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 Dolphone

HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206
 Printed in U. S. of America 6CY383

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 14-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:
L12 thru L16.....8728
L2 thru L11,L17.....9440

SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Input of frequency counter and RF VTVM to L1 secondary.	Ch. 1	L1	Adjust for 37.600MHz at maximum output.
Input of frequency counter to L1 secondary.	Ch. 5		Check for 37.650MHz.
	Ch. 9		Check for 37.700MHz.
	Ch. 13		Check for 37.750MHz.
	Ch. 17		Check for 37.800MHz.
	Ch. 21		Check for 37.850MHz.
Input of frequency counter to Q2 Emitter.	Ch. 1		Check for 10.180MHz.
	Ch. 2		Check for 10.170MHz.
	Ch. 3		Check for 10.160MHz.
	Ch. 4		Check for 10.140MHz.
Input of frequency counter to Q2 Emitter.	Ch. 1, Xmit		Check for 10.635MHz.
	Ch. 2, Xmit		Check for 10.625MHz.
	Ch. 3, Xmit		Check for 10.615MHz.
	Ch. 4, Xmit		Check for 10.595MHz.

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 D5 cathode. 455kHz, 1000Hz @ 30% modulation.	Ch. 13	L16,L15,L14	Adjust for maximum output.
Output of signal generator thru .01uF to Q8 base. 10.6MHz, 1000Hz @ 30% modulation.	Ch. 13	L13,L12	Adjust for maximum output.
Output of signal generator thru .01uF to antenna jack. 27.115MHz, 1000Hz @ 30% modulation	Ch. 13	L11,L10,L9	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 10,000uV.	Squelch control fully clockwise. Ch. 13	VR3	SQUELCH RANGE Adjust VR3 so that squelch just breaks.

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 or adjustments of transmitter.

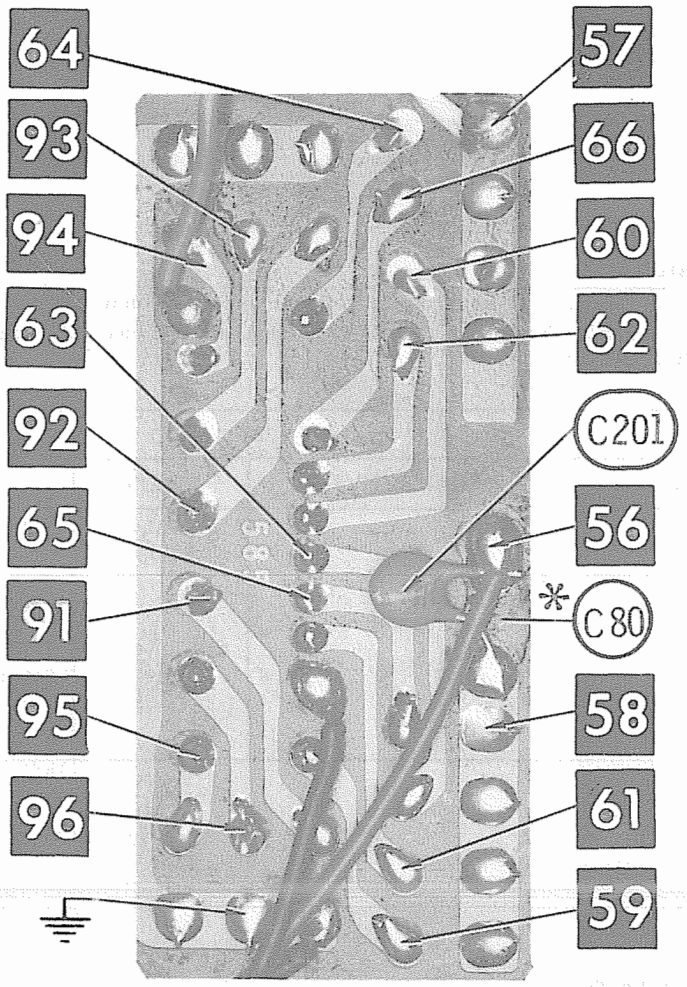
TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
	Ch. 13	L2,L3,L4,L5, L6,L7,L8	Adjust for maximum output.
	Ch. 13	L8,L7	Adjust for 4 watts maximum.
TV SET (Ch. 2)	Ch. 13	L17	Adjust for MINIMUM interference.

