

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.



PANASONIC MODEL RJ-3660

MODEL RJ-3660

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

© 1979 Howard W. Sams & Co., Inc. Printed in U. S. of America

9CE984

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 R171 for 13.8-volts DC output at TP14 (TR33 emitter). 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:

T1 thru T14.....5000,5009,8276,8728,9089
 L7,L10,L11.....8606,9091,9440
 FL1.....9300,9302,9304
 C28,C37,C89.....5000,8276,9089

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Input of frequency counter to TP12 (TR22 emitter).	Ch. 19		Check for 10.240MHz +650Hz.
Input of oscilloscope to TP6 (T13 secondary).	Ch. 19	T13	Adjust for maximum RF (210mv p-p typical).
Input of frequency counter to TP6 (T13 secondary).	Ch. 19	C89	Adjust for 35.740MHz +300Hz.
Input of DC meter to TP5 (Junction of R132 and R22).	Ch. 40	C28	Adjust for 3.00 volts +.1 volt. Check for approximate 1.00 volt on channel 1.
Input of frequency counter to TP13 (IC4 Pin 13).	Ch. 1		Check for 1.920MHz. Check all channels. (See Truth Chart for correct frequencies).
Input of oscilloscope to TP4 (T4 secondary).	Ch. 19	T4	Adjust for maximum RF.
Input of frequency counter to TP4 (T4 secondary).	Ch. 1		Check for 37.660MHz. If necessary readjust C89 for correct frequency. Check all channels. (See Truth Chart for correct frequencies).
Input of frequency counter to TP11 (Junction of CF1 and C30).	Ch. 19 XMT	C37	Adjust for 10.695MHz +300Hz.
Input of frequency to antenna input.	Ch. 1 XMT		Check for 26.965MHz +600Hz. If necessary readjust C37 for correct frequency. Check all channels. (See page 4 for channel 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 controls as follows, unless otherwise noted:
 CB RF Gain Maximum, CB Squelch MINIMUM, Band CB, Ch. 9 Off, NB/ANL Off.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to TP2 (TR18 base). 455kHz,1000Hz @ 30% modulation.	Ch. 19	T14,T12,T11	Adjust for maximum output.
Output of signal generator thru .01uF to antenna input. 27.185MHz,1000Hz @ 30% modulation.	Ch. 19	T8,T3,T2,T1	Adjust for maximum output. Readjust T11,T12, and T14 for maximum.

RECEIVER ADJUSTMENTS

Connect an AC VTVM or AF wattmeter across speaker voice coil.
Adjust volume control to obtain a suitable indication.
Preset controls as follows, unless otherwise noted:
CB RF Gain Maximum, CB Squelch MINIMUM, Band CB, Ch. 9 Off, NB/ANL Off.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output 100uV.	Ch. 19 Squelch Maximum	R46	SQUELCH RANGE Adjust so that squelch just breaks.
Output of signal generator thru .01uF to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output 100uV.	Ch. 19	R143	SIGNAL METER Adjust for 9 on SIGNAL scale of S/RF power meter.
Output of signal generator thru .01uF to antenna input. 27.185MHz, 1000Hz @ 30% modulation. Output 1000uV.	Ch. 19	R163	VU METER Adjust for 8.5 on VU scale of VU/MOD meter.

TRANSMITTER ALIGNMENT

Connect a 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
Input of RF wattmeter to antenna input.	Ch. 19	T5, T6, T7, T9, T10, L7	Adjust for maximum RF output.
Input of RF wattmeter to antenna input.	Ch. 19	L10, FL1, L11	Adjust for 4.0 watts RF output maximum.

TRANSMITTER ADJUSTMENTS

Connect a 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
Input of DC meter to TP10 (Junction of D11 and D12). Adjust in receive mode.	Ch. 19	R94	AMC Adjust for .75 volt $\pm$.02 volt.
Input of RF wattmeter to antenna input.	Ch. 19	R146	RF POWER METER Adjust so that meter needle rests in the middle of red area on RF POWER scale of S/RF power meter.

PANASONIC MODEL RJ-3660

ALIGNMENT INSTRUCTIONS (Continued)

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:

T100 thru T104.....5000,5009,8276,8728,8728A

L100.....8728,8728A,9304

C350,C352.....5000,8276

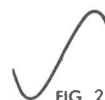


FIG. 2

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

High side of generator thru .001uF to TP102 (Junction of R312 and C314).

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 TP103 (Junction of R338 and C340).	(1)T100, T102,T103, T104	Adjust for maximum amplitude and straightness of line, similar to Fig. 2.

PSB RF ALIGNMENT—SELECTOR IN PSB POSITION

Input of signal generator to TP100 (antenna input), negative side to TP10 (RF shield).

Adjustment of coils by bending should not be attempted unless the coil is deformed or replaced.

GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
136MHz Modulated	136	Input of AC VTUM across speaker.	L102	Adjust for maximum.
140MHz Modulated	140	"	L100	Adjust for maximum.
158MHz Modulated	158	"	C350	Adjust for maximum.
174MHz Modulated	174	"	C352	Adjust for maximum. Repeat FM RF steps until no further improvement is noted.

PSB RF ALIGNMENT—SELECTOR IN PSB POSITION

Input of signal generator to TP100 (antenna input), negative side to TP101 (RF shield).

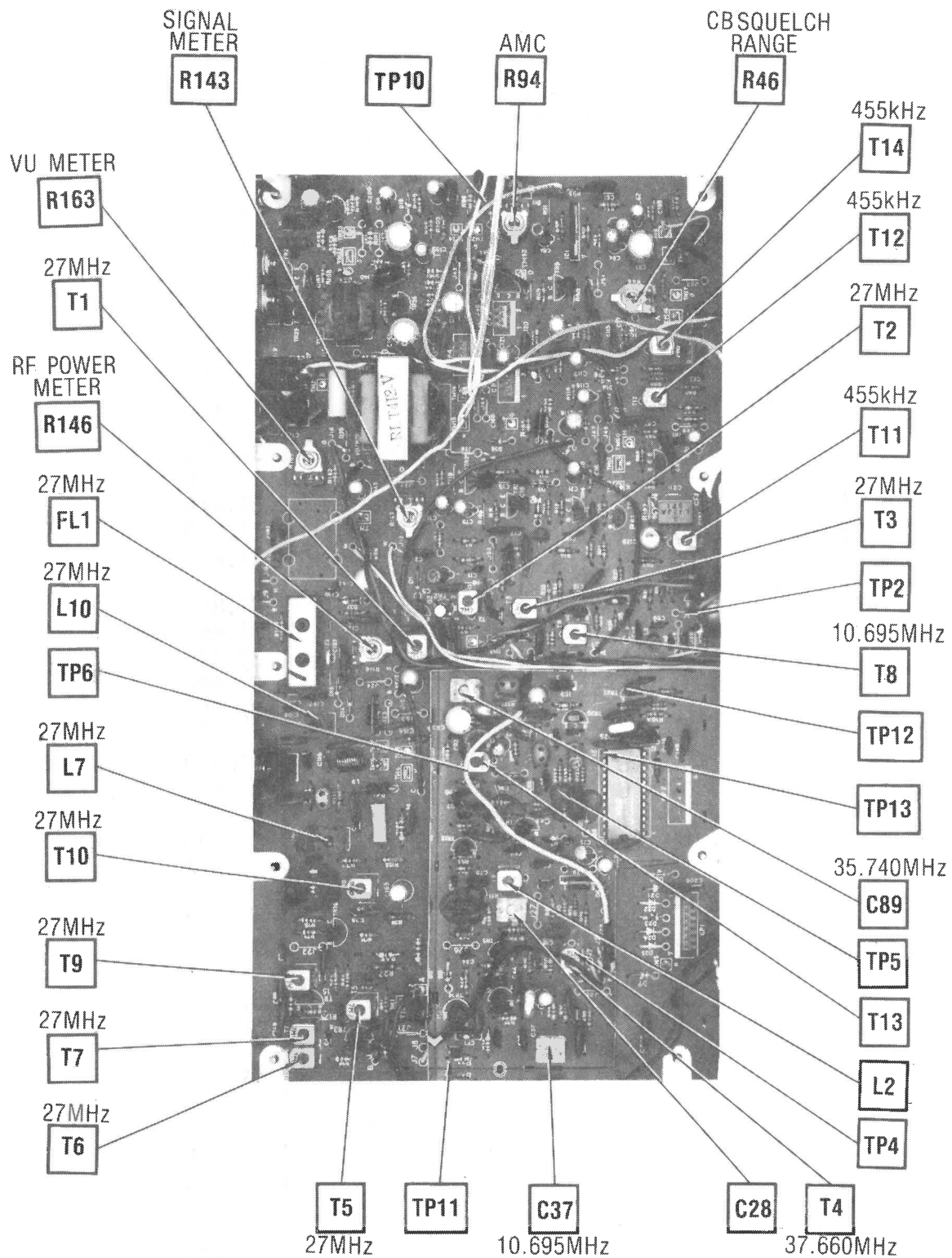
Adjustment of coils by bending should not be attempted unless the coil is deformed or replaced.

GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
140MHz Modulated Generator Output 100uV.	140MHz	Input of AC VTVM across speaker.	R331	PSB SQUELCH RANGE Set PSB Squelch control to maximum and adjust R331 so that squelch just breaks.

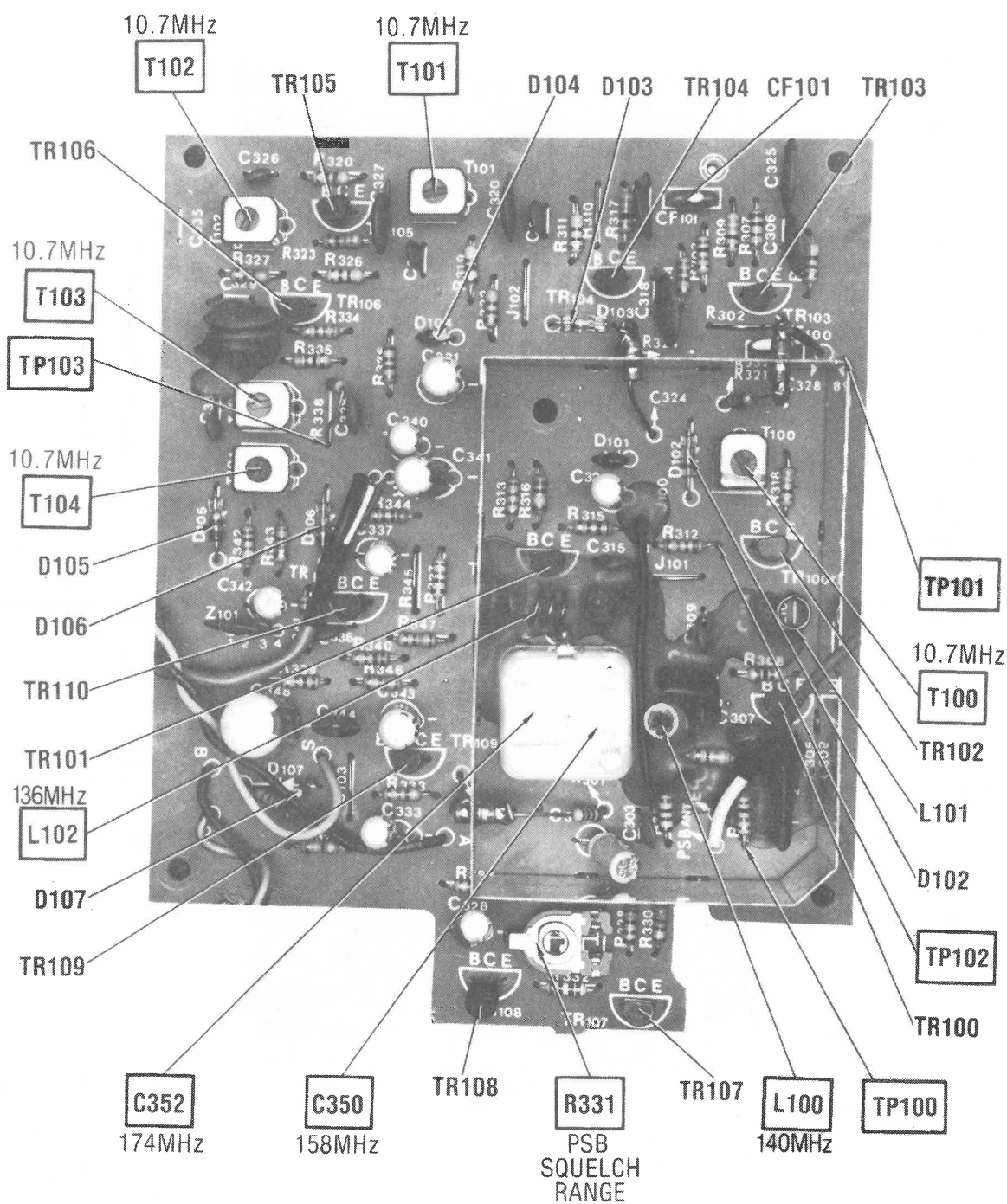
TRUTH CHART

C H A N N E L	1 = 5.00 Volts 0 = 0 Volts								DIVIDER INPUT IN MHz AT TP13	Rec and XMT VCO OUTPUT IN MHz AT TP4	
	CHANNEL INPUT CODES IC4										
	PINS										
	8	7	6	5	4	3	2	1			
1	1	1	0	0	0	0	0	0	1.920	37.660	
2	1	1	0	0	0	0	0	1	1.930	37.670	
3	1	1	0	0	0	0	1	0	1.940	37.680	
4	1	1	0	0	0	1	0	0	1.960	37.700	
5	1	1	0	0	0	1	0	1	1.970	37.710	
6	1	1	0	0	0	1	1	0	1.980	37.720	
7	1	1	0	0	0	1	1	1	1.990	37.730	
8	1	1	0	0	1	0	0	1	2.010	37.750	
9	1	1	0	0	1	0	1	0	2.020	37.760	
10	1	1	0	0	1	0	1	1	2.030	37.770	
11	1	1	0	0	1	1	0	0	2.040	37.780	
12	1	1	0	0	1	1	1	0	2.060	37.800	
13	1	1	0	0	1	1	1	1	2.070	37.810	
14	1	1	0	1	0	0	0	0	2.080	37.820	
15	1	1	0	1	0	0	0	1	2.090	37.830	
16	1	1	0	1	0	0	1	1	2.110	37.850	
17	1	1	0	1	0	1	0	0	2.120	37.860	
18	1	1	0	1	0	1	0	1	2.130	37.870	
19	1	1	0	1	0	1	1	0	2.140	37.880	
20	1	1	0	1	1	0	0	0	2.160	37.900	
21	1	1	0	1	1	0	0	1	2.170	37.910	
22	1	1	0	1	1	0	1	0	2.180	37.920	
23	1	1	0	1	1	1	0	1	2.210	37.950	
24	1	1	0	1	1	0	1	1	2.190	37.930	
25	1	1	0	1	1	1	0	0	2.200	37.940	
26	1	1	0	1	1	1	1	0	2.220	37.960	
27	1	1	0	1	1	1	1	1	2.230	37.970	
28	1	1	1	0	0	0	0	0	2.240	37.980	
29	1	1	1	0	0	0	0	1	2.250	37.990	
30	1	1	1	0	0	0	1	0	2.260	38.000	
31	1	1	1	0	0	0	1	1	2.270	38.010	
32	1	1	1	0	0	1	0	0	2.280	38.020	
33	1	1	1	0	0	1	0	1	2.290	38.030	
34	1	1	1	0	0	1	1	0	2.300	38.040	
35	1	1	1	0	0	1	1	1	2.310	38.050	
36	1	1	1	0	1	0	0	0	2.320	38.060	
37	1	1	1	0	1	0	0	1	2.330	38.070	
38	1	1	1	0	1	0	1	0	2.340	38.080	
39	1	1	1	0	1	0	1	1	2.350	38.090	
40	1	1	1	0	1	1	0	0	2.360	38.100	

