



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 T-240D

MANUFACTURER'S SPECIFICATIONS

Dimensions

12" W × 5" H × 8-1/4" D

Net Weight

17 lbs

Power Supply

105 — 120 volt, 50/60 Hz AC; 12 volt DC

Power Consumption

AC — 80 watts

DC — 6.2A REC; 7 A TX. (13.6 volt)

40

Channels

RECEIVER

Input Impedance

50 — 52 ohms

Sensitivity

0.8uV for 10dB S + N to N ratio

Selectivity

6 KHz bandwidth — 6dB

Intermediate Frequency

1st IF 9.785 MHz; 2nd IF 455 kHz

Image Rejection

— 75 dB

Audio Output

4 watts

External Speaker Impedance

8 ohms

TRANSMITTER

RF Power Output

4 watts

Modulation

AM

Harmonic Suppression

Better than 60dB down

Frequency Stability

Better than 0.005%

Output Impedance

50 — 52 ohms

Courtesy of the Manufacturer

ROBYN MODEL T-240D

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

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ALIGNMENT INSTRUCTIONS

CAUTION: Use isolation transformer or observe polarity when connecting test equipment. Maintain line voltage at 120V AC. Allow a 15-minute warm-up period. 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:
 L181 9440
 VC901, VC902 8276, 5000
 L302, L303 5009, 8728-A, 8728
 L102, L201, L401, L402, L702, L703, L801, L904 .. 9440, 8282, 8606, 9302

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of frequency counter to TP1 (Q11, Collector).	Ch. 19 Delta Tune Detent	L181	Check for 10.240MHz.
Input of frequency counter to TP2 (Q14, Emitter).	Ch. 19 Delta Tune Detent		Check for 15.250MHz.
Input of DC meter to TP3 (Q12, Pin 6).	Ch. 1 Delta Tune Detent		Adjust for 1.80 volts.
Input of frequency counter to TP5 (V7, Pin 2).	Ch. 1 Delta Tune Detent		Check for 17.180MHz. Check all channels. (See Truth Chart for correct frequencies.)
Input of frequency counter to TP4 (Q17, Emitter).	Ch. 19, XMT		Check for 9.785MHz.

RECEIVER ALIGNMENT

Connect an AC VTVM or AF wattmeter across speaker voice coil. Adjust volume control to obtain a suitable indication. Set generator output low enough to prevent AGC limiting.

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to TP6 (V2, Pin 2). 455kHz, 1000Hz @ 30% modulation.	Ch. 19 Fine Tune Detent Squelch MIN	L402, L401, L303, L302	Adjust for maximum output.
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation.	Ch. 19 Fine Tune Detent Squelch MIN	L201, L102	Adjust for maximum output. If necessary, readjust L302, L303, L401, and L402.

RECEIVER ADJUSTMENTS

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

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Output of signal generator thru .01uF to antenna jack. 27.185MHz, 1000Hz @ 30% modulation. Output 100uV.	Ch. 19 S-RF S	VR1	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	TRANSCIVER	ADJUST	REMARKS
Input of spectrum analyzer or harmonic meter to antenna jack.	Ch. 19	L703, L702, L801, VC901, VC902	Adjust for maximum.
	Ch. 19	L702 (Top)	Adjust for 4 watts maximum.
	Ch. 19	L904	Adjust for MINIMUM at 54MHz.

TRANSMITTER ADJUSTMENTS

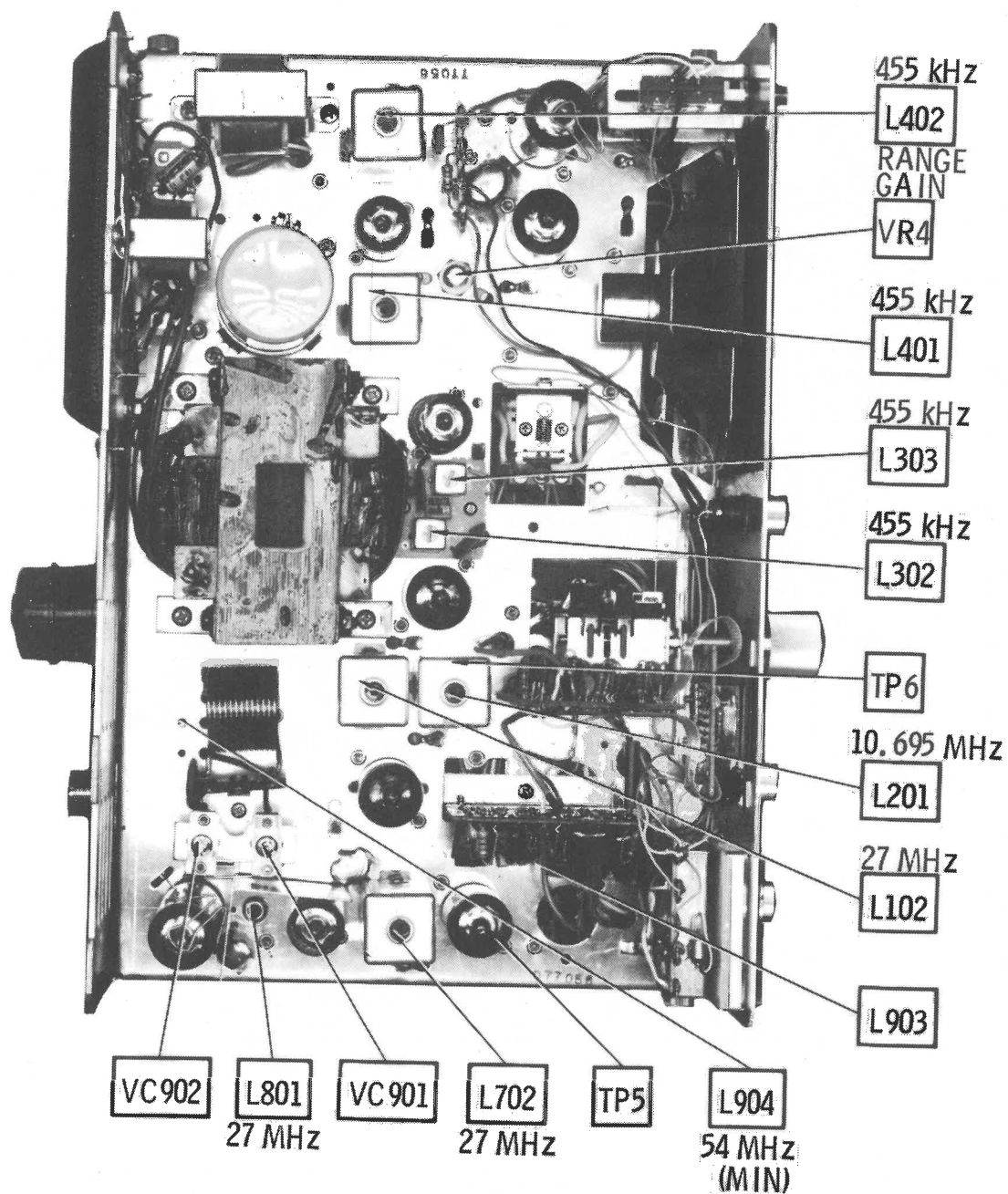
Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.
NOTE: Be sure to check transmit frequency and power on all active channels after adjustment of transmitter.
See page 4 for channel frequencies.

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
Input of oscilloscope or modulation meter to antenna jack. Inject a 1000Hz, 100mV signal at mic input.	Ch. 19 Range Expand On	VR4	RANGE GAIN ADJ. (MIC) Adjust VR4 for 100% modulation maximum.
Connect an RF wattmeter and 50-ohm, 25-watt dummy load to antenna connector.	Ch. 19 S-RF RF	VR6	RF PWR METER Adjust VR6 so that RF panel meter agrees with RF wattmeter.

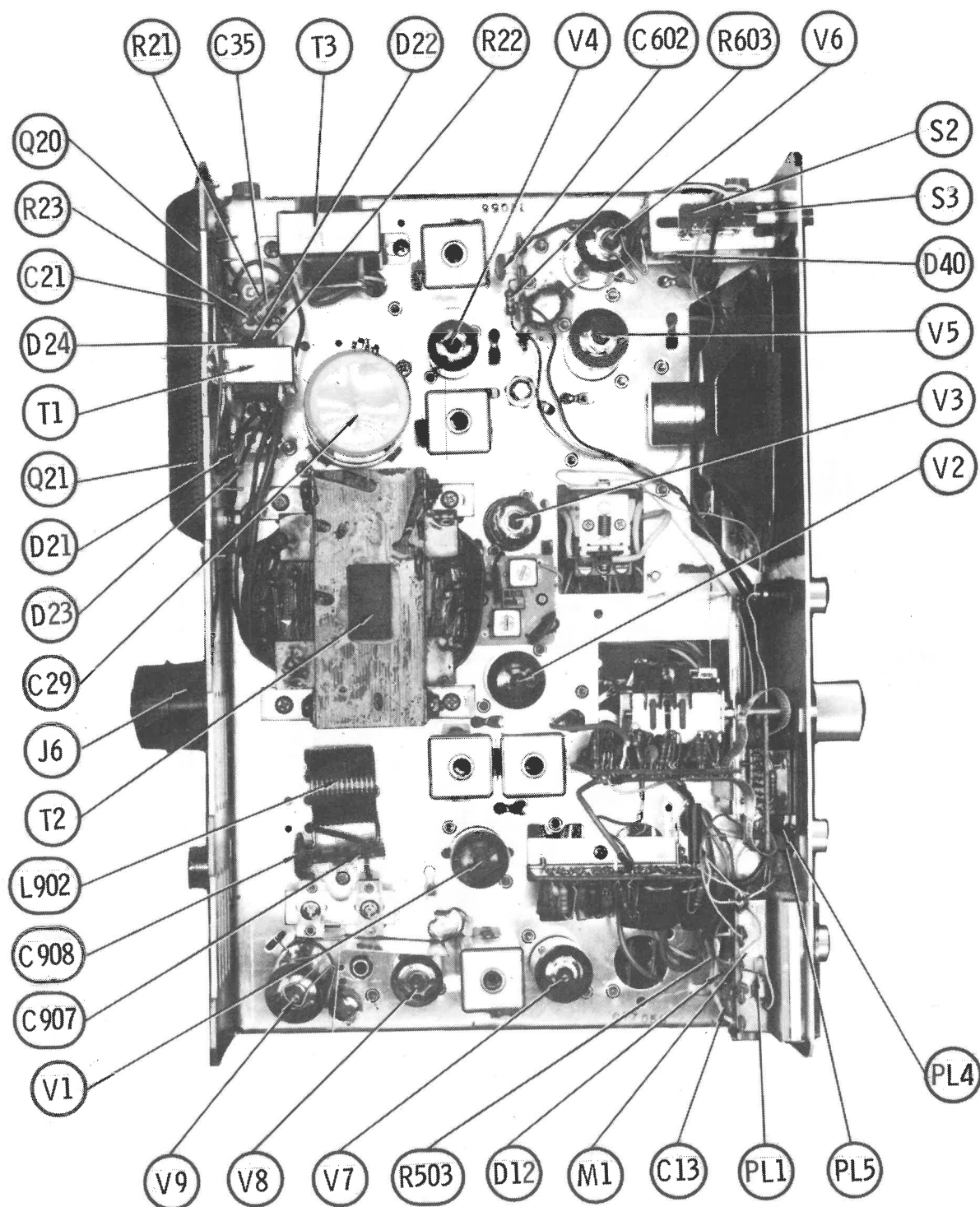
ROBYN MODEL T-240D

TRUTH CHART

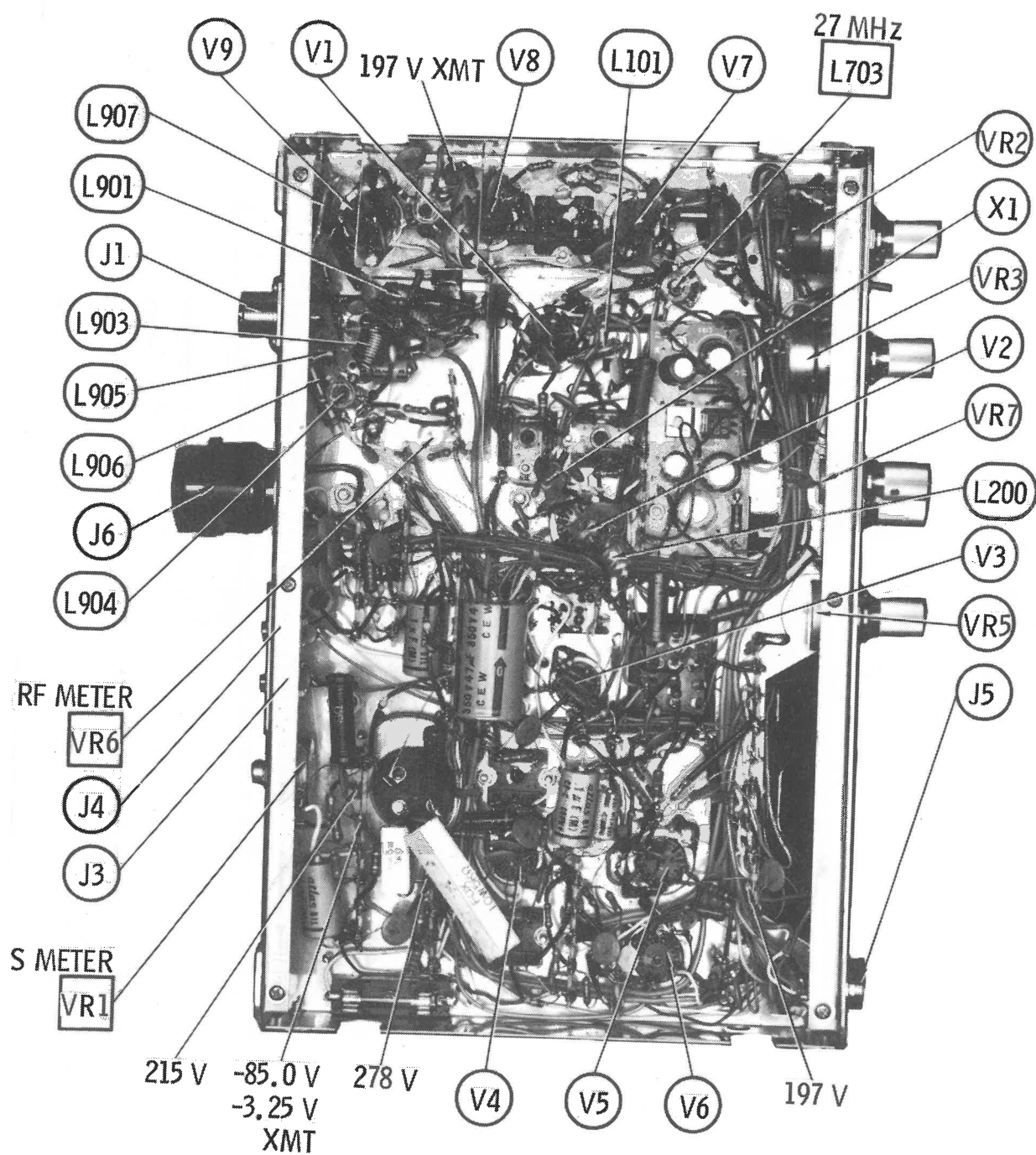
TRUTH CHART										
C H A N N E L	1 = 5.46 Volts 0 = 0 Volts							REC & XMT VCO OUTPUT IN MHz AT TP5.		
	Q13 PROGRAM DIVIDER									
	PINS									
	3	2	1	15	14	13				
1	0	0	0	0	0	0			17.180	
2	0	0	0	0	0	1			17.190	
3	0	0	0	0	1	0			17.200	
4	0	0	0	1	0	0			17.220	
5	0	0	0	1	0	1			17.230	
6	0	0	0	1	1	0			17.240	
7	0	0	0	1	1	1			17.250	
8	0	0	1	0	0	1			17.270	
9	0	0	1	0	1	0			17.280	
10	0	0	1	0	1	1			17.290	
11	0	0	1	1	0	0			17.300	
12	0	0	1	1	1	0			17.320	
13	0	0	1	1	1	1			17.330	
14	0	1	0	0	0	0			17.340	
15	0	1	0	0	0	1			17.350	
16	0	1	0	0	1	1			17.370	
17	0	1	0	1	0	0			17.380	
18	0	1	0	1	0	1			17.390	
19	0	1	0	1	1	0			17.400	
20	0	1	1	0	0	0			17.420	
21	0	1	1	0	0	1			17.430	
22	0	1	1	0	1	0			17.440	
23	0	1	1	1	0	1			17.470	
24	0	1	1	0	1	1			17.450	
25	0	1	1	1	0	0			17.460	
26	0	1	1	1	1	0			17.480	
27	0	1	1	1	1	1			17.490	
28	1	0	0	0	0	0			17.500	
29	1	0	0	0	0	1			17.510	
30	1	0	0	0	1	0			17.520	
31	1	0	0	0	1	1			17.530	
32	1	0	0	1	0	0			17.540	
33	1	0	0	1	0	1			17.550	
34	1	0	0	1	1	0			17.560	
35	1	0	0	1	1	1			17.570	
36	1	0	1	0	0	0			17.580	
37	1	0	1	0	0	1			17.590	
38	1	0	1	0	1	0			17.600	
39	1	0	1	0	1	1			17.610	
40	1	0	1	1	0	0			17.620	



