

PHOTOFACT[®] with

CIRCUITRACE[®]

For Supplier Address See PHOTOFACT Index

NOTE

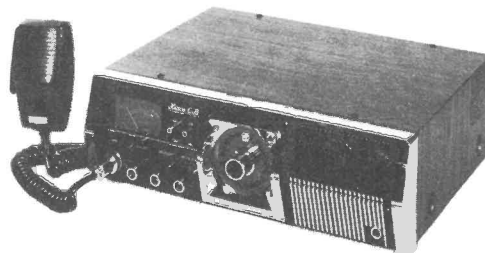
Repair or adjustment of transmitter circuits must be under supervision of a person with first-or second-class radiotelephone license.

(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 KB-4045

MANUFACTURER'S SPECIFICATIONS

GENERAL

Circuitry	23 Transistors, 4 ICs, 22 Diodes
Frequency Control	PLL (Phase Lock Loop) Frequency synthesizing system
Channels	40 channels all installed
Mode of Operation	AM
Speaker	3" dynamic, 8 ohms
Microphone	Dynamic, 500—600 ohms
Power Source	117 V, 50/60 Hz (AC) or 13.8 V (DC)

RECEIVER SECTION

Receiving System	Dual conversion system
Sensitivity	0.7 μ V for 10 dB S/N
Selectivity	More than 45 dB down at ± 10 kHz
Delta Tune	About ± 1 kHz
Spurious Rejection	—45 dB
Audio Output Power	3.0 watts at 8 ohms
Squelch Range	0.7 μ V to 300 μ V
IF	
1st	10.695 MHz
2nd	455 kHz

TRANSMITTER SECTION

Modulation System	High level class B, Power IC
RF Output Power	4 watts (F.C.C. maximum), at 117 V AC, 50/60 Hz or 13.8 V DC
Frequency Tolerance	$\pm 0.005\%$
Spurious Rejection	More than 60 dB down

Courtesy of the Manufacturer

KRACO MODEL KB-4045

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

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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.
Adjust RV1 for 13.8-volts DC output at TP11.
Connect low sides of test equipment to ground unless specified otherwise.
Connect 50-ohm dummy load or antenna before keying transmitter.
Connect microphone.

Suggested Alignment Tools: GC ELECTRONICS:
L14, T7 thru T10 5009,8728,8728A
L7, L11, L12 9304,9300,9302
L1, L2, L5, T1 thru T6 9440
CT1 5000,8276

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of frequency counter to TP1 (Q1 Emitter).	Ch. 19	CT1	Adjust for 10.240MHz $\pm$ 50Hz.
Input of oscilloscope to TP2 (T1 Secondary).	Ch. 19	T1	Adjust for maximum. (60mV p-p typical.)
Input of DC meter to TP8.	Ch. 1	L1	Adjust for 3.60V $\pm$.1V.
Input of frequency counter to TP3 (IC3 Pin 2).	Ch. 19, XMT		Check for 10.695MHz.
Input of oscilloscope to TP4 (IC3 Pin 4).	Ch. 19	L2,T2	Adjust for maximum. (20mV p-p typical.)
Input of frequency counter to TP4 (IC3 Pin 4).	Ch. 1		Check for 37.660MHz. Check all channels. (See Truth Chart for correct frequencies.)

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. Preset as follows; unless otherwise noted:
Delta Tune 0, Squelch MINIMUM, ANL Off.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to TP10 (Q10 Emitter). 455kHz, 1000Hz @ 30% modulation.	Ch. 19	T10,T9,T8	Adjust for maximum output.
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation.	Ch. 19	T7,L14,T6,T5	Adjust for maximum output. If necessary, readjust T8, T9 and T10.

RECEIVER ADJUSTMENTS

Connect an AC VTVM or AF wattmeter across speaker voice coil.
Adjust volume control to obtain a suitable indication. Preset as follows; unless otherwise noted:
Delta Tune 0, Squelch MINIMUM, ANL Off.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation. Output 1000uV.	Ch. 19 Squelch Maximum	RV1	SQUELCH RANGE Adjust so squelch just breaks.
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation. Output 100uV.	Ch. 19	RV3	S METER Adjust for 9 on S unit 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. 19	L5,T3,T4, L7,L11,L12	Adjust for maximum.
	Ch. 19	L12	Adjust for 3.8 watts maximum.

TRANSMITTER ADJUSTMENTS

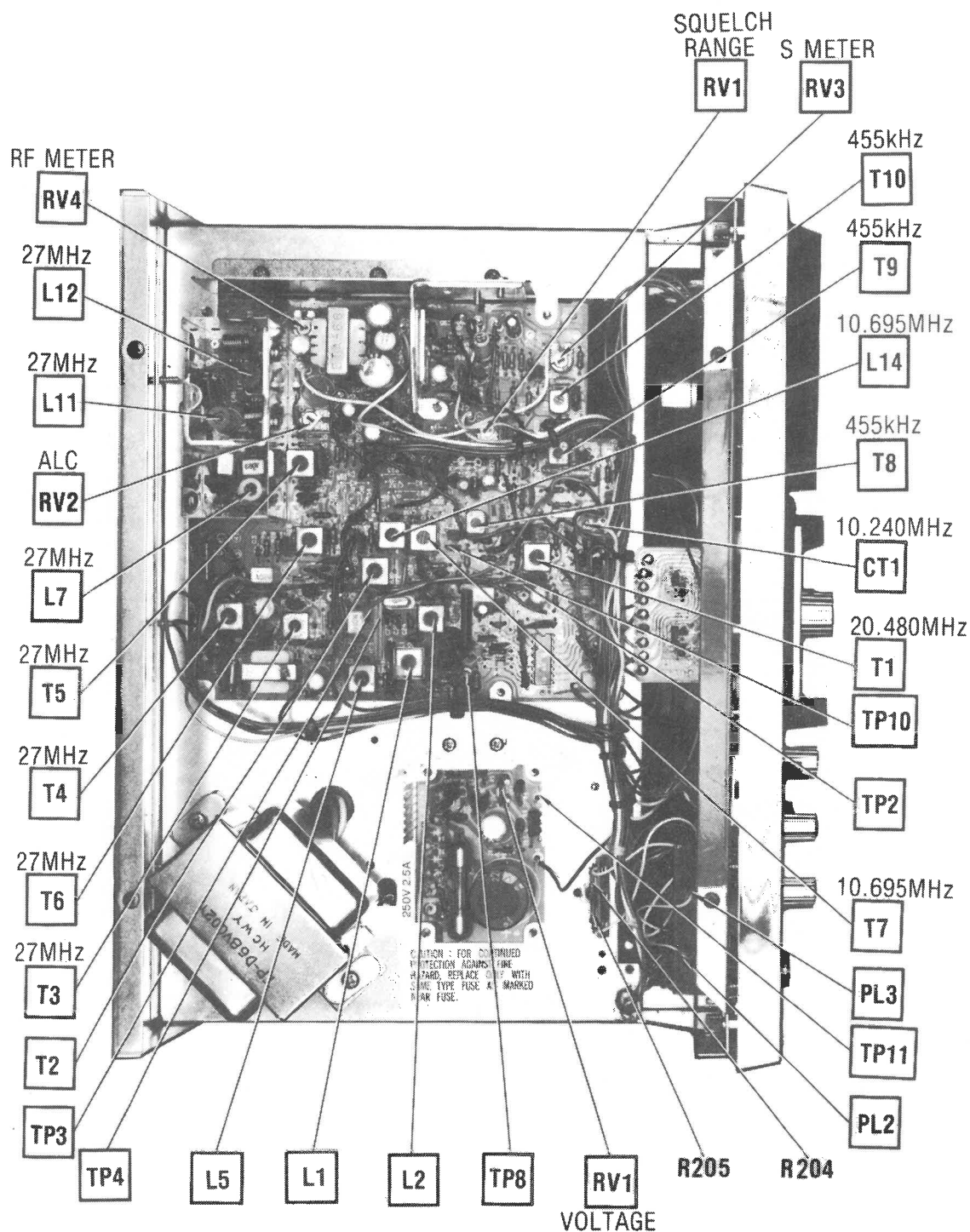
Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.
NOTE: Be sure to check transmit frequency and power on all active channels after adjustment of transmitter.
See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Modulation meter to antenna jack. Inject a 20mV, 1000Hz signal at mic input.	Ch. 19	RV2	ALC Adjust for 80% modulation.
	Ch. 19	RV4	RF PANEL METER Adjust so RF panel meter agrees with RF wattmeter.

