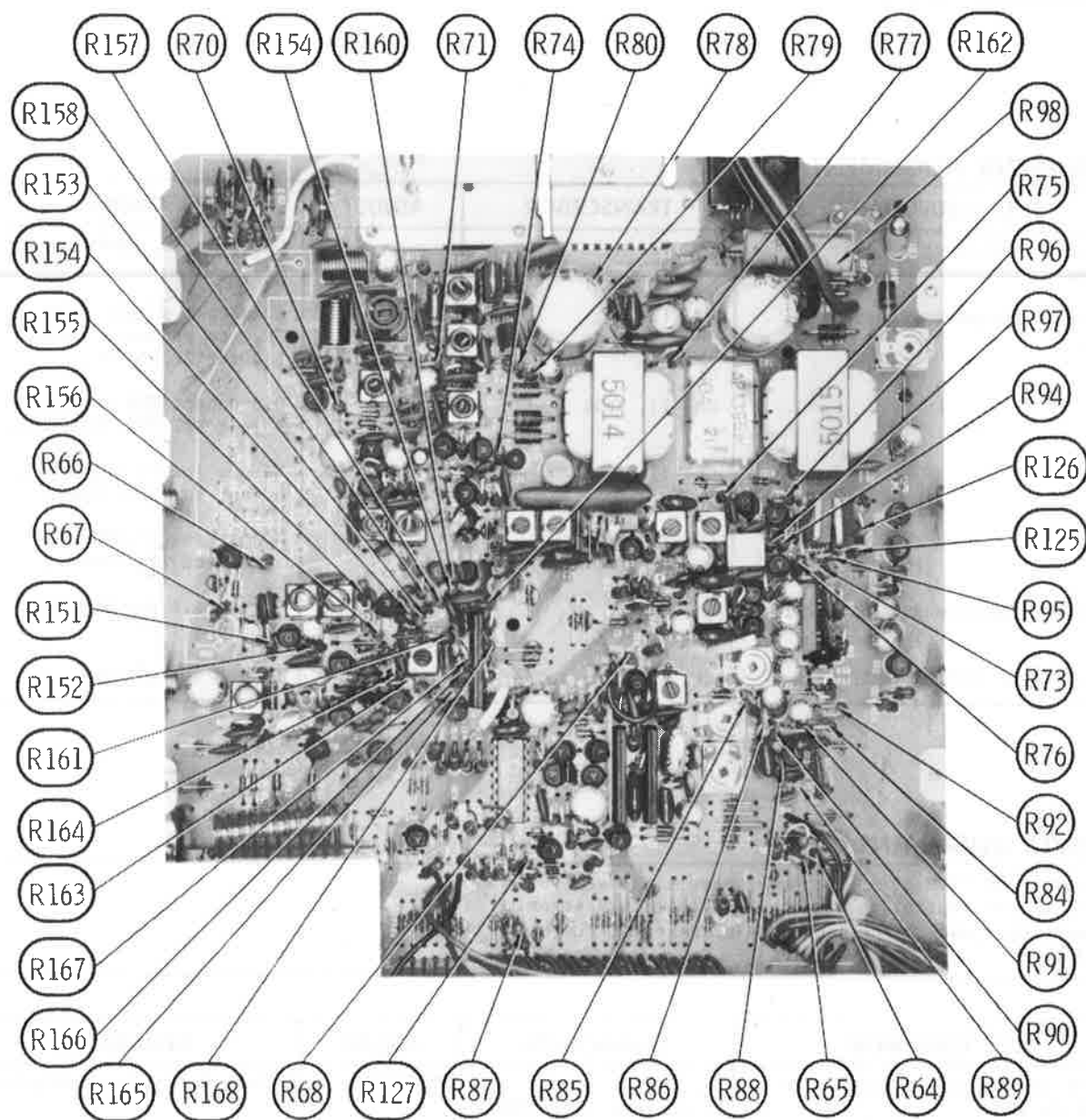
© 1977 Howard W. Sams & Co., Inc.

Printed in U. S. of America

7CE525



MAIN BOARD



MAIN BOARD

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:

L3,L13,T4,T5,T6,T7,T8,T13.....5009
 L4,L5,L11,L12,L14,T1,T2,T3,T9.....9440
 C173.....5000

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of frequency counter to TP20.	Ch. 11		Check for 5.120MHz.
Input of frequency counter to TP1.	Ch. 11	L12	Connect a jumper from TP10 to ground. Adjust L12 for 21.600MHz.
	Ch. 11, Xmit	L11	Disconnect TP6 jumper. Adjust L11 for 26.300MHz.
	Ch. 11 Delta Tune - Mid Range	L14	Remove jumper from TP10. Adjust for 22.420MHz.
	Ch. 11, Xmit	C173	Adjust for 27.085MHz. Reconnect TP6 jumper.
Input of oscilloscope to TP21.	Ch. 11	L13	Adjust L13 for MINIMUM squaring.
Input of RF VTVM to TP3.	Ch. 11	T13	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	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to TP3. 455kHz,1000Hz @ 30% modulation.	Ch. 13, Delta Tune - Mid Range RF Gain - Max	T8,T7,T6	Adjust for maximum output.
Output of signal generator thru .01uF to TP1. 4.665MHz,1000Hz @30% modulation.	Ch. 13	T5,T4	Adjust for maximum output.
Output of signal generator thru .01uF to antenna jack. 27.115MHz,1000Hz @ 30% modulation.	Ch. 13	T3,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, Delta Tune - Mid Range RF Gain - Max	R60	SQUELCH RANGE Set Squelch Control R61 fully clockwise. Adjust R60 so that squelch just breaks
Output of signal generator thru .01uF to antenna jack. 27.115MHz, 1000Hz @ 30% modulation. Output 100uV.	Ch. 13	R28	S METER Adjust R28 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.

See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
	Ch. 13	T9, L4, L5, L3	Adjust for maximum.
	Ch. 13	L3	Adjust for 4 watts maximum.

TRANSMITTER ADJUSTMENTS

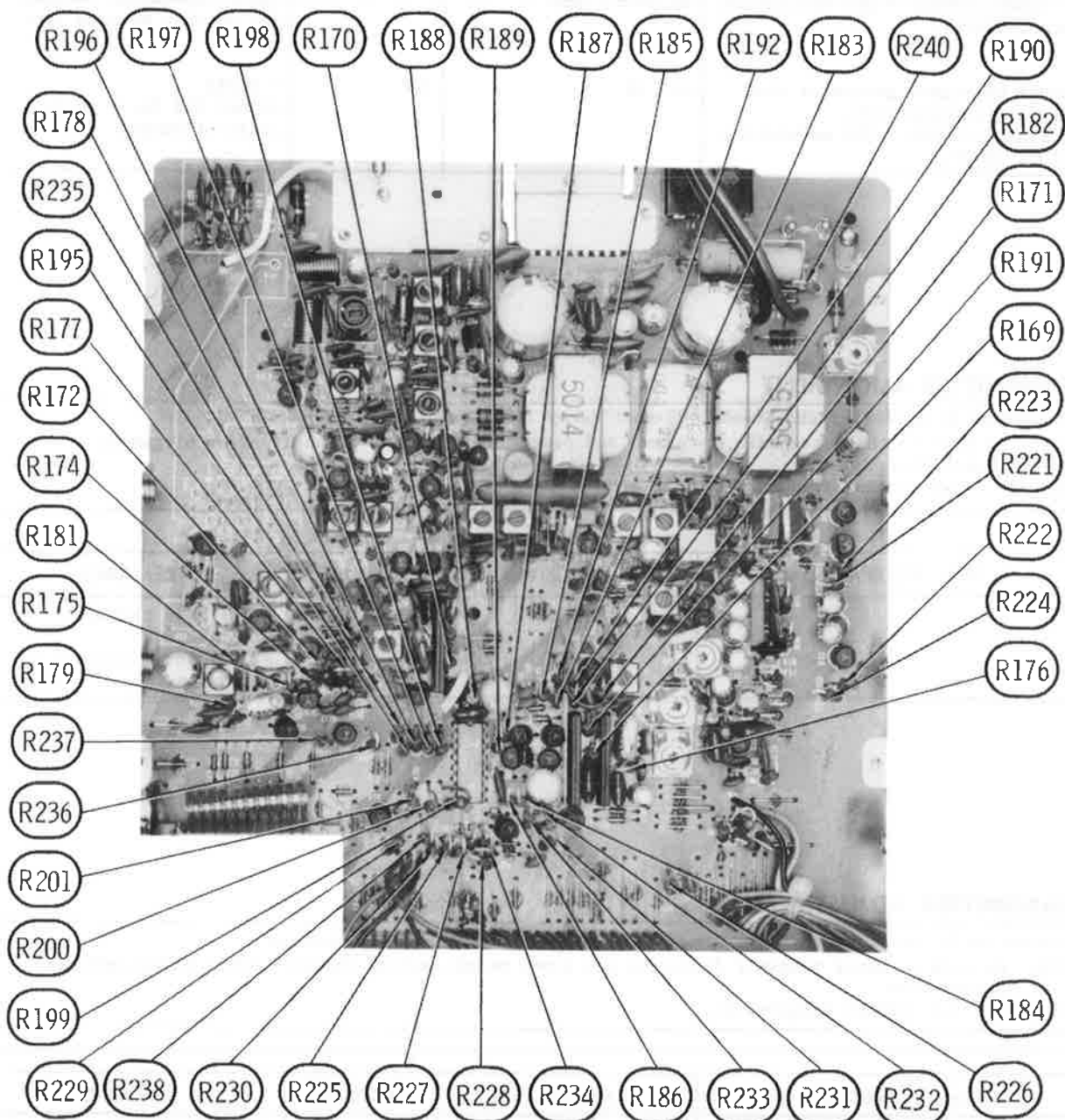
Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.

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

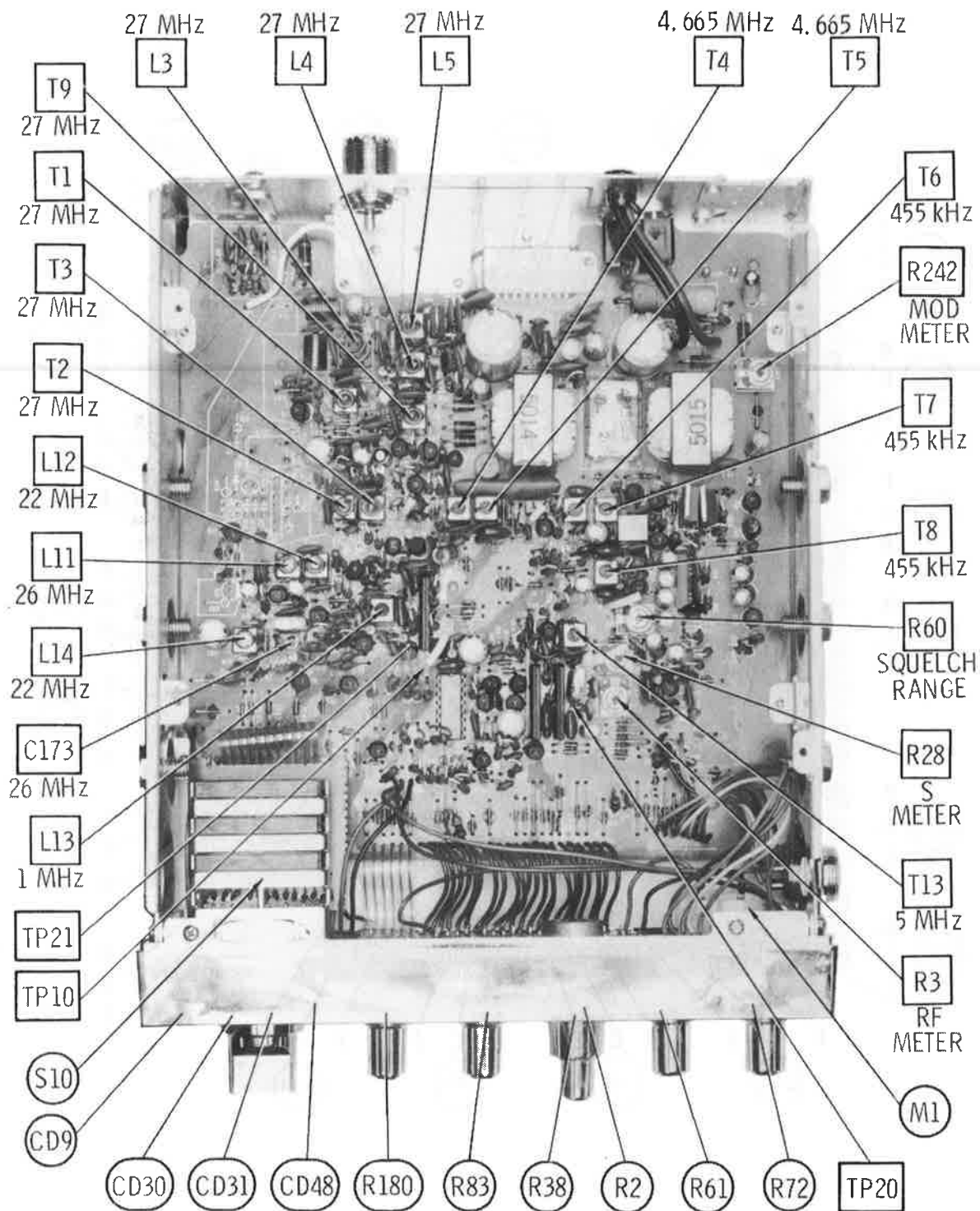
See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
	Ch. 13	R3	RF PANEL METER Adjust R3 so that RF panel meter agrees with RF wattmeter.
Modulation meter to antenna jack. Inject a 1000Hz signal to MIC input.	Ch. 13	R242	MODULATION METER Adjust R242 so the modulation meter agrees with external modulation meter.