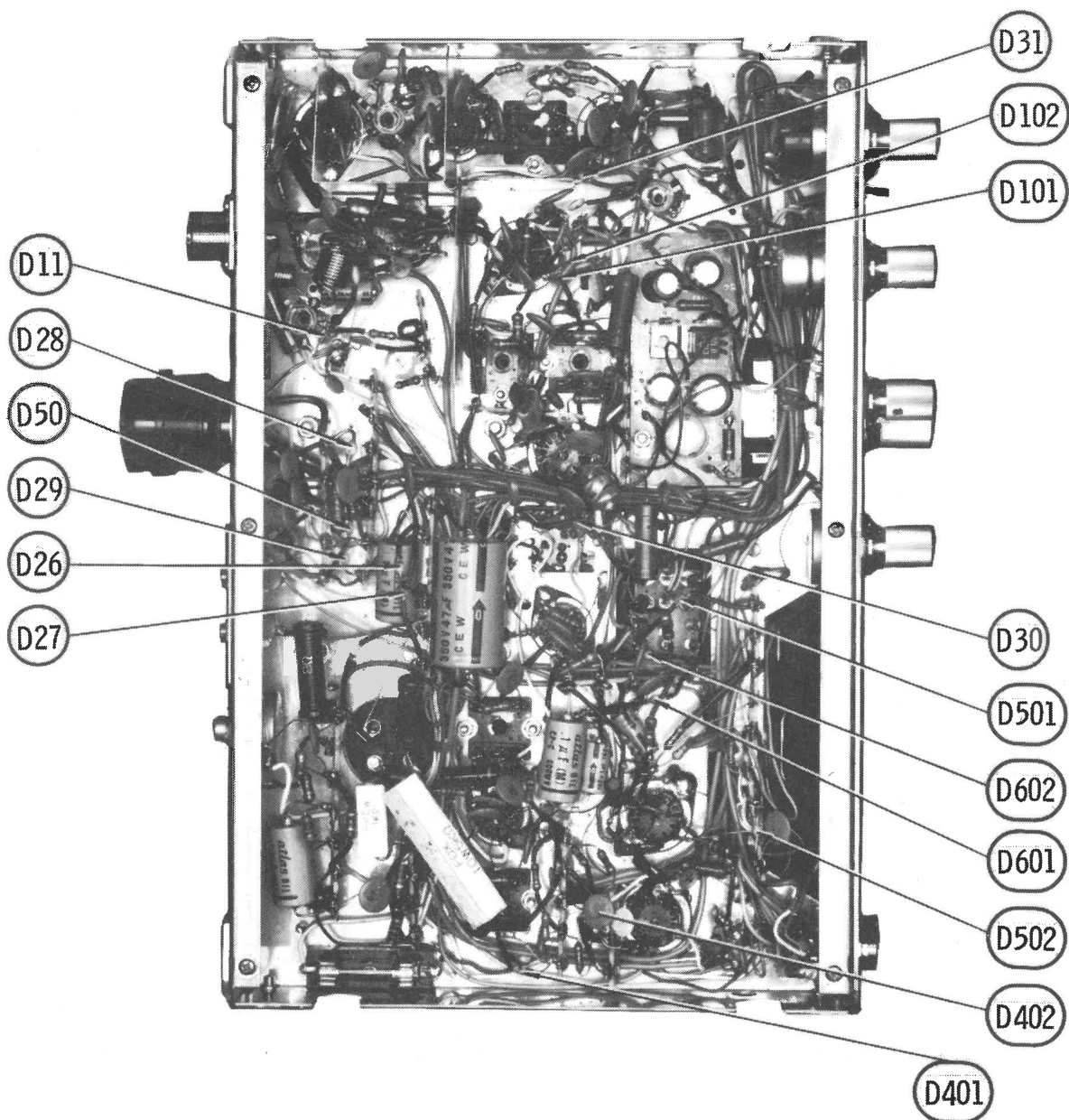
CHASSIS-TOP



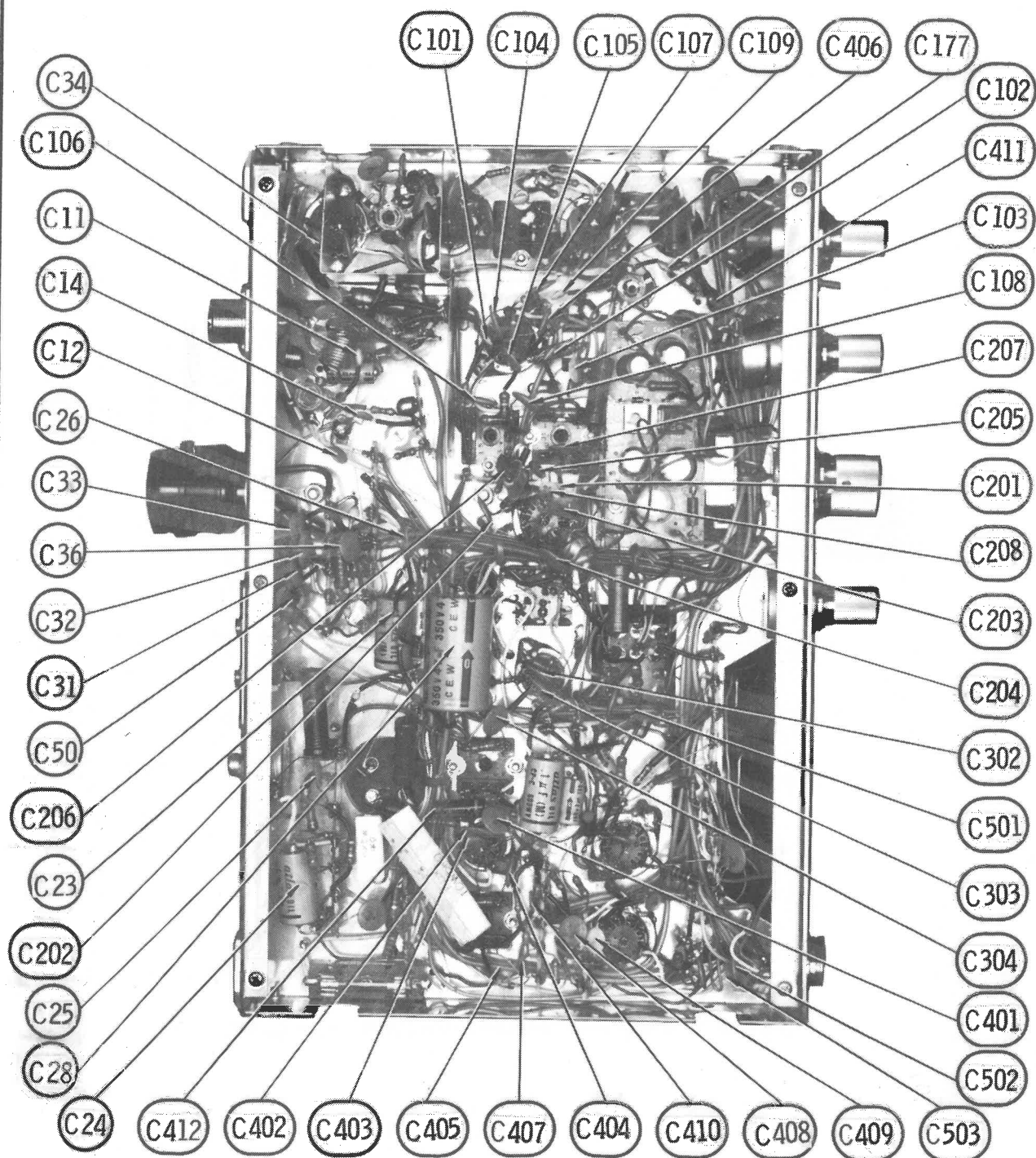
CHASSIS-TOP



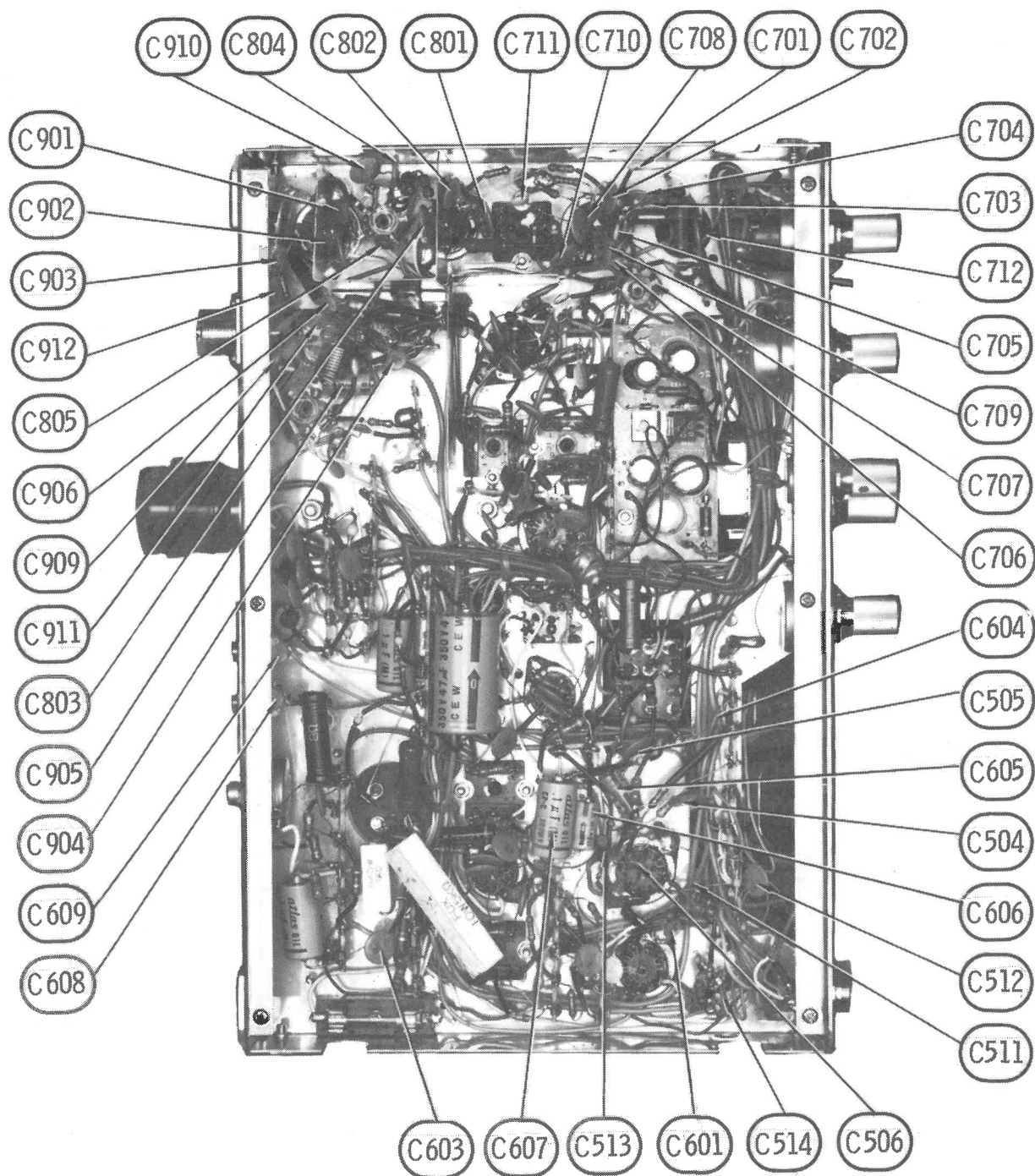
CHASSIS-BOTTOM



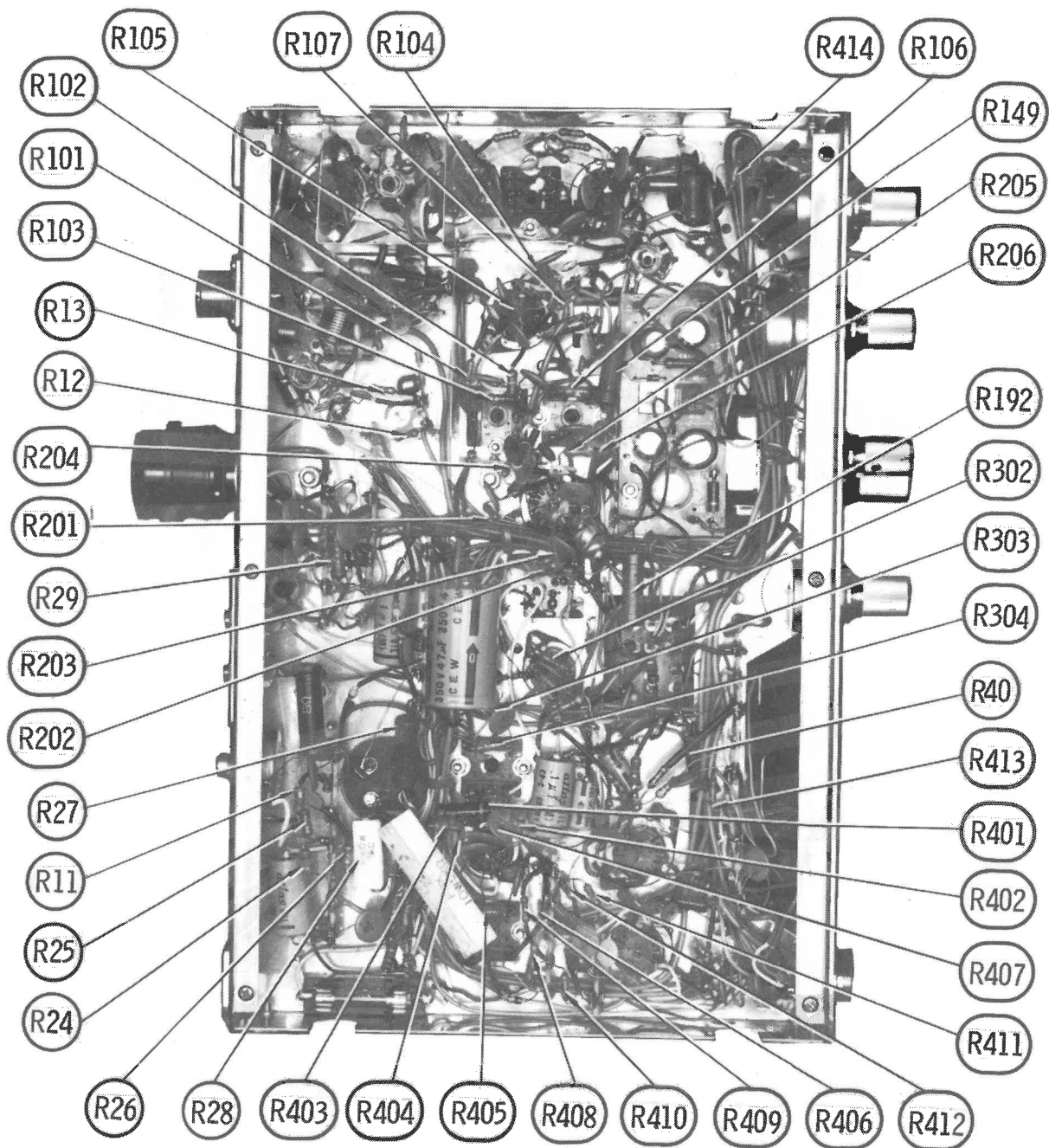
CHASSIS-BOTTOM



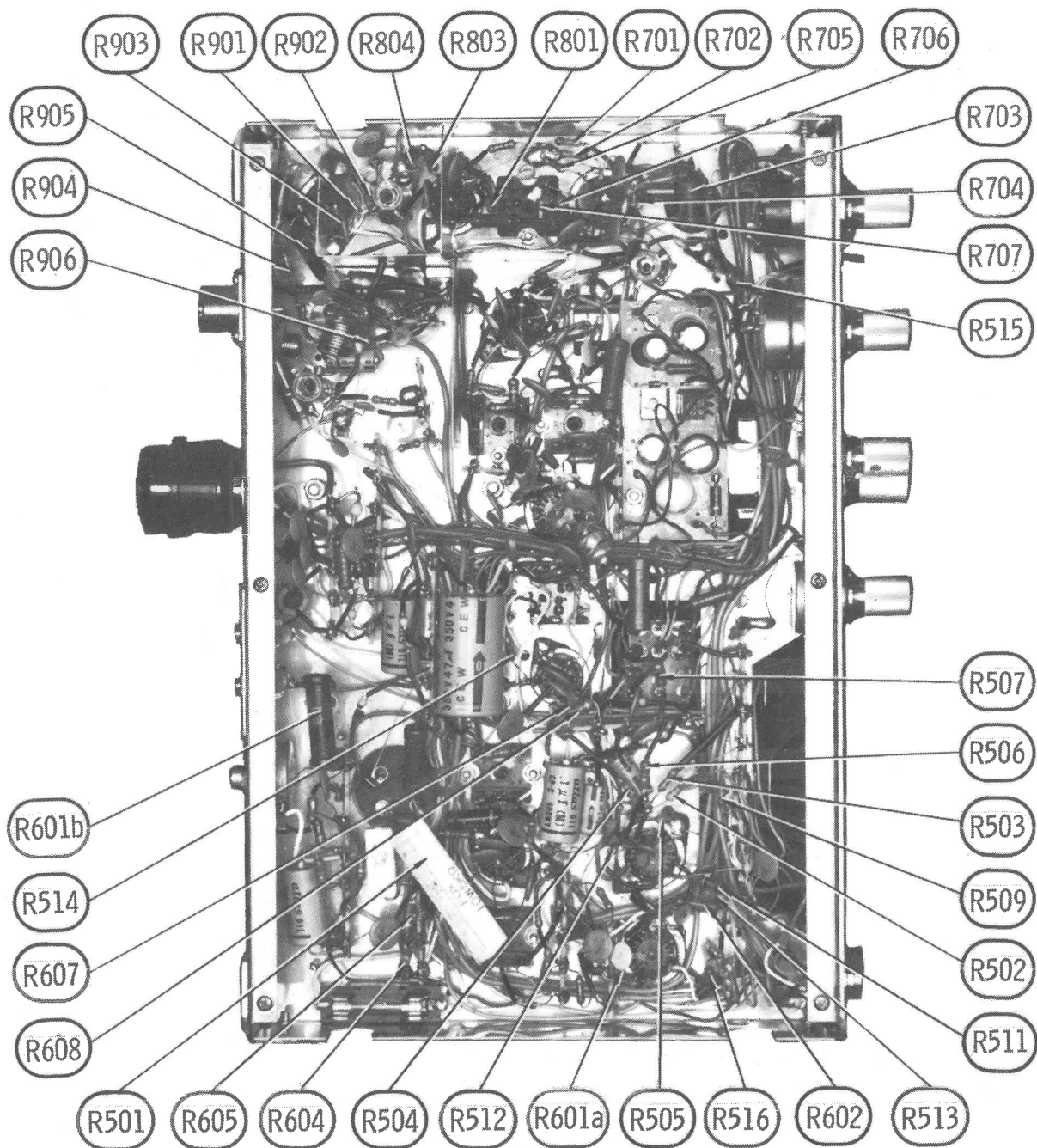