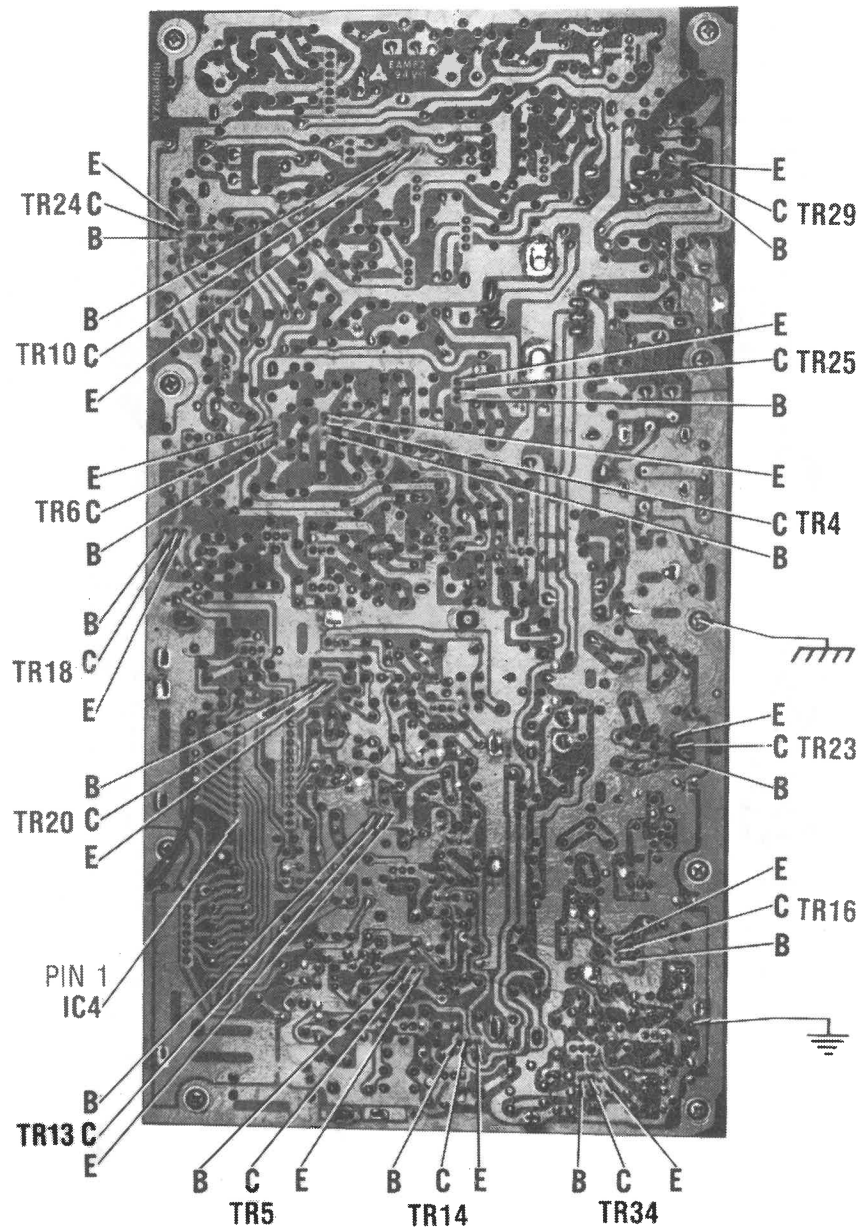
PANASONIC MODEL R-J-3660



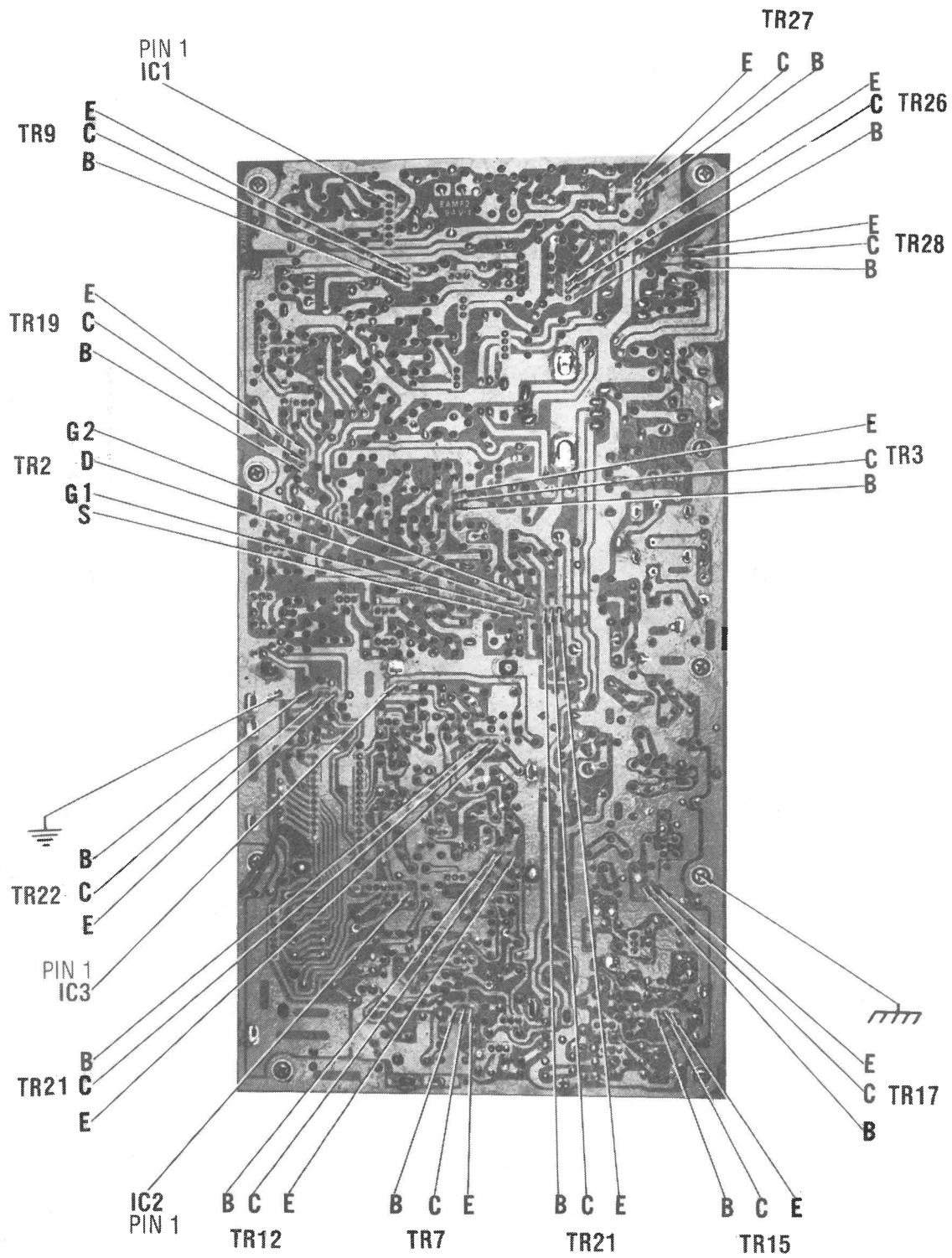
MAIN BOARD



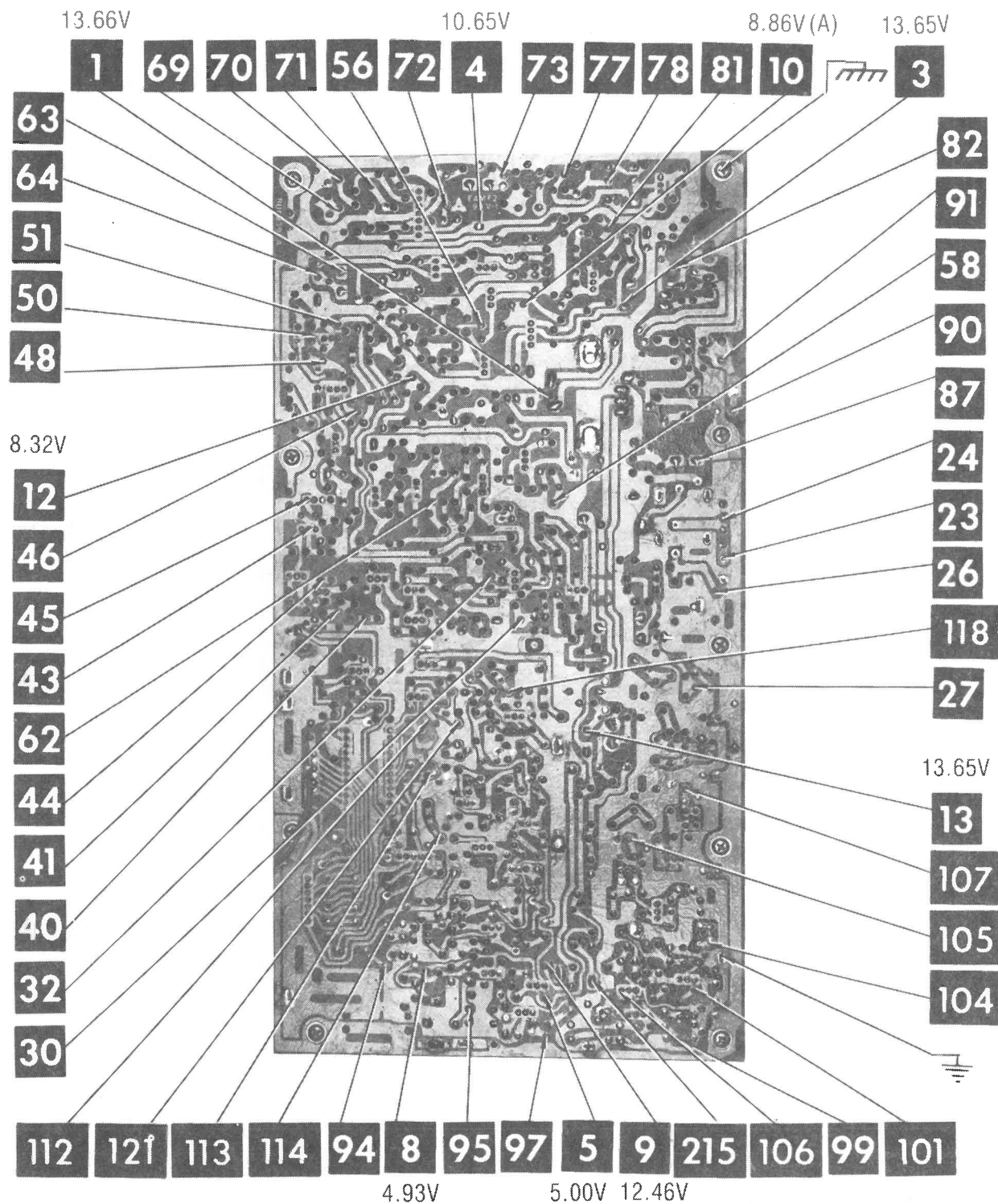
PSB BOARD



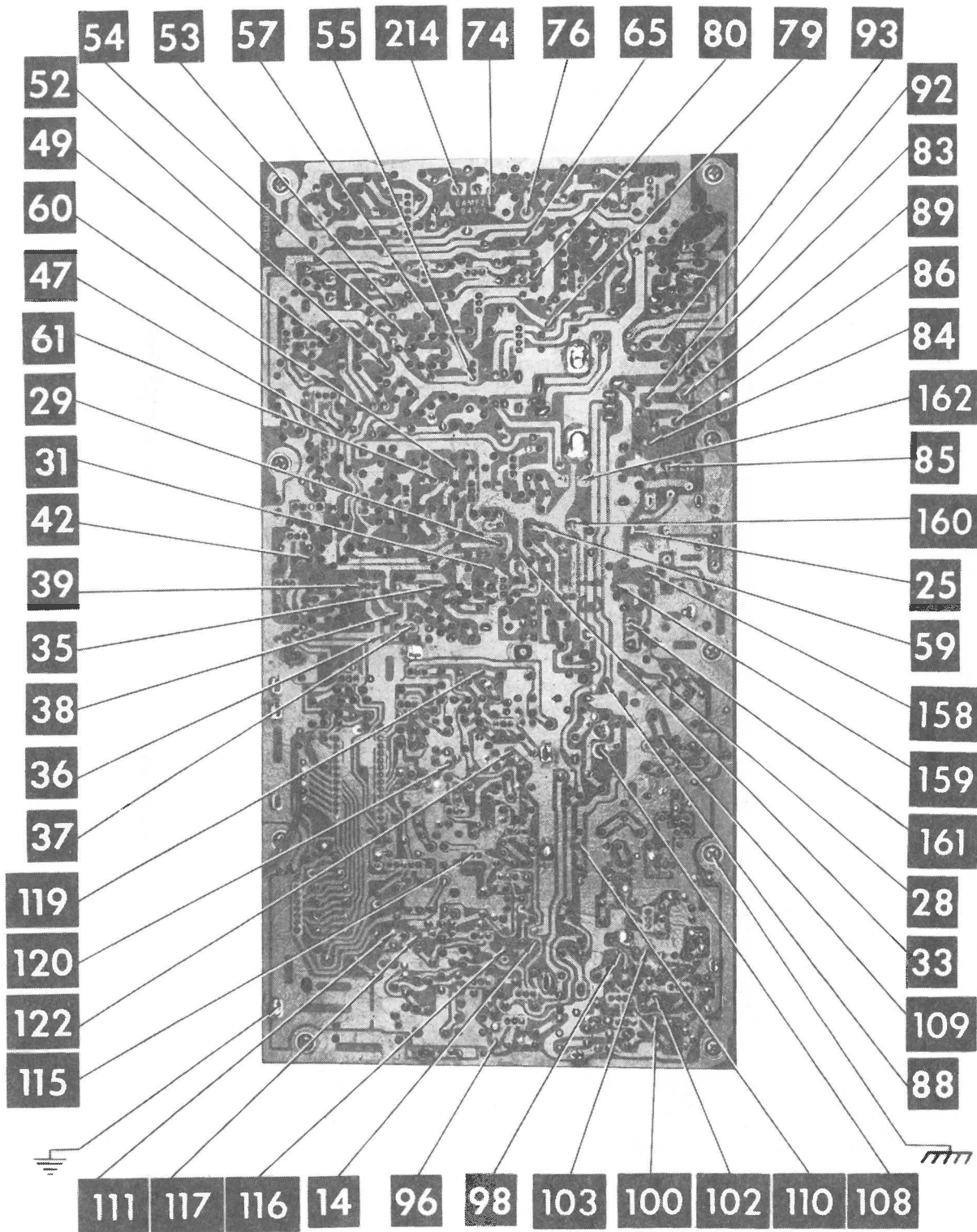
MAIN BOARD



MAIN BOARD

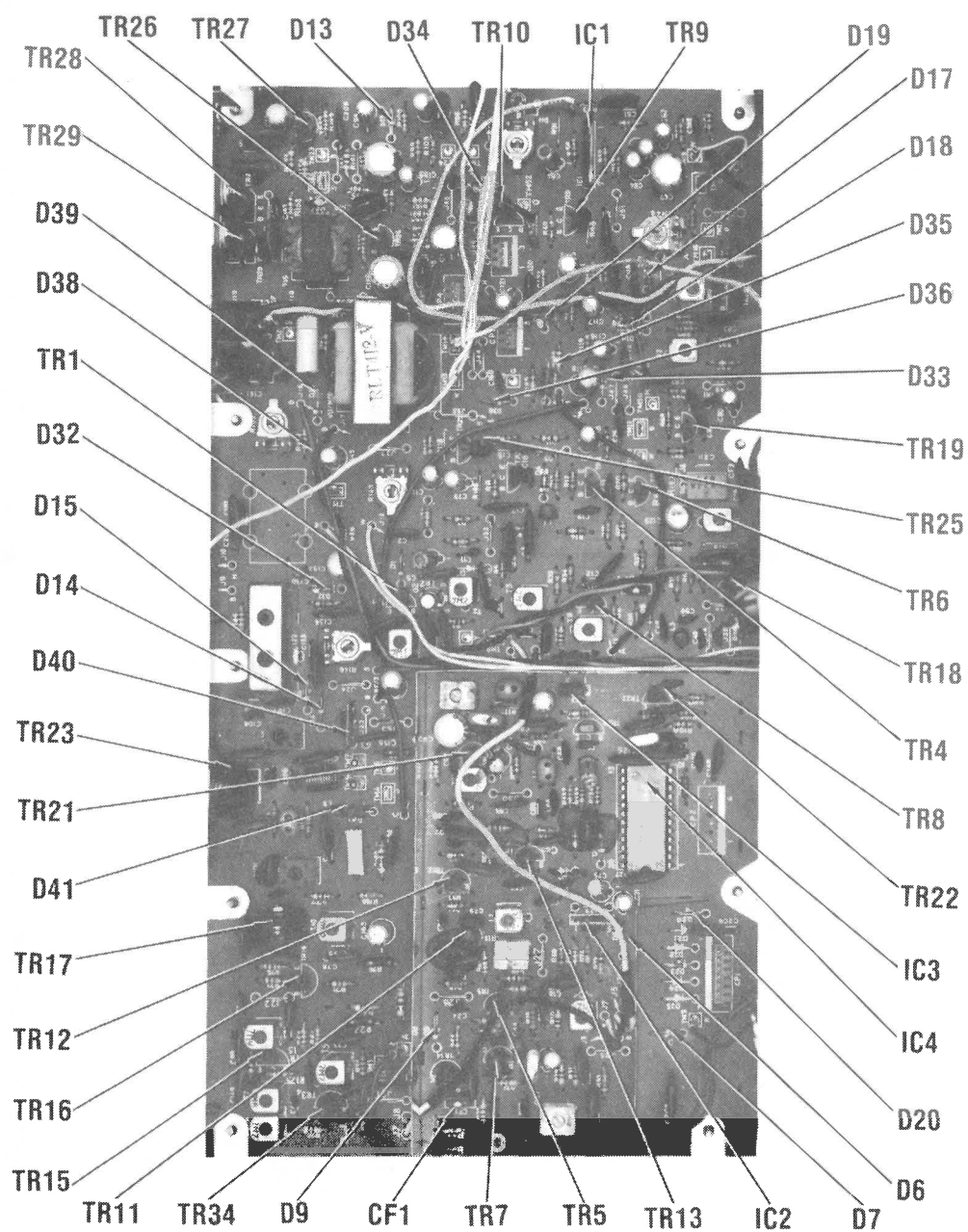


MAIN BOARD

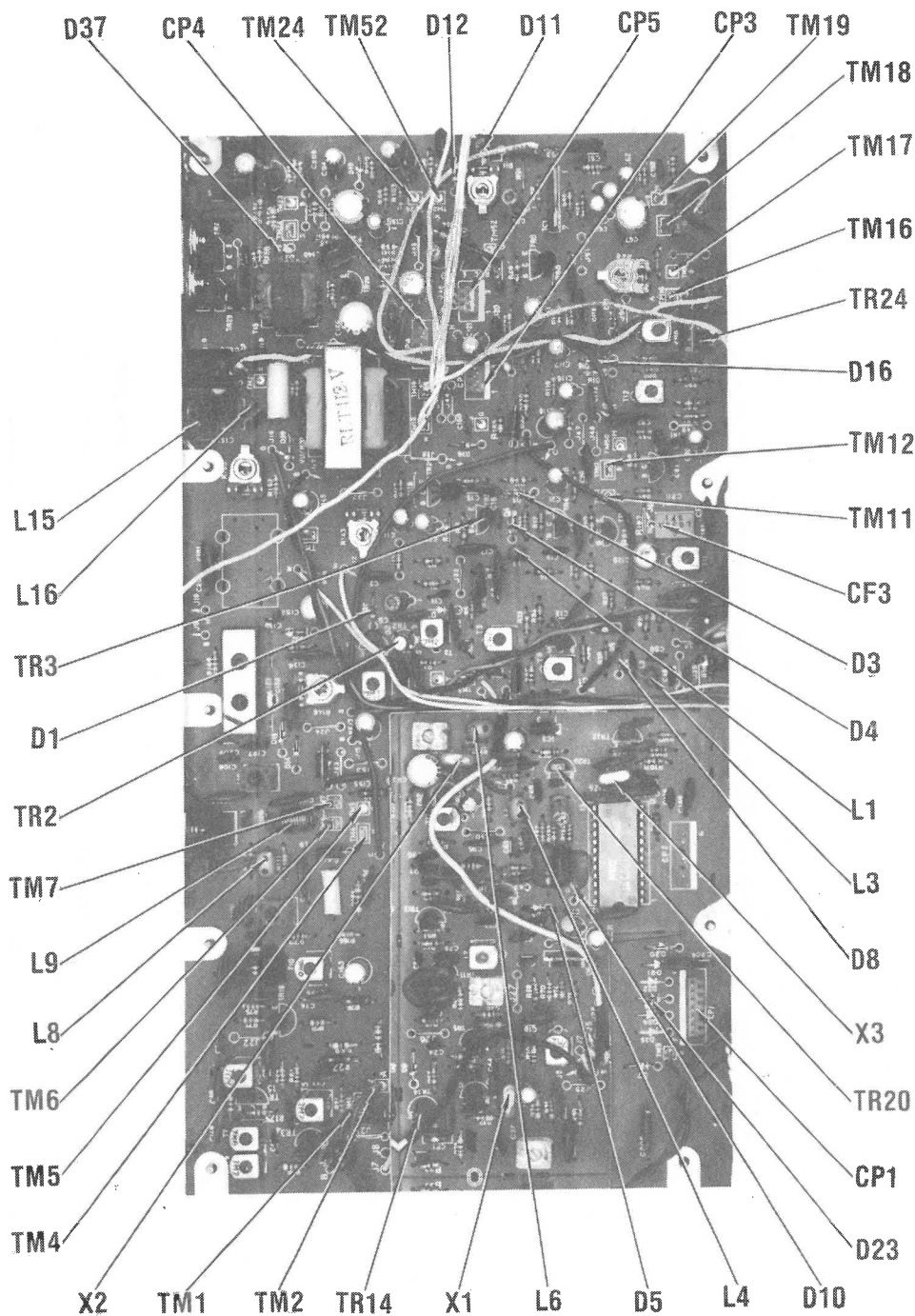


PANASONIC MODEL RJ-3660

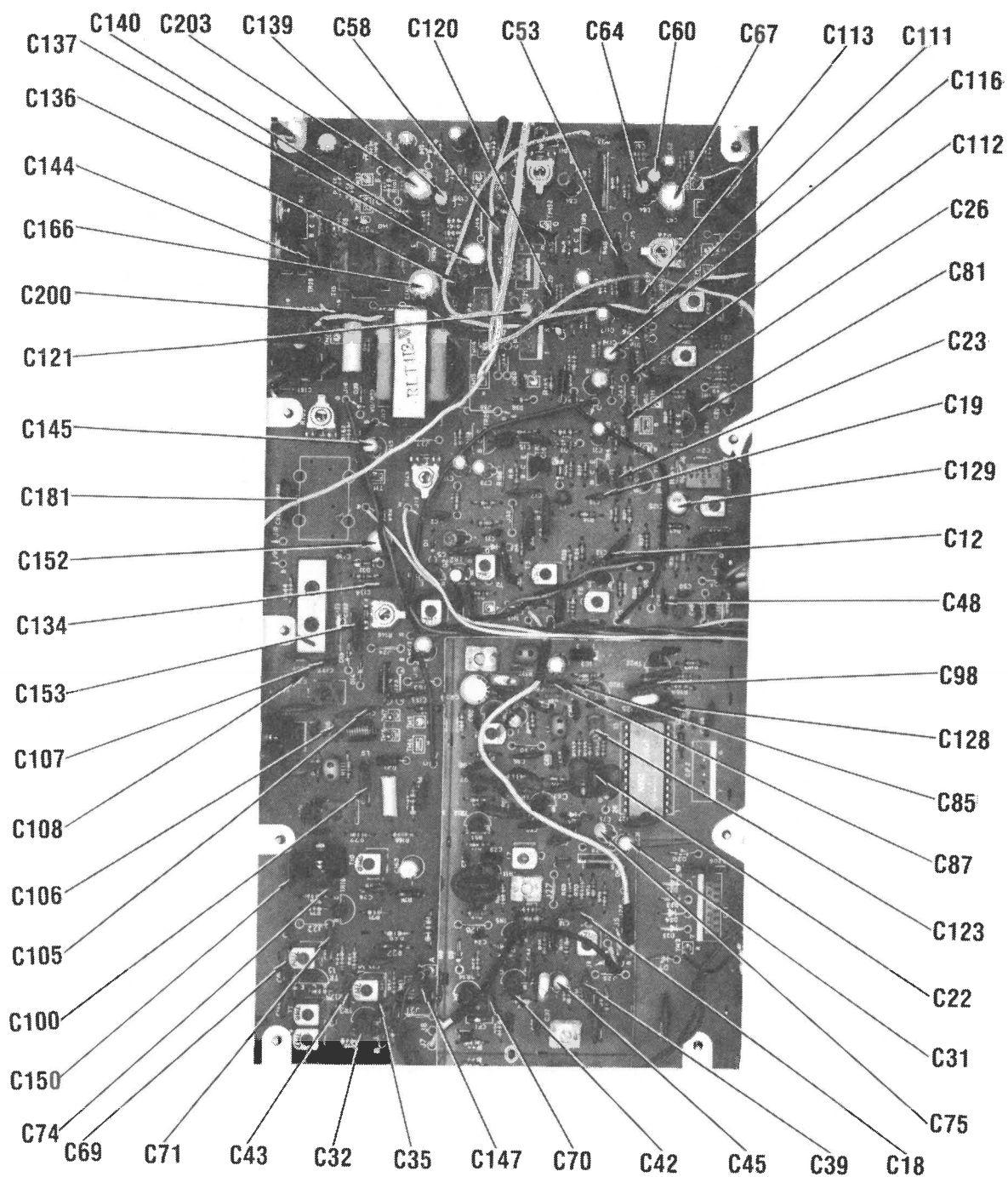
MAIN BOARD



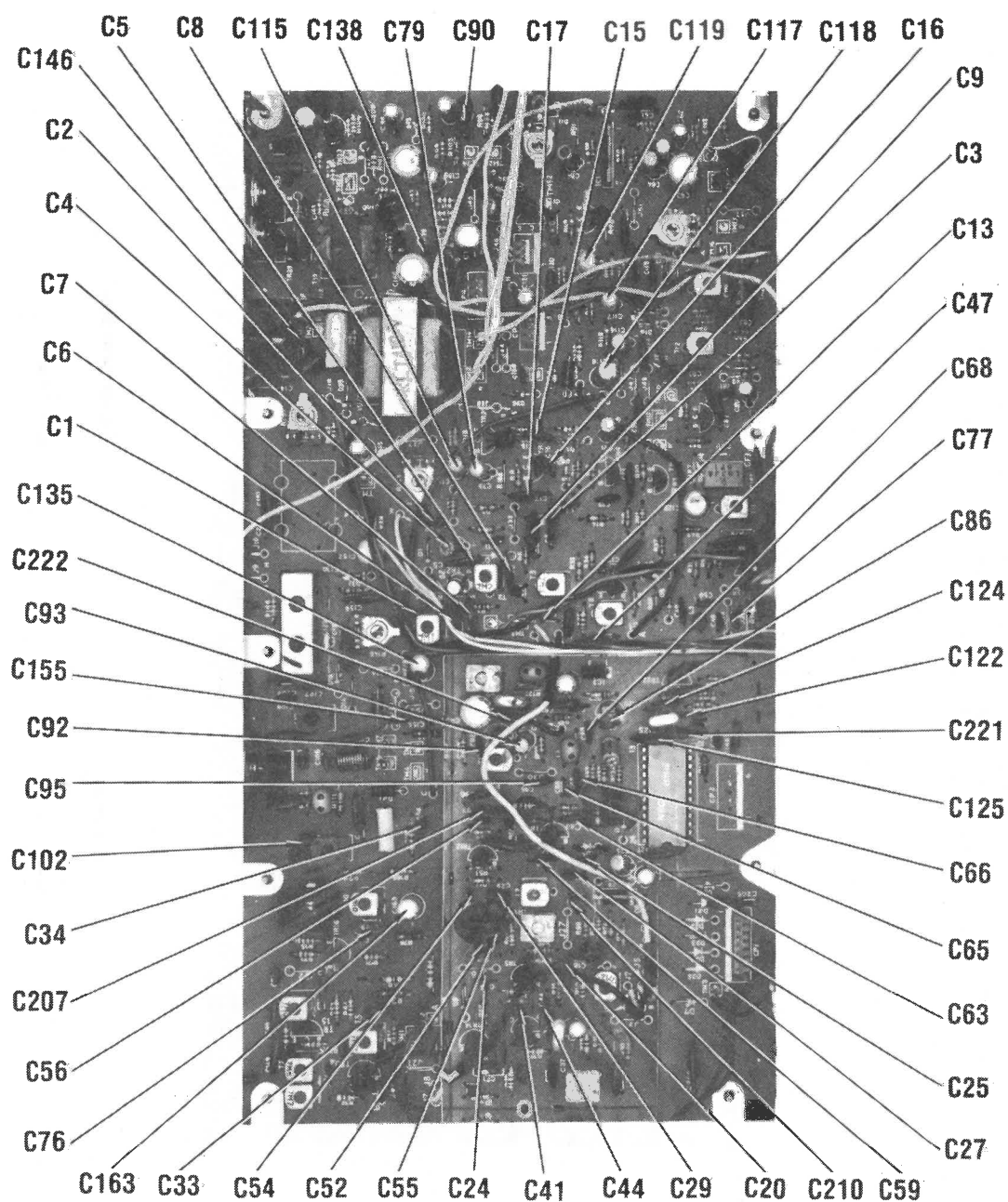