COBRA MODEL 32XLR

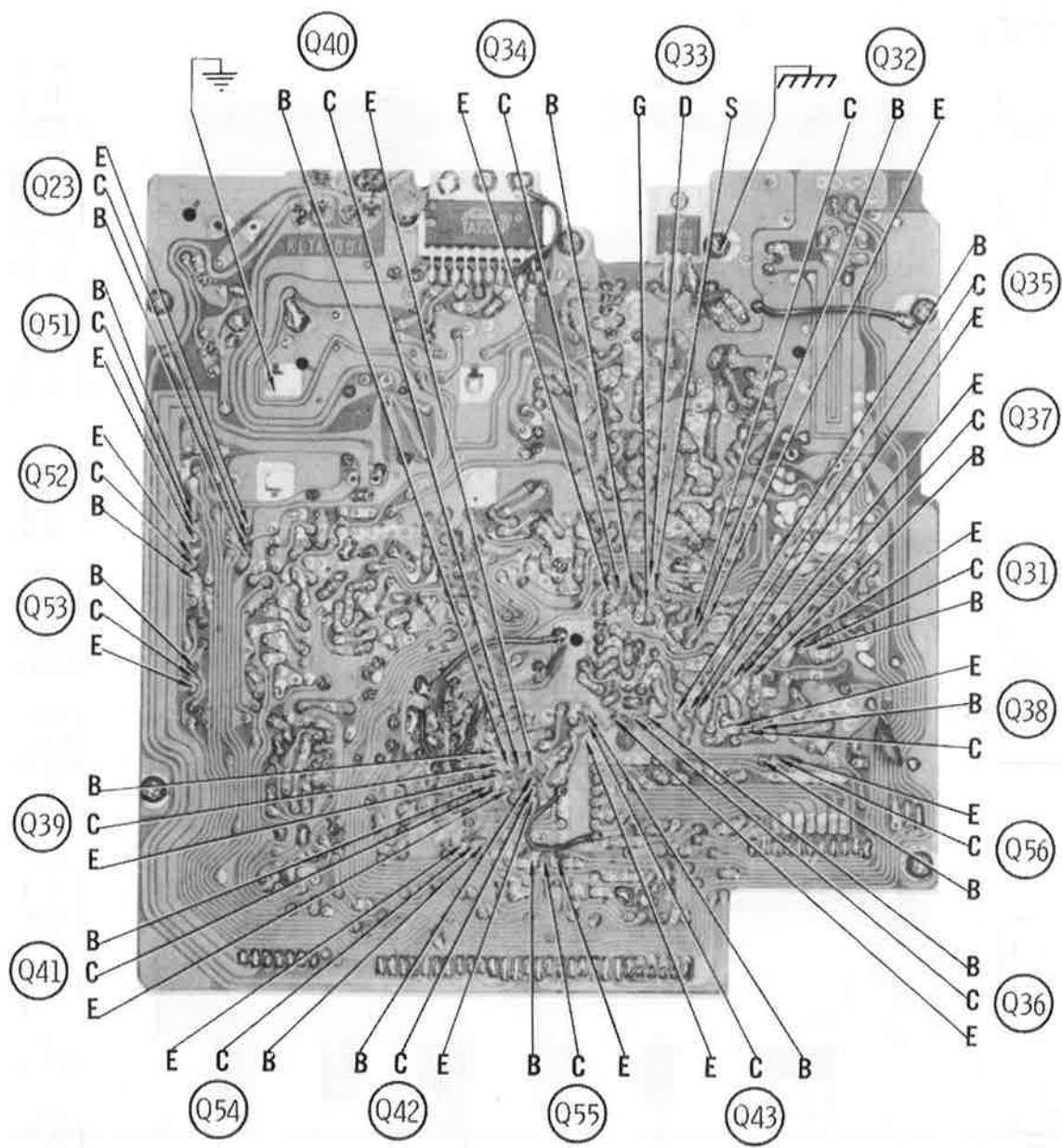


MAIN BOARD

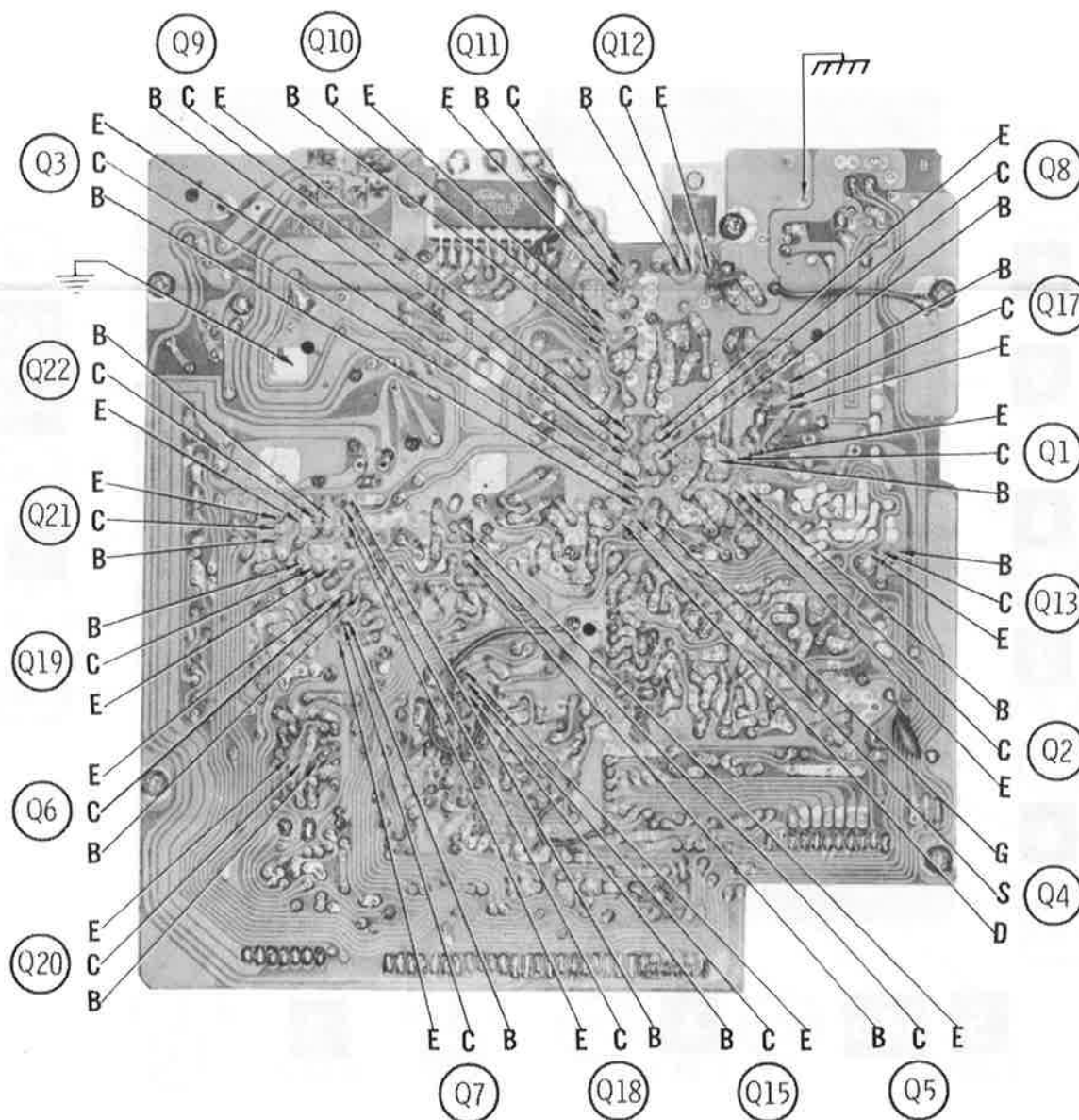


COBRA MODEL 32XLR

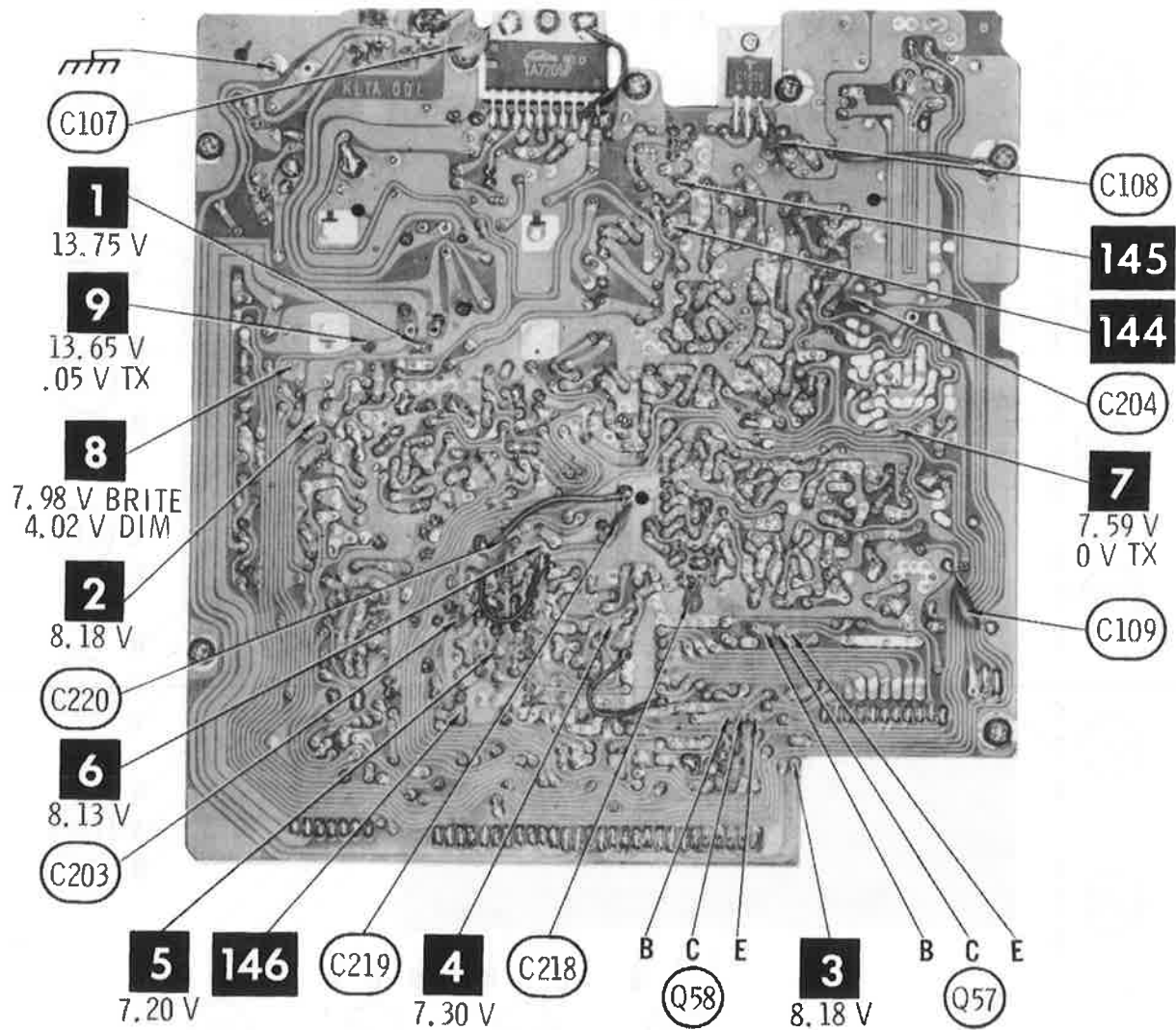
CHASSIS-BOTTOM