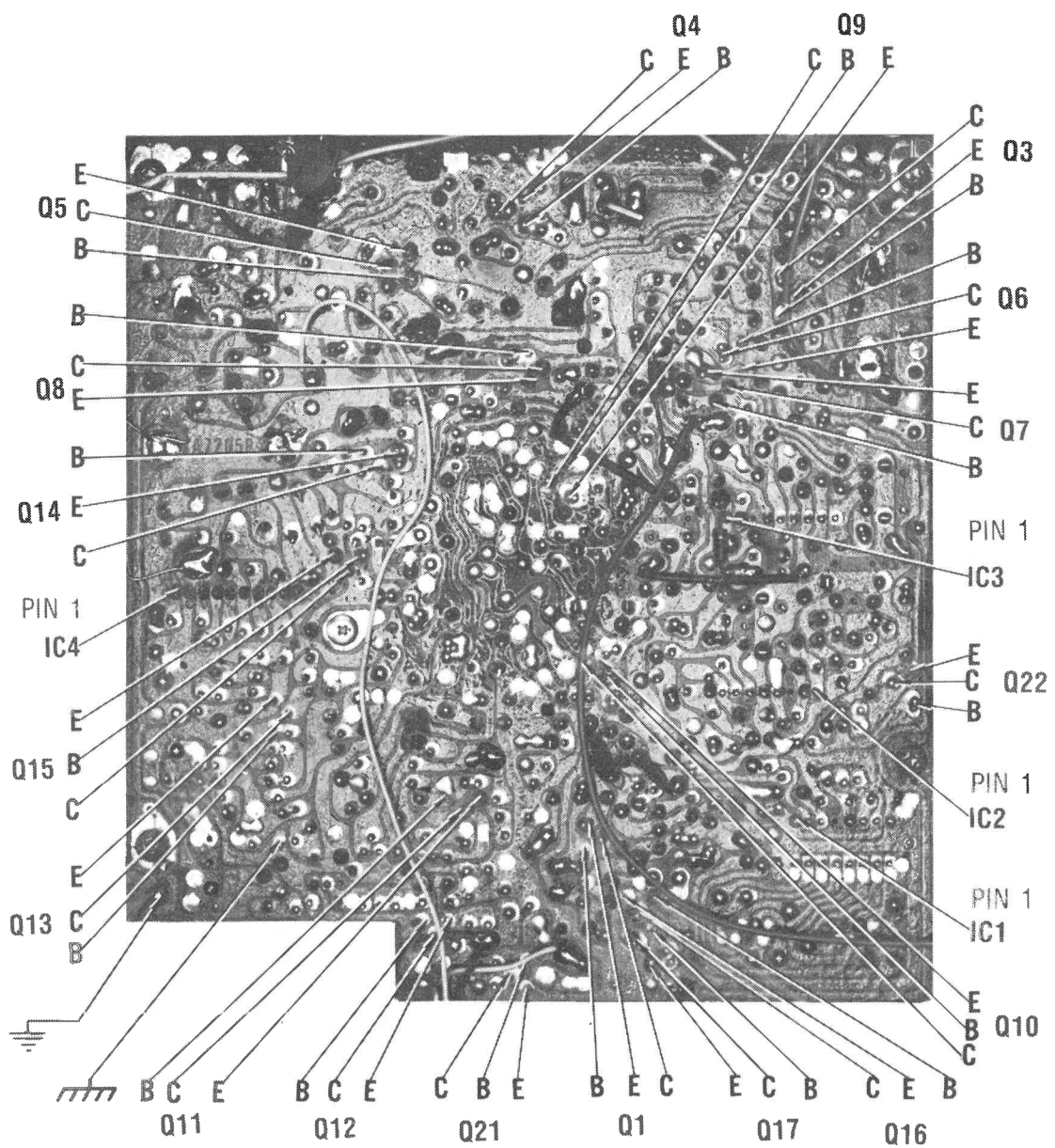
KRACO MODEL KB-4045

TRUTH CHART

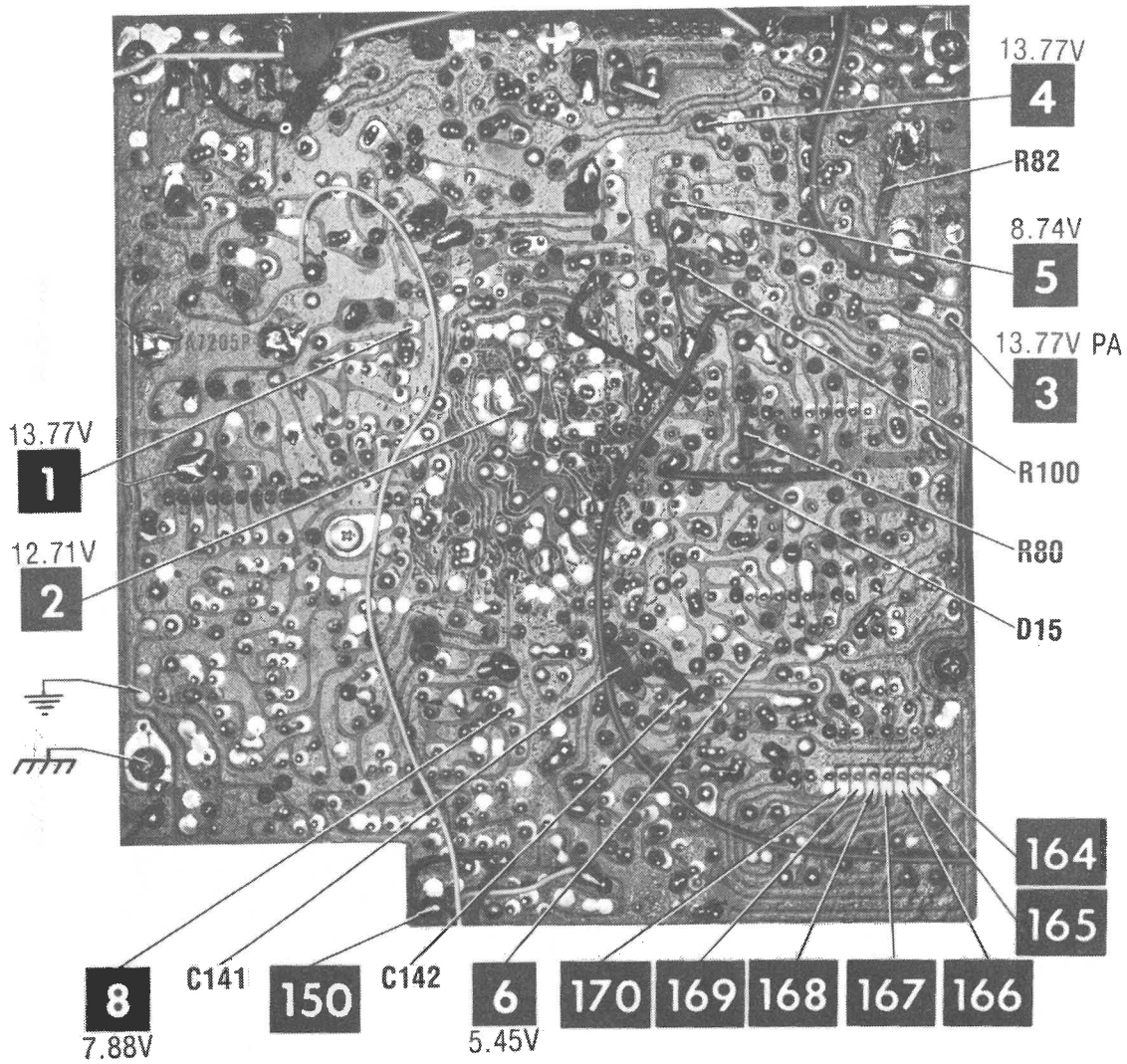
C H A N N E L	1 = 5.45 Volts 0 = 0 Volts								REC & XMT VCO OUTPUT IN MHz AT TP4		
	IC1 PROGRAM DIVIDER										
	PINS										
	9	10	11	12	13	14	15				
1	1	0	0	1	0	1	0		37.660		
2	1	0	0	1	0	0	1		37.670		
3	1	0	0	1	0	0	0		37.680		
4	1	0	0	0	1	1	0		37.700		
5	1	0	0	0	1	0	1		37.710		
6	1	0	0	0	1	0	0		37.720		
7	1	0	0	0	0	1	1		37.730		
8	1	0	0	0	0	0	1		37.750		
9	1	0	0	0	0	0	0		37.760		
10	0	1	1	1	1	1	1		37.770		
11	0	1	1	1	1	1	0		37.780		
12	0	1	1	1	1	0	0		37.800		
13	0	1	1	1	0	1	1		37.810		
14	0	1	1	1	0	1	0		37.820		
15	0	1	1	1	0	0	1		37.830		
16	0	1	1	0	1	1	1		37.850		
17	0	1	1	0	1	1	0		37.860		
18	0	1	1	0	0	0	1		37.870		
19	0	1	1	0	1	0	0		37.880		
20	0	1	1	0	0	1	0		37.900		
21	0	1	1	0	0	0	1		37.910		
22	0	1	1	0	0	0	0		37.920		
23	0	1	0	1	1	0	1		37.950		
24	0	1	0	1	1	1	1		37.930		
25	0	1	0	1	0	1	0		37.940		
26	0	1	0	1	1	0	0		37.960		
27	0	1	0	1	0	1	1		37.970		
28	0	1	0	1	0	1	0		37.980		
29	0	1	0	1	0	0	1		37.990		
30	0	1	0	1	0	0	0		38.000		
31	0	1	0	0	1	1	1		38.010		
32	0	1	0	0	1	1	0		38.020		
33	0	1	0	0	1	0	1		38.030		
34	0	1	0	0	1	0	0		38.040		
35	0	1	0	0	0	1	1		38.050		
36	0	1	0	0	0	1	0		38.060		
37	0	1	0	0	0	0	1		38.070		
38	0	1	0	0	0	0	0		38.080		
39	0	0	1	1	1	1	1		38.090		
40	0	0	1	1	1	1	0		38.100		



