



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 47XLR

MANUFACTURER'S SPECIFICATIONS

GENERAL

Input Voltage	12.8 VDC nom. (negative ground).
Current Drain	<i>Transmit:</i> 2.0A. <i>Receive:</i> 1.5A. <i>AM Radio:</i> 1.5A. <i>FM Radio:</i> 1.5A

CB SECTION

TRANSMITTER

Power Output	4 watts.
Frequency Response	300 to 3000 Hz.
Output Impedance	50 ohms, unbalanced.
Harmonic Supression	Better than 60 dB.
Channels	40.
Frequency Range	26.965 to 27.405 MHz.
Frequency Control	Phase Locked Loop (PLL).
Frequency Tolerance	0.005%.
Operating Temperature Range	-30° to +50°C.
Microphone	Remote control, plug-in type; dynamic; low impedance

RECEIVER

Sensitivity	0.5μV.
Selectivity	5 kHz at -6 dB.
Image Rejection	-60 dB.
IF Frequency	Double conversion, 1st: 10.695 MHz. 2nd: 455 kHz.
Audio Output Power	5 watts/channel.
Frequency Response	300 to 3000 Hz.
Distortion	10%.

FM RADIO SECTION

FM Sensitivity	8μV.
FM Selectivity	300 kHz.
Stereo Separation	25 dB.
Audio Output	5 watts per channel.

AM RADIO SECTION

AM Sensitivity	20μV.
AM Selectivity	5 kHz at -6 dB.
Audio Output	5 watts.

COBRA MODEL 47XLR

Courtesy of the Manufacturer

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

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CB 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.
 Connect microphone.

Suggested Alignment Tools:

L101, L102, L103, L112 thru L115, L118, L119, L120.....	GC Electronics: 9440
L104, L105, L106.....	5009, 8728, 8728-A
L109.....	9091, 8728, 8728-A

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of oscilloscope to TP1.	Ch. 19	L115	Adjust for maximum RF.
Input of frequency counter to TP1.	Ch. 19		Check for 10.240MHz.
Input of frequency counter to TP3.	Ch. 19	L118	Adjust for 36.570MHz.
Input of DC meter to TP4.	Ch. 19	L119	Adjust for 2.5 volts.
Input of oscilloscope to TP6.	Ch. 19	L120	Adjust for maximum RF.
Input of frequency counter to TP6.	Ch. 19 Ch. 1	L118	Adjust for 37.880MHz. Check for 37.660MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of oscilloscope to TP7.	Ch. 19	L114	Adjust for maximum RF at 10.695MHz.

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 TP1. 455kHz, 1000Hz @ 30% modulation.	Ch. 19, Squelch MIN ANL Off	L106, L105, L104	Adjust for maximum output.
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation	Ch. 19, Squelch MIN ANL Off	L103, L102, L101	Adjust for maximum output. If necessary readjust L104, L105 and L106.

CB RECEIVER ADJUSTMENTS

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

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation. Output 50,000uV.	Ch. 19, Squelch MIN ANL Off	VR102	AGC Adjust volume for 0db. Decrease generator to 50uV. Adjust VR102 so that audio does not drop more than 10db.
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation. Output 600uV.	Ch. 19, Squelch Max ANL Off	VR103	SQUELCH RANGE Adjust VR103 so that squelch just breaks.
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation. Output 100uV.	Ch. 19, Squelch MIN ANL Off	VR101	SIGNAL METER Adjust VR101 for 9 on scale of meter.

COBRA MODEL 47XLR

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	TRANSCEIVER	ADJUST	REMARKS
	Ch. 19	L113, L112, L109	Adjust for maximum.
	Ch. 19	L109	Adjust for 3.8 watts.

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.

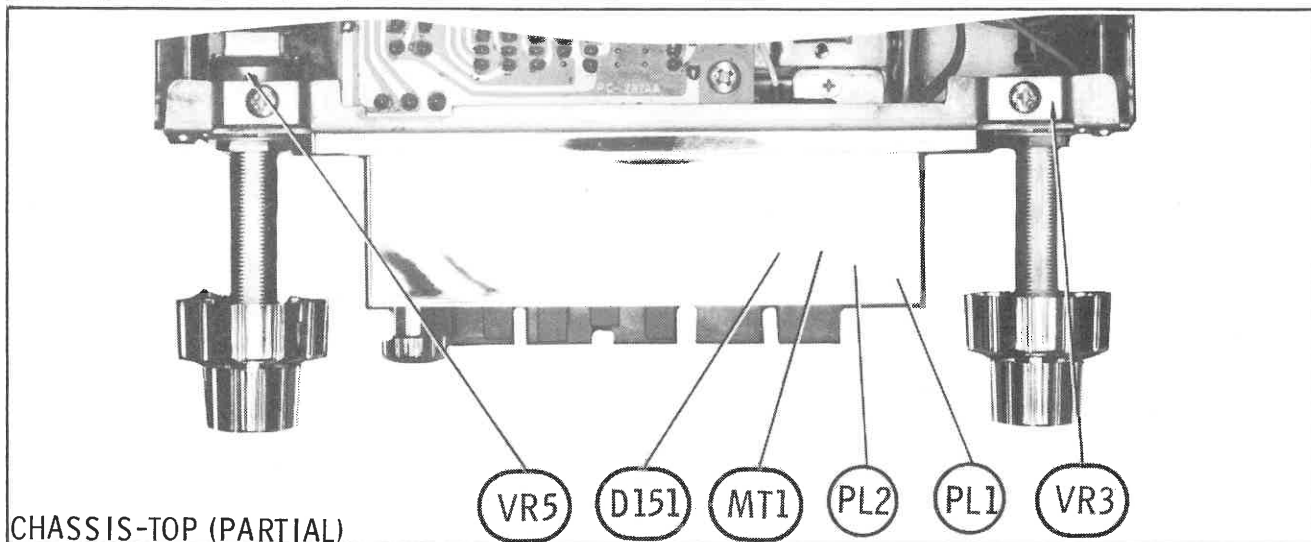
See page 4 for channel frequencies.

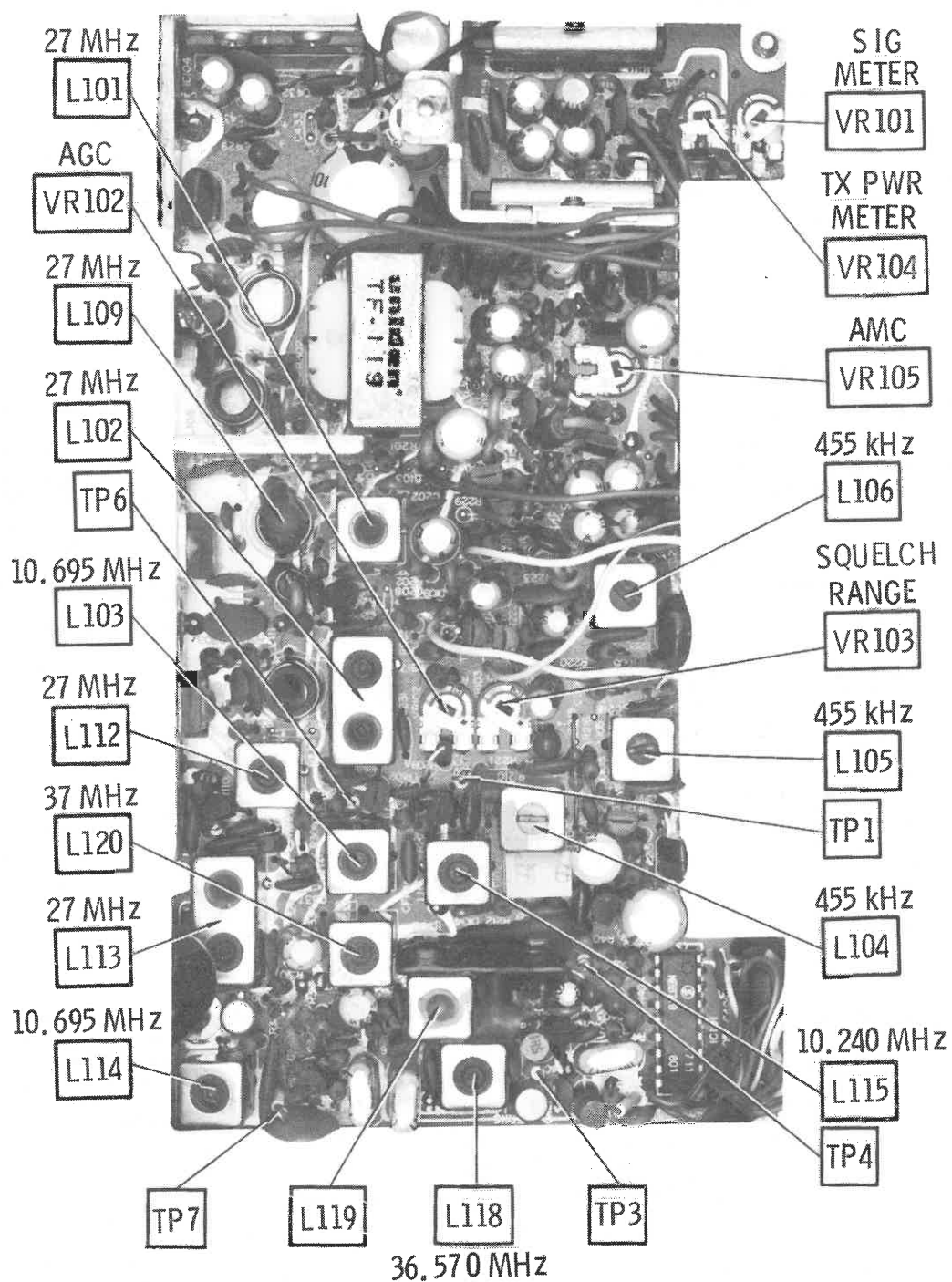
TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Oscilloscope or modulation meter to antenna jack. Inject a 1000Hz 60mV signal at MIC input (TP10).	Ch. 19	VR105	AMC Adjust for 100% modulation maximum.
Connect an RF wattmeter and 50-ohm, 25 watt dummy load to antenna connector.	Ch. 19	VR104	TX POWER METER Adjust VR104 so that TX Power Meter agrees with RF wattmeter.

TRUTH CHART

1 = <u>4.88</u> Volts 0 = <u>0</u> Volts								
C H A N N E L	IC101 PROGRAM DIVIDER							REC & XMT VCO OUTPUT IN MHz AT TP6
	PINS							
	11	12	13	14	15	16		
1	1	0	1	1	0	1		37.660
2	1	0	1	1	1	0		37.670
3	1	0	1	1	1	1		37.680
4	1	1	0	0	0	1		37.700
5	1	1	0	0	1	0		37.710
6	1	1	0	0	1	1		37.720
7	1	1	0	1	0	0		37.730
8	1	1	0	1	1	0		37.750
9	1	1	0	1	1	1		37.760
10	1	1	1	0	0	0		37.770
11	1	1	1	0	0	1		37.780
12	1	1	1	0	1	1		37.800
13	1	1	1	1	0	0		37.810
14	1	1	1	1	0	1		37.820
15	1	1	1	1	1	0		37.830
16	0	0	0	0	0	0		37.850
17	0	0	0	0	0	1		37.860
18	0	0	0	0	1	0		37.870
19	0	0	0	0	1	1		37.880
20	0	0	0	1	0	1		37.900

1 = <u>4.88</u> Volts 0 = <u>0</u> Volts								
C H A N N E L	IC101 PROGRAM DIVIDER							REC & XMT VCO OUTPUT IN MHz AT TP6
	PINS							
	11	12	13	14	15	16		
21	0	0	0	1	1	0		37.910
22	0	0	0	1	1	1		37.920
23	0	0	1	0	1	0		37.950
24	0	0	1	0	0	0		37.930
25	0	0	1	0	0	1		37.940
26	0	0	1	0	1	1		37.960
27	0	0	1	1	0	0		37.970
28	0	0	1	1	0	1		37.980
29	0	0	1	1	1	0		37.990
30	0	0	1	1	1	1		38.000
31	0	1	0	0	0	0		38.010
32	0	1	0	0	0	1		38.020
33	0	1	0	0	1	0		38.030
34	0	1	0	0	1	1		38.040
35	0	1	0	1	0	0		38.050
36	0	1	0	1	0	1		38.060
37	0	1	0	1	1	0		38.070
38	0	1	0	1	1	1		38.080
39	0	1	1	0	0	0		38.090
40	0	1	1	0	0	1		38.100





CB MAIN BOARD

AM-FM ALIGNMENT INSTRUCTIONS

Check for specified source voltage.
Connect low sides of generator and indicator to ground unless specified otherwise.
Use only enough generator output to provide a usable indication.

Suggested Alignment Tools: GC ELECTRONICS:
L1, L2, L3, CF3, L403..... 5009, 8728, 8728-A
VC2, VC3, VC401, VC402, VC403..... 8276, 5000
VC1..... 8275, 8282

PUSH-BUTTON ADJUSTMENT

1. Pull button out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.



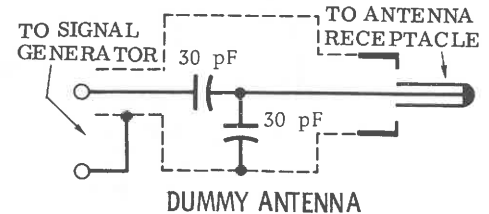
FIG. 2

AM ALIGNMENT—SELECTOR IN AM POSITION

Connect output meter across speaker voice coil.

GENERATOR COUPLING	GENERATOR FREQUENCY	RADIO DIAL SETTING	ADJUST	REMARKS
High side thru .1uF to antenna.	455kHz 400-Hz mod.	High freq end stop	L3,CF3 L2	Adjust for maximum.
Thru dummy antenna to antenna input.	1600kHz 400-Hz mod.	1600kHz	VC3	"
Thru dummy antenna to antenna input.	1400kHz 400-Hz mod.	1400Hz	VC2 VC1	Adjust for maximum. Repeat alignment until no further improvement is noted.

With radio installed in car and antenna extended 36", tune in a weak station near 1400kHz and adjust VC1 for maximum output. Antenna adjustment is located to right side of Push-Buttons.



FM IF ALIGNMENT USING FM SIGNAL GENERATOR—SELECTOR IN FM POSITION

High side of generator thru .001uF to TP11. (TR602, Base).
Use only enough marker signal for indication. Use 60-hertz, frequency-modulated signal, 450kHz sweep.
Use 60-hertz sawtooth voltage in scope for horizontal deflection.

GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
10.7MHz 450kHz Sweep	Point of non-interference	Vert input of scope to TP12 (Junction of C10 & C11).	L603, L1	Adjust for maximum amplitude and straightness of line, similar to Fig. 2.