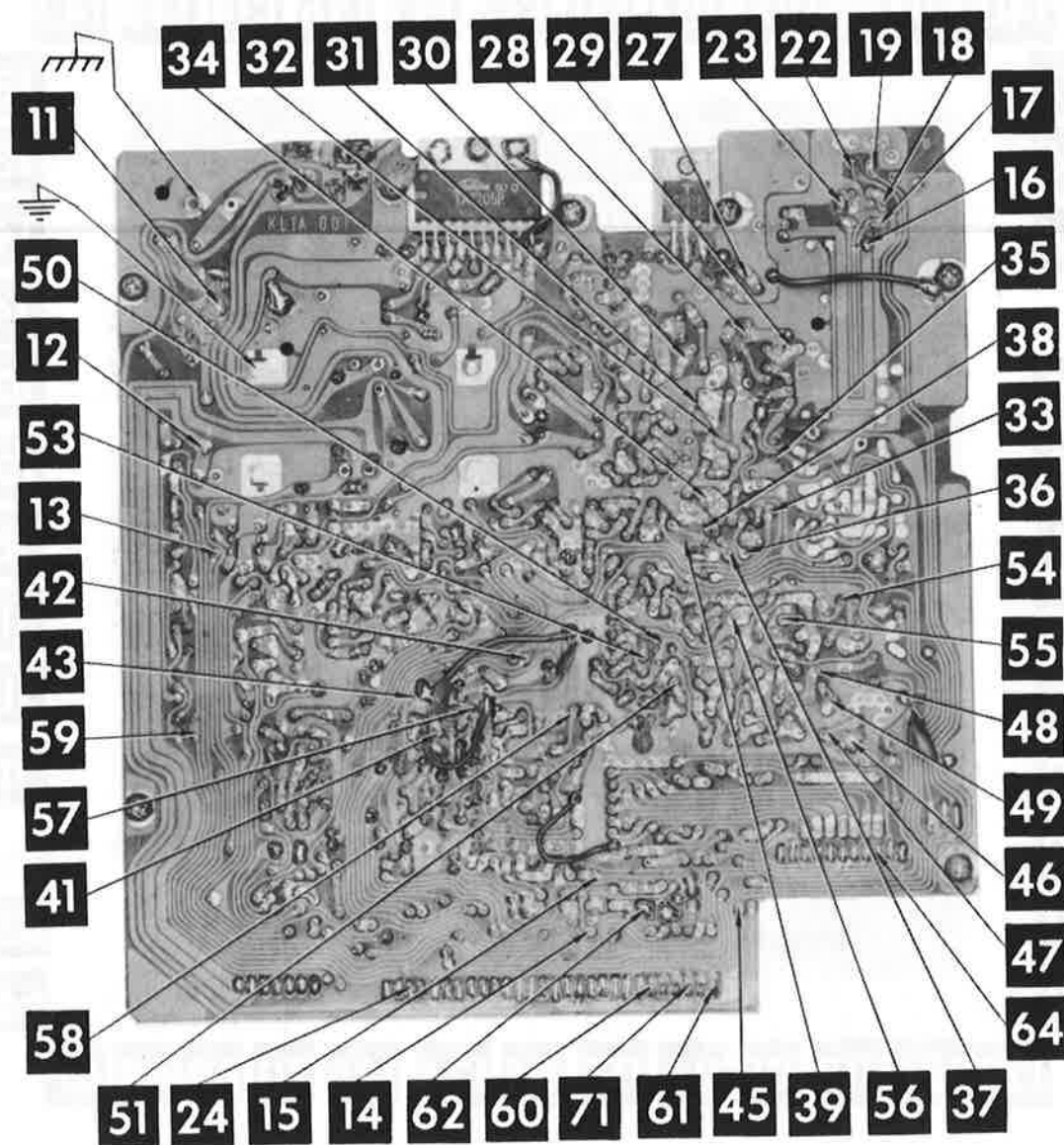
MAIN BOARD



MAIN BOARD

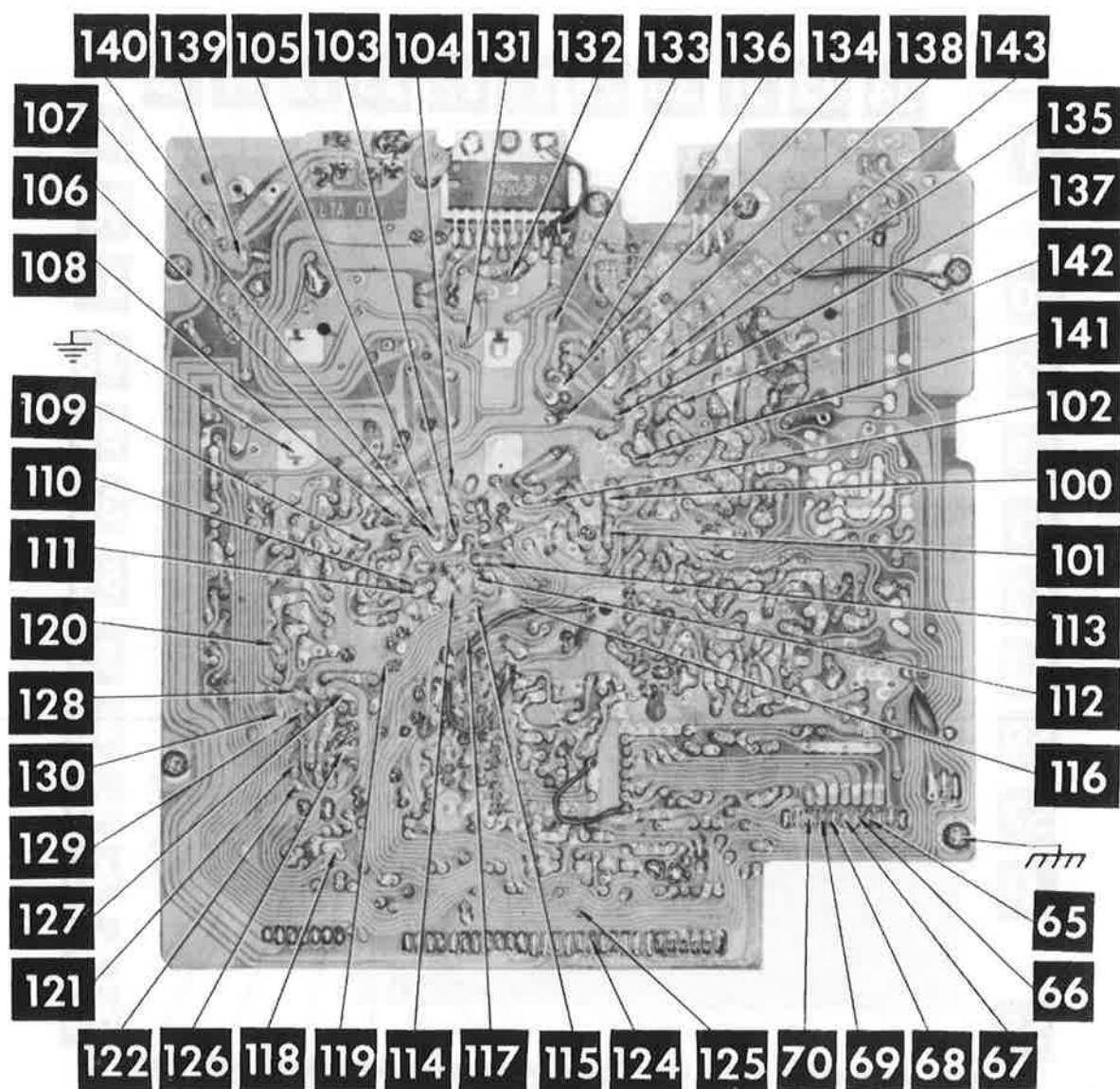


MAIN BOARD

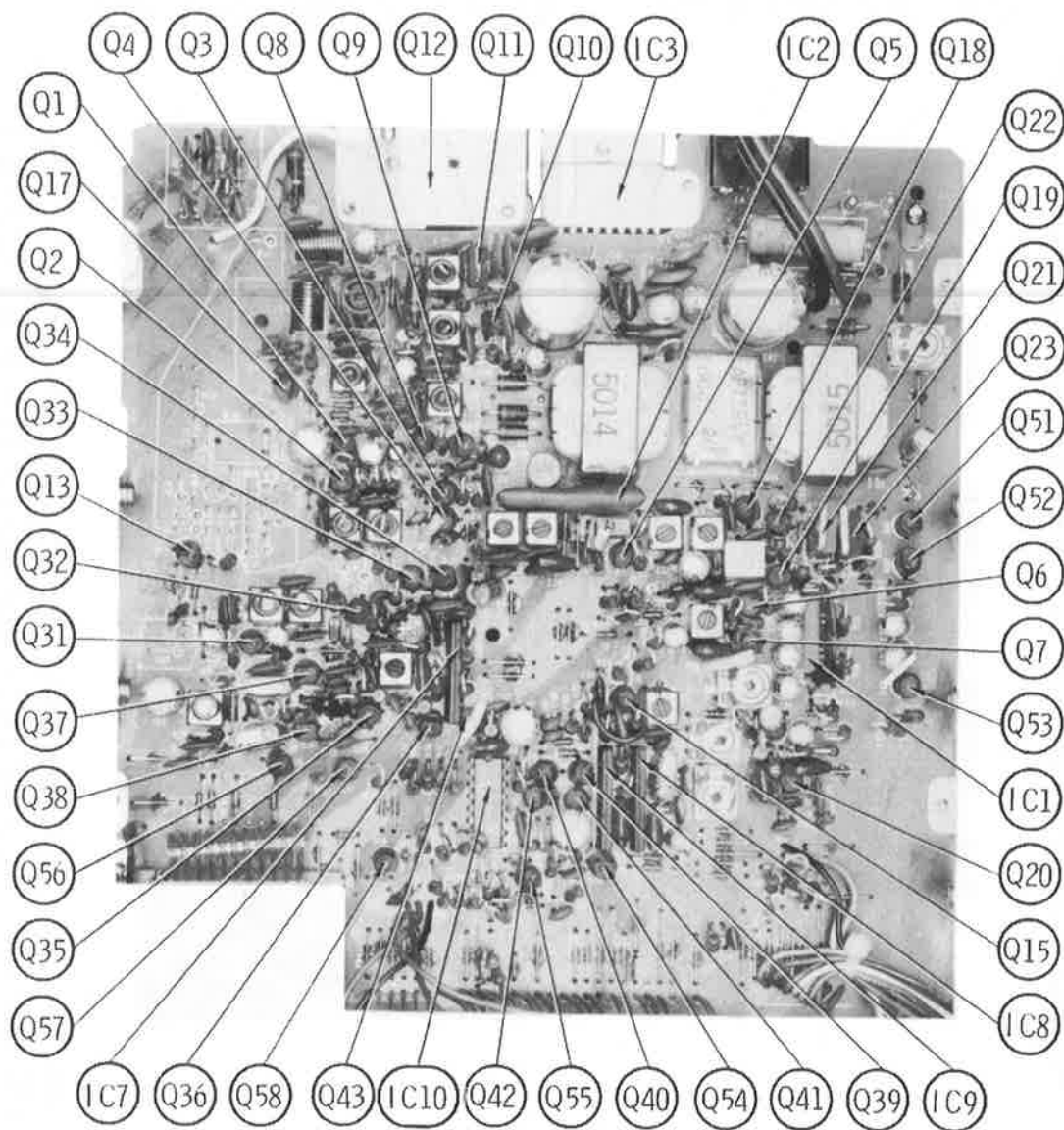


COBRA MODEL 32XLR