MAIN BOARD



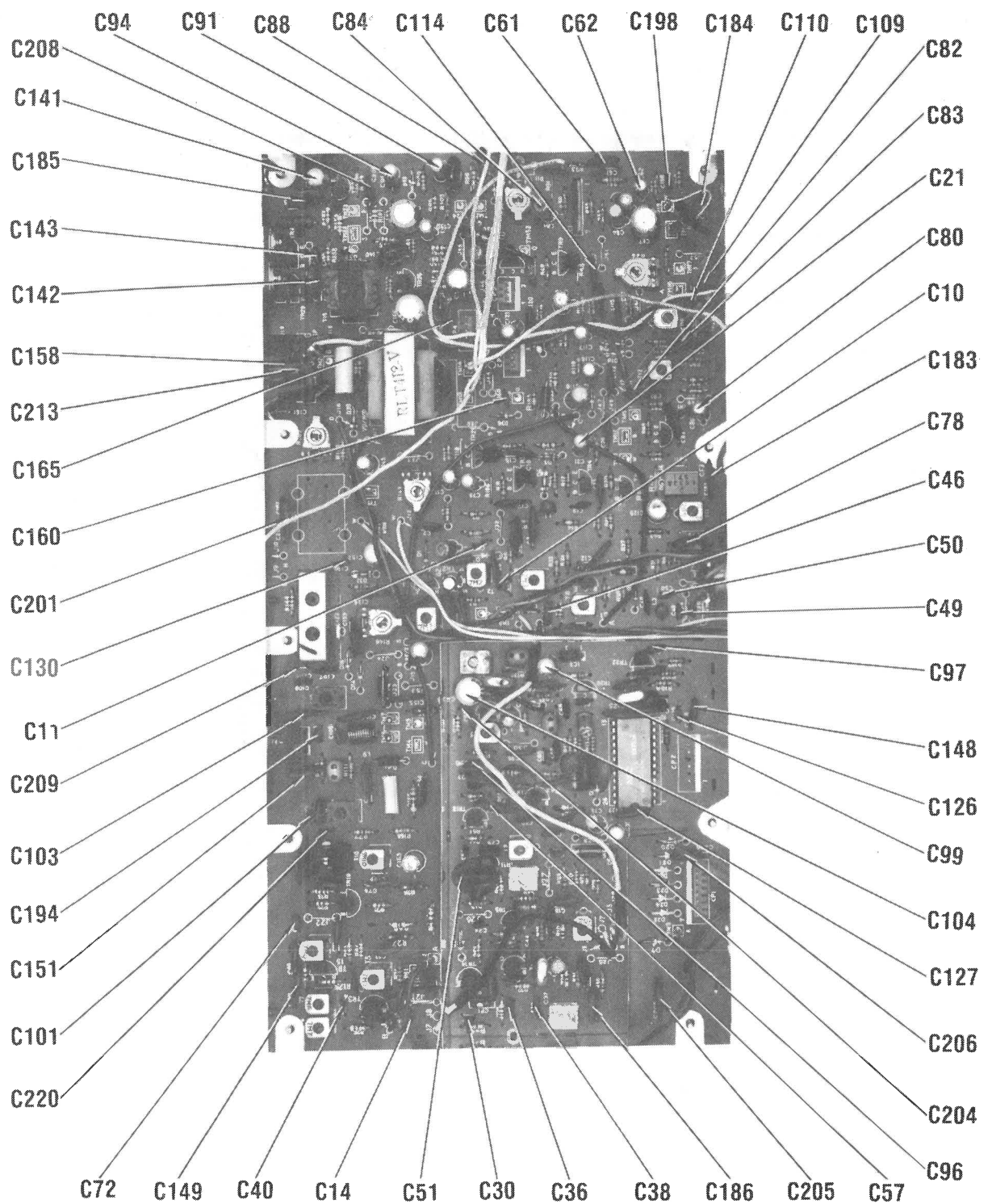
MAIN BOARD



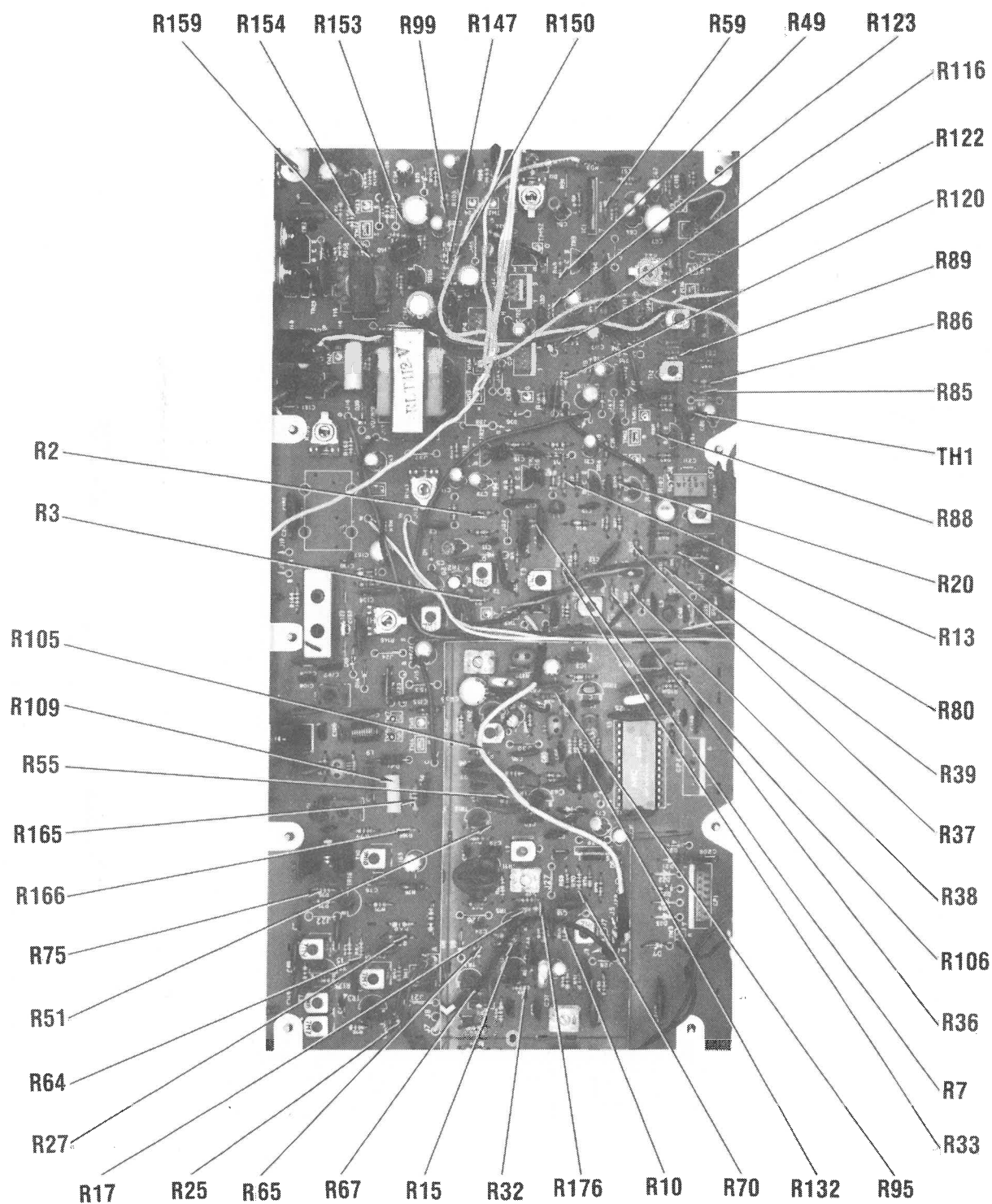
MAIN BOARD



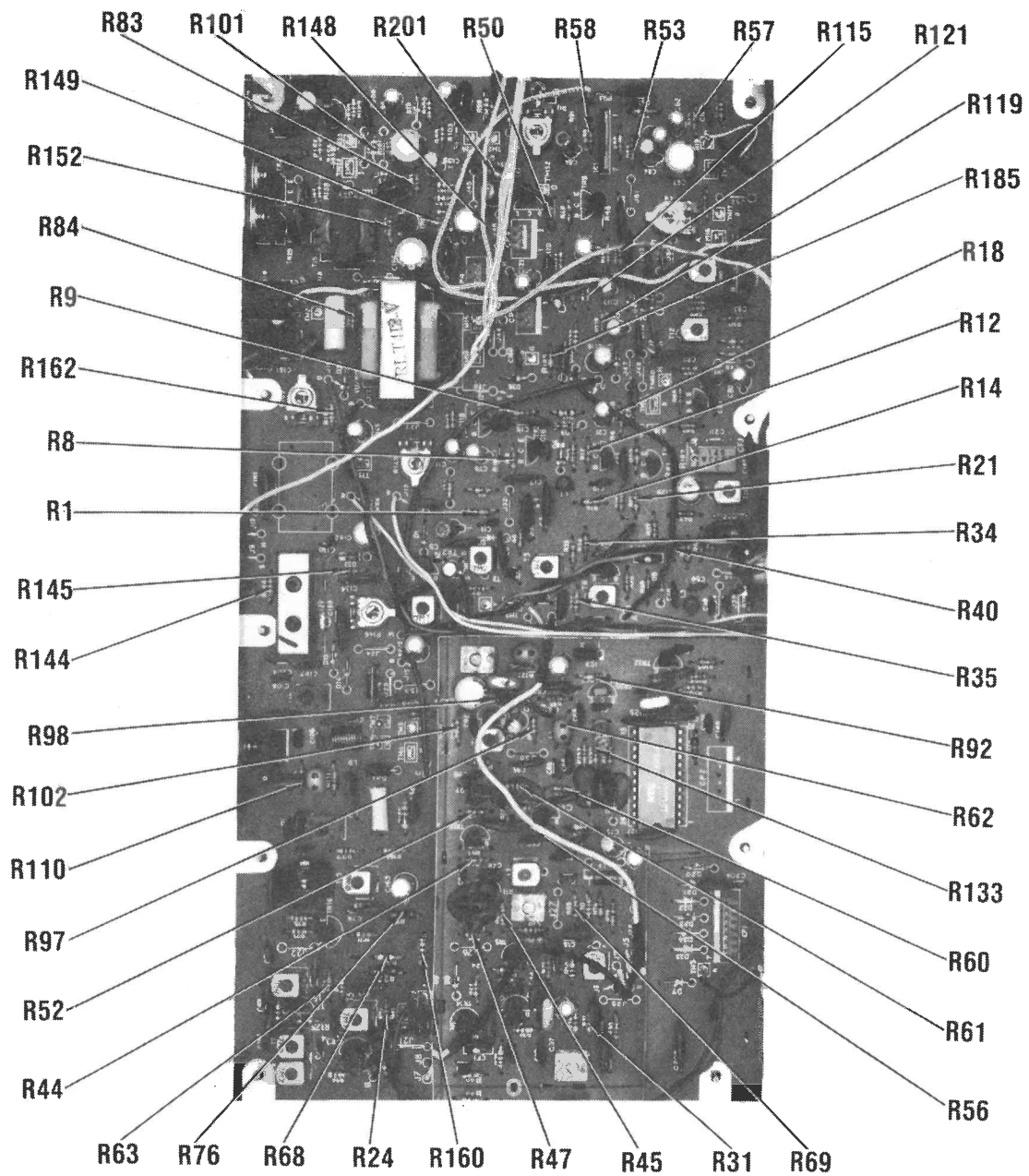
MAIN BOARD



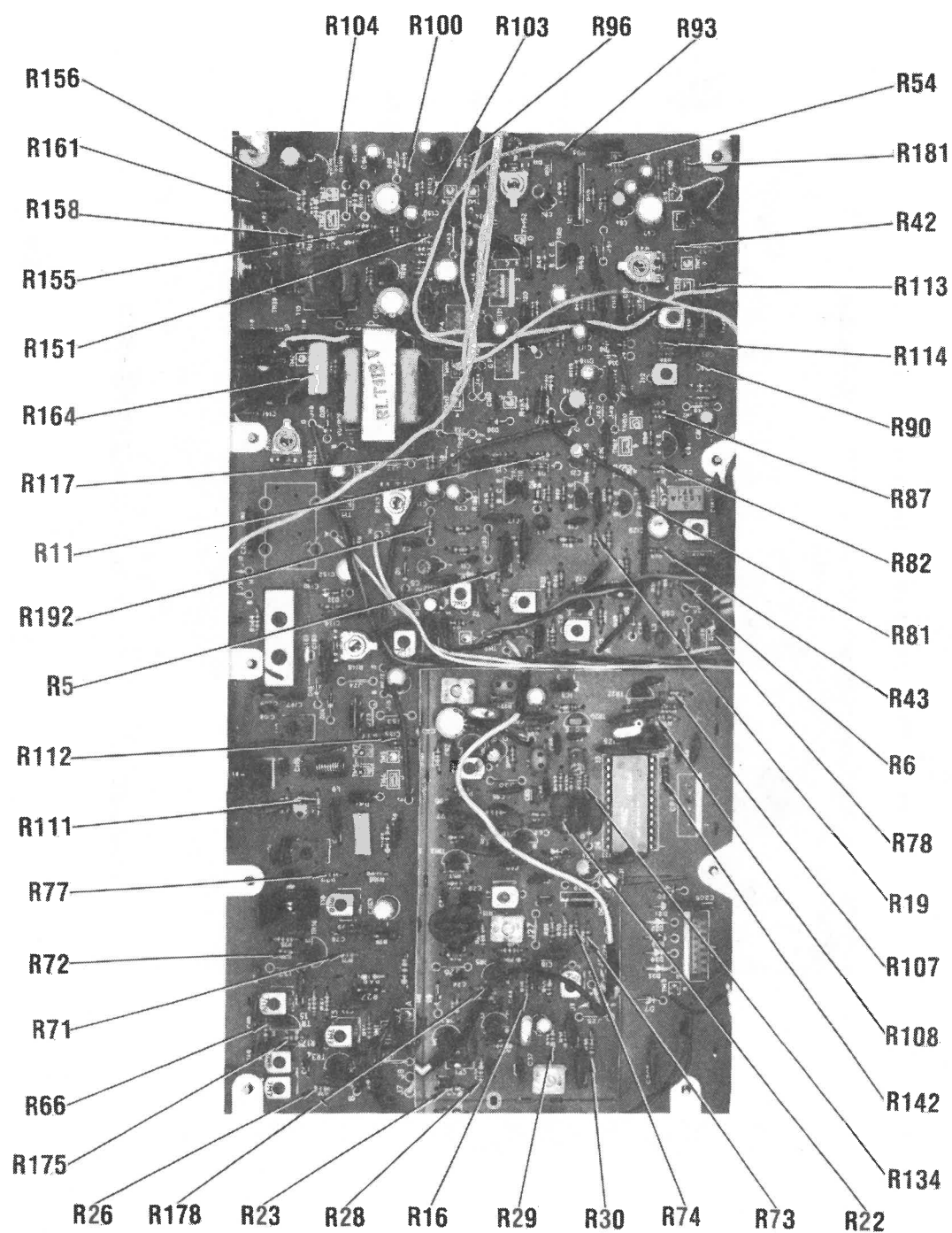
MAIN BOARD



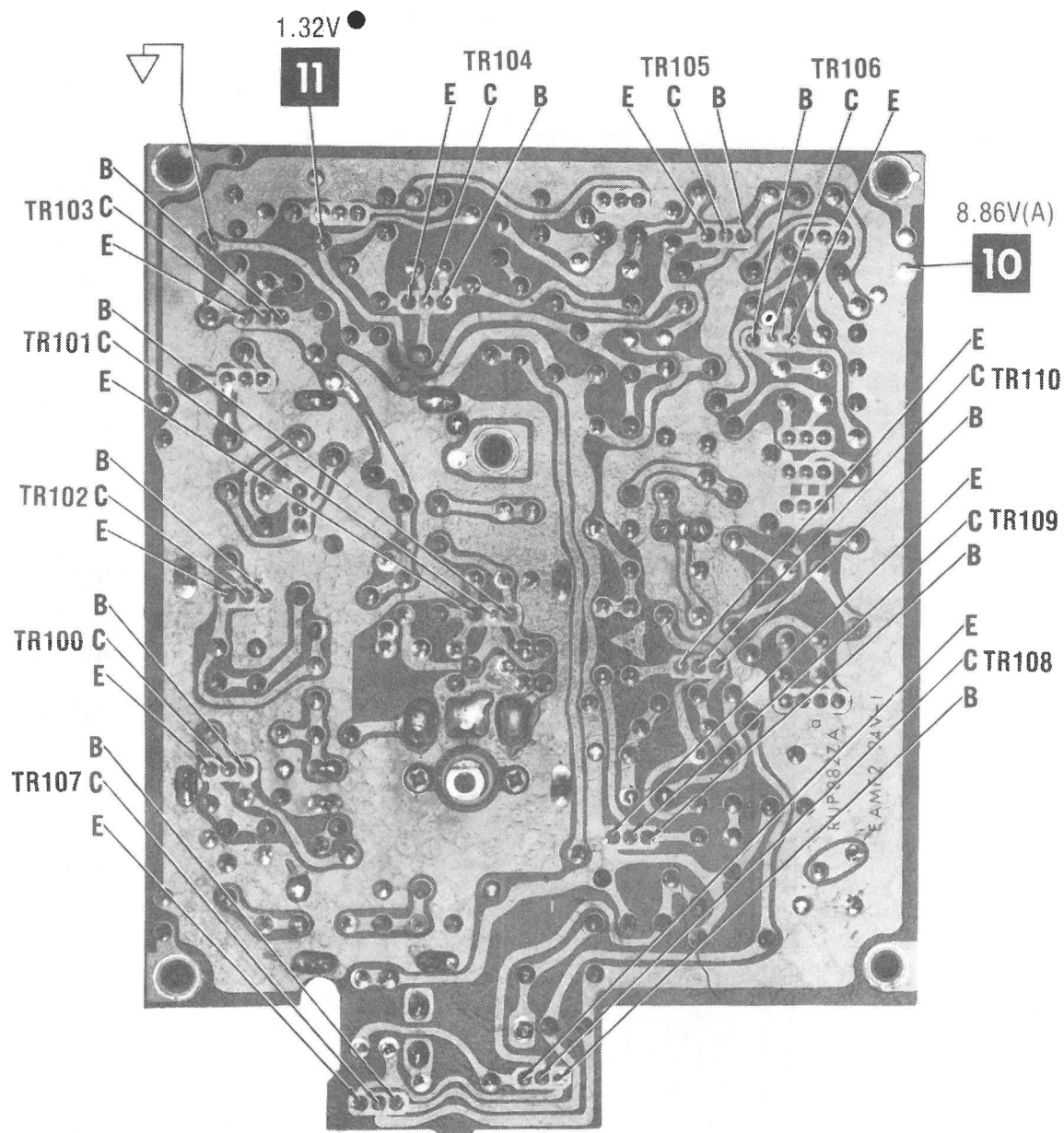
MAIN BOARD



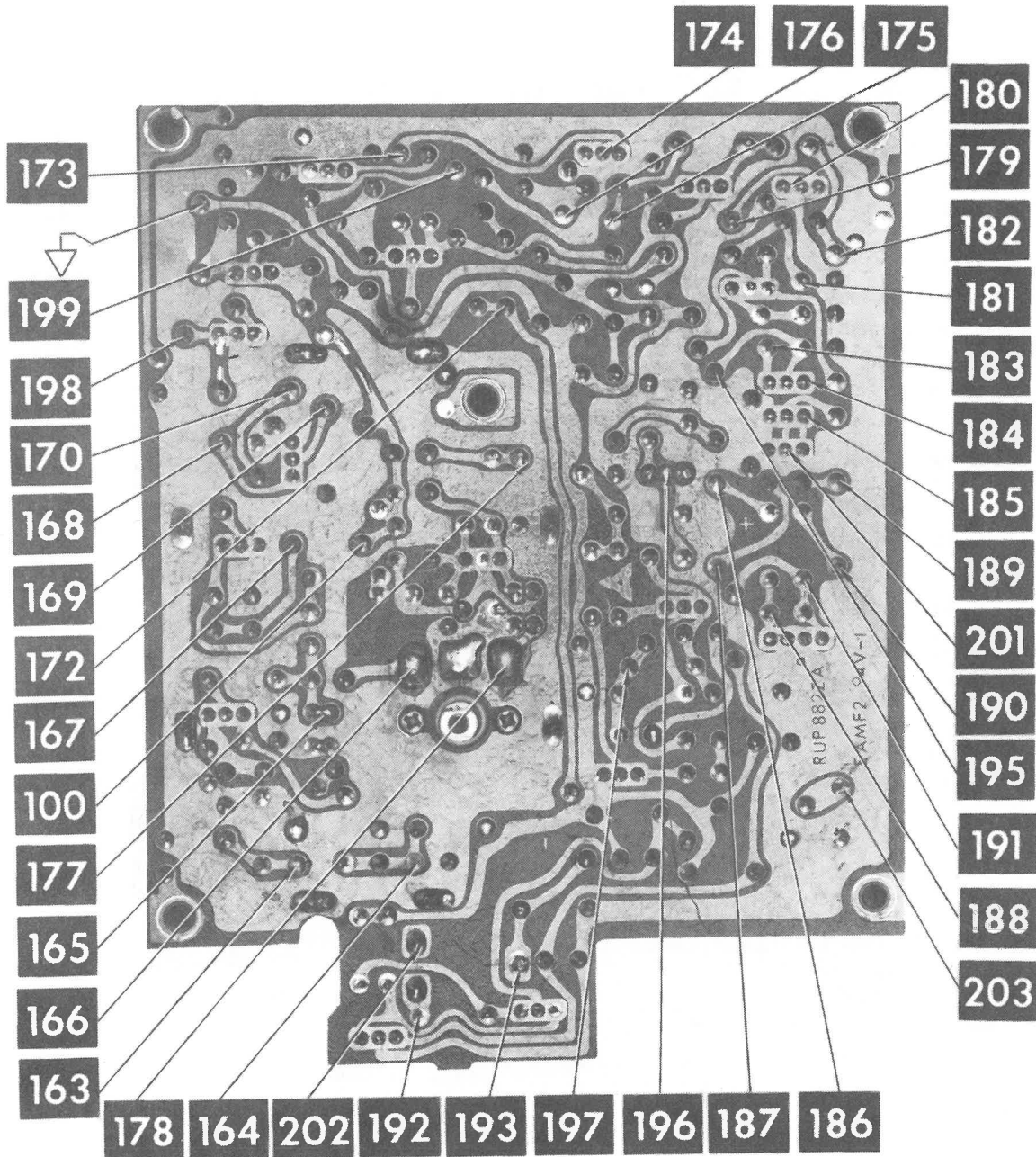
MAIN BOARD



MAIN BOARD

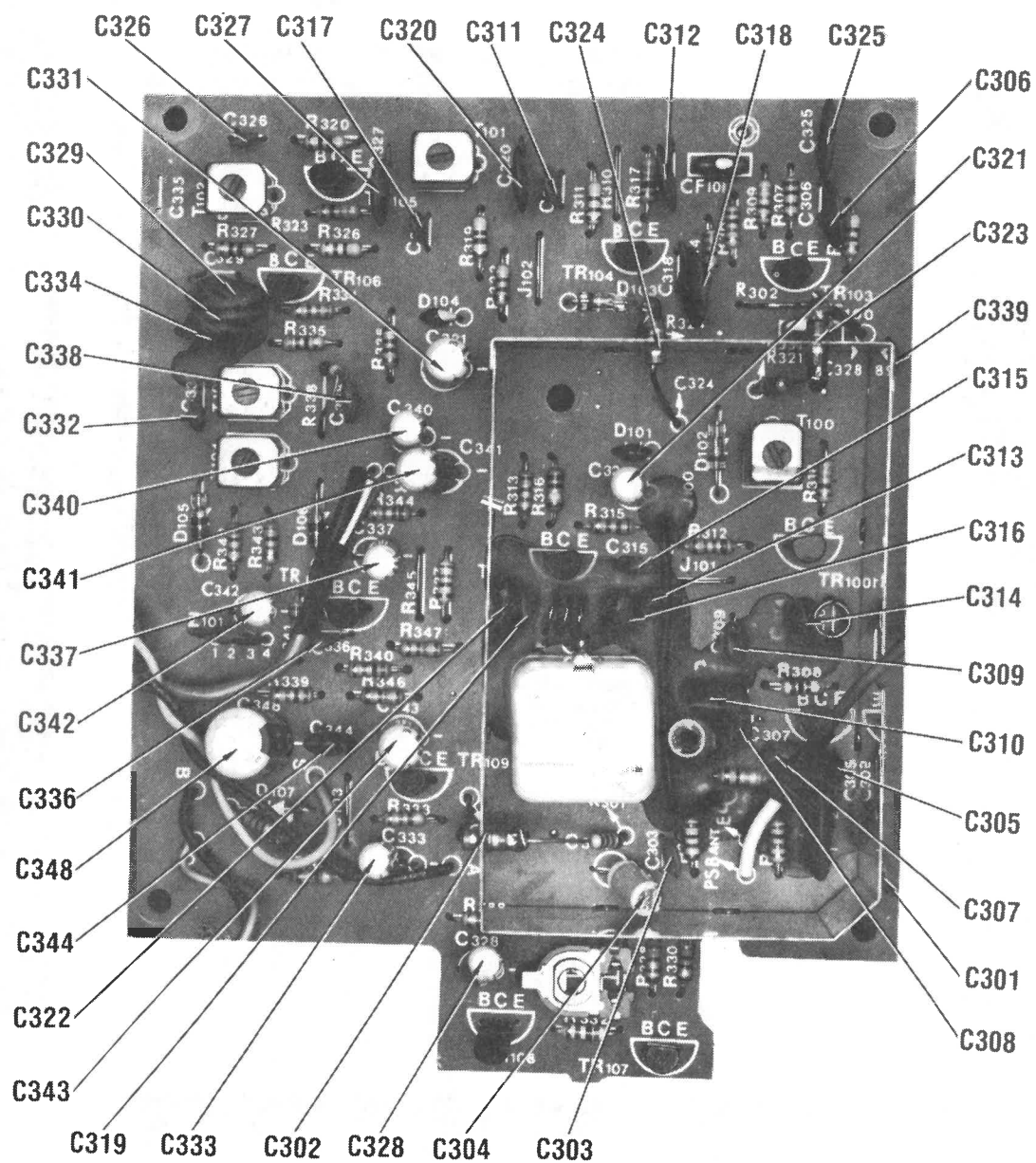


● Measured with reference to common tie point.