FM RF ALIGNMENT—SELECTOR IN FM POSITION

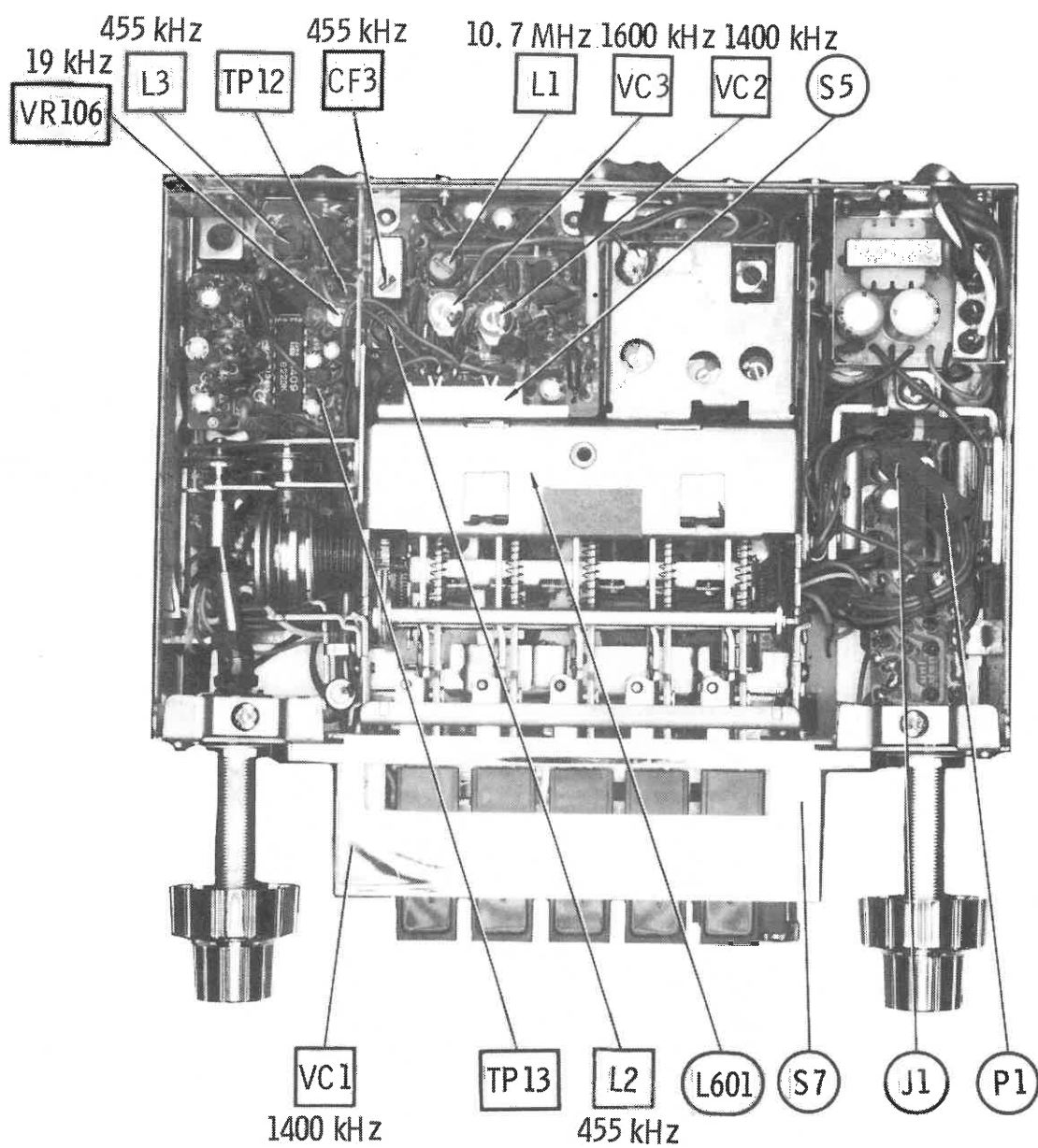
Connect generator across antenna terminals with 120-ohm carbon resistor in series with each lead.
Adjustment of coils by bending should not be attempted unless the coil is deformed or replaced.

GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
108MHz Modulated	108MHz	DC probe of VTVM to TP12 (Junction C11 & C10).	VC603, VC602, VC601	Adjust for maximum.

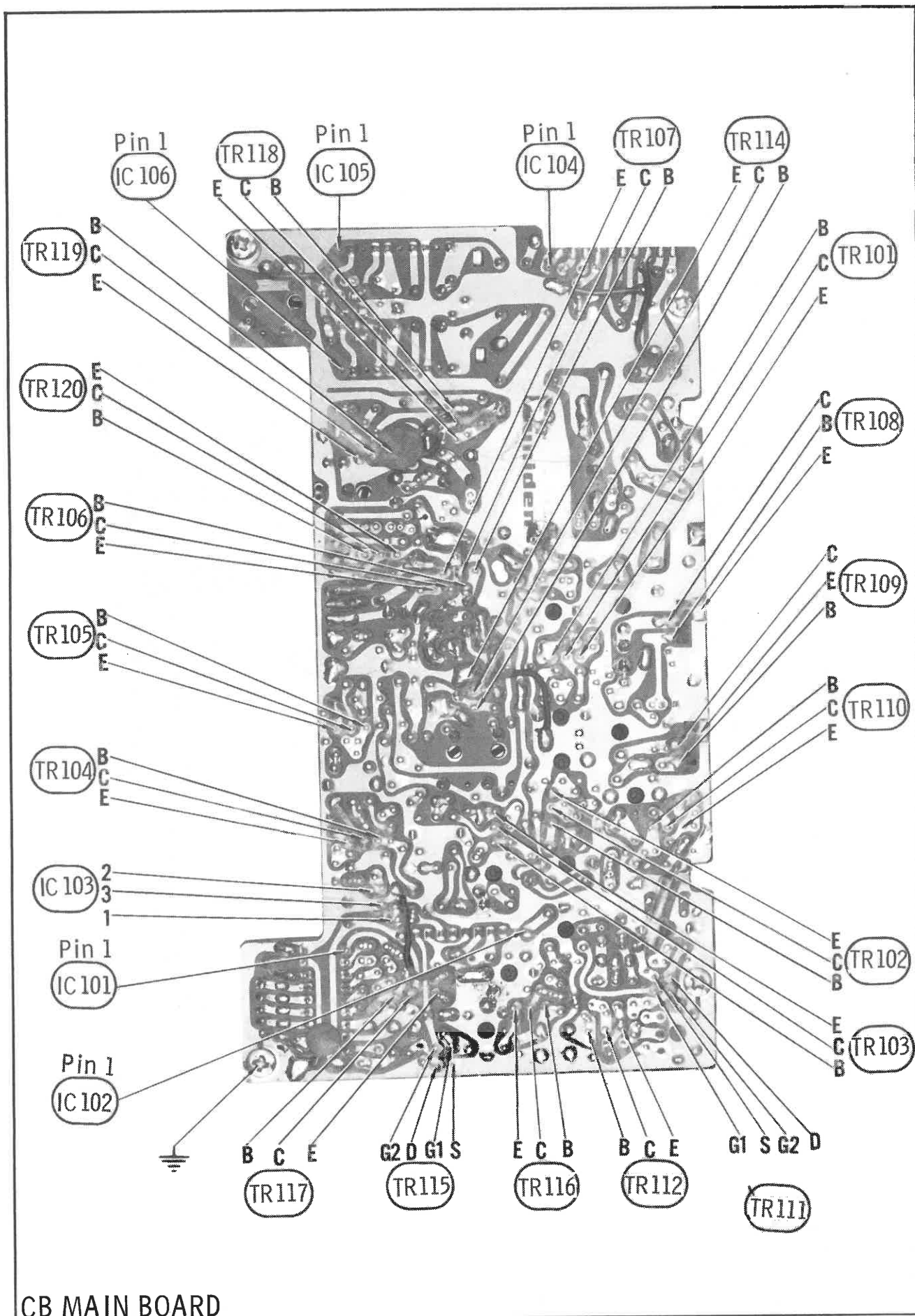
FM STEREO ALIGNMENT

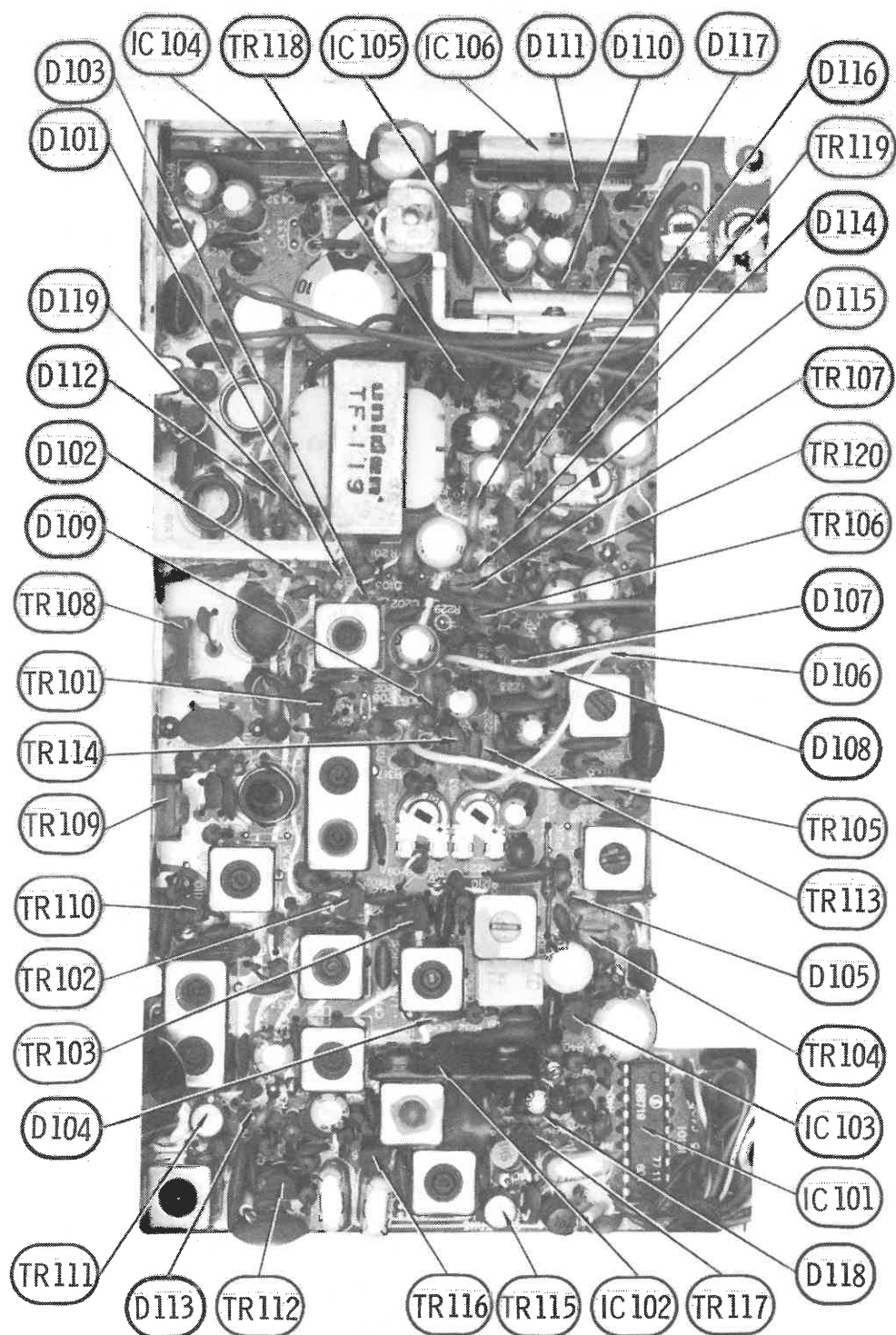
Connect a jumper from TP12 to ground.

GENERATOR FREQUENCY	INDICATOR	ADJUST	REMARKS
	Input of frequency counter to TP13 (Top end of R47).	VR106	Adjust for 19kHz $\pm$ 20Hz.

