



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 Telsat 1023 (99-32997W)

ALIGNMENT INSTRUCTIONS

Suggested Alignment Tools:

L103, L104, L105, L106, L107.....5000, 8290

L1.....9300

ALL others.....9440

GC ELECTRONICS

LAFAYETTE MODEL TELSAT 1023

RECEIVER

Connect an AC VTVM or AF Wattmeter across speaker voice coil.

Adjustments made with 14-volt DC input.

Adjust volume control to obtain suitable reading.

SIGNAL GENERATOR	GEN FREQ	CHANNEL	ADJUST	REMARKS
High side thru .01uF to Anode of D112, low side to ground.	455kHz, 1000Hz @ 30% modulation.	Any	L105,L106, L107	Set generator output for a .5V reading on AC VTVM. Adjust for maximum.
High side thru .01uF to Antenna Jack, low side to ground.	27.115MHz, 1000Hz @ 30% modulation, output 1uV.	13	L101,L102, L103,L104	Adjust for maximum.

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

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SCY277

RECEIVER ADJUSTMENTS

Connect an AC VTVM or AF Wattmeter across speaker voice coil.
 These adjustments made with 14-volt DC input.
 Adjust volume control to obtain a suitable reading.

SIGNAL GENERATOR	GEN FREQ	CHANNEL	ADJUST	REMARKS
SQUELCH RANGE High side thru .01uF to Antenna Jack, low side to ground.	27.115Hz, 1000Hz @ 30% modulation, output 10,000uV	13	RV101	Set squelch control fully clockwise. Adjust so that squelch just breaks.
"S" METER High side thru .01uF to Antenna Jack, low side to ground.	27.115MHz. 1000Hz @ 30% modulation, output 100uV.	13	RV102	Adjust for "S" 9 on Panel Meter.

TRANSMITTER

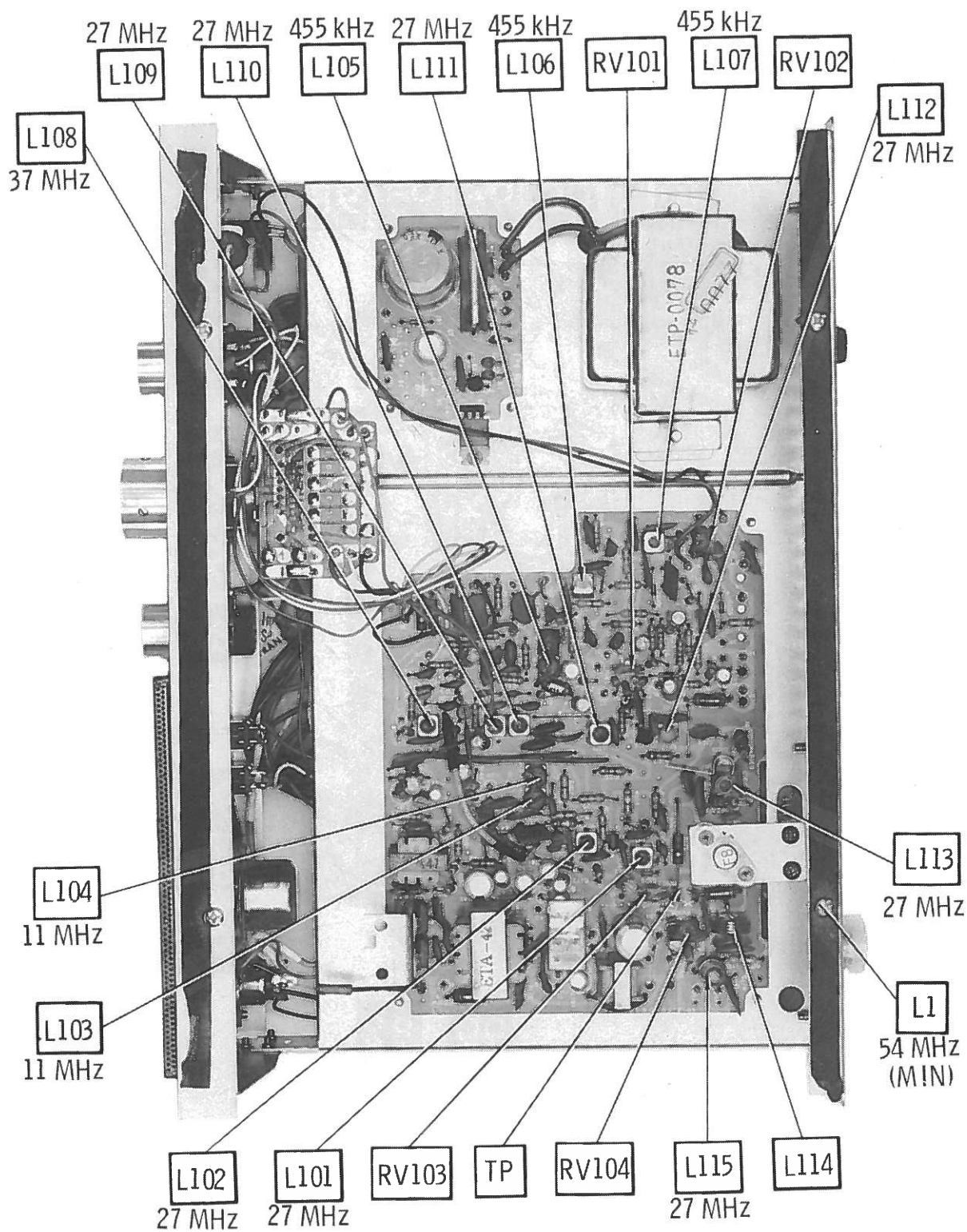
Connect an RF Wattmeter or 50-ohm, 25-watt dummy load to antenna connector.
 Adjustments made with 14-volt DC input.

INDICATOR	ADJUST	REMARKS
OSCILLATOR, MIXER, BUFFER, DRIVER, FINAL RF Wattmeter	L108,L109, L110,L111, L112,L113	Channel selector to 13,Key transmitter. Adjust for maximum.
OUTPUT POWER RF Wattmeter	L114,L115	Key transmitter. Adjust for 4 watts output.
TVI TRAP TV (Ch 2)	L1	Key transmitter. Adjust for MINIMUM interference on TV.
FINAL INPUT POWER Remove jumper at TP and connect 0-1A DC milliammeter between RFC104 and R171.	L114	Adjust for 5 watts maximum.

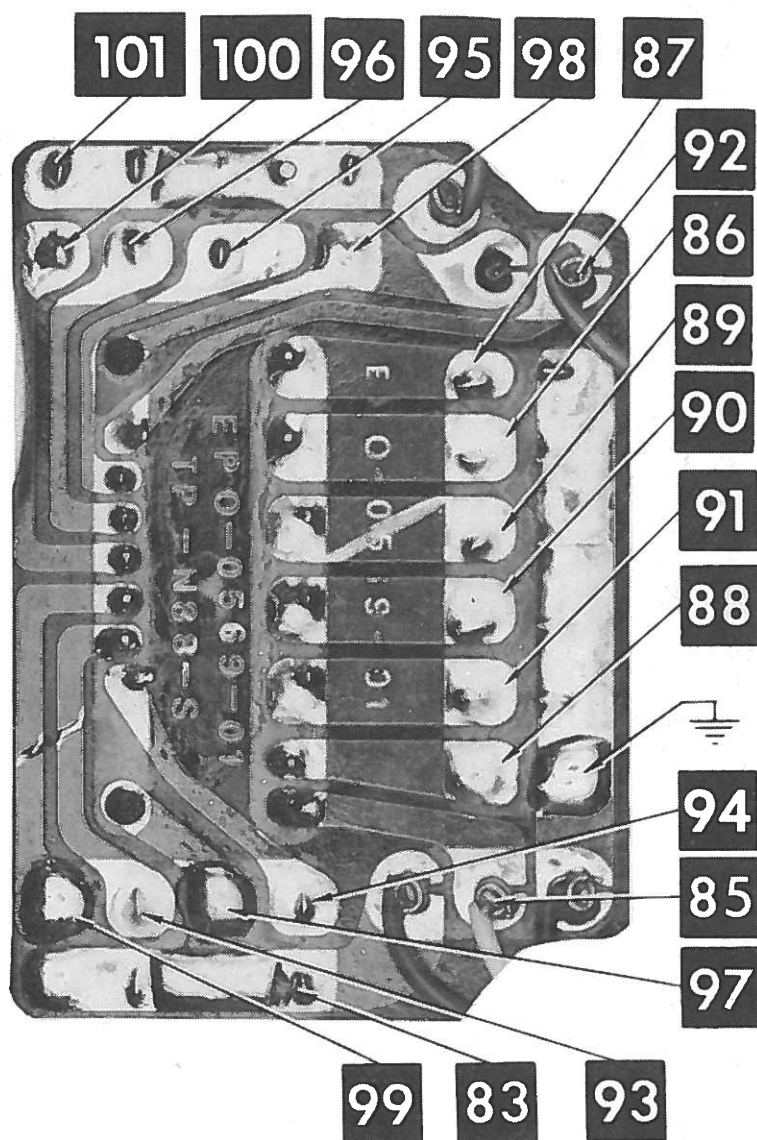
TRANSMITTER ADJUSTMENTS

Connect an RF Wattmeter or 50-ohm, 25-watt dummy load to antenna connector.
 Adjustments made with 14-volt DC input.