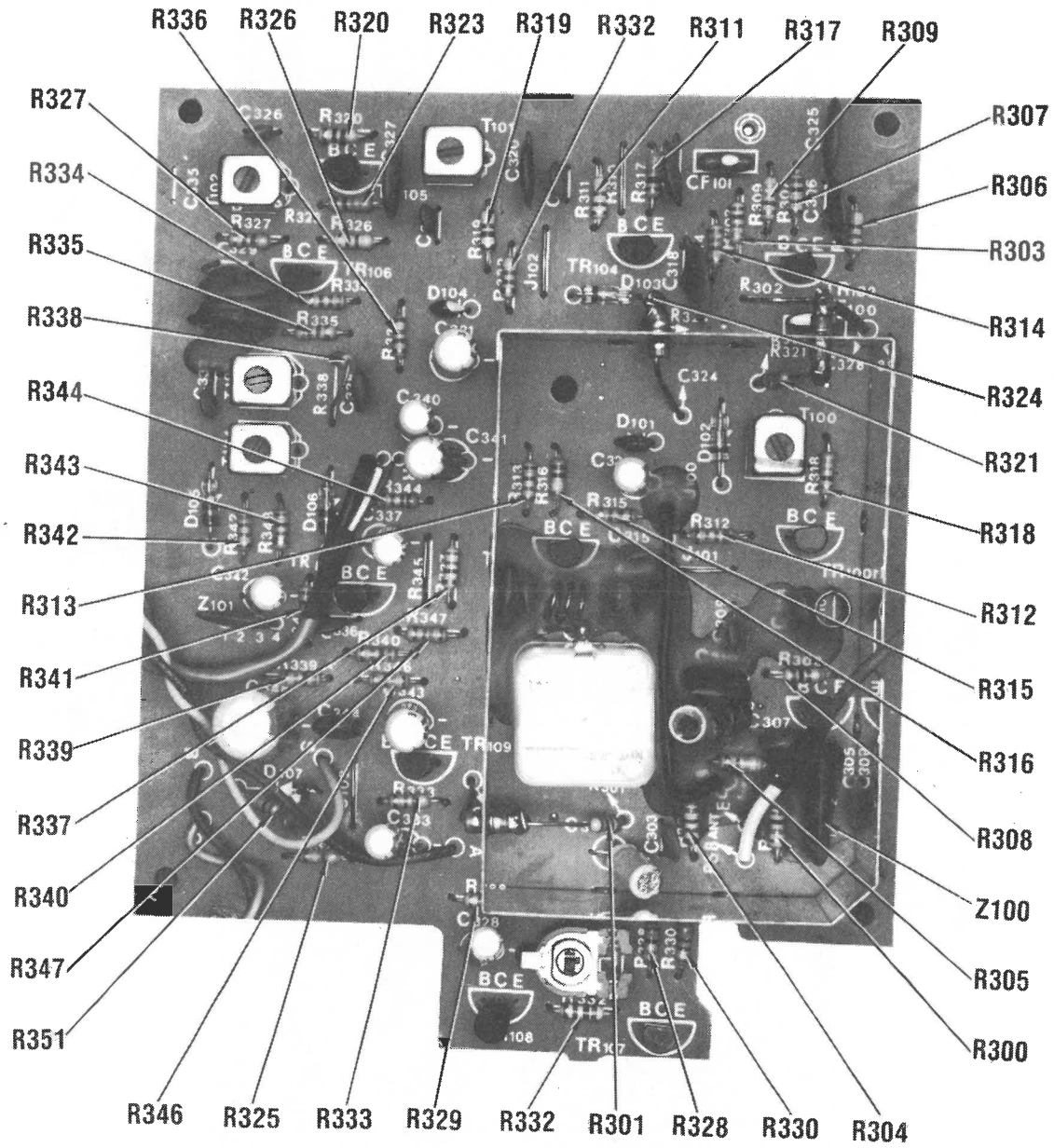


PANASONIC MODEL RJ-3660

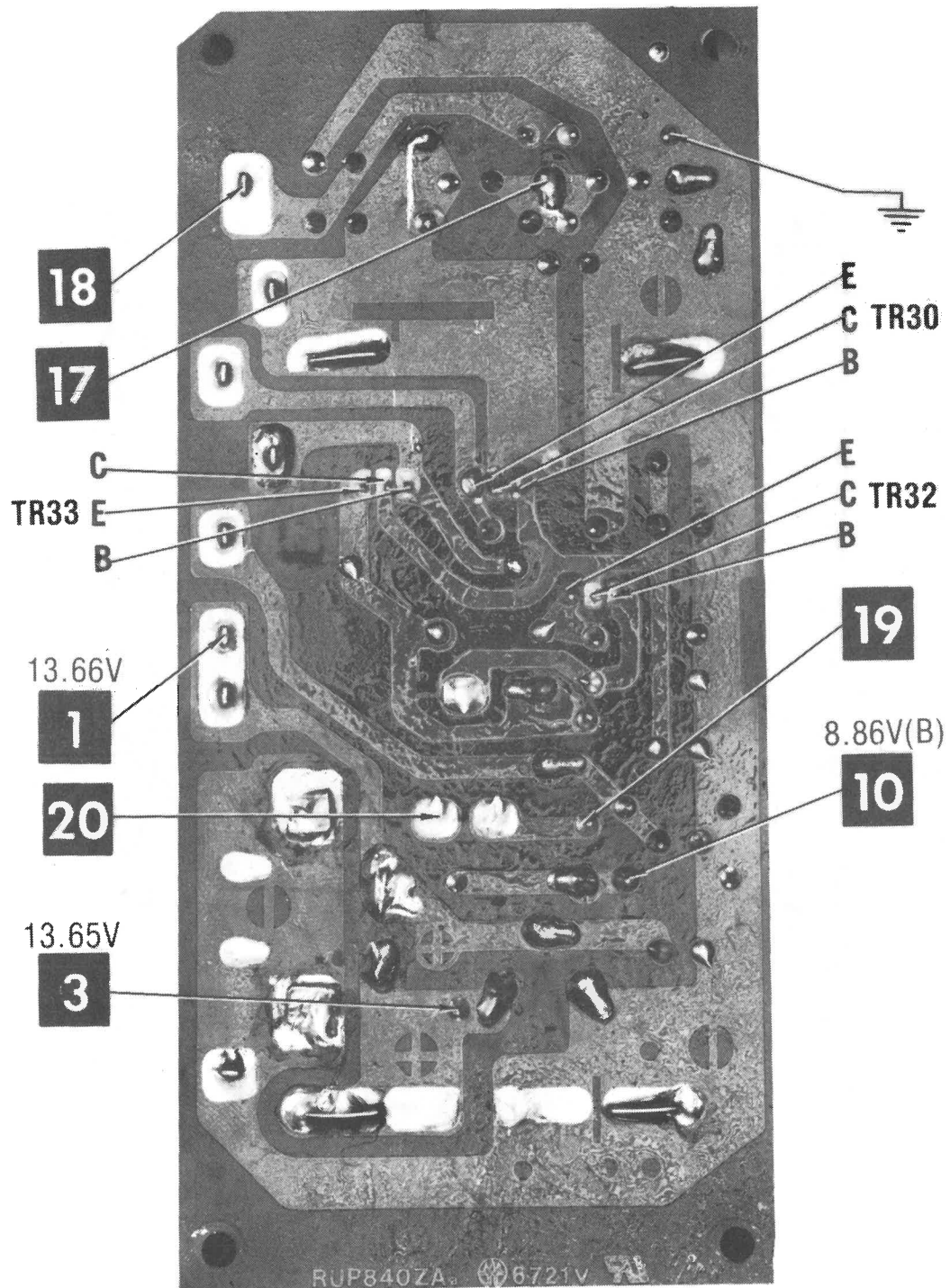
PSB BOARD



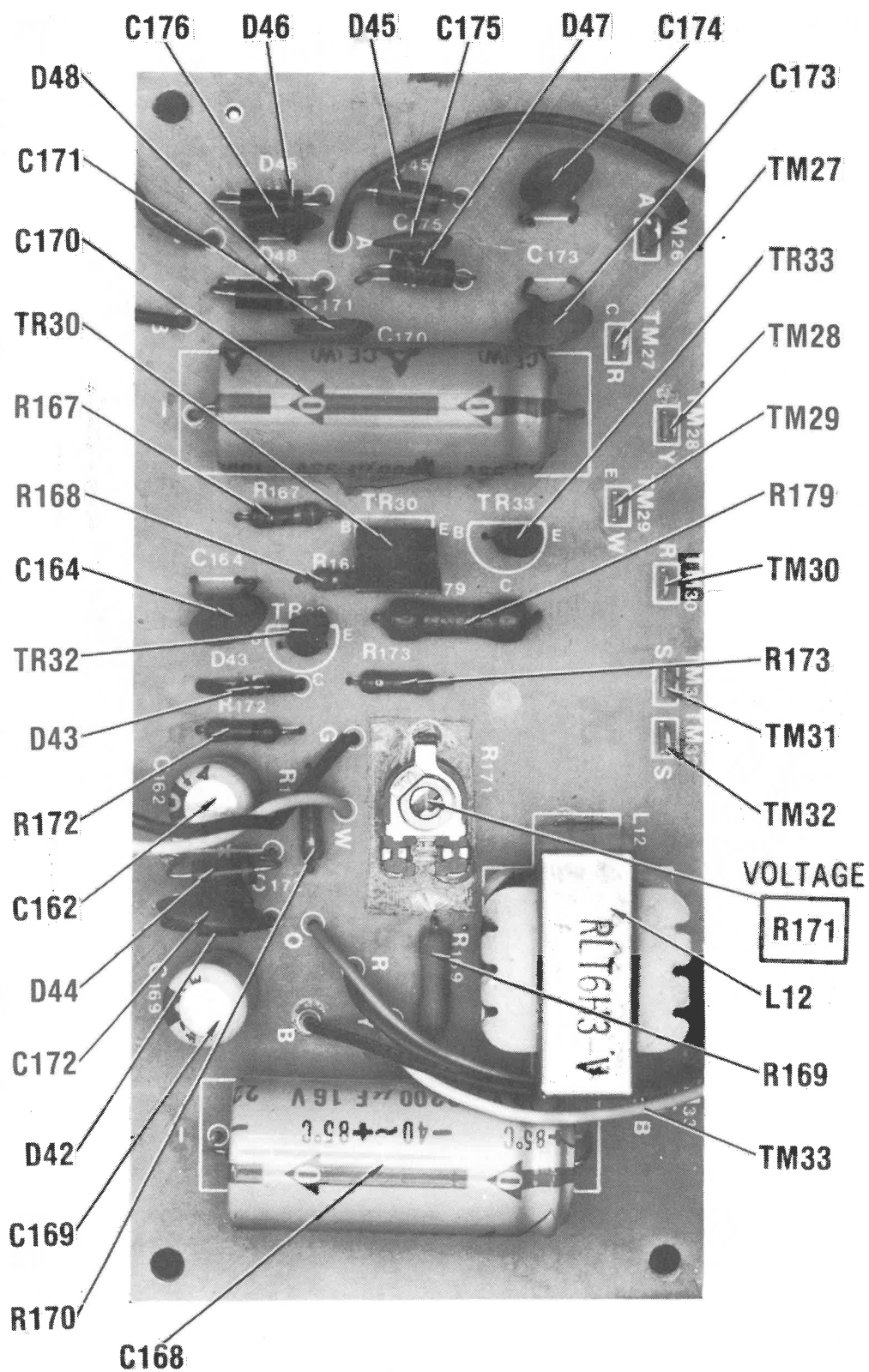
PSB BOARD



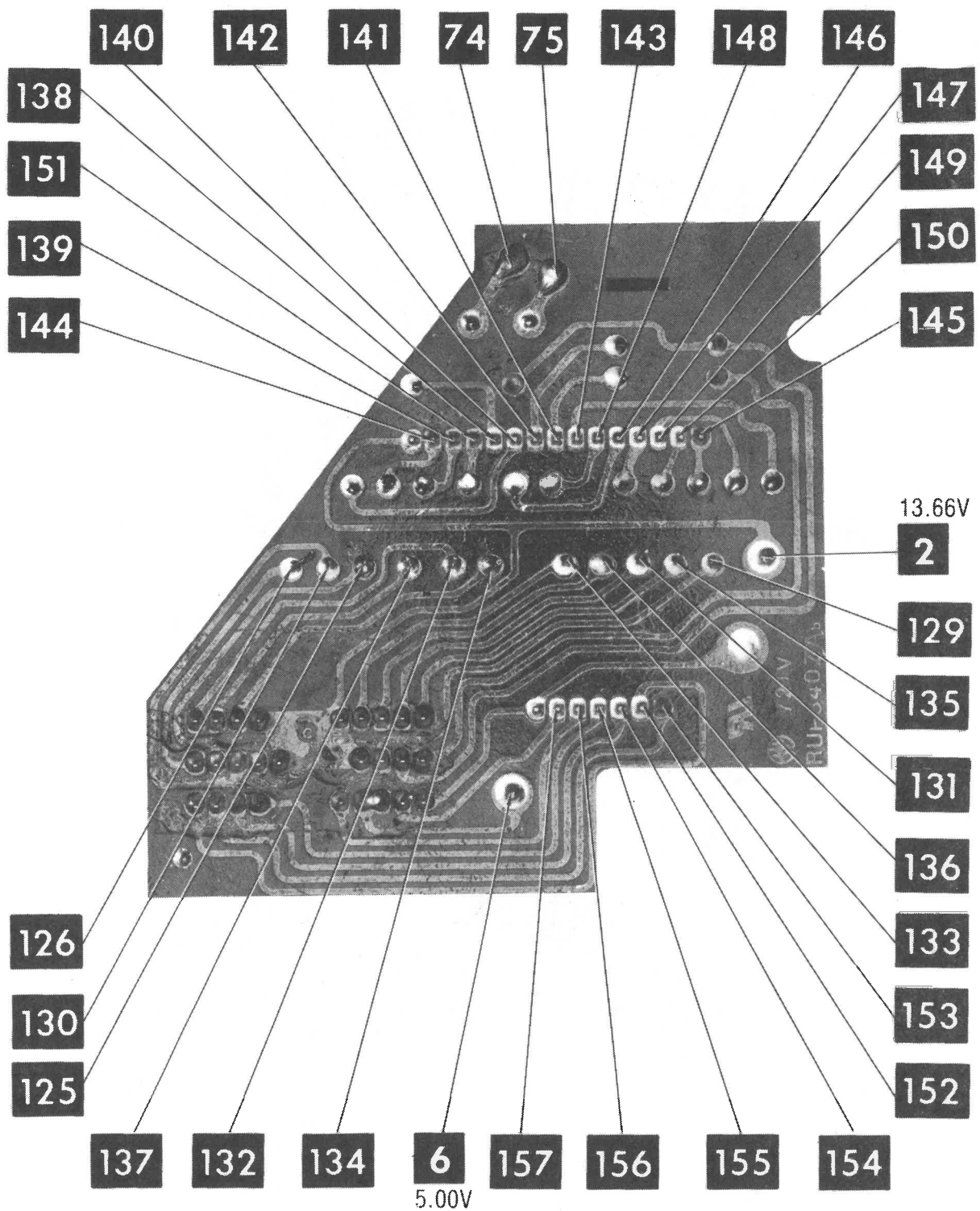
PSB BOARD



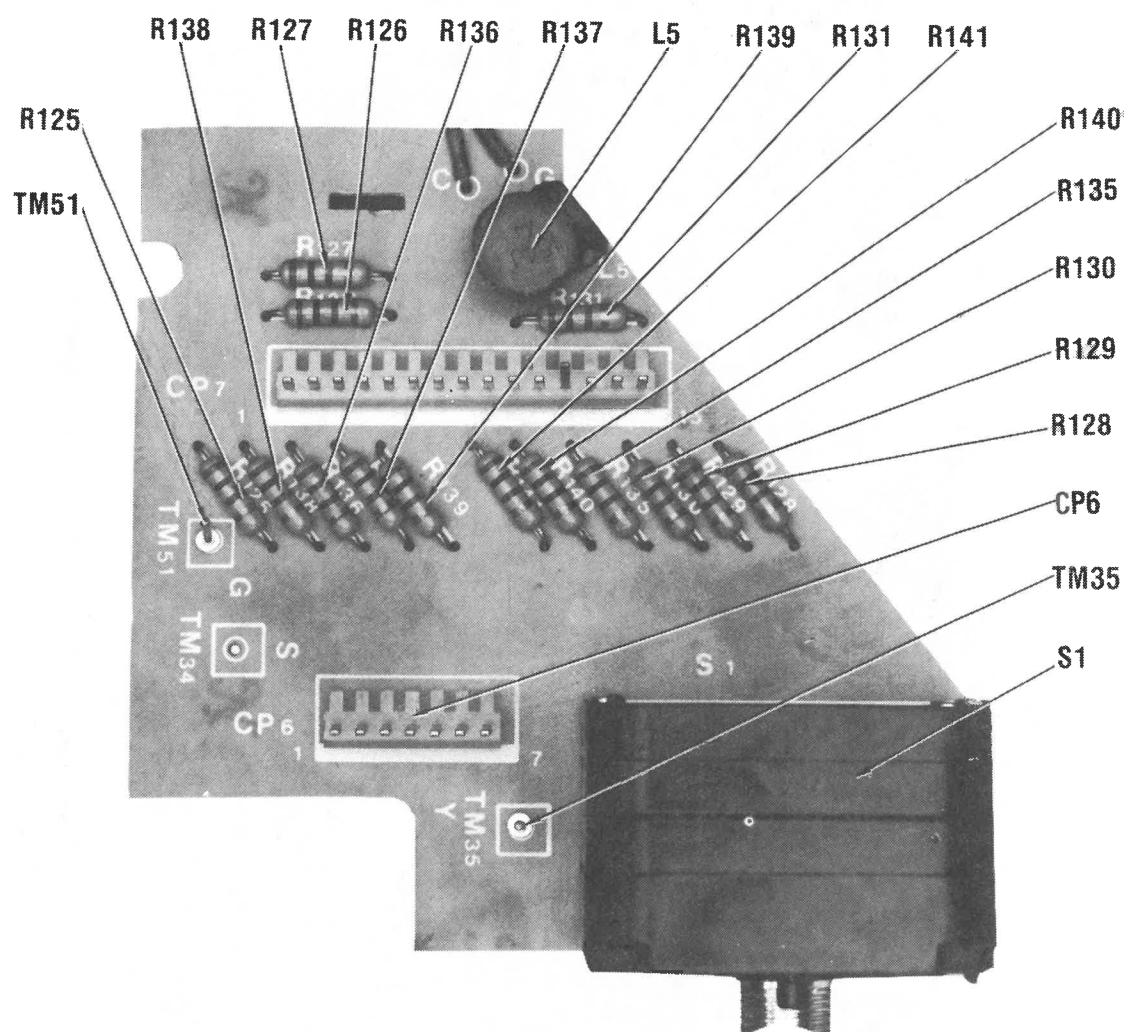
POWER SUPPLY BOARD



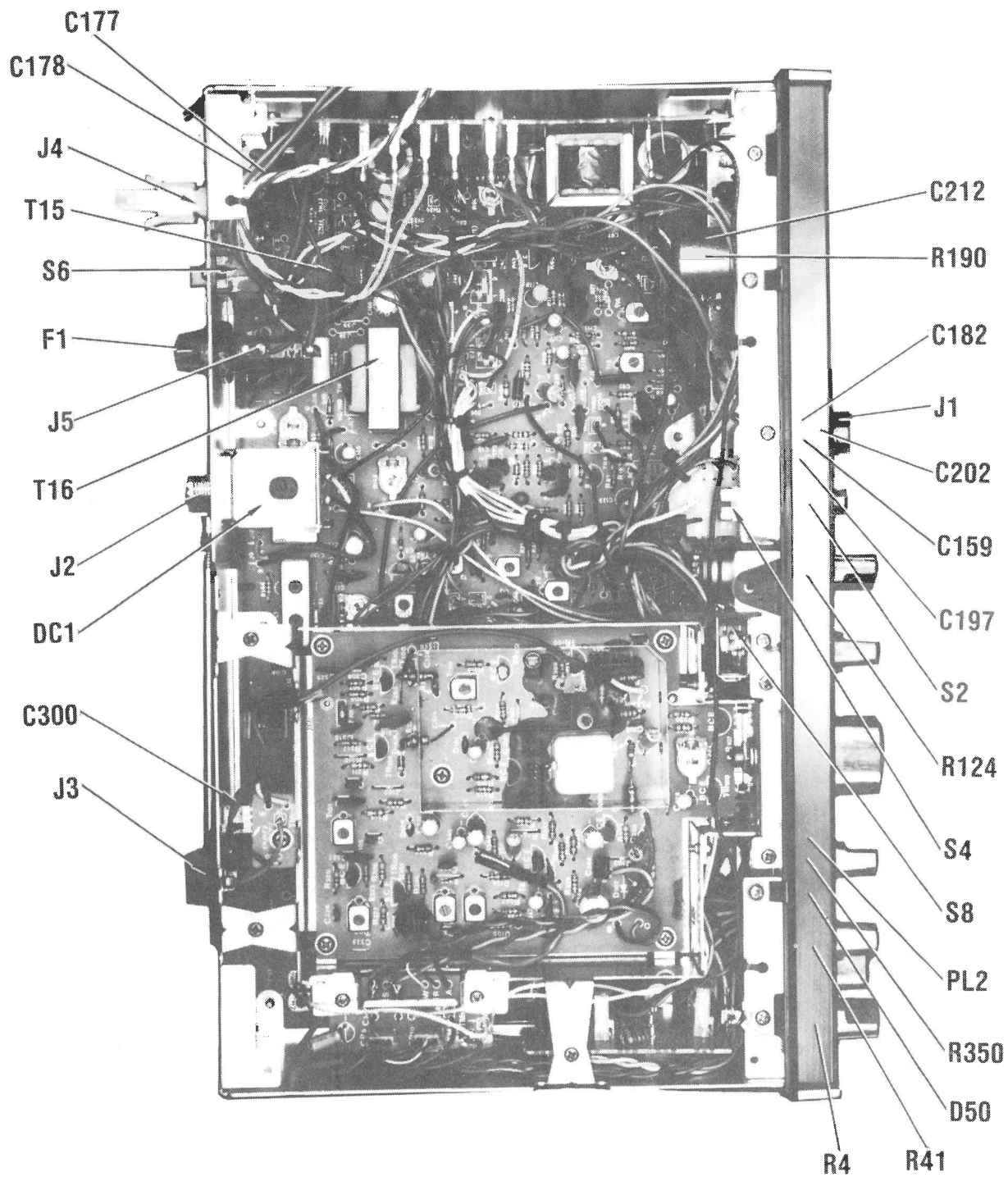
POWER SUPPLY BOARD



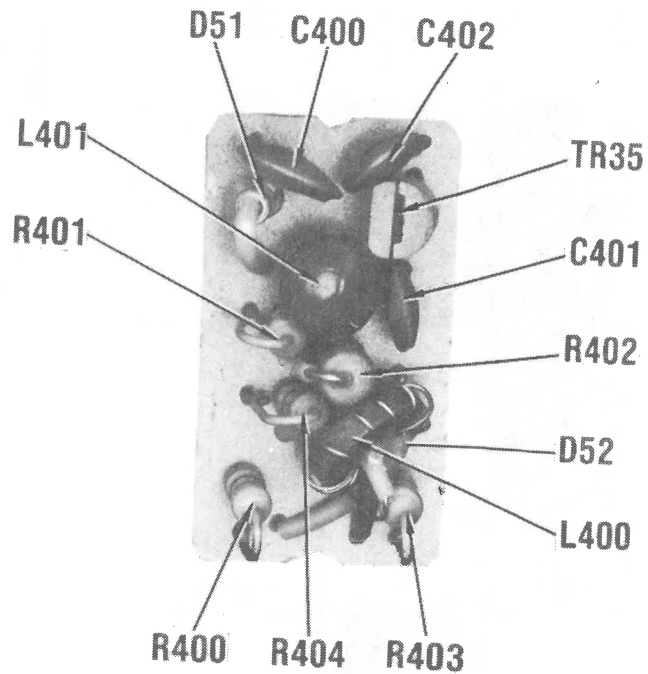
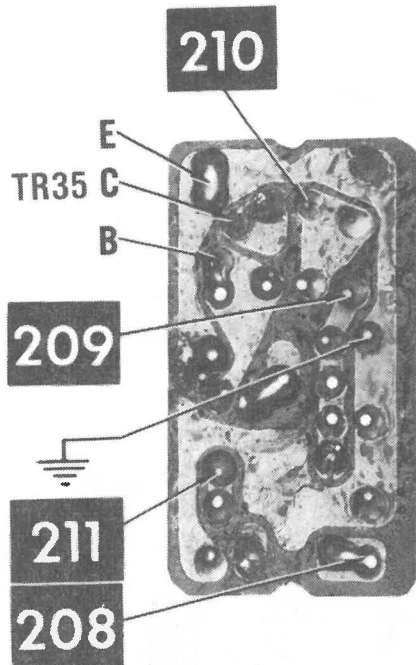
CHANNEL SELECTOR BOARD



CHANNEL SELECTOR BOARD



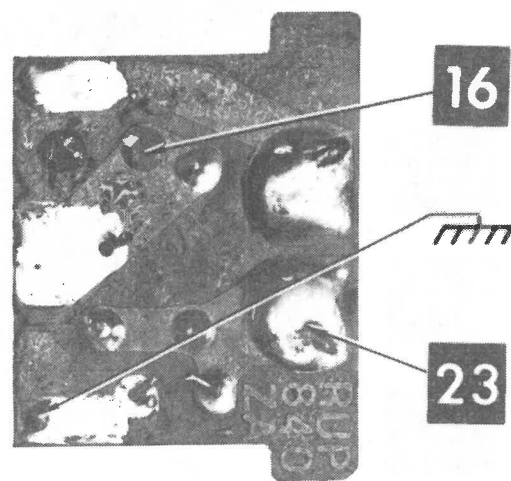
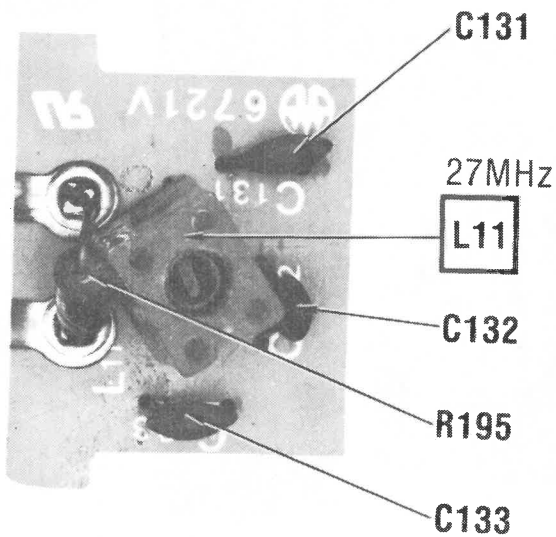
CHASSIS - TOP



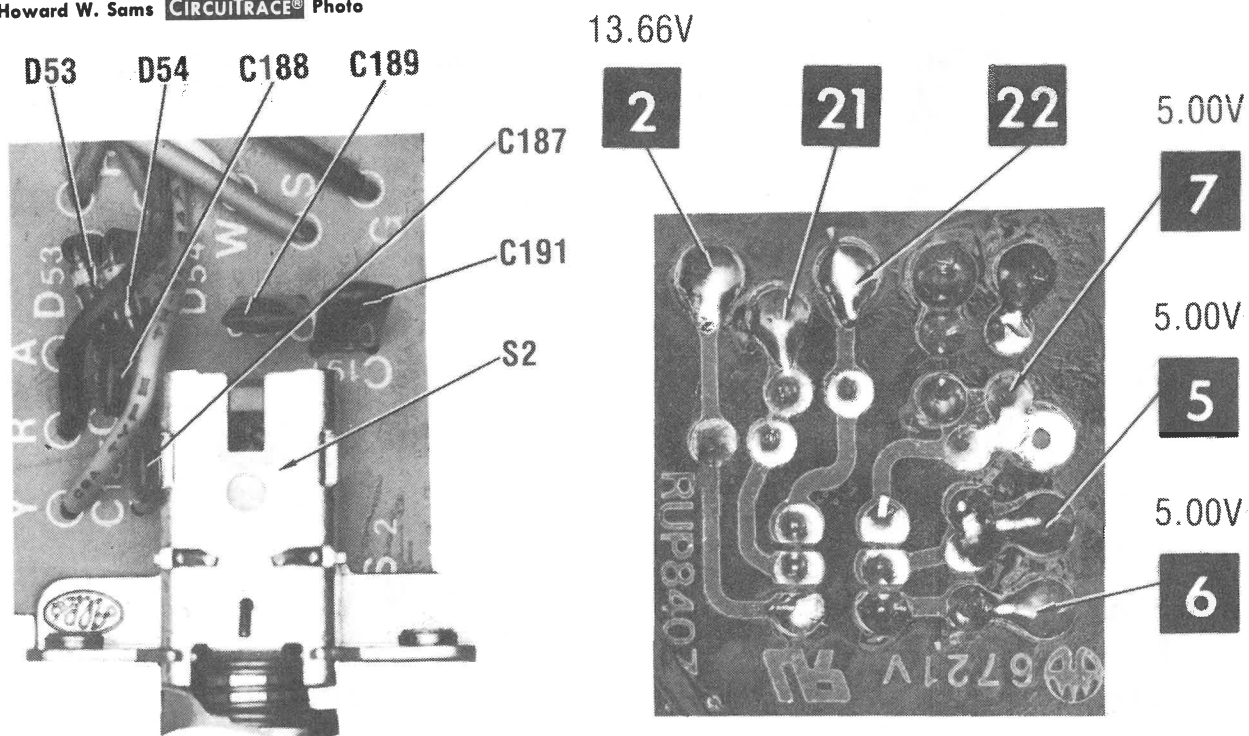
ANTENNA WARNING BOARD

A Howard W. Sams CIRCUITRACE® Photo

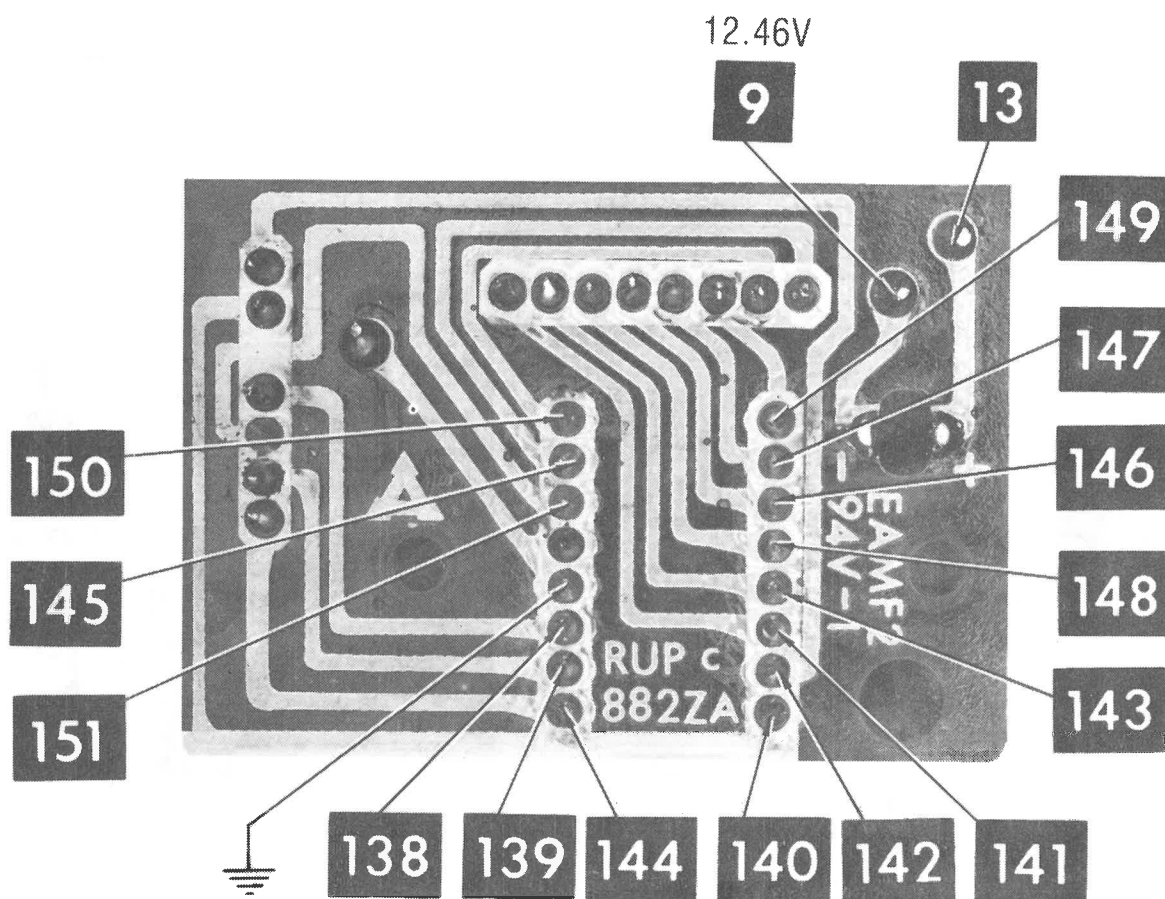
PANASONIC MODEL RJ-3660



ANTENNA BOARD



CH. 9 SWITCH BOARD



LED 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	MA150		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D3	OA90		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-Z9001
D4	OA90		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-Z9001
D5	1S2687AA				HEPR2502	REN 612			ECG612			103-176
D6	MA150		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D7	MA150		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D8	MA150		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D9	MA150		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D10	MA150		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D11	MA150		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D12	MA150		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D13	MA150		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D14	MA150		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D15	MA150		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D16	OA90		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-Z9001
D17	OA90		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-Z9001
D18	OA90		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-Z9001
D19	RVDVD1150L			PTC301		REN 601	SK3463		ECG601			
D20	MA150		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D23	MA150		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D32	OA90		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-Z9001
D33	MA150		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D34	RVD10E1		GE-504A	PTC201	HEPR0052	REN 116	SK3311	RT-213	ECG116	TM116	WEP156	212-76-02
D35	RVD10E1		GE-504A	PTC201	HEPR0052	REN 116	SK3311	RT-213	ECG116	TM116	WEP156	212-76-02
D36	MA150		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D37	RVDVD1150L			PTC301		REN 601	SK3463		ECG601			
D38	MA150		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D39	OA90		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-Z9001
D40	RVD10E1		GE-504A	PTC201	HEPR0052	REN 116	SK3311	RT-213	ECG116	TM116	WEP156	212-76-02
D41	RVD10E1		GE-504A	PTC201	HEPR0052	REN 116	SK3311	RT-213	ECG116	TM116	WEP156	212-76-02
D42	RVDN4739		GEZD-9.1	ZB9.1A	HEP20412	REN 139	SK3060	RT-240	ECG139	TM139/**	WEP1109	103-272
D43	RVDNR82EC		GEZD-8.2	ZB8.2B		REN 5072	SK3136	RT-257	ECG5072A	TM5072/**	WEP1108	
D44	RVD10E1		GE-504A	PTC201	HEPR0052	REN 116	SK3311	RT-213	ECG116	TM116	WEP156	212-76-02
D45	RVD10E1		GE-504A	PTC201	HEPR0052	REN 116	SK3311	RT-213	ECG116	TM116	WEP156	212-76-02
D46	RVD10E1		GE-504A	PTC201	HEPR0052	REN 116	SK3311	RT-213	ECG116	TM116	WEP156	212-76-02
D47	RVD10E1		GE-504A	PTC201	HEPR0052	REN 116	SK3311	RT-213	ECG116	TM116	WEP156	212-76-02
D48	RVD10E1		GE-504A	PTC201	HEPR0052	REN 116	SK3311	RT-213	ECG116	TM116	WEP156	212-76-02
D51	OA90		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-Z9001
D52	RVDVD1250			PTC301		REN 601	SK3463		ECG601			