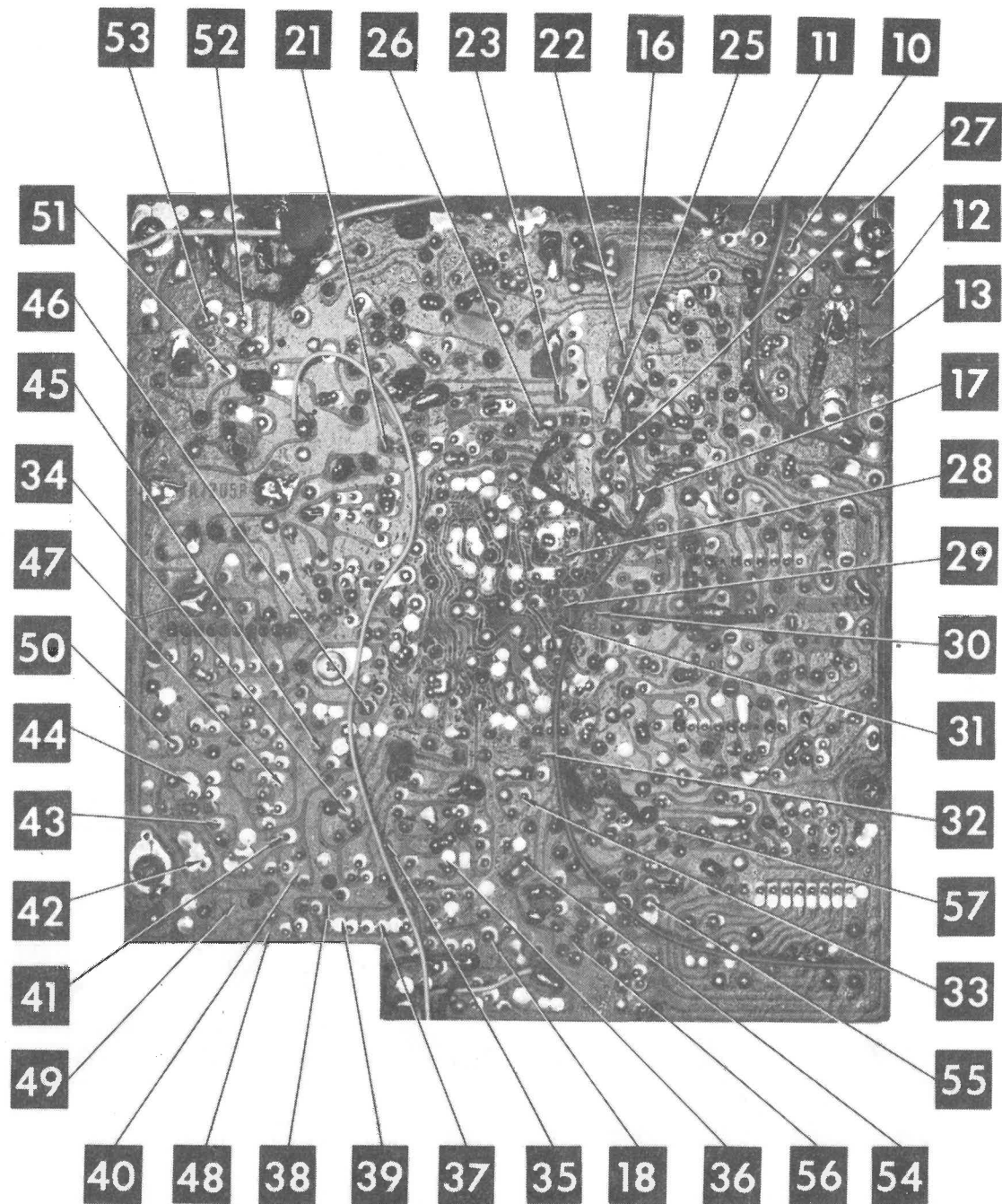
CHASSIS - TOP



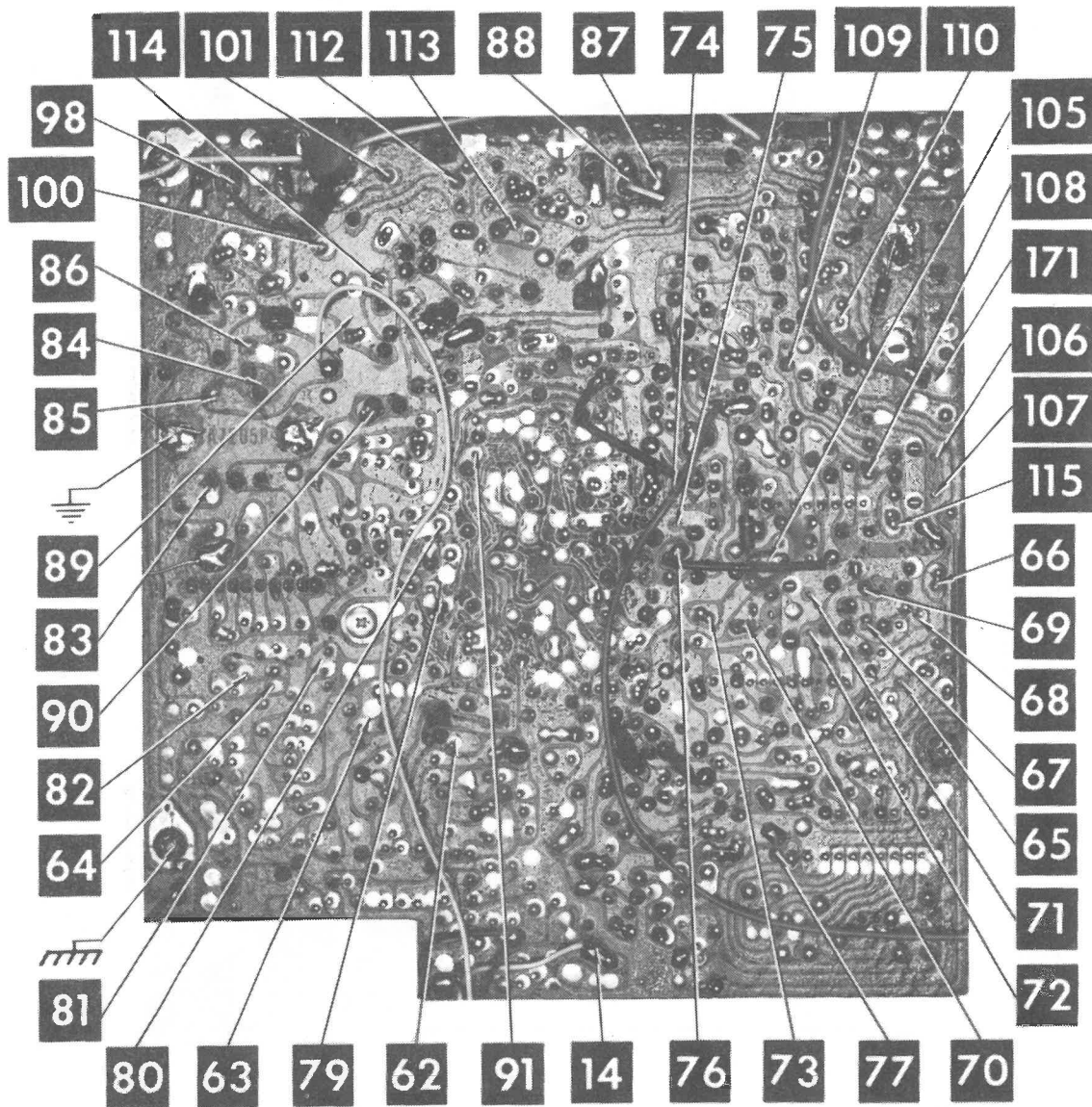
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MAIN BOARD