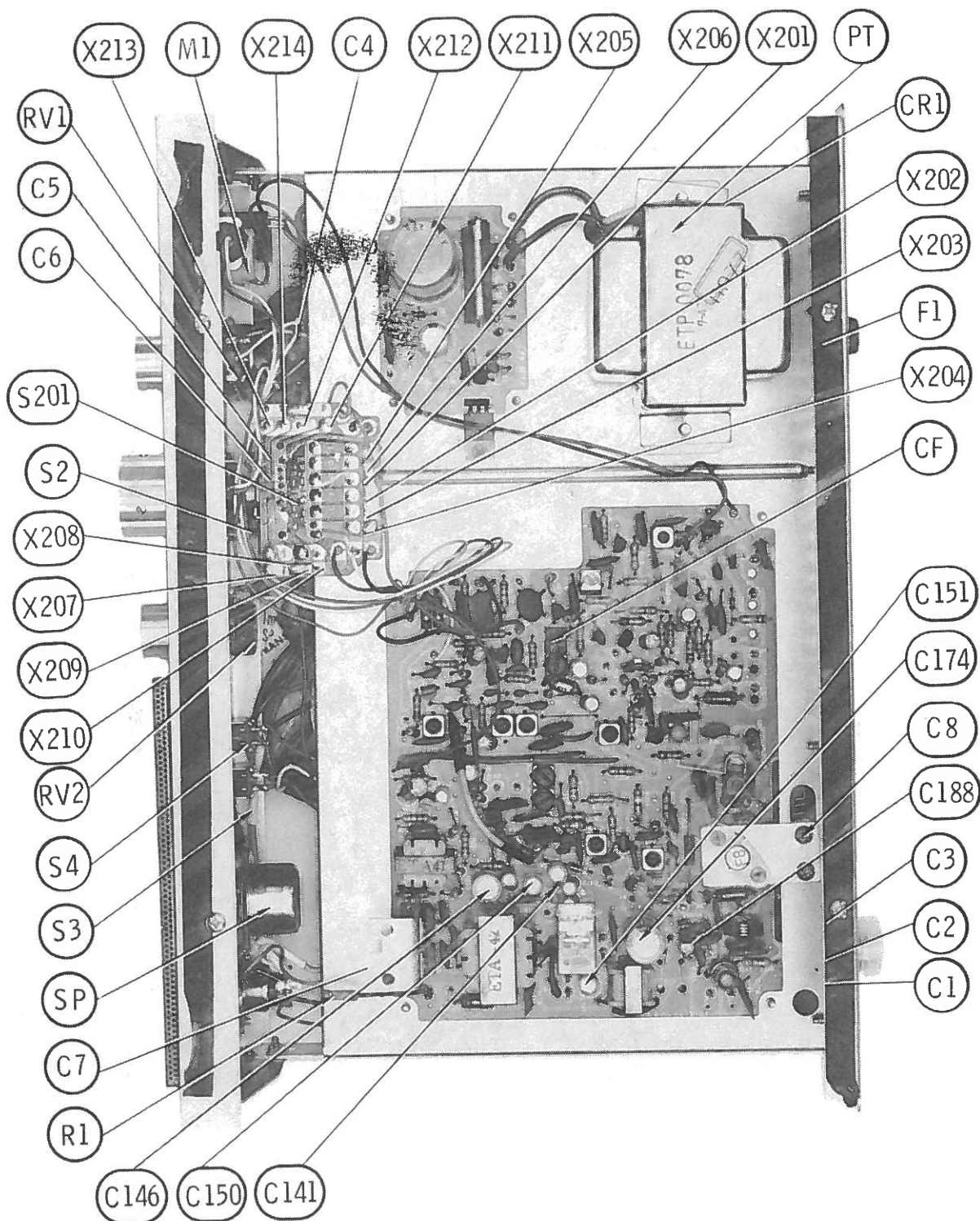
INDICATOR	ADJUST	REMARKS
AMC Modulation Meter connected to antenna jack.	RV103	Deactivate RV103. Inject a 1000Hz audio tone to micro- phone jack. Key transmitter. Adjust audio output to obtain 110% modulation. Adjust for 100% modulation.
RF PANEL METER RF Wattmeter	RV104	Key transmitter. Adjust so that panel RF meter agrees with RF wattmeter.