D53	MA150		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D54	MA150		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D100	MA150		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
D101	RVDVD1251L			PTC301		REN 601	SK3463		ECG601			
D102	OA90		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-Z9001
D103	OA90		1N60	PTC206	HEPR9135	REN 109	SK3088	RT-263	ECG109	TM109/**	WEP134	103-Z9001
D104	RVDVD1252L		1N60(7)	PTC206M(6)	HEPR9135(7)	REN 110(6)	SK3088(7)	RT-263(7)	ECG110(6)	TM110(6)/**	WEP134(7)	103-Z9001(7)
D105	2-OA90											
D106	2-OA90											
D107	MA150		GE-514	PTC214	HEPR9137	REN 177	SK3100	RT-218	ECG519	TM519	WEP925	103-287
IC1	UPC566H3	RVIUCP566H3	GEIC-135			REN 1052	SK3249	RT-218	ECG1052	TM1052	WEP2082	
IC2	M51202	RVIIM51202L										
IC3	78L05	RVIUCP78L05				REN 977	SK3462		ECG977			
IC4	UPD861C	RVIUPD861C							ECG1254			
TR1	2SC1359C		GE-212	PTC121*	HEPS0014*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP829	121-Z9021
	2SC1359		GE-212	PTC121*	HEPS0014*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP829	121-Z9021
	3SK40		GE-FET-4	PTC182	HEPF2007	REN 222	SK3065	RT-181	ECG222	TM222	WEP905	121-826
TR2	2SC828R		GE-61*	PTC139*	HEPS0015*	REN 199	SK3122	RT-302	ECG199	TM199/**	WEP828	121-972
TR3	2SC828R		GE-61*	PTC139*	HEPS0015*	REN 199	SK3122	RT-302	ECG199	TM199/**	WEP828	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3122	RT-302	ECG199	TM199/**	WEP828	121-972
TR4	2SC828R		GE-61*	PTC139*	HEPS0015*	REN 199	SK3122	RT-302	ECG199	TM199/**	WEP828	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3122	RT-302	ECG199	TM199/**	WEP828	121-972
TR5	2SC829C		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
	2SC829		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
TR6	2SC828C		GE-61*	PTC139*	HEPS0015*	REN 199	SK3122	RT-302	ECG199	TM199/**	WEP828	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3122	RT-302	ECG199	TM199/**	WEP828	121-972
TR7	2SC1359C		GE-212	PTC121*	HEPS0014*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP829	121-Z9021
	2SC1359		GE-212	PTC121*	HEPS0014*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP829	121-Z9021
TR8	2SC829C		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
	2SC829		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
TR9	2SC828Q		GE-61*	PTC139*	HEPS0015*	REN 199	SK3122	RT-302	ECG199	TM199/**	WEP828	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3122	RT-302	ECG199	TM199/**	WEP828	121-972
TR10	2SA564Q		GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	TM234	WEP564	121-879
	2SA564		GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	TM234	WEP564	121-879
TR11	2SC829C		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
	2SC829		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
TR12	2SC829C		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
	2SC829		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
TR13	2SC1359B		GE-212	PTC121*	HEPS0014*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP829	121-Z9021
	2SC1359		GE-212	PTC121*	HEPS0014*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP829	121-Z9021
TR14	2SA564Q		GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	TM234	WEP564	121-879
	2SA564		GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	TM234	WEP564	121-879
TR15	2SC1359B		GE-212	PTC121*	HEPS0014*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP829	121-Z9021
	2SC1359		GE-212	PTC121*	HEPS0014*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP829	121-Z9021
TR16	2SC1359B		GE-212	PTC121*	HEPS0014*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP829	121-Z9021
	2SC1359		GE-212	PTC121*	HEPS0014*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP829	121-Z9021
TR17	2SC1957		GE-270	PTC180	HEPS3044	REN 295	SK3197		ECG295	TM295	WEP913	121-880