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 alignment or adjustments of transmitter.

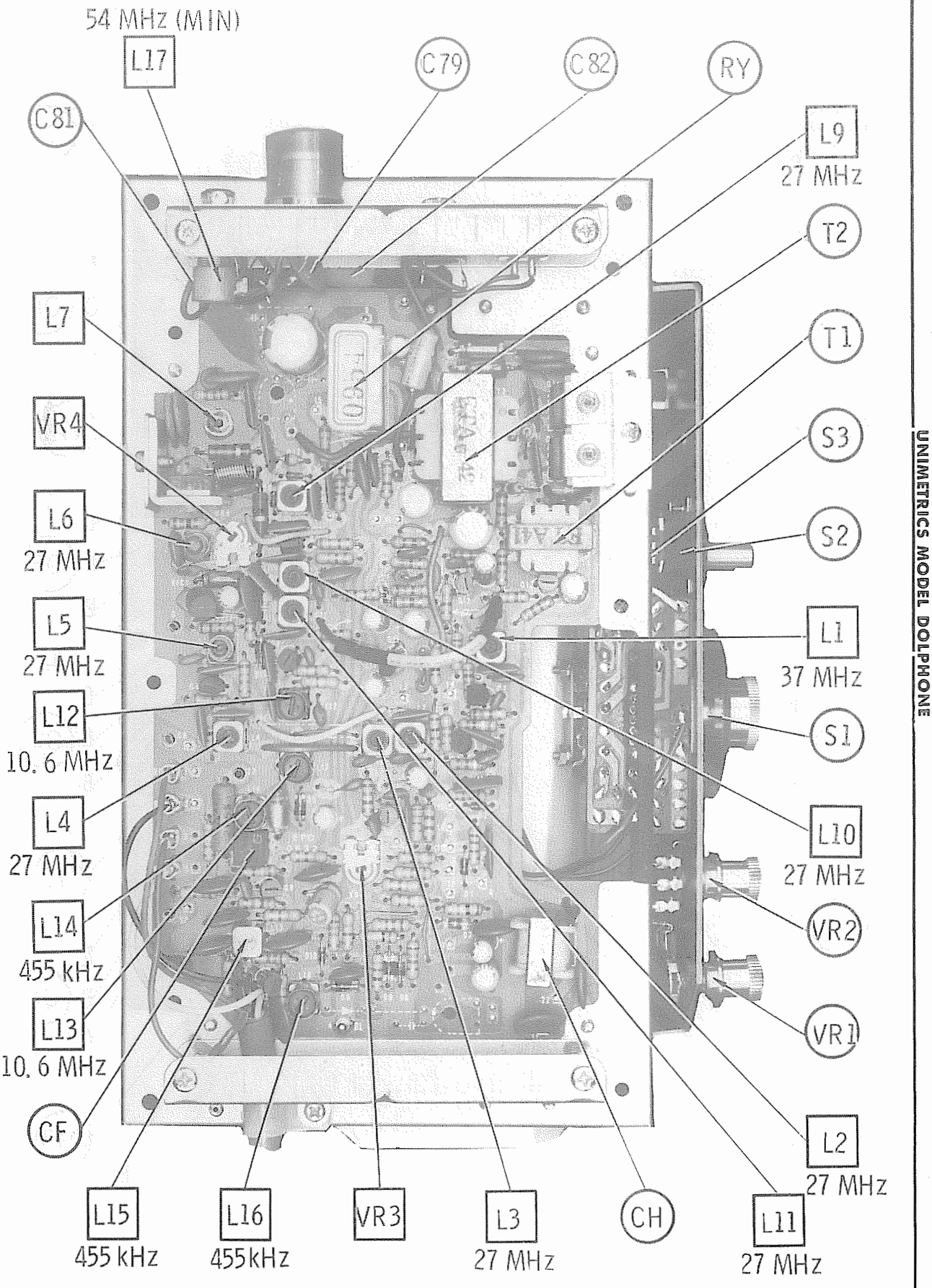
TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
Modulation meter to antenna jack. Inject a 1000Hz signal at MIC input.	Ch. 13	VR4	AMC Disconnect C66 to disable AMC. Adjust signal for overmodulation. Restore AMC operation. Adjust VR4 for 100% modulation maximum.