CHASSIS-TOP

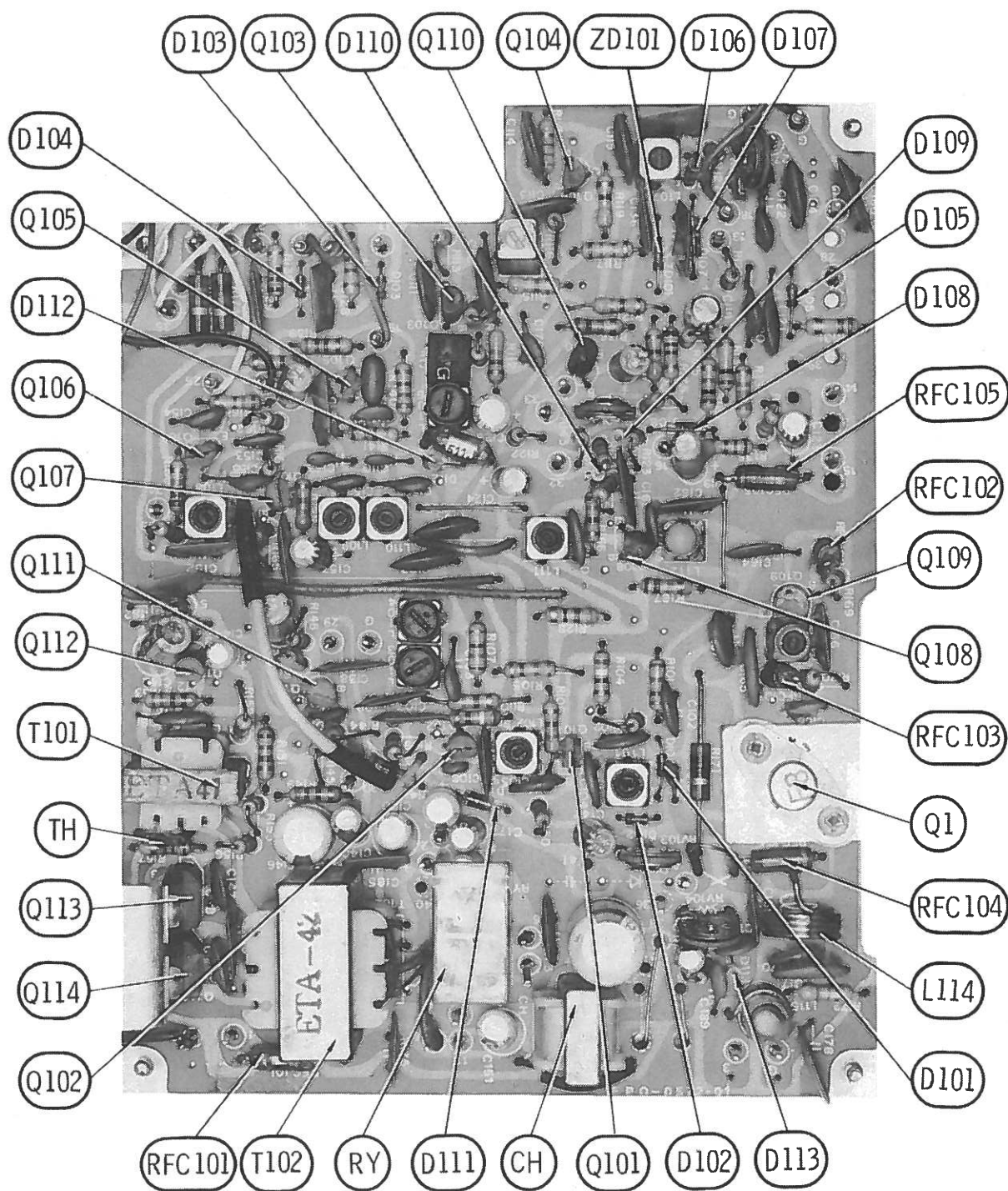


CRYSTAL BOARD

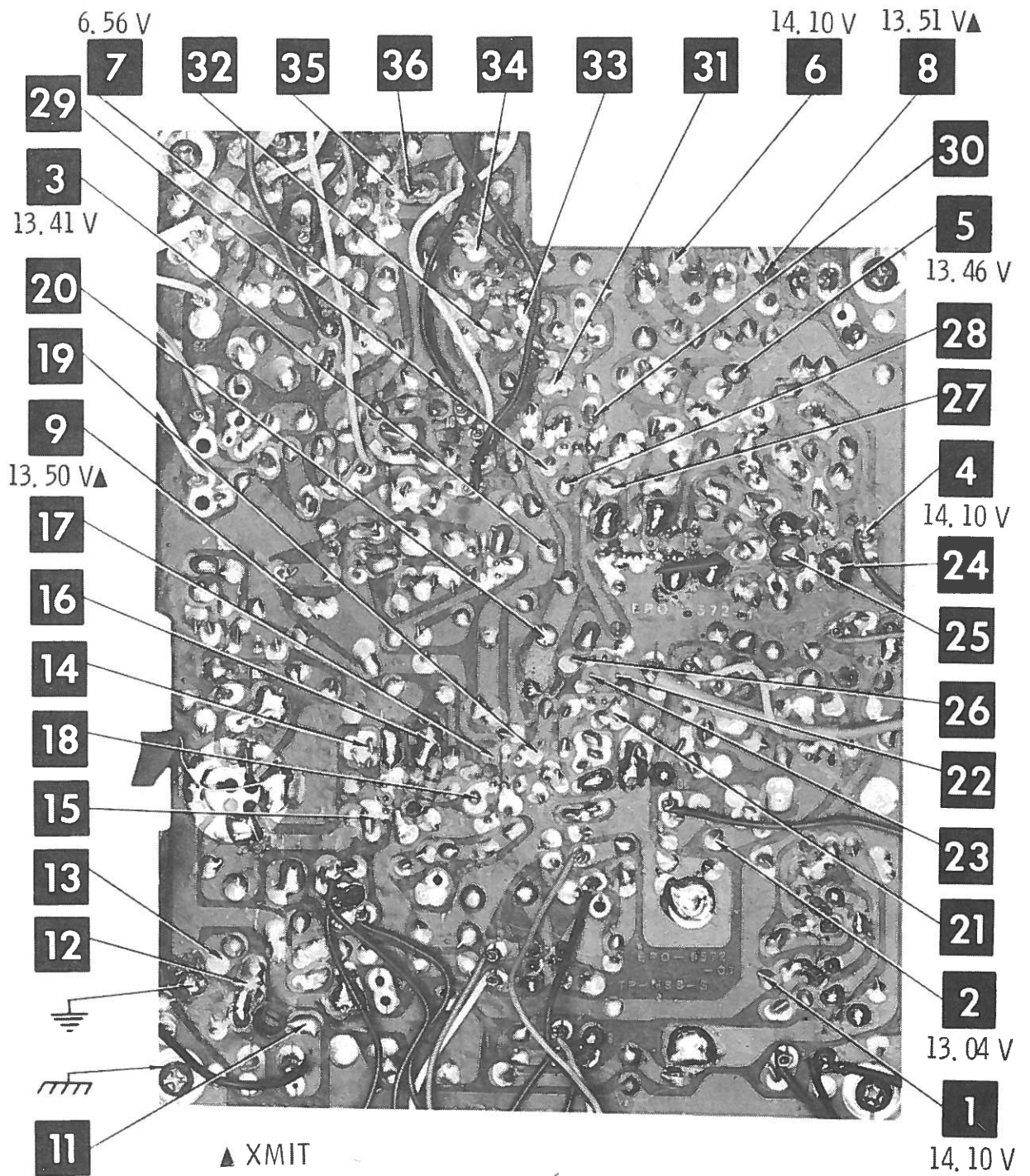


CHASSIS-TOP

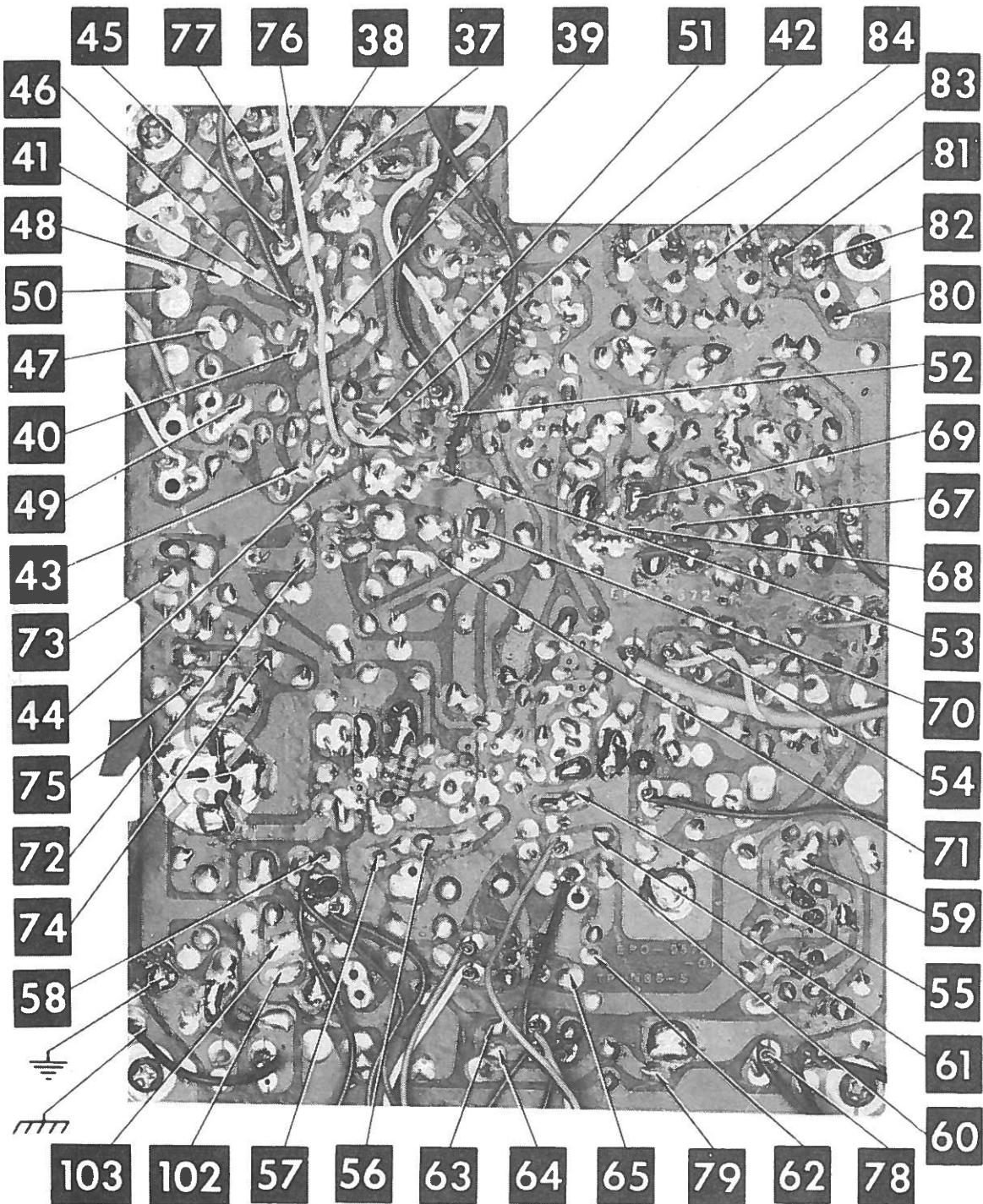




MAIN BOARD