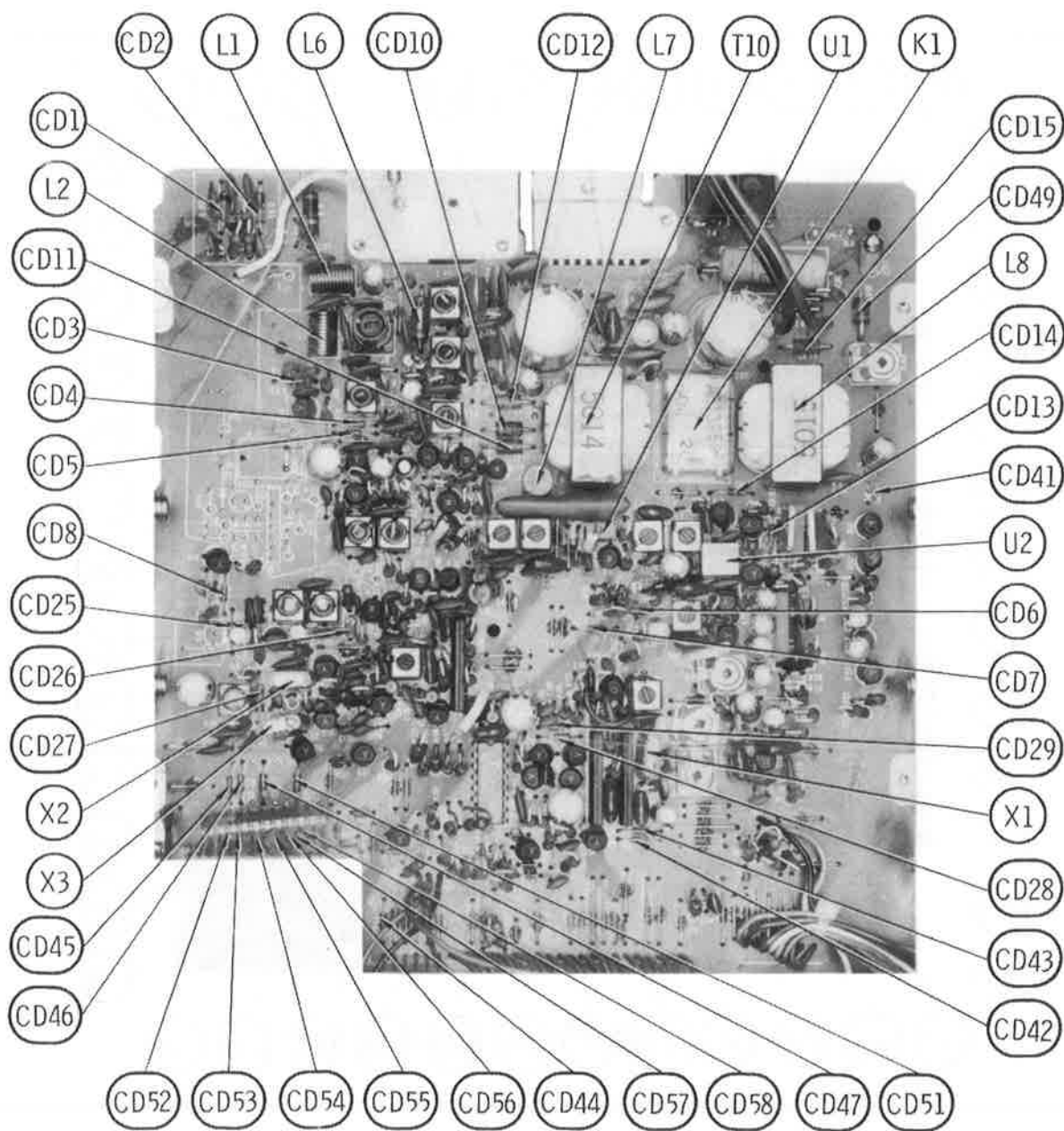
MAIN BOARD



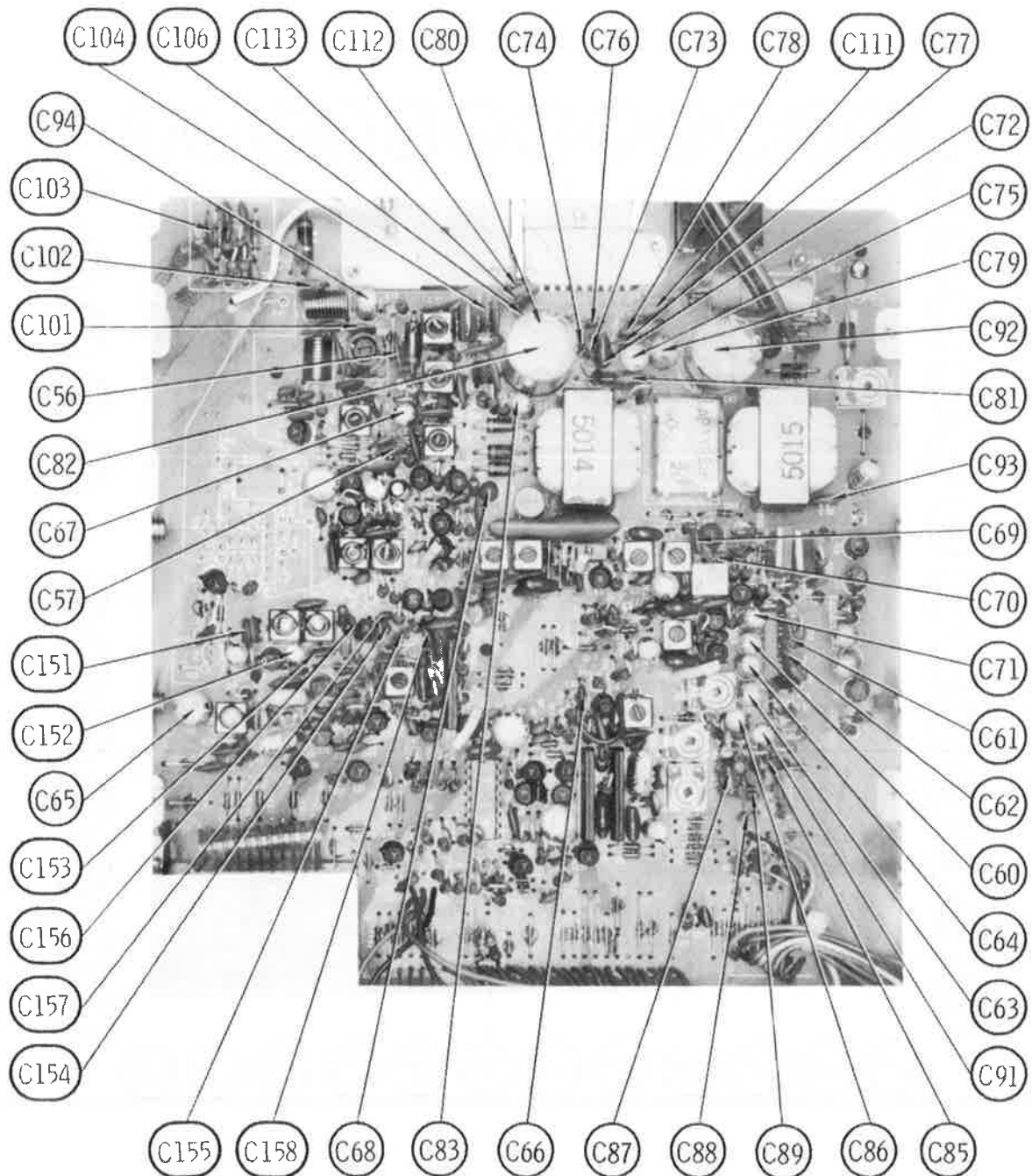
MAIN BOARD



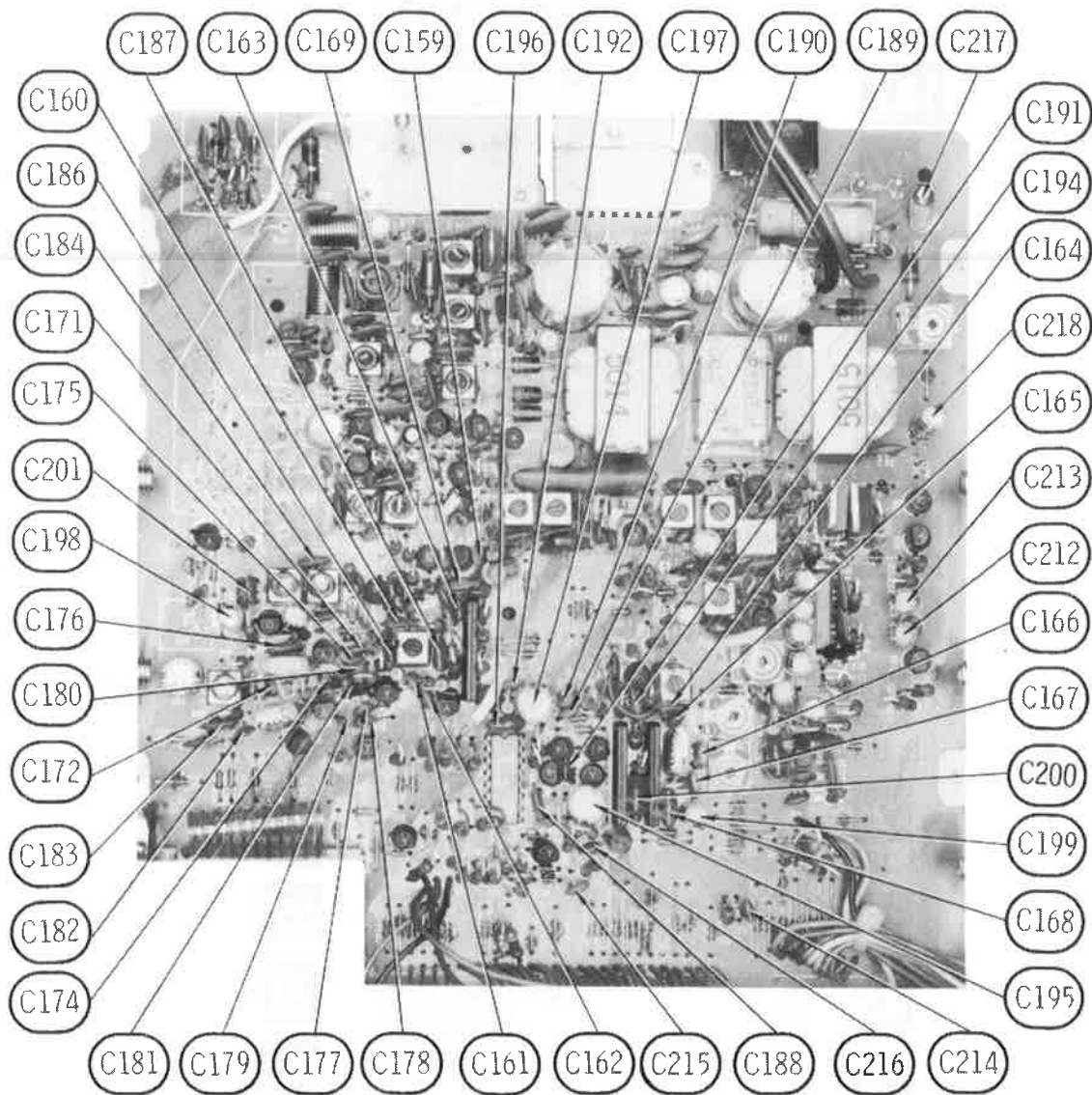
MAIN BOARD