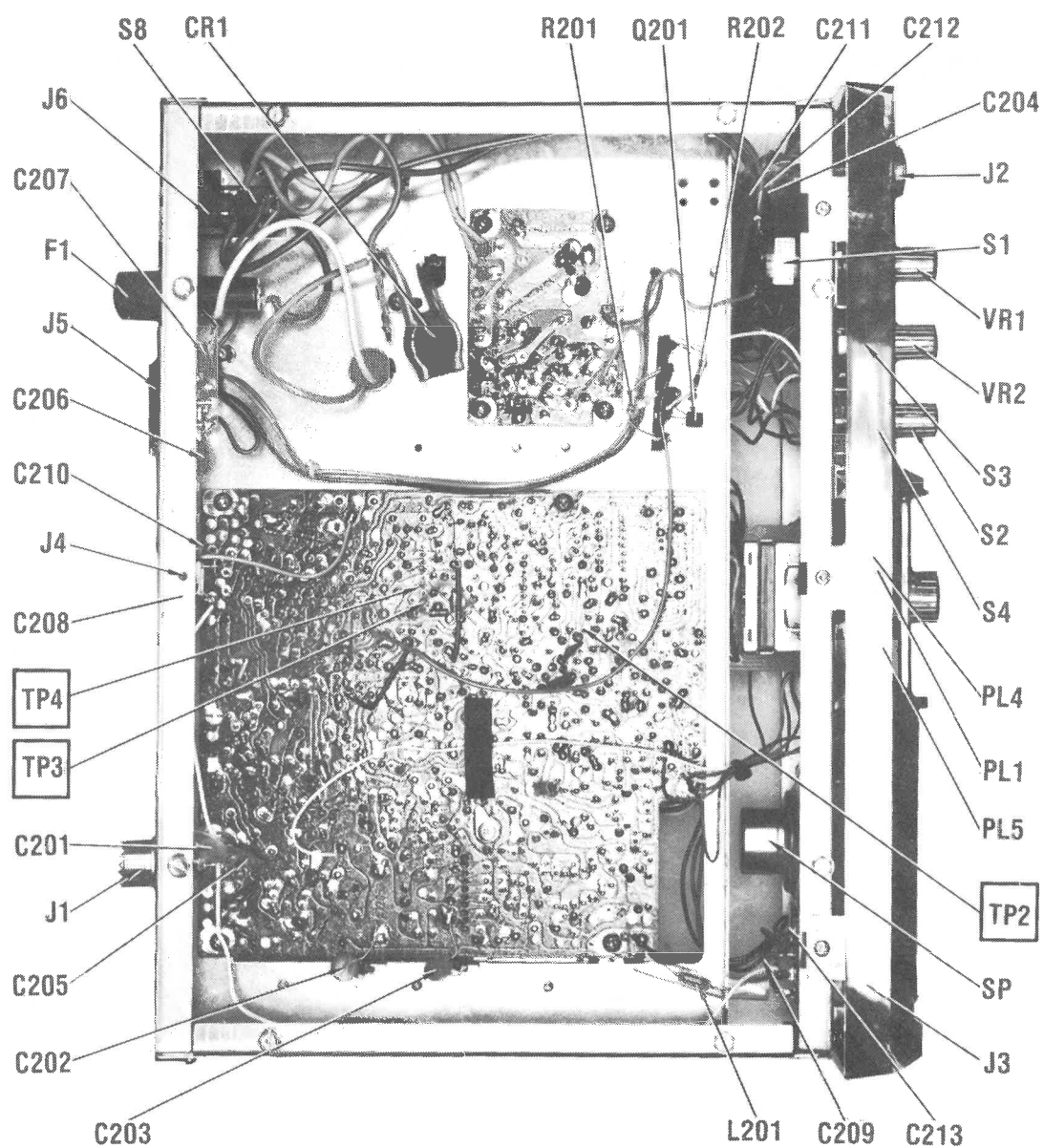


MAIN BOARD

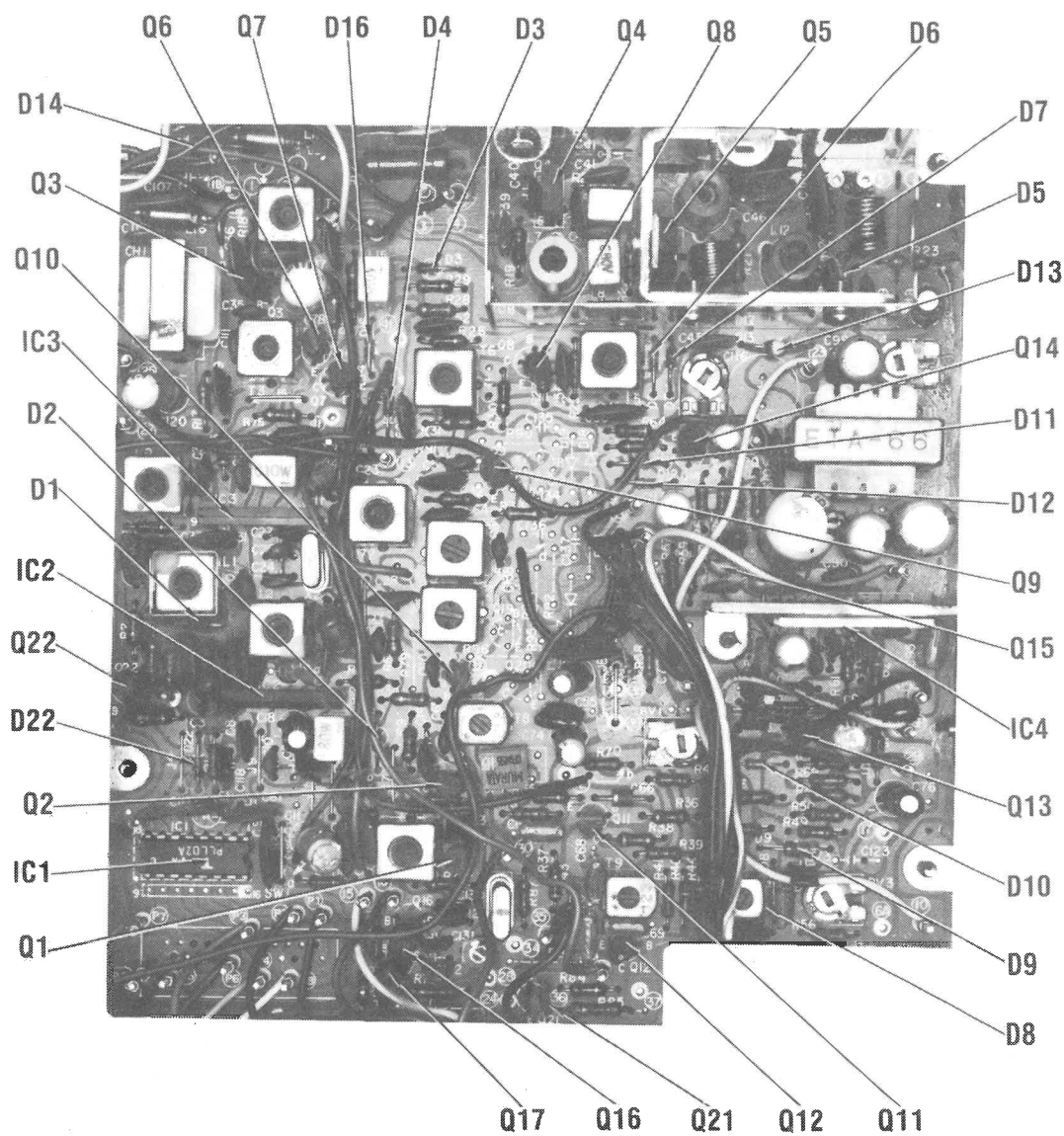


KRACO MODEL KB-4045

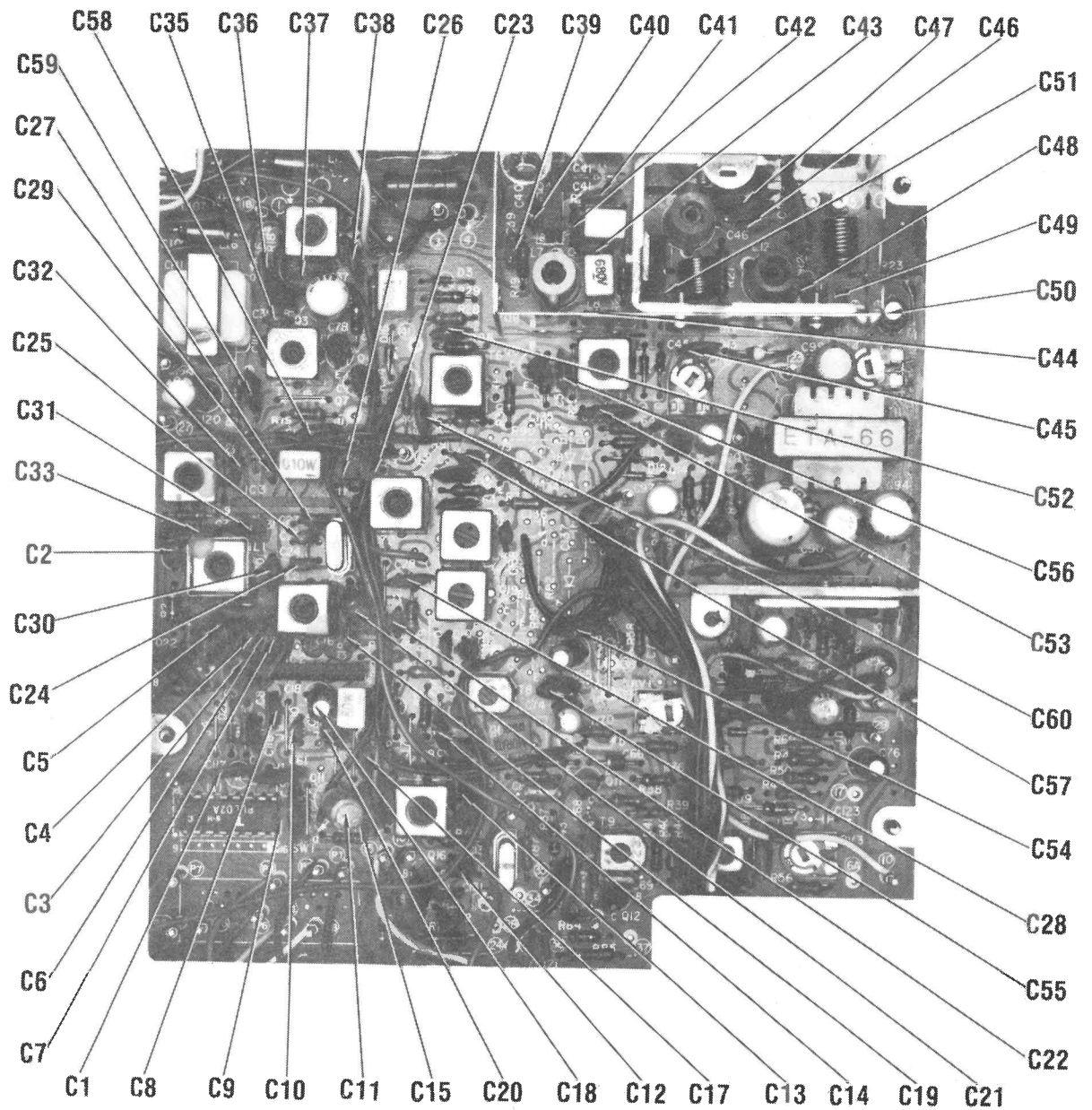
MAIN BOARD



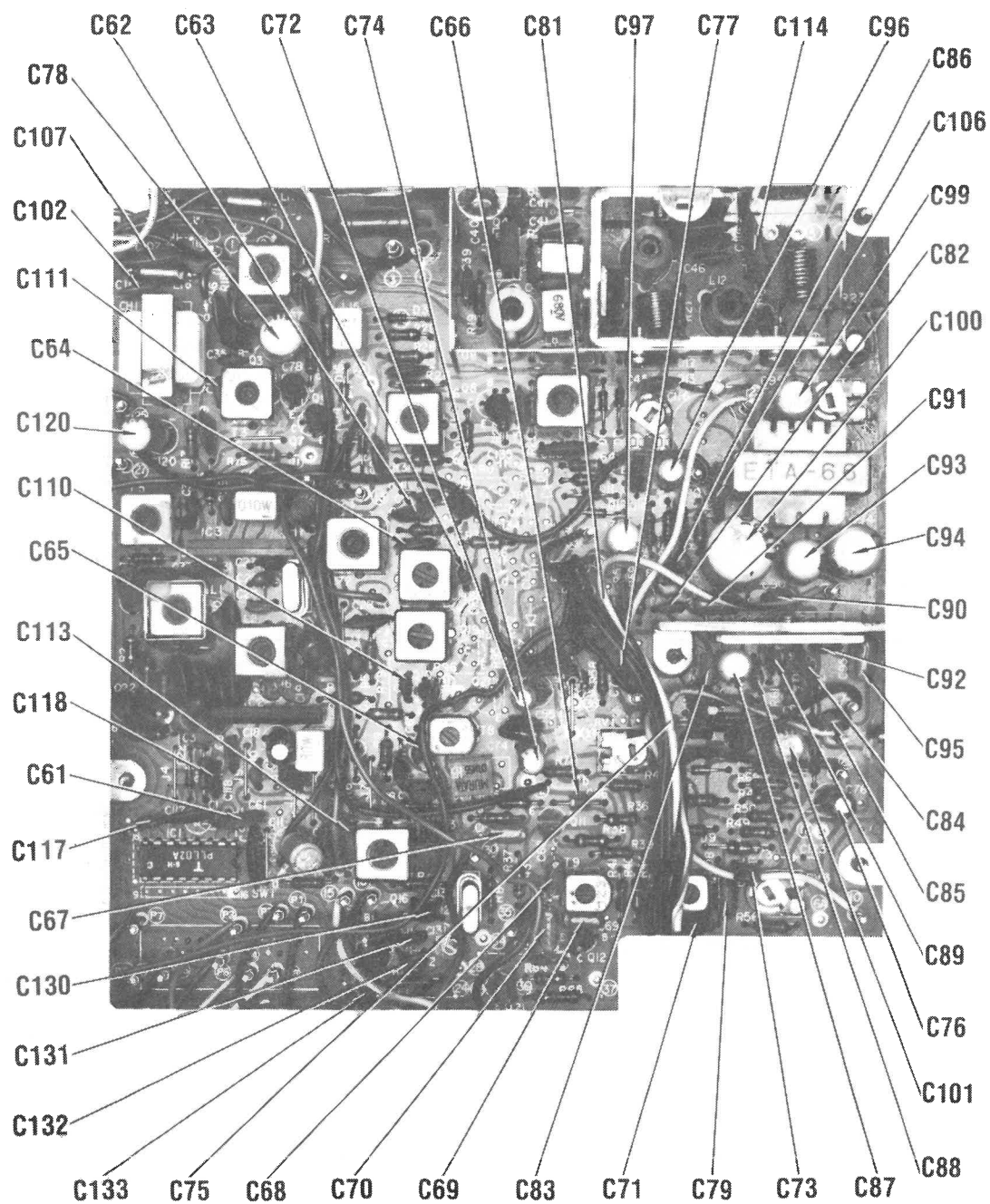
CHASSIS - BOTTOM