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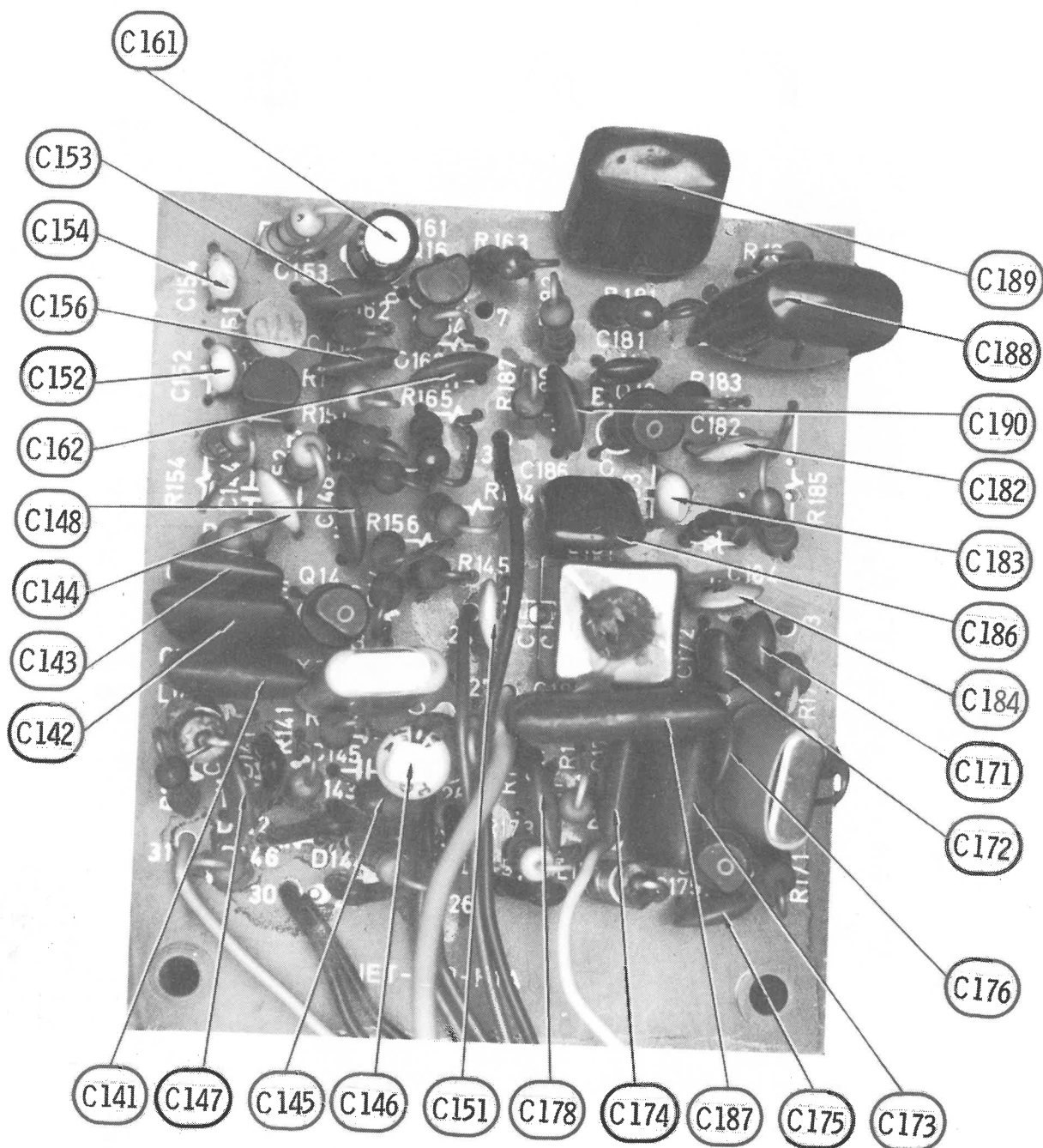
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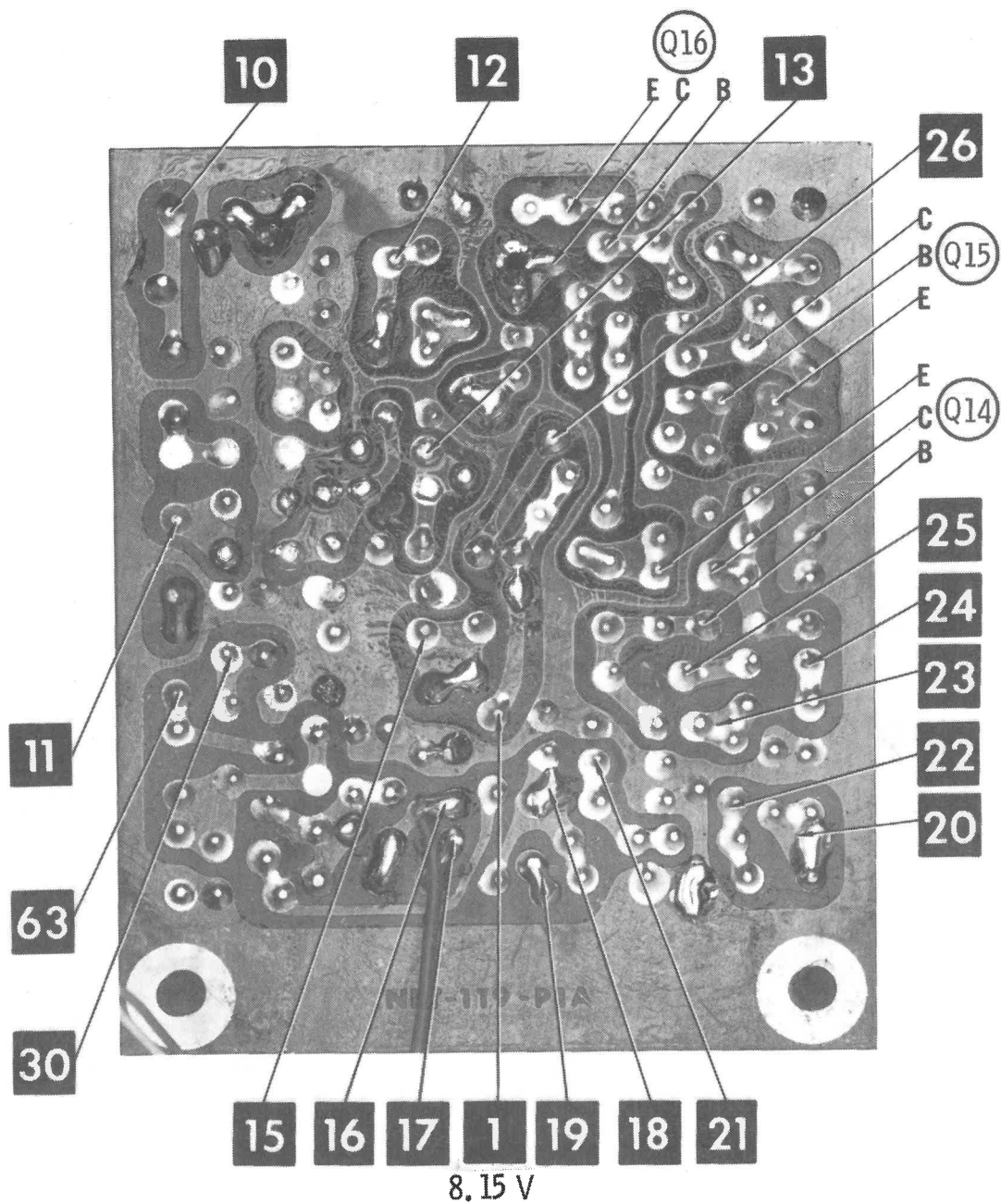
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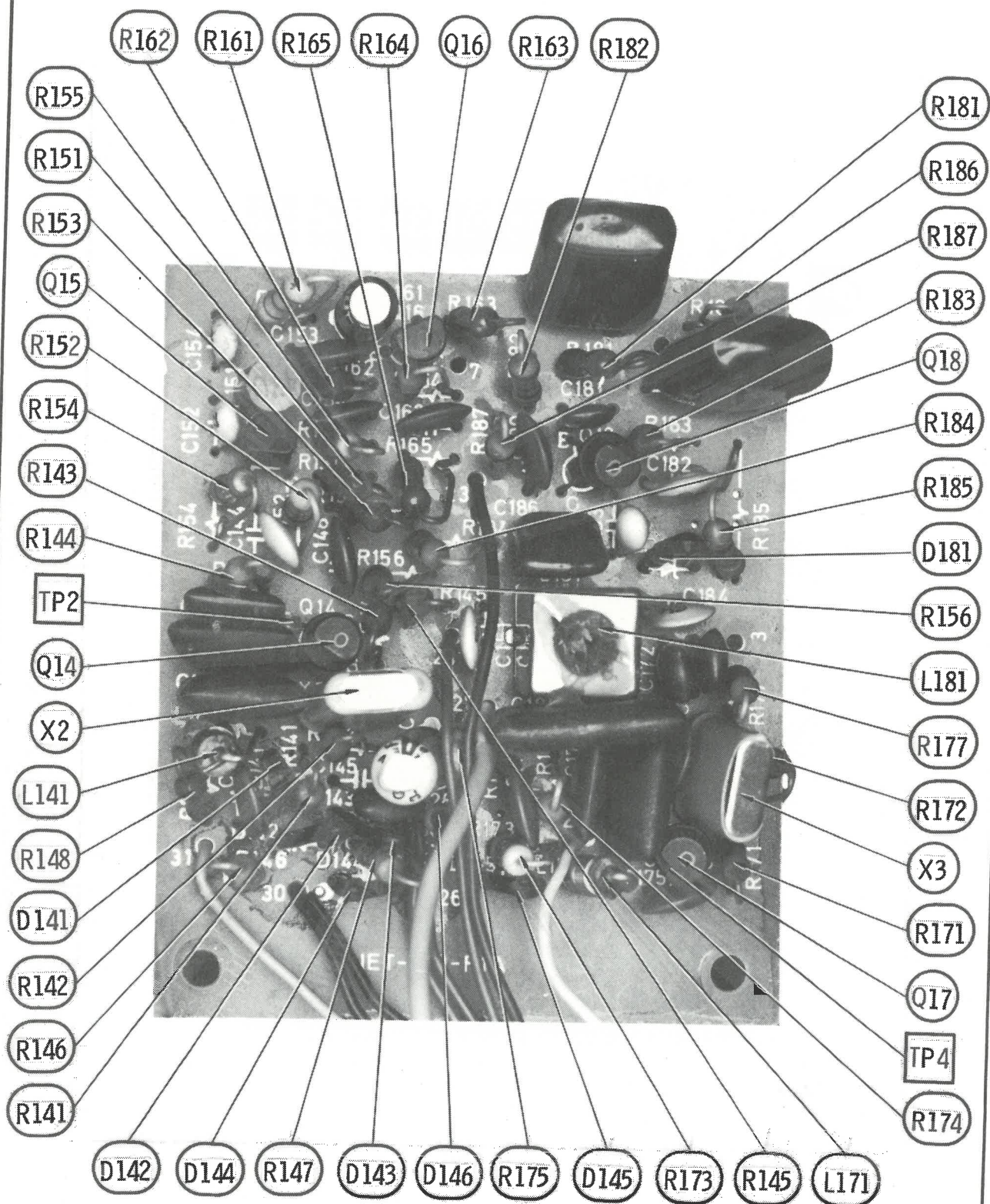