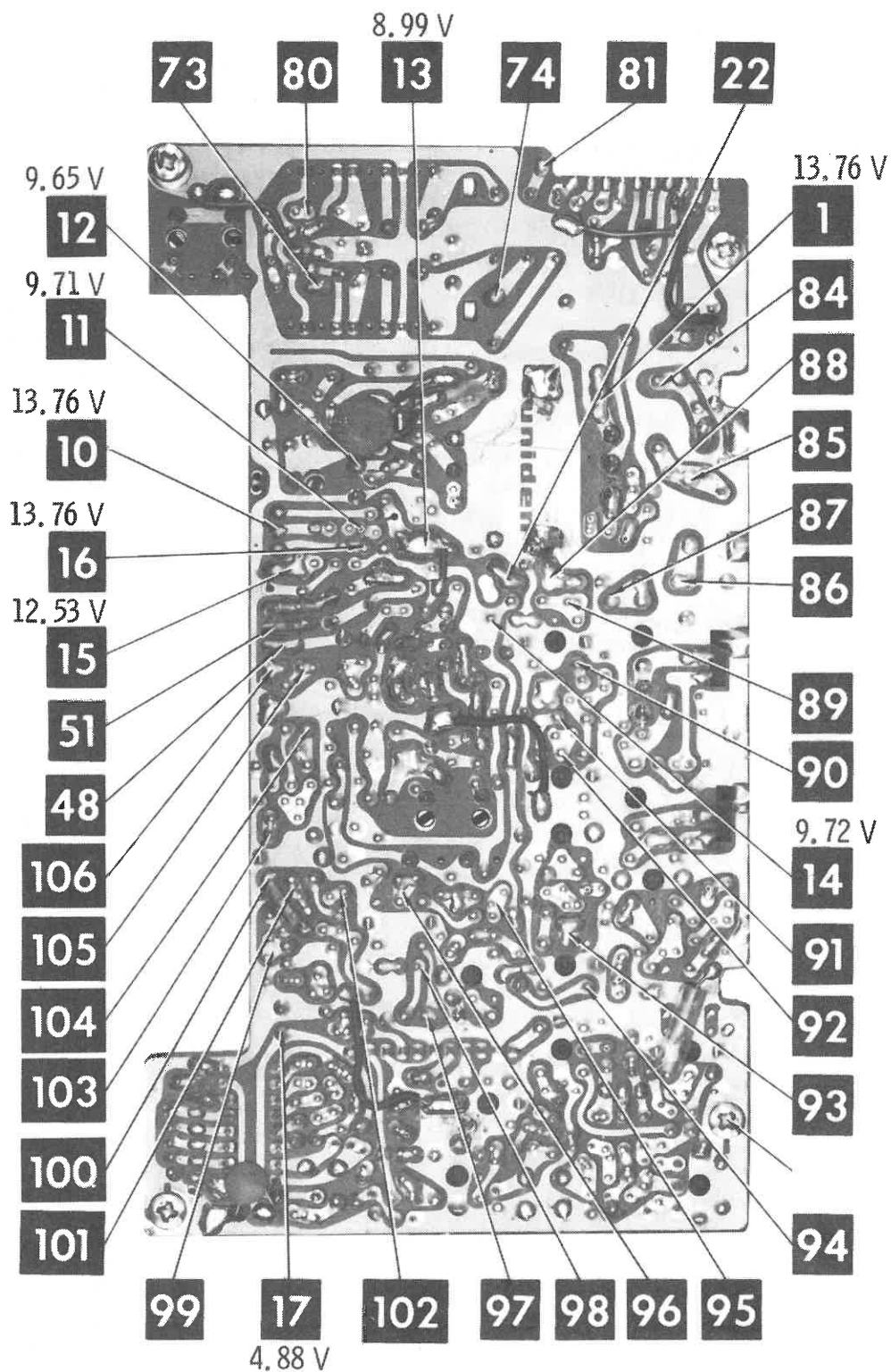


CHASSIS-BOTTOM

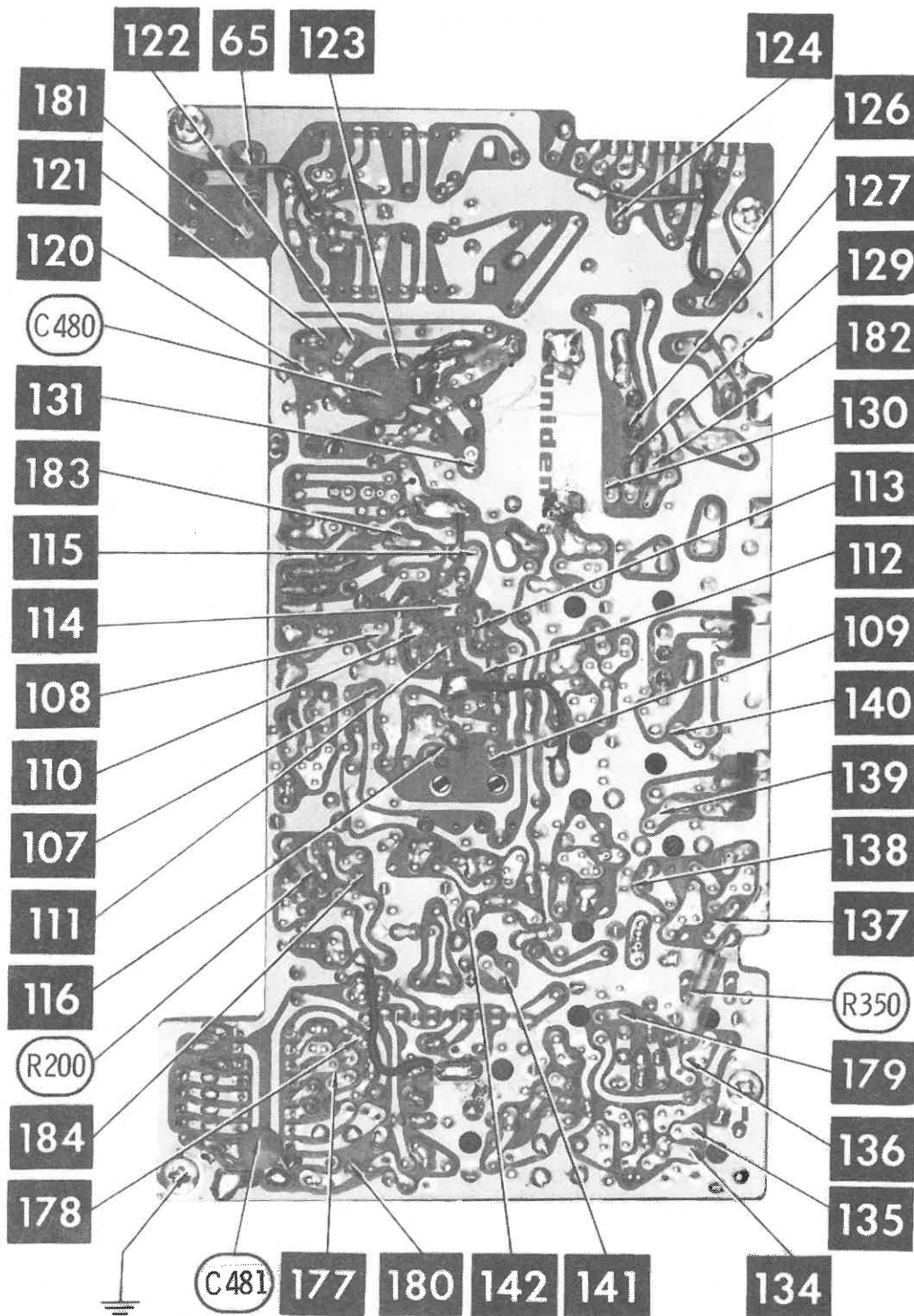




CB MAIN BOARD

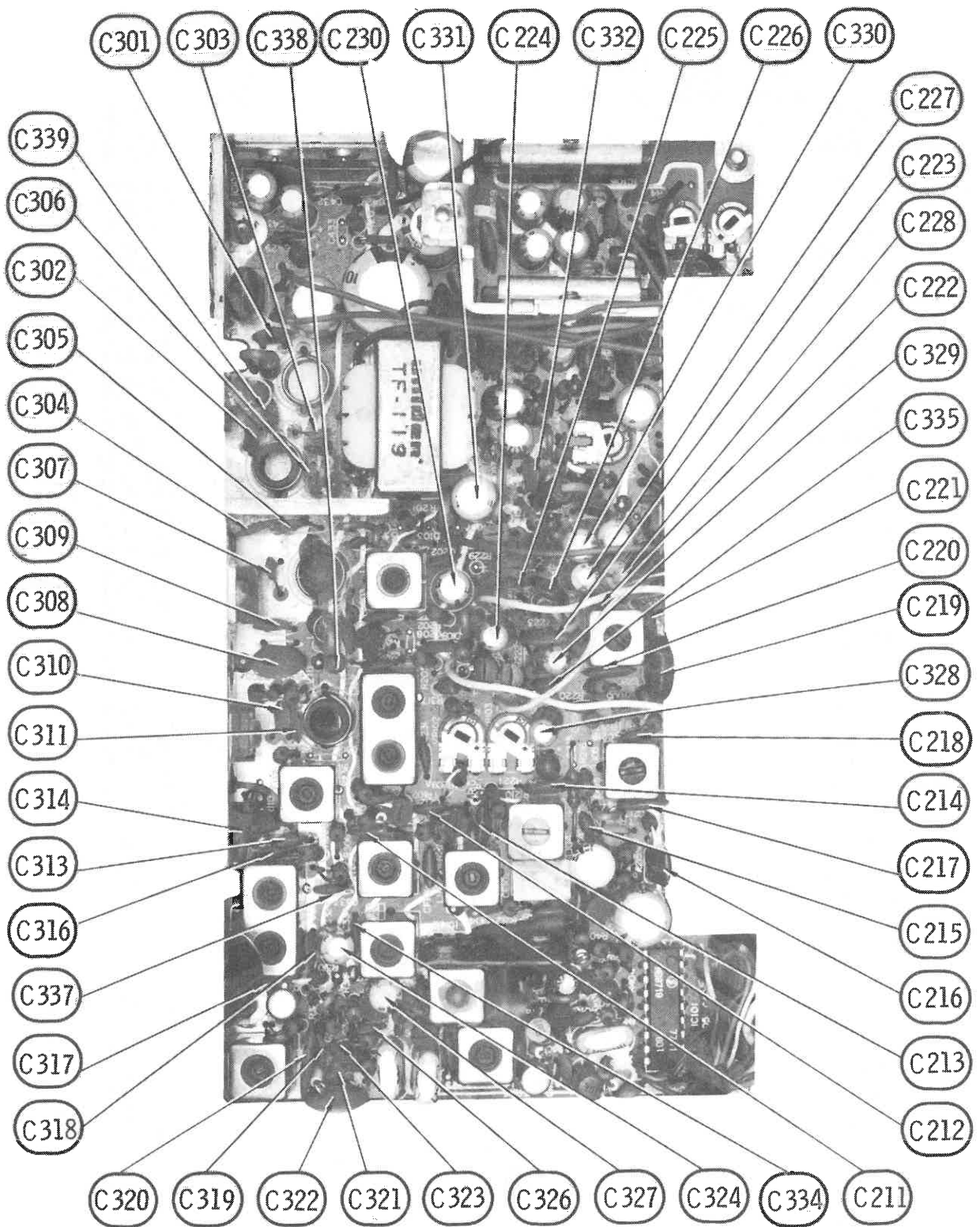


CB MAIN BOARD

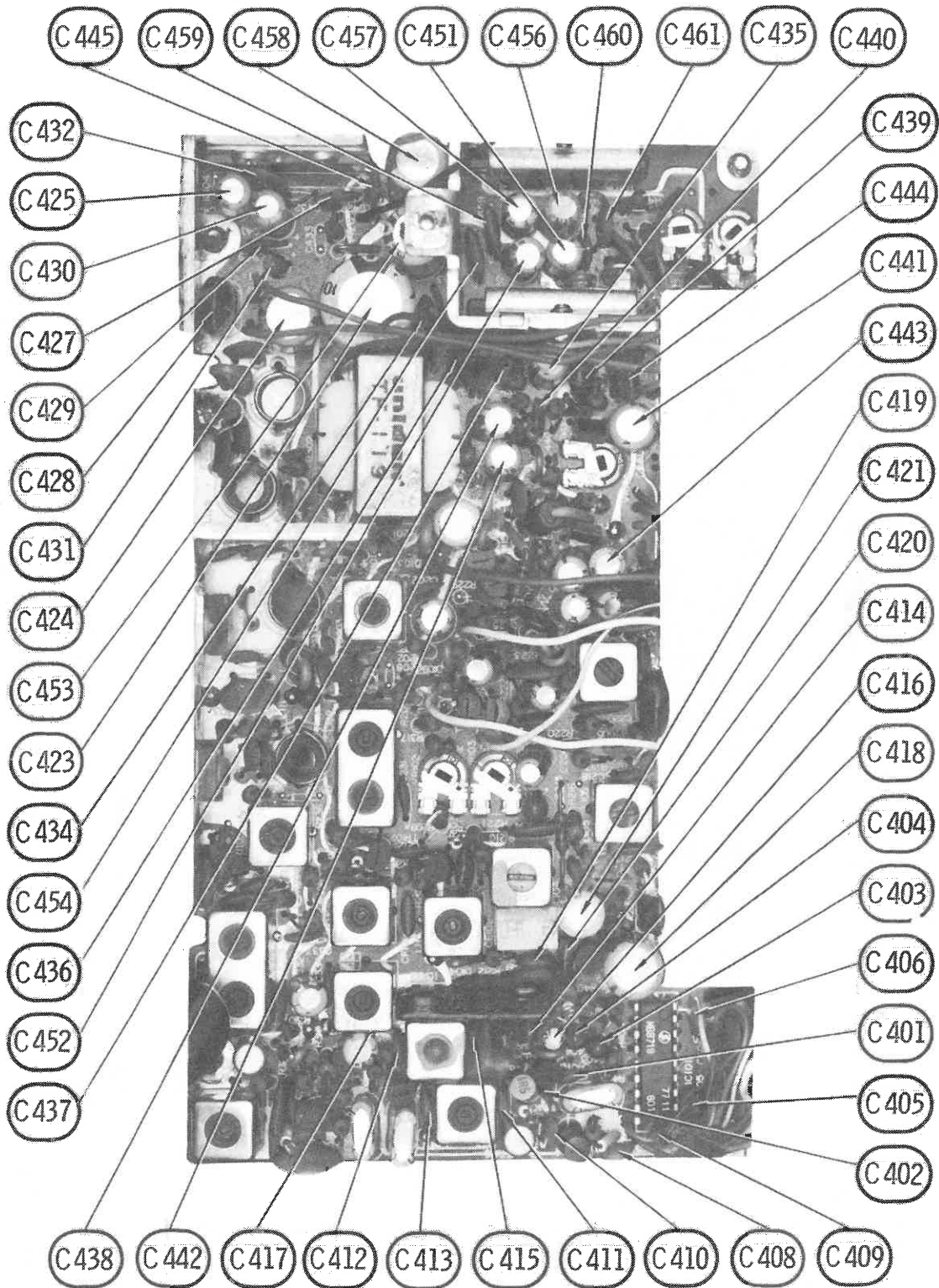


COBRA MODEL 47XLR

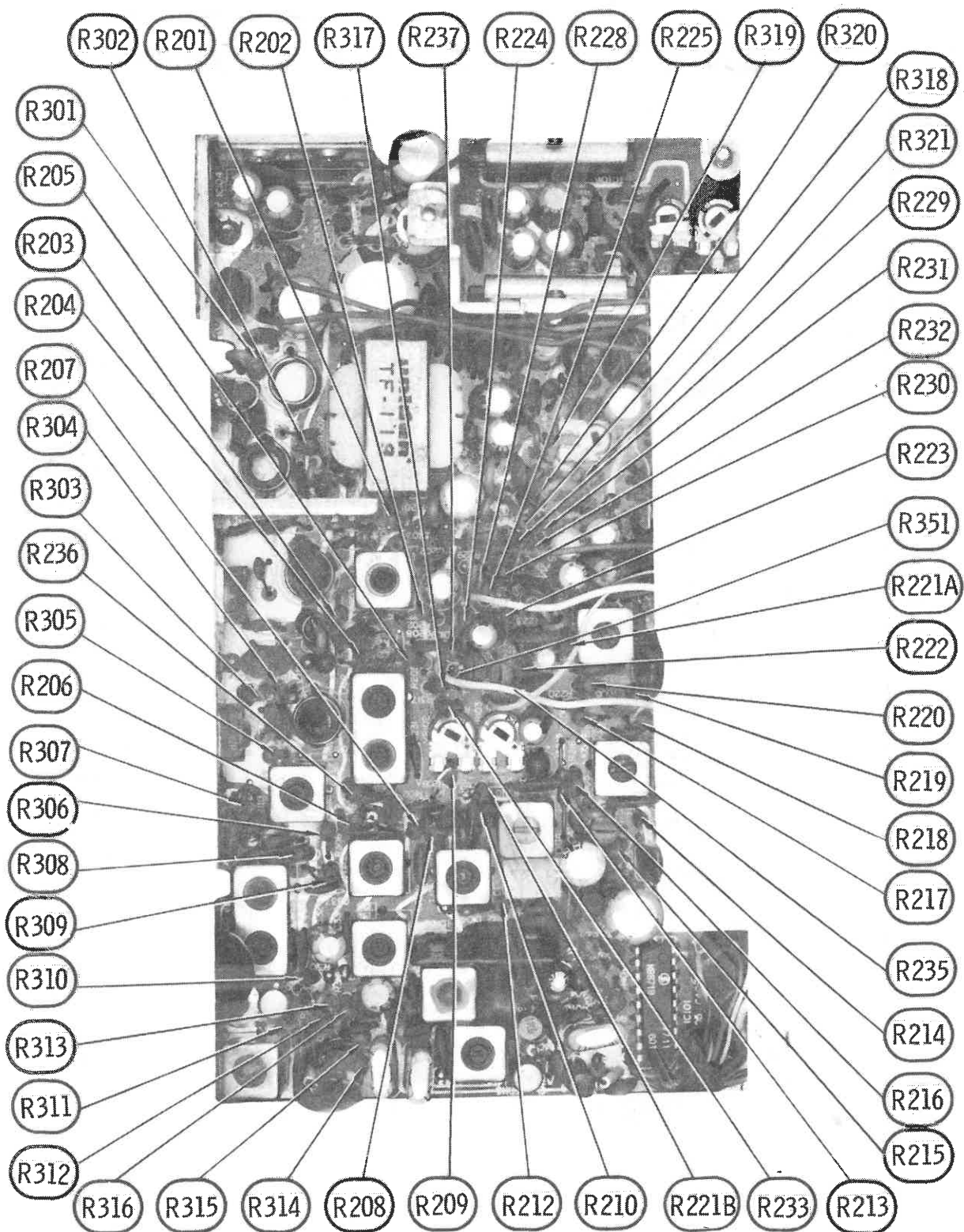
CB MAIN BOARD



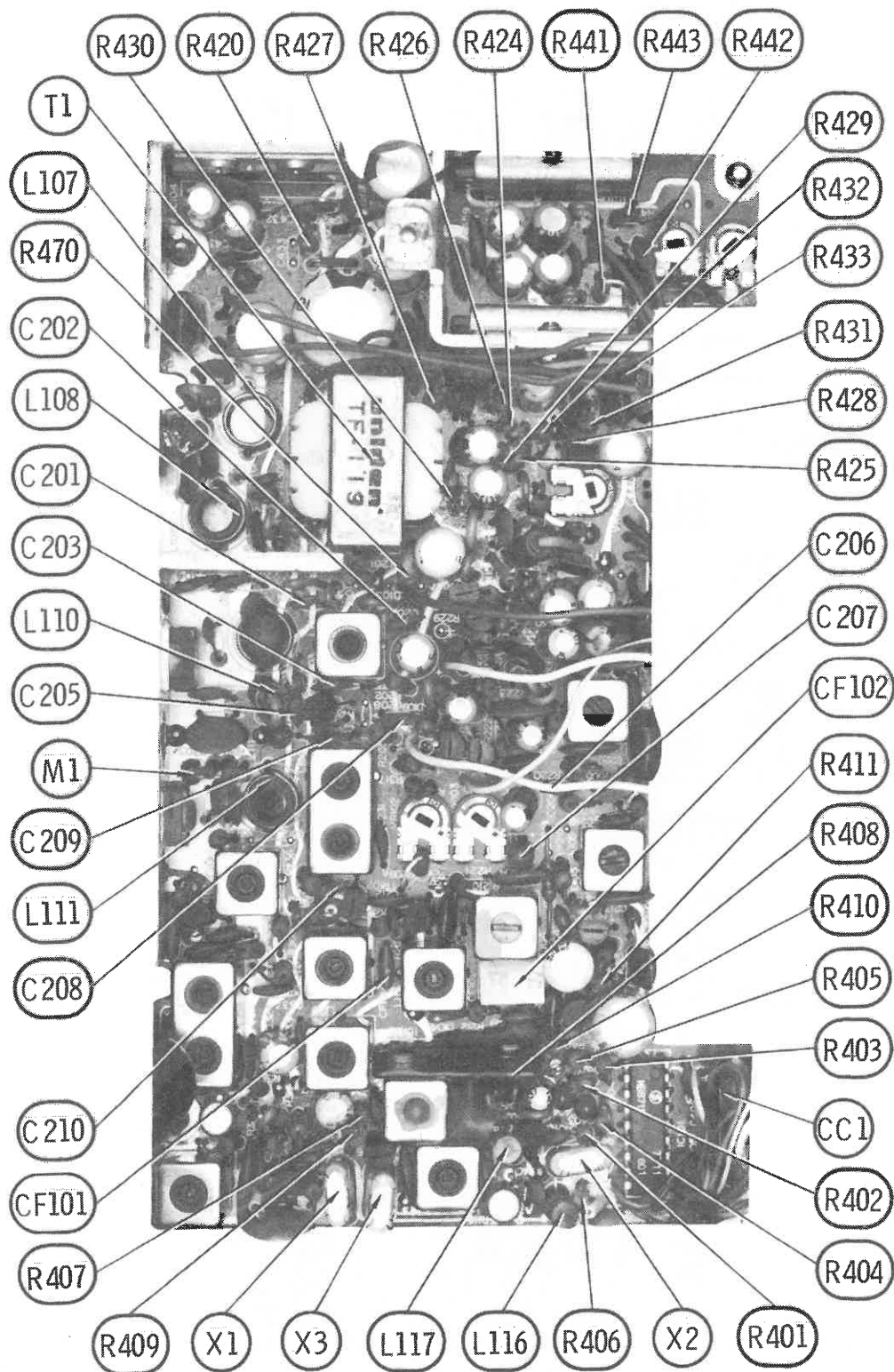
CB MAIN BOARD



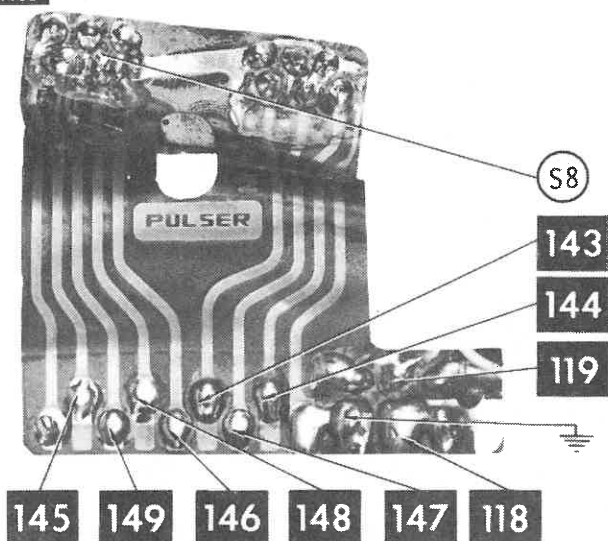
CB MAIN BOARD



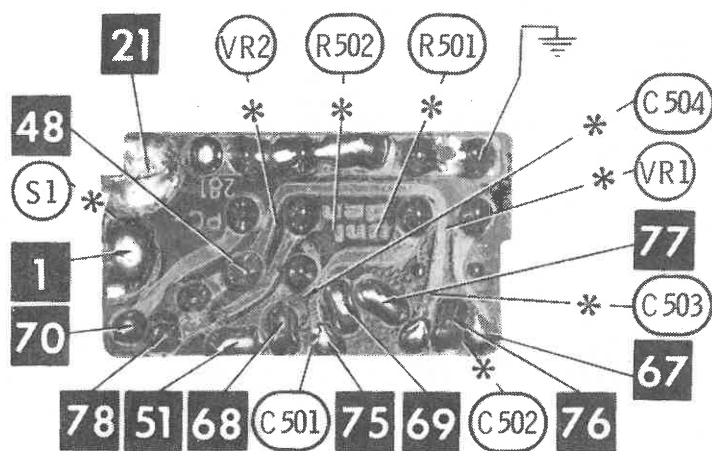
CB MAIN BOARD



CB MAIN BOARD

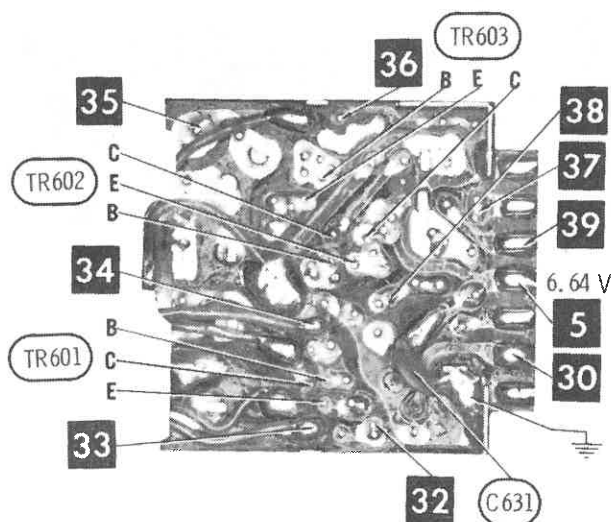


CH. SELECTOR & MIC SWITCH

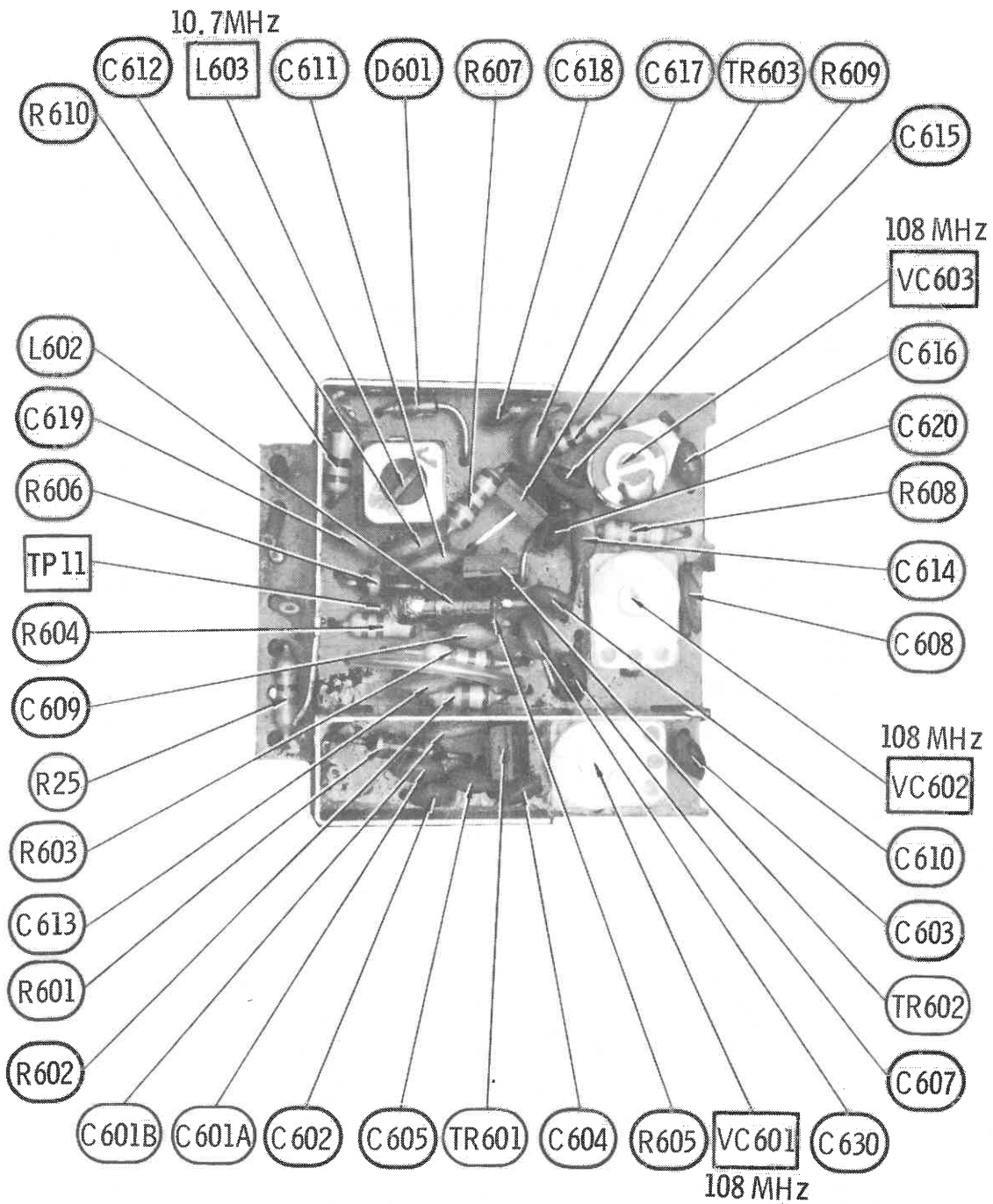


* Components on top of circuit board.

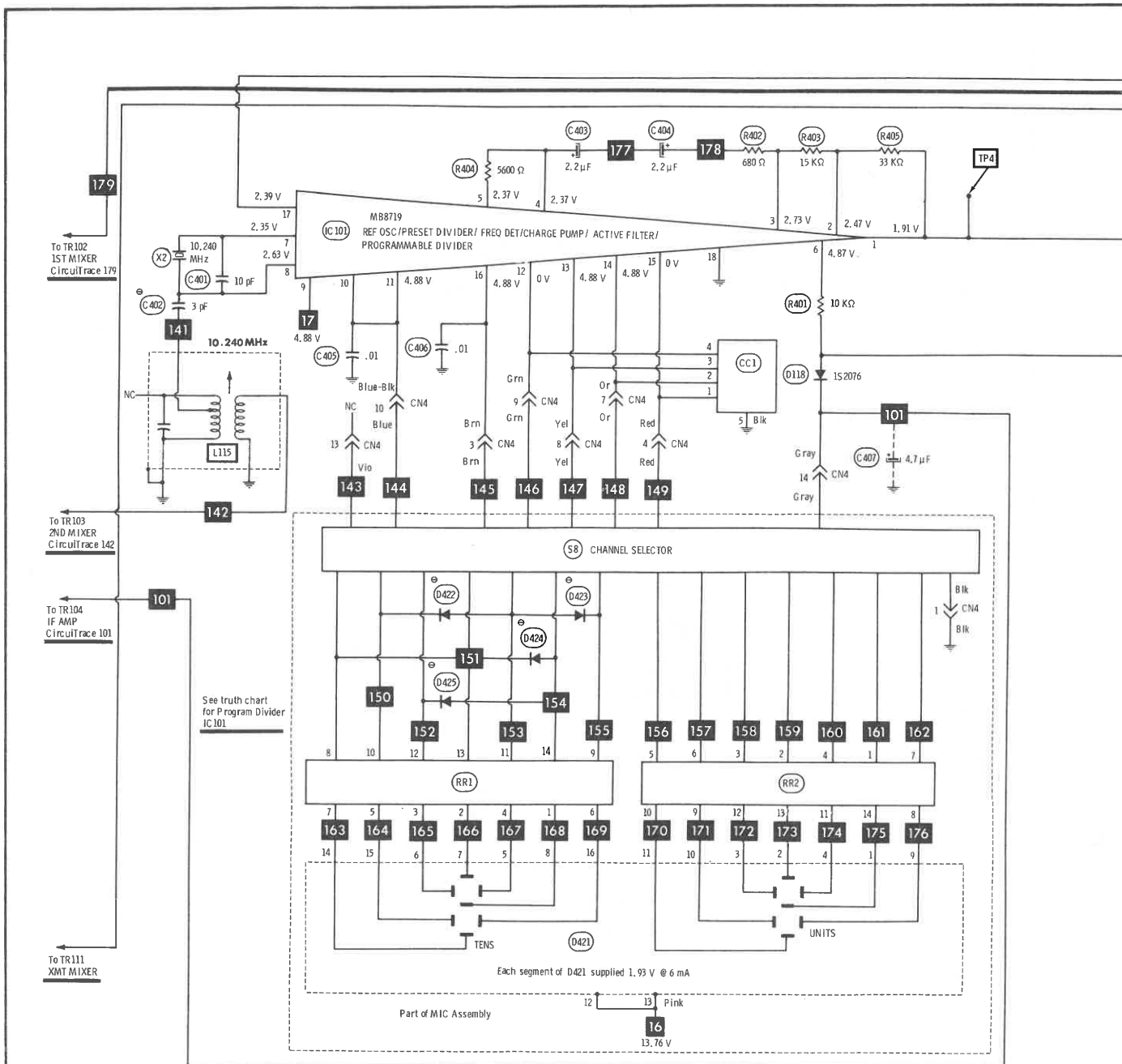
VOLUME & TONE CONTROL BOARD