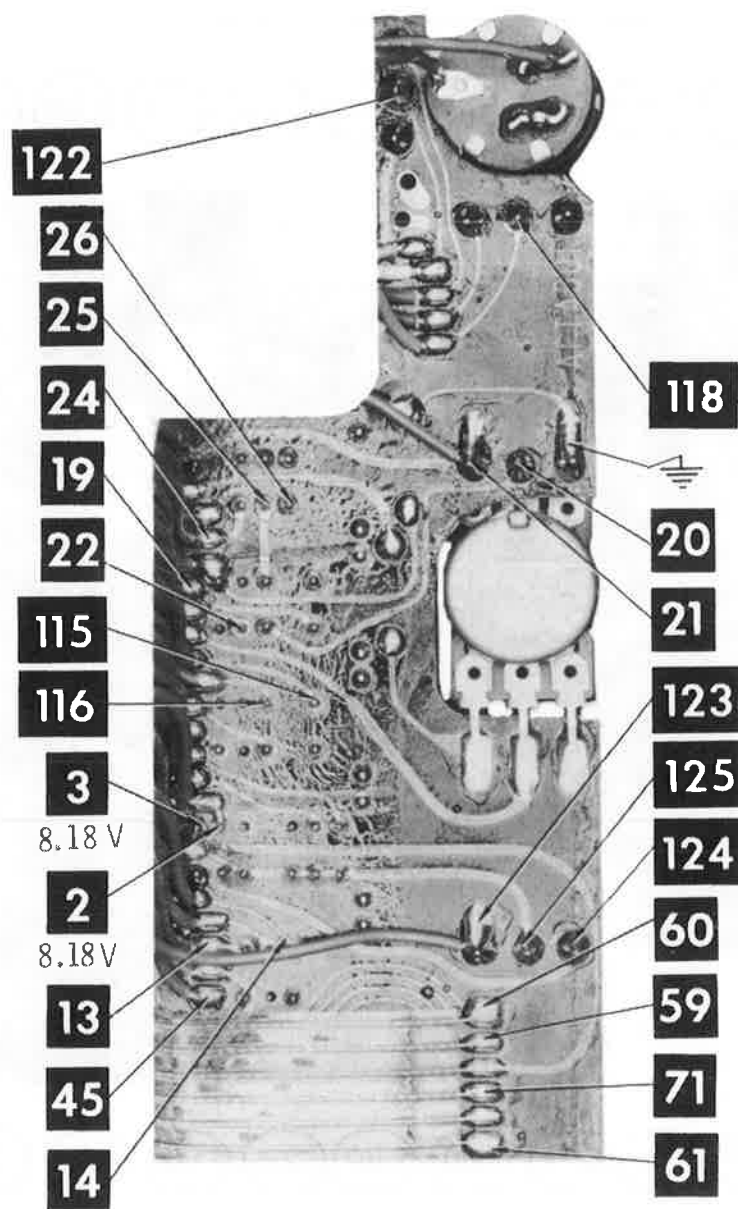
MAIN BOARD



MAIN BOARD

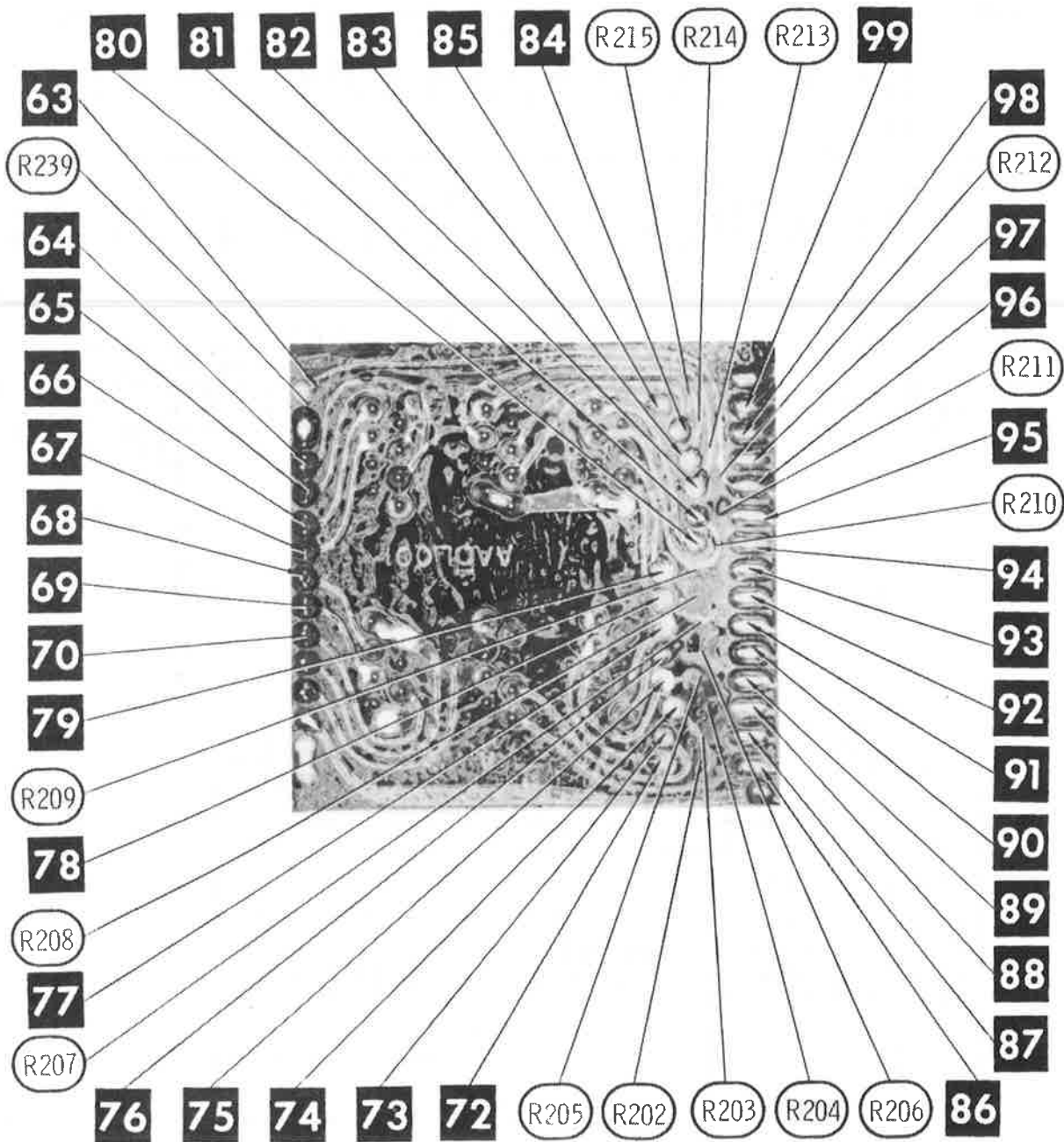


MAIN BOARD

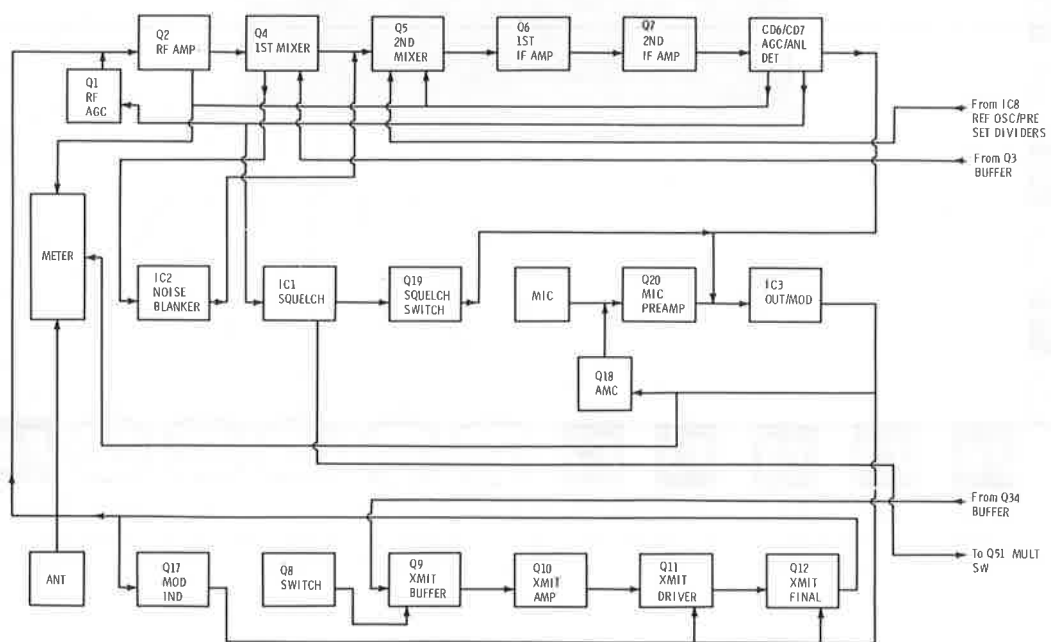
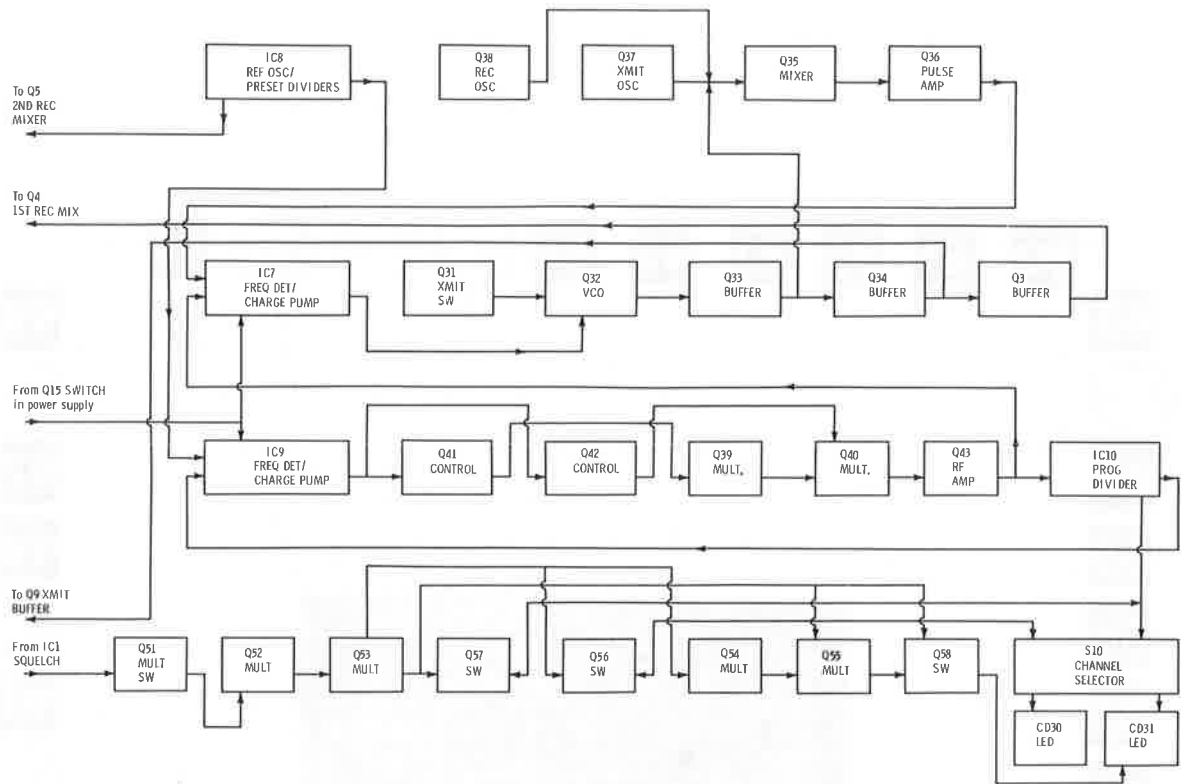