CHASSIS-BOTTOM

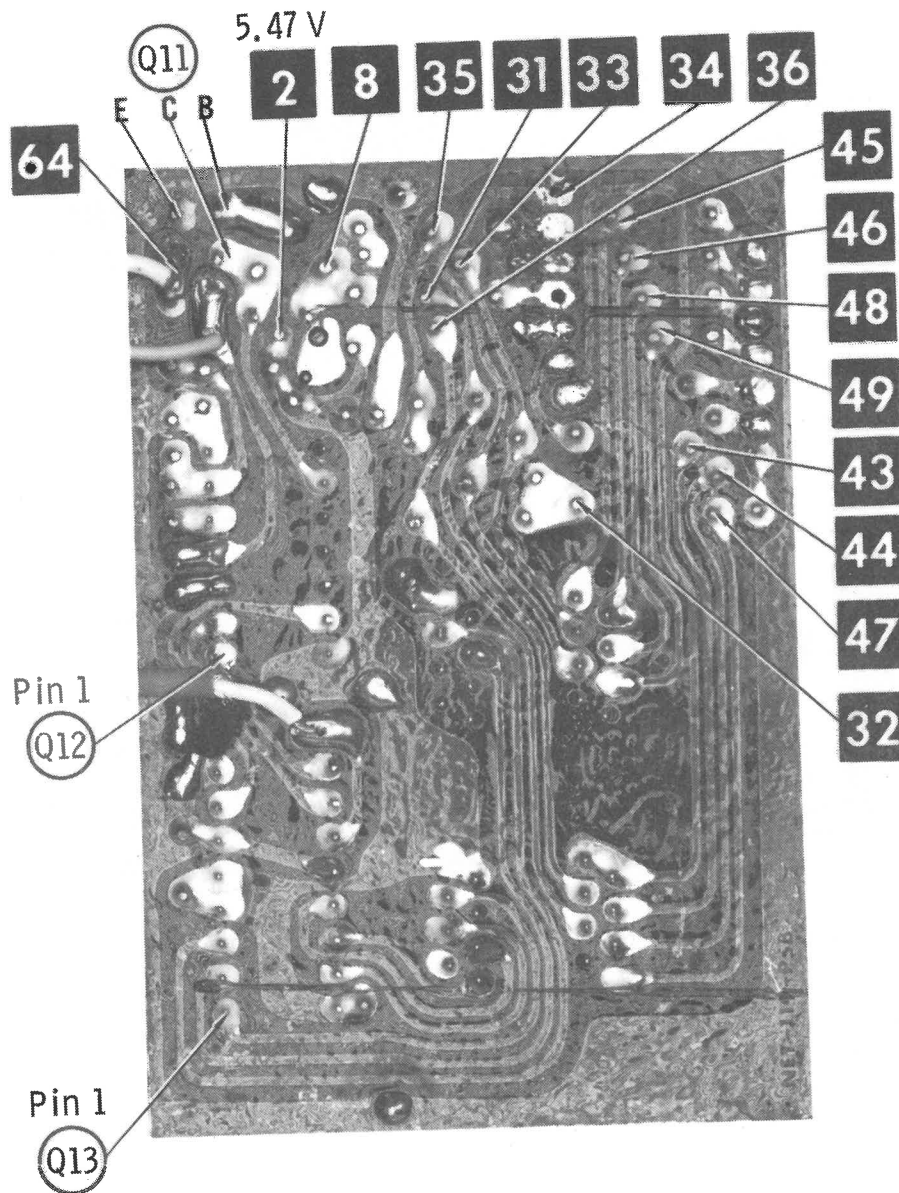


PLL BOARD

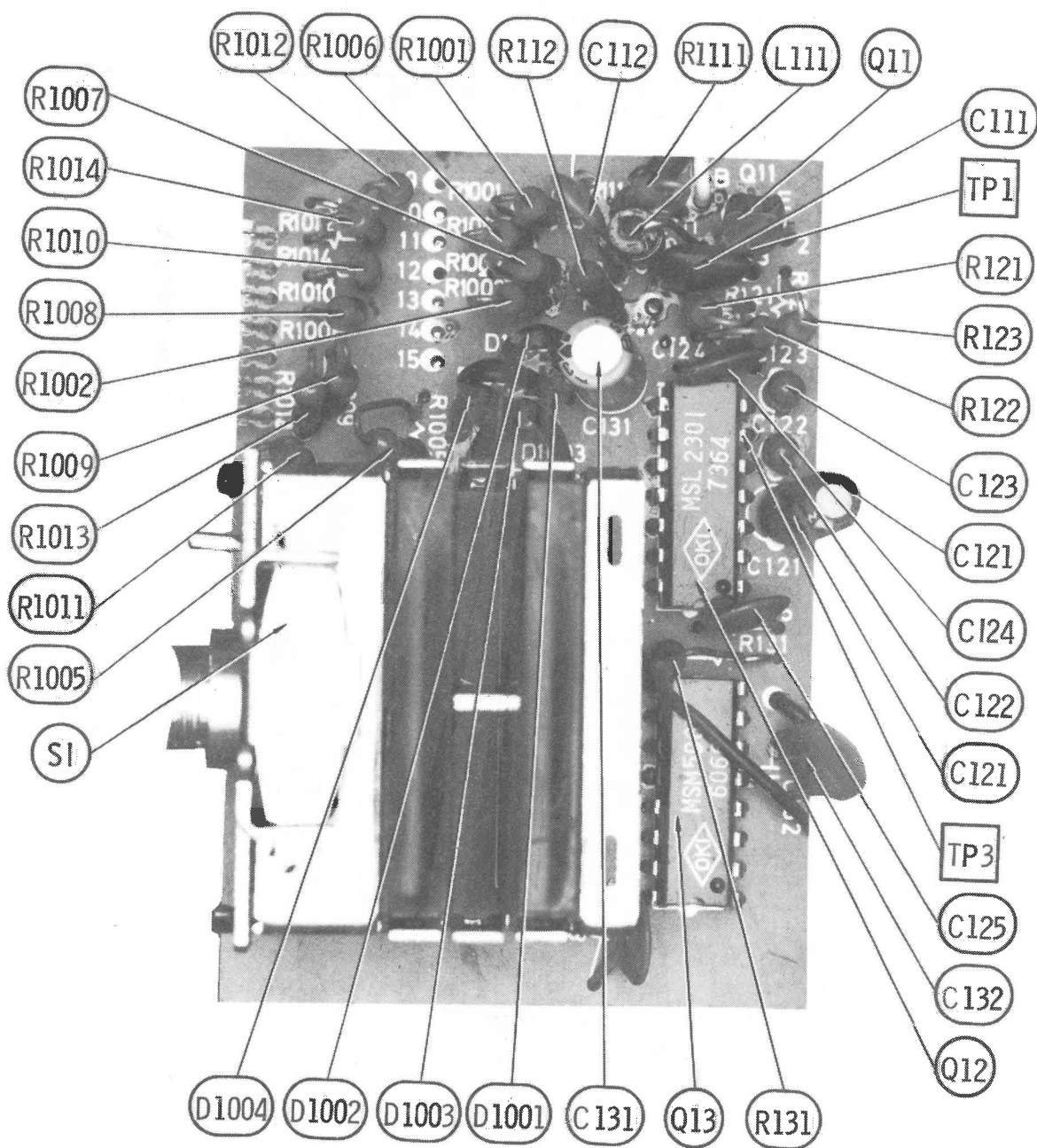




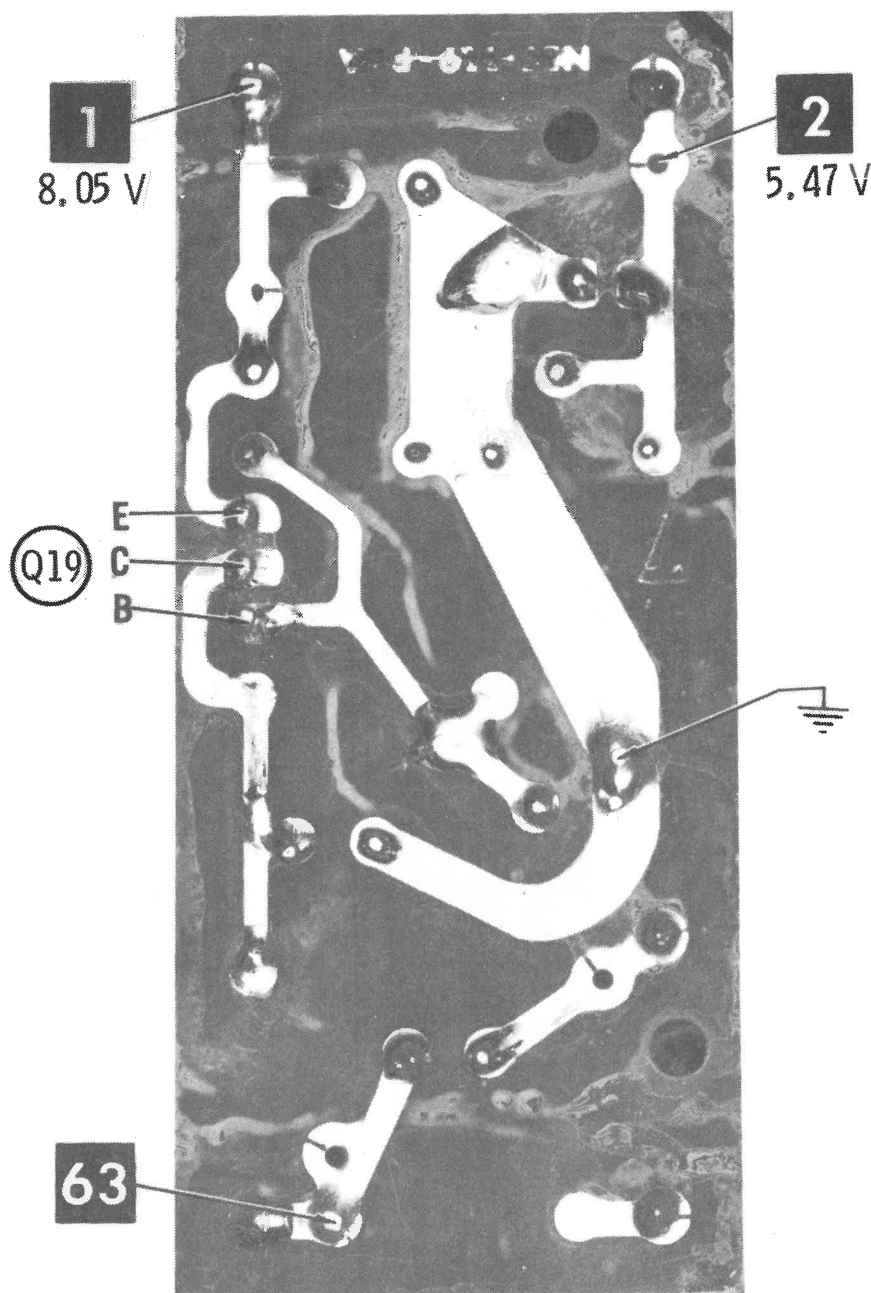
PLL BOARD



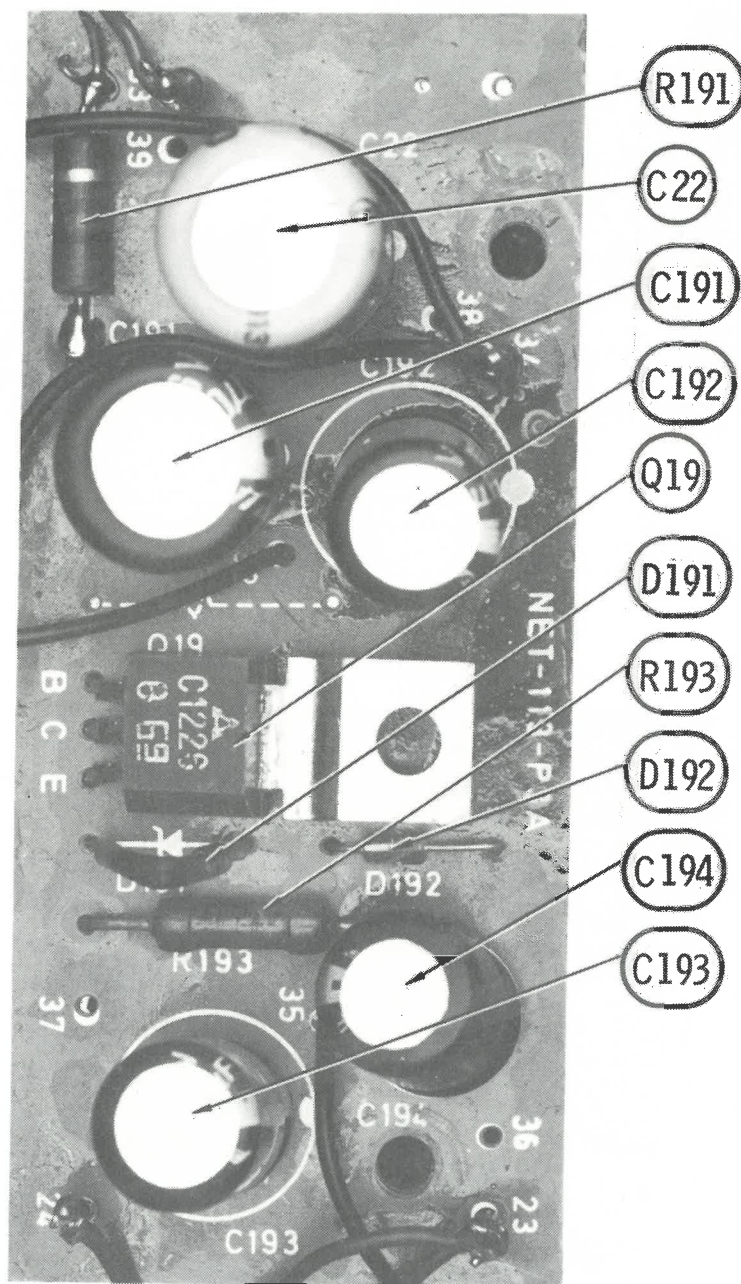
CH. SELECTOR BOARD



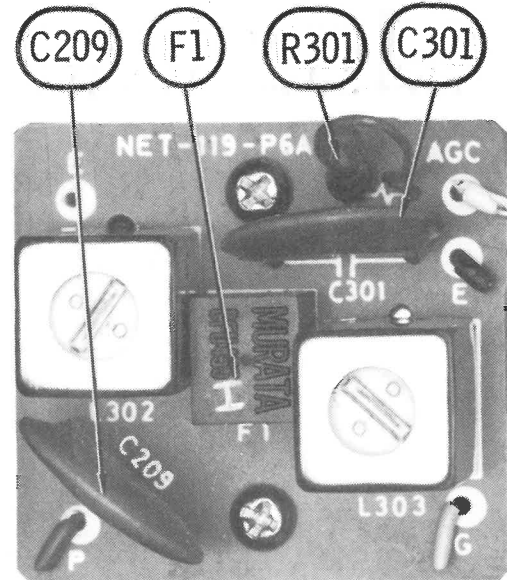
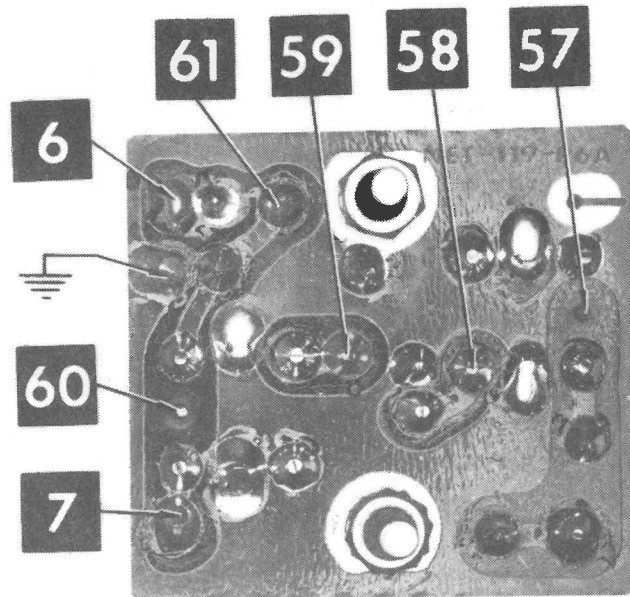
CH. SELECTOR BOARD



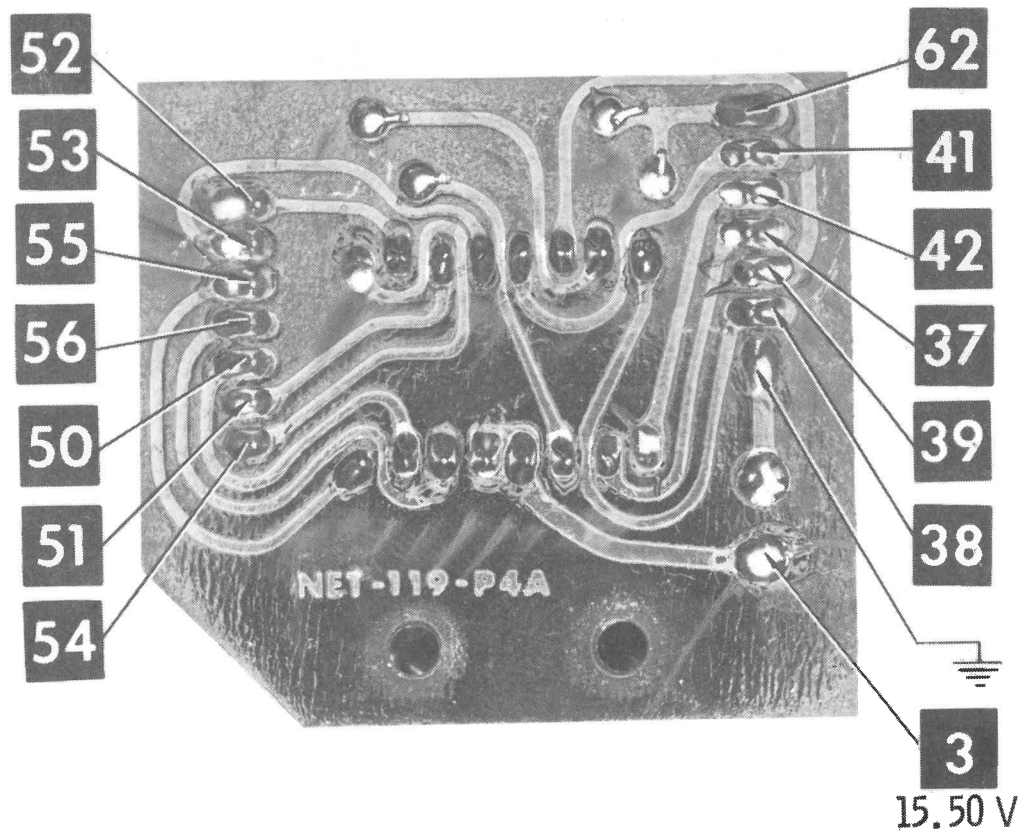
POWER SUPPLY BOARD



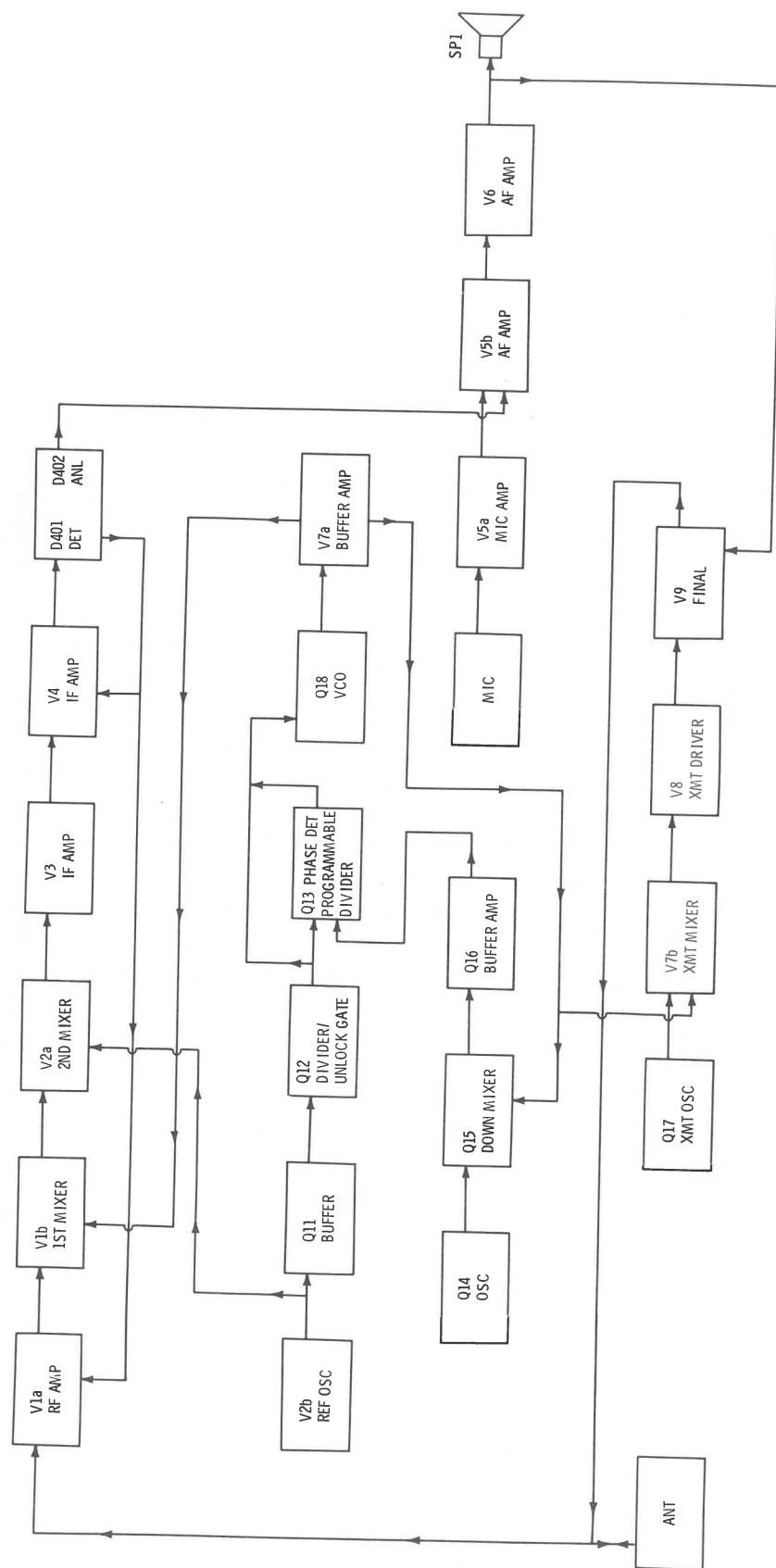
POWER SUPPLY BOARD



IF BOARD



LED BOARD



BLOCK DIAGRAM

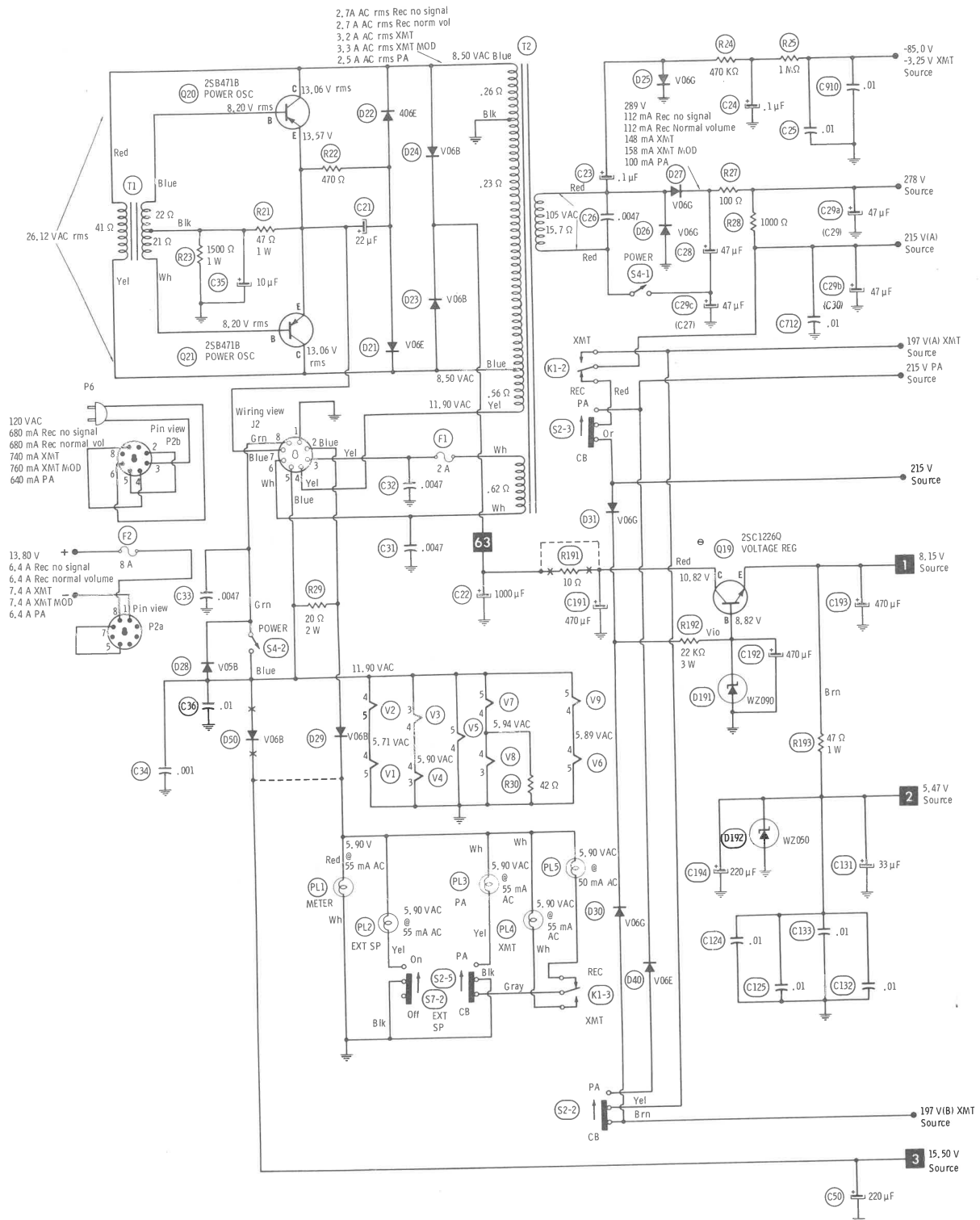
- ✕ Circuitry not used in some versions
- Circuitry used in some versions
- ⊙ See parts list
- ⊗ Nominal value
- ⊥ Ground
- ⏏ Chassis
- ▽ Common tie point

A PHOTOFACT STANDARD NOTATION SCHEMATIC

WITH **CIRCUITRACE**

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Measurements made in Channel 1 with switching as shown unless noted. Item numbers in rectangles appear in the alignment/adjustment instructions. Supply voltage maintained as shown at input. Voltages measured with digital meter, no signal. Controls adjusted for normal operation. Arrow at control indicates direction of advance. Terminal identification may not be found on unit. Resistors are 1/2W or less, 5% unless noted. Value in () used in some versions.