PANASONIC MODEL RJ-3660

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.
TR18	2SC829C		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
	2SC829		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
TR19	2SC829C		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
	2SC829		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
TR20	2SC1359B		GE-212	PTC121*	HEPS0014*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP829	121-Z9021
	2SC1359		GE-212	PTC121*	HEPS0014*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP829	121-Z9021
TR21	2SC829C		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
	2SC829		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
TR22	2SC829C		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
	2SC829		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
TR23	2SC1909		GE-215	PTC186		REN 235	SK3197	RT-146	ECG235	TM235	WEP785	121-Z9039
TR24	2SC829C		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
	2SC829		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
TR25	2SC828C		GE-61*	PTC139*	HEPS0015*	REN 199	SK3122	RT-302	ECG199	TM199/**	WEP828	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3122	RT-302	ECG199	TM199/**	WEP828	121-972
TR26	2SC828C		GE-61*	PTC139*	HEPS0015*	REN 199	SK3122	RT-302	ECG199	TM199/**	WEP828	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3122	RT-302	ECG199	TM199/**	WEP828	121-972
TR27	2SC1384Q		GE-88	PTC143*	HEPS5014*	REN 293	SK3849	RT-302	ECG293	TM293	WEP914	121-Z9000
	2SC1384		GE-88	PTC143*	HEPS5014*	REN 293	SK3849	RT-302	ECG293	TM293	WEP914	121-Z9000
TR28	2SC1098		GE-28	PTC110	HEPS5027	REN 186A	SK3197	RT-197	ECG186A	TM186A	WEP768	121-Z9008
TR29	2SC1098		GE-28	PTC110	HEPS5027	REN 186A	SK3197	RT-197	ECG186A	TM186A	WEP768	121-Z9008
TR30	2SC1226Q		GE-215	PTC186		REN 186A	SK3357	RT-166	ECG186A	TM186A/**	WEP751	121-Z9008
	2SC1226		GE-215	PTC186		REN 186A	SK3357	RT-166	ECG186A	TM186A/**	WEP751	121-Z9008
TR31	2SC647		GE-35	PTC146	HEPS5021	REN 165	SK3561	RT-139	ECG165	TM165	WEP740B	121-Z9042
TR32	2SC828R		GE-61*	PTC139*	HEPS0015*	REN 199	SK3122	RT-302	ECG199	TM199/**	WEP828	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3122	RT-302	ECG199	TM199/**	WEP828	121-972
TR33	2SC828R		GE-61*	PTC139*	HEPS0015*	REN 199	SK3122	RT-302	ECG199	TM199/**	WEP828	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3122	RT-302	ECG199	TM199/**	WEP828	121-972
TR34	2SC1359A		GE-212	PTC121*	HEPS0014*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP829	121-Z9021
	2SC1359		GE-212	PTC121*	HEPS0014*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP829	121-Z9021
TR35	2SC945AP		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
	2SC945		GE-212	PTC121*	HEPS0015*	REN 199	SK3124	RT-107A	ECG199	TM199/**	WEP1945	121-972
TR100	2SC1047C		GE-60*	PTC132*	HEPS0016*	REN 229*	SK3132	RT-107	ECG229*	TM229*	WEP63*	121-Z9021
	2SC1047		GE-60*	PTC132*	HEPS0016*	REN 229*	SK3132	RT-107	ECG229*	TM229*	WEP63*	121-Z9021
TR101	2SC1359B		GE-212	PTC121*	HEPS0014*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP829	121-Z9021
	2SC1359		GE-212	PTC121*	HEPS0014*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP829	121-Z9021
TR102	2SC1359C		GE-212	PTC121*	HEPS0014*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP829	121-Z9021
	2SC1359		GE-212	PTC121*	HEPS0014*	REN 229*	SK3122	RT-308	ECG229*	TM229*	WEP829	121-Z9021
TR103	2SC829B		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
	2SC829		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
TR104	2SC829B		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
	2SC829		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
TR105	2SC829B		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
	2SC829		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
TR106	2SC829B		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
	2SC829		GE-20*	PTC139*	HEPS0015*	REN 229*	SK3122	RT-308	ECG229*	TM229*/**	WEP829	121-Z9000A*
TR107	2SC828Q		GE-61*	PTC139*	HEPS0015*	REN 199	SK3122	RT-302	ECG199	TM199/**	WEP828	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3122	RT-302	ECG199	TM199/**	WEP828	121-972
TR108	2SA564Q		GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	TM234	WEP564	121-879
	2SA564		GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	TM234	WEP564	121-879
TR109	2SC828Q		GE-61*	PTC139*	HEPS0015*	REN 199	SK3122	RT-302	ECG199	TM199/**	WEP828	121-972
	2SC828		GE-61*	PTC139*	HEPS0015*	REN 199	SK3122	RT-302	ECG199	TM199/**	WEP828	121-972
TR110	2SA564Q		GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	TM234	WEP564	121-879
	2SA564		GE-65	PTC103*	HEPS0019*	REN 234	SK3114	RT-303	ECG234	TM234	WEP564	121-879

* Lead configuration may vary from original.

** Also available as exact type replacement.

(6) Matched pair.

(7) Two required - select matched pair.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA				
		MFRG. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C4	.1 50V	ECEA50ZR1		TDC104M050EL	QDT1-2	SD50-R109
C21	10 16V	ECEA16V10	PC10-25	VTT10B25	QV1-41	EV-1222
C31	4.7 25V	ECEA35V4R7	PC5-50	VTT4R7B50	QV1-31	EV-1619.1
C45	4.7 25V	ECEA35V4R7	PC5-50	VTT4R7B50	QV1-31	EV-1619.1
C58	10 16V	ECEA16V10	PC10-25	VTT10B25	QV1-41	EV-1222
C60	10 16V	ECEA16V10	PC10-25	VTT10B25	QV1-41	EV-1222
C62	.47 50V	ECEA50ZR47	PC1-50	VTT4R7A63	QV1-3	EV-1610
C64	10 16V	ECEA16V10	PC10-25	VTT10B25	QV1-41	EV-1222
C67	100 16V	ECEA16V100	PC100-16	VTT100F16	QV1-95	EV-1231
C75	.1 50V	ECEA50ZR1		TDC104M050EL	QDT1-2	SD50-R109
C79	4.7 25V	ECEA35V4R7	PC5-50	VTT4R7B50	QV1-31	EV-1619.1
C80	4.7 25V	ECEA35V4R7	PC5-50	VTT4R7B50	QV1-31	EV-1619.1
C84	.1 50V	ECEA50ZR1		TDC104M050EL	QDT1-2	SD50-R109
C91	1 50V	ECEA50V1	PC1-50	VTT1A50	QV1-11	EV-1615
C93	4.7 25V	ECEA35V4R7	PC5-50	VTT4R7B50	QV1-31	EV-1619.1
C94	.47 50V	ECEA50ZR47	PC1-50	VTT4R7A63	QV1-3	EV-1610
C99	47 6.3V	ECEA10V47	PC50-16	VTT47D16	QV1-73	EV-1226
C104	100 16V	ECEA16V100	PC100-16	VTT100F16	QV1-95	EV-1231
C115	1 50V	ECEA50V1	PC1-50	VTT1A50	QV1-11	EV-1615
C116	1 50V	ECEA50V1	PC1-50	VTT1A50	QV1-11	EV-1615
C117	.22 50V	ECEA50ZR22		TDC224M050EL	QDT1-10	SD50-R229
C118	47 10V	ECEA10V47	PC50-16	VTT47D16	QV1-73	EV-1226
C119	47 10V	ECEA10V47	PC50-16	VTT47D16	QV1-73	EV-1226
C121	10 16V	ECEA16V10	PC10-25	VTT10B25	QV1-41	EV-1222
C123	2.2 25V NP	ECEA25N2R2	WNP3-50	TCN503A	QEN1-63	TVAN-1302.1
C129	47 16V	ECEA16V47	PC50-16	VTT47D16	QV1-73	EV-1226
C135	47 10V	ECEA10V47	PC50-16	VTT47D16	QV1-73	EV-1226
C137	100 10V	ECEA10V100	PC100-10	VTT100E10	QV1-93	EV-1131
C139	1 50V	ECEA50V1	PC1-50	VTT1A50	QV1-11	EV-1615
C141	47 10V	ECEA10V47	PC50-16	VTT47D16	QV1-73	EV-1226
C145	1 50V	ECEA50V1	PC1-50	VTT1A50	QV1-11	EV-1615
C152	47 16V	ECEA16V47	PC50-16	VTT47D16	QV1-73	EV-1226
C162	100 16V	ECEA16V100	PC100-16	VTT100F16	QV1-95	EV-1231
C163	33 16V	ECEA16V33	PC30-25	VTT33D25	QV1-63	EV-1325
C166	220 16V	ECEA16V220	PC250-25	VTT220H16	QV1-117	EV-1240

PARTS LIST AND DESCRIPTION (CONTINUED)

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

ELECTROLYTIC CAPACITORS (cont)

ITEM No.	RATING	REPLACEMENT DATA				
		MFR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
# C168	2200 6.3V	ECEB6V2200	WBR2000-16	TT10X2400	QE1-641	TVA-1134.5
# C169	100 16V	ECEA16V100	PC100-16	VTT100F16	QV1-95	EV-1231
# C170	1000 35V	ECEB35V1000	WBR1000-50	TC50100C	QE1-594	TVA-1316
C203	100 16V	ECEA16V100	PC100-16	VTT100F16	QV1-95	EV-1231
C212	4.7 25V NP	ECEA25V4R7	WNP5-50	TCN505A	QEN1-113	TVAN-1303.1
C213	10 16V	ECEA16V10	PC10-25	VTT10B25	QV1-41	EV-1222
C304	1 50V	ECEA50V1	PC1-50	VTT1A50	QV1-11	EV-1615
C321	1 50V	ECEA50V1	PC1-50	VTT1A50	QV1-11	EV-1615
C328	.1 50V	ECEA50ZR1		TDC104M050EL	QDT1-2	SD50-R109
C331	33 10V	ECEA10V33	PC30-25	VTT33B10		EV-1225
C333	10 16V	ECEA16V10	PC10-25	VTT10B25	QV1-41	EV-1222
C337	1 50V	ECEA50V1	PC1-50	VTT1A50	QV1-11	EV-1615
C340	.1 50V	ECEA50ZR1		TDC104M050EL	QDT1-2	SD50-R109
C341	33 16V	ECEA16V33	PC30-25	VTT33D25	QV1-63	EV-1325
C342	4.7 25V	ECEA25V4R7	PC5-50	VTT4R7B50	QV1-31	EV-1619.1
C343	33 16V	ECEA16V33	PC30-25	VTT33D25	QV1-63	EV-1325
C347	2.2 25V	ECEA25V2R2	PC2-100	VTT2R2A50	QV1-21	EV-1617.1
C348	220 16V	ECEA16V220	PC250-10	VTT220F10	QV1-115	EV-1140

For SAFETY use only equivalent replacement part.

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	.01 50V	ECCV1H020CC	UK50-103		MAG5011		
C2	.01 50V		UK50-103		MAG5011		
C3	.033 50V				M192P3339R8		192P3339R8
C5	.01 50V		UK50-103		MAG5011		
C6	.01 50V		UK50-103		MAG5011		
C7	.033 50V		UK50-333		MAG50133		
C8	.022 50V				M192P2239R8		192P2239R8
C9	.033 50V		UK50-333		MAG50133		
C10	2 NPO +.25						
C11	10 NPO 10%		DTZ-10	NP010	CN0410		10TCC-Q10
C12	.01 50V	ECCD1H040DC	UK50-103		MAG5011		
C13	82 50V 10%		DTZ-82	NP082	CN0482		10TCC-Q82
C14	4 50V +.5%						
C15	.01 50V		UK50-103		MAG5011		
C16	.001 50V		DD-102		GP210		10TS-D10
C17	.022 50V				M192P2239R8		192P2239R8
C18	.01 50V		UK50-103		MAG5011		
C19	180 50V 10%		DTZ-180				10TCC-T18
C20	.01 50V		UK50-103				
C22	.1 50V			WMF05P1	MAG5011		431P1049R5
C23	.01 50V	ECCV1H103PF	UK50-103		EWFO5010		
C24	10 NPO 10%		DTZ-10	NP010	MAG5011		
C25	56 N750 5%				CN0410		10TCC-Q10
C26	.01 50V		UK50-103		*		10TCU-Q56
C27	120 N750 5%		DTN-120		MAG5011		10TCU-T12
C28	30						
C29	100 50V 5%			CD15FD101J03	SX310	QW1-27	MMA-101
C30	7 NPO +.5			NP06P8	CN0568		10TCC-V68
C32	.01 50V		DTZ-6R8		MAG5011		
C33	.01 50V		UK50-103		MAG5011		
C34	.01 50V	RCV1PX30AG	UK50-103		MAG5011		
C35	1.5 NPO +.25		DTZ-1R5	NP01P5	CN0515		10TCC-V15
C36	33 NPO 5%		DTZ-33	NP033	CN0433		10TCC-Q33
C37	30						
C38	39 NPO 10%				CN0439		10TCC-Q39
C39	.01 50V	ECCV1H1R5CC	UK50-103		MAG5011		
C40	1.5 NPO +.25						
C41	180 50V 10%		DTZ-180				10TCC-T18
C42	100 NPO 5%		DTZ-100	NP0100	CN0310		10TCC-T10
C43	220 50V 10%		DTZ-220				10TCC-T22
C44	.01 50V		UK50-103				
C46	220 50V 5%			CD15FD221J03	SX322	QW1-35	MMA-221
C47	.022 50V				M192P2239R8		192P2239R8
C48	100 NPO 5%		DTZ-100	NP0100	CN0310		10TCC-T10
C49	33 50V 5%		DTZ-33	NP033	CN0433		10TCC-Q33
C50	.001 50V	RCV1PX30AG	DD-102		GP210		10TS-D10
C51	330 50V 10%			CD15FD331J03	SX333	QW1-39	MMA-331
C52	27 50V 10%			CD15ED270J03	SX427	QW1-13	MMA-270
C53	.01 50V		UK50-103		MAG5011		
C54	15 NPO 10%		DTZ-15	NP015	CN0415		10TCC-Q15
C55	.01 50V		UK50-103		MAG5011		
C56	33 NPO 5%		DTZ-33	NP033	CN0433		10TCC-Q33
C57	.033 50V		UK50-333		MAG50133		
C59	100 50V 5%		DTZ-100	NP0100	CN0310		10TCC-T10
C61	.01 50V	ECCV1H1R5CC	UK50-103		MAG5011		
C63	.01 50V		UK50-103		MAG5011		
C65	.001 50V		DD-102		GP210		10TS-D10
C66	56 NPO 5%				CN0456		10TCC-Q56
C68	56 NPO 5%				CN0456		10TCC-Q56
C69	.01 50V		UK50-103		MAG5011		
C70	.01 50V		UK50-103		MAG5011		
C71	.01 50V		UK50-103		MAG5011		
C72	.001 50V		DD-102		GP210		10TS-D10
C74	.01 50V		UK50-103		MAG5011		
C76	.01 50V	RCV1PX30AG	UK50-103		MAG5011		
C77	330 50V 10%		DD-331	GP330	GP333		10TS-T33
C78	.033 50V		UK50-333		MAG50133		
C81	.033 50V		UK50-333		MAG50133		
C82	.033 50V		UK50-333		MAG50133		
C83	.033 50V		UK50-333		MAG50133		

PANASONIC MODEL RJ-3660

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
C85	330 50V 10%	RCV1PX30AG	DD-331	GP330	GP333		10TS-T33
C86	68 50V 5%		DTZ-68	NP068	CN0468		10TCC-Q68
C87	.01 50V		UK50-103		MAG5011		
C88	.047 50V			DPMS2S47	EWFA1A147	QF1-171	1PB-S47
C89	30						
C90	.068 50V			WMF1S68	EWFA1A168	QF1-195	1PB-S68
C92	47 NPO 5%		DTZ-47	NP047	CN0447		10TCC-Q47
C95	.01 50V		UK50-103		MAG5011		
C96	39 50V 10%				CN0439		10TCC-Q39
C97	150 50V 10%		DTZ-150		CN0315		10TCC-T15
C98	.01 50V		UK50-103		MAG5011		
C100	.033 50V		UK50-333		MAG50133		
C101	33 NPO 5%		DTZ-33	NP033	CN0433		10TCC-Q33
	0-47 10%						
C102	220 50V 5%		DTZ-220				10TCC-T22
	150-220						
C103	.033 50V	ECCV1H020CC	UK50-333		MAG50133		
C105	.033 50V		UK50-333		MAG50133		
C106	.001 50V		DD-102		GP210		10TS-D10
C107	68 NPO		DTZ-68	NP068	CN0468		10TCC-Q68
C108	82 50V 10%		DTZ-82	NP082	CN0482		10TCC-Q82
C109	.033 50V				M192P3339R8		192P3339R8
C110	.033 50V		UK50-333		MAG50133		
C111	82 50V 10%		DTZ-82	NP082	CN0482		10TCC-Q82
C112	.01 50V		UK50-103		MAG5011		
C113	.01 50V		UK50-103		MAG5011		
C114	.01 50V		UK50-103		MAG5011		
C120	.033 50V				M192P3339R8		192P3339R8
C122	2 NPO $\pm$.25						
C124	.033 50V		UK50-333		MAG50133		
C125	.033 50V		UK50-333		MAG50133		
C126	22 NPO	ECCV1H030C	DTZ-22	NP022	CN0422		10TCC-Q22
C127	.033 50V		UK50-333		MAG50133		
C128	22 NPO		DTZ-22	NP022	CN0422		10TCC-Q22
C130	3 50V $\pm$.25						
C131	82 50V 10%		DTZ-82	NP082	CN0482		10TCC-Q82
C132	10 50V 10%		DTZ-10	NP010	CN0410		10TCC-Q10
C133	82 NPO 10%		DTZ-82	NP082	CN0482		10TCC-Q82
C134	.022 50V				M192P2239R8		192P2239R8
C136	.033 50V		UK50-333		MAG50133		
C138	.01 50V		UK50-103		MAG5011		
C140	.1 50V			WMF05P1	EWFO5010		431P1049R5
C142	.01 50V		UK50-103		MAG5011		
C143	.022 50V				M192P2239R8		192P2239R8
C144	.022 50V				M192P2239R8		192P2239R8
C146	.001 50V		DD-102		GP210		10TS-D10
C147	.033 50V	ECKE1H102PF	UK50-333		MAG50133		
C148	.01 50V		UK50-103		MAG5011		
C149	.033 50V		UK50-333		MAG50133		
C150	.033 50V		UK50-333		MAG50133		
C151	.033 50V		UK50-333		MAG50133		
C153	.033 50V		UK50-333		MAG50133		
C155	.033 50V		UK50-333		MAG50133		
C158	.001 50V		DD-102		GP210		10TS-D10
C159	.001						
C160	.001 50V		DD-102		GP210		10TS-D10
# C164	.01 50V		UK50-103		MAG5011		
# C165	.033 50V		UK50-333		MAG50133		
# C171	.01 50V		UK50-103		MAG5011		
# C172	.033 50V		UK50-333		MAG50133		
# C173	.01 50V		UK50-103		MAG5011		
# C174	.01 50V		UK50-103		MAG5011		
# C175	.01 50V		UK50-103		MAG5011		
C176	.01 50V		UK50-103		MAG5011		
C177	.001	ECKL1H102PF	ECKL1H102PF				
C178	.001		ECKL1H102PF				
C179	.001 50V		DD-102		GP210		10TS-D10
# C180	.001 50V		DD-102		GP210		10TS-D10
# C181	10 NPO 10%		DTZ-10	NP010	CN0410		10TCC-Q10
C182	.001						
C183	.033 50V		UK50-333		MAG50133		
C184	.033 50V		UK50-333		MAG50133		
C185	.033 50V		UK50-333		MAG50133		
C186	.033 50V		UK50-333		MAG50133		
C187	.001 50V			DPMS6D1	EWFA1A210	QF1-1	1PB-D10
C188	.001 50V			DPMS6D1	EWFA1A210	QF1-1	1PB-D10
C189	.001 50V			DPMS6D1	EWFA1A210	QF1-1	1PB-D10
C191	.001 50V			DPMS6D1	EWFA1A210	QF1-1	1PB-D10
C194	33 NPO 5%		DTZ-33	NP033	CN0433		10TCC-Q33
C197	.001 50V	ECKL1H102PF	DD-102		GP210		10TS-D10
C198	.001 50V		DD-102		GP210		10TS-D10
C200	.033 50V		UK50-333		MAG50133		
C201	.033 50V		UK50-333		MAG50133		
C202	.001						
C204	.001 50V		DD-102		GP210		10TS-D10
C205	.033 50V		UK50-333		MAG50133		
C206	.033 50V		UK50-333		MAG50133		
C207	.033 50V		UK50-333		MAG50133		
C208	.022 50V				M192P2239R8		192P2239R8
C209	.001 50V		DD-102		GP210		10TS-D10
C210	.001 50V		DD-102		GP210		10TS-D10
C220	27 NPO 10%				CN0427		10TCC-Q27
C221	.033 50V		UK50-333		MAG50133		
C222	.001 50V		DD-102		GP210		10TS-D10
C300	.01 50V	ECKL1H102PF	UK50-103		MAG5011		
C301	.001 50V		DD-102		GP210		10TS-D10
C302	.001						
C303	.001 50V		DD-102		GP210		10TS-D10
C305	12 NPO 10%				CN0412		10TCC-Q12
C306	.01 50V		UK50-103		MAG5011		

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
C307	.001 50V	ECCD1H030C ECMS05141JH	DD-102	NP010	GP210	QW1-30	10TS-D10
C308	10 NPO		DTZ-10		CN0410		10TCC-Q10
C309	3 50V +.25						
C310	140 50V 10%						
C311	.001 50V		DD-102		GP210		10TS-D10
C312	.01 50V	ECCD1H030C	UK50-103	NP02P2	MAG5011		10TCC-V22
C313	2 NPO		DTZ-2R2		CN0522		10TS-D10
C314	.001 50V		DD-102		GP210		10TCC-Q18
C315	3 50V +.25						
C316	18 NPO 10%				CN0418		
C317	3 50V +.25	ECCD1H030C	UK50-103	CD15FD131J03 NP047	MAG5011		10TS-D10
C318	.01 50V		DD-102		GP210		
C319	.001 50V		UK50-103		MAG5011		MMA-131
C320	.01 50V				SX313		10TCC-Q47
C322	130 50V 5%		DTZ-47		CN0447		10TS-D10
C323	47 50V 10%	ECCD1H030C	DD-102		GP210		
C324	.001 50V		UK50-103		MAG5011		
C325	.01 50V						
C326	3 50V +.25		UK50-103		MAG5011		
C327	.01 50V		UK50-103		MAG5011		
C329	.01 50V	ECCD1H2R5C	UK50-103		MAG5011		
C330	.01 50V						
C332	2.5 50V +.25				M192P2239R8		192P2239R8
C334	.022 50V		DD-102		GP210		10TS-D10
C336	.001 50V				GP222		10TS-D22
C338	.0022 50V	ECKL1H102PF ECKL1H102PF	DD-102		GP210		10TS-D10
C339	.001 50V		UK50-333		MAG50133		
C344	.033 50V						
C345	.001						
C346	.001						
C349	(1)						
C350	(1)						
C351	(1)						
C352	(1)						
C400	220 10%		DTZ-220		MAG5011		10TCC-T22
C401	.01		UK50-103		MAG5011		
C402	.01		UK50-103				

For SAFETY use only equivalent replacement part.