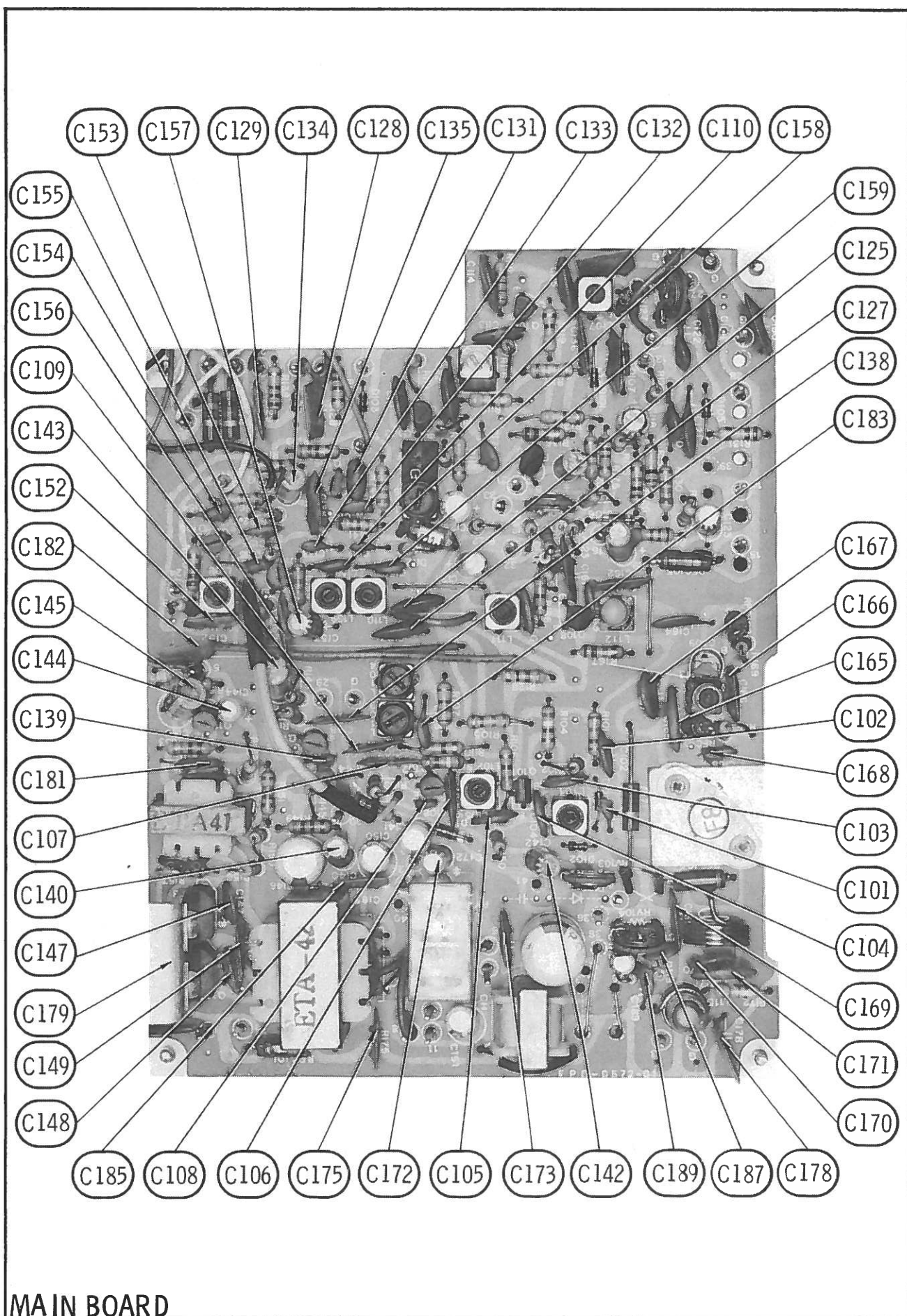


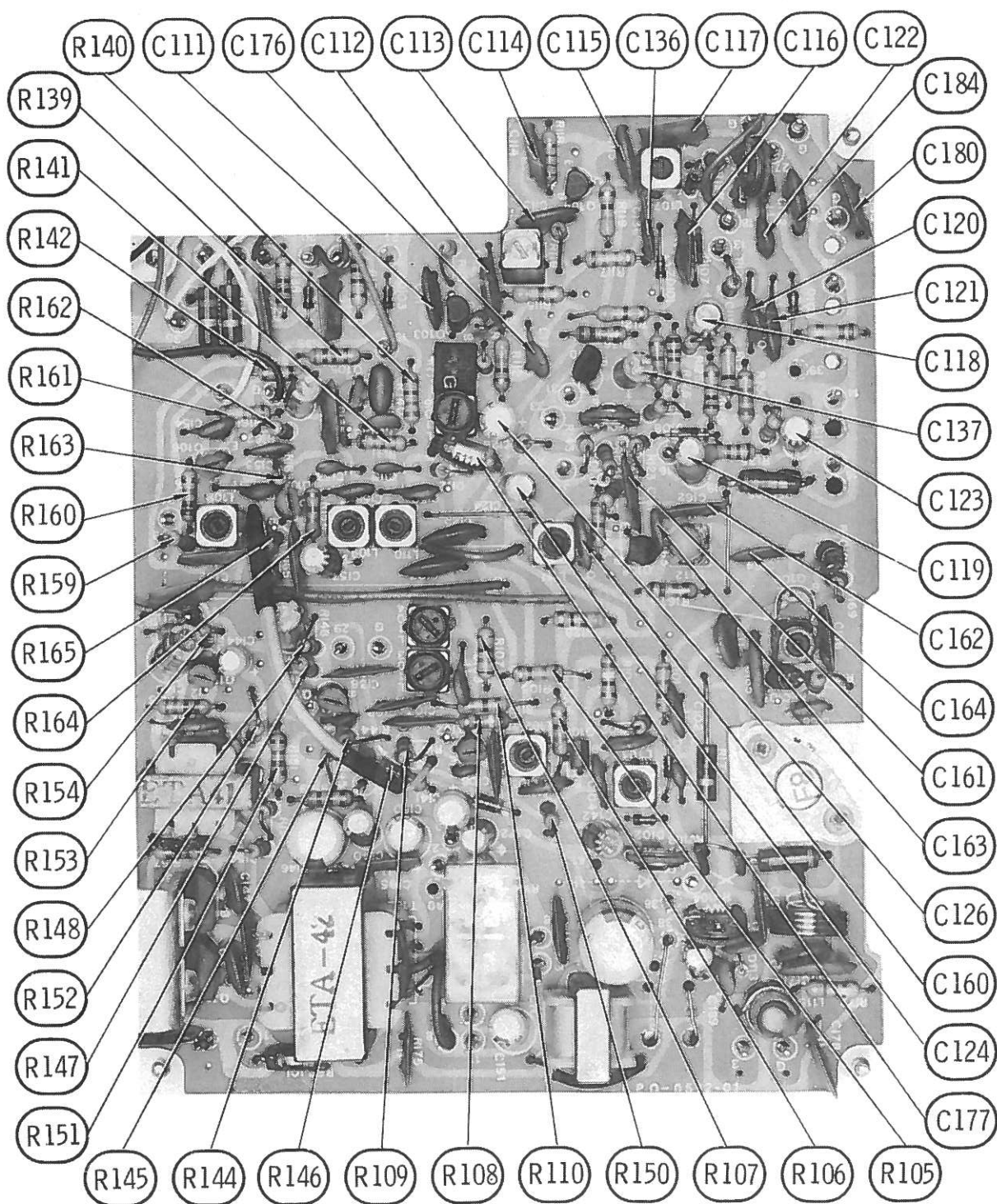
MAIN BOARD



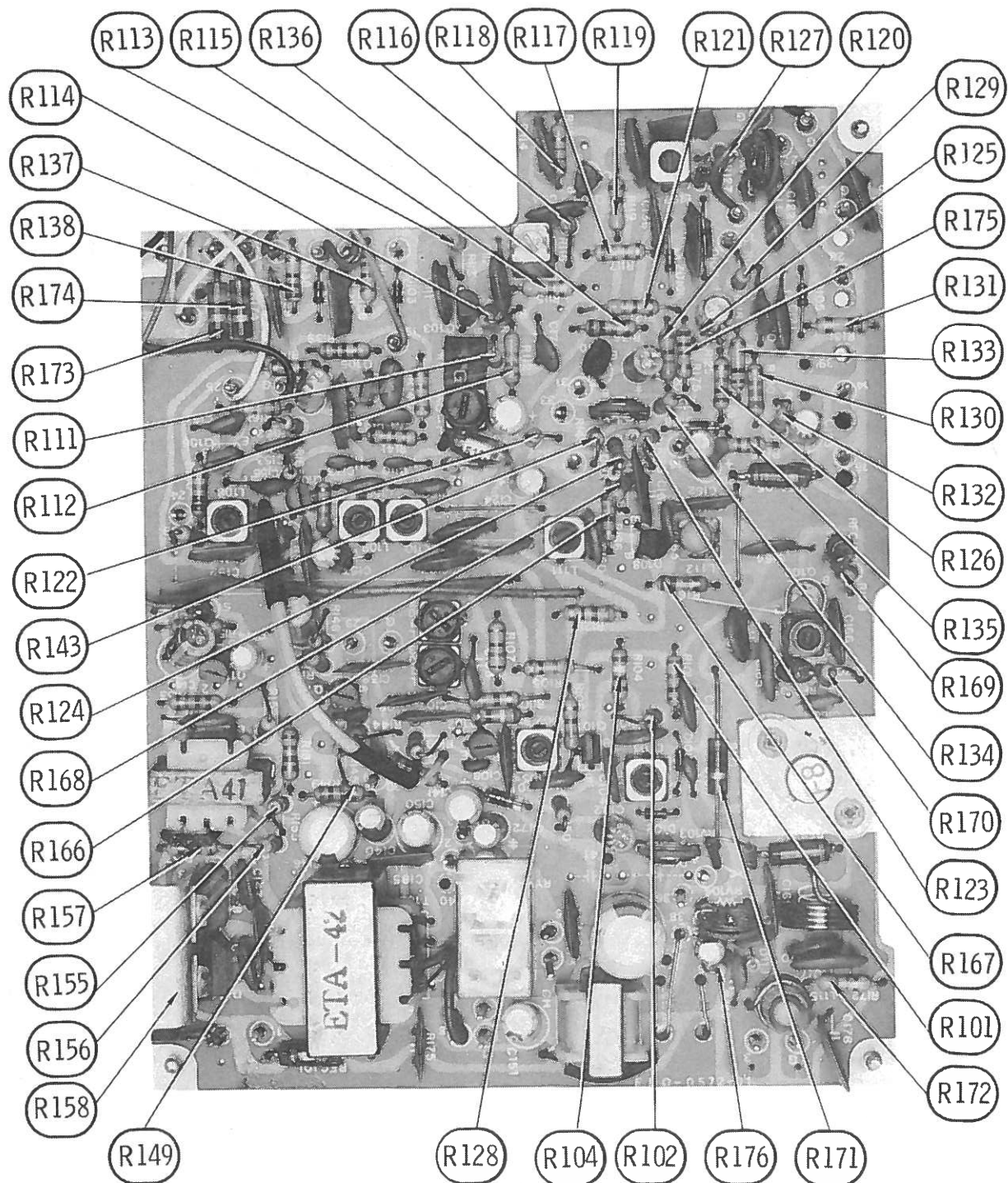
LAFAYETTE MODEL TELSAT 1023

MAIN BOARD

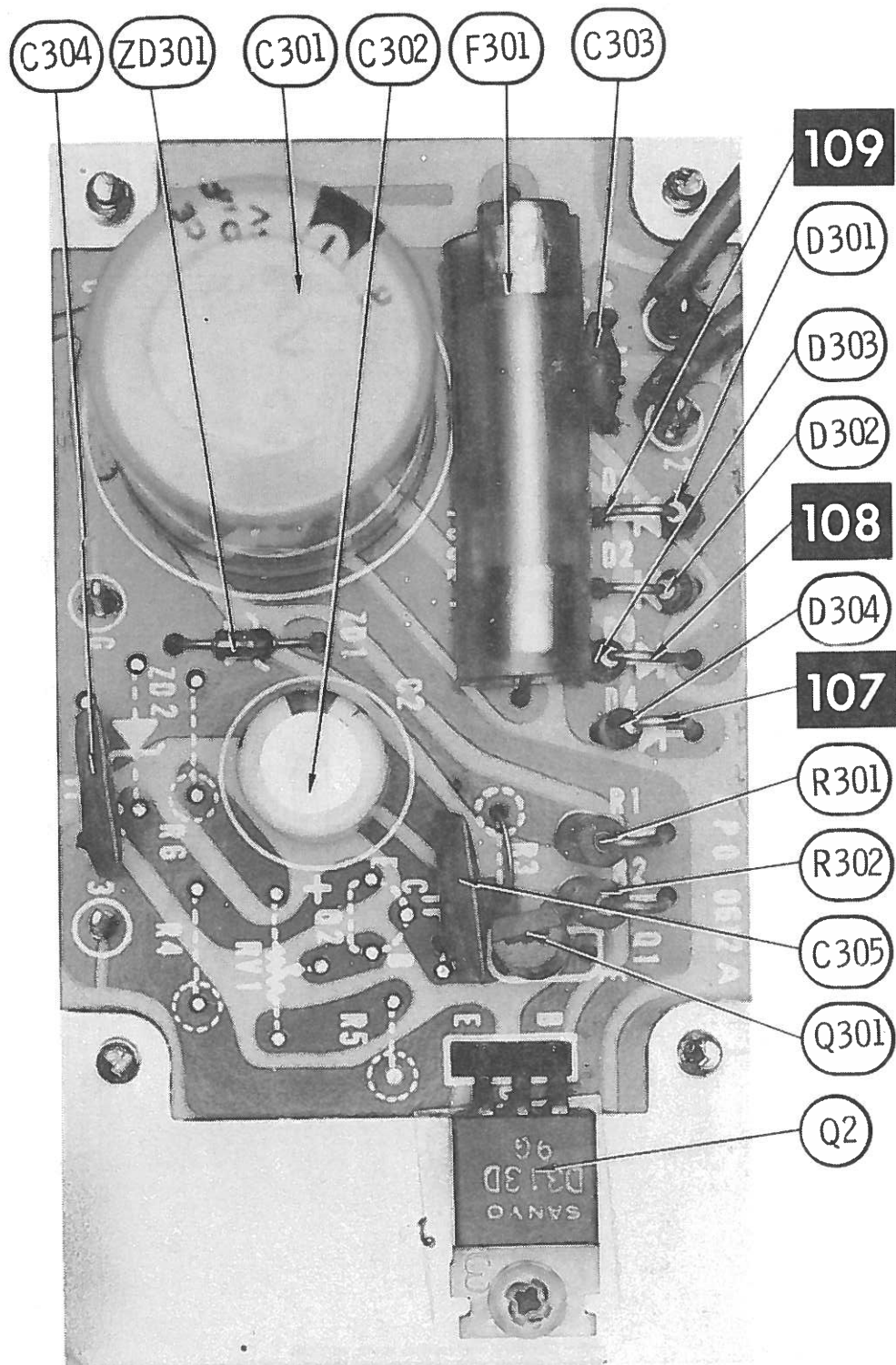




MAIN BOARD

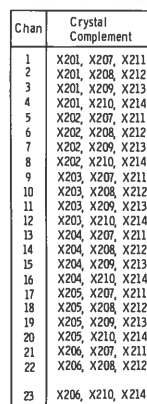


MAIN BOARD

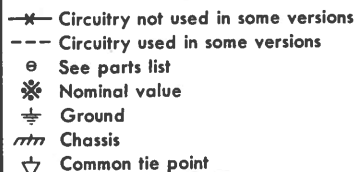
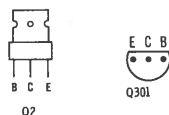
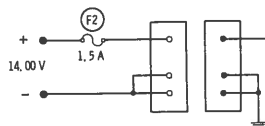