PARTS LIST AND DESCRIPTION

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

TUBES

AMPEREX			GENERAL ELECTRIC			RCA			SYLVANIA		
ITEM No.	USE		TYPE			ITEM No.	USE		TYPE		
V1A B	RF Amp		6BL8			V6	AF Amp		6BQ5		
V2A B	First Mixer		6BL8			V7A B	Buffer Amp		6GH8		
V3	Second Mixer					V8	Xmt Mixer		6BA6		
V4	Ref Osc					V9	Xmt Driver		6BQ5		
V5A B	IF Amp		6BA6				Final				
	IF Amp		6BA6								
	Mic Amp		12AX7								
	AF Amp										

SEMICONDUCTORS (Select replacement transistor for best results)

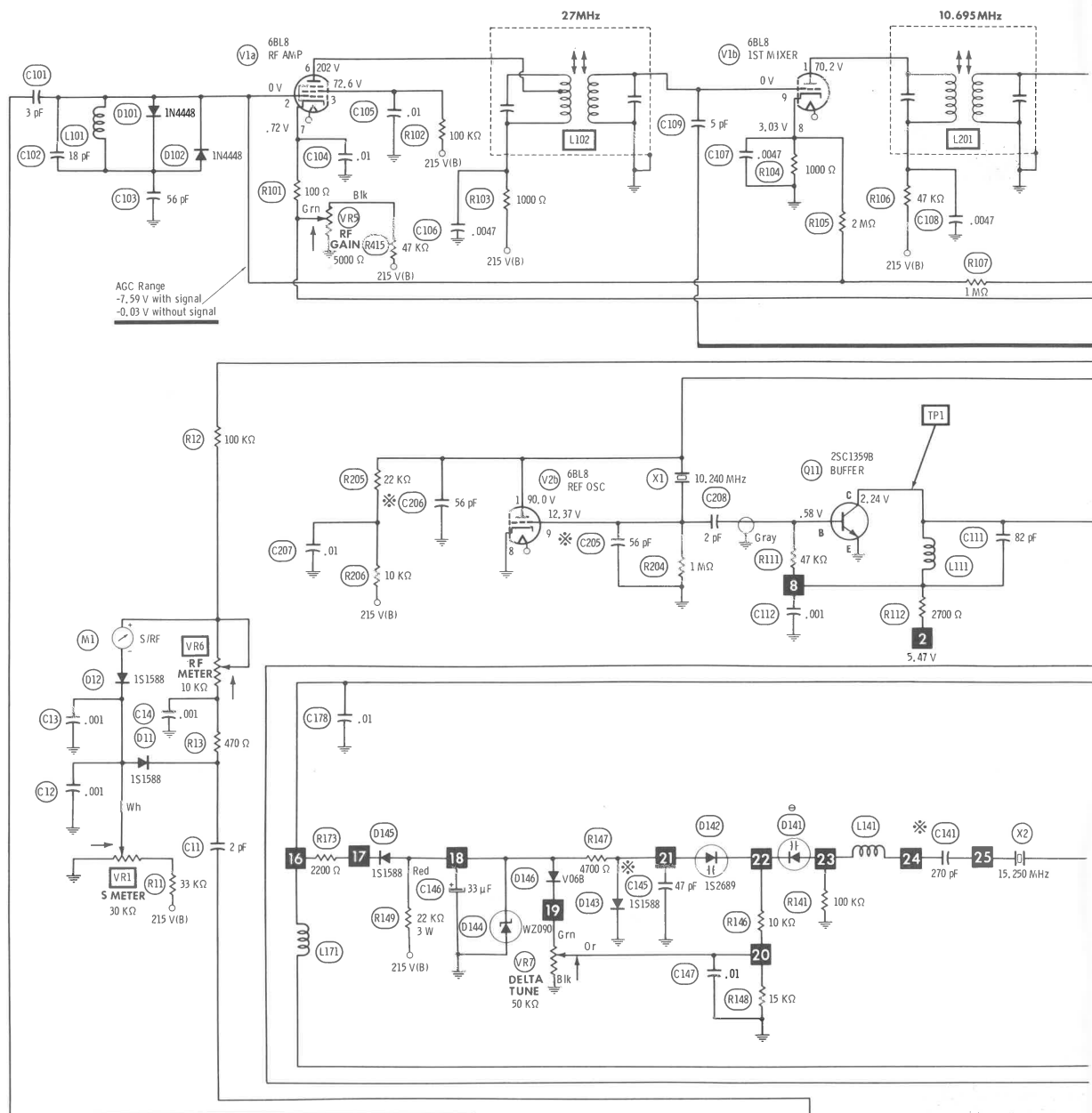
ITEM No.	TYPE No.	MFR. PART No.	REPLACEMENT DATA									
			GENERAL ELECTRIC PART No.	MALLORY PART No.	MOTOROLA PART No.	RAYTHEON PART No.	RCA PART No.	SPRAGUE PART No.	SYLVANIA PART No.	THORDARSON PART No.	WORKMAN PART No.	ZENITH PART No.
D11	1S1588	DS1588	GE-514	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG519	1N4148	WEP925	
D12	1S1588	DS1588	GE-514	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG519	1N4148	WEP925	
D21	V06E	DR1200	GE-504A	PTC201	HEPR0053	RE 49	SK3016	RT-214	ECG116	1N4004	WEP157	212-96
D22	V06E	DR1200	GE-504A	PTC201	HEPR0053	RE 49	SK3016	RT-214	ECG116	1N4004	WEP157	212-96
D23	V06B	DR1050	GE-504A	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116	1N4004	WEP156	212-61
D24	V06B	DR1050	GE-504A	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116	1N4004	WEP156	212-61
D25	V06G	DR1600	GE-504A	PTC202	HEPR0054	RE 49	SK3017A	RT-215	ECG116	1N4007	WEP158	212-76
D26	V06G	DR1600	GE-504A	PTC202	HEPR0054	RE 49	SK3017A	RT-215	ECG116	1N4007	WEP158	212-76
D27	V06G	DR1600	GE-504A	PTC202	HEPR0054	RE 49	SK3017A	RT-215	ECG116	1N4007	WEP158	212-76
D28	U05B	URA050	GE-512	PTC204	HEPR0098	RE 92	SK3051	RT-201	ECG156		WEP4008	
D29	V06B	DR1050	GE-504A	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116	1N4004	WEP156	212-61
D30	V06G	DR1600	GE-504A	PTC202	HEPR0054	RE 49	SK3017A	RT-215	ECG116	1N4007	WEP158	212-76
D31	V06G	DR1600	GE-504A	PTC202	HEPR0054	RE 49	SK3017A	RT-215	ECG116	1N4007	WEP158	212-76
D40	V06E	DR1200	GE-504A	PTC201	HEPR0053	RE 49	SK3016	RT-214	ECG116	1N4004	WEP157	212-96
D50	V06B	DR1050	GE-504A	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116	1N4004	WEP156	212-61
D101	1N4448	DS4448	GE-514	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG519	1N4148	WEP925	
D102	1N4448	DS4448	GE-514	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG519	1N4148	WEP925	
D141	1S2689	DC2689	GE-90		HEPR2503			RT-262	ECG614		WEP200	ZEN-453
D142	1S2689	DC2689	GE-90		HEPR2503			RT-262	ECG614		WEP200	ZEN-453
D143	1S1588	DS1588	GE-514	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG519	1N4148	WEP925	
D144	WZ090	DZ0900	GEZD-9.1	ZM9.1B		RE 114	SK3060	RT-240	ECG5018	1N4739A	WEP1419	103-279-18
D145	1S1588	DS1588	GE-514	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG519	1N4148	WEP925	
D146	V06B	DR1050	GE-504A	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116	1N4004	WEP156	212-61
D181	1S2688	DC2688	GE-90		HEPR2503			RT-262	ECG614		WEP200	ZEN-453
D191	WZ090	DZ0900	GEZD-9.1	ZM9.1B		RE 114	SK3060	RT-240	ECG5018	1N4739A	WEP1419	103-279-18
D192	WZ050	DZ0500	GEZD-5.1					RT-235	ECG519	1N4733A	WEP1103	
D401	1N60	DG1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109	1N60	WEP134	ZEN-430
D402	1S1588	DS1588	GE-514	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG519	1N4148	WEP925	
D501	V06G	DR1600	GE-504A	PTC202	HEPR0054	RE 49	SK3017A	RT-215	ECG116	1N4007	WEP158	212-76
D502	V06B	DR1050	GE-504A	PTC201	HEPR0052	RE 49	SK3030	RT-213	ECG116	1N4004	WEP156	212-61
D601	V06E	DR1200	GE-504A	PTC201	HEPR0053	RE 49	SK3016	RT-214	ECG116	1N4004	WEP157	212-96
D602	V06E	DR1200	GE-504A	PTC201	HEPR0053	RE 49	SK3016	RT-214	ECG116	1N4004	WEP157	212-96
D1001	1S1588	DS1588	GE-514	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG519	1N4148	WEP925	
D1002	1S1588	DS1588	GE-514	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG519	1N4148	WEP925	
D1003	1S1588	DS1588	GE-514	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG519	1N4148	WEP925	
D1004	1S1588	DS1588	GE-514	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG519	1N4148	WEP925	
Q11	2SC1359B	Q51359	GE-212	PTC121*	HEPS0014*	RE 192	SK3122*	RT-308	ECG199	2SC710	WEP66	121-29000
	2SC1675	Q51675	GE-213	PTC139*	2SC1675	RE 13*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
	2SC1359	Q51359	GE-212	PTC121*	HEPS0014*	RE 192	SK3122*	RT-308	ECG199	2SC710	WEP66	121-29000
	2SC381	Q5C381	GE-61*	PTC132*	HEPS0009*	RE 9	SK3039*	RT-107A	ECG107	2SC380	WEP535	ZEN-127
Q12	MSL2301	NC2301										
Q13	MSM5907	NC5907										
Q14	2SC381-0	Q5C381	GE-61*	PTC132*	HEPS0009*	RE 9	SK3039*	RT-107A	ECG107	2SC380	WEP535	ZEN-127
	2SC381	Q5C381	GE-61*	PTC132*	HEPS0009*	RE 9	SK3039*	RT-107A	ECG107	2SC380	WEP535	ZEN-127
	2SC1675	Q51675	GE-213	PTC139*	2SC1675	RE 13*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
	2SC1359	Q51359	GE-212	PTC121*	HEPS0014*	RE 192	SK3122*	RT-308	ECG199	2SC710	WEP66	121-29000
Q15	2SC1359B	Q51359	GE-212	PTC121*	HEPS0014*	RE 192	SK3122*	RT-308	ECG199	2SC710	WEP66	121-29000
	2SC1359	Q51359	GE-212	PTC121*	HEPS0014*	RE 192	SK3122*	RT-308	ECG199	2SC710	WEP66	121-29000
	2SC1675	Q51675	GE-213	PTC139*	2SC1675	RE 13*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
	2SC381	Q5C381	GE-61*	PTC132*	HEPS0009*	RE 9	SK3039*	RT-107A	ECG107	2SC380	WEP535	ZEN-127
Q16	2SC1359B	Q51359	GE-212	PTC121*	HEPS0014*	RE 192	SK3122*	RT-308	ECG199	2SC710	WEP66	121-29000
	2SC1359	Q51359	GE-212	PTC121*	HEPS0014*	RE 192	SK3122*	RT-308	ECG199	2SC710	WEP66	121-29000
	2SC1675	Q51675	GE-213	PTC139*	2SC1675	RE 13*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
	2SC381	Q5C381	GE-61*	PTC132*	HEPS0009*	RE 9	SK3039*	RT-107A	ECG107	2SC380	WEP535	ZEN-127
Q17	2SC381-0	Q5C381	GE-61*	PTC132*	HEPS0009*	RE 9	SK3039*	RT-107A	ECG107	2SC380	WEP535	ZEN-127
	2SC381	Q5C381	GE-61*	PTC132*	HEPS0009*	RE 9	SK3039*	RT-107A	ECG107	2SC380	WEP535	ZEN-127
	2SC1675	Q51675	GE-213	PTC139*	2SC1675	RE 13*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
	2SC1359	Q51359	GE-212	PTC121*	HEPS0014*	RE 192	SK3122*	RT-308	ECG199	2SC710	WEP66	121-29000
Q18	2SC381-0	Q5C381	GE-61*	PTC132*	HEPS0009*	RE 9	SK3039*	RT-107A	ECG107	2SC380	WEP535	ZEN-127
	2SC381	Q5C381	GE-61*	PTC132*	HEPS0009*	RE 9	SK3039*	RT-107A	ECG107	2SC380	WEP535	ZEN-127
	2SC1675	Q51675	GE-213	PTC139*	2SC1675	RE 13*	SK3124	RT-308	ECG229*		WEP956*	ZEN-127
Q19	2SC1226Q	(12) Q51226	GE-215	PTC186	2SC1226	RE 203	SK3197	RT-166	ECG186A	2SC1226	WEP900	
	2SC1226	Q51226	GE-215	PTC186	2SC1226	RE 203	SK3197	RT-166	ECG186A	2SC1226	WEP900	
	2SC1096	Q51096	GE-28	PTC110	2SC1096	RE 42	SK3197	RT-166	ECG186A	2SC1096	WEP1096	
Q20	2SB471B	(13) QT8471	GE-16	PTC105	HEPG6005	RE 11	SK3009	RT-127A	ECG121		WEP235	
	2SB471	QT8471	GE-16	PTC105	HEPG6005	RE 11	SK3009	RT-127A	ECG121		WEP235	
Q21	2SB471B	(13) QT8471	GE-16	PTC105	HEPG6005	RE 11	SK3009	RT-127A	ECG121		WEP235	
	2SB471	QT8471	GE-16	PTC105	HEPG6005	RE 11	SK3009	RT-127A	ECG121		WEP235	

* Lead configuration may vary from original.

(12) 10 WATT @ 3.0 AMP.

(13) 12 WATT @ 10 AMP.