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

(1) Part of tuning gang Part No. PVC2C20TL.

PANASONIC MODEL RJ-3660

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.
R4	RF Gain	50K	EVHMA087C54			
R41	Squelch	10K	EVHMA087C14			
R46	Squelch Range	2000	EVLS3AA00B23	T-2500 (3)	MTC23L1 (3)	U260R252B
R94	AMC	100K	EVLS3AA00B15	T-100K (3)	MTC15L1 (3)	U260R104B
R124	Volume	10K	EVKCMC024D14 (18)			
R348	PSB Volume/Power Switch	10K				
R143	Signal Meter	20K	EVLS3AA00B24	T-20K (3)	MTC24L1 (3)	U260R253B
R146	RF Power Meter	50K	EVLS3AA00B54	T-50K (3)	MTC54L1 (3)	U260R503B
R163	VU Meter	2000	EVLS3AA00B24	T-20K (3)	MTC24L1 (3)	U260R253B
R171	Voltage	500	EVLS3AA00B52	T-500 (3)	MTC52L1 (3)	U260R501B
R331	PSB Squelch Range	5000	EVLS3AA00B53	T-5000 (3)	MTC53L1 (3)	U260R502B
R350	PSB Squelch	10K	EVHMA087C14			

(3) For horizontal mounting, bend the two outside terminals to fit P.C. board. Use jumper to connect center terminal to P.C. board.

(18) Includes R124, R348 and S7.

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		MFR. PART No.	WORKMAN PART No.			MFR. PART No.	WORKMAN PART No.
TH1	930 Cold NTC		RRT102	# R168	1500 1/4W 5%	22-1100	ERD14FJ152
R27	100 1/4W 5%	22-1072	ERD25TJ101	# R169	68 1W 5%	22-1068	ERG1ANJ680
R76	100 1/4W 5%	221072	ERD14FJ101	# R170	330 1/4W 5%	22-1084	ERD14FJ331
R109	10 1W 5%	223048	ERX1ANJ100	# R173	1K 1/4W 5%	22-1096	ERD14FJ102
R161	.47 1W 5%		ERX1ANJR47	# R179	.33 2W 5%		ERW2PBJR33
R167	6800 1/4W 5%	22-1116	ERD14FJ682	# R195	1.5M 1/4W 10%		ERC12GK155

For SAFETY use only equivalent replacement part.

PARTS LIST AND DESCRIPTION (CONTINUED)

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

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
DC1	Component Combination	RLE5007			
FL1	Component Combination	RLE5006			
L1	RF Choke				
L2	VCO	RLA7M5			
L3	RF Choke				
L4	RF Choke		154J		
L5	RF Choke				
L6	RF Choke				
L7	Driver (27MHz)	RLD7M1	RLD7M1-0		
L8	RF Choke				
L9	RF Choke				
L10	Final (27MHz)	RLD7M2	RLD7M2-0		
L11	Antenna Pi (27MHz)	RLD7M2	RLD7M2-0		
L13	RF Choke				
L14	RF Choke				
L15	RF Choke				
L16	RF Choke				
L100	PSB RF	RLD4N35			
L101	10.7MHz IF Trap				
L102	PSB OSC	RLD4Y43			
L400	RF Choke				
L401	RF Choke				
T1	Antenna Matching (27MHz)	RLA7M1			
T2	RF Amp (27MHz)	RLA7M2			
T3	RF Amp (27MHz)	RLA7M3			
T4	Buffer (37.660MHz)	RLA7M27			
T5	XMT Mixer (27MHz)	RLA7M7			
T6	XMT Mixer (27MHz)	RLA7M7			
T7	XMT Mixer (27MHz)	RLA7M8			
T8	Mixer (10.695MHz)	RL14M101			
T9	XMT Amp (27MHz)	RLA7M9			
T10	XMT Predriver (27MHz)	RLA7M10			
T11	IF (455kHz)	RLI2M205			
T12	IF (455kHz)	RLI2M205			
T13	Down Oscillator (35.740MHz)	RLA7M6			
T14	IF (455kHz)	RLI2M402			
T100	PSB Mixer (10.7MHz)	RLI4M101			
T101	PSB IF Amp (10.7MHz)	RLI4M301			
T102	PSB IF Amp (10.7MHz)	RLI4M301			
T103	PSB IF Amp (10.7MHz)	RLI4M501			
T104	PSB IF Amp (10.7MHz)	RLI4M502			
Z100	Component Combination	RXABPPB1			

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.	
# L12	1.5A	.14	2.1mH	RLT6H3 RLT6H3-V (1)			# For SAFETY use only equivalent replacement part. (1) Number on unit.

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
# T15	1	1.1 CT		RLT3F33 RLT3F33-T (1)			# For SAFETY use only equivalent replacement part. (1) Number on unit.

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE			REPLACEMENT DATA			NOTES
	PRI.	SEC.		MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
# T16	32CT	1 8 2 20		RLT412 RLT412-V (1)			(1) Number on unit.

For SAFETY use only equivalent replacement part.

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.	
# T17	120V AC @ .5A AC	19.50V AC @ 1.5A DC	RLT5M330A/-W RLT5M330A-W (1)			# For SAFETY use only equivalent replacement part. (1) Number on unit.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	4" PM 8 Ohms	EAS10P108S	4A1Z8	

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	3A 125V Quick Acting	XBA2F30NU100	SJFA101	AGC3	HKP	312003	342058AL	FG3-2
# F2	2A 125V Quick Acting	XBA2F20N4100		AGC2	HRK	312002	150145	FG2-2

For SAFETY use only equivalent replacement part.

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	RJM128Z	18-032	18-034	18-010	18-092	2	4	3	1	NC	4

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
CF1	Filter	RVFCF10S12CR	10.695MHz
CF2	Filter	RVFCF10S12CR	10.695MHz
CF3	Filter	RVFCF455H4	455kHz
CF100	Filter	RVF107MFR	10.7MHz
CF101	Filter	RVF107MFR	10.7MHz
CN1	Connector	RJS219Y-X	7 Pin Connector Socket (Channel)
CN4	Connector	RJS216Y-X	4 Pin Connector Socket Power Source
CN6	Connector	RJS219Y-X	7 Pin Connector
CN7	Connector	RJS131Z-X	14 Pin Connector Socket Channel-On Air
CN8	Connector	RJS253Y-X	3 Pin Connector Socket
CN9	Connector	RJS253Y-X	3 Pin Connector Socket
CN10	Connector	RJS253Y-X	3 Pin Connector Socket
D50	LED	RVDGL31AR	On Air Indicator
J1	Jack	RJS257Z	Microphone
J2	Jack	RJS258Z	Antenna
J3	Jack	RMA5077Z	(Telescopic Holder)
J4	Jack	XEARK102GDY	PSB Antenna
J5	Jack	RJJ135Z-N	DC Power
J5	Jack	RJJ76A-C	External Speaker
LED1	LED	RAD301ZE	Channel Display
M1	Meter	RSW2305Z	S-RF
M2	Meter	RSW2526Z-N	VU-Modulation
PL1	Lamp	XAMQ24S250	Ch. 9 (13.66V @ 80mA)
PL2	Lamp	XAMR48S250	Antenna Warning (12.75V @ 42mA)
PL3	Lamp	XAMQ24S250	S-RF (13.66V @ 80mA)
PL4	Lamp	XAMQ24S250	VU Modulation (13.60V @ 80mA)
PL5	Lamp	XAMQ24S250	PSB Indicator (13.66V @ 80mA)
S1	Switch	ESRN33TF25A	Channel Selector
S2	Switch	ESRN11TF20A	Ch. 9/CB
S4	Switch	ESH2B02Z-A	NB/ANL
S6	Switch	ESD393T	AC-DC
S7	Switch		Power (On-Volume)
S8	Switch	RSR3F05Z-A	Band Select (PSB/CB Mon/CB)
X1	Crystal	RVCK10695R4Z	10.695MHz
X2	Crystal	RVCK35740R4Z	35.740MHz
X3	Crystal	RVCK10240Q4Z	10.240MHz
Z101	Component Combination	EXA5DL04C	

PANASONIC MODEL RJ-3660

PARTS LIST AND DESCRIPTION (CONTINUED)

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

MISCELLANEOUS

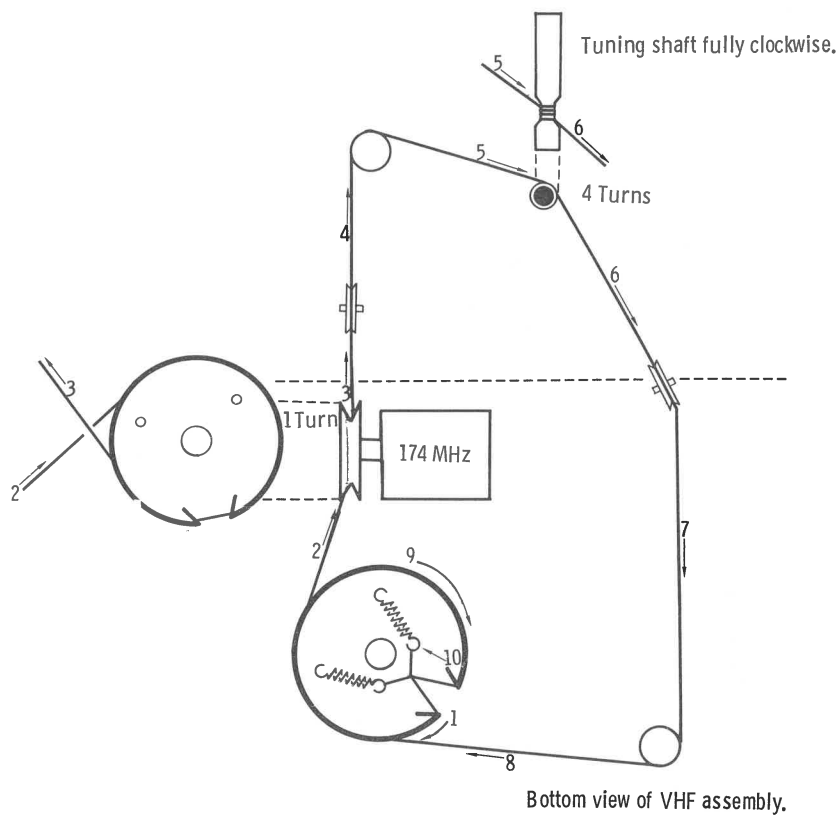
ITEM No.	PART NAME	PART No.	NOTES
#	Cord Cord Plug Plug Plug Plug	RJA10A RXEJ3660M RJP137Z RJP107Z RJP219Z RJP165Z	AC Power DC Assembly 3 Terminals 4 Terminals (Power Source) 7 Terminals (Channel) 15 Terminals Channel-On Air

For SAFETY use only equivalent replacement part.

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

ITEM	PART No.	ITEM	PART No.
Button NB/ANL Button, Preset Cover Upper Side Front Panel Assembly	RBC121X RBC121Y RKM465Z RYMJ3660M	Grille Assembly Knob, Channel Tuning, RF Gain Knob, Volume, Squelch, Band	RYGJ3660M RBN360Z RBN413Z

DIAL CORD STRINGING



For SAFETY use only equivalent replacement part.

—*— Circuitry not used in some versions.

--- Circuitry used in some versions.

⊛ Nominal value

⊞ Common tie point

⊞ Ground

⊞ Chassis

⊞ See parts list

Measurements made in Channel 1 with switching

in receive 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.

Terminal identification may not be found on unit.

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

Value in () used in some versions.

Arrow head(s) at coils and transformers

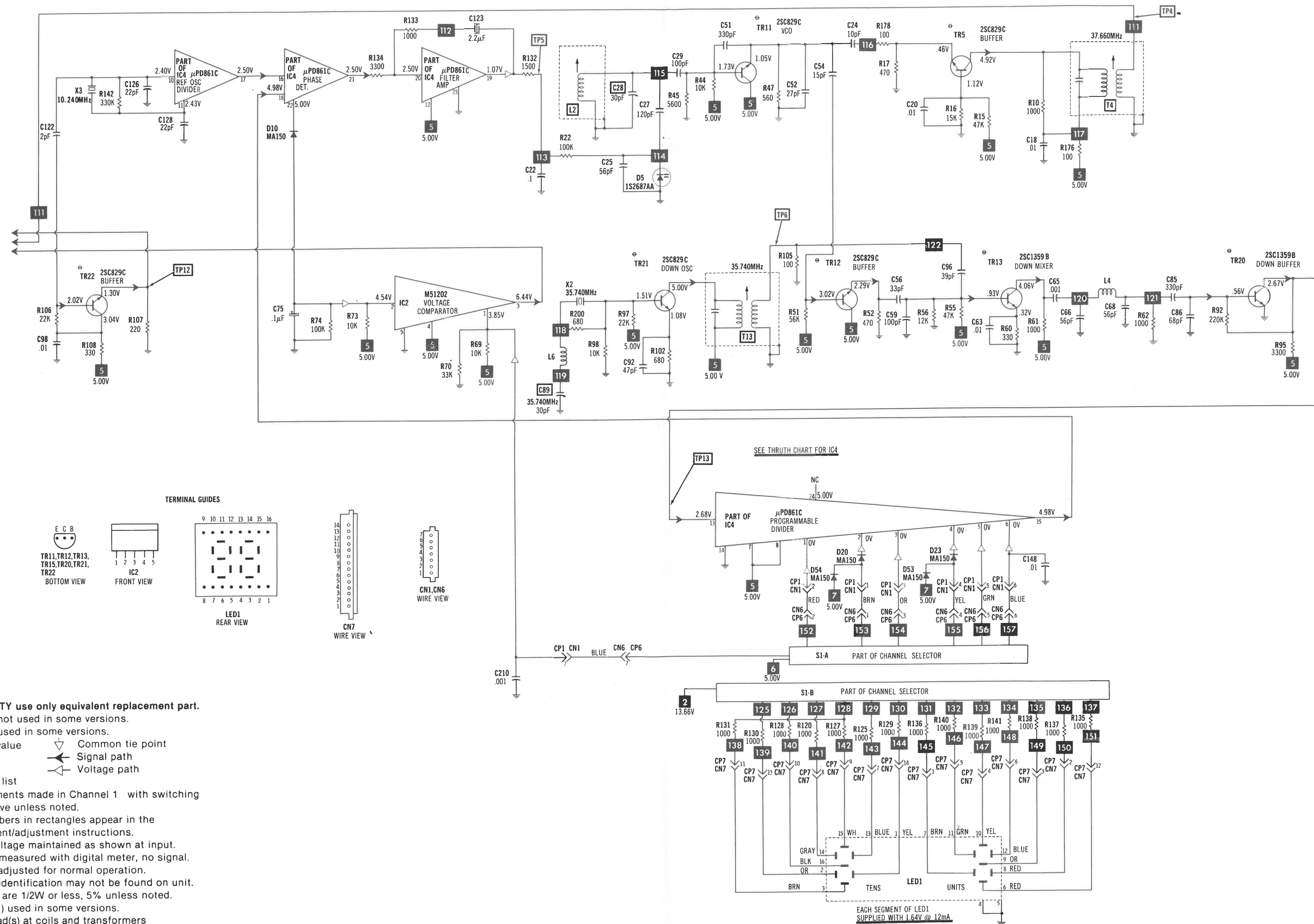
indicates accessibility of tuning slug(s).

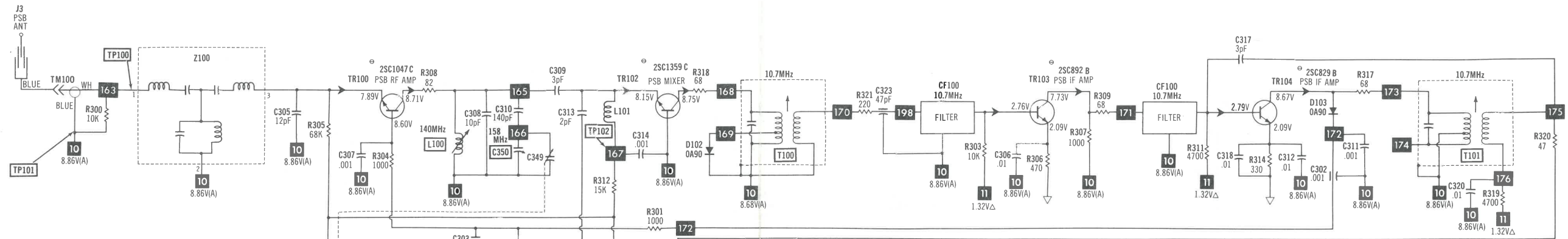
A PHOTOFAC STANDARD NOTATION SCHEMATIC

WITH CIRCUITTRACE

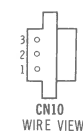
© Howard W. Sams & Co., Inc. 1979

PLL & CHANNEL SELECTOR SCHEMATIC





TERMINAL GUIDES



Δ MEASURED FROM ∇ (COMMON TIE POINT)

For SAFETY use only equivalent replacement part.

--- Circuitry not used in some versions.

--- Circuitry used in some versions.

※ Nominal value ∇ Common tie point

⊥ Ground ← Signal path

⌞ Chassis ← Voltage path

⊙ See parts list

Measurements made in Channel 1 with switching in receive 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.

Terminal identification may not be found on unit.

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

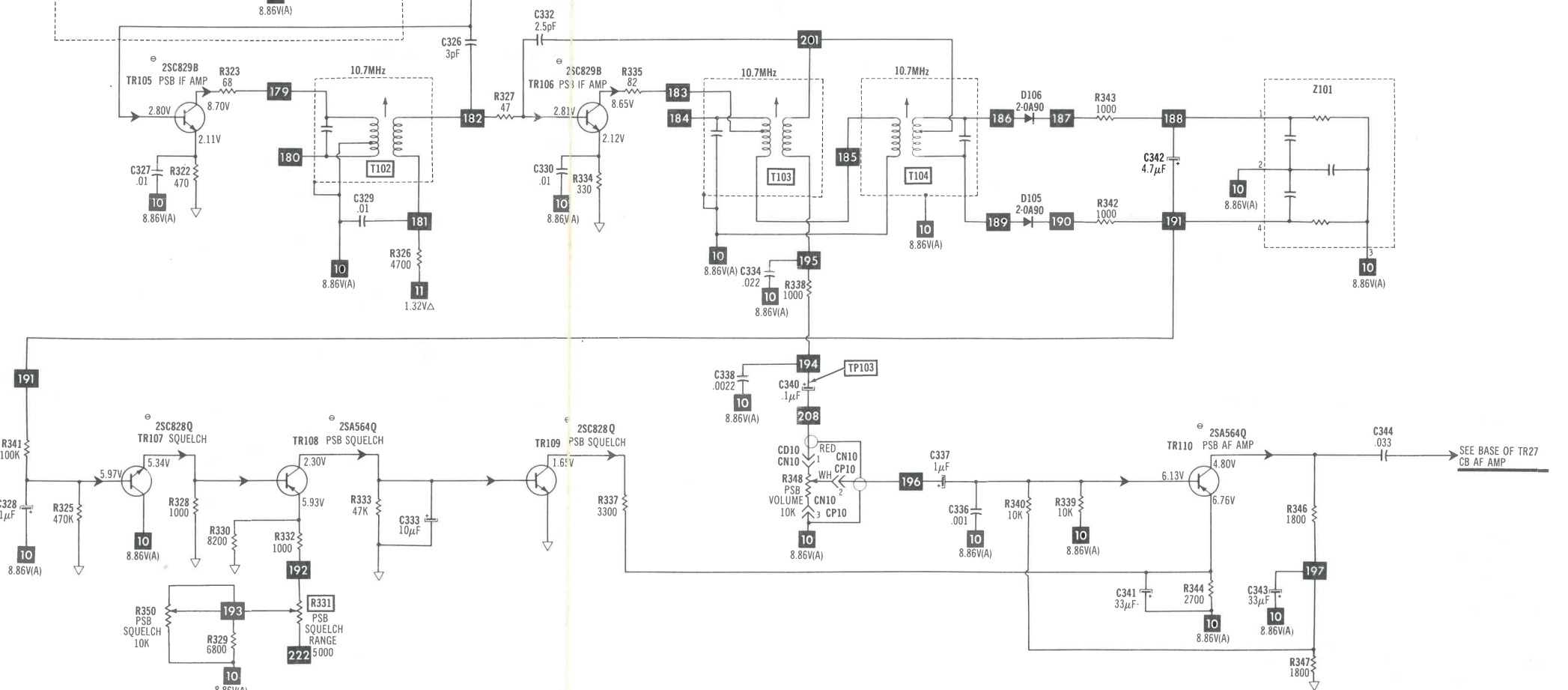
Value in () used in some versions.

Arrow head(s) at coils and transformers indicates accessibility of tuning slug(s).