LAFAYETTE MODEL TELSAT 1023

POWER SUPPLY BOARD



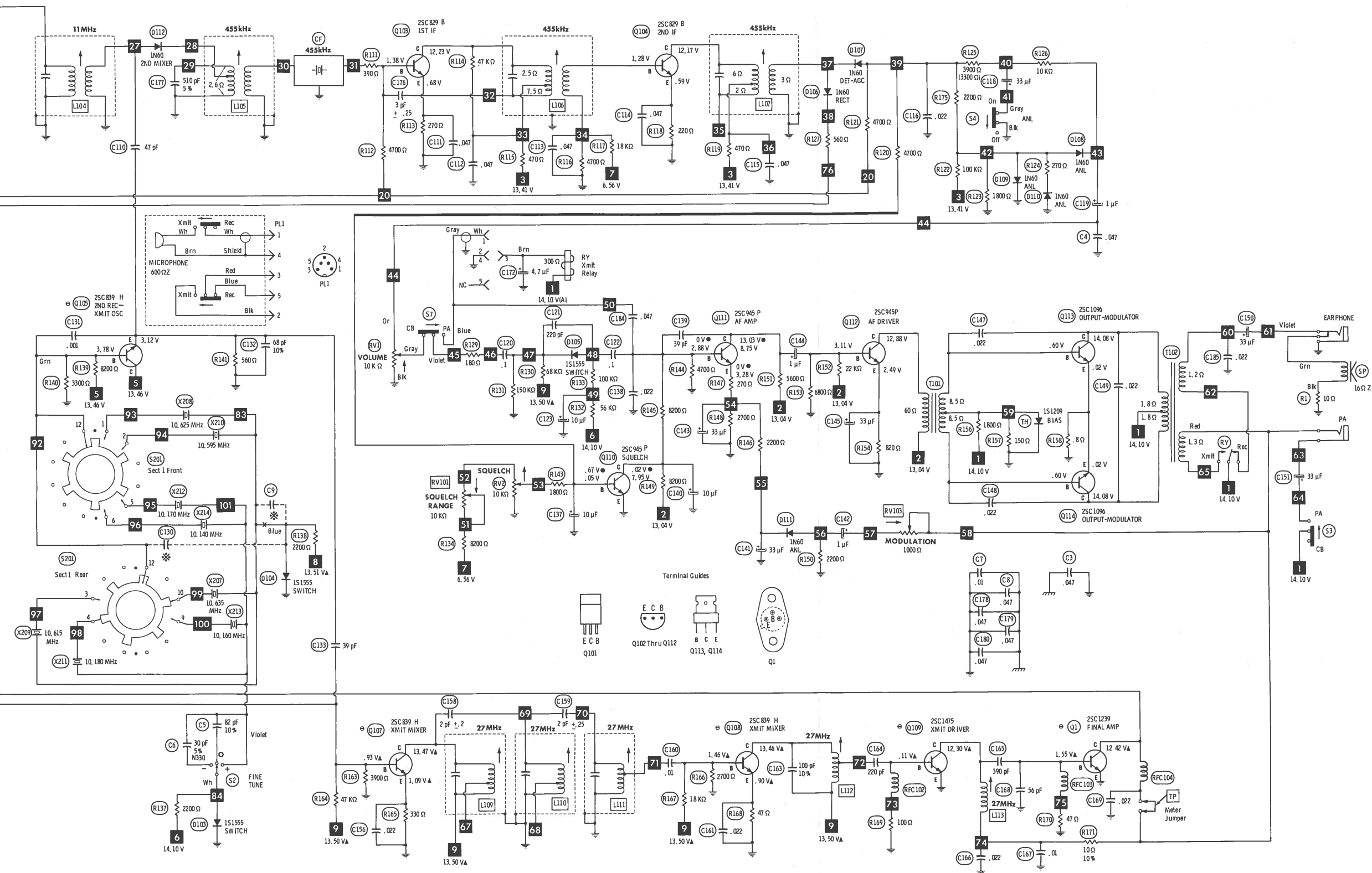
18



- Squelch fully clockwise
- ▲ 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.

WITH CIRCUITRACE™



PARTS LIST AND DESCRIPTION

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

WIRING DATA

General-use Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Shielded Antenna Lead	Use BELDEN No. 8214 Lowest-loss (RG-8/U Type) 8237 Low-loss (RG-8/U) 8240 (Solid) Miniature (RG-58/U) 8259 (Stranded) Miniature (RG-58A/U)
Coiled Microphone Cable	Use BELDEN No. 8497 3-Conductor (1 shielded for Press-to-Talk) Neoprene 8491 4-Conductor (2 shielded, 2 unshielded) Neoprene
Ignition Noise Suppression	Use BELDEN No. 7300-Series Spark-Plug Sets
Bonding Strap	Use BELDEN No. 8661 (3/8 inch)

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA							
			GENERAL ELECTRIC PART No.	INTERNATIONAL RECTIFIER PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.
D101	1S1555	1937-17	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D102	1S1555	1937-17	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D103	1S1555	1937-17	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D104	1S1555	1937-17	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D105	1S1555	1937-17	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D106	1N60	1000-17	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D107	1N60	1000-17	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D108	1N60	1000-17	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D109	1N60	1000-17	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D110	1N60	1000-17	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D111	1N60	1000-17	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D112	1N60	1000-17	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D113	1N60	1000-17	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D301	V06C	1949-17	GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
	F14A(1)		GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
	SR1K-4(1)		GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D302	V06C	1949-17	GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
	F14A(1)		GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
	SR1K-4(1)		GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D303	V06C	1949-17	GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
	F14A(1)		GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
	SR1K-4(1)		GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
D304	V06C	1949-17	GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
	F14A(1)		GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
	SR1K-4(1)		GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
Q1	25C1239	2167-17(2)	GE-46		PTC176			SK3049	RT-186	ECG237
	25CF8		GE-46		PTC176			SK3049		ECG237
Q2	25D313D	2418-17(3)	GE-66	TR-76	PTC154	HEPS5000	RE 21	SK3054	RT-154	ECG196
	25D313C	(3)	GE-66	TR-76	PTC154	HEPS5000	RE 21	SK3054	RT-154	ECG196
Q101	25C460A	1373-17	GE-17	TR-24	PTC101	HEPS0020	RE 10	SK3039	RT-187	ECG108
	25C829B	1925-17	GE-20	(IR)25C829B	PTC132	HEPS0011	RE 9	SK3018	RT-105	ECG229
	(1)									
	25C930(1)		GE-60	(IR)25C772	PTC132	HEPS0016	RE 9	SK3018	RT-108	ECG229
Q102	25C839H	2337-17	GE-20	TR-24	PTC121	HEPS0015	RE 13	SK3018	RT-107A	ECG123A
Q103	25C829B	1925-17	GE-20	(IR)25C829B	PTC132	HEPS0011	RE 9	SK3018	RT-105	ECG229
Q104	25C829B	1925-17	GE-20	(IR)25C829B	PTC132	HEPS0011	RE 9	SK3018	RT-105	ECG229
Q105	25C839H	2337-17	GE-20	TR-24	PTC121	HEPS0015	RE 13	SK3018	RT-107A	ECG123A
	25C829B	1925-17	GE-20	(IR)25C829B	PTC132	HEPS0011	RE 9	SK3018	RT-105	ECG229
	(1)									
Q106	25C839H	2337-17	GE-20	TR-24	PTC121	HEPS0015	RE 13	SK3018	RT-107A	ECG123A
	25C829B	1925-17	GE-20	(IR)25C829B	PTC132	HEPS0011	RE 9	SK3018	RT-105	ECG229
	(1)									
Q107	25C839H	2337-17	GE-20	TR-24	PTC121	HEPS0015	RE 13	SK3018	RT-107A	ECG123A
	25C829B	1925-17	GE-20	(IR)25C829B	PTC132	HEPS0011	RE 9	SK3018	RT-105	ECG229
	(1)									
Q108	25C839H	2337-17	GE-20	TR-24	PTC121	HEPS0015	RE 13	SK3018	RT-107A	ECG123A
	25C829B	1925-17	GE-20	(IR)25C829B	PTC132	HEPS0011	RE 9	SK3018	RT-105	ECG229
	(1)									
Q109	25C1475	2340-17(4)	GE-45	TR-64	PTC143	HEPS5014	RE 79	SK3048	RT-114	ECG315
Q110	25C945P	2338-17	GE-20	TR-21	PTC136	HEPS0015	RE 13	SK3124	RT-107A	ECG199
	25C828(1)		GE-18	(IR)25C828A	PTC132	HEPS0015	RE 13	SK3124	RT-107A	ECG199
Q111	25C945P	2338-17	GE-20	TR-21	PTC136	HEPS0015	RE 13	SK3124	RT-107A	ECG199
	25C828(1)		GE-18	(IR)25C828A	PTC132	HEPS0015	RE 13	SK3124	RT-107A	ECG199
Q112	25C945P	2338-17	GE-20	TR-21	PTC136	HEPS0015	RE 13	SK3124	RT-107A	ECG199
	25C828(1)		GE-18	(IR)25C828A	PTC132	HEPS0015	RE 13	SK3124	RT-107A	ECG199
	(1)									
Q113	25C1096	2334-17(5)	GE-28	TR-55	PTC110	HEPS5000	RE 42	SK3054	RT-197	ECG186
Q114	25C1096	2334-17(5)	GE-28	TR-55	PTC110	HEPS5000	RE 42	SK3054	RT-197	ECG186
Q301	25C945P	2338-17	GE-20	TR-21	PTC136	HEPS0015	RE 13	SK3124	RT-107A	ECG199
TH	1S1209	2400-17	GE-504A	8D4	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116
ZD101	MZ207-02A	2341-17	GEZD-6.8	Z1206	ZB6.8	HEPZ0409	RE 110	SK3058	RT-238	ECG5071
	7V Zener									
ZD301	WZ150	2396-17	GEZD-15	Z1214	ZB15B	HEPZ0418	RE 121	SK3063	RT-245	ECG145
	15V Zener									