ROBYN MODEL T-240D



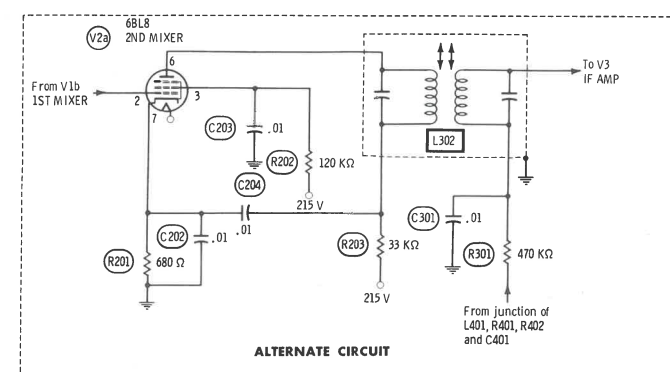
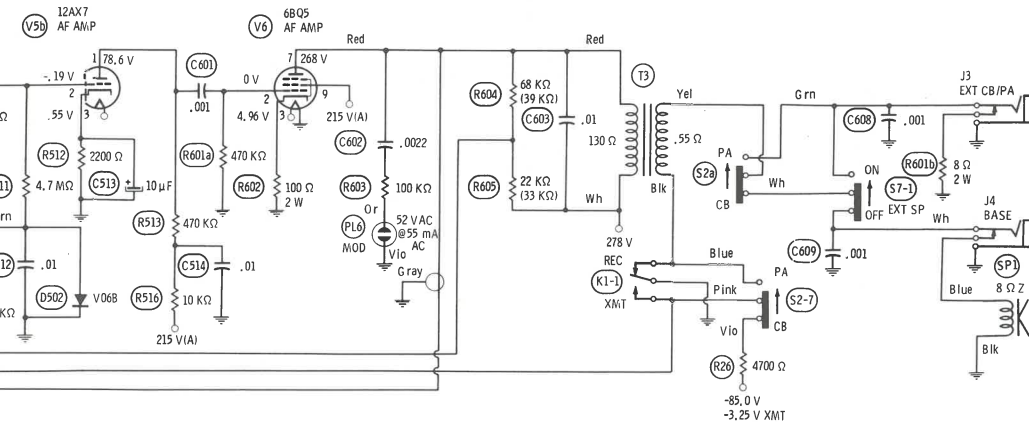
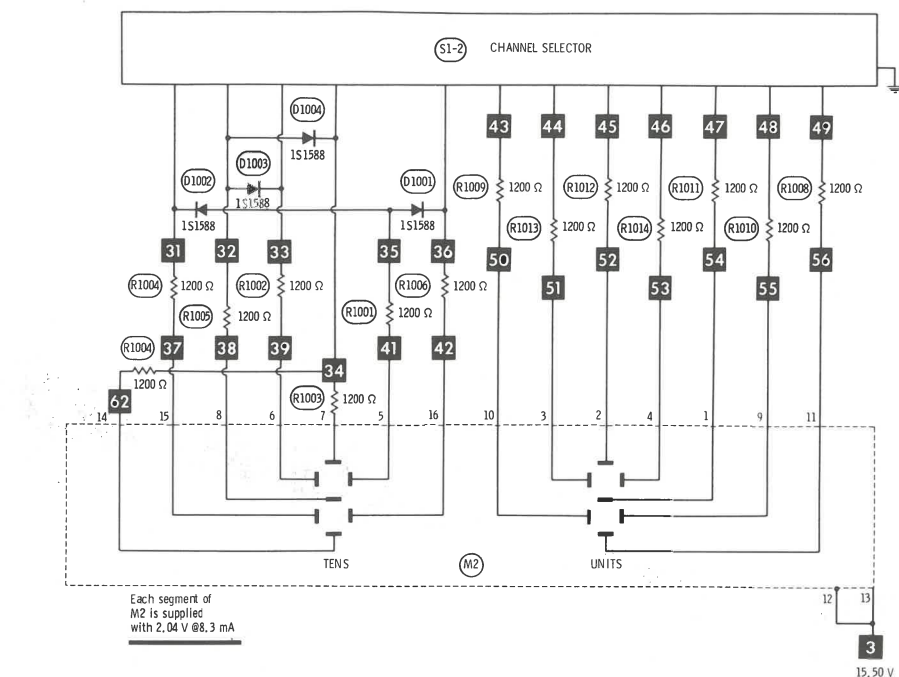
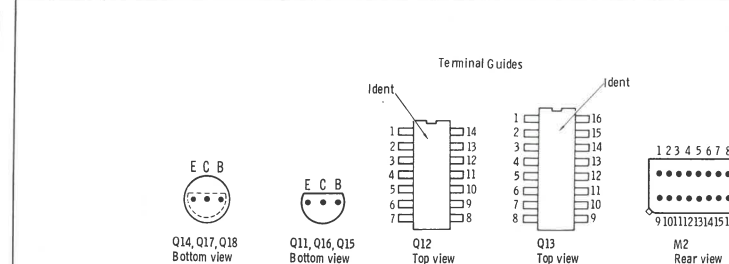
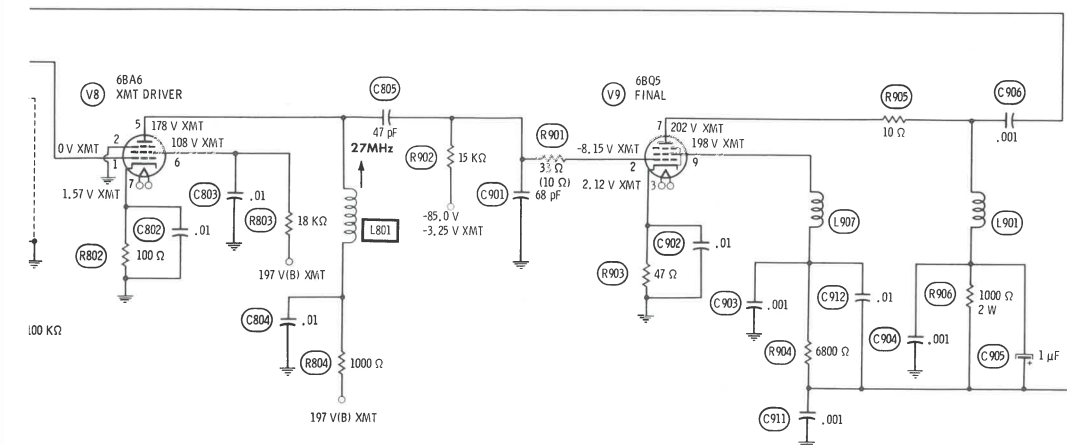
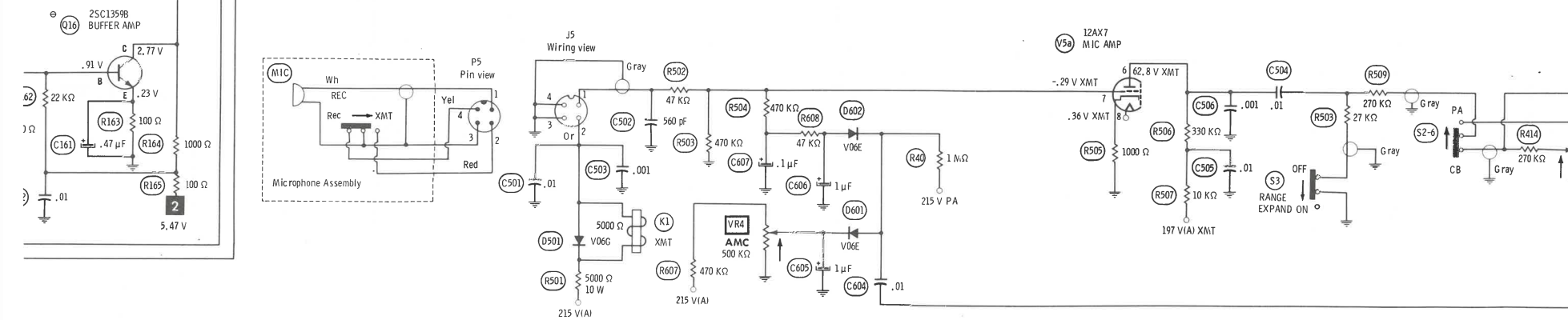
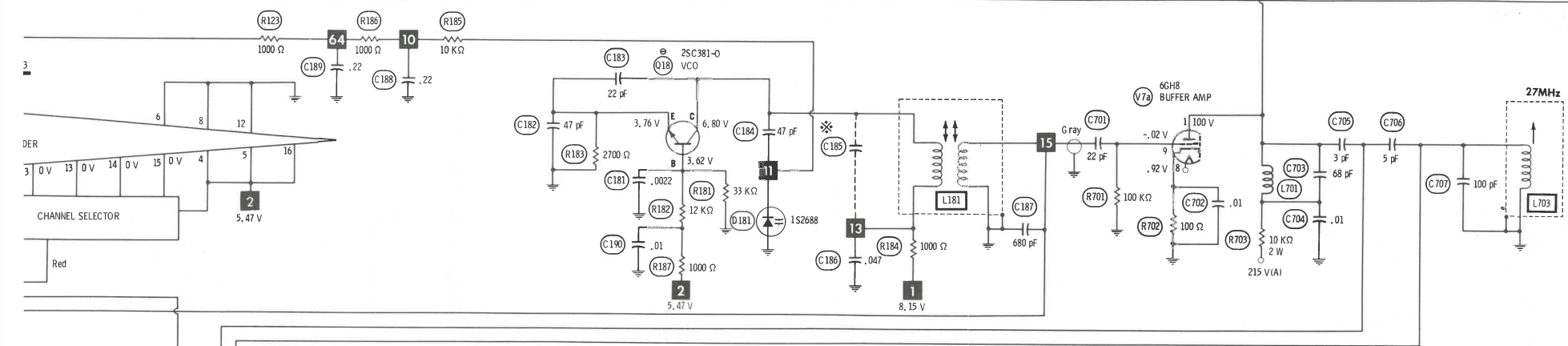
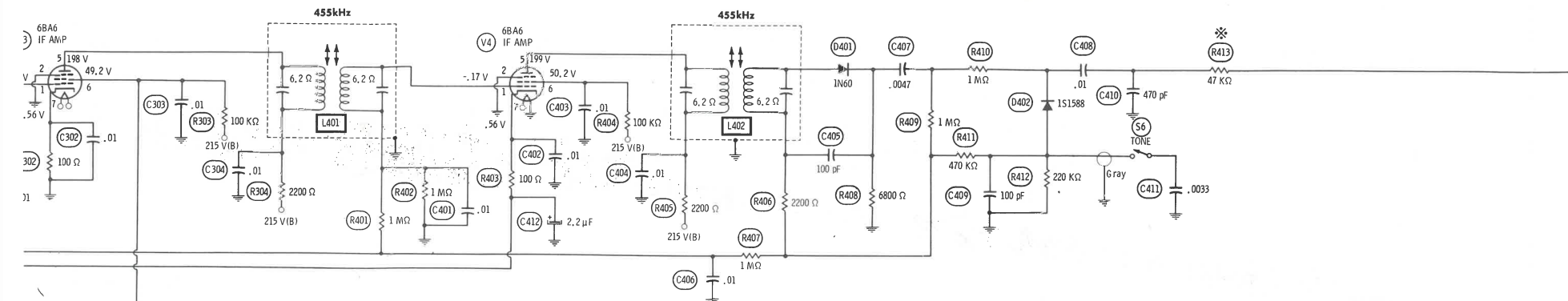
- ✖ Circuitry not used in some versions
 - Circuitry used in some versions
 - ⊙ See parts list
 - * Nominal value
 - ⊥ Ground
 - ⏏ Chassis
 - ▽ Common tie point
- Measurements made in Channel 1 with switching as shown unless noted.
Item numbers in rectangles appear in the alignment/adjustment instructions.
Supply voltage maintained as shown at input.
Voltages measured with digital meter, no signal.
Controls adjusted for normal operation.
Arrow at control indicates direction of advance.
Terminal identification may not be found on unit.
Resistors are 1/2W or less, 5% unless noted.
Value in () used in some versions.

A PHOTOFACIT STANDARD NOTATION SCHEMATIC

WITH **CIRCUITRACE®**

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PARTS LIST AND DESCRIPTION (CONTINUED)

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

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA				
		MFRG. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
					Q-LINE	GENERAL LINE
C21	22 50V	240007 240007 240007	WBR25-50	TT50X25A	QE1-295	TVA-1306
C22	1000 16V		PC1000-16	VTT1000L16	QV1-183	EV-1260
C23	.1 600V		WBR50-50	TDC104M050EL	QDT1-2	SD50-R109
C24	.1 600V			TDC104M050EL	QDT1-2	SD50-R109
C28	47 350V			TT50X50B	QE1-357	TVA-1308
C29A	47 350V					
B	47 350V					
C	47 350V					
C35	10 50V		PC10-50	VTT10D63	QV1-45	EV-1622
C50	220 16V		PC250-25	VTT220H16	QV1-117	EV-1240
C121	10 16V		PC10-25	VTT10B25	QV1-41	EV-1222
C122	1 25V	PC30-25	TDC105M035EL	QV1-61	SD35-19	
C123	1 25V		TDC105M035EL		SD35-19	
C131	33 10V		VTT33B10		EV-1125	
C146	33 10V		VTT33B10		EV-1125	
C161	.47 50V		PC1-50	VTR47A63	QV1-3	EV-1610
C191	470 16V		PC500-16	VTT470K16	QV1-151	EV-1250
C192	470 10V		PC500-16	VTT470K16	QV1-149	EV-1150
C193	470 10V		PC500-16	VTT470K16	QV1-149	EV-1150
C194	220 10V		PC250-10	VTT220F10	QV1-115	EV-1140
	470					
C412	2.2 160V		WBR2-450	TC595A	QV1-41	TVA-1500.1
C513	10 16V		PC10-25	VTT10B25		EV-1222
C605	1 160V		WBR1-450	TC56A		TVA-1500
C606	1 160V		WBR1-450	TC56A		TVA-1500
C607	.1 600V		WBR1-450	TDC104M050EL		SD50-R109
C905	1 160V	TC56A		QDT1-2	TVA-1500	

CAPACITORS

ITEM No.	RATING	MFRG. PART No.	REPLACEMENT DATA				
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
						Q-LINE	GENERAL LINE
C11	2		DTZ-2R2	NP02P2	CN0522	QW1-25	10TCC-V22
C12	.001		DD-102	GP4700	GP210		10TS-D10
C13	.001		DD-102		GP210		10TS-D10
C14	.001		DD-102		GP210		10TS-D10
C25	.01		UK50-103		MAG5011		
C26	.0047		DD-472		GP247		5GA-D47
C31	.0047		DD-472		GP247		5GA-D47
C32	.0047		DD-472		GP247		5GA-D47
C33	.0047		DD-472		GP247		5GA-D47
C34	.001		DD-102		GP210		10TS-D10
C36	.01		UK50-103	NP03P3	MAG5011		
C101	3		DTZ-3R3		CN0533		10TCC-V33
C102	18				CN0418		10TCC-Q18
C103	56				CN0456		10TCC-Q56
C104	.01		UK50-103		MAG5011		
C105	.01		UK50-103		MAG5011		
C106	.0046		DD-472		GP247		5GA-D47
C107	.0047		DD-472		GP247		5GA-D47
C108	.0047		DD-472		GP247		5GA-D47
C109	5		DTZ-4R7		NP04P7		10TCC-V47
C111	82 10%			CD15ED820J03	SX482		MMA-820
C112	.001		DD-102		GP210		10TS-D10
C124	.01		UK50-103		MAG5011		
C125	.01		UK50-103		MAG5011		
C132	.01		UK50-103		MAG5011		
C141	270 10%			CD15FD271J03	SX327		MWB-271
C142	330 10%				CD15FD331J03		MMA-331
C143	150 10%				CD15FD151J03		MMA-151
C144	100		DTZ-100		NP0100		10TCC-T10
C145	47				CD15ED470J03		MMA-470
C147	.01		UK50-103		MAG5011		
C148	.01		UK50-103		MAG5011		
C151	10		DTZ-10	NP010	CN0410		10TCC-Q10
C152	22		DTZ-22		CN0422		10TCC-Q22
C153	.01		UK50-103		MAG5011		
C154	22		DTZ-22		CN0422		10TCC-Q22
C156	.01		UK50-103		MAG5011		
C162	.01		UK50-103		MAG5011		
C171	33			CD15ED330J03	SX433		MMA-330
C172	33				CD15ED330J03		MMA-330
C173	330 10%				CD15FD331J03		MMA-331
C174	150 10%				CD15FD151J03		MMA-151
C175	.01		UK50-103		MAG5011		
C176	.01		UK50-103		MAG5011		
C177	5		DTZ-4R7	NP04P7	CN0547		10TCC-V47
C178	.01		UK50-103		MAG5011		
C182	47		DTZ-47		NP047		10TCC-Q47
C183	22		DTZ-22		NP022		10TCC-Q22
C184	47		DTZ-47		NP047		10TCC-Q47
C185					CN0447		
C186	.047 10%			DPMS2S47	EWFTA147		QFT2-171
C187	680 10%				CD19FD681J03		MWC-681
C188	.22				DPMS2P22		QFT2-253
C189	.22				DPMS2P22		QFT2-253
C190	.01		UK50-103		MAG5011		
C201	2		DTZ-2R2	NP02P2	CN0522		10TCC-V22
C202	.01		UK50-103		MAG5011		
C203	.01		UK50-103		MAG5011		
C204	.01		UK50-103		MAG5011		
C205	56 10%				CD15ED560J03		MMA-560