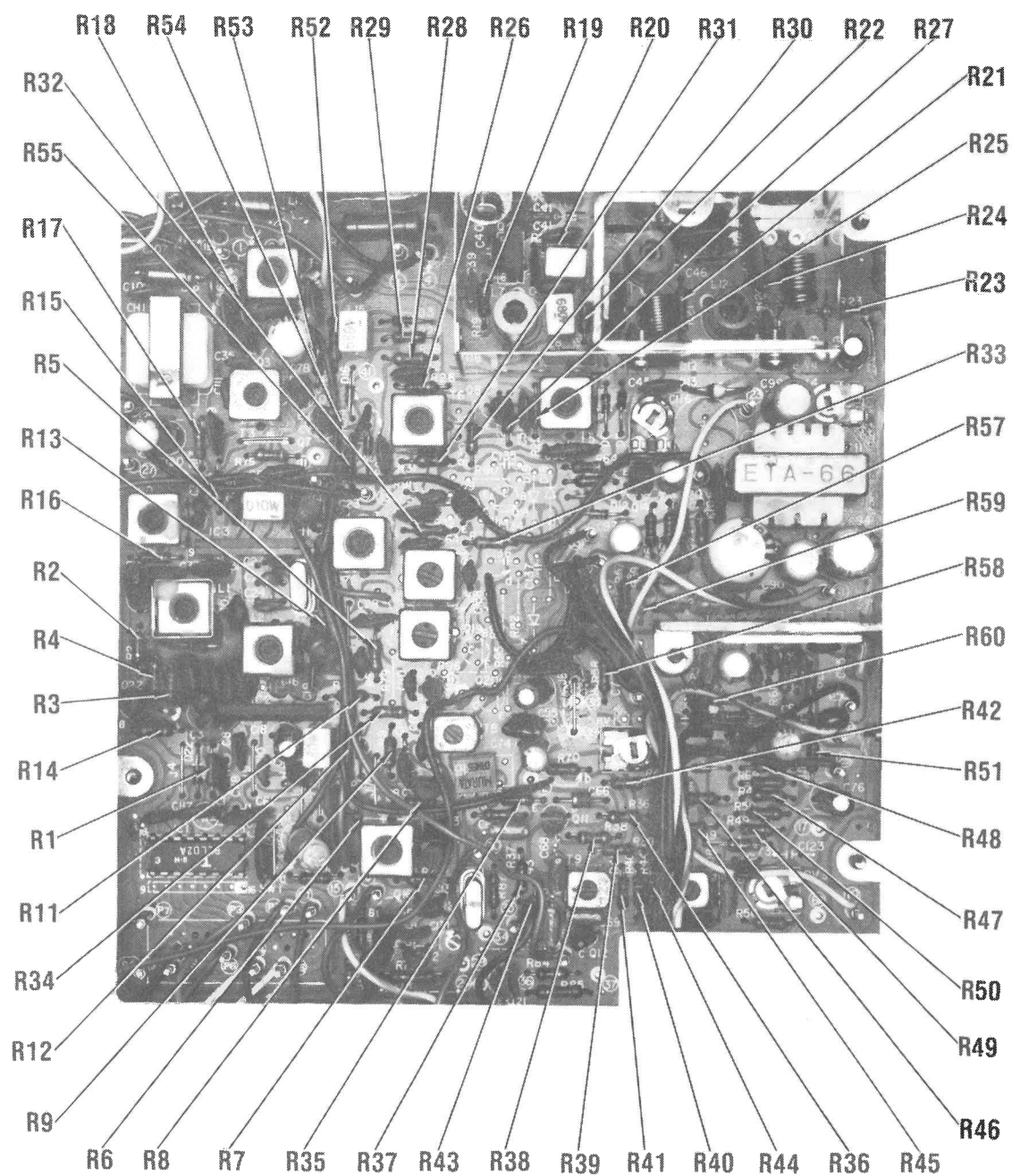
MAIN BOARD



MAIN BOARD

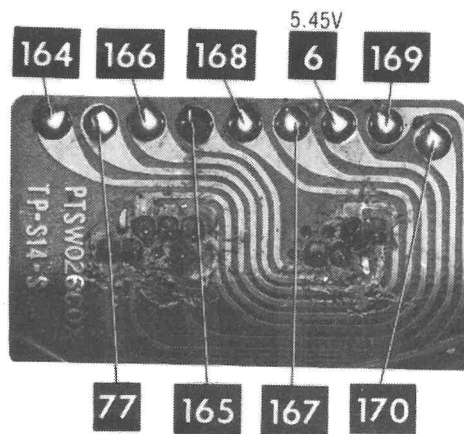


MAIN BOARD



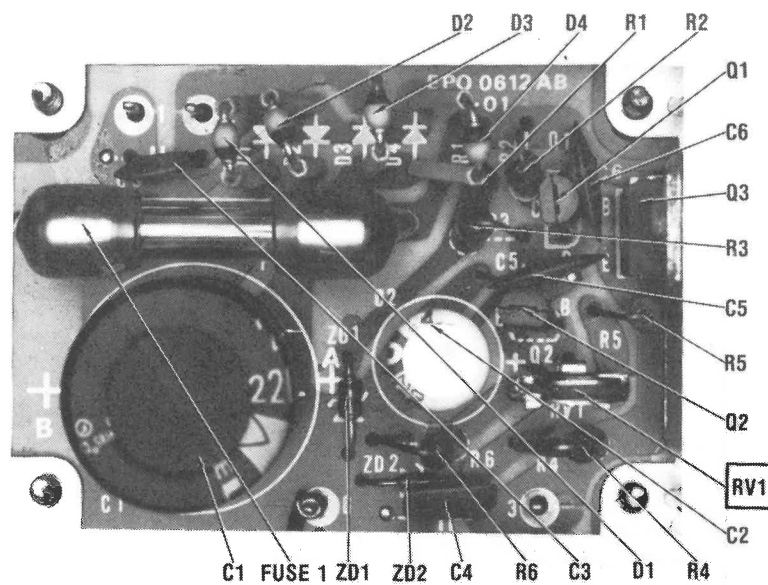
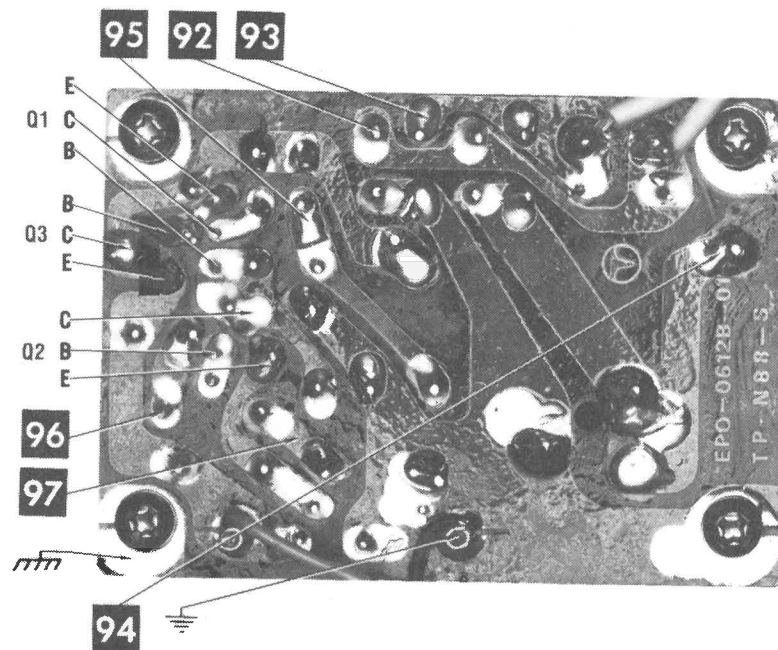
MAIN BOARD