FM TUNER BOARD



FM TUNER BOARD

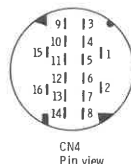
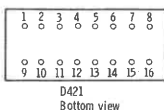
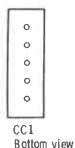
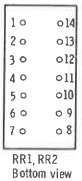
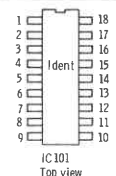
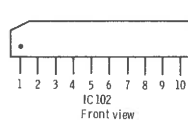


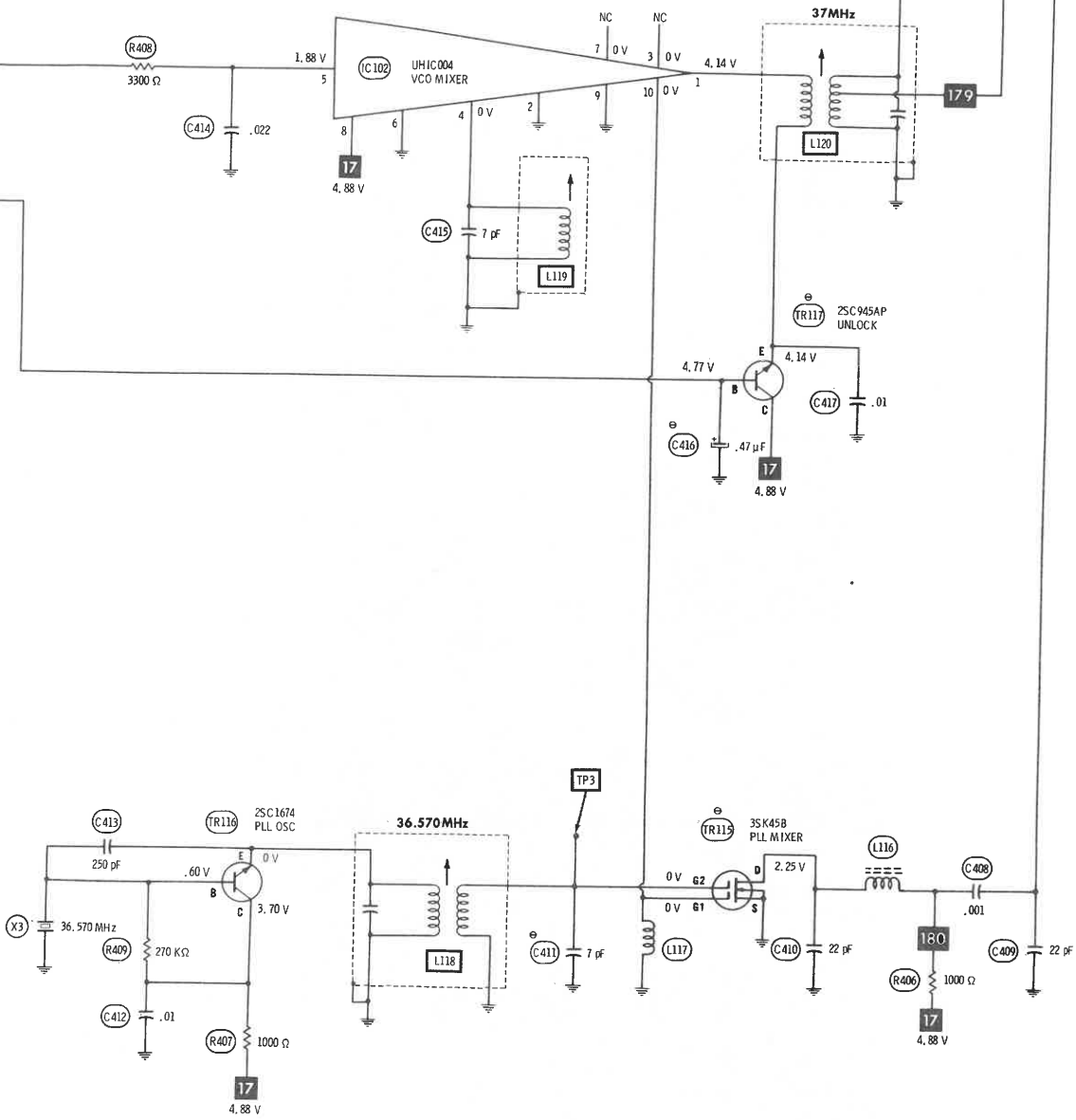
* Circuitry not used in some versions
 --- Circuitry used in some versions
 e See parts list
 * Nominal value
 G Ground
 Chassis
 Common tie point
 Measurements made in Channel 1 with switching as shown unless noted.
 Item numbers in rectangles appear in the alignment/adjustment instructions.
 Supply 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.