CONTROL BOARD

COBRA MODEL 32XLR



CH. SELECTOR BOARD



BLOCK DIAGRAM

PARTS LIST AND DESCRIPTION

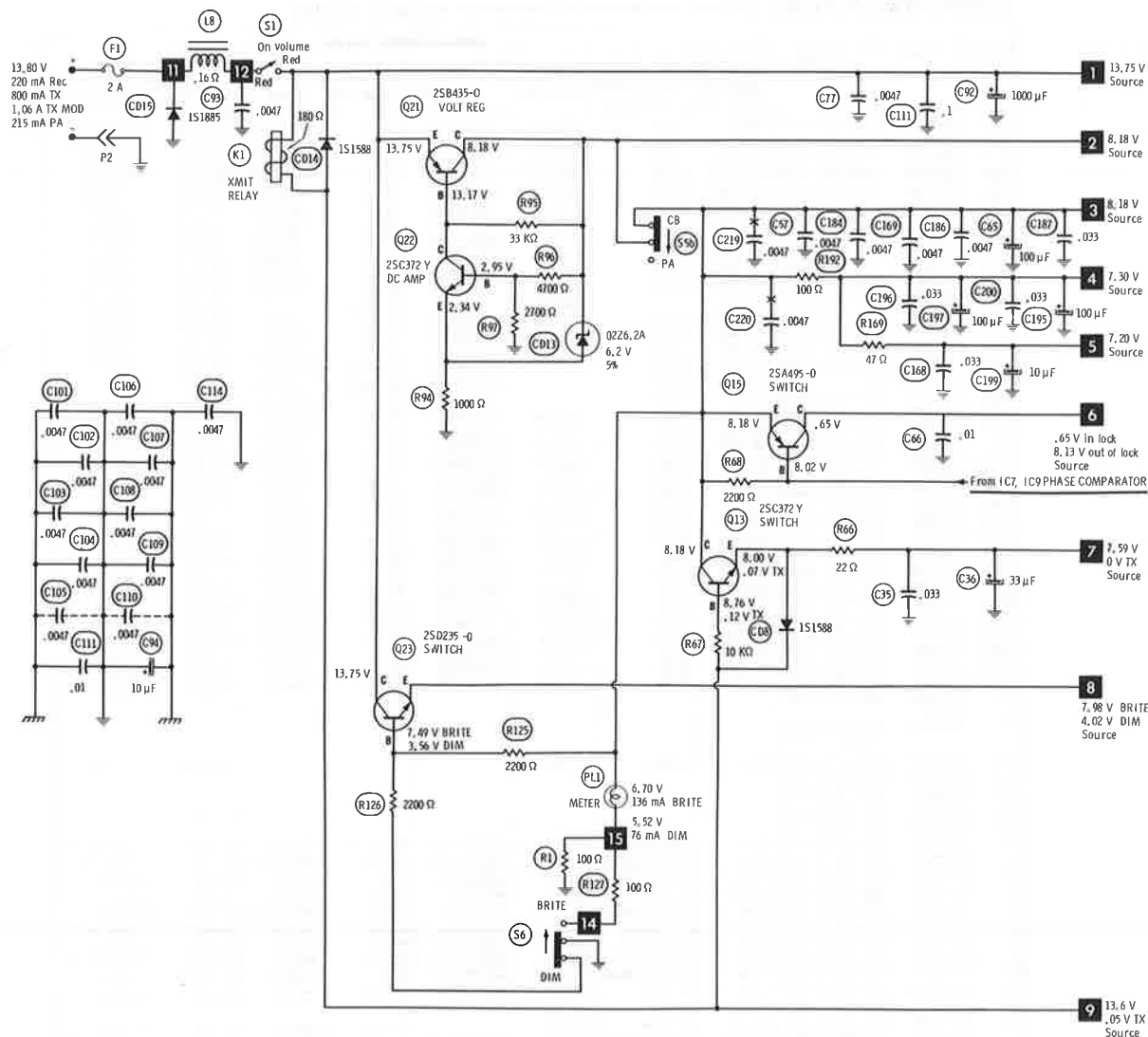
(When ordering parts, state Model, Part Number, and Description.)

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.
CD1	1N60	150-001-9-005	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
CD2	1N60	150-001-9-005	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
CD3	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD4	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD5	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD6	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD7	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD8	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD10	1S1885	151-030-9-005	GE-504A	5A4D	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
CD11	1S1885	151-030-9-005	GE-504A	5A4D	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
CD12	1S1885	151-030-9-005	GE-504A	5A4D	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
CD13	02Z6.2A	152-047-9-001	GEZD-6.2		ZB6.2B		RE 109		RT-237	ECG137
CD14	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD15	1S1885	151-030-9-005	GE-504A	5A4D	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
CD25	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD26	1S2208	151-062-9-001	GE-90	D201		HEPR2503	RE 195	SK3126	RT-262	ECG177
	SVC0053(1)		GE-90	D201		HEPR2503	RE 195	SK3126	RT-262	
CD27	1S1588	151-030-9-004	GE-90	D201		HEPR2503	RE 195	SK3126	RT-262	
CD28	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD29	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD41	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD42	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD43	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD44	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD45	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD46	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD47	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD49	1S1885	151-030-9-005	GE-504A	5A4D	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
CD51	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD52	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD53	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD54	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD55	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD56	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD57	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
CD58	1S1588	151-051-9-001	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
IC1	TA7064P	307-107-9-001								
IC2	10060									
	SV10052	307-107-9-002								
		(1)								
IC3	TA7205P	307-107-9-003	GEIC-179	WEP949	PTC780				TVCM-81	ECG1155
IC7	TC5081P	307-107-9-004								
IC8	TC5082P	307-107-9-005								
IC9	TC5081P	307-107-9-004								
IC10	TC5080P	307-107-9-006								
Q1	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q2	25C784R	176-056-9-001	GE-60 *	(1R)25C380A0	PTC132 *	HEPS0008 *	RE 28 *	SK3018 *	RT-187	ECG229 *
Q3	25C785R	176-056-9-003	GE-60 *	(1R)25C380A0	PTC132 *	HEPS0016 *	RE 9	SK3018 *	RT-187	ECG107
Q4	25K19GR	182-029-9-001	GE-FET-2	FE-100	PTC161	HEPF0021	RE 45	SK3116	RT-175	ECG312
Q5	25C785R	176-056-9-003	GE-60 *	(1R)25C380A0	PTC132 *	HEPS0016 *	RE 9	SK3018 *	RT-187	ECG107
Q6	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q7	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q8	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q9	25C785R	176-056-9-003	GE-60 *	(1R)25C380A0	PTC132 *	HEPS0016 *	RE 9	SK3018 *	RT-187	ECG107
Q10	25C1166Y	176-056-9-005	GE-81 *	TR-63 *	PTC143	HEPS0026 *	RE 210	SK3122	RT-141	ECG297
Q11	25C2074	176-070-9-001								
Q12	25C1678	172-028-9-001	GE-322	WEP1306	PTC186		RE 203	SK3197	RT-146	ECG235
Q13	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q15	25A495-0	177-019-9-003	GE-221 *	(1R)25A495	PTC103 *	HEPS0013 *	RE 26 *	SK3114	RT-303	ECG159 *
Q16	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
		(1)								
Q17	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
		(1)								
Q18	25A495-0	177-019-9-003	GE-221 *	(1R)25A495	PTC103 *	HEPS0013 *	RE 26 *	SK3114	RT-303	ECG159 *
Q19	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q20	25C732BL	176-056-9-006	GE-62	(1R)25C373	PTC139 *	HEPS0024 *	RE 192	SK3122	RT-302	ECG199
Q21	25B435-0	177-023-9-001	GE-58	TR-77	PTC162	HEPS0006 *	RE 22	SK3083	RT-155	ECG153
Q22	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q23	25D235-0	172-031-9-003	GE-66	TR-76	PTC167	HEPS0027 *	RE 21	SK3054	RT-197	ECG152
Q31	25A495-0	177-019-9-003	GE-221 *	(1R)25A495	PTC103 *	HEPS0013 *	RE 26 *	SK3114	RT-303	ECG159 *
Q32	25C785R	176-056-9-003	GE-60 *	(1R)25C380A0	PTC132 *	HEPS0016 *	RE 9	SK3018 *	RT-187	ECG107
Q33	25K19GR	182-029-9-001	GE-FET-2	FE-100	PTC161	HEPF0021	RE 45	SK3116	RT-175	ECG312
Q34	25C387A	176-044-9-002	GE-214	TR-80 *	PTC132 *	HEPS0020 *	RE 10 *	SK3039 *	RT-134	ECG108 *
Q35	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q36	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q37	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q38	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q39	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q40	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q41	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q42	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q43	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q51	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q52	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q53	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q54	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q55	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q56	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q57	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q58	25C372Y	176-042-9-003	GE-61 *	(1R)25C372	PTC121 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *

* Lead configuration may vary from original.
(1) Used in some versions.