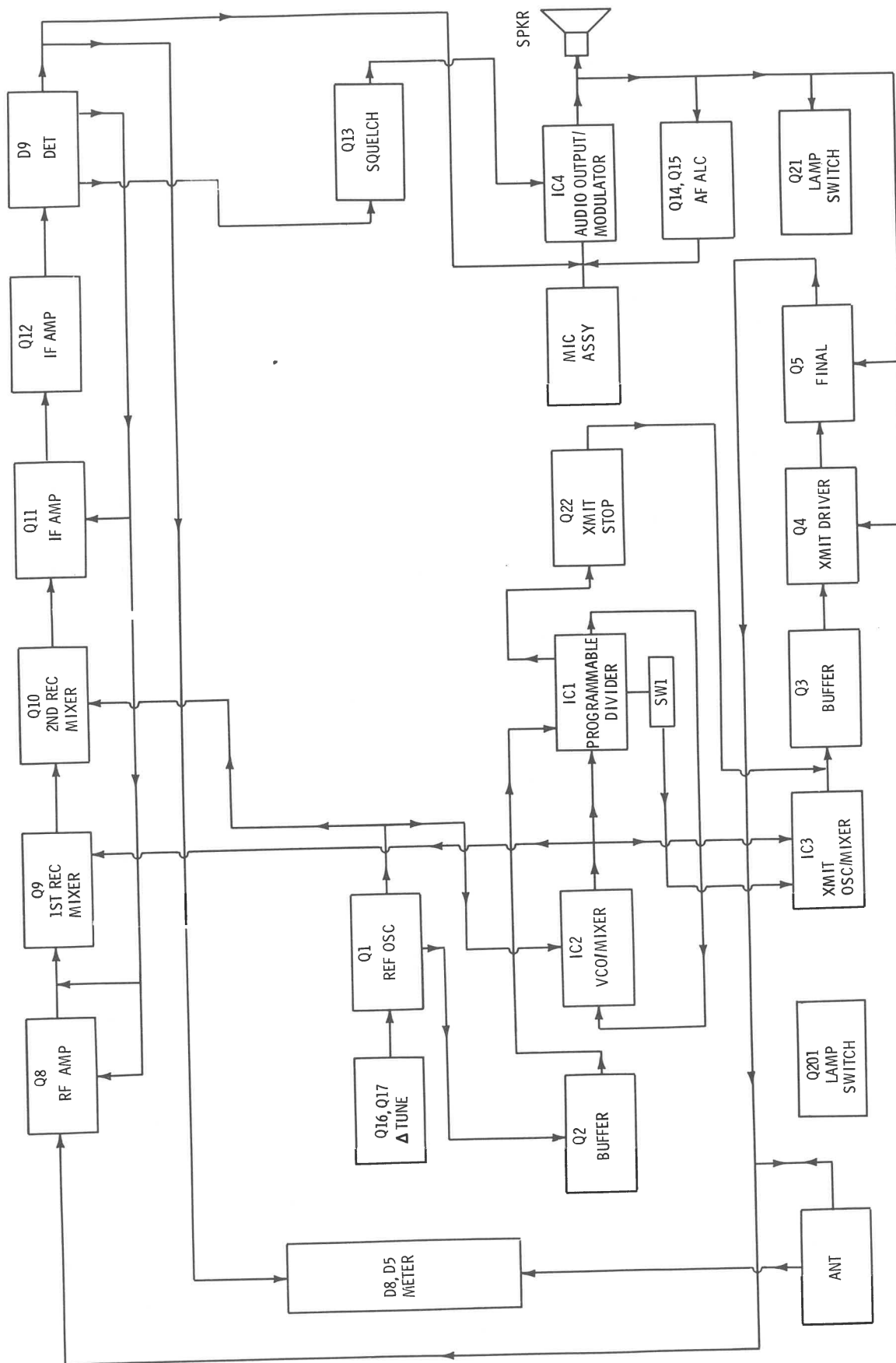


SWITCH BOARD

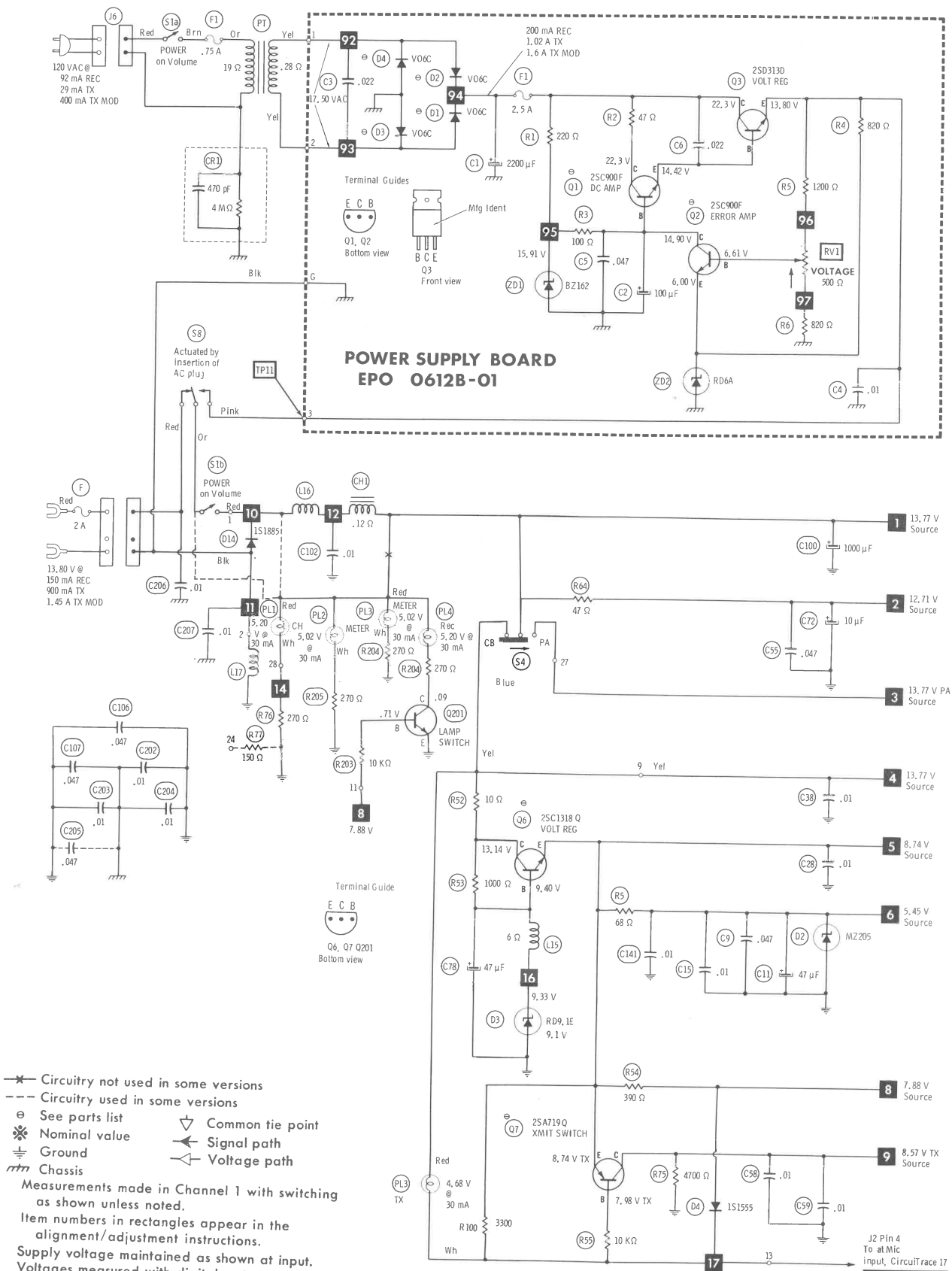
A Howard W. Sams CIRCUITRACE® Photo



POWER SUPPLY BOARD

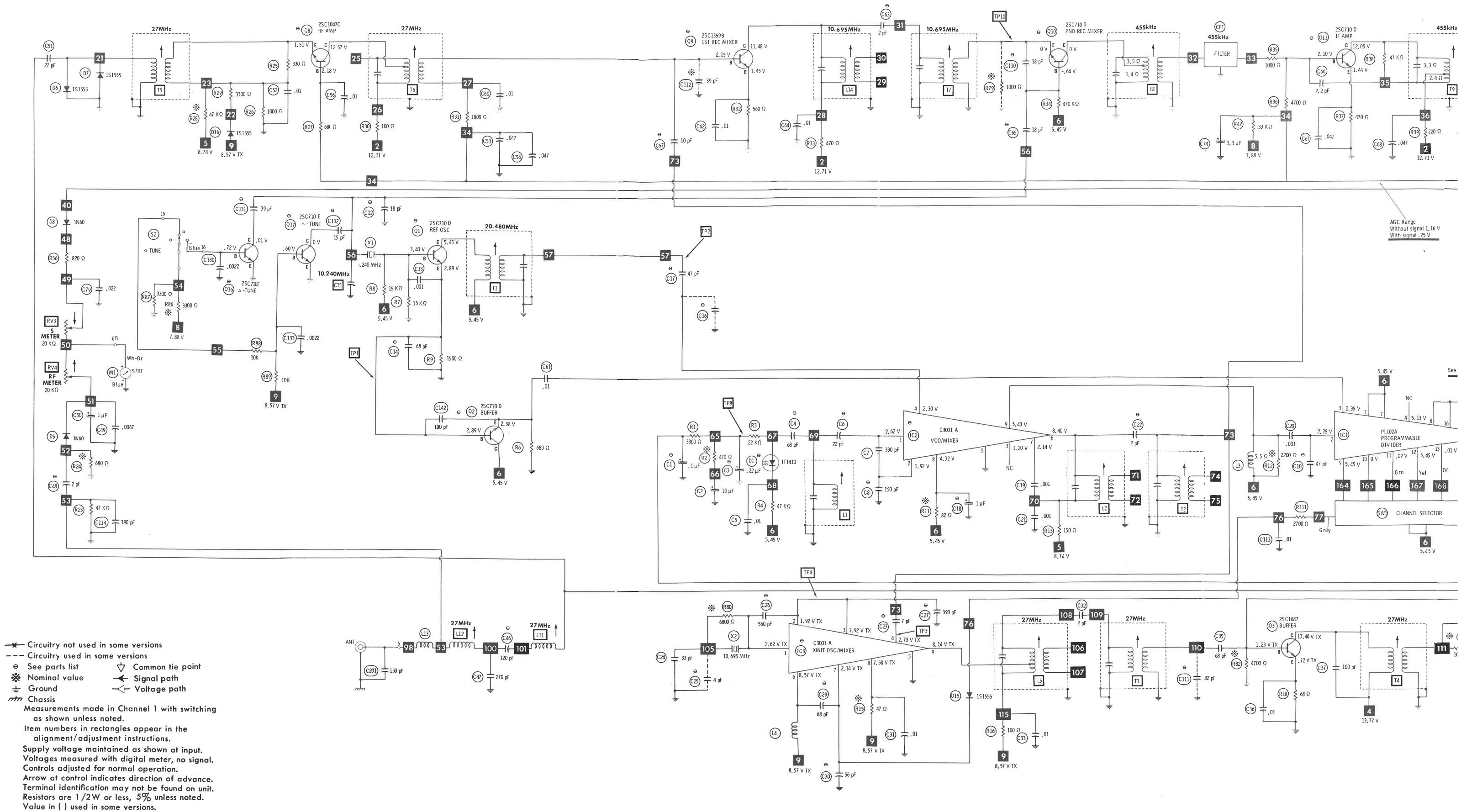


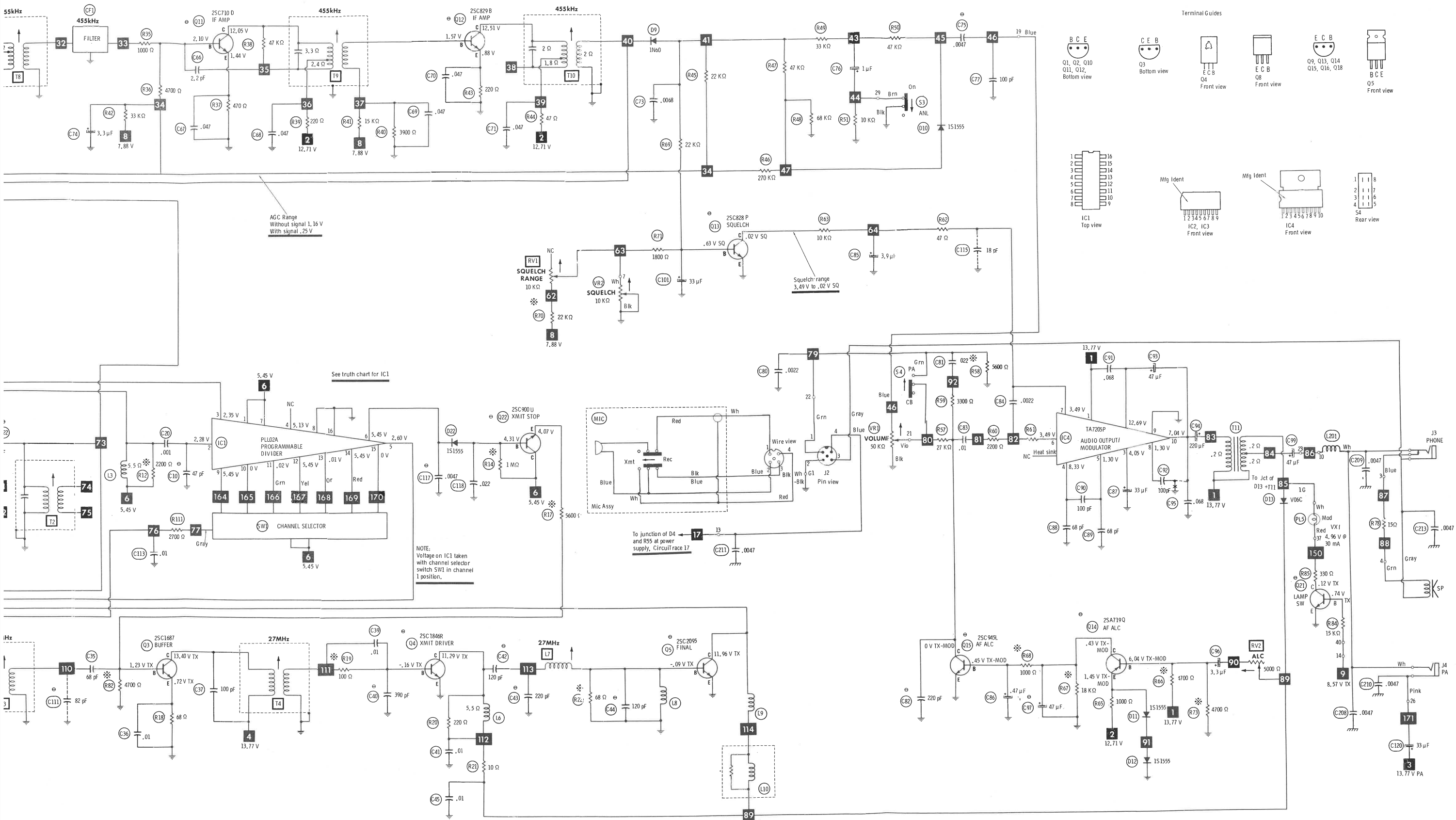
BLOCK DIAGRAM



POWER SUPPLY SCHEMATIC

KRACO MODEL KB-4045





KRACO MODEL KB-4045

MAIN SCHEMATIC

PARTS LIST AND DESCRIPTION

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

WIRING DATA

General-use Hook-up Wire (available in 5 colors)	BELDEN No. 8523	Coiled Microphone Cable	
Shielded Hook-up Wire (spiral wrapped)	BELDEN No. 8421	3-conductor (1 shielded)	23AWG BELDEN No. 9471 (5')
(braided)	BELDEN No. 8401		BELDEN No. 8497 (6')
Speaker Cable (available in 4 colors)	BELDEN No. 8782		BELDEN No. 9472 (7-1/2')
Bonding Strap	BELDEN No. 8672	28AWG BELDEN No. 9466 (6')	
AC Power Cord	(6') BELDEN No. 17106	31AWG BELDEN No. 9468 (10')	
	(9') BELDEN No. 17109	4-conductor (unshielded) 23AWG BELDEN No. 8415 (6')	
		5-conductor (1 shielded) 28AWG BELDEN No. 9467 (6')	
			BELDEN No. 9465 (7-1/2')