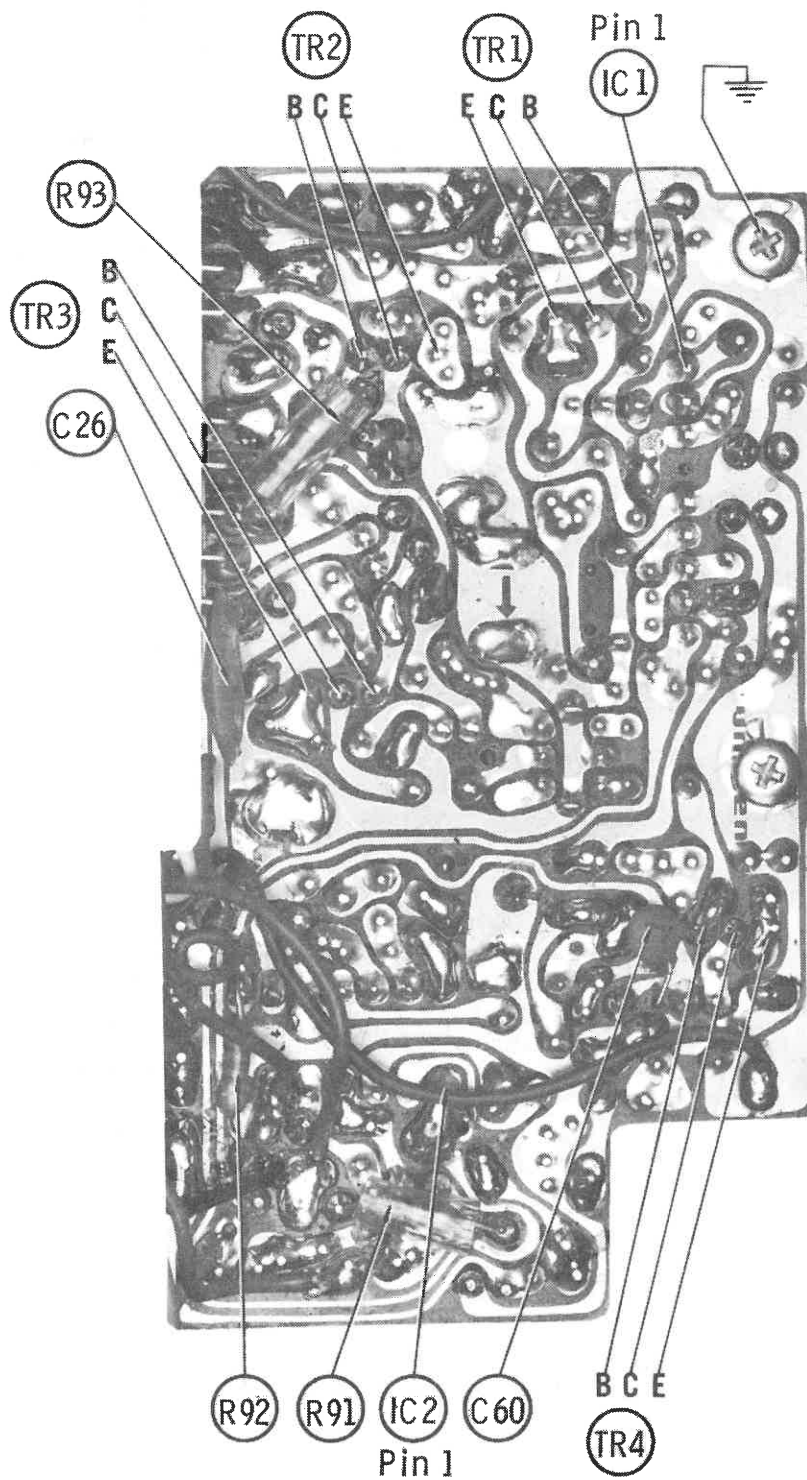
A PHOTOFACT STANDARD NOTATION SCHEMATIC

WITH **CIRCUITRACE**

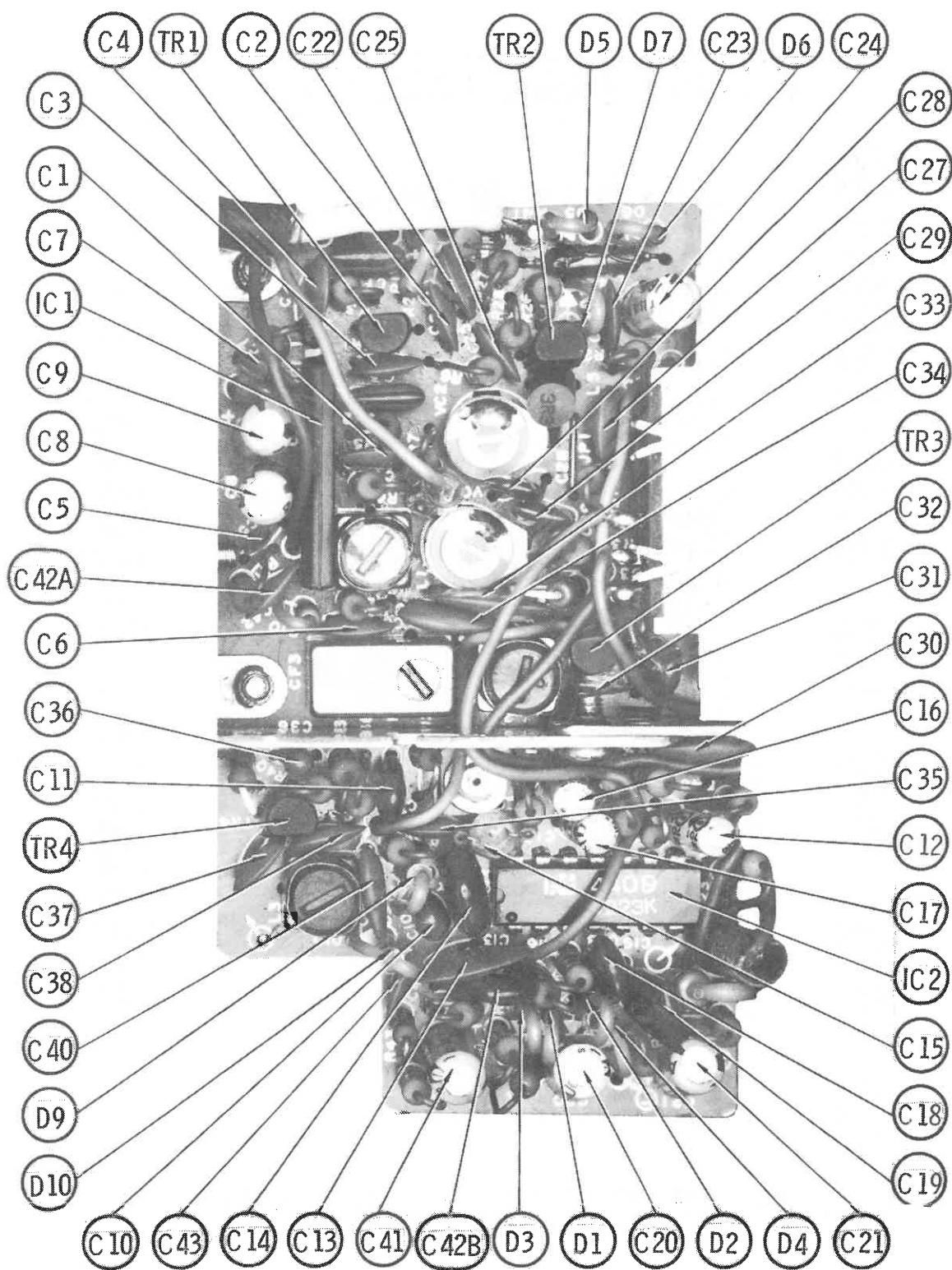
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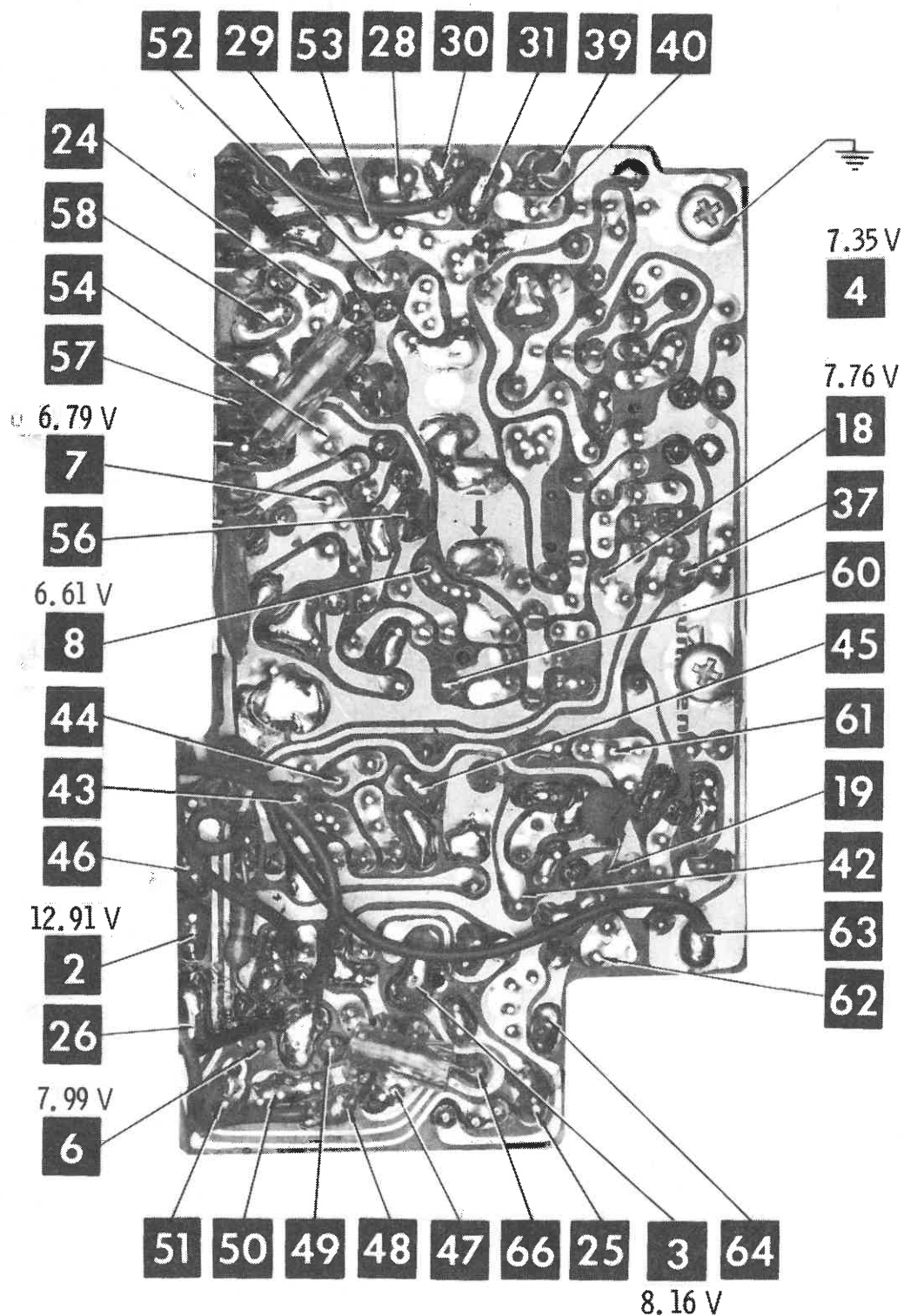