COBRA MODEL 32XL

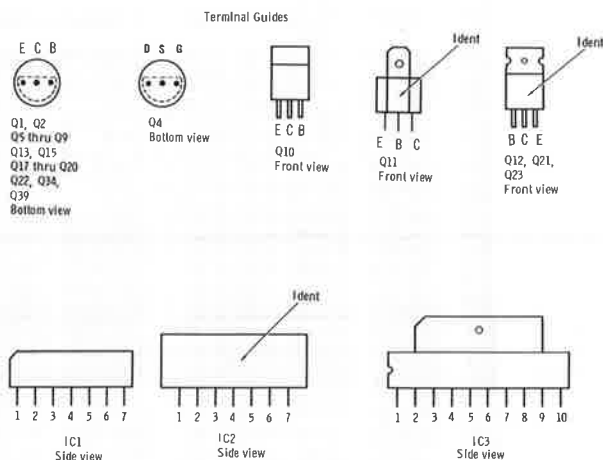


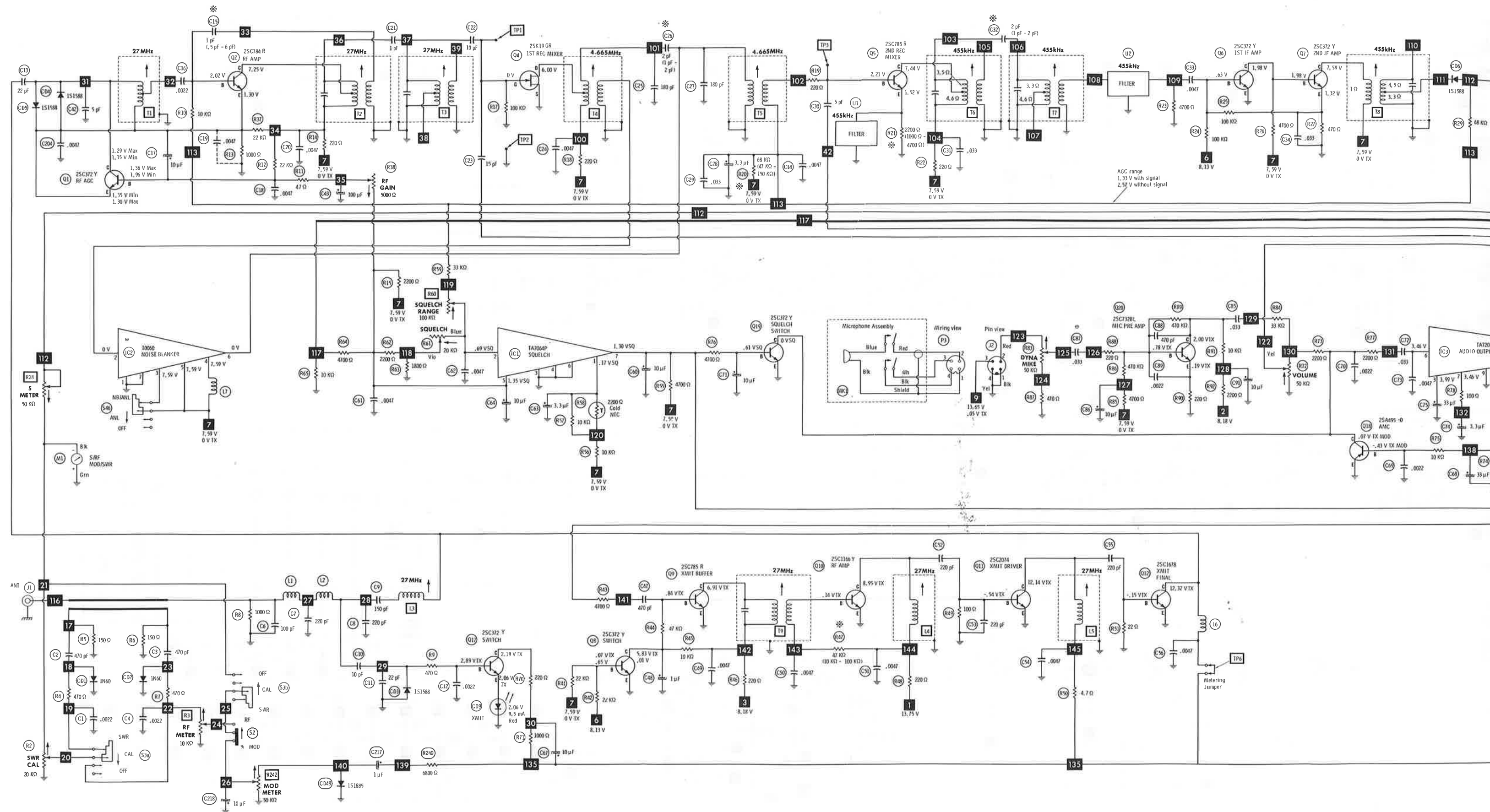
* Circuitry not used in some versions
 --- Circuitry used in some versions
 e See parts list
 * Nominal value
 G Ground
 Chassis
 Measurements with switching as shown unless noted:

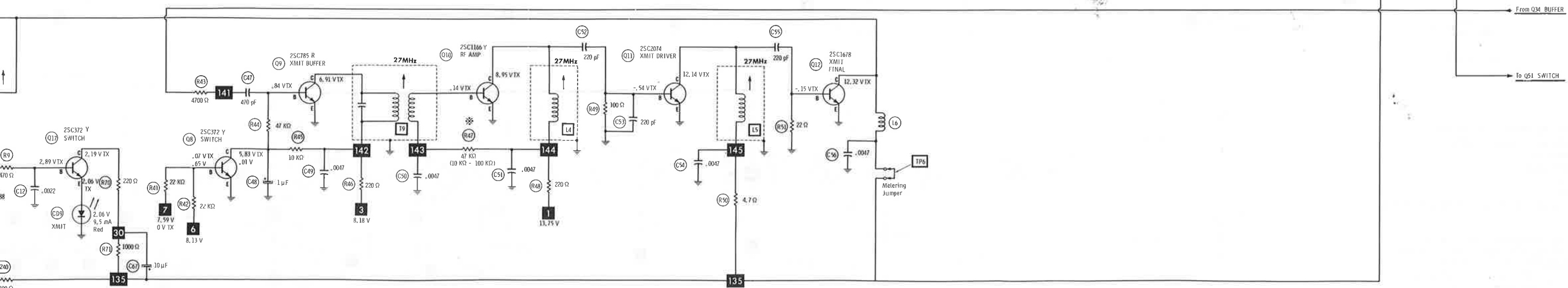
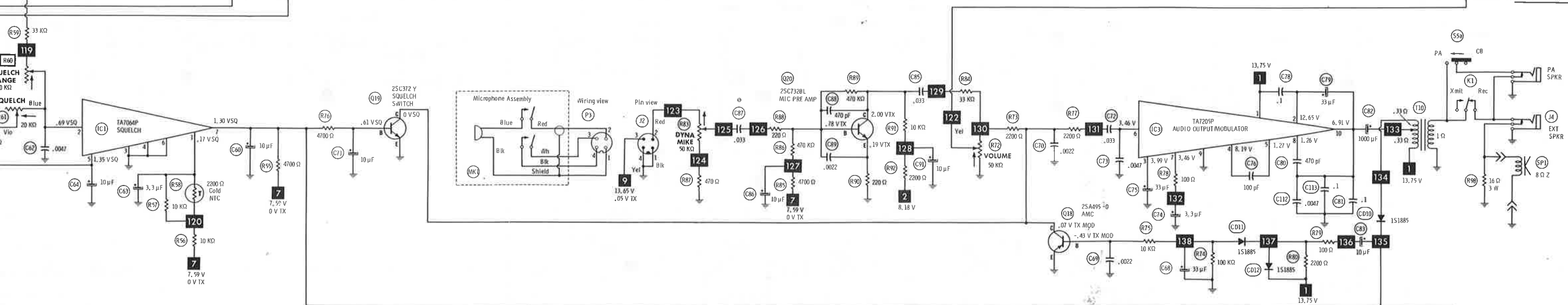
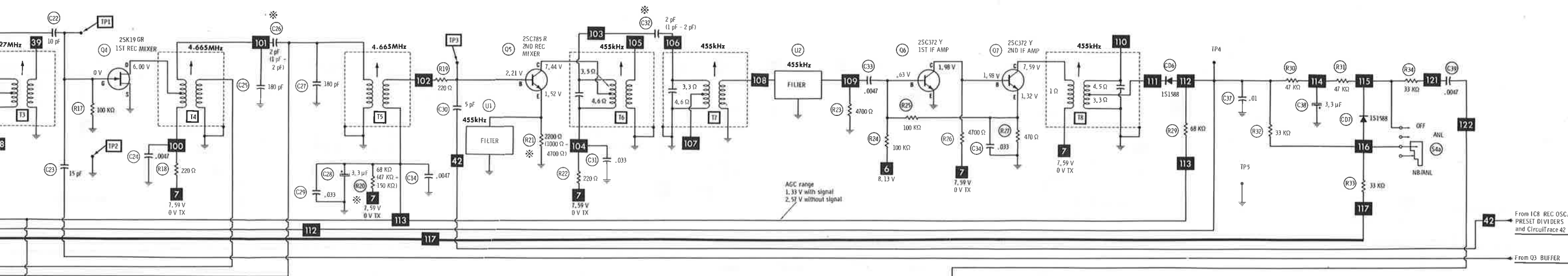
Supply voltage maintained as shown at input.
 Voltages measured with digital meter, no signal.
 Controls adjusted for normal operation.
 Arrow at control indicates direction of advance.
 Terminal identification may not be found on unit.
 Resistors are 1/2W or less, 5% unless noted.
 Value in () used in some versions.
 A PHOTOFAC STANDARD NOTATION SCHEMATIC

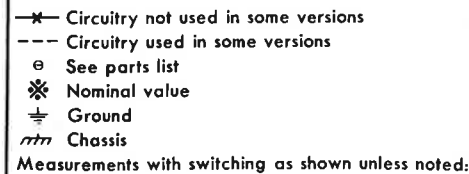
WITH CIRCUITACE

© Howard W. Sams & Co., Inc. 1977









A PHOTOFACT STANDARD NOTATION SCHEMATIC
WITH **CIRCUITRACE™**
© Howard W. Sams & Co., Inc. 1977

PARTS LIST AND DESCRIPTION (CONTINUED)

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

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA				
		MFR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C17	10 16V	022-076-9-003	PC10-25	VTT10A25	QV1-41	EV-1222
C28	3.3 50V	022-150-9-001	PC5-50	VTT3R3A50	QV1-25	EV-1618
C36	33 16V	022-076-9-005	PC30-25	VTT3D25	QV1-63	EV-1325
C38	3.3 50V	022-076-9-002	PC5-50	VTT3R3A50	QV1-25	EV-1618
C43	100 10V	022-076-9-010	PC100-10	VTT100E10	QV1-93	EV-1130
C48	1 50V	022-076-9-001	PC1-50	VTT1B63	QV1-11	EV-1615
C60	10 16V	022-076-9-003	PC10-25	VTT10A25	QV1-41	EV-1222
C63	3.3 50V	022-150-9-001	PC5-50	VTT3R3A50	QV1-25	EV-1618
C64	10 16V	022-076-9-003	PC10-25	VTT10A25	QV1-41	EV-1222
C65	100 10V	022-076-9-010	PC100-10	VTT100E10	QV1-93	EV-1130
C67	10 16V	022-076-9-008	PC10-25	VTT10A25	QV1-41	EV-1222
C68	33 3V	027-005-9-001		TDC336M010FL	QDT1-89	SD10-339
C71	10 16V	022-076-9-003	PC10-25	VTT10A25	QV1-41	EV-1222
C74	3.3 16V	027-020-9-001		TDC335M035FL		SD35-3R39
C75	33 16V	022-076-9-005	PC30-25	VTT3D25	QV1-63	EV-1325
C79	33 16V	022-076-9-005	PC30-25	VTT3D25	QV1-63	EV-1325
C82	1000 25V	022-150-9-002	WBR1000-25	VTT1000M25	QV1-185	EV-1360
C83	10 16V	022-076-9-003	PC10-25	VTT10A25	QV1-41	EV-1222
C86	10 16V	022-076-9-003	PC10-25	VTT10A25	QV1-41	EV-1222
C91	10 16V	022-076-9-003	PC10-25	VTT10A25	QV1-41	EV-1222
C92	1000 16V	022-150-9-003	PC1000-16	VTT1000L16	QV1-183	EV-1260
C94	10 16V	022-076-9-003	PC10-25	VTT10A25	QV1-41	EV-1222
C152	10 10V	022-076-9-003	PC10-25	VTT10A25	QV1-41	EV-1222
C195	100 10V	022-076-9-010	PC100-10	VTT100E10	QV1-93	EV-1130
C197	100 10V	022-076-9-010	PC100-10	VTT100E10	QV1-93	EV-1130
C198	10 16V	022-076-9-003	PC10-25	VTT10A25	QV1-41	EV-1222
C199	10 16V	022-076-9-003	PC10-25	VTT10A25	QV1-41	EV-1222
C212	3.3 50V	022-150-9-001	PC5-50	VTT3R3A50	QV1-25	EV-1618
C213	3.3 50V	022-150-9-001	PC5-50	VTT3R3A50	QV1-25	EV-1618
C217	1 50V	022-076-9-001	PC1-50	VTT1B63	QV1-11	EV-1615
C218	10 16V	022-076-9-003	PC10-25	VTT10A25	QV1-41	EV-1222