(1) Alternate.

(2) Rating 12 watts @ 4 amps.

(3) Rating 30 watts @ 3 amps.

(4) Rating 750mW @ 1 amp.

(5) Rating 10 watts @ 2-amps.

PARTS LIST AND DESCRIPTION (CONTINUED)

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

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA					
		MFGR. PART No.	ARCO PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C118	33 6.3V	1056-52	ME-3-D-035	EP15-25	PC30-25	VTT33A10	EV-1125
C119	1 50V	1015-52	RME-A-J-001	EP50-1	PC1-50	MTV1CB50	EV-1615
C123	10 16V	1043-52	RME-B-G-010	EP15-10	PC10-25	VTT10A25	EV-1222
C124	10 16V	1043-52	RME-B-G-010	EP15-10	PC10-25	VTT10A25	EV-1222
C126	33 10V	1057-52	ME-3-D-035	EP15-25	PC30-25	VTT33A10	EV-1125
C134	10 16V	1043-52	RME-B-G-010	EP15-10	PC10-25	VTT10A25	EV-1222
C137	10 16V	1043-52	RME-B-G-010	EP15-10	PC10-25	VTT10A25	EV-1222
C140	10 16V	1043-52	RME-B-G-010	EP15-10	PC10-25	VTT10A25	EV-1222
C141	33 10V	1057-52	ME-3-D-035	EP15-25	PC30-25	VTT10A25	EV-1222
C142	1 50V	1015-52	RME-A-J-001	EP50-1	PC1-50	MTV1CB50	EV-1615
C143	33 10V	1057-52	ME-3-D-035	EP15-25	PC30-25	VTT33A10	EV-1125
C144	1 50V	1015-52	RME-A-J-001	EP50-1	PC1-50	MTV1CB50	EV-1615
C145	33 6.3V	1056-52	ME-3-D-035	EP15-25	PC30-25	VTT33A10	EV-1125
C146	100 16V	1080-52	RME-E-E-100	EP15-100	PC100-16	VTT100F16	EV-1230
C150	33 16V	1058-52	ME-4-G-035	EP30-25	PC30-25	VTT33D25	EV-1325
C151	33 16V	1058-52	ME-4-G-035	EP30-25	PC30-25	VTT33D25	EV-1325
C155	33 16V	1058-52	ME-4-G-035	EP30-25	PC30-25	VTT33D25	EV-1325
C157	10 16V	1043-52	RME-B-G-010	EP15-10	PC10-25	VTT10A25	EV-1222
C172	4.7 25V	1030-52	RME-A-J-005	EP30-5	PC5-50	VTT4R7A50	EV-1319
C174	270 16V	1105-52	RME-L-E-500	EP15-500	PC500-16	VTT470J16	EV-1250
C188	1 50V	1015-52	RME-A-J-001	EP50-1	PC1-50	MTV1CB50	EV-1615
C301	2200 25V	1149-52	ME-G2000		WBR2000-25	TC2520A	TVA-1213.5
C302	100 16V	1080-52	RME-E-E-100	EP15-100	PC100-16	VTT100F16	EV-1230

CAPACITORS

ITEM No.	RATING	MFGR. PART No.	REPLACEMENT DATA				
			ARCO PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	22		CCT0-220	DTZ-22	NP022	CN0422	10TCC-Q22
C2	150 10%		CCD-151	DD-151		CN0315	10TCC-T15
C3	.047		CCD-503	DC-503	MGP05	MAG5015	TGL-S50
C4	.047		CCD-503	DC-503	MGP05	MAG5015	TGL-S50
C5	82 10%		CCD-820	DD-820		GP482	10TS-Q82
C6	30 5% N330		*			*	10TCS-Q30
C7	.01		CCD-103				10TS-S10
C8	.047		CCD-503	DC-503	MGP05	MAG5015	TGL-S50
C101	39		CCT0-390			CN0439	10TCC-Q39
C102	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C103	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C104	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C105	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C106	.022		CCD-203			GP120	5GA-S20
C107	.022		CCD-203			GP120	5GA-S20
C108	22		CCT0-220	DTZ-22	NP022	CN0422	10TCC-Q22
C109	.022		CCD-203			GP120	5GA-S20
C110	47		CCT0-470	DTZ-47	NP047	CN0447	10TCC-Q47
C111	.047		CCD-503	DC-503	MGP05	MAG5015	TGL-S50
C112	.047		CCD-503	DC-503	MGP05	MAG5015	TGL-S50
C113	.047		CCD-503	DC-503	MGP05	MAG5015	TGL-S50
C114	.047		CCD-503	DC-503	MGP05	MAG5015	TGL-S50
C115	.047		CCD-503	DC-503	MGP05	MAG5015	TGL-S50
C116	.022		CCD-203	DC-503	MGP05	MAG5015	TGL-S50
C117	.002		CCD-203			GP120	5GA-S20
C120	.1			DC-104	MGP1	MAG5001	TG-P10
C121	220		CCD-221	DD-221		GP322	10TS-T22
C122	.1			DC-104	MGP1	MAG5001	TG-P10
C125	.047		CCD-503	DC-503	MGP05	MAG5015	TGL-S50
C127	.047		CCD-503	DC-503	MGP05	MAG5015	TGL-S50
C128	.022		CCD-203	DC-503	MGP05	MAG5015	TGL-S50
C129	.022		CCD-203			GP120	5GA-S20
C131	.001		DM19-102J	CPR-1000J	CD19FD102J03	SX210	424ME1001J501
C132	68 10%		CCD-680	DD-680	GP68	GP468	10TS-Q68
C133	39		CCT0-390			CN0439	10TCC-Q39
C135	.022		CCD-203			GP120	5GA-S20
C136	.022		CCD-203			GP120	5GA-S20
C138	.022		CCD-203			GP120	5GA-S20
C139	39		CCT0-390			CN0439	10TCC-Q39
C147	.022		CCD-203			GP120	5GA-S20
C148	.022		CCD-203			GP120	5GA-S20
C149	.022		CCD-203			GP120	5GA-S20
C152	.022		CCD-203			GP120	5GA-S20
C153	150 10%		CCD-151	DD-151		CN0315	10TCC-T15
C154	3 +.25		CCT0-3R3	DTZ-3R3	NP03P3	CN0533	10TCC-V33
C155	27		CCT0-270			CN0427	10TCC-Q27
C156	.022		CCD-203			GP120	5GA-S20
C158	2 +.25		CCT0-2R2	DTZ-2R2	NP02P2	CN0522	10TCC-V22
C159	2 +.25		CCT0-2R2	DTZ-2R2	NP02P2	CN0522	10TCC-V22
C160	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C161	.022		CCD-203			GP120	5GA-S20
C162	.022		CCD-203			GP120	5GA-S20
C163	100 10%		CCT0-101	DTZ-100	NP0100	CN0310	10TCC-T10
C164	220		CCD-221	DD-221		GP322	10TS-T22
C165	39		CCT0-390			CN0439	10TCC-Q39
C166	.022		CCD-203			GP120	5GA-S20
C167	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C168	56		DM10-560J	CPR-56J	CD6ED560J03	SX456	424MC56R0J501