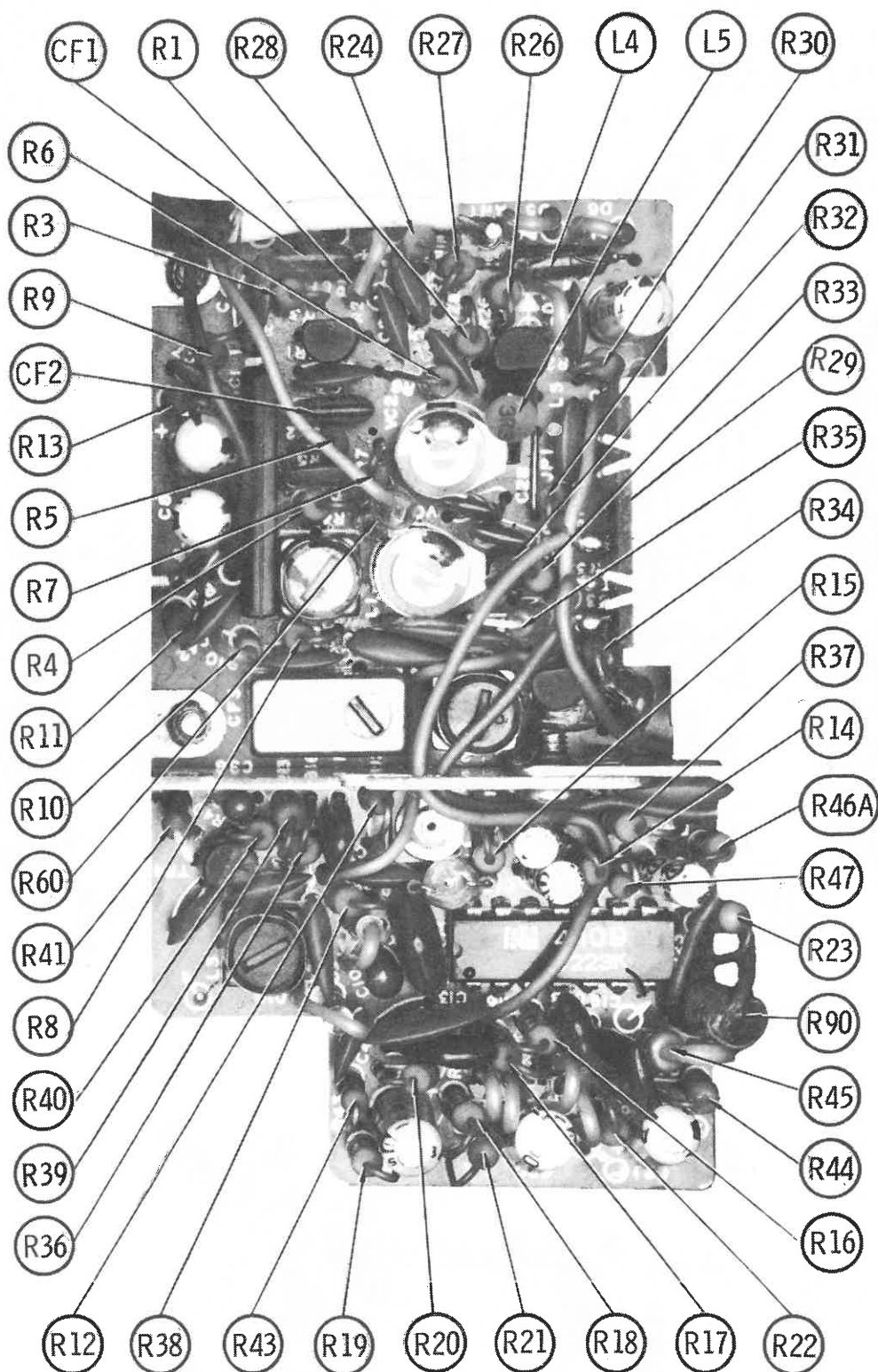
AM-FM IF BOARD



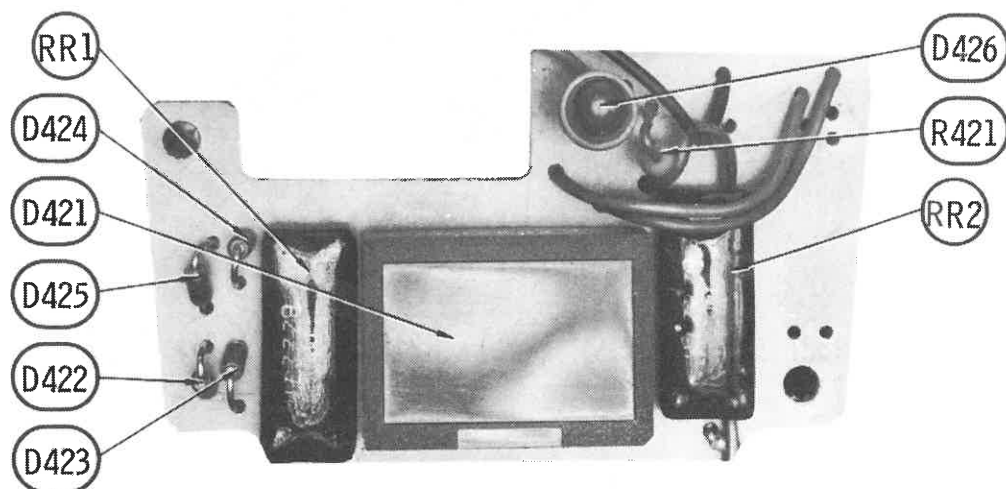
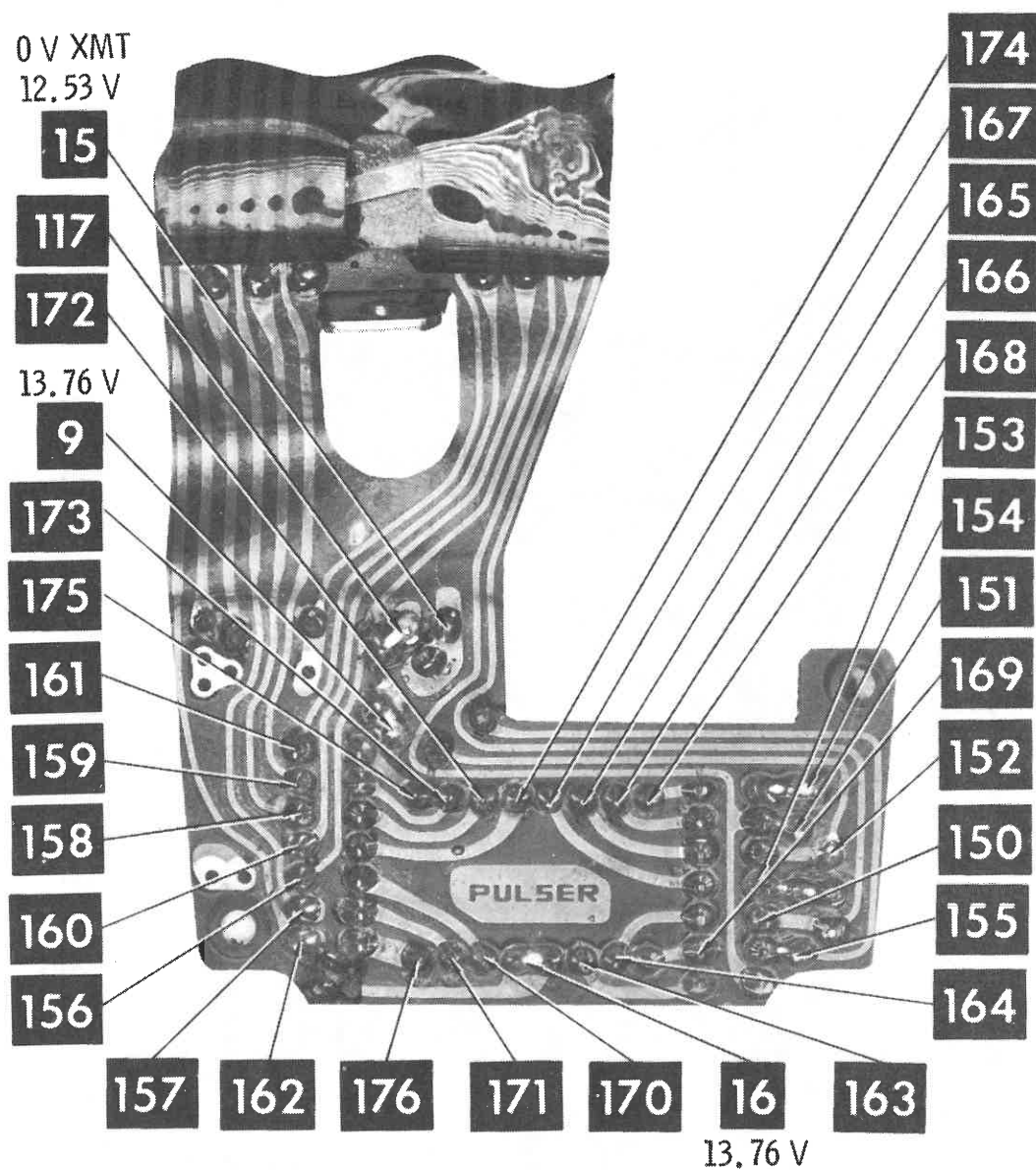
AM-FM IF BOARD



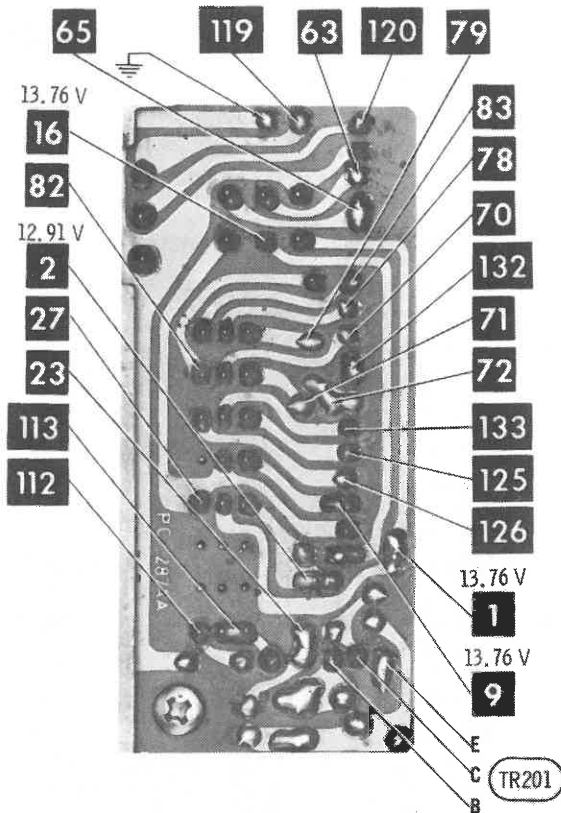
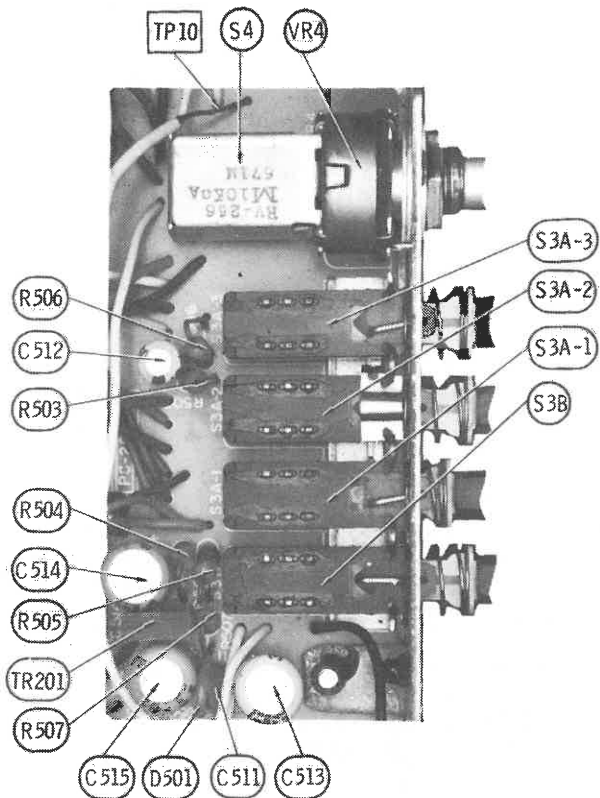
AM-FM IF BOARD



AM-FM IF BOARD

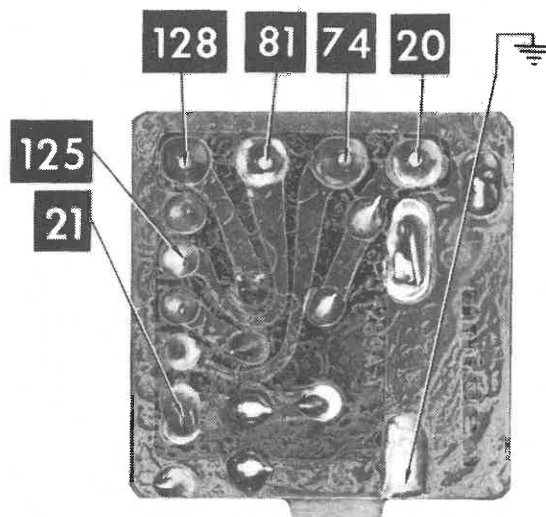
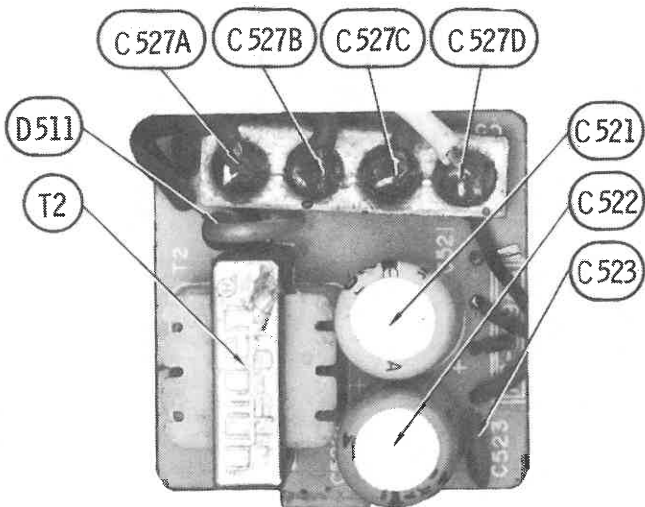


LED READOUT BOARD



COBRA MODEL 47 XLR

CONTROL BOARD



POWER SUPPLY BOARD

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')

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.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
D1	1S2076	151-067-9-001	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D2	1S2076	151-067-9-001	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D3	1S2076	151-067-9-001	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D4	1S2076	151-067-9-001	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D5	1S2473K	151-069-9-001	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D6	1S2473K	151-069-9-001	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D7	1S2076	151-067-9-001	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D8	1N60AM	182-038-9-001	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D9	1N60AM	182-038-9-001	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D10	1N60AM	182-038-9-001	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D101	1S2076	151-067-9-001	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D102	1S2076	151-067-9-001	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D103	1S2076	151-067-9-001	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D104	1S2076	151-067-9-001	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D105	1S2076	151-067-9-001	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D106	1N60AM	182-038-9-001	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D107	1N60AM	182-038-9-001	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D108	1N60AM	182-038-9-001	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D109	1S2473K	151-069-9-001	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D110	1S2076	151-067-9-001	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D111	1S2076	151-067-9-001	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D112	1N60AM	182-038-9-001	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D113	1N60AM	182-038-9-001	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D114	1S2076	151-067-9-001	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D115	1S2076	151-067-9-001	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D116	1S2076	151-067-9-001	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D117	RD8, 2FC	151-085-9-002	GEZD-8, 2	ZM8, 2B		RE 112		RT-257	ECG5016	1N4738A	WEP1417	
D118	1S2076	151-067-9-001	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D119	1S2076	151-067-9-001	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D422			GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D423			GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D424			GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D425			GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D501	RD9, 1EC	152-086-7-001	GEZD-9, 1	ZM9, 1B		RE 114	SK3060	RT-240	ECG5018	1N4739A	WEP1419	103-279-18
D511	SR1K-1	151-040-9-003	GE-300	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177		WEP1062	
D601	1S2139B			PTC311	HEPR2501				ECG611		WEP1062	ZEN-451
IC1	TA7303P	307-128-9-001										
IC2	KB4409	307-120-9-002										
IC101	MB8719	307-128-9-002										
IC102	UHC-004	307-113-9-002							ECG1203			
IC103	NJM78L05A	307-113-9-003				RE 387-1C			ECG977			
IC104	MB3710	307-128-9-003										
IC105	HA1366	307-128-9-004										
IC106	HA1366R	307-128-9-005										
TR1	2SC829B	176-075-9-002	GE-20*	PTC121*	HEPS0015*	RE 9*	SK3122	RT-308	ECG229*	2SC829	WEP829	ZEN-127
	2SC829		GE-20*	PTC121*	HEPS0015*	RE 9*	SK3122	RT-308	ECG229*	2SC829	WEP829	ZEN-127
TR2	2SC829B	176-075-9-002	GE-20*	PTC121*	HEPS0015*	RE 9*	SK3122	RT-308	ECG229*	2SC829	WEP829	ZEN-127
	2SC829		GE-20*	PTC121*	HEPS0015*	RE 9*	SK3122	RT-308	ECG229*	2SC829	WEP829	ZEN-127
TR3	2SC829B	176-075-9-002	GE-20*	PTC121*	HEPS0015*	RE 9*	SK3122	RT-308	ECG229*	2SC829	WEP829	ZEN-127
	2SC829		GE-20*	PTC121*	HEPS0015*	RE 9*	SK3122	RT-308	ECG229*	2SC829	WEP829	ZEN-127
TR4	2SC829B	176-075-9-002	GE-20*	PTC121*	HEPS0015*	RE 9*	SK3122	RT-308	ECG229*	2SC829	WEP829	ZEN-127
	2SC829		GE-20*	PTC121*	HEPS0015*	RE 9*	SK3122	RT-308	ECG229*	2SC829	WEP829	ZEN-127
TR101	2SC1674L	176-081-9-002	GE-61	PTC132*	HEPS0010*	RE 9*	SK3018*	RT-308	ECG229*	2SC829	WEP956*	
	2SC1674		GE-61	PTC132*	HEPS0010*	RE 9*	SK3018*	RT-308	ECG229*		WEP956*	
TR102	2SK49F	182-048-9-001	GE-FET-4	PTC182	HEPF2004	RE 199	SK3050	RT-181	ECG222		WEP905	121-826
	2SK49		GE-FET-4	PTC182	HEPF2004	RE 199	SK3050	RT-181	ECG222		WEP905	121-826
TR103	2SC1675K	176-081-9-003	GE-213	PTC139*	HEPS0025*	RE 13*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
	2SC1675		GE-213	PTC139*	HEPS0025*	RE 13*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
TR104	2SC1675L	176-065-9-001	GE-213	PTC139*	HEPS0025*	RE 13*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
	2SC1675		GE-213	PTC139*	HEPS0025*	RE 13*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
TR105	2SC1675K	176-081-9-003	GE-213	PTC139*	HEPS0025*	RE 13*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
	2SC1675		GE-213	PTC139*	HEPS0025*	RE 13*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
TR106	2SC945AQ	176-062-9-001	GE-212	PTC121*	HEPS0015*	RE 192	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000
	2SC945		GE-212	PTC121*	HEPS0015*	RE 192	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000
TR107	2SC945AQ	176-062-9-001	GE-212	PTC121*	HEPS0015*	RE 192	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000
	2SC945		GE-212	PTC121*	HEPS0015*	RE 192	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000
TR108	2SC1909	176-081-9-004(12)	GE-215	PTC186		RE 203	SK3197	RT-146	ECG235		WEP785	
TR109	2SC1846Q	176-075-9-006(13)	GE-336			RE 209			ECG295	2SC496	WEP913	
	2SC1846		GE-336			RE 209			ECG295	2SC496	WEP913	
TR110	2SC2076C	176-060-9-004	GE-210*	PTC121*	HEPS0015*	RE 13*	SK3122	RT-308	ECG123A		WEP736	121-722
	2SC2076		GE-210*	PTC121*	HEPS0015*	RE 13*	SK3122	RT-308	ECG123A		WEP736	121-722
TR111	3SK45B	182-038-9-001	GE-FET-4	PTC182	HEPF2004	RE 199	SK3050	RT-181	ECG222		WEP905	121-826
	3SK45		GE-FET-4	PTC182	HEPF2004	RE 199	SK3050	RT-181	ECG222		WEP905	121-826
TR112	2SC1674K	176-081-9-001	GE-61	PTC132*	HEPS0010*	RE 9*	SK3018*	RT-308	ECG229*		WEP956*	
	2SC1674		GE-61	PTC132*	HEPS0010*	RE 9*	SK3018*	RT-308	ECG229*		WEP956*	
TR113	2SC945AP	176-060-9-003	GE-212	PTC121*	HEPS0015*	RE 192	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000
	2SC945		GE-212	PTC121*	HEPS0015*	RE 192	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000
TR114	2SC945AP	176-060-9-003	GE-212	PTC121*	HEPS0015*	RE 192	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000
	2SC945		GE-212	PTC121*	HEPS0015*	RE 192	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000

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.
TR115	3SK45B	182-038-9-001	GE-FET-4	PTC182	HEPF2004	RE 199	SK3050	RT-181	ECG222		WEP905	121-826
TR116	2SC1674K	176-081-9-001	GE-FET-4	PTC182	HEPF2004	RE 199	SK3050	RT-181	ECG222		WEP905	121-826
	3SK45		GE-61	PTC132*	HEPS0010*	RE 9*	SK3018*	RT-308	ECG229*		WEP956*	
TR117	2SC1674	176-060-9-003	GE-61	PTC132*	HEPS0010*	RE 9*	SK3018*	RT-308	ECG229*		WEP956*	
	2SC945AP		GE-212	PTC121*	HEPS0015*	RE 192	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000
	2SC945		GE-212	PTC121*	HEPS0015*	RE 192	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000
TR118	2SC945AQ	176-062-9-001	GE-212	PTC121*	HEPS0015*	RE 192	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000
	2SC945		GE-212	PTC121*	HEPS0015*	RE 192	SK3124	RT-107A	ECG199	2SC945	WEP1945	121-29000
TR119	2SC673C	177-025-9-001	GE-269	PTC103*	HEPS0026*	RE 197*	SK3114	RT-115*	ECG290		WEP911	
	2SA673C		GE-269	PTC103*	HEPS0026*	RE 197*	SK3114	RT-115*	ECG290		WEP911	
	2SA673		GE-269	PTC103*	HEPS0026*	RE 197*	SK3114	RT-115*	ECG290		WEP911	
TR120	2SA673C	177-025-9-001	GE-269	PTC103*	HEPS0026*	RE 197*	SK3114	RT-115*	ECG290		WEP911	
	2SA673		GE-269	PTC103*	HEPS0026*	RE 197*	SK3114	RT-115*	ECG290		WEP911	
TR201	2SC1846-Q	176-075-9-006(13)	GE-336			RE 209			ECG295	2SC496	WEP913	
	2SC1846		GE-336			RE 209			ECG295	2SC496	WEP913	
TR601	2SC1342B		GE-61*	PTC136*	HEPS0014*	RE 9*	SK3018*	RT-108A*	ECG229*		WEP956*	ZEN-127
	2SC1674		GE-61	PTC132*	HEPS0010*	RE 9*	SK3018*	RT-308	ECG229*		WEP956*	
TR602	2SC535C		GE-86	PTC132*	HEPS0016*	RE 9*	SK3018*	RT-134	ECG229*	2SC535	WEP535	121-881
	2SC1674		GE-61	PTC132*	HEPS0010*	RE 9*	SK3018*	RT-308	ECG229*		WEP956*	
TR603	2SC461R		GE-61*	PTC121*	HEPS0014*	RE 10*	SK3018*	RT-107A	ECG108*	2SC372*	WEP736*	ZEN-127
	2SC1674		GE-61	PTC132*	HEPS0010*	RE 9*	SK3018*	RT-308	ECG229*		WEP956*	

* Lead configuration may vary from original.