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.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
Q15	2SC945L 2SC945P,Q 2SC900	QT-C0945LAA QT-C0945LAA	GE-212 GE-212 GE-62	PTC121* PTC121* PTC139*	HEPS0015* HEPS0015* HEPS0015*	REN 199 REN 199 REN 199	SK3124 SK3134 SK3124	RT-107A RT-107A RT-107A	ECG199 ECG199 ECG199	TM199/** TM199/** TM199/**	WEP1945 WEP1945 WEP1945	121-972 121-972 121-972
Q16	2SC710E 2SC710 2SC829 2SC839		GE-211* GE-211* GE-61* GE-211*	PTC132 PTC132 PTC132* PTC132	HEPS0016* HEPS0016* HEPS0015* HEPS0016*	REN 123A* REN 123A* REN 123A* REN 123A*	SK3122 SK3122 SK3444 SK3444	RT-308* RT-308* RT-308 RT-308	ECG123A* ECG123A* ECG123A* ECG123A*	TM123A/** TM123A/** TM123A/** TM123A/**	WEP66 WEP66 WEP710 WEP710	121-972 121-972 121-29000A 121-29000A
Q17	2SC710E 2SC710 2SC829 2SC839		GE-211* GE-211* GE-61* GE-211*	PTC132 PTC132 PTC132* PTC132	HEPS0016* HEPS0016* HEPS0015* HEPS0016*	REN 123A* REN 123A* REN 123A* REN 123A*	SK3122 SK3122 SK3444 SK3444	RT-308* RT-308* RT-308 RT-308	ECG123A* ECG123A* ECG123A* ECG123A*	TM123A/** TM123A/** TM123A/** TM123A/**	WEP710 WEP710 WEP1945 WEP1945	121-29000A 121-29000A 121-972 121-972
Q21	2SC945L 2SC945P,Q 2SC945	QT-C0945LAA QT-C0945LAA	GE-212 GE-212 GE-61*	PTC121* PTC121* PTC121*	HEPS0015* HEPS0015* HEPS0015*	REN 199 REN 199 REN 199	SK3124 SK3124 SK3124	RT-107A RT-107A RT-107A	ECG199 ECG199 ECG199	TM199/** TM199/** TM199/**	WEP1945 WEP1945 WEP1945	121-972 121-972 121-972
Q22	2SC900U,E 2SC900	QT-C0900XEA QT-C0945LAA	GE-62 GE-62	PTC139* PTC139*	HEPS0015* HEPS0015*	REN 199 REN 199	SK3444 SK3124	RT-302 RT-302	ECG199 ECG199	TM199/** TM199/**	WEP66 WEP66	121-972 121-972
Q201	2SC945L,P,Q	QT-C0945LAA	GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972

* Lead configuration may vary from original.
/** Also available as exact type replacement.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA				
		MFR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
MAIN BOARD						
C1	.1 10V	CE-ED100ZMN	PC10-25	TDC104M050EL	QDT1-2	SD50-R109
C2	.10 16V	CD-A1AR22ME (1)		VTT10B25	QV1-41	EV-1222
C3	.22 10V	CE-EC470ALN	PC50-16	TDC224M050EL	QDT1-10	SD50-R229
C11	47 10V	CE-EG010ALN (1)	PC1-50	VTT47D16	QV1-73	EV-1226
C18	1 50V	CE-EG010ALN	PC1-50	VTT1A50	QV1-11	EV-1615
C50	1 50V	CE-EG010ALN	PC1-50	VTT1A50	QV1-11	EV-1615
C72	10 16V	CE-ED100ALN	PC10-25	VTT10B25	QV1-41	EV-1222
C74	3.3 25V	CE-EE3R3ALN	PC5-50	VTT3R3A50	QV1-23	EV-1318
C76	1 50V	CE-EG010ALN	PC1-50	VTT1A50	QV1-11	EV-1615
C78	47 16V	CE-ED470ALN	PC50-16	VTT47D16	QV1-73	EV-1226
C85	3.9 25V	CS-SE3R9MDN				
C86	.47 10V	CD-A1AR47ME		TDC474M050EL	QDT1-19	SD50-R479
C87	33 6.3V	CE-EB330ALN	PC30-25	VTT33B10	QV1-61	EV-1125
C93	47 16V	CE-ED470ALN	PC50-16	VTT47D16	QV1-73	EV-1226
C94	220 16V	CE-AD221ZLS	PC250-25	VTT220H16	QV1-117	EV-1240
C96	3.3 25V	CE-EE3R3ALN	PC5-50	VTT3R3A50	QV1-23	EV-1318
C97	47 10V	CE-EC470ALN (1)	PC50-16	VTT47D16	QV1-73	EV-1226
C99	47 25V	CE-AE470ZLS	PC50-25	VTT47E25	QV1-75	EV-1326
C100	100 16V	CE-ED102ZUN	PC1000-16	VTT100B16	QV1-183	EV-1260
C101	33 6.3V	CE-EB330ALN	PC30-25	VTT33B10	QV1-61	EV-1125
C120	33 16V	CE-ED330ALN	PC30-25	VTT33B25	QV1-63	EV-1325
POWER SUPPLY BOARD						
C1	2200 25V	CE-TTE22201	WBR2000-25*	TC2520A*	QE1-645*	TVA-1213.5*
C2	100 25V	CE-AE101ALN	PC100-25	VTT100G25	QV1-97	EV-1330

* Axial replacement for radial device.
(1) Nominal value.

PARTS LIST AND DESCRIPTION

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

CAPACITORS

ITEM No.	RATING
MAIN BOARD	
C1	.01
C4	68 N150 10%
C5	.01 50V
C6	22 N150
C7	330 50V 10%
C8	150 50V 10%
C9	.047 50V
C10	47 50V
C12	18 N150
	4 50V
C13	.001 50V
C14	68 N150 10%
C15	.01 50V
C17	47 N150 10%
C19	.001 50V
C20	.001 50V
C21	.001 50V
C22	2 50V
C23	7 50V
C24	33 N150
C25	4 N150
C26	330 50V
	560
C27	390 50V
C28	.01 50V
C29	68 50V
C30	56 50V
C31	.01 50V
C32	2 50V
C33	.01 50V
C35	68 50V
C36	.01 50V
C37	100 N150 10%
C38	.01 50V
C39	.01 50V
C40	390 50V
	330
C41	.01 50V
C42	120 50V 10%
C43	220 50V
C44	120 50V 10%
C45	.01 50V
C46	120 50V 10%
C47	270 500V 10%
C48	2 500V
C49	.0047 50V
C51	27 50V
C52	.01 50V
C53	.047 50V
C54	.047 50V
C55	.047 50V
C56	.01 50V
C57	10 50V
C58	.01 50V
C59	.01 50V
C60	.01 50V
C61	.01 50V
C62	.01 50V
C63	2 50V
C64	.01 50V
C65	18 N150
C66	2.2 500V
C67	.047 50V
C68	.047 50V
C69	.047 50V
C70	.047 50V
C71	.047 50V
C73	.0068 50V
C75	.0047 50V
C77	100 50V 10%
C79	.022 50V
C81	.022 50V
C82	220 50V
C83	.01 50V
C84	.0022 50V
C88	68 50V
C89	68 50V
C90	100 50V 10%
C91	.068 50V
C92	100 50V 10%
C95	.068 50V
C102	.01 50V
C106	.047 50V
C107	.047 50V
C110	18 50V
C111	82
C112	39
C113	.01 50V
C114	390 500V 10%
C115	18
C117	.0047 50V 10%
C118	.022 50V
C130	.0022 50V
C131	39 N150 10%

PARTS LIST AND DESCRIPTION (CONTINUED)

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

CAPACITORS

DARSON RT No.	WORKMAN PART No.	ZENITH PART No.
9/**	WEP1945	121-972
9/**	WEP1945	121-972
9/**	WEP1945	121-972
9/**	WEP66	121-972
3A/**	WEP710	121-Z9000A
3A/**	WEP710	121-Z9000A
3A/**	WEP829	121-Z9000A*
3A/**	WEP1945	121-Z9000A*
3A/**	WEP710	121-Z9000A
3A/**	WEP710	121-Z9000A
3A/**	WEP829	121-Z9000A*
3A/**	WEP1945	121-Z9000A*
3/**	WEP1945	121-972
3/**	WEP1945	121-972
3/**	WEP1945	121-972
3/**	WEP828	121-972
3/**	WEP66	121-972
3/**	WEP66	121-972
3/**	WEP1945	121-972
5	WEP156	212-76-02
5	WEP156	212-76-02
5	WEP156	212-76-02
5	WEP156	212-76-02
5	WEP156	212-76-02
5	WEP156	212-76-02
5	WEP156	212-76-02
5	WEP156	212-76-02
5	WEP156	212-76-02
5	WEP156	212-76-02
3/**	WEP66	121-972
3/**	WEP66	121-972
3/**	WEP66	121-972
3/**	WEP66	121-972
5	WEP745	121-987-02
15/**	WEP1160	103-Z9013
1/**	WEP1104	103-Z9007
1/**	WEP1104	103-Z9007

ART No.
GENERAL LINE
SD50-R109
EV-1222
SD50-R229
EV-1226
EV-1615
EV-1615
EV-1222
EV-1318
EV-1615
EV-1226
SD50-R479
EV-1125
EV-1226
EV-1240
EV-1318
EV-1226
EV-1326
EV-1260
EV-1125
EV-1325
TVA-1213.5*
EV-1330