PARTS LIST AND DESCRIPTION (CONTINUED)

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

CAPACITORS (cont)

ITEM No.	RATING	MFRG. PART No.	REPLACEMENT DATA				
			CENTRALAB PART No.	CORNELL- DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
						Q-LINE	GENERAL LINE
C206	56 10%	240008 240009	UK50-103 DTZ-2R2	CD15ED560J03	SX456	QW1-21	MMA-560
C207	.01				MAG5011		
C208	2			NP02P2	CN0522		10TCC-V22
C209	.01				MAG5011		
C301	.01				MAG5011		
C302	.01				MAG5011		
C303	.01				MAG5011		
C304	.01				MAG5011		
C401	.01				MAG5011		
C402	.01				MAG5011		
C403	.01			UK50-103			
C404	.01			UK50-103			
C405	100			UK50-103			
C406	.01			DTZ-100	NP0100		10TCC-T10
C407	.0047			UK50-103			
C408	.01			DD-472	GP4700		5GA-D47
C409	100			UK50-103			
C410	470			DTZ-100	NP0100		10TCC-T10
C411	.0033			DD-471	GP470		10TS-T47
C501	.01						1FT-D33
C502	560			UK50-103			
C503	.001			DD-561			10TS-T56
C504	.01			DD-102			10TS-D10
C505	.01			UK50-103			
C506	.001			UK50-103			
C511	.001			DD-102			10TS-D10
C512	.01			DD-102			10TS-D10
C514	.01			UK50-103			
C601	.001			UK50-103			
C602	.0022			DD-102			10TS-D10
C603	.01						10TS-D22
C604	.01			UK50-103			
C608	.001			UK50-103			
C609	.001			DD-102			10TS-D10
C701	22			DTZ-22	NP022		10TCC-Q22
C702	.01			UK50-103			
C703	68			DTZ-68	NP068		10TCC-Q68
C704	.01			UK50-103			
C705	3			DTZ-3R3	NP03P3		10TCC-V33
C706	5			DTZ-4R7	NP04P7		10TCC-V47
C707	100				CD15FD101J03		MMA-101
C708	.01			UK50-103			
C709	.01			UK50-103			
C710	.01			UK50-103			
C711	1						10TCC-V10
C712	.01			UK50-103			
C801	.01			UK50-103			
C802	.01			UK50-103			
C803	.01			UK50-103			
C804	.01			UK50-103			
C805	47 10%				CD15ED470J03		QW1-19
C901	68 10%				CD15ED680J03		QW1-23
C902	.01			UK50-103			
C903	.001			DD-102			10TS-D10
C904	.001			DD-102			10TS-D10
C906	.001			DD-102			10TS-D10
C907	22				CD15ED220J03		QW1-11
C908	330 10%				CD15FD331J03		QW1-39
C909	68 10%				CD15ED680J03		QW1-23
C910	.01			UK50-103			
C911	.001			DD-102			10TS-D10
C912	.01			UK50-103			

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

ITEM No.

PARTS LIST AND DESCRIPTION (CONTINUED)
(When ordering parts, state Model, Part Number, and Description.)

PART No.	
GENERAL LINE	
TVA-1306	EV-1260 SD50-R109 SD50-R109 TVA-1308
EV-1260	
SD50-R109	
SD50-R109	
TVA-1308	
EV-1622	EV-1240 EV-1222 SD35-19 SD35-19 EV-1125 EV-1125 EV-1610 EV-1250 EV-1150 EV-1150 EV-1140
EV-1240	
EV-1222	
SD35-19	
SD35-19	
EV-1125	
EV-1125	
EV-1610	
EV-1250	
EV-1150	
EV-1150	
EV-1140	
TVA-1500.1	EV-1222 TVA-1500 TVA-1500 SD50-R109 TVA-1500
EV-1222	
TVA-1500	
TVA-1500	
SD50-R109	
TVA-1500	

PART No.	
GENERAL LINE	
10TCC-V22	10TS-D10 10TS-D10 10TS-D10 10TS-D10
10TS-D10	
10TS-D10	
10TS-D10	
10TS-D10	
5GA-D47	5GA-D47 5GA-D47 5GA-D47 5GA-D47 10TS-D10
5GA-D47	
5GA-D47	
5GA-D47	
10TS-D10	
10TCC-V33	10TCC-Q18 10TCC-Q56
10TCC-Q18	
10TCC-Q56	
5GA-D47	
5GA-D47	
5GA-D47	10TCC-V47 MWA-820 10TS-D10
10TCC-V47	
MWA-820	
10TS-D10	
MWB-271	
MWA-331	MWA-151 10TCC-T10 MWA-470
MWA-331	
MWA-151	
10TCC-T10	
MWA-470	
10TCC-Q10	10TCC-Q22
10TCC-Q22	
10TCC-Q22	MWA-330 MWA-330 MWA-331 MWA-151
MWA-330	
MWA-330	
MWA-331	
MWA-151	
10TCC-V47	10TCC-Q47 10TCC-Q22 10TCC-Q47
10TCC-Q47	
10TCC-Q22	
10TCC-Q47	
1FT-S47	
MWC-681	1FT-P22 1FT-P22
1FT-P22	
1FT-P22	10TCC-V22
10TCC-V22	
MWA-560	

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	
C206	56 10%	240008 240009	UK50-103	CD15ED560J03	SX456	QW1-21	MWA-560	
C207	.01		DTZ-2R2	NP02P2	MAG5011		10TCC-V22	
C208	2		UK50-103		CN0522			
C209	.01		UK50-103		MAG5011			
C301	.01		UK50-103		MAG5011			
C302	.01		UK50-103		MAG5011			
C303	.01		UK50-103		MAG5011			
C304	.01		UK50-103		MAG5011			
C401	.01		UK50-103		MAG5011			
C402	.01		UK50-103		MAG5011			
C403	.01		UK50-103		MAG5011			
C404	.01		UK50-103	MAG5011				
C405	100		DTZ-100	NP0100	CN0310	10TCC-T10		
C406	.01		UK50-103	MAG5011	GP247	5GA-D47		
C407	.0047		DD-472	GP4700				
C408	.01		UK50-103	MAG5011				
C409	100		DTZ-100	NP0100	CN0310	10TCC-T10		
C410	470		DD-471	GP470	GP347	10TS-T47		
C411	.0033				M192P3329R8	1FT-D33		
C501	.01		UK50-103	NP022	MAG5011	QFT2-43		
C502	560		DD-561		GP356			
C503	.001		DD-102		GP210			
C504	.01		UK50-103		MAG5011			
C505	.01		UK50-103		MAG5011			
C506	.001		DD-102		GP210			
C511	.001		DD-102		GP210			
C512	.01		UK50-103		MAG5011			
C514	.01		UK50-103		MAG5011			
C601	.001		DD-102		GP210			
C602	.0022			GP222		10TS-D10		
C603	.01		UK50-103	MAG5011	NP068	10TS-D22		
C604	.01		UK50-103	MAG5011				
C608	.001		DD-102	GP210				
C609	.001		DD-102	GP210				
C701	22		DTZ-22	CN0422			10TS-D10	
C702	.01		UK50-103	MAG5011			10TCC-Q22	
C703	68		DTZ-68	CN0468			10TCC-Q68	
C704	.01		UK50-103	MAG5011			NP03P3	10TCC-V33
C705	3		DTZ-3R3	CN0533				
C706	5		DTZ-4R7	CN0547				
C707	100			CD15FD101J03	SX310	10TCC-V47		
C708	.01		UK50-103		MAG5011	MWA-101		
C709	.01		UK50-103		MAG5011	QW1-27		
C710	.01		UK50-103		MAG5011			
C711	1				CN0510			
C712	.01		UK50-103		MAG5011			
C801	.01		UK50-103		MAG5011			
C802	.01	UK50-103		MAG5011				
C803	.01	UK50-103		MAG5011				
C804	.01	UK50-103		MAG5011				
C805	47 10%		CD15ED470J03	SX447	QW1-19			MWA-470
C901	68 10%		CD15ED680J03	SX468	QW1-23			MWA-680
C902	.01	UK50-103	CD15ED220J03	MAG5011				
C903	.001	DD-102		GP210				
C904	.001	DD-102		GP210				
C906	.001	DD-102		GP210				
C907	22		CD15ED220J03	SX422	QW1-11	MWA-220		
C908	330 10%		CD15FD331J03	SX333	QW1-39	MWA-331		
C909	68 10%		CD15ED680J03	SX468	QW1-23	MWA-680		
C910	.01		UK50-103	MAG5011				
C911	.001		DD-102	GP210				
C912	.01		UK50-103	MAG5011				

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.
VR1	S Meter	30K	240001	F1-50K (1), SRS008	NP-50K-S (1), UP-A-400	UA54L (1),SK1000	BU1 (1),CF12,SS1, DC1
VR2	Volume/On Switch	500K	240002	F1-500K (1), SRS014,KR7	NP-500K-S (1), UP-A-400,NWE-20	UA55L (1),SK1000, US27	BU1 (1),CF16,SS1, WF
VR3	Squelch/Tone Switch	2Meg	240003	F1-2Meg (1), SPU304,KR8	NP-2Meg-S (1), UPP-A-400,NWG-18	PP26T16 (1)	BU1 (1),CF19, SS20,K
VR4	AMC	500K	240004	F1-500K (1), SRS008	NP-500K-S (1), UP-A-400	UA55L (1),SK1000	BU1 (1),CF16,SS1, DC1
VR5	RF Gain	5000	240005	F1-5000 (1), SRS014	NP-5000-S (1), UP-A-400	UA53L (1),SK1000	BU1 (1),CF8,SS1, DC1
VR6	RF Meter	10K	RS1032 240006				X260R103B (2)
VR7	Delta Tune	50K					

- (1) Enlarge mounting hole.
(2) Cut off one of the end terminals and bend to fit PC board.

PARTS LIST AND DESCRIPTION (CONTINUED)
(When ordering parts, state Model, Part Number, and Description.)

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
		WORKMAN PART No.	MFR. PART No.			WORKMAN PART No.	MFR. PART No.
R27	100 3W 5%	5W-SQ1K	100/3W/5% 1K/5W	R149	22K 3W 5%	10W-SQ5K	22K/3W/5% 22K/3W/5% 5K/10W
R28	1K 5W			R192	22K 3W 5%		
				R501	5K 10W		

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L101	RF Choke	LL0031			
L102	RF Amp (27MHz)	LL0036			
L111	RF Choke	LL0035			
L141	RF Choke	LL0035			
L151	RF Choke	LL0049			
L171	RF Choke	LL0034			
L181	VCO	LL0041			
L200	RF Choke	LL0031			
L201	IF (10.695MHz)	LL0037			
L302	IF (455kHz)	LL0079			
L303	IF (455kHz)	LL0080			
L401	IF (455kHz)	LL0039			
L402	IF (455kHz)	LL0040			
L702	Xmt Mixer (27MHz)	LL0043			
L703	Buffer Amp (27MHz)	LL0042			
L801	Xmt Driver (27MHz)	LL0044			
L901	RF Choke	LL0032			
L902	Pi Filter (27MHz)	LL0045			
L903	RF Choke	LL0046			
L904	TVI Trap (54MHz)	LL0048			
L905	Antenna Match	LL0047			
L906	RF Choke	LL0033			
L907	RF Choke	LL0081			

TRANSFORMER (Driver)

ITEM No.	TURNS RATIO			REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	SEC. 2	MFR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T1	2	1		240010			

TRANSFORMER (Power)

ITEM No.	RATING		REPLACEMENT DATA			NOTES
	PRI.	SEC. 1	MFR. PART No.	THORDARSON PART No.	TRIAD PART No.	
	120V AC @ 760mA AC	105V AC @ 150mA DC	240011			
	SEC. 2	SEC. 3				
	17V AC CT @ 3.3A DC Tap @ 11.90V AC @ 2.2A AC					

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA			NOTES
	PRI.	SEC.	MFR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T3	5000	8	240012			

ROBYN MODEL T-240D

PARTS LIST AND DESCRIPTION (CONTINUED)

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

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP	4" PM, 8 Ohms	240018	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	2A Quick Acting	110042	240026	AGC2	3998	312002	357001	FG2-2
F2	8A Quick Acting	240029	240025	AGC8	HDJ	312008	150145	

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	240019	18-032	18-034	18-010	18-092	1	3	2	4	NC	3

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
CF1	Filter	110008	455kHz
J1	Jack	110013	Antenna
J2	Jack	240020	Power
J3	Jack	110018	Ext PA/CB
J4	Jack	110018	Base
J5	Jack	110030	Mic
K1	Relay	240017	Xmt/Rec
M1	Meter	240038	S/R
M2	LED	DN1221	Channel Readout
PL1	Lamp	240037	Meter (5.90V AC @ 55mA) (Red)
PL2	Lamp	240035	Ext Spkr (5.90V AC @ 55mA) (Yellow)
PL3	Lamp	240035	PA (5.90V AC @ 55mA) (White)
PL4	Lamp	240035	Xmt (5.90V AC @ 55mA) (Blue)
PL5	Lamp	240035	Rec (5.90V AC @ 55mA) (Green)
PL6	Lamp	240036	Modulation Indicator
S1	Switch	240013	Channel Selector
S2	Switch	240014	CB/PA
S3	Switch	240016	Range Expand
S7	Switch	240015	Ext Spkr
X1	Crystal	XR2400	10.240MHz
X2	Crystal	XH2500	15.250MHz
X3	Crystal	XC7850	9.785MHz

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')
Speaker Cable (available in 4 colors)	BELDEN No. 8401		BELDEN No. 8497 (6')
Bonding Strap	BELDEN No. 8782		BELDEN No. 9472 (7-1/2')
AC Power Cord	BELDEN No. 8672		28AWG BELDEN No. 9466 (6')
	(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')

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