A Howard W. Sams CIRCUITRACE® Photo

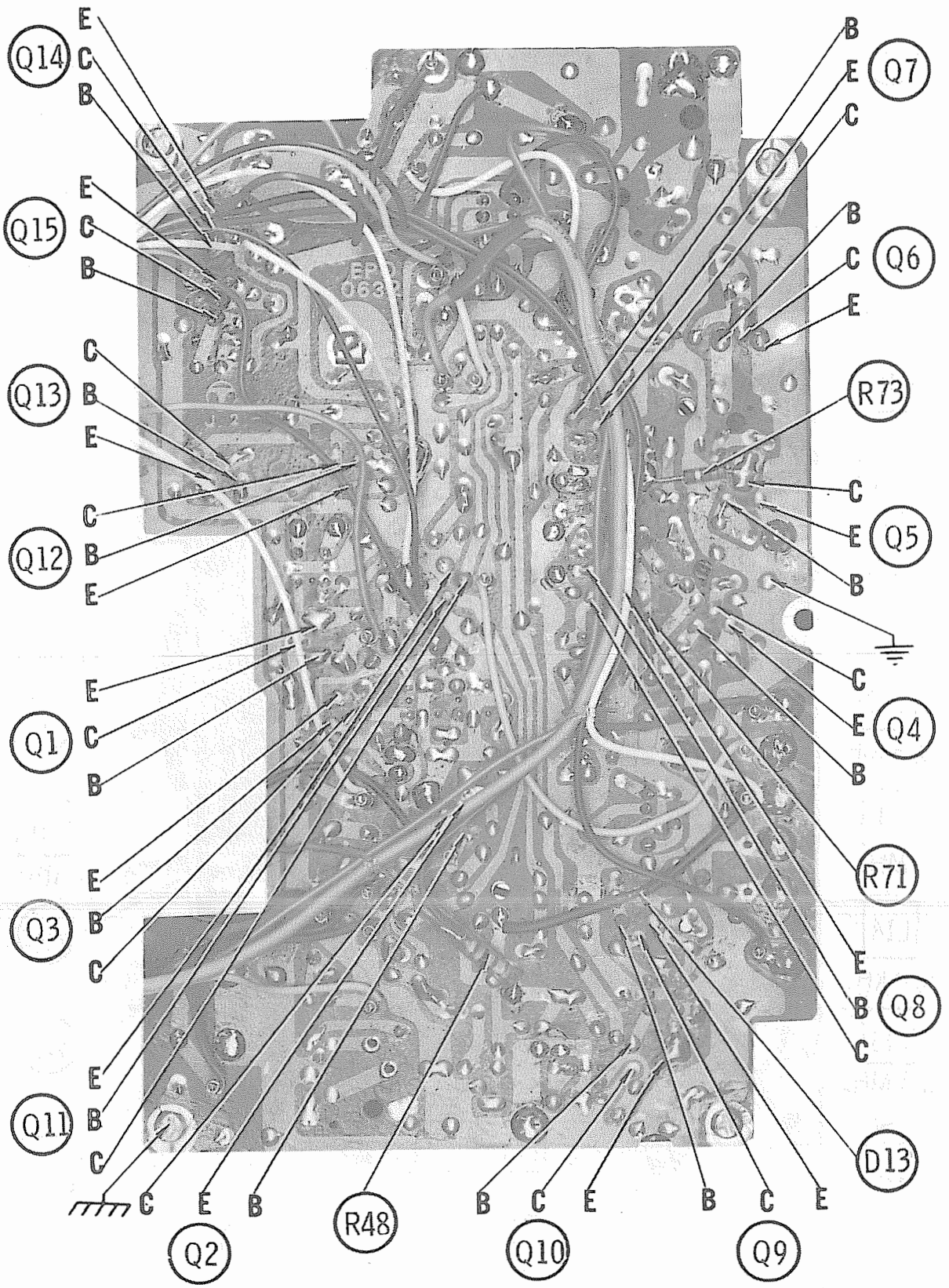


* Located on top of board