(12) 10 WATTS @ 3 AMPS.

(13) 1.2 WATTS @ 1 AMP.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA				
		MFRG. PART No.	CORNELL- DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C8	2.2 25V	022-158-9-002	PC2-100	VTT2R2A50	QV1-19	EV-1517
C9	1 50V	022-157-9-002	PC1-50	VTT1A50	QV1-11	EV-1615
C10	1 16V	027-027-9-002		TDC105M035EL		SD35-19
C12	.47 16V	022-161-9-002	PC1-50	VTT47A63	QV1-3	EV-1610
	.22 16V	022-158-9-001(1)		TDC224M050EL	QDT1-10	SD50-R229
C16	.47 16V	022-161-9-002	PC1-50	VTT47A63	QV1-3	EV-1610
C17	.22 16V	022-158-9-001		TDC224M050EL	QDT1-10	SD50-R229
C20	1 50V	022-157-9-002	PC1-50	VTT1A50	QV1-11	EV-1615
C21	1 50V	022-157-9-002	PC1-50	VTT1A50	QV1-11	EV-1615
C24	10 16V	022-157-9-004	PC10-25	VTT10B25	QV1-41	EV-1222
C36	1 16V	027-027-9-002		TDC105M035EL		SD35-19
C41	1 50V	022-157-9-002	PC1-50	VTT1A50	QV1-11	EV-1615
C207	10 16V	022-157-9-004	PC10-25	VTT10B25	QV1-41	EV-1222
C224	1 50V	022-157-9-002	PC1-50	VTT1A50	QV1-11	EV-1615
C227	1 50V	002-157-9-002	PC1-50	VTT1A50	QV1-11	EV-1615
C228	1 50V	022-157-9-002	PC1-50	VTT1A50	QV1-11	EV-1615
C230	47 10V	002-120-9-002	PC50-16	VTT47D16	QV1-73	EV-1226
C324	33 16V	022-157-9-006	PC30-25	VTT33D25	QV1-63	EV-1325
C327	33 16V	022-157-9-006	PC30-25	VTT33D25	QV1-63	EV-1325
C328	10 16V	022-157-9-004	PC10-25	VTT10B25	QV1-41	EV-1222
C329	1 50V	022-157-9-002	PC1-50	VTT1A50	QV1-11	EV-1615
C330	47 10V		PC50-16	VTT47D16	QV1-73	EV-1226
	10 16V	022-157-9-004(1)	PC10-25	VTT10B25	QV1-41	EV-1222
C331	47 16V	022-155-9-001	PC50-16	VTT47D16	QV1-73	EV-1226
C338	1 50V		PC1-50	VTT1A50	QV1-11	EV-1615
C403	2.2 25V	027-021-9-001		TDC225M035FL		SD35-2P29
C404	2.2 25V	027-021-9-001		TDC225M035FL		SD35-2R29
C416	.47 16V	022-161-9-002	PC1-50	VTT47A63	QV1-3	EV-1610
C418	470 6.3V	022-158-9-008	PC500-16	VTT470K16	QV1-149	EV-1150
C421	47 16V	022-155-9-001	PC50-16	VTT47D16	QV1-73	EV-1226
C423	1000 16V	022-152-9-002	PC1000-16	VTT1000L16	QV1-183	EV-1260
C424	220 16V	022-122-9-008	PC250-25	VTT220H16	QV1-117	EV-1240
C425	33 16V	022-157-9-006	PC30-25	VTT33D25	QV1-63	EV-1325
C430	33 16V	022-157-9-006	PC30-25	VTT33D25	QV1-63	EV-1325
C431	4.7 16V	027-026-9-004		TDC475M010EL	QDT1-48	SD10-4R79
C435	47 10V	022-120-9-002	PC50-16	VTT47D16	QV1-73	EV-1226
C438	47 10V	022-120-9-002	PC50-16	VTT47D16	QV1-73	EV-1226
	33 10V	022-158-9-005	PC30-25	VTT33B10	QV1-61	EV-1125
C441	100 10V	022-157-9-008	PC100-10	VTT100E10	QV1-93	EV-1130
C442	47 10V	022-120-9-002	PC50-16	VTT47D16	QV1-73	EV-1226
C443	33 16V	022-157-9-006	PC30-25	VTT33D25	QV1-63	EV-1325
	1 50V	022-157-9-002(1)	PC1-50	VTT1A50	QV1-11	EV-1615
C451	47 10V	022-120-9-002	PC50-16	VTT47D16	QV1-73	EV-1226
	10 16V	022-157-9-004	PC10-25	VTT10B25	QV1-41	EV-1222
C452	33 16V	022-157-9-006	PC30-25	VTT33D25	QV1-63	EV-1325
C453	330 16V	022-158-9-003	WBR300-35	VTT330H16	QV1-133	EV-1245
C456	47 10V	022-120-9-002	PC50-16	VTT47D16	QV1-73	EV-1226
	10 16V	022-157-9-004(1)	PC10-25	VTT10B25	QV1-41	EV-1222
C457	33 16V	022-157-9-006	PC30-25	VTT33D25	QV1-63	EV-1325
C458	330 16V	022-158-9-003	WBR300-35	VTT330H16	QV1-133	EV-1245
C512	1 50V	022-157-9-002	PC1-50	VTT1A50	QV1-11	EV-1615
C513	100 16V	022-157-9-009	PC100-16	VTT100F16	QV1-95	EV-1230
C514	47 10V	022-120-9-002	PC50-16	VTT47D16	QV1-73	EV-1226
C515	100 10V	022-157-9-008	PC100-10	VTT100E10	QV1-93	EV-1130
C521	220 16V	022-122-9-008	PC250-25	VTT220H16	QV1-117	EV-1240
C522	100 25V	022-155-9-022	PC100-25	VTT100G25	QV1-97	EV-1330

COBRA MODEL 47XLR

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
C1	.022 25V		UK25-223				HY-725
C2	.022 25V		UK25-223				HY-725
C3	.022 25V		UK25-223				HY-725
C4	.022 25V		UK25-223				HY-725
C5	10 50V		DTZ-10	NP010	CN0410		10TCC-Q10
C6	.022 25V		UK25-223				HY-725
C7	.022 25V		UK25-223				HY-725
C11	.0022 5% 50V		DD-222		GP222	QC2-97	5GA-D22
	22 5% 50V		DTZ-22		CN0422		10TCC-Q22
C13	680 10% 50V		DD-681	NP022	GP368		10TS-T68
C14	.047 10% 50V			GP680	EWFA1A147	QFT2-171	1FT-S47
C15	470 5% 50V			DPMS2S47	SX347	QW1-42	MWA-471
C16	.015 10% 50V			CD15FD471J03	EWFA1A115	QFT2-105	1FT-S15
	.033 50V	CQM2813335		WMF1S15			
C19	.015 10% 50V			WMF1S15	EWFA1A115	QFT2-105	1FT-S15
	.033 50V	CQM2813335				QFT2-149	1FT-S33
C22	.022 25V		UK25-223				HY-725
C23	.022 25V		UK25-223				HY-725
C25	.022 25V		UK25-223				HY-725
C26	150 10% 50V		DTZ-47	NP047	CN0447		10TCC-Q47
	100 10% 50V		DTZ-100	NP0100	CN0310		10TCC-T10
C27	3.3 50V		DTZ-3R3	NP03P3	CN0533		10TCC-V33
	47 10% 50V		DD-222	NP047	CN0447		10TCC-Q47
C28	.0022 10% 50V		DD-472		GP222	QC2-97	5GA-D22
	.0047 50V			GP4700	GP247		5GA-D47
C29	.01 10% 50V			WMF1S1	EWFA1A110	QFT2-91	1FT-S10
C30	.047 10% 50V			DPMS2S47	EWFA1A147	QFT2-171	1FT-S47
C31	.0022 10% 50V			DPMS6022	M192P2229R8	QFT2-27	1FT-D22
C32	.0068 50V		DD-682	GP6800	GP268		5GA-D68
C33	180 5% 50V			CD15FD181J03	SX318	QW1-33	MWA-181
C34	.047 25V		UK25-503		MAG2515		HY-735
C35	.022 25V		UK25-223				HY-725
C37	.022 25V		UK25-223				HY-725
C38	220 10% 50V		DTZ-220				10TCC-T22
	150 10% 50V		DTZ-150		CN0315		10TCC-T15
C40	.047 25V		UK25-503		MAG2515		HY-735
C42A	220		DTZ-220				10TCC-T22
C42B	.01 10% 50V			WMF1S1	EWFA1A110	QFT2-91	1FT-S10
C43	.022 25V		UK25-223				HY-725
C201	27 5% 50V				CN0427		10TCC-Q27
C202	.01 25V		UK25-103		MAG2511		HY-520
C203	.01 25V		UK25-103		MAG2511		HY-520
C205	.01 25V		UK25-103		MAG2511		HY-520
C206	.0022		DD-222		GP222	QC2-97	5GA-D22
C208	.022 25V		UK25-223				HY-725
C209	.01 25V		UK25-103		MAG2511		HY-520
C210	.0047 25V		DD-472	GP4700	GP247		5GA-D47
C211	.01 25V		UK25-103		MAG2511		HY-520
C212	.01 25V		UK25-103		MAG2511		HY-520
C213	.022 10% 50V			DPMS2S22	M192P2239R8	QFT2-127	1FT-S22
	.047 10% 50V		UK25-503		MAG2515		HY-735
C214	.039 25V				GP140		5GA-S40
C215	1.5 50V		DTZ-1R5	NP01P5	CN0515		10TCC-V15
	2 +.25 50 V		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C216	.022 10% 50V			DPMS2S22	M192P2239R8	QFT2-127	1FT-S22
C217	.039 25V				GP140		5GA-S40
C218	.01 25V		UK25-103		MAG2511		HY-520
C219	.068 10% 50V			WMF1S68	EWFA1A168	QF1-195	1PB-S68
C220	.039 25V				GP140		5GA-S40
C221	.01 25V		UK25-103		MAG2511		HY-520
	.0047 25V		DD-472	GP4700	GP247		5GA-D47
C222	.01 10% 50V			WMF1S1	EWFA1A110	QFT2-91	1FT-S10
C223	.01 25V		UK25-103		MAG2511		HY-520
	.0047 25V		DD-472	GP4700	GP247		5GA-D47
C225	.0033 10% 50V			WMF1D33	M192P3329R8	QFT2-43	1FT-D33
	.022 10% 50V			DPMS2S22	M192P2239R8	QFT2-127	1FT-S22
C226	.015 10% 50V			WMF1S15	M192P1539R8	QFT2-105	1FT-S15
	.0047 10% 50V			WMF1D47	EWFA1A247	QFT2-63	1FT-D47
C301	150 10% 50V		DTZ-150		CN0315		10TCC-T15
	180 10% 50V		DTZ-180				10TCC-T18
C302	300 10% 50V		DD-301	GP300	GP330		10TS-T30
C303	2 +.25 50V		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C304	300 10% 50V			GP300	GP330		10TS-T30
C305	.01 25V		UK25-103		MAG2511		HY-520
C306	.01 25V		UK25-103		MAG2511		HY-520
C307	33 5% 50V		DTZ-33	NP033	CN0433		10TCC-Q33
C308	.039 25V				GP140		5GA-S40
C309	.01 25V		UK25-103		MAG2511		HY-520
C310	47 5% 50V		DTZ-47	NP047	CN0447		10TCC-Q47
	68 5% 50V		DTZ-68	NP068	CN0468		10TCC-Q68
C311	220 10% 50V		DTZ-220				10TCC-T22
C313	.01 25V		UK25-103				HY-520
C314	.0047 25V		DD-472	GP4700	GP247		5GA-D47
C316	330 10% 50V		DD-331	GP330	GP333		10TS-T33
C317	.01 25V		UK25-103		MAG2511		HY-520
C318	.01 25V		UK25-103		MAG2511		HY-520
C319	.001 25V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C320	330 10% 50V		DD-331	GP330	GP333		10TS-T33
C321	10 +1 50V		DTZ-10	NP010	CN0410		10TCC-Q10
C322	100 10% 50V		DTZ-100	NP0100	CN0310		10TCC-T10
C323	.001 10% 50V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C326	.01 25V		UK25-103		MAG2511		HY-520
C332	.01 25V		UK25-103		MAG2511		HY-520
C334	.01 25V		UK25-103		MAG2511		HY-520
C335	.01 25V		UK25-103		MAG2511		HY-520
C337	.01 25V		UK25-103		MAG2511		HY-520
C339	68 10% 50V		DTZ-68	NP068	CN0468		10TCC-Q68