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
C1	.0022		DD-222		GP222	QC2-97	5GA-D22
C2	470		DD-471	GP470	GP347		10TS-T47
C3	470		DD-471	GP470	GP347		10TS-T47
C4	.0022		DD-222		GP222	QC2-97	5GA-D22
C6	100		DTZ-100	NP0100	CN0310		10TCC-T10
C7	220 10%		DD-221		GP322		10TS-T22
C8	220 10%		DD-221		GP322		10TS-T22
C9	150 10%		DD-151		GP315		10TS-T15
C10	10		DTZ-10	NP010	CN0410		10TCC-Q10
C11	22		DTZ-22	NP022	CN0422		10TCC-Q22
C12	.0022		DD-222		GP222	QC2-97	5GA-D22
C13	22 N220				*		10TCR-Q22
C14	.0047		DD-472	GP4700	GP247		5GA-D47
C15	1				CN0510		10TCC-V10
C16	.0022		DD-222		GP222	QC2-97	5GA-D22
C18	.0047		DD-472	GP4700	GP247		5GA-D47
C19	.0047		DD-472	GP4700	GP247		5GA-D47
C20	.0047		DD-472	GP4700	GP247		5GA-D47
C21	1				CN0510		10TCC-V10
C22	10		DTZ-10	NP010	CN0410		10TCC-Q10
C23	15 N220	020-173-9-010			*		10TCR-Q15
C24	.0047		DD-472	GP4700	GP247		5GA-D47
C25	180 5% N470	020-173-9-011			*		10TCT-T18
C26	2		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C27	180 5% N470	020-173-9-011			*		10TCT-T18
C29	.033				M192P3339R8		192P3339R8
C30	5		DTZ-4R7	NP04P7	CN0547		10TCC-V47
C31	.033				M192P3339R8		192P3339R8
C32	2		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C33	.0047		DD-472	GP4700	GP247		5GA-D47
C34	.033				M192P3339R8		192P3339R8
C35	.033				M192P3339R8		192P3339R8
C37	.01			WMF1S1	EWF1A110	QF1-91	1PB-S10
C39	.0047		DD-472	GP4700	GP247		5GA-D47
C42	5 N220	020-173-9-013			*		10TCR-V47
C47	470		DD-471	GP470	GP347		10TS-T47
C49	.0047		DD-472	GP4700	GP247		5GA-D47
C50	.0047		DD-472	GP4700	GP247		5GA-D47
C51	.0047		DD-472	GP4700	GP247		5GA-D47
C52	220 10%		DD-221		GP322		10TS-T22
C53	220 10%		DD-221		GP322		10TS-T22
C54	.0047		DD-472	GP4700	GP247		5GA-D47
C55	220 10%		DD-221		GP322		10TS-T22
C56	.0047		DD-472	GP4700	GP247		5GA-D47
C57	.0047		DD-472	GP4700	GP247		5GA-D47
C61	.0047		DD-472	GP4700	GP247		5GA-D47
C62	.0047		DD-472	GP4700	GP247		5GA-D47
C66	.01			WMF1S1	EWF1A110	QF1-91	1PB-S10
C69	.0022		DD-222		GP222	QC2-97	5GA-D22
C70	.0022		DD-222		GP222	QC2-97	5GA-D22
C72	.033				M192P3339R8		192P3339R8
C73	.0047		DD-472	GP4700	GP247		5GA-D47
C76	100		DTZ-100	NP0100	CN0310		10TCC-T10
C77	.0047		DD-472	GP4700	GP247		5GA-D47
C78	.1		CK-104		MAG5001		
C80	470		DD-471	GP470	GP347		10TS-T47
C81	.1		CK-104		MAG5001		
C85	.033				M192P3339R8		192P3339R8

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
C87	.033				M192P3339R8		192P3339R8
C88	470		DD-471	GP470	GP347	QC2-97	10TS-T47
C89	.0022		DD-222		GP222		5GA-D22
C93	.0047		DD-472	GP4700	GP247		5GA-D47
C101	.0047		DD-472	GP4700	GP247		5GA-D47
C102	.0047		DD-472	GP4700	GP247		5GA-D47
C103	.0047		DD-472	GP4700	GP247		5GA-D47
C104	.0047		DD-472	GP4700	GP247		5GA-D47
C105	.0047	(1)	DD-472	GP4700	GP247		5GA-D47
C106	.0047		DD-472	GP4700	GP247		5GA-D47
C107	.0047		DD-472	GP4700	GP247		5GA-D47
C108	.0047		DD-472	GP4700	GP247	QC2-97	5GA-D47
C109	.0047		DD-472	GP4700	GP247		5GA-D47
C110	.0047	(1)	DD-472	GP4700	GP247		5GA-D47
C111	.1		CK-104		MAG5001		5GA-D47
	.0047	(1)					
C112	.0047		DD-472	GP4700	GP247		5GA-D47
C113	.1		CK-104		MAG5001		5GA-D22
C151	.0022		DD-222		GP222		5GA-D47
C153	.0047		DD-472	GP4700	GP247		10TCC-Q15
C154	15		DTZ-15	NP015	CN0415		10TCC-Q47
C155	47		DTZ-47	NP047	CN0447	QC2-97	10TCC-Q10
C157	10		DTZ-10	NP010	CN0410		10TS-T47
C158	470		DD-471	GP470	GP347		5GA-D22
C159	.0022		DD-222		GP222		5GA-D47
C160	.0047		DD-472	GP4700	GP247		10TS-T22
C161	220		DD-221		GP322		10TS-T22
C162	220		DD-221		GP322		192P4729R8
C163	.0047 10%				M192P4729R8		10TCT-T15
C164	150 5% N470	020-173-9-005			*		10TCC-V47
C165	5		DTZ-4R7	NP04P7	CN0547		10TCR-Q47
C166	47 5% N220	020-173-9-014			*	QC2-97	10TCR-Q47
C167	47 5% N220	020-173-9-014			*		192P3339R8
C168	.033				M192P3339R8		5GA-D47
C169	.0047		DD-472	GP4700	GP247		5GA-D47
C171	.0047		DD-472	GP4700	GP247		10TCR-Q22
C172	22 N220				*		10TCC-Q20
C173	20		DTZ-20	NP020	CN0420		10TCC-T10
C174	100		DTZ-100	NP0100	CN0310		10TCC-Q47
C175	47		DTZ-47	NP047	CN0447		5GA-D47
C176	.0047		DD-472	GP4700	GP247	QF1-91	10TCC-V33
C177	3		DTZ-3R3	NP03P3	CN0533		10TCC-V33
C178	3		DTZ-3R3	NP03P3	CN0533		10TCC-T10
C179	100		DTZ-100	NP0100	CN0310		10TCC-Q47
C180	47		DTZ-47	NP047	CN0447		1PB-S10
C181	.01		WMF1S1		EWFI1A110		10TCU-Q47
C182	47 N750		DTN-47	N47	CN7447		5GA-D47
C183	.0047		DD-472	GP4700	GP247		5GA-D47
C184	.0047		DD-472	GP4700	GP247		5GA-D47
C186	.0047		DD-472	GP4700	GP247		5GA-D47
C187	.033				M192P3339R8	QC2-97	192P3339R8
C188	.0022		DD-222		GP222		5GA-D22
C189	220		DD-221		GP322		10TS-T22
C190	220		DD-221		GP322		10TS-T22
C191	.001			DPMS6D1	EWFI1A210	QF1-1	1PB-D10
C192	470		DD-471	GP470	GP347		10TS-T47
C196	.033		DD-472	GP4700	GP247		5GA-D47
C200	.033		DD-472	GP4700	GP247		5GA-D47
C201	.0022		DD-222		GP222		5GA-D22
C203	22		DTZ-22	NP022	CN0422		10TCC-Q22
C204	.0047		DD-472	GP4700	GP247		5GA-D47
C214	.0068 10%			WMF1D68	EWFI1A268	QF1-73	1PB-D68
C215	470		DD-471	GP470	GP347		10TS-T47
C216	470		DD-471	GP470	GP347		10TS-T47
C218	22		DTZ-22	NP022	CN0422		10TCC-Q22
C219	.0047		DD-472	GP4700	GP247		5GA-D47
C220	.0047		DD-472	GP4700	GP247		5GA-D47

* 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.
R2	SWR CAL	20K	008-306-9-001 (18)				
R38	RF Gain	5000					
R3	RF Meter	10K	008-206-9-008				
R28	S Meter	50K	008-206-9-006				
R60	Squelch Range	100K	008-206-9-001				
R61	Squelch	20K	008-300-9-002				
R72	Volume/Power Switch	50K	008-300-9-003				
R83	Dynamike	50K	008-300-9-004				
R180	Delta Tune	20K	008-300-9-002				
R242	Modulation Meter	50K	008-206-9-006				

(18) Includes R2 and R38.

PARTS LIST AND DESCRIPTION (CONTINUED)

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

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFGR. PART No.			WORKMAN PART No.	MFGR. PART No.
R58	2.2K Co1d NTC		004-099-9-002				

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	RF Choke	044-025-9-005			
L2	RF Choke	044-025-9-005			
L3	Final Amp (27MHz)	041-054-9-002			
L4	RF Amp (27MHz)	041-084-9-001	25082		
L5	Xmit Driver (27MHz)	041-084-9-001	25082		
L6	RF Choke	042-013-9-002			
L7	RF Choke	042-022-9-002			
L11	VCO (22MHz)	041-084-9-001	25082		
L12	VCO (22MHz)	041-084-9-002	25085		
L13	Mixer (1MHz)	041-084-9-003	25090		
L14	Rec Osc (22MHz)	041-084-9-004	25086		
T1	Rec Antenna (27MHz)	066-026-9-001	25087		
T2	Rec RF (27MHz)	066-013-9-002	1641		
T3	Rec RF (27MHz)	066-015-9-014	1642		
T4	Rec Mixer (4.665MHz)	066-026-9-002	25088		
T5	Rec Mixer (4.665MHz)	066-026-9-002	25088		
T6	IF (455kHz)	060-014-9-004	0753		
T7	IF (455kHz)	060-014-9-004	0753		
T8	IF (455kHz)	060-014-9-004	0753		
T9	Xmit Buffer (27MHz)	066-026-9-003	25089		
T13	Ref Osc (5MHz)	066-026-9-002	25088		

COBRA MODEL 32XLR

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.	
L8	1.06A	.16	1.26mH	042-022-9-003 5015 (1)	TR573		(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	31.3	16	061-029-9-001 5014 (1)	TR833		(1) Number on unit.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	2" X 6" PM 16 Ohms	580-011-9-001	26A07UZ16	

PARTS LIST AND DESCRIPTION (CONTINUED)

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

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA						
		PART No.		BUSS PART No.		LITTELFUSE PART No.		WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE
F1	2A Fast Acting	191-251-3-002		AGC2	HDJ	312002	150145	FG2-2

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	260-003-9-001	18-032	18-034	18-010	18-092	2	1	3	NC	NC	4

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	5.120	133-012-9-001		Ref. Osc.	X3	10.825	133-012-9-003	CB20W10825	Rec. Osc.
X2	13.157	133-012-9-002	CB20W13157	Xmit Osc.					

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
CD9	LED	158-013-9-001	Xmit Indicator
CD30	LED	158-013-9-002	Channel Indicator
CD31	LED	158-013-9-002	Channel Indicator
CD48	LED	158-013-9-001	Channel 9 Indicator
K1	Relay	441-010-9-001	Xmit/Rec (180 Ohm)
M1	Meter	320-080-9-001	S/R/Mod/SWR
S1	Part of Volume Control	008-300-9-003	On/Volume
S2	Switch	080-007-9-001	RF/Mod
S3	Switch	080-007-9-002	CAL/SWR/Off
S4	Switch	080-007-9-002	NB/ANL
S5	Switch	080-007-9-004	CB/PA
S6	Switch	080-007-9-001	Brite/Dim
S7	Switch	080-007-9-001	Hold/Scan/Off
S10	Switch	083-213-9-001	Channel Selector
U1	Filter	140-010-9-001	455kHz
U2	Filter	140-010-9-002	455kHz
	Printed Circuit Board	302-221-9-001	Main (KLTA-001) (1)
	Printed Circuit Board	302-222-9-001	Control
	Printed Circuit Board	302-223-9-001	LED
	Printed Circuit Board	302-224-9-001	Channel Switch

(1) Number on unit.

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

ITEM	PART No.	ITEM	PART No.
Cover Assembly, Top	527-073-9-001	Knob, RF	751-144-9-002
Cover Assembly, Bottom	527-073-9-001	Knob, SWR	751-144-9-003
Panel, Front	255-147-9-001	Knob, Control	751-144-9-004
Knob, Channel Selector	755-144-9-001		

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)
Coiled Microphone Cable	Use BELDEN No. 8497 3-Conductor (1 shielded for Press-to-Talk) Neoprene