LAFAYETTE MODEL TELSAT 1023

PARTS LIST AND DESCRIPTION (CONTINUED)

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

CAPACITORS(cont)

ITEM No.	RATING	MFR. PART No.	REPLACEMENT DATA				
			ARCO PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C169	.022		CCD-203			GP120	5GA-S20
C170	.01		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C171	330		CCD-331	DD-331	GP330	GP333	10TS-T33
C173	.022		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C175	.022		CCD-103	DC-103	GP10000	MAG5011	2SS-S10
C176	3 +.25		CCTO-3R3	DTZ-3R3	NP03P3	CN0533	10TCC-V33
C177	510 5%		DM15-511J	CPR-510J	CD15FD511J03	SX351	424ME5100J501
C178	.047		CCD-503	DC-503	MGP05	MAG5015	TGL-S50
C179	.047		CCD-503	DC-503	MGP05	MAG5015	TGL-S50
C180	.047		CCD-503	DC-503	MGP05	MAG5015	TGL-S50
C181	.022		CCD-203			GP120	5GA-S20
C182	.022		CCD-203			GP120	5GA-S20
C183	2 +.25		CCTO-2R2	DTZ-2R2	NP02P2	CN0522	10TCC-V22
C184	.047		CCD-503	DC-503	MGP05	MAG5015	TGL-S50
C185	.022		CCD-203			GP120	5GA-S20
C186	.022		CCD-203			GP120	5GA-S20
C187	.0047		CCD-472				10TS-D47
C303	.0047		CCD-472				10TS-D47
C304	.022		CCD-203			GP120	5GA-S20
C305	.047		CCD-503	DC-503	MGP05	MAG5015	TGL-S50

* 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	RESIST-ANCE	REPLACEMENT DATA				
			MFR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	MALLORY PART No.	TRW PART No.
RV1	Volume/Switch	10K	1788-11	F2-10K (1), SSK014, KR2	A47-10K-Z (1), KSS-3, SWE-20 or [NP-10K-Z (1), UP-C-400, NWE-20]	RUI14A, SL36 (1), SL36, SL1500, US42 or [UA14A (1), SK750, US27] or [U18 (1), US27]	BU1 (1), CF61, SS1, WF
RV2	Squelch	10K	1754-11	F5-10K (1), SSK014	A47-10K-V (1), KSS-3 or [NP-10K-V (1), UP-C-400]	RUI14R, SL36 (1), SL1500 or [UA114R (1), SK750] or U19 (1)	BU1 (1), CF35, SS1, DC1
RV101	Squelch Range	10K	2474-13	TSV-10K (2) or T-10K (2)	C-103 (2)	MTC14L1 (2)	X201R103B (2)
RV102	"S"	10K	2474-13	TSV-10K (2) or T-10K (2)	C-103 (2)	MTC14L1 (2)	X201R103B (2)
RV103	Modulation	1000	2564-13	TSV-1K (2) or T-1000 (2)	C-102 (2)	MTC13L1 (2)	X201R102B (2)
RV104	RF Meter	20K	2292-13	T-20K (2) or TSV-25K (2)	C-253 (2)	MTC24L1 (2)	X201R253B (2)

(1) Enlarge mounting hole.

(2) Cut off one of the end terminals and bend to fit PC board.

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	TVI Trap (54MHz)	2216-23	ETR-0018		
L101	Rec. Antenna (27MHz)	2721-23	ETR-194		
L102	Rec. RF (27MHz)	2431-23	ETR-104		
L103	1st Mixer (11MHz)	2732-23	ETR-0279		
L104	1st Mixer (11MHz)	2732-23	R-279		
L105	Input IF (455kHz)	2197-24	ETI-0085		
L106	Interstage IF (455kHz)	1943-24	ETI-17		
L107	Output IF (455kHz)	1944-23	ETI-18		
L108	Rec. Osc. (37MHz)	2723-23	ETR-196		
L109	Xmit Mixer (27MHz)	2354-23	ETR-0031		
L110	Xmit Mixer (27MHz)	2354-23	ETR-0031		
L111	Xmit Mixer (27MHz)	2352-23	ETR-0031		
L112	Xmit Buffer (27MHz)	2225-23	ETR-0022		
L113	Xmit Driver (27MHz)	2724-23	ETR-0197		
L114	Final Tank (27MHz)	2724-23	ETR-0017		
L115	Pi Filter (27MHz)	2725-23	ETR-0232		
RFC101	RF Choke	2217-23			
RFC102	RF Choke	2342-23			
RFC103	RF Choke	2342-23			
RFC104	RF Choke	2342-23			
RFC105	RF Choke	2342-23			

PARTS LIST AND DESCRIPTION (CONTINUED)

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

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA				NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
CH	1100mA	.1	.21mA	1090-15 (ELA-2)				

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	SEC. 2	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD Part No.	
T101	2	1		1805-15 (ETA-41)				

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA				NOTES
	PRI.	SEC.	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
T102	18	8	1806-15 (ETA-42)				

TRANSFORMER (Power)

ITEM No.	RATING		REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	MFGR. PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
PT	120V AC @ 320mA AC	15V AC @ 1800mA AC	1835-15 (ETP-0078)				

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP	3" PM 8 ohms	1305-36	30A05RZ16	

PARTS LIST AND DESCRIPTION (CONTINUED)

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

FUSE DEVICES

ITEM No.	DESCRIPTION	REPLACEMENT DATA						
		PART No.		BUSS PART No.		LITTELFUSE PART No.		WORKMAN PART No.
		DEVICE	HOLDER	DEVICE	HOLDER	DEVICE	HOLDER	DEVICE
F1	.75A Quick Acting	5389-20	13-158317	AGC3/4	HKP	312.750	342012A	
F2	1.5 Quick Acting			AGC1 1/2	HDJ	31201.5	150145	FG1 1/2-2
F301	2 Amp Quick Acting	5396-20	1417-19	AGC2-2	HDJ	312002	150145	FG2-2
	2 Amp Quick Acting			GJV2		318002		

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
X201	37.600	1361-35	DA20W37.600	1,2,3,4	X208	10.625	1369-35	DB80W10.635	2,6,10,14,18,22
X202	37.650	1363-35	DA20W37.650	5,6,7,8	X209	10.615	1370-35	DB80W10.615	3,7,11,15,19
X203	37.700	1364-35	DA20W37.700	9,10,11,12	X210	10.595	1371-35	DB80W10.595	4,8,12,16,20,23
X204	37.750	1365-35	DA20W37.750	13,14,15,16	X211	10.180	1372-35	DC90W10.180	1,5,9,13,17,21
X205	37.800	1366-35	DA20W37.800	17,18,19,20	X212	10.170	1373-35	DC90W10.170	2,6,10,14,18,22
X206	37.850	1367-35	DA20W37.850	21,22,23	X213	10.160	1374-35	DC90W10.160	3,7,11,15,19
X207	10.635	1368-35	DB80W10.635	1,5,9,13,17,21	X214	10.140	1375-35	DC90W10.140	4,8,12,16,20,23

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
CF	Ceramic Filter	1361-35	455kHz
M1	Meter	1203-27	"S"-RF
RY	Relay	1084-37	Xmit/Rec
S2	Switch	2050-14	Delta Fine Tune
S3	Switch	2102-14	CB-PA
S4	Switch	2102-14	ANL
S201	Switch	2035-14	Channel Selector
	Printed Circuit Board	1799-16	Main
	Printed Circuit Board	1800-16	Crystals and Channel Selector
	Printed Circuit Board	1801-10	Power

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

ITEM	PART No.	ITEM	PART No.
Front Panel	1863-80	Knob, Channel Selector	2018-18
Rear Panel	1865-80	Knob, Volume-Squelch	2019-18
Case	1864-80	Plate, Channel	5391-20
Chassis	1866-80		

ACCESSORIES

ITEM	MFGR. PART No.	REMARKS
Microphone	109034	
AC Cord Assembly	1287-38	