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
C401	10 +1 50V		DTZ-10	NP010	CN0410		10TCC-Q10
C402	3 50V		DTZ-3R3	NP03P3	CN0533		10TCC-V33
	5 +0.5 50V		DTZ-4R7	NP04P7	CN0547		10TCC-V47
C405	.0T 25V		UK25-103		MAG2511		HY-520
C406	.01 25V		UK25-103		MAG2511		HY-520
C408	.001 25V		DD-102G	GP1000	GP210	QC2-81	5GA-D10
C409	22 5% 50V		DTZ-22	NP022	CN0422		10TCC-Q22
C410	22 5% 50V		DTZ-22	NP022	CN0422		10TCC-Q22
C411	7 50V		DTZ-6R8	NP06P8	CN0568		10TCC-V68
	5 +0.5 50V		DTZ-4R7	NP04P7	CN0547		10TCC-V47
C412	.0T 25V		UK25-103		MAG2511		HY-520
C413	250 10% 50V		DTZ-270				10TCC-T27
C414	.022 10% 50V			DPMS2S22	M192P2239R8	QFT2-127	1FT-S22
C415	7 +1pF 50V		DTZ-6R8	NP06P8	CN0568		10TCC-V68
C417	.0T 25V		UK25-103		MAG2511		HY-520
C419	.01 25V		UK25-103		MAG2511		HY-520
C420	.022 10% 50V			DPMS2S22	M192P2239R8	QFT2-127	1FT-S22
C427	300 10% 50V		DD-301	GP300	GP330		10TS-T30
	68 5% 50V		DTZ-68	NP068	CN0468		10TCC-Q68
C428	.068 10% 50V			DPMS6S68	EW6168		6PS-S68
C429	68 5% 50V		DD-680	GP68	GP468		10TS-Q68
C432	.0047 10% 50V		DD-472	GP4700	GP247		5GA-D47
C434	.0047 10% 50V			WMF1D47	M192P4729R8	QFT2-63	1FT-D47
C436	.01 10% 50V			WMF1S1	EW1A110	QFT2-91	1FT-S10
C437	.01 25V		UK25-103		MAG2511		HY-520
C439	.047 10% 50V			DPMS2S47	EW1A147	QFT2-171	1FT-S47
C440	.01 25V		UK25-103		MAG2511		HY-520
C444	.047 10% 50V			DPMS2S47	EW1A147	QFT-171	1FT-S47
C445	.022 25V		UK25-223				HY-725
C454	.22 12V		UK12-204		MAG12022		HY-370
C459	.22 12V		UK12-204		MAG12022		HY-370
C460	.0047		DD-472	GP4700	GP247		5GA-D47
C461	.0047		DD-472	GP4700	GP247		5GA-D47
C501	.2		UK16-204				HY-470
	.01 50V		UK50-103		MAG5011		HY-470
C502	.2		UK16-204				HY-470
	.01 50V		UK50-103		MAG5011		HY-380
C503	.47 6.3V		UK12-474		MAG12047		HY-380
C504	.47 6.3V		UK12-474		MAG12047		HY-520
C511	.01 25V		UK25-103		MAG2511		HY-520
C523	.01 25V		UK25-103		MAG2511		HY-520
C527A	.001	003-033-9-001					
C527B	.001	(2)					
C527C	.001	(2)					
C527D	.001	(2)					
C601A	15		DTZ-15	NP015	CN0415		10TCC-Q15
C601B	.02		DC-203	MGP02	TA120	QC2-157	TG-S20
C602	24		DTZ-25	NP025	CN0425		10TCC-Q25
C603	2 NPO		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C604	10		DTZ-10	NP010	CN0410		10TCC-Q10
C605	2		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C607	15 NPO		DTZ-15	NP015	CN0415		10TCC-Q15
C608	.02		DC-203	MGP02	TA120	QC2-157	TG-S20
C609	150		DTZ-150		CN0315		10TCC-T15
C610	4		DTZ-4R7	NP04P7	CN0547		10TCC-V47
C611	.02		DC-203	MGP02	TA120	QC2-157	TG-S20
C612	.02		DC-203	MGP02	TA120	QC2-157	TG-S20
C613	.02		DC-203	MGP02	TA120	QC2-157	TG-S20
C614	10 N220				*		10TCR-Q10
C615	33 N075				*		
C616	6 N150				CN7568		10TCU-V68
C617	10 N750		DTN-10	N10	CN7410		10TCU-Q10
C618	4		DTZ-4R7	NP04P7	CN0547		10TCC-V47
C619	.02		DC-203	MGP02	TA120	QC2-157	TG-S20
C620	1 NPO				CN0510		10TCC-V10
C631	.02		DC-203	MGP02	TA120	QC2-157	TG-S20
CC1		527-077-9-002(1)					
VC1	70	028-047-9-001					
VC2	70	028-047-9-001					
VC3	70	028-047-9-001					
VC601	8						
VC602	8						
VC603	6						

(1) Consist of four .001 capacitors.

(2) Part of C527A.

COBRA MODEL 47XLR

PARTS LIST AND DESCRIPTION (CONTINUED)

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

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

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	MALLORY PART No.	TRW PART No.
VR1A	Tone-Left	50K	008-323-9-002 (18)				
VR1B	Tone-Right	50K	RV-262 (5)				
VR2A	Volume-Left	20K Tap 2500	(				
VR2B	Volume-Right/Power Switch	20K Tap 2500					
VR3	Balance	20K	008-323-9-003 (5)				
VR4	Dynamike	10K	RV-265 008-324-9-002 (5)				
VR5	Squelch/Monitor /Switch	10K	RV-266				
VR101	Sig Meter	20K	008-316-9-003				U260R253B
VR102	AGC	50K	008-316-9-002				U260R503B
VR103	Squelch Range	50K	008-316-9-002				U260R503B
VR104	TX BWR Meter	50K	008-316-9-002				U260R503B
VR105	AMC	3000	008-323-9-001				U260R502B
VR106	19kHz	4700	008-324-9-001				U260R502B

(5) Number on unit.

(18) Includes VR1A, VR1B, VR2A, VR2B and S1.

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.
RR1	Resistor Network		(1)	RR2	Resistor Network		(1)

(1) Consists of seven 2200, Ohm Resistors.

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
CF3	AM IF (455kHz)	140-020-9-002	FL-033		
L1	FM IF (10.7MHz)	046-020-9-002	LB-095		
L2	AM IF (455kHz)	046-020-9-001	LB-094		
L3	AM IF (455kHz)	046-019-9-004	LB-077		
L4	RF Choke	041-095-9-001	LD-090		
L5	RF Choke	041-088-9-002	LZ-002		
L101	Rec Input (27MHz)	006-017-9-001	LA-029	CBS740-T	
L102	Rec RF (27MHz)	060-027-9-001	LA-197		
L103	Rer Mix (10.695MHz)	060-024-9-001	LA-180	CBS715-TC	
L104	Rec Mix (10.695MHz)	060-022-9-001	LA-163		
L105	IF (455kHz)	060-024-9-004	KA-183		
L106	IF (455kHz)	060-024-9-005	LA-184		
L107	Pi Filter	041-093-9-001	LE-064		
L108	Pi Filter	044-078-9-003	LC-110		
L109	Antenna Match (27MHz)	041-088-9-001	LC-051		
L110	RF Choke	044-028-9-003	LD-012	4588	
L111	RF Choke	041-094-9-001	LC-051		
L112	Xmt Buffer (27MHz)	060-024-9-010	LA-189		
L113	Xmt Mixer (27MHz)	060-024-9-006	LA-185		
L114	Xmt Osc (10.695MHz)	060-024-9-011	LA-193		
L115	Rec Mixer (10.240MHz)	060-024-9-003	LA-182		
L116	RF Choke (1uH)	041-087-9-002	LZ-002	4622	
L117	RF Choke (100uH)	041-062-9-001	LZ-012		
L118	PLL Osc (36.570MHz)	060-027-9-002	LA-196		
L119	VCO	060-024-9-008	LA-187		
L120	Mixer (37MHz)	060-024-9-009	LA-188		
L601A	FM Antenna				
L601B	FM RF				
L601C	FM Osc				
L601D	Am Antenna				

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.	
T2	1A	.114	1mH	042-014-9-001 TF017(1)			(1) Number on Unit

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.	
T1	8	8	061-037-9-001 TF-119(1)			(1) Number on Unit

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 Quick-Acting	191-251-9-002		AGC2	HDJ	312002	HDJ	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	562-021-9-001										

MISCELLANEOUS

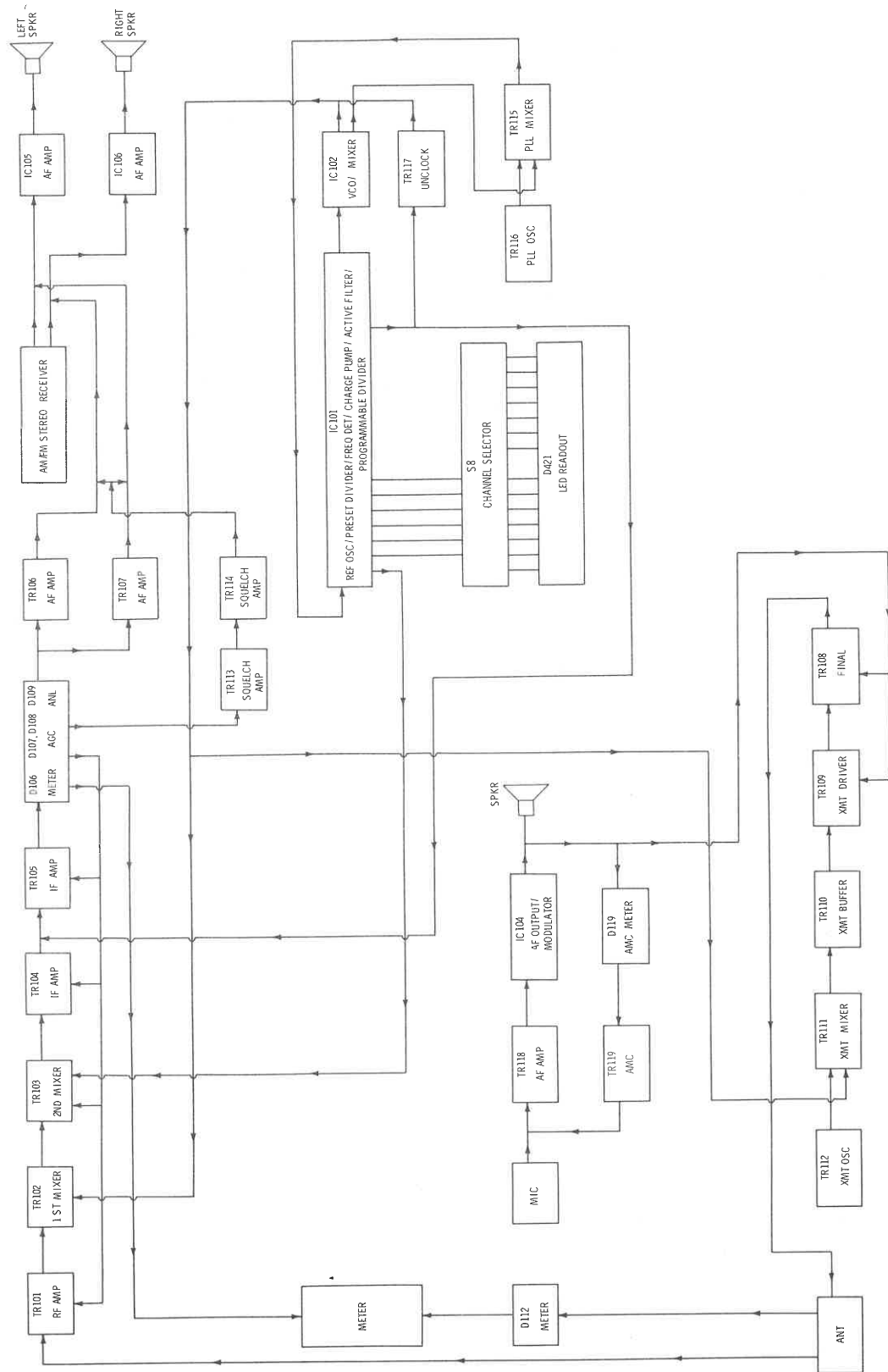
ITEM No.	PART NAME	PART No.	NOTES
CF1	Filter	140-020-9-003(1)	10.7MHz
CF2	Filter	140-020-9-003(1)	10.7MHz
CF101	Filter	140-020-9-001	10.7MHz
CF102	Filter	140-018-9-002	455kHz
CN1	Jack	426-023-9-001	Antenna (CB)
CN2	Jack	426-027-9-003	Antenna (AM-FM)
CN4	Jack	426-027-9-002	MIC
D151	LED	158-016-9-001	Stereo Ind
MT1	Meter	320-092-9-001	Meter
PL1	Lamp	400-050-9-001	Dial (46mA @ 12.17V)
S1	Switch		On/Off (part of volume control)
S3	Switch	088-038-9-002	Radio
S4	Switch		Monitor (Part of VR5)
S5	Switch		AM/FM
S7	Switch	088-038-9-001	
S8	Switch		Channel Select
X1	Crystal	133-014-9-002	10.695MHz
X2	Crystal	133-014-9-001	10.270MHz
X3	Crystal	133-014-9-003	36.570MHz
	Printed Circuit Board	302-261-9-001	CB
	Printed Circuit Board	302-267-9-001	AM-FM
	Printed Circuit Board	302-263-9-001	Control
	Printed Circuit Board	302-268-9-001	Function Switch
	Printed Circuit Board	302-264-9-001	Noise Filter
	Tuner Assembly	523-206-9-001	AM-FM

(1) When replacing CF1, CF2 should also be replaced.

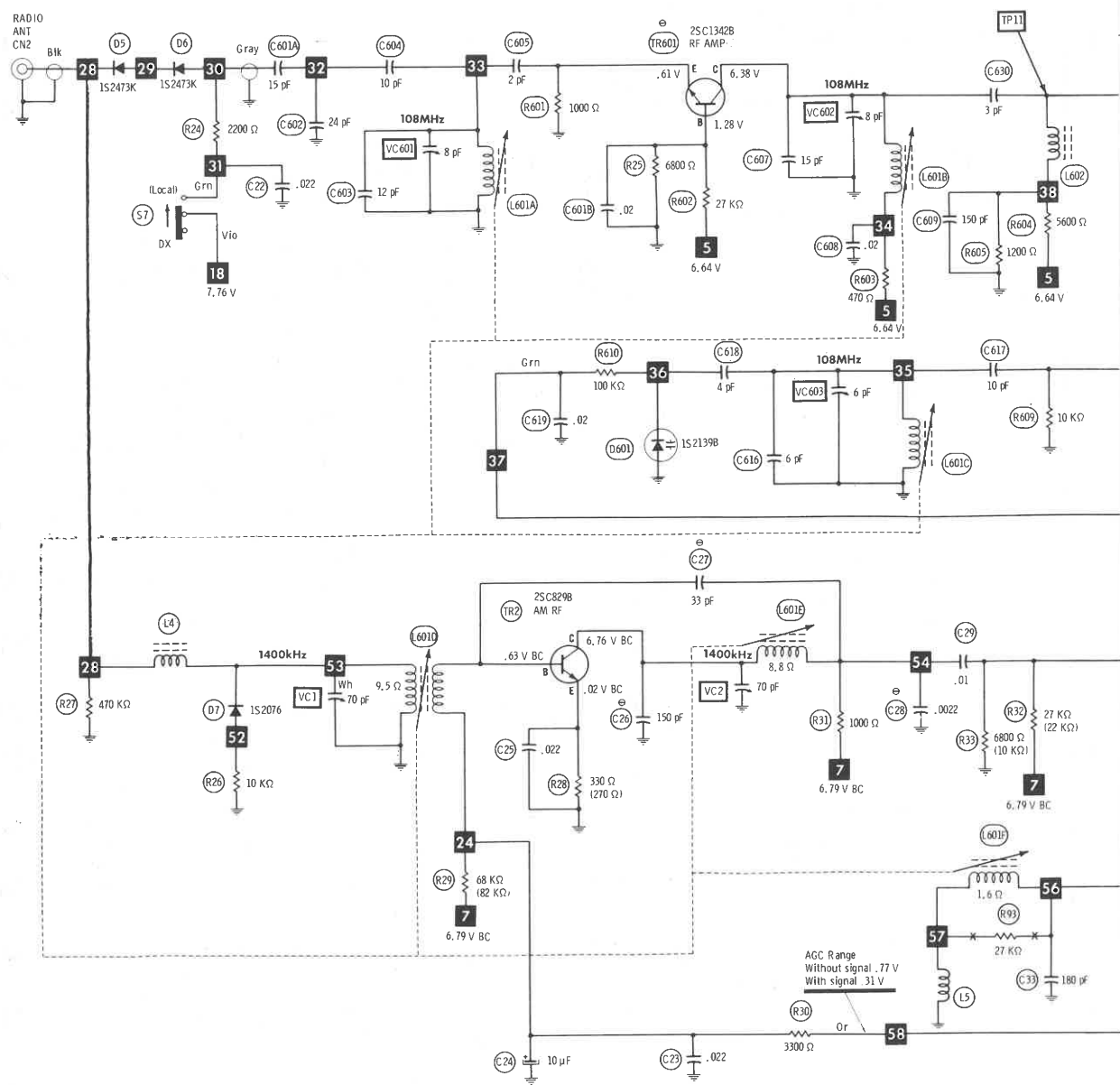
CABINETS & CABINET PARTS (When ordering specify model, chassis & color)

ITEM	PART No.	ITEM	PART No.
Cover	253-061-9-001	Knob, Rear (Deep)	754-154-9-006
Escutcheon	763-094-9-004	Push Buttons, Function	384-023-9-002
Dial Scale Plate	260-139-9-001	Push Button, DX	384-023-9-003
Pointer, Dial	763-094-9-002	Push Buttons (Tuner)	384-023-9-001
Knob, Front	751-154-9-005	Microphone Hanger	741-074-9-001
Knob, Rear (Shallow)	751-154-9-004		

COBRA MODEL 47 XLR



BLOCK DIAGRAM



* Circuitry not used in some versions
 --- Circuitry used in some versions
 e See parts list
 * Nominal value
 GND Ground
 Chassis
 Common tie point
 Measurements made in Channel 1 with switching as shown unless noted.
 Item numbers in rectangles appear in the alignment/adjustment instructions.
 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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