A PHOTOFAC STANDARD NOTATION SCHEMATIC

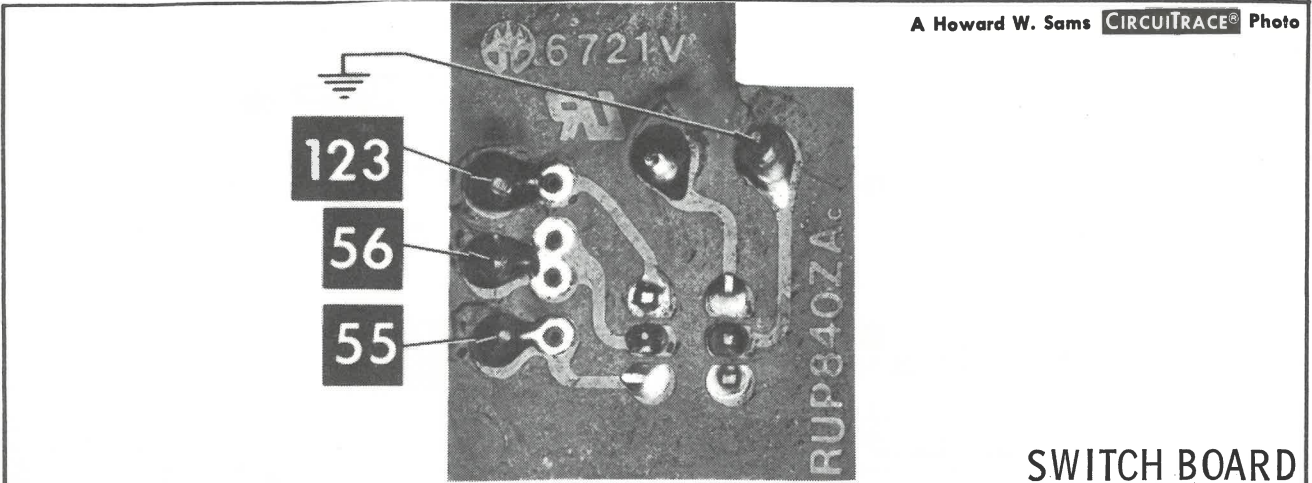
WITH **CIRCUITRACE®**

© Howard W. Sams & Co., Inc. 1979

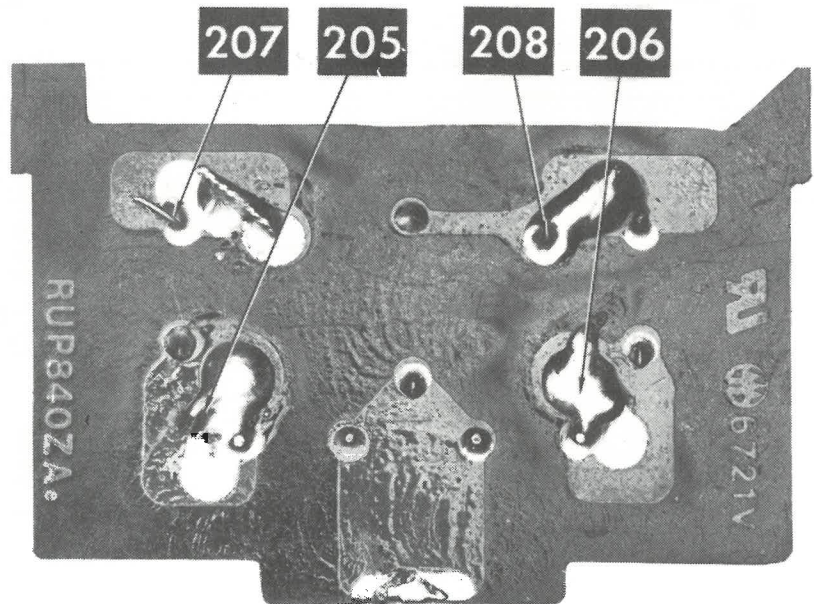
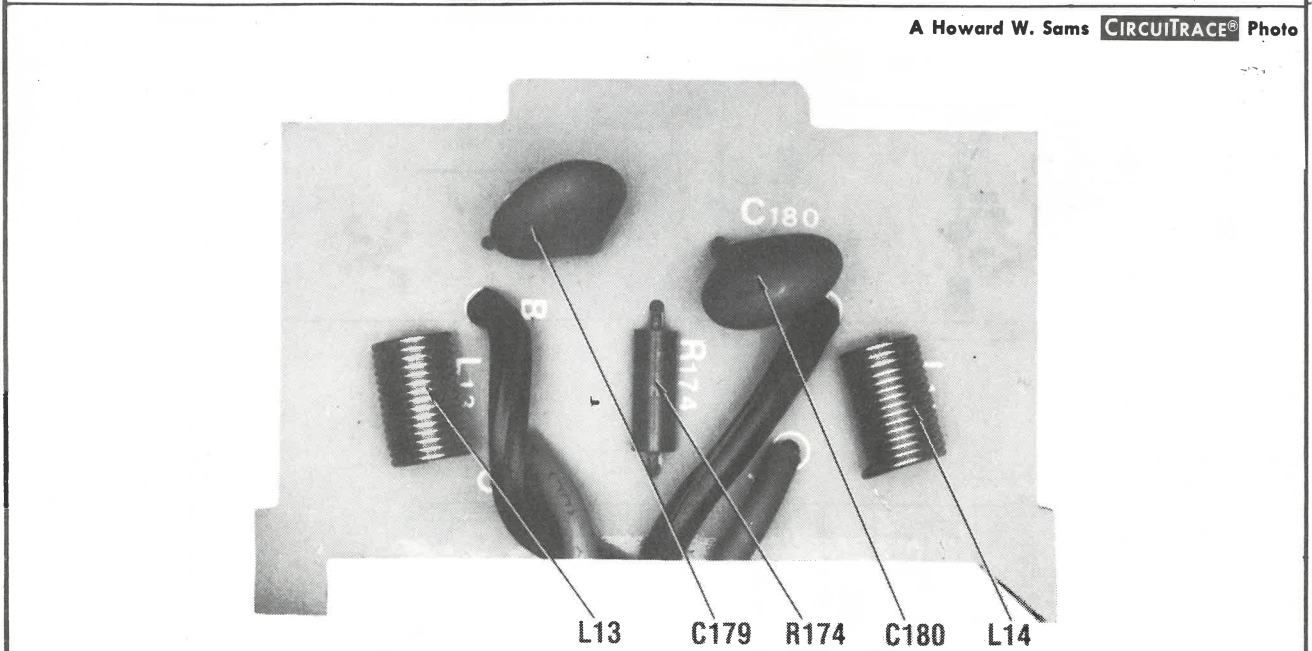


PSB BOARD

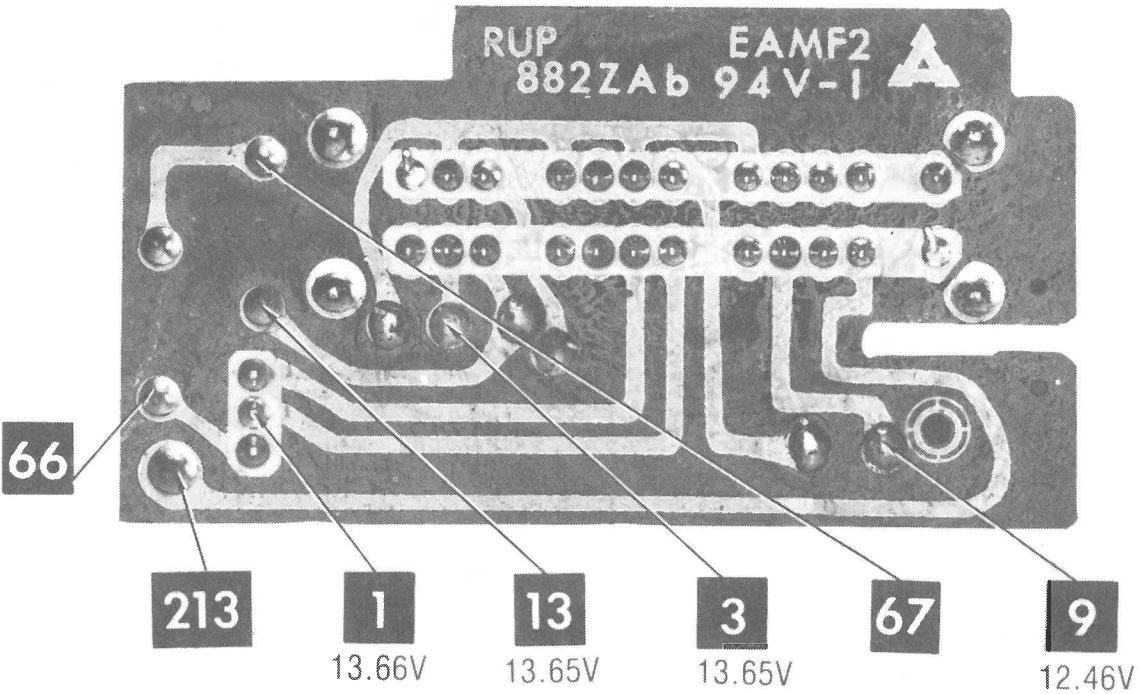
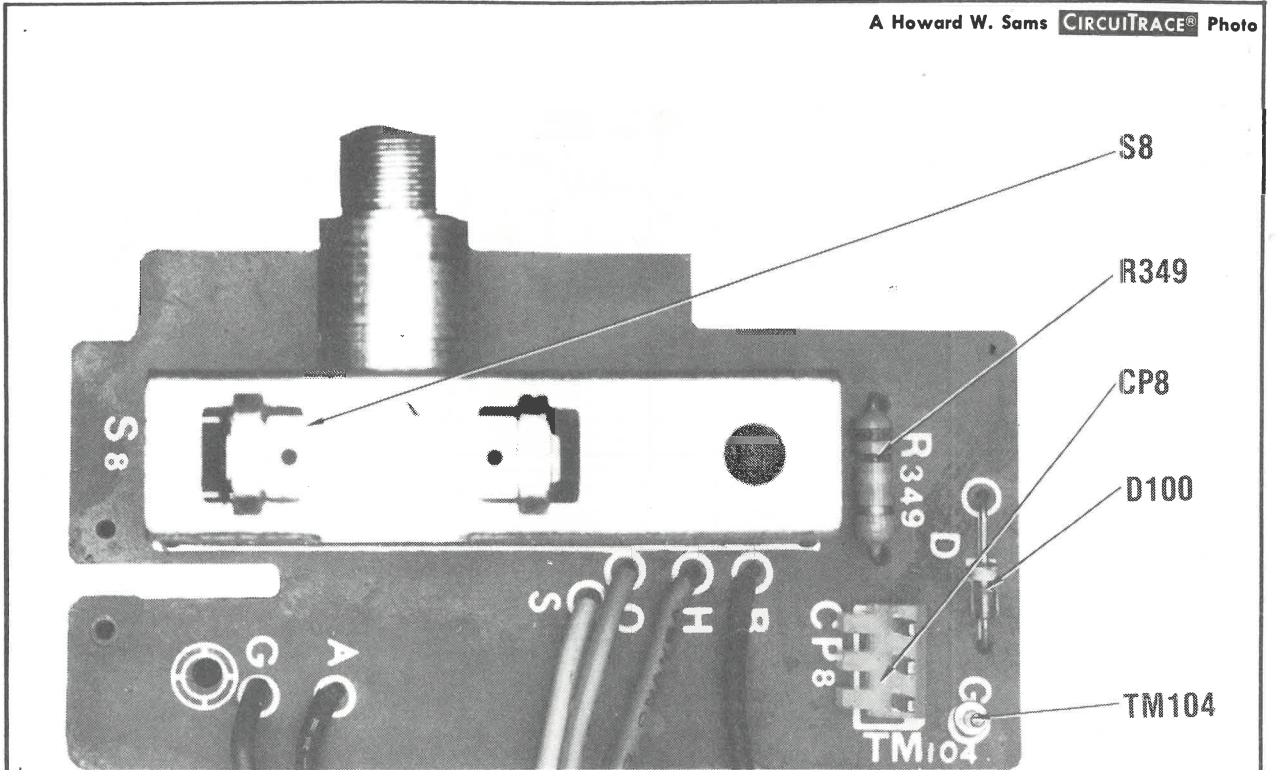
PANASONIC MODEL RJ-3660



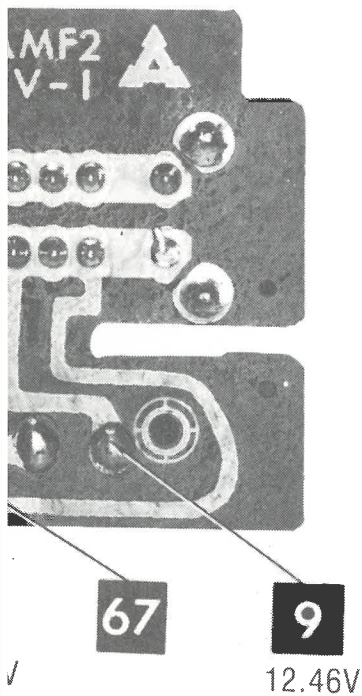
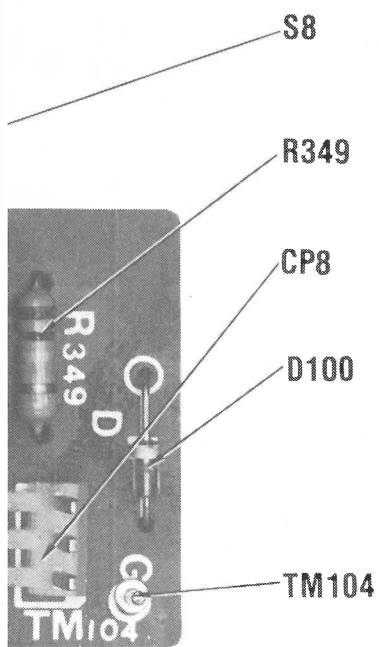
SWITCH BOARD



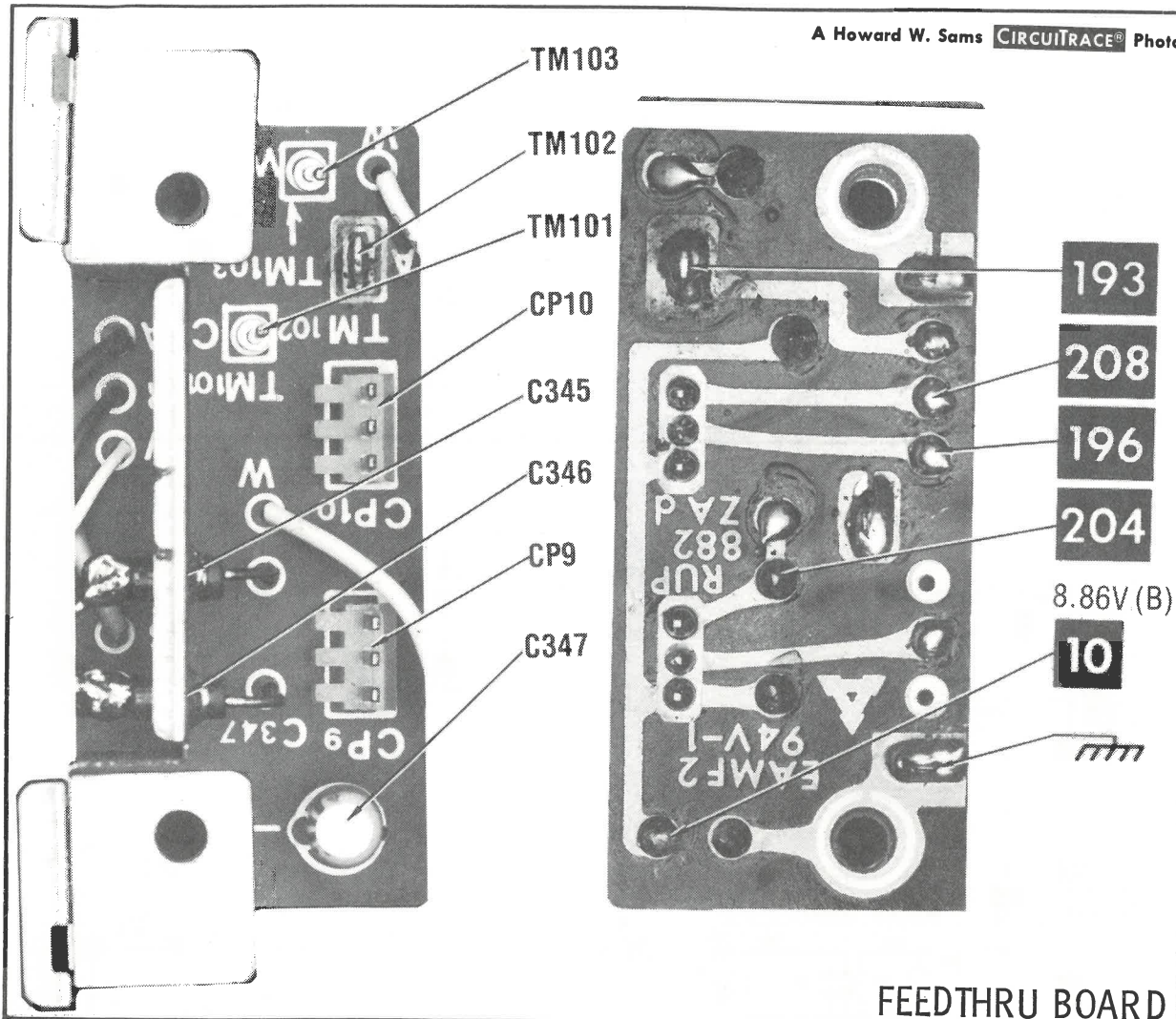
LINE FILTER BOARD



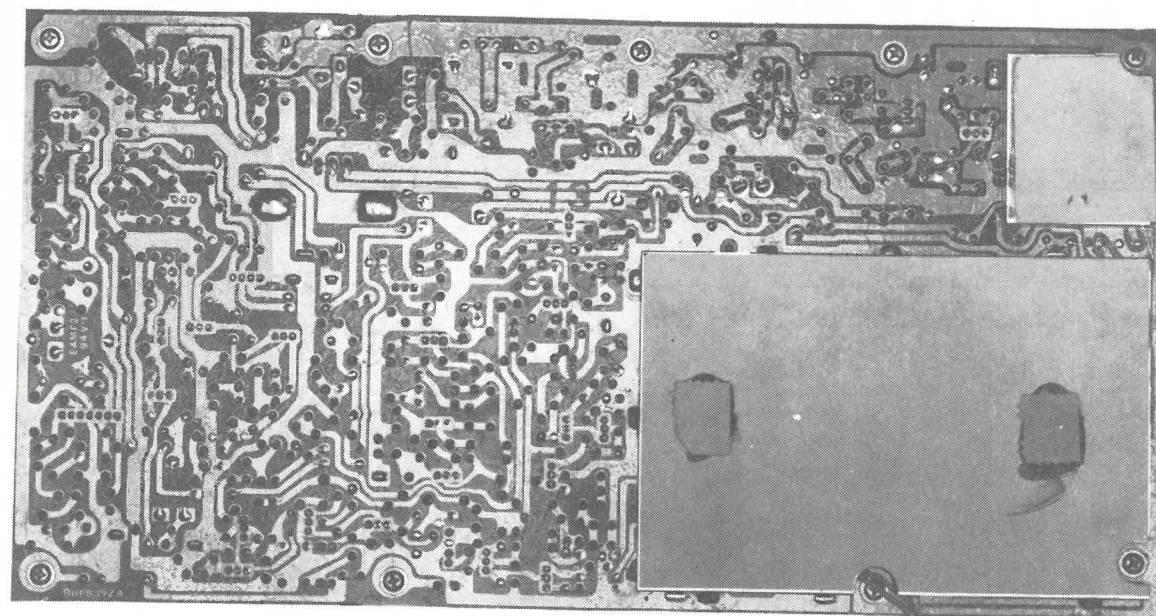
BAND SELECTOR SWITCH BOARD



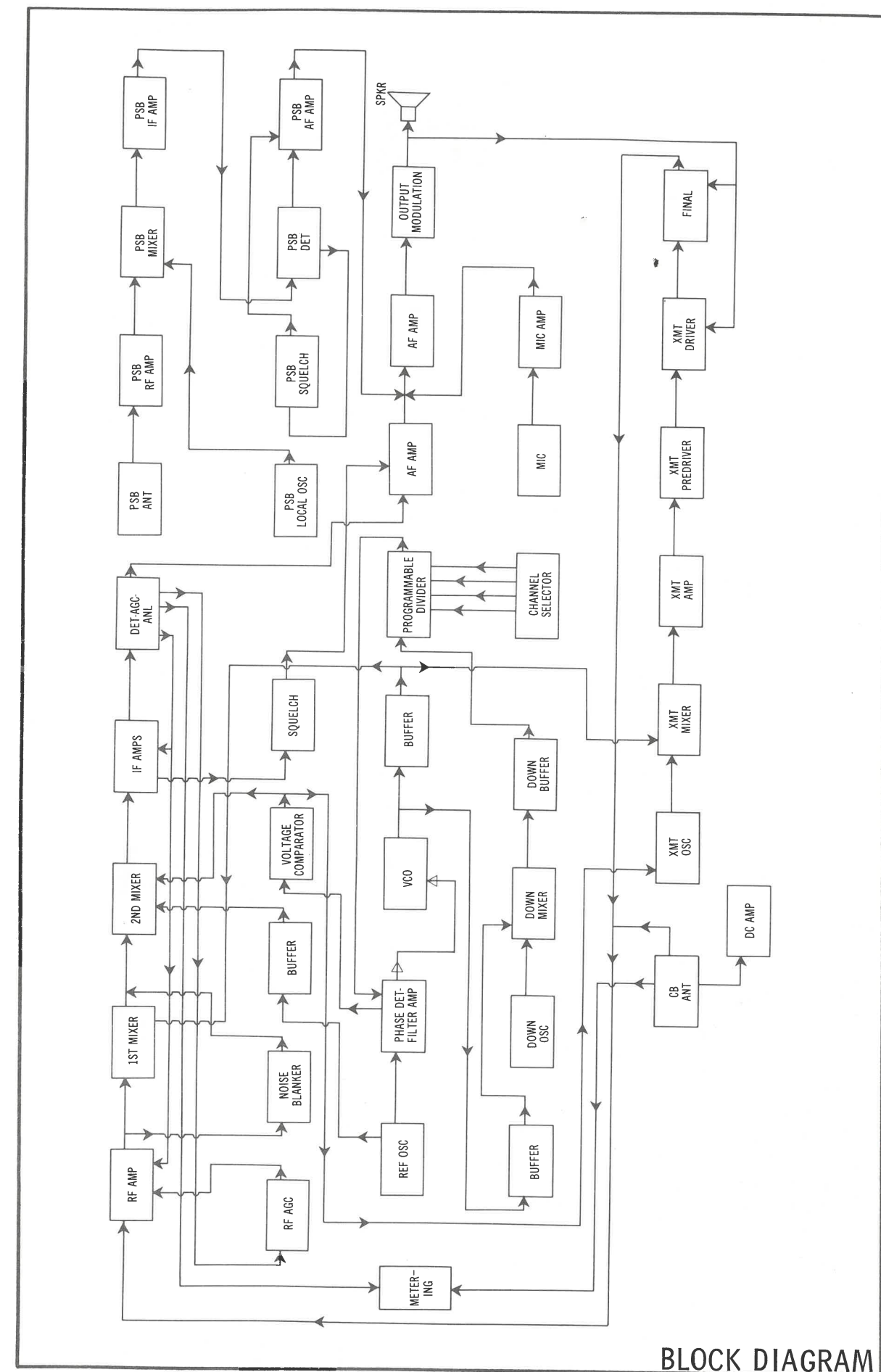
ECTOR SWITCH BOARD



FEEDTHRU BOARD



SHIELD LOCATION BOARD



BLOCK DIAGRAM