ITEM No.	RATING	MFRG. PART No.	REPLACEMENT DATA				
			CENTRALAB PART No.	CORNELL- DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
						Q-LINE	GENERAL LINE
MAIN BOARD							
C1	.01	CC-CB680KPM(1)	UK50-103		MAG5011		
C4	68 N150 10%				*		10TCP-Q68
C5	.01 50V			UK50-103		MAG5011	
C6	22 N150	CC-CB220KPM(1)			*		10TCP-Q22
C7	330 50V 10%	(1)	DD-331	GP330	GP333		10TS-T33
C8	150 50V 10%		DTZ-150		CN0315		10TCC-T15
C9	.047 50V			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C10	47 50V	(1)	DTZ-47	NP047	CN0447		10TCC-Q47
C12	18 N150				*		10TCP-Q18
	4 50V	CC-CB040CPM					
C13	.001 50V			DPMS6D1	EWFA1A210	QF1-1	1PB-D10
C14	68 N150 10%	CC-CB680KPM(1)			*		10TCP-Q68
C15	.01 50V		UK50-103		MAG5011		
C17	47 N150 10%	CC-CB470KPM(1)			*		10TCP-Q47
C19	.001 50V			DPMS6D1	EWFA1A210	QF1-1	1PB-D10
C20	.001 50V			DPMS6D1	EWFA1A210	QF1-1	1PB-D10
C21	.001 50V			CD19FD102J03	SX210		MWC-102
C22	2 50V	(1)	DTZ-2R2	NP02P2	CN0522		10TCC-V22
C23	7 50V	(1)	DTZ-6R8	NP06P8	CN0568		10TCC-V68
C24	33 N150	CC-CB330KPM			*		10TCP-Q33
C25	4 N150	CC-CB040CPM(1)			*		10TCP-V39
C26	330 50V			CD15FD331J03	SX333	QW1-39	MWA-331
	560			CD19FD561J03	SX356		MWC-561
C27	390 50V		DD-391	GP390	GP339		10TS-T39
C28	.01 50V		UK50-103		MAG5011		
C29	68 50V	(1)	DTZ-68	NP068	CN0468		10TCC-Q68
C30	56 50V				CN0456		10TCC-Q56
C31	.01 50V			UK50-103		MAG5011	
C32	2 50V		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C33	.01 50V		UK50-103		MAG5011		
C35	68 50V		DTZ-68	NP068	CN0468		10TCC-Q68
C36	.01 50V		UK50-103		MAG5011		
C37	100 N150 10%	CC-CB101KPM			*		10TCP-T10
C38	.01 50V		UK50-103		MAG5011		
C39	.01 50V			WMF1S1	EWFA1A110	QF1-91	1PB-S10
C40	390 50V		DD-391	GP390	GP339		10TS-T39
	330		DD-331	GP330	GP333		10TS-T33
C41	.01 50V		UK50-103		MAG5011		
C42	120 50V 10%	(1)	DTZ-120		CN0312		10TCC-T12
C43	220 50V	(1)	DTZ-220		MAG5011		10TCC-T22
C44	120 50V 10%	(1)	DTZ-120		CN0312		10TCC-T12
C45	.01 50V		UK50-103		MAG5011		
C46	120 50V 10%	(1)	DTZ-120		CN0312		10TCC-T12
C47	270 500V 10%		DD-271	GP270	GP327		10TS-T27
C48	2 500V	(1)	DTZ-2R2	NP02P2	CN0522		10TCC-V22
C49	.0047 50V		DD-472	GP4700	GP247		56A-D47
C51	27 50V				CN0427		10TCC-Q27
C52	.01 50V		UK50-103		MAG5011		
C53	.047 50V			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C54	.047 50V			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C55	.047 50V			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C56	.01 50V		UK50-103		MAG5011		
C57	10 50V	(1)	DTZ-10	NP010	CN0410		10TCC-Q10
C58	.01 50V		UK50-103		MAG5011		
C59	.01 50V		UK50-103		MAG5011		
C60	.01 50V		UK50-103		MAG5011		
C61	.01 50V		UK50-103		MAG5011		
C62	.01 50V		UK50-103		MAG5011		
C63	2 50V	(1)	DTZ-2R2	NP02P2	CN0522		10TCC-V22
C64	.01 50V		UK50-103		MAG5011		
C65	18 N150	CC-CB180KPM(1)			*		10TCP-Q18
C66	2.2 500V		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C67	.047 50V			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C68	.047 50V			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C69	.047 50V			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C70	.047 50V			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C71	.047 50V			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C73	.0068 50V			WMF1D68	EWFA1A268	QF1-73	1PB-D68
C75	.0047 50V				M192P4729R8		192P4729R8
C77	100 50V 10%		DTZ-100	NP0100	CN0310		10TCC-T10
C79	.022 50V				M192P2239R8		192P2239R8
C81	.022 50V				M192P2239R8		192P2239R8
C82	220 50V	(1)	DTZ-220		M192P2239R8		10TCC-T22
C83	.01 50V			WMF1S1	EWFA1A110	QF1-91	1PB-S10
C84	.0022 50V			GP222	CN0418		10TS-D22
C88	68 50V		DTZ-68	NP068	CN0468		10TCC-Q68
C89	68 50V		DTZ-68	NP068	CN0468		10TCC-Q68
C90	100 50V 10%		DTZ-100	NP0100	CN0310		10TCC-T10
C91	.068 50V			WMF1S68	EWFA1A168	QF1-195	1PB-S68
C92	100 50V 10%		DTZ-100	NP0100	CN0310		10TCC-T10
C95	.068 50V			WMF1S68	EWFA1A168	QF1-195	1PB-S68
C102	.01 50V		UK50-103		MAG5011		
C106	.047 50V			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C107	.047 50V			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C110	18 50V	(1)			CN0418		10TCC-Q18
C111	82	(1)	DTZ-82	NP082	CN0482		10TCC-Q82
C112	39	(1)			CN0439		10TCC-Q39
C113	.01 50V		UK50-103		MAG5011		
C114	390 500V 10%		DD-391	GP390	GP339		10TS-T39
C115	18				CN0418		10TCC-Q18
C117	.0047 50V 10%	(1)			M192P4729R8		192P4729R8
C118	.022 50V				M192P2239R8		192P2239R8
C130	.0022 50V				GP222		10TS-D22
C131	39 N150 10%	CC-CB390KPM(1)			*		10TCP-Q39

KRACO MODEL KB-4045

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
C132	15 N150 10%	CC-CB150KPM(1)					
C133	.022 50V						
C141	.01 50V		UK50-103		M192P2239R8		192P2239R8
C142	100 50V 10%		DTZ-100	NP0100	MAG5011		
C201	150 500V 10%		DTZ-150		CNO310		10TCC-T10
C202	.01 50V		UK50-103		CNO315		10TCC-T15
C203	.01 50V		UK50-103		MAG5011		
C204	.01 50V		UK50-103		MAG5011		
C205	.047 50V			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C206	.01 50V		UK50-103		MAG5011		
C207	.01 50V		UK50-103		MAG5011		
C208	.0047 50V		DD-472		GP4700		56A-D47
C209	.0047 50V		DD-472		GP4700		56A-D47
C210	.0047 50V		DD-472		GP4700		56A-D47
C211	.0047 50V		DD-472		GP4700		56A-D47
C212	.0047 50V		DD-472		GP4700		56A-D47
C213	.0047 50V		DD-472		GP4700		56A-D47
CT1	20	CT-Z7200H01					
POWER SUPPLY BOARD							
C3	.022 50V				M192P2239R8		192P2239R8
C4	.01 50V		UK50-103		MAG5011		
C5	.047 50V			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C6	.022 50V				M192P2239R8		192P2239R8

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.
(1) Nominal value.

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

ITEM No.	FUNCTION	RESIST- ANCE	REPLACEMENT DATA			
			MFR. PART No.	CENTRALAB PART No.	MALLORY PART No.	TRW PART No.
RV1	Voltage	500	RP-ANB50101	T-500	MTCS2L1	X201R501B
RV1	SqueIch Range	10K	RP-GNB10301			U260R103B
RV2	ALC	5000	RP-GNB50202			U260R502B
RV3	S Meter	20K	RP-GNB20301			U260R253B
RV4	RF Meter	20K	RP-GNB20301			U260R253B
VR1	Volume/Power Switch	50K	RV-AD503A02	F2-50K(1), SSK104,KR2	RU54A,SL36,SL3250, US42	BU1(1),CF63,SS1, WF
VR2	SqueIch	10K	RV-NA103B04			

(1) Enlarge mounting hole.

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	VCO (18MHz)	TR-10DD003S			
L2	VCO Mixer (37MHz)	TR-10MB003T	10MB003M		
L3	RF Choke (68uH)	LF-680KD01N			
L4	RF Choke (1uH)	LF-0R9KD01N		70F106AI	
L5	XMT Oscillator (27MHz)	TR-10CB002M	10CB002M		
L6	RF Choke (2.2uH)	LF-2R2KD01N		70F226AI	
L7	XMT Driver (27MHz)	TR-A5CZ001M			
L8	RF Choke (68uH)	LF-680KD01N			
L9	Final (.55uH)	LA-1KET011A			
L10	RF Choke (1uH)	LD-ADX3825M			
L11	Loading Final (27MHz)	TR-A5CZ002M			
L12	Pi Filter (27MHz)	TR-A5CZ003M			
L13	RF Choke (.40uH)	LA-1JG1010A			
L14	Mixer (10.695MHz)	TR-10MA017S	10MA017S		
L15	RF Choke (68uH)	LF-680KD01N			
L16	RF Choke (.75uH)	LD-ADB4024B			
L17	RF Choke (.75uH)	LD-ADB4024B			
L201	RF Choke (1.95uH)	LD-ADA3038J			
T1	Ref Oscillator (20.480MHz)	TR-10DB002S	10DB002S		
T2	VCO Mixer (38MHz)	TR-10MB005S	10MB005S		
T3	XMT Oscillator (27MHz)	TR-10CB001S	10CB001S		
T4	Buffer (27MHz)	TR-10CP005S	10CP005M		
T5	Antenna Matching (27MHz)	TR-10MP003T	ETR0333		
T6	RF Amp (27MHz)	TR-10CA003T	ETR0334		
T7	Mixer (10.695MHz)	TR-10MA017S			
T8	IF (455kHz)	TR-07LA004N	122		
T9	IF (455kHz)	TR-07LA005N	123		
T10	IF (455kHz)	TR-07LA023N	ET10129		

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	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
PT	120V AC @ 360mA	17.50V AC @ 1.3A DC	TP-D68V002Y			

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA			NOTES
	PRI.	SEC.	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T11	2	1 8 2 .5	TB-G25B001W	TR723	MCB-16	

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP	3" PM, 8 Ohms	ZQ-A0770802(1)	30A05Z8R	(1) Number on unit.

FUSE DEVICES

FUSE DEVICES		REPLACEMENT DATA						
ITEM No.	DESCRIPTION	PART No.		BUSS PART No.		LITTELFUSE PART No.		WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE
F	2A Quick Acting	ZF-BQ75101U	YH-F1S3001U	AGC2	HRK	312002	150145	FG2-2
F1	.75A Quick Acting			AGC3/4		312.750		
POWER SUPPLY BOARD		ZF-AQ25201U		MDV2 1/2		31802.5		
F1	2.5A Quick Acting							

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	ZG-AAZ50103	18-032	18-034	18-010	18-092	1	2	4	3	NC	2	

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
CF1	Filter	FB-R455A08M	455kHz (4 Elements)
CR1	RC Network	CR-E471A01M	(470pF Capacitor, 4M Ohm Resistor)
J1	Jack	YJ-C025002Z	Antenna
J2	Jack	YJ-Z045003Z	Microphone
J3	Jack	YJ-S035010Z	Headphone
J4	Jack	YJ-T035003Z	PA Speaker
J5	Jack	YJ-B025001U	DC Power
J6	Jack	YJ-A025001U	AC Power
M1	Meter	ZM-Z050N02	S/Rf
PL1	Lamp	ZP-A064101U	Channel Indicator (5.20V @ 30mA)
PL2	Lamp	ZP-Z064101U	Meter (5.02V @ 30mA)
PL3	Lamp	ZP-A064101U	Transmit (4.96V @ 30mA)
PL4	Lamp	ZP-A064101U	Receive (5.20V @ 30mA)
PL5	Lamp	ZP-A064102U	Modulation Indicator
S1	Switch	SR-0303103E	Power On/Off (Part of Volume Control)
S2	Switch	ST-020201ZM	Delta Tune
S3	Switch	ST-020201ZM	ANL On/Off
S4	Switch		CB/PA
S8	Switch		AC/DC (Actuated by Insertion of AC Plug)
SW1	Switch	SR-0840101H	Channel Selector
X1	Crystal	XA-S1C2001T	10.240MHz
X2	Crystal	XA-S1C2002T	10.695MHz
	Printed Circuit Board	PT-BM050C0X	Main Assembly (AP-TBM050GT)
	Printed Circuit Board	PT-PW005C0X	Power Assembly (AP-TPM005AA)
	Printed Circuit Board	PT-SW026C0X	Switch Assembly (AP-TSW026AA)
	Cord	AC-CN008ULA	AC Assembly
	Cord	AC-DC034ULA	DC Assembly

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

ITEM	PART No.	ITEM	PART No.
Cabinet, Bottom	MS-887SZ004	Front Panel	MB-861SZ005
Cabinet, Top	MU-886SX002	Knob (3 Used)	VN-276SP009
Channel Indicator	VS-908VC002	Knob, Channel Selector	AV-KNOB#018
Escutcheon	AM-KB404501		

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