



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.



LAFAYETTE MODEL TELSAT 1050

MODEL Telsat 1050 (99-33292W)

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

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Printed in U. S. of America

7CY572

ALIGNMENT INSTRUCTIONS

CAUTION: Use isolation transformer or observe polarity when connecting test equipment. Maintain line voltage at 120V AC. Allow a 15-minute warm-up period. Adjustments made with 13.8-volt DC input.

Connect low sides of test equipment to ground unless specified otherwise.

Connect 50-ohm dummy load or antenna before keying transmitter.

Suggested Alignment Tools: GC ELECTRONICS:

L112, T106, T107, T108, T109 5009

L106, L109, L110 9304

L103, L104, T101, T102, T103, T104, T105, T111 9440

CT101 5000

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Input of frequency counter to TP1.	Ch. 13		Check for 10.2392MHz ± 0.4 kHz.
Input of frequency counter to TP2.	Ch. 1 Delta Tune-0 Position.	CT101	Adjust for 37.659200MHz.
Input of VTVM to TP8.	Ch. 1 Delta Tune-0 Position.	T101	Adjust for 1.5V $\pm .01$ volt.
Input of RF VTVM to TP3.	Ch. 13 Delta Tune-0 Position.	T111	Adjust for maximum.
Input of frequency counter to TP4.	Ch. 13, Xmit		Check for 10.6942MHz ± 0.4 kHz.

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	TRANSCIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to TP5. 455kHz, 1000Hz @ 30% modulation.	Ch. 13	T109, T108, T107	Adjust for maximum output.
Output of signal generator thru .01uF to TP3. 10.694200MHz, 1000Hz @ 30% modulation.	Ch. 13	T106, L112	Adjust for maximum output.
Output of signal generator thru .01uF to antenna jack. 27.115MHz, 1000Hz @ 30% modulation.	Ch. 13 Delta Tune-0 Position.	T105, T104	Adjust for maximum output. Repeat above steps, if necessary.

RECEIVER ADJUSTMENTS

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

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to antenna jack. 27.115MHz, 1000Hz @ 30% modulation. Output 500uV.	Ch. 13 Delta Tune-0 Position.	RV101	SQUELCH RANGE Set squelch control VR2 fully clockwise. Adjust RV101 so that squelch just breaks.
Output of signal generator thru .01uF to antenna jack. 27.115MHz, 1000Hz @ 30% modulation. Output 100uV.	Ch. 13 Delta Tune-0 Position.	RV103	S METER Adjust for 9 on S scale of meter.

TRANSMITTER ALIGNMENT

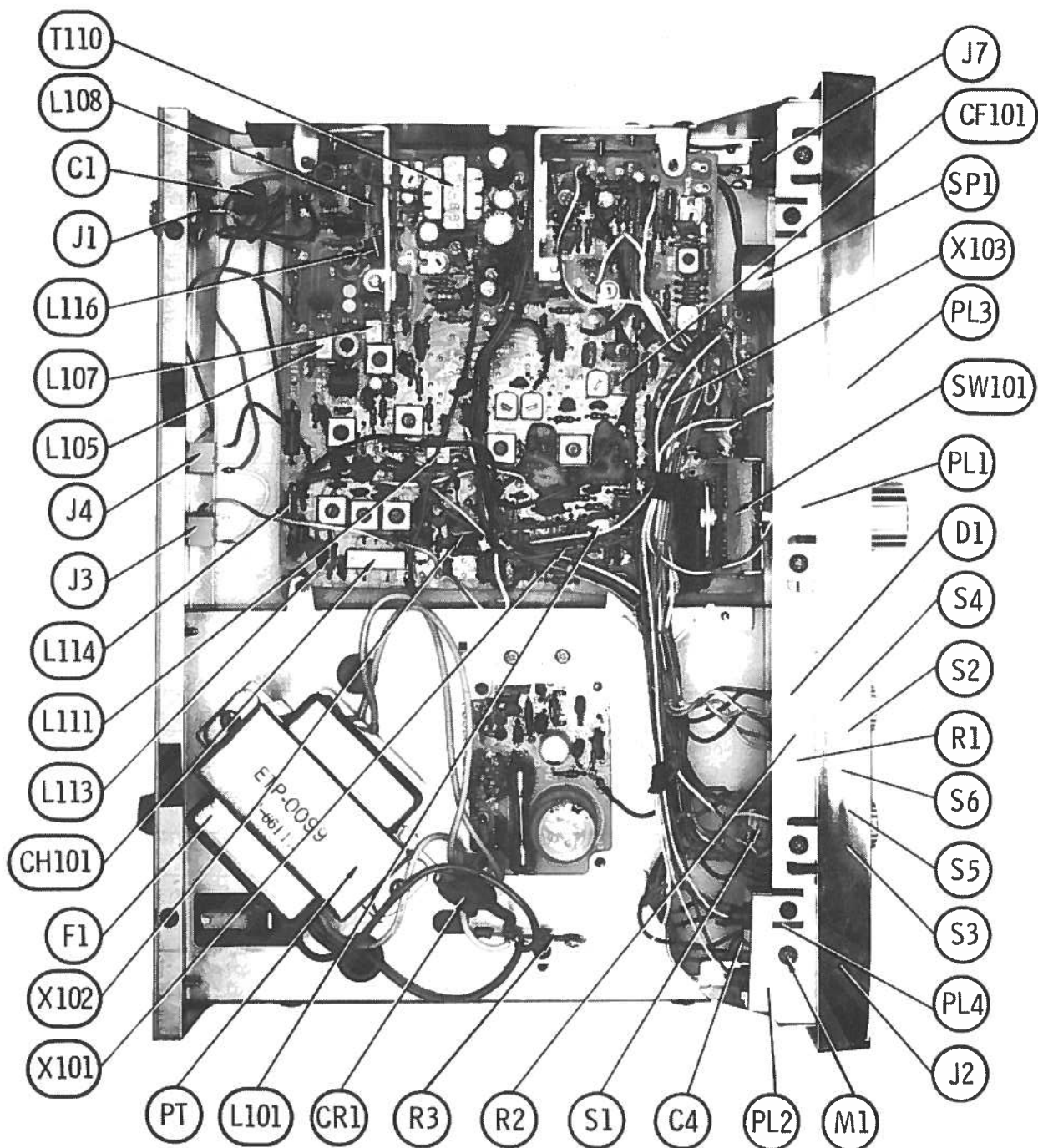
Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.
NOTE: Be sure to check transmit frequency and power on all active channels after alignment of transmitter.
See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
	Ch. 13	L103,L104, T102,T103, L106,L109, L110	Adjust for maximum.
	Ch. 13	L110,L109	Adjust for 4 watts maximum.

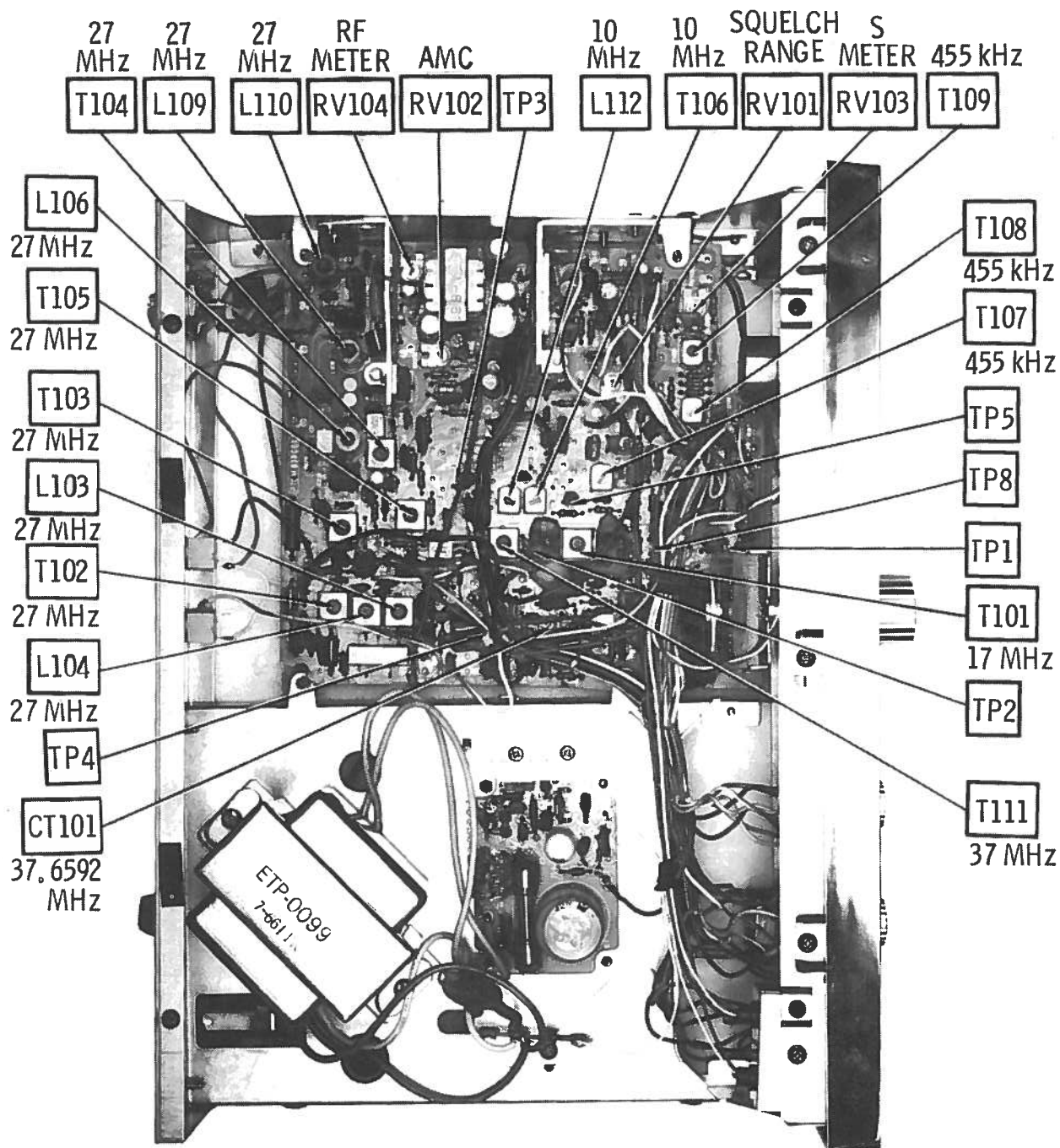
TRANSMITTER ADJUSTMENTS

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

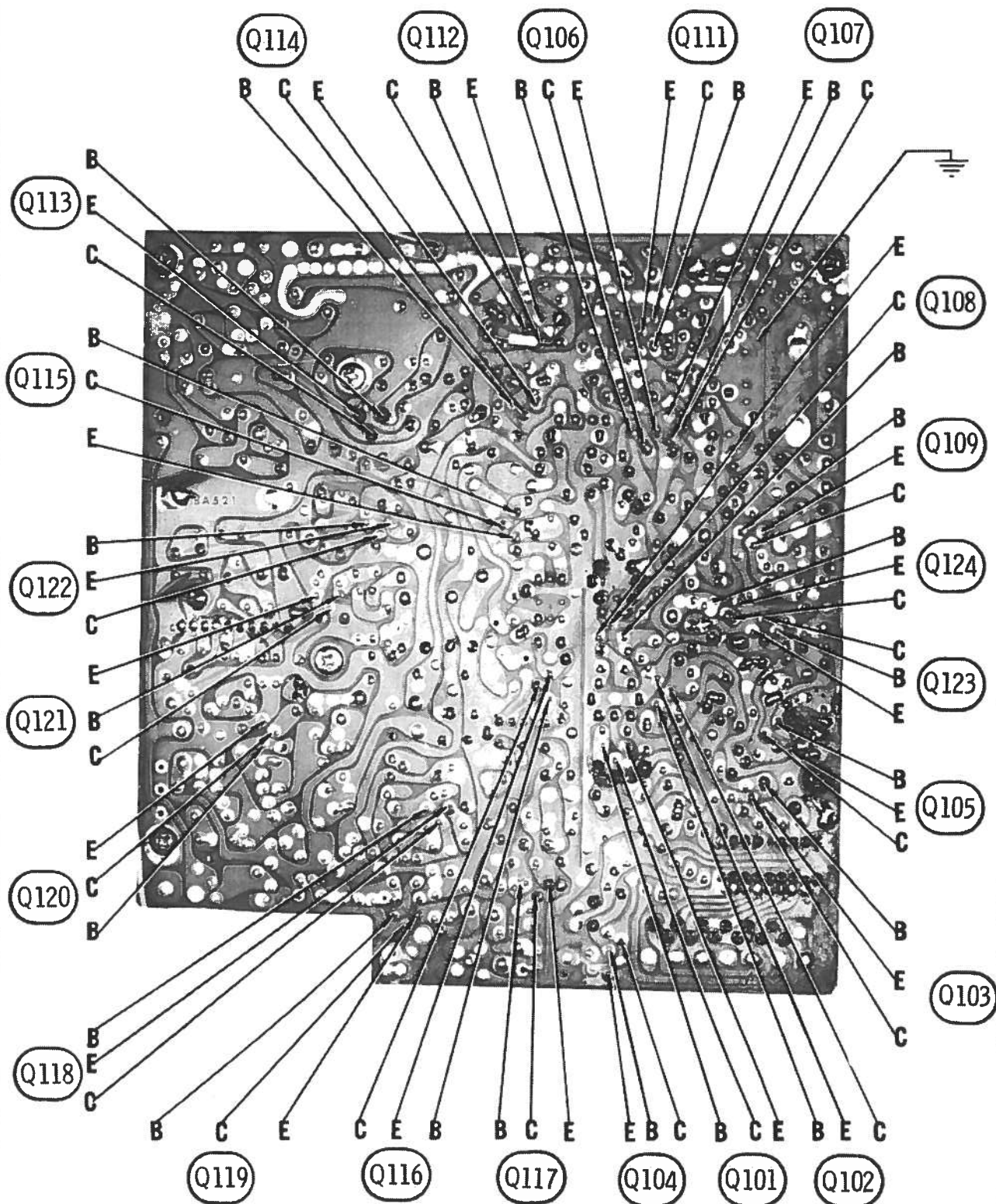
TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of DC meter to TP6.	Ch. 13	RV1	VOLTAGE Adjust RV1 for 13.8 volts. Voltage should not vary when keying transmitter.
Modulation meter to antenna jack. Inject a 1000Hz signal at mic input.	Ch. 13	RV102	AMC Disconnect C209 to disable AMC. Adjust signal for over-modulation. Restore AMC operation. Adjust RV102 for 100% modulation maximum.
	Ch. 13	RV104	RF PANEL METER Adjust RV104 so that panel RF meter agrees with RF wattmeter.



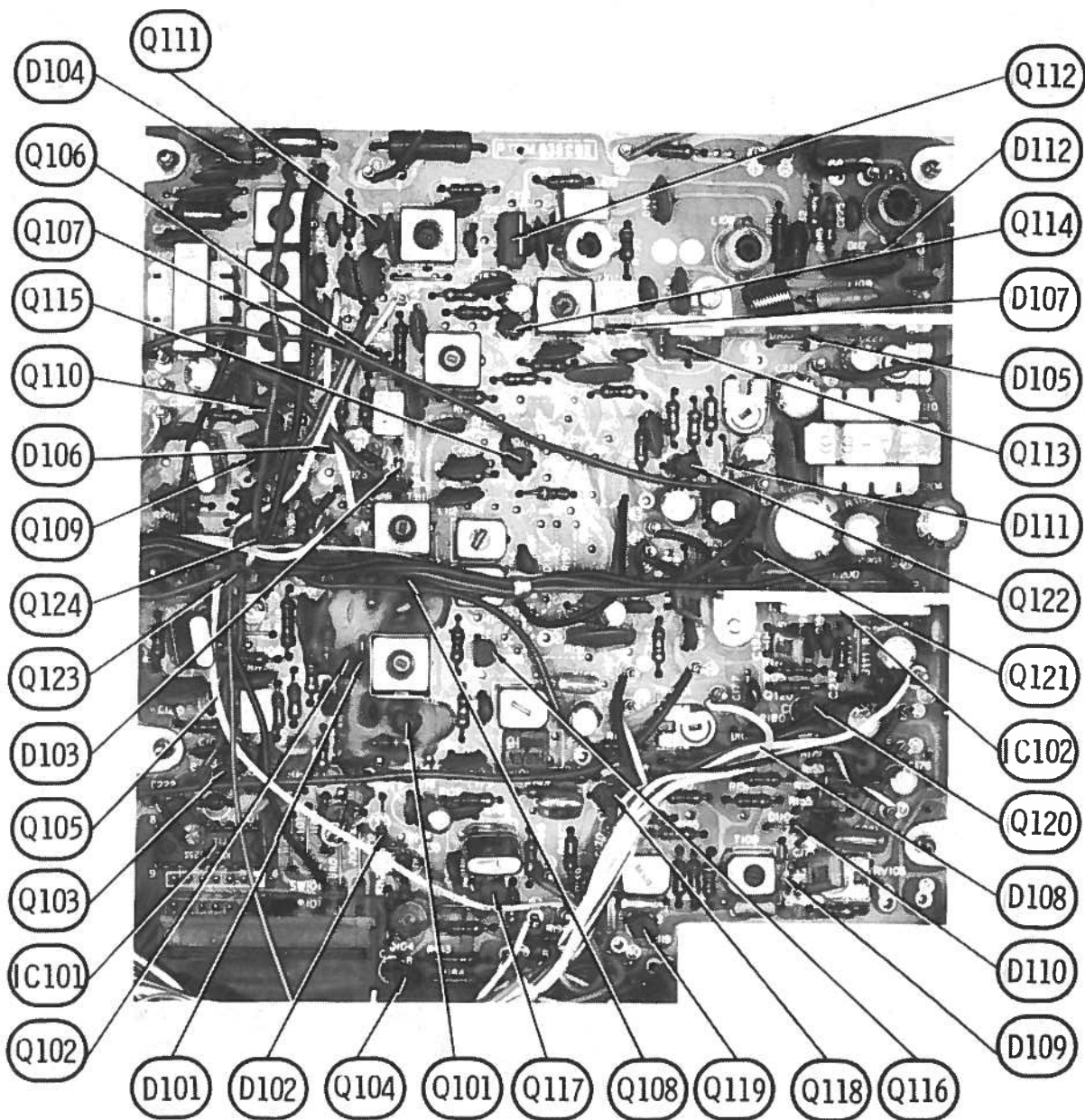
CHASSIS-BOTTOM



CHASSIS-BOTTOM



MAIN BOARD

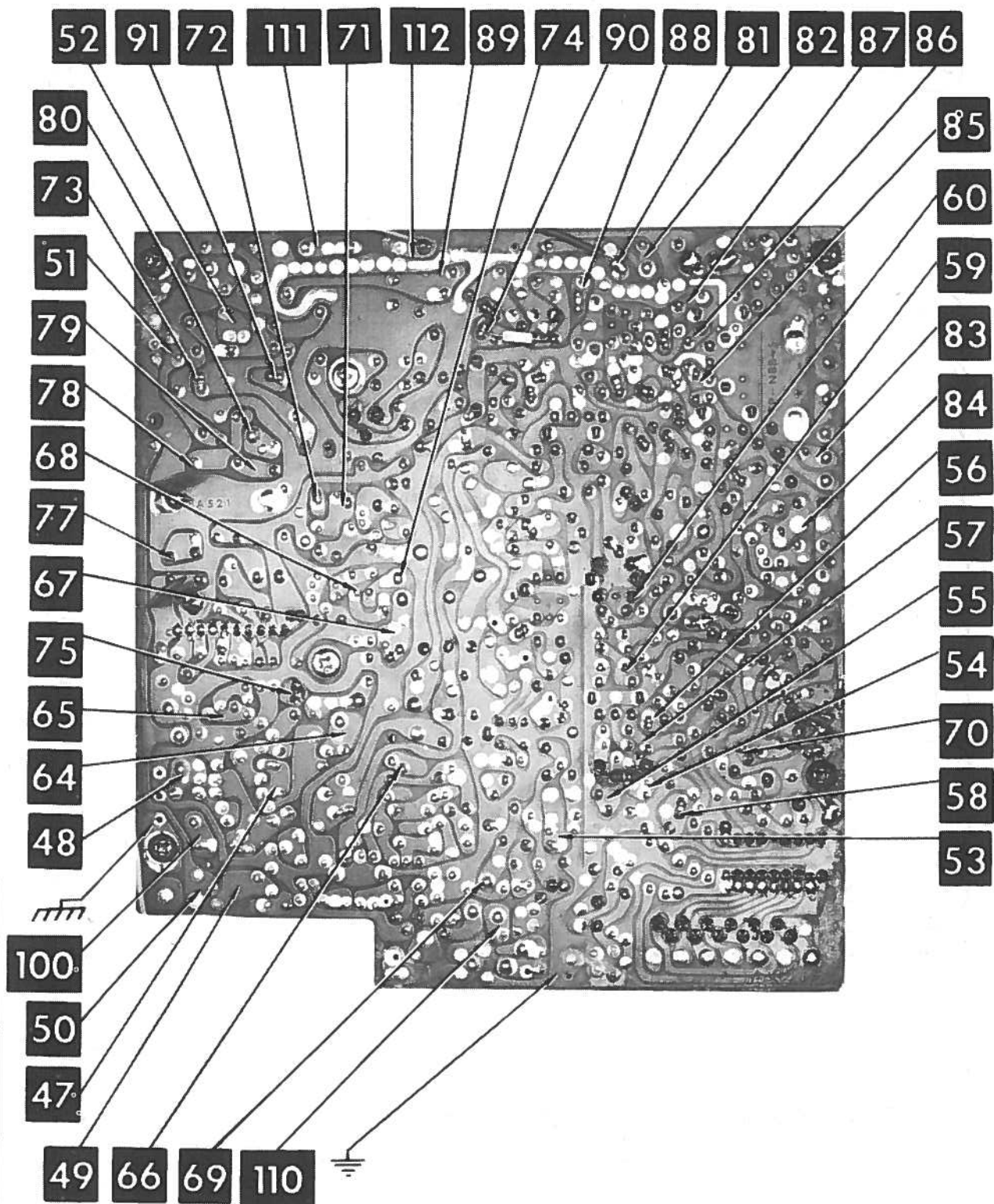


MAIN BOARD



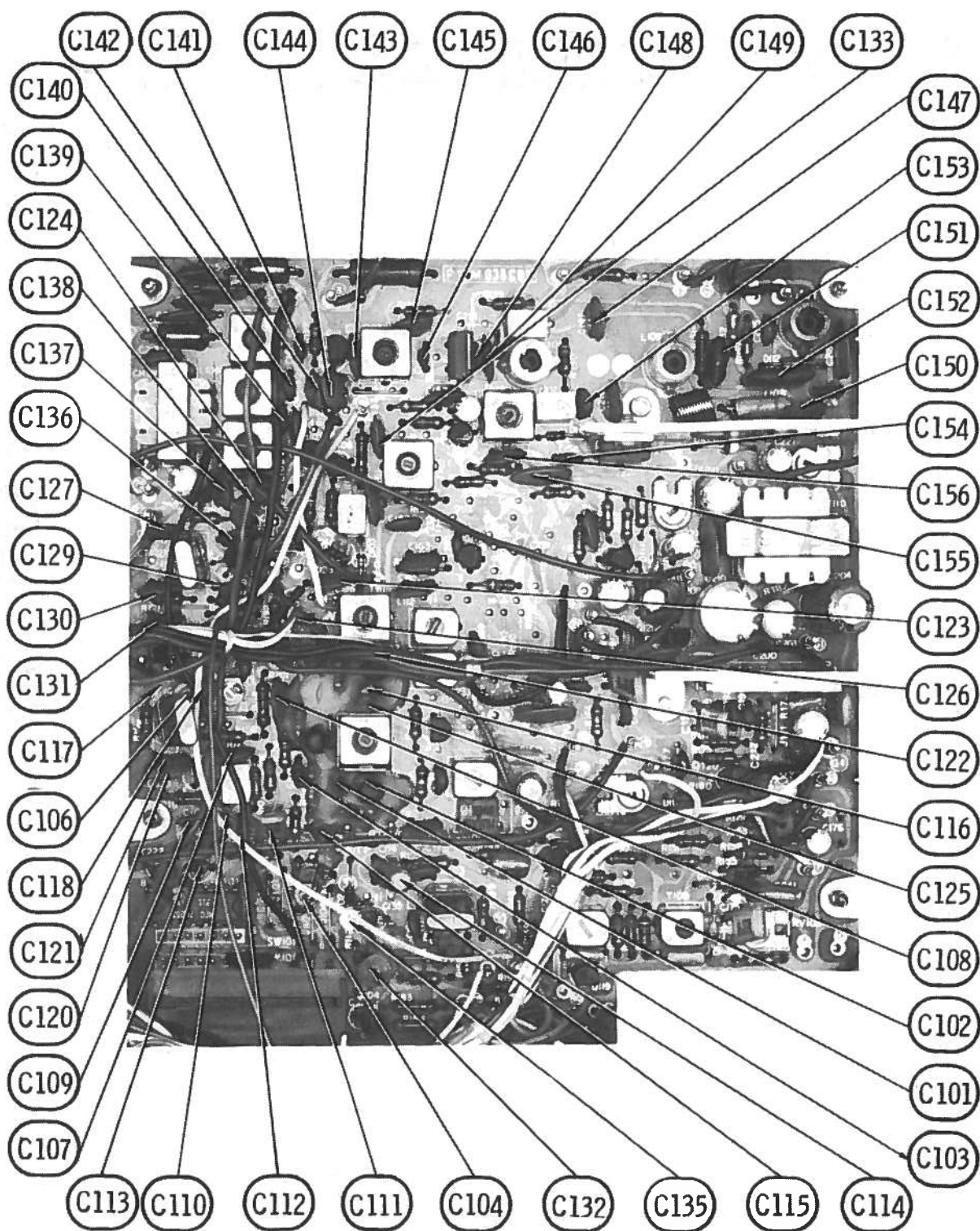
•Transmit

MAIN BOARD



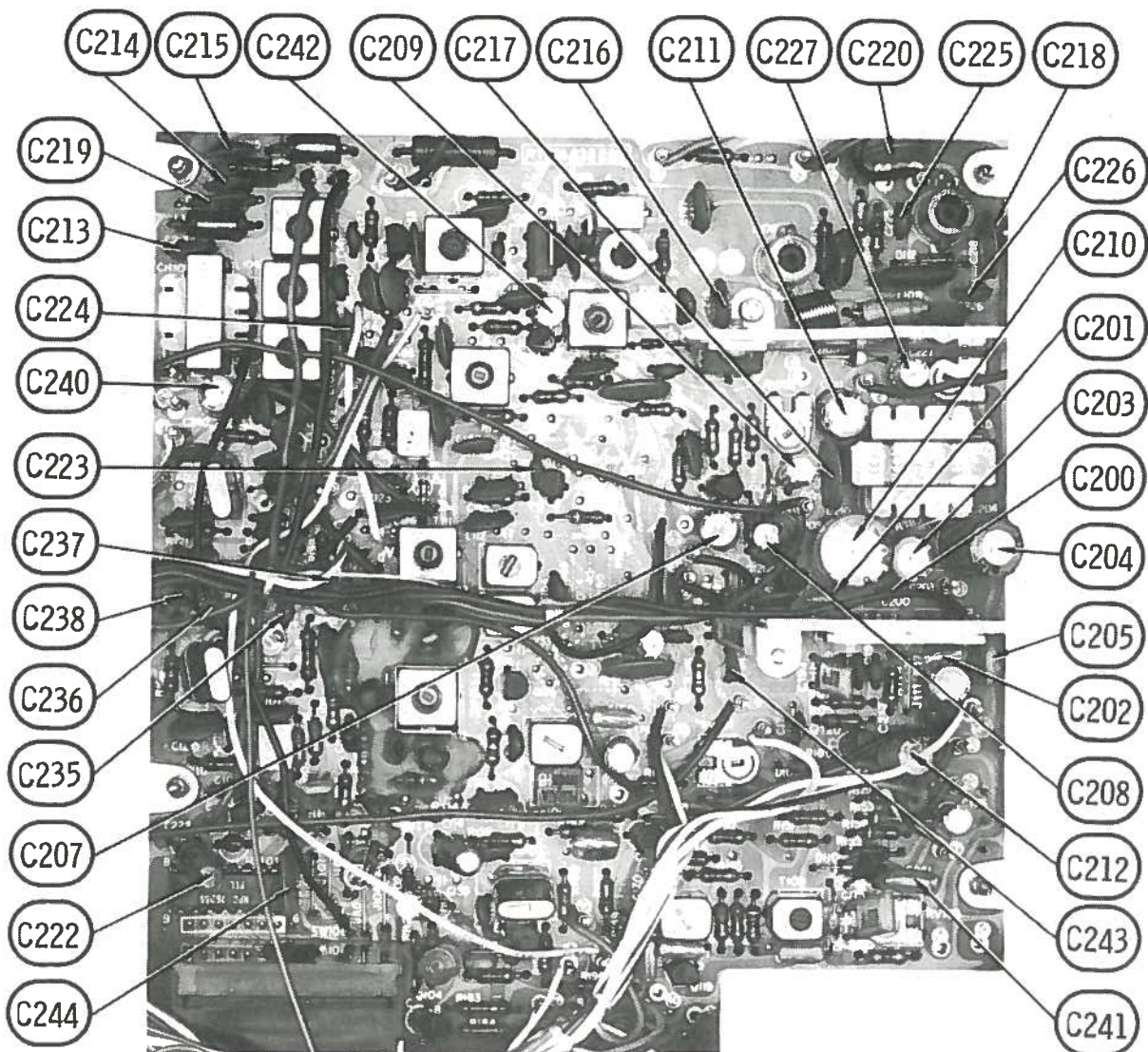
LAFAYETTE MODEL TELSAT 1050

MAIN BOARD

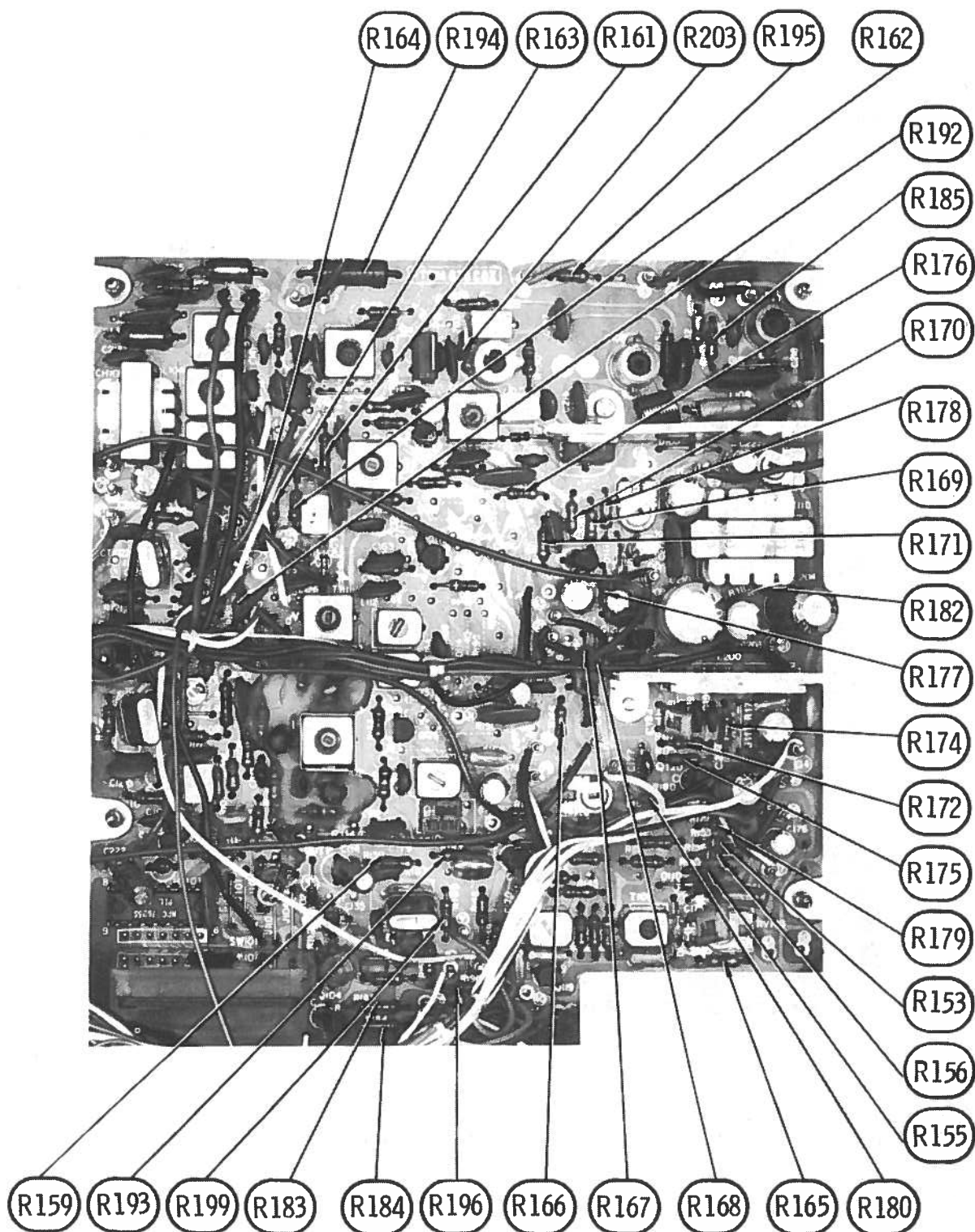


MAIN BOARD

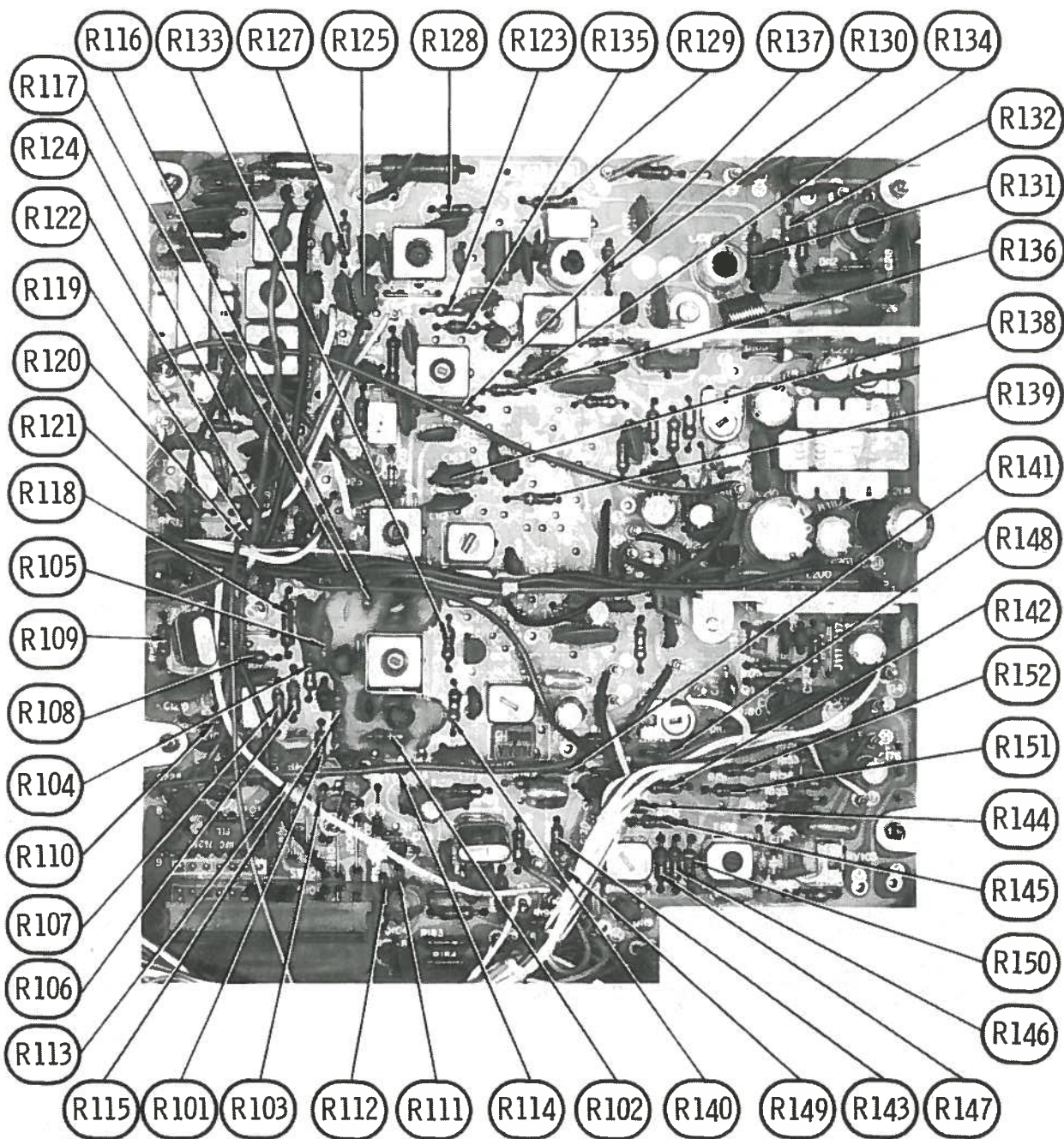




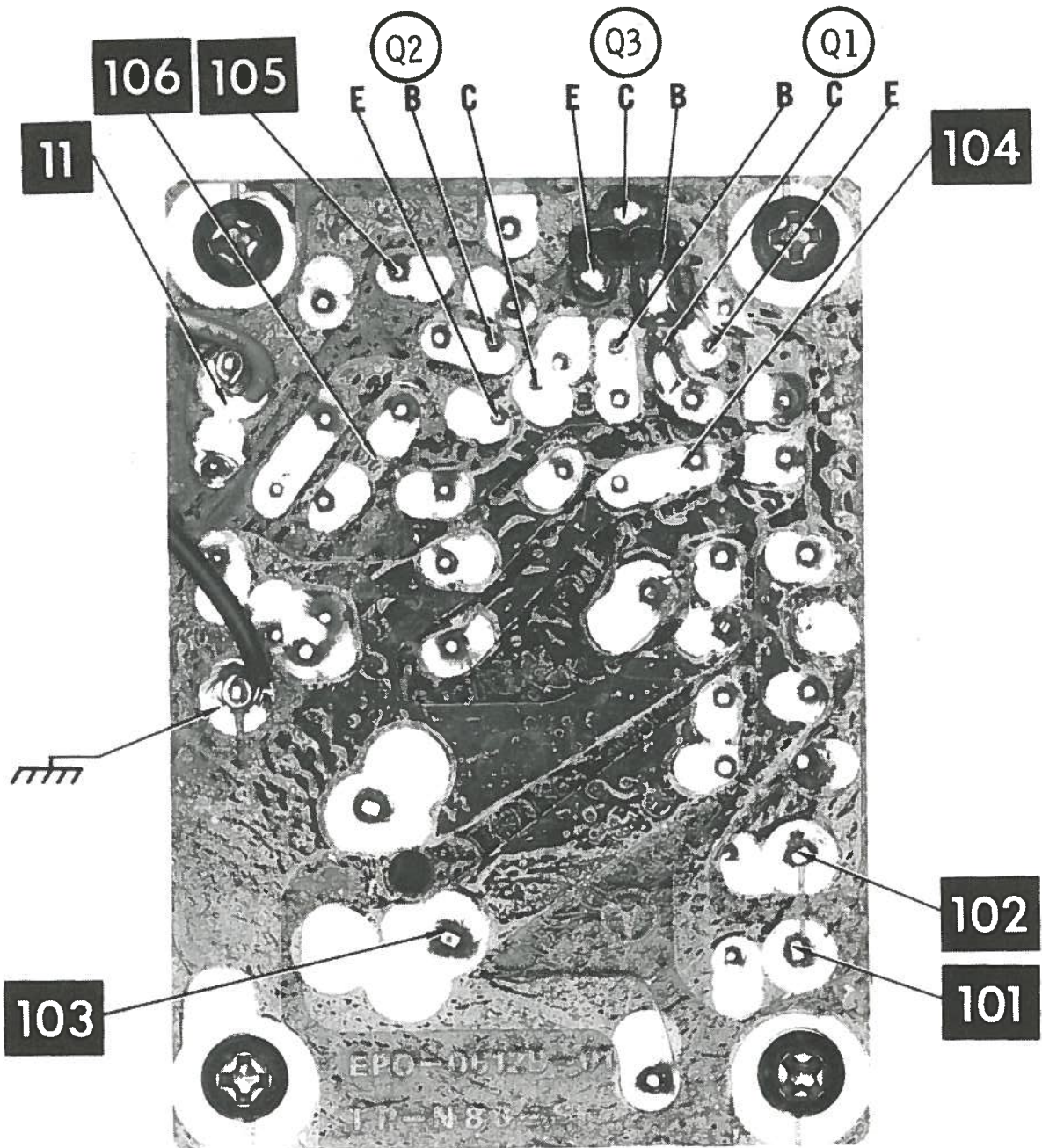
MAIN BOARD



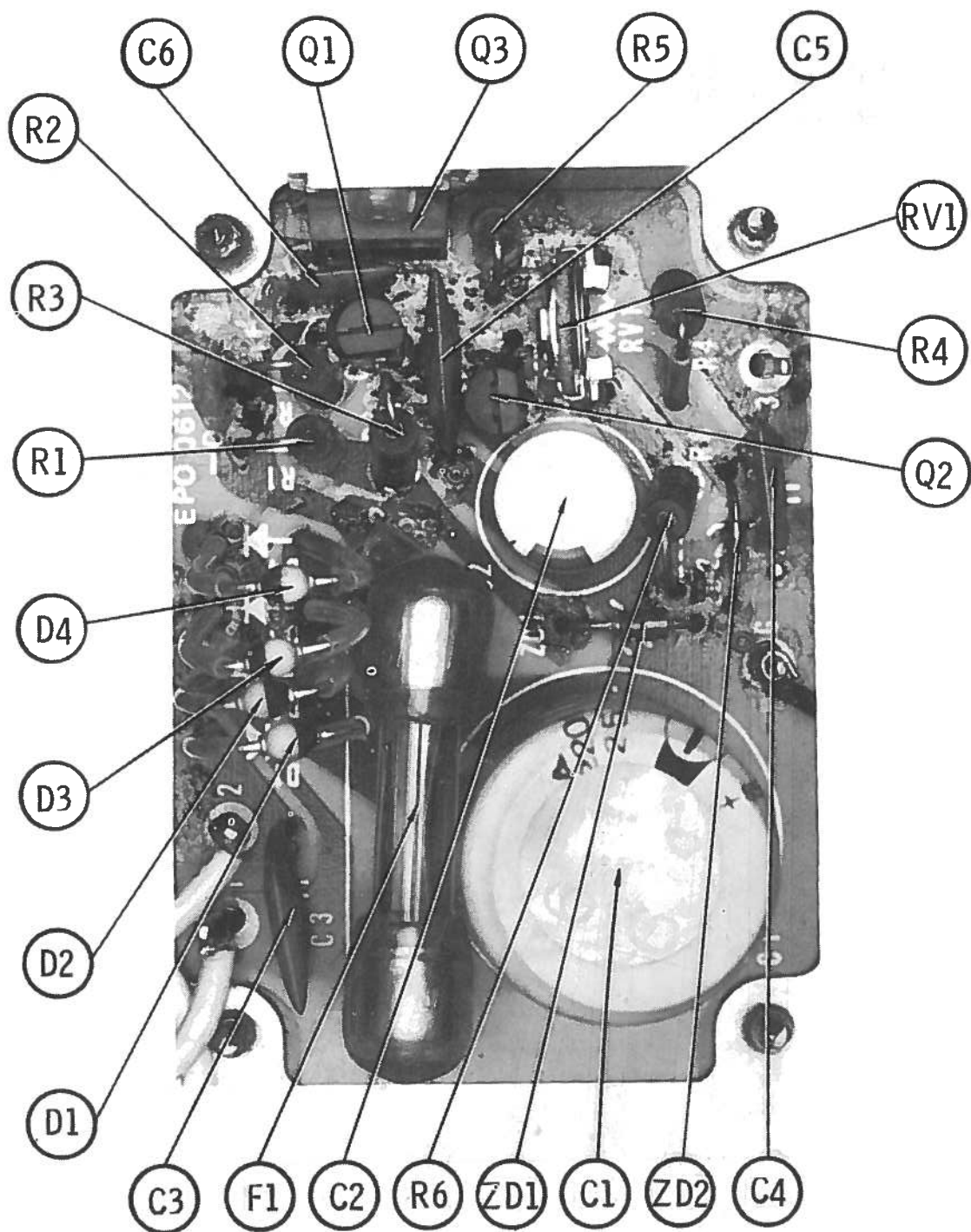
MAIN BOARD



MAIN BOARD



POWER SUPPLY BOARD

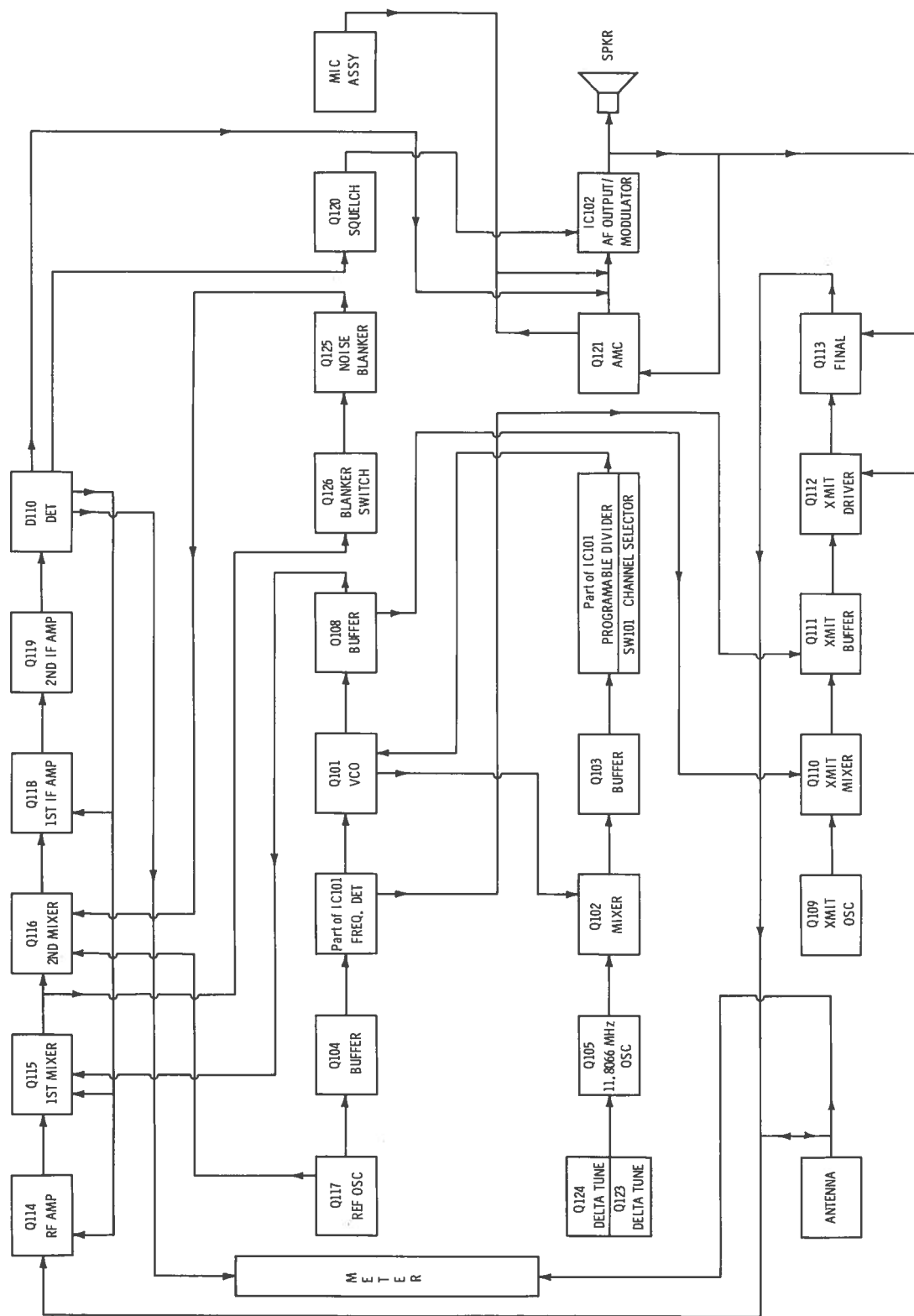


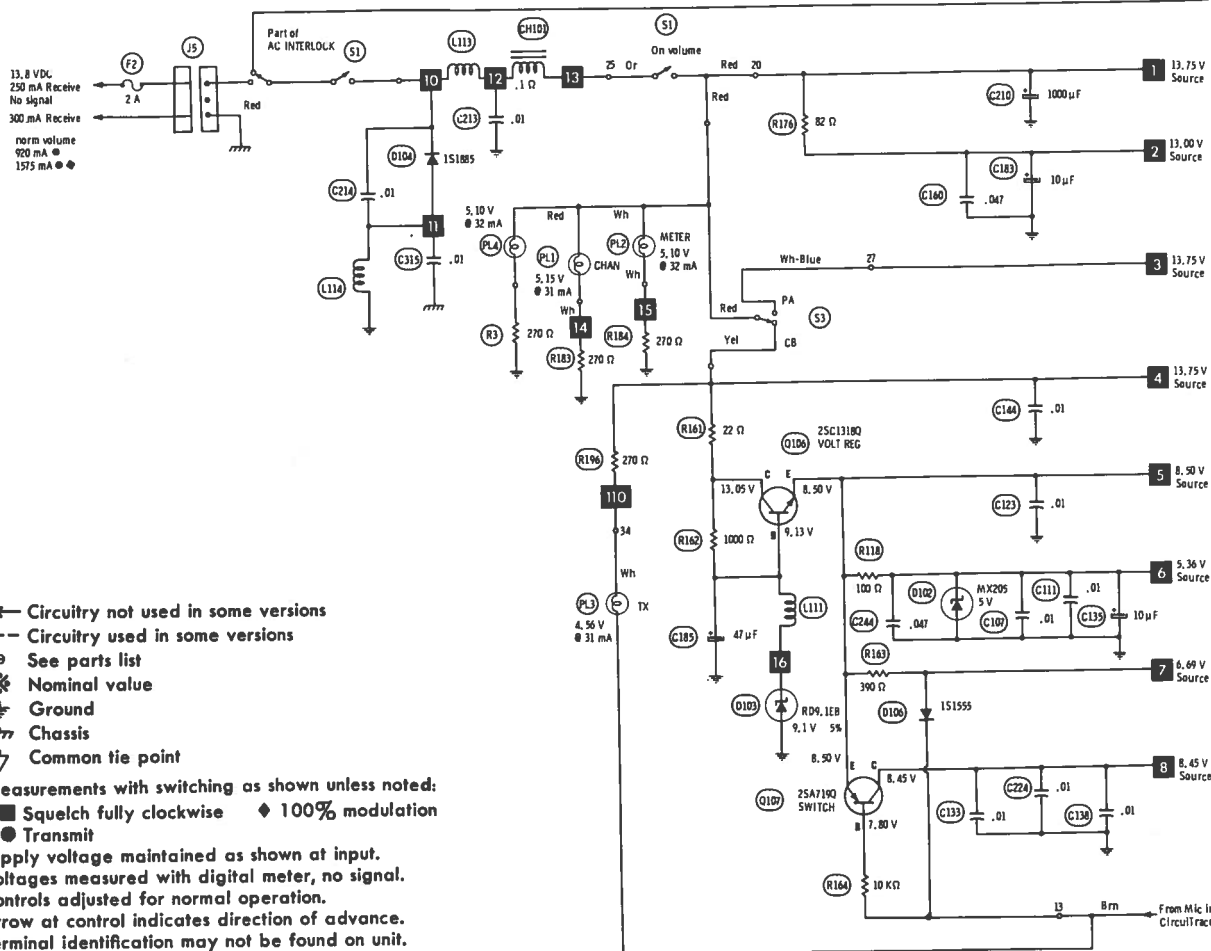
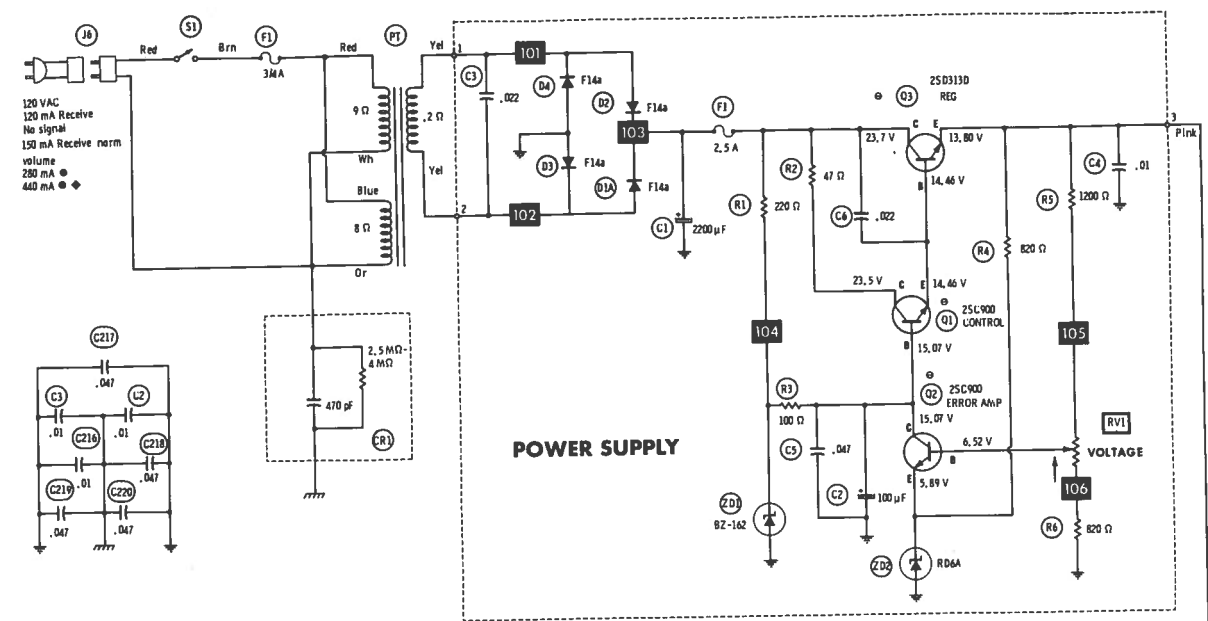
POWER SUPPLY BOARD

TRUTH CHART

1 = 5.33 Volts 0 = 0 Volts

C H A N N E L	IC101 PROGRAM DIVIDER							REC VCO OUTPUT IN MHz AT TP3	
	PINS								
	11	12	13	14	15				
1	0	0	0	0	0			37.6592	
2	0	0	0	0	1			37.6692	
3	0	0	0	1	0			37.6792	
4	0	0	1	0	0			37.6992	
5	0	0	1	0	1			37.7092	
6	0	0	1	1	0			37.7192	
7	0	0	1	1	1			37.7292	
8	0	1	0	0	1			37.7492	
9	0	1	0	1	0			37.7592	
10	0	1	0	1	1			37.7692	
11	0	1	1	0	0			37.7792	
12	0	1	1	1	0			37.7992	
13	0	1	1	1	1			37.8092	
14	1	0	0	0	0			37.8192	
15	1	0	0	0	1			37.8292	
16	1	0	0	1	1			37.8492	
17	1	0	1	0	0			37.8592	
18	1	0	1	0	1			37.8692	
19	1	0	1	1	0			37.8792	
20	1	1	0	0	0			37.8992	
21	1	1	0	0	1			37.9092	
22	1	1	0	1	0			37.9192	
23	1	1	1	0	1			37.9492	





— Circuitry not used in some versions

- - - Circuitry used in some versions

⊙ See parts list

⊛ Nominal value

⊕ Ground

⊖ Chassis

▽ Common tie point

Measurements with switching as shown unless noted:

■ Squelch fully clockwise ♦ 100% modulation

● Transmit

Supply voltage maintained as shown at input.

Voltages measured with digital meter, no signal.

Controls adjusted for normal operation.

Arrow at control indicates direction of advance.

Terminal identification may not be found on unit.

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

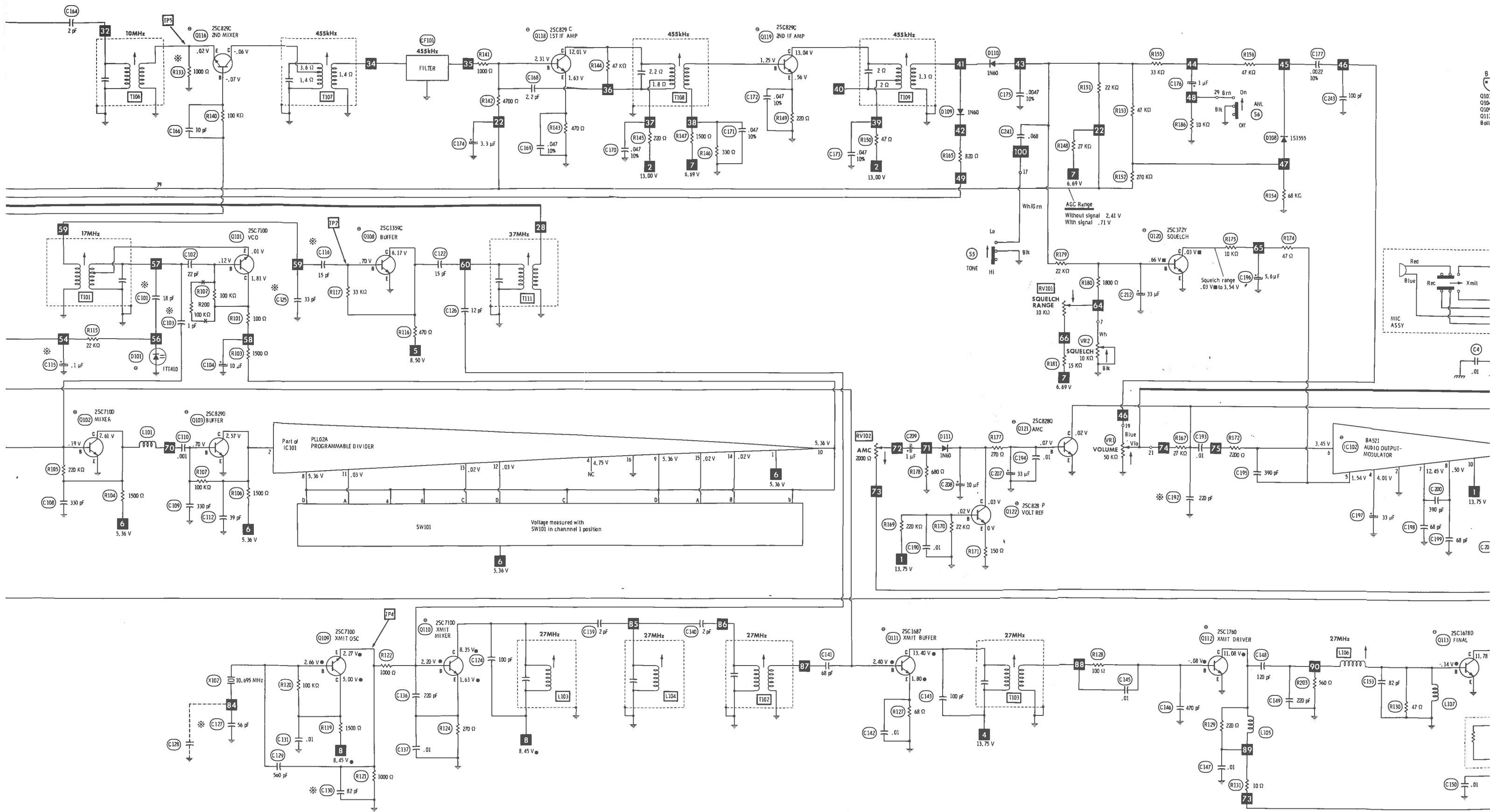
Value in () used in some versions.

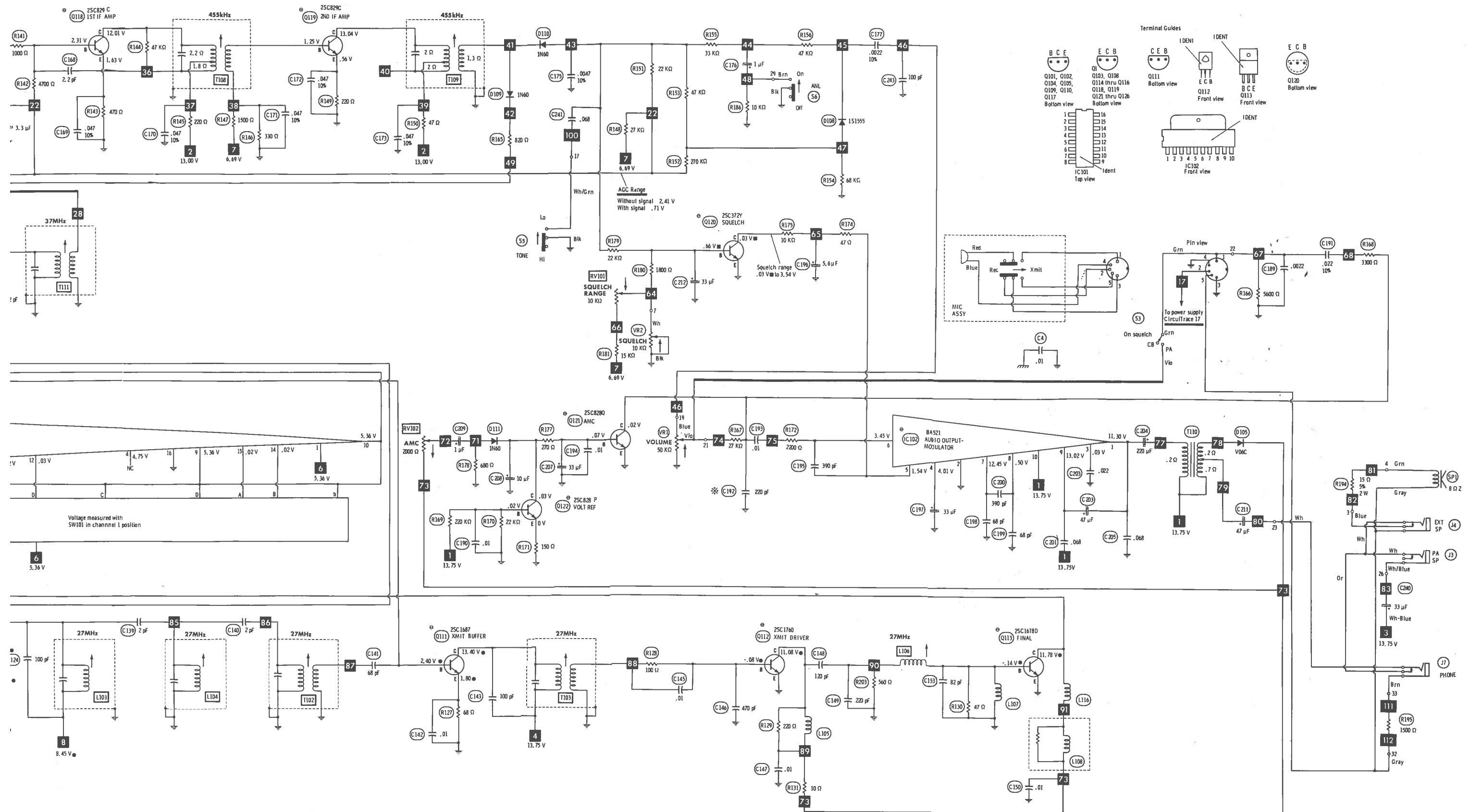
A PHOTOFAC STANDARD NOTATION SCHEMATIC

WITH CIRCUITACE

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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
C227	1 50V	101552	PC1-50	VTT1A50	QV1-11	EV-1615
C240	33 16V	105852	PC30-25	VTT33025	QV1-63	EV-1325
C242	1 50V	101552	PC1-50	VTT1A50	QV1-11	EV-1615
POWER SUPPLY BOARD						
C1	2200 25V	114952	WBR2000-25	TC2520A	QE1-645	TVA-1213.5
C2	100 25V	108152	PC100-25	VTT100G25	QV1-97	EV-1330

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	220 500V			CD15FD221J03	SX322	QW1-35	MMA-221
C2	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C3	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C4	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C101	18 NPO				CN0418		10TCC-Q18
C102	22		DTZ-22	NP022	CN0422		10TCC-Q22
C103	1 NPO				CN0510		10TCC-V10
C106	10		DTZ-10	NP010	CN0410		10TCC-Q10
C107	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C108	330		DD-331	GP330	GP333		10TS-T33
C109	330		DD-331	GP330	GP333		10TS-T33
C110	.001			DPMS6D1	EWFA1210	QF1-1	1PB-D10
C111	.01			WMF1S1	EWFA1110	QF1-91	1PB-S10
C112	39				CN0439		10TCC-Q39
C116	15 N750		DTN-15	N15	CN7415		10TCU-Q15
C117	.01			WMF1S1	EWFA1110	QF1-91	1PB-S10
C118	22 N150				*		10TCC-Q22
C120	560		DD-561		GP356		10TS-T56
C121	100 N150				*		10TCP-T10
C122	15 N750		DTN-15	N15	CN7415		10TCU-Q15
C123	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C124	100 500V			CD15FD101J03	SX310	QW1-27	MMA-101
C125	33		DTZ-33	NP033	CN0433		10TCC-Q33
C126	12 N150				*		10TCP-Q12
C127	56 N150				*		10TCP-Q56
C129	560		DTX-561		CN15-356		10TCW-T56
C130	82 N150				*		10TCP-Q82
C131	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C132	560			CD19FD561J03	SX356		MWC-561
C133	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C136	220		DD-221		GP322		10TS-T22
C137	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C138	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C139	2		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C140	2		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C141	68		DD-680	GP68	GP468		10TS-Q68
C142	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C143	100 N150				*		10TCP-T10
C144	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C145	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C146	470		DD-471	GP470	GP347		10TS-T47
C147	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C148	120		DTZ-120		CN0312		10TCC-T12
C149	220		DD-221		GP322		10TS-T22
C150	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C151	100 500V			CD15FD101J03	SX310	QW1-27	MMA-101
C152	270 500V			CD15FD271J03	SX327	QW1-37	MWB-271
C153	82						
C154	27		DTZ-47	NP047	CN0447		10TCC-Q47
C155	.047		DC-503	MGP05	TA150	QC2-207	TG-S50
C156	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C157	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C159	.047		DC-503	MGP05	TA150	QC2-207	TG-S50
C160	.047			DPMS2S47	EWFA1A47	QF1-171	1PB-S47
C161	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C162	33 N150						
C163	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C164	2		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C165	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C166	10		DD-561		GP356		10TS-T56
C168	2.2 500V		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C169	.047			DPMS2S47	EWFA1A47	QF1-171	1PB-S47
C170	.047			DPMS2S47	EWFA1A47	QF1-171	1PB-S47
C171	.047			DPMS2S47	EWFA1A47	QF1-171	1PB-S47
C172	.047			DPMS2S47	EWFA1A47	QF1-171	1PB-S47
C173	.047			DPMS2S47	EWFA1A47	QF1-171	1PB-S47
C175	.0047			WMF1D47	EWFA1A247	QF1-57	1PB-D47
C177	.0022			DPMS6D22	EWFA6222		6PS-D22
C178	56 N150						10TCP-Q56
C180	560		DD-561		GP356		10TS-T56
C181	100		DD-181		GP318		10TS-T18
C182	68 N150						10TCP-Q68
C184	.022			DPMS2S22	EWFA1A22	QF1-127	1PB-S22
C189	.0022		DD-222		GP222	QC2-97	5GA-D22
C190	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C191	.022			DPMS2S22	EWFA1A22	QF1-127	1PB-S22
C192	220		DD-221		GP322		10TS-T22
C193	.01			WMF1S1	EWFA1A10	QF1-91	1PB-S10
C194	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C195	390		DD-391	GP390	GP339		10TS-T39
C198	68		DD-680	GP68	GP468		10TS-Q68
C199	68		DD-680	GP68	GP468		10TS-Q68
C200	390		DD-391	GP390	GP339		10TS-T39

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.	IR WORKMAN PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.
Q114	2SC1678	(1)	GE-322	WE1678	PTC186		RE 203	SK3197	RT-146	ECG235
	2SC2075	(1)	GE-60 *	(IR)25C8298	PTC132 *	HEPS0016 *	RE 28 *	SK3018 *	RT-107	ECG161 *
	2SC1047B	256617	GE-60 *	(IR)25C8298	PTC132 *	HEPS0016 *	RE 28 *	SK3018 *	RT-107	ECG161 *
	2SC1047	(1)	GE-60 *	(IR)25C380A0	PTC132 *	HEPS0008 *	RE 28 *	SK3018 *	RT-187	ECG229 *
Q115	2SC784	(1)	GE-212	(IR)25C380A0	PTC121 *	HEPS0014 *	RE 192	SK3038 *	RT-308	ECG199
	2SC1359	(1)	GE-212	(IR)25C380A0	PTC121 *	HEPS0014 *	RE 192	SK3038 *	RT-308	ECG199
	2SC1359C	(1)	GE-212	(IR)25C380A0	PTC121 *	HEPS0014 *	RE 192	SK3038 *	RT-308	ECG199
	2SC1359B	256417	GE-212	(IR)25C380A0	PTC121 *	HEPS0014 *	RE 192	SK3038 *	RT-308	ECG199
Q116	2SC1359	(1)	GE-211 *	(IR)25C710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
	2SC710	(1)	GE-211 *	(IR)25C710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
	2SC710D	227517	GE-211 *	(IR)25C710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
	2SC829C	228417	GE-20 *	(IR)25C8298	PTC121 *	HEPS0015 *	RE 9 *	SK3122	RT-308	ECG229 *
Q117	2SC829	(1)	GE-20 *	(IR)25C8298	PTC121 *	HEPS0015 *	RE 9 *	SK3122	RT-308	ECG229 *
	2SC710D	(1)	GE-211 *	(IR)25C710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
	2SC829D	256217	GE-20 *	(IR)25C8298	PTC121 *	HEPS0015 *	RE 9 *	SK3122	RT-308	ECG229 *
	2SC839	(1)	GE-61 *	(IR)25C644	PTC132 *	HEPS0015 *	RE 13 *	SK3018 *	RT-308	ECG123A *
Q118	2SC839F	232017	GE-61 *	(IR)25C644	PTC132 *	HEPS0015 *	RE 13 *	SK3018 *	RT-308	ECG123A *
	2SC710	(1)	GE-211 *	(IR)25C710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
	2SC710D	227517	GE-211 *	(IR)25C710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
	2SC829C	228417	GE-20 *	(IR)25C8298	PTC121 *	HEPS0015 *	RE 9 *	SK3122	RT-308	ECG229 *
Q119	2SC829D	256217	GE-20 *	(IR)25C8298	PTC121 *	HEPS0015 *	RE 9 *	SK3122	RT-308	ECG229 *
	2SC829	(1)	GE-20 *	(IR)25C8298	PTC121 *	HEPS0015 *	RE 9 *	SK3122	RT-308	ECG229 *
	2SC710	(1)	GE-211 *	(IR)25C710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
	2SC710D	227517	GE-211 *	(IR)25C710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
Q120	2SC839	(1)	GE-61 *	(IR)25C644	PTC132 *	HEPS0015 *	RE 13 *	SK3018 *	RT-308	ECG123A *
	2SC839F	232017	GE-61 *	(IR)25C644	PTC132 *	HEPS0015 *	RE 13 *	SK3018 *	RT-308	ECG123A *
	2SC372Y	256917	GE-61 *	(IR)25C372	PTC101 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
	2SC372	(1)	GE-61 *	(IR)25C372	PTC101 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q121	2SC945	(1)	GE-212	(IR)25C945	PTC121 *	HEPS0015 *	RE 192	SK3124	RT-107A	ECG199
	2SC828	(1)	GE-61 *	(IR)25C828A	PTC121 *	HEPS0015 *	RE 192	SK3122	RT-302	ECG199
	2SC828BQ	202617	GE-61 *	(IR)25C828A	PTC121 *	HEPS0015 *	RE 192	SK3122	RT-302	ECG199
	2SC828C	(1)	GE-61 *	(IR)25C828A	PTC121 *	HEPS0015 *	RE 192	SK3122	RT-302	ECG199
Q122	2SC372	(1)	GE-61 *	(IR)25C372	PTC101 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
	2SC372Y	256917	GE-61 *	(IR)25C372	PTC101 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
	2SC828	(1)	GE-61 *	(IR)25C828A	PTC121 *	HEPS0015 *	RE 192	SK3122	RT-302	ECG199
	2SC828P	(1)	GE-61 *	(IR)25C828A	PTC121 *	HEPS0015 *	RE 192	SK3122	RT-302	ECG199
Q123	2SC828BQ	202617	GE-61 *	(IR)25C828A	PTC121 *	HEPS0015 *	RE 192	SK3122	RT-302	ECG199
	2SC945	(1)	GE-212	(IR)25C945	PTC121 *	HEPS0015 *	RE 192	SK3124	RT-107A	ECG199
	2SC372	(1)	GE-61 *	(IR)25C372	PTC101 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
	2SC372Y	256917	GE-61 *	(IR)25C372	PTC101 *	HEPS0015 *	RE 13 *	SK3122	RT-308	ECG123A *
Q124	2SC839	232017	GE-61 *	(IR)25C644	PTC132 *	HEPS0015 *	RE 13 *	SK3018 *	RT-308	ECG123A *
	2SC829	(1)	GE-20 *	(IR)25C8298	PTC121 *	HEPS0015 *	RE 9 *	SK3122	RT-308	ECG229 *
	2SC829C	228417	GE-20 *	(IR)25C8298	PTC121 *	HEPS0015 *	RE 9 *	SK3122	RT-308	ECG229 *
	2SC829D	256217	GE-20 *	(IR)25C8298	PTC121 *	HEPS0015 *	RE 9 *	SK3122	RT-308	ECG229 *
ZD1	2SC710	(1)	GE-211 *	(IR)25C710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
	2SC710D	227517	GE-211 *	(IR)25C710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
	B2162	257317	GEZD-16	Z1204	ZM68	HEPZ0407	RE 122	SK3057	RT-246	ECG5075A
	RD6A	(1)	GEZD-5.6	Z1204	ZM68	HEPZ0407	RE 107	SK3057	RT-236	ECG136
ZD2	RD5.6EC	252717	GEZD-5.6	Z1204	ZB5.6A	HEPZ0407	RE 107	SK3057	RT-236	ECG136

* Lead configuration may vary from original.

(1)Used in some versions.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA			
			CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	GENERAL LINE
C104	10 16V	104352	PC10-25	VTT10B25	QV1-41	EV-1222
C113	.22 50V	117852	PC10-25	TUC224M050EL	QDT1-10	SD50-R229
C114	10 16V	104352	PC10-25	VTT10B25	QV1-41	EV-1222
C115	.1 50V	118652	PC10-25	TUC104M050EL	QDT1-2	SD50-R109
C135	10 16V	104352	PC5-50	VTT10B25	QV1-41	EV-1222
C174	3.3 25V	102652	PC1-50	VTT3R3A50	QV1-23	EV-1318
C176	1 50V	101552	PC10-25	VTT1A50	QV1-11	EV-1615
C183	10 16V	104352	PC10-25	VTT10B25	QV1-41	EV-1222
C185	47 16V	106352	PC50-16	VTT47D16	QV1-73	EV-1226
C196	5.6 25V			TIM565M025POY	QDT1-51	SD25-5R69
C197	33 6.3V	102352	PC30-25	VTT33B10	QV1-61	EV-1125
C203	47 16V	106352	PC50-16	VTT47D16	QV1-73	EV-1226
C204	220 16V	109452	PC250-25	VTT220H16	QV1-117	EV-1240
C207	33 6.3V	102352	PC30-25	VTT33B10	QV1-61	EV-1125
C208	10 16V	104352	PC10-25	VTT10B25	QV1-41	EV-1222
C209	1 50V	101552	PC1-50	VTT1A50	QV1-11	EV-1615
C210	1000 16V	111652	PC1000-16	VTT1000L16	QV1-183	EV-1260
C211	47 25V	106452	PC50-25	VTT47E25	QV1-75	EV-1326
C212	33 6.3V	102352	PC30-25	VTT33B10	QV1-61	EV-1125
C222	4.7 25V	103152	PC5-50	VTT47B50	QV1-27	EV-1319

LAURENTE MODEL TELSAT 1050

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	4-conductor (unshielded)	31AWG BELDEN No. 9468 (10')
	(9') BELDEN No. 17109	5-conductor (1 shielded)	23AWG BELDEN No. 8415 (6')
			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.	IR WORKMAN PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.
D1A	F14a	194917 (1)	GE-504A	5A4D	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
	V06C	252817 (1)	GE-504A	5A4D	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D1B	1S1885	193717	GE-504A	5A4D	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D2	F14a	194917 (1)	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
	V06C	252817 (1)	GE-504A	5A4D	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D3	1S1885	194917 (1)	GE-504A	5A4D	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
	V06C	252817 (1)	GE-504A	5A4D	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D4	F14a	194917 (1)	GE-504A	5A4D	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
	V06C	252817 (1)	GE-504A	5A4D	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D101	1S1885	194917 (1)	GE-504A	5A4D	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
	ITT410	256717	GE-90	D201	PTC311	HEPR2503	RE 195	SK3126	RT-262	ECG610
	BB142	(1)	GE-90	D201	PTC311	HEPR2503	RE 195	SK3126	RT-262	ECG610
D102	MZ205	256817	GEZD-9.1	WEP602	ZM5.1B		RE 105			ECG135
D103	RD9.1E	245217	GE-504A	5A4D	ZM9.1B		RE 114		RT-240	ECG139A
D104	1S1885	252817	GE-504A	5A4D	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D105	V06C	194917	GE-504A	5A4D	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D106	1S1555	193717	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D107	1S1555	193717	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D108	1S1555	193717	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D109	1N60	100017	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D110	1N60	100017	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D111	1N60	100017	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D112	1N60	100017	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
IC101	PLL02A	106525								ECG1167
IC102	BA521	106625	GEIC-179		PTC780				TVMC-81	ECG1166
Q1	2SC900		GE-62	(IR)2SC644	PTC139 *	HEPS0015 *	RE 192	SK3124	RT-302	ECG199
	2SC900F	213217 (1)	GE-62	(IR)2SC644	PTC139 *	HEPS0015 *	RE 192	SK3124	RT-302	ECG199
Q2	2SC900		GE-62	(IR)2SC644	PTC139 *	HEPS0015 *	RE 192	SK3124	RT-302	ECG199
	2SC900F	213217 (1)	GE-62	(IR)2SC644	PTC139 *	HEPS0015 *	RE 192	SK3124	RT-302	ECG199
Q3	2SD3130		GE-241	TR-76	PTC154		RE 205	SK3054	RT-154	ECG196
	2SD313	239517 (1)	GE-241	TR-76	PTC154		RE 205	SK3054	RT-154	ECG196
Q101	2SC710		GE-211 *	(IR)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
	2SC7100	227517 (1)	GE-211 *	(IR)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
Q102	2SC710		GE-211 *	(IR)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
	2SC7100	227517 (1)	GE-211 *	(IR)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
	2SC829	(1)	GE-20 *	(IR)2SC829B	PTC121 *	HEPS0015 *	RE 9 *	SK3122	RT-308	ECG229 *
	2SC829C	256217 (1)	GE-20 *	(IR)2SC829B	PTC121 *	HEPS0015 *	RE 9 *	SK3122	RT-308	ECG229 *
	2SC829C	228417 (1)	GE-20 *	(IR)2SC829B	PTC121 *	HEPS0015 *	RE 9 *	SK3122	RT-308	ECG229 *
	2SC839	(1)	GE-61 *	(IR)2SC644	PTC132 *	HEPS0015 *	RE 13 *	SK3018 *	RT-308	ECG123A *
	2SC839F	232017 (1)	GE-61 *	(IR)2SC644	PTC132 *	HEPS0015 *	RE 13 *	SK3018 *	RT-308	ECG123A *
Q103	2SC710		GE-211 *	(IR)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
	2SC7100	227517 (1)	GE-211 *	(IR)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
	2SC829	(1)	GE-20 *	(IR)2SC829B	PTC121 *	HEPS0015 *	RE 9 *	SK3122	RT-308	ECG229 *
	2SC829C	256217 (1)	GE-20 *	(IR)2SC829B	PTC121 *	HEPS0015 *	RE 9 *	SK3122	RT-308	ECG229 *
	2SC829C	228417 (1)	GE-20 *	(IR)2SC829B	PTC121 *	HEPS0015 *	RE 9 *	SK3122	RT-308	ECG229 *
	2SC839	(1)	GE-61 *	(IR)2SC644	PTC132 *	HEPS0015 *	RE 13 *	SK3018 *	RT-308	ECG123A *
	2SC839F	232017 (1)	GE-61 *	(IR)2SC644	PTC132 *	HEPS0015 *	RE 13 *	SK3018 *	RT-308	ECG123A *
Q104	2SC710		GE-211 *	(IR)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
	2SC7100	227517 (1)	GE-211 *	(IR)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
	2SC829	(1)	GE-20 *	(IR)2SC829B	PTC121 *	HEPS0015 *	RE 9 *	SK3122	RT-308	ECG229 *
	2SC829C	228417 (1)	GE-20 *	(IR)2SC829B	PTC121 *	HEPS0015 *	RE 9 *	SK3122	RT-308	ECG229 *
	2SC829C	256217 (1)	GE-20 *	(IR)2SC829B	PTC121 *	HEPS0015 *	RE 9 *	SK3122	RT-308	ECG229 *
	2SC839	(1)	GE-61 *	(IR)2SC644	PTC132 *	HEPS0015 *	RE 13 *	SK3018 *	RT-308	ECG123A *
	2SC839F	232017 (1)	GE-61 *	(IR)2SC644	PTC132 *	HEPS0015 *	RE 13 *	SK3018 *	RT-308	ECG123A *
Q105	2SC710		GE-211 *	(IR)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
	2SC7100	227517 (1)	GE-211 *	(IR)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
	2SC829	(1)	GE-20 *	(IR)2SC829B	PTC121 *	HEPS0015 *	RE 9 *	SK3122	RT-308	ECG229 *
	2SC829C	256217 (1)	GE-20 *	(IR)2SC829B	PTC121 *	HEPS0015 *	RE 9 *	SK3122	RT-308	ECG229 *
	2SC829C	228417 (1)	GE-20 *	(IR)2SC829B	PTC121 *	HEPS0015 *	RE 9 *	SK3122	RT-308	ECG229 *
	2SC839	(1)	GE-61 *	(IR)2SC644	PTC132 *	HEPS0015 *	RE 13 *	SK3018 *	RT-308	ECG123A *
	2SC839F	232017 (1)	GE-61 *	(IR)2SC644	PTC132 *	HEPS0015 *	RE 13 *	SK3018 *	RT-308	ECG123A *
Q106	2SC1318Q	231017	GE-210 *	TR-21 *	PTC178	HEPS0015 *	RE 17 *	SK3122	RT-302	ECG128 *
	2SC1318	(1)	GE-210 *	TR-21 *	PTC178	HEPS0015 *	RE 17 *	SK3122	RT-302	ECG128 *
Q107	2SA719Q	256317	GE-269	TR-28 *	PTC177 *	HEPS0019 *	RE 26 *	SK3114	RT-305	ECG290
	2SA719	(1)	GE-269	TR-28 *	PTC177 *	HEPS0019 *	RE 26 *	SK3114	RT-305	ECG290
Q108	2SC1359C		GE-212	(IR)2SC380A0	PTC132 *	HEPS0014 *	RE 192	SK3038 *	RT-308	ECG199
	2SC1359B	256417 (1)	GE-212	(IR)2SC380A0	PTC132 *	HEPS0014 *	RE 192	SK3038 *	RT-308	ECG199
	2SC1359	(1)	GE-212	(IR)2SC380A0	PTC132 *	HEPS0014 *	RE 192	SK3038 *	RT-308	ECG199
	2SC1047	(1)	GE-60 *	(IR)2SC829B	PTC132 *	HEPS0016 *	RE 28 *	SK3018 *	RT-107	ECG161 *
	2SC1047B	256617 (1)	GE-60 *	(IR)2SC829B	PTC132 *	HEPS0016 *	RE 28 *	SK3018 *	RT-107	ECG161 *
Q109	2SC710		GE-211 *	(IR)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
	2SC7100	227517 (1)	GE-211 *	(IR)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
Q110	2SC710		GE-211 *	(IR)2SC710	PTC115	HEPS0016 *	RE 13 *	SK3018 *	RT-308 *	ECG123A *
	2SC1687	256517 (1)	GE-20 *	TR-24 *	PTC121 *	HEPS0015 *	RE 13 *	SK3018 *	RT-107A *	ECG123A *
	2SC1687	256517	GE-20 *	TR-24 *	PTC121 *	HEPS0015 *	RE 13 *	SK3018 *	RT-107A *	ECG123A *
	2SC1688	(1)	GE-81 *	TR-24 *	PTC121 *	HEPS0027 *	RE 13 *	SK3137 *	RT-107A *	ECG123A *
	2SC1215	(1)	GE-61 *	(IR)2SC717	PTC133 *	HEPS0020 *	RE 9	SK3039 *	RT-107A	ECG107
Q112	2SC1760		GE-276		PTC180		RE 224		RT-310	ECG306
	2SC1846	(1)	GE-336		PTC180		RE 209			ECG306
	2SC2074	(1)			PTC180		RE 224			
Q113	2SC1760-3	245917 (1)	GE-276	WEP1306	PTC180		RE 203	SK3197	RT-146	ECG235
	2SC1306	239917	GE-215	WEP1306	PTC186		RE 203	SK3197	RT-146	ECG235
	2SC1974	(1)	GE-337	WEP1306	PTC186					

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
C201	.068			WMF1S68	EWFA168	QF1-195	1PB-S68
C202	.022			DPMS2S22	EWFA122	QF1-127	1PB-S22
C205	.068			WMF1S68	EWFA168	QF1-195	1PB-S68
C213	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C214	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C215	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C216	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C217	.047		DC-503	MGP05	TA150	QC2-207	TG-S50
C218	.047		DC-503	MGP05	TA150	QC2-207	TG-S50
C219	.047		DC-503	MGP05	TA150	QC2-207	TG-S50
C220	.047		DC-503	MGP05	TA150	QC2-207	TG-S50
C223	39				CN0439		10TCC-Q39
C224	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C225	4 500V		DTZ-4R7	NPO4P7	CN0547		10TCC-V47
C226	.0047		DD-472	GP4700	GP247		5GA-D47
C235	15 N150				*		10TCP-Q15
C236	39 N150				*		10TCP-Q39
C237	.0022			DPMS6D22	EWF6222		6PS-D22
C238	.0022			DPMS6D22	EWF6222		6PS-D22
C241	.068			WMF1S68	EWFA168	QF1-195	1PB-S68
C243	100		DD-101	GP100	GP310		10TS-T10
C244	.068		UK50-683		MAG50168		
CT101							
POWER SUPPLY BOARD							
C3	.022		UK25-223				HY-725
C4	.01		DC-103	MGP01	TA110	QC2-141	TG-S10
C5	.047		DC-503	MGP05	TA150	QC2-207	TG-S50
C6	.022		UK25-223				HY-725

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

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

ITEM No.	FUNCTION	RESISTANCE	REPLACEMENT DATA				
			MFR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	MALLORY PART No.	TRW PART No.
RV1	Voltage Adjust	500	285813	T-500	C-501	MTC52L1	X201R501B
RV101	Squelch Range	10K	271613				
RV102	AMC	2000	277913				
RV103	S Meter	20K	278013				
RV104	RF Meter	20K	278013				
VR1	Volume/Switch	50K	185111	F2-50K (1), SSK100,KR-1	A47-50K-Z (1), KSS-3,SWE-20 or [NP-50K-Z (1), UP-C-400,NWE-20]	RU54A,SL36,SL3250, US42 or [UA54A (1), SK3500,US42]	BU1 (1),CF63, SS1,WF
VR2	Squelch	10K	185211				

(1) Enlarge mounting hole.

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L101	RF Choke (22uH)	291023			
L103	Xmit Mixer (27MHz)	291123			
L104	Harmonic Suppressor (27MHz)	291223			
L105	RF Choke (2.2uH)	287423			
L106	Xmit Driver (27MHz)	226324			
L107	RF Choke (68uH)	287323			
L108	RF Choke	287523			
L109	Final (27MHz)	226424			
L110	Antenna Match (27MHz)	226524			
L111	RF Choke (68uH)	287323			
L112	IF (10MHz)	291923			
L113	RF Choke	251723			
L114	RF Choke	251723			
L116	RF Choke	287623			
T101	VCO (17MHz)	291523			
T102	Harmonic Suppressor (27MHz)	291623			
T103	Xmit Buffer (27MHz)	291723			
T104	Rec Antenna (27MHz)	226624			
T105	Rec RF (27MHz)	291823			
T106	IF (10MHz)	291923			
T107	IF (455kHz)	227024			
T108	IF (455kHz)	227124			
T109	IF (455kHz)	227824			
T111	VCO Buffer (37MHz)	227924			

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFR. PART No.	THORDARSON PART No.	TRIAD PART No.	
CH101	1.6A	.116	.48mH	287223 ELA-16 (1)	TR523		(1) Number on unit.

LAFAYETTE MODEL TELSAT 1050

PARTS LIST AND DESCRIPTION (CONTINUED)

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

TRANSFORMER (Power)

ITEM No.	RATING		REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
PT	120V AC @ 440mA AC	18.7V AC @ 2.9A AC	189515 ETP-0099 (1)			(1) Number on unit.

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA			NOTES
	PRI.	SEC.	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T110	2.88	1 8 2 13.52	188015 ETA-66 (1)	TR723	MCB-16	(1) Number on unit.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP1	3" PH, 8 Ohms	133536	30A0528R	

FUSE DEVICES

ITEM No.		DESCRIPTION	REPLACEMENT DATA						WORKMAN PART No.
			PART No.		BUSS PART No.		LITTELFUSE PART No.		
			DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	
F1	3/4A	538920	192319	AGC3/4	HKP	312.750	342001AL	FG2-2	
F2	2 Amp		135238 (1)	AGC2	HDJ	312002	150145		
POWER SUPPLY BOARD									
F1	2 1/2 Amp	528020		GJV2 1/2		31802.5		FG3-2 (33-125)	

(1) Includes DC Cord Assembly.

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	110334	18-032	18-034	18-000	18-105	1	4	2	5	NC	3

CRYSTALS

ITEM No.	CRYSTAL FREQUENCY IN MHz	MFGR. PART No.	CTS KNIGHTS PART No.	CHANNEL	ITEM No.	CRYSTAL FREQUENCY IN MHz	MFGR. PART No.	CTS KNIGHTS PART No.	CHANNEL
X101	11.8066	141235	CA110M11.8066	Osc.	X103	10.240	141435	CB160M10.240	Ref. Osc.
X102	10.695	141335	CB126M10.695	Xmit Osc.					

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
CF101	Ceramic Filter	141135	455kHz
CR1	Component Combination	161558	Isolation (470pF/2.5m-4m)
J1	Socket	221819	Antenna
J2	Socket	237419	Microphone (5 Pin)
J3	Socket	206319	PA
J4	Socket	206319	Ext. Speaker
J5	Socket	239119	Power (DC)
J6	Socket	219419	Power (AC)
J7	Socket	239019	Headphone
M1	Meter	124627	S/Rf
PL1	Lamp	540320	Channel Indicator (31mA @ 5.15V)
PL2	Lamp	576520	Meter (32mA @ 5.10V)
PL3	Lamp	572620	TX (31mA @ 4.56V)
PL4	Lamp	576520	Meter (32mA @ 5.10V)
S1	Switch		Power (Part of Volume Control)
S2	Switch	222914	Loc/Dist
S3	Switch	222914	CB/PA
S4	Switch	223314	Delta Tune
S5	Switch	222914	Tone
S6	Switch	222914	ANL
SW101	Switch	223014	Channel Selector
	AC Power Cord	128738	Assembly
	Printed Circuit Board	189616	Main (PTBMD38COX)
	Printed Circuit Board	189716	Power Supply (EP00612AB)

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

ITEM	PART No.	ITEM	PART No.
Knob, Control	210518	Cabinet Top	198280
Knob, Channel Selector	210418	Cabinet Bottom	198380
Disc, Channel Indicator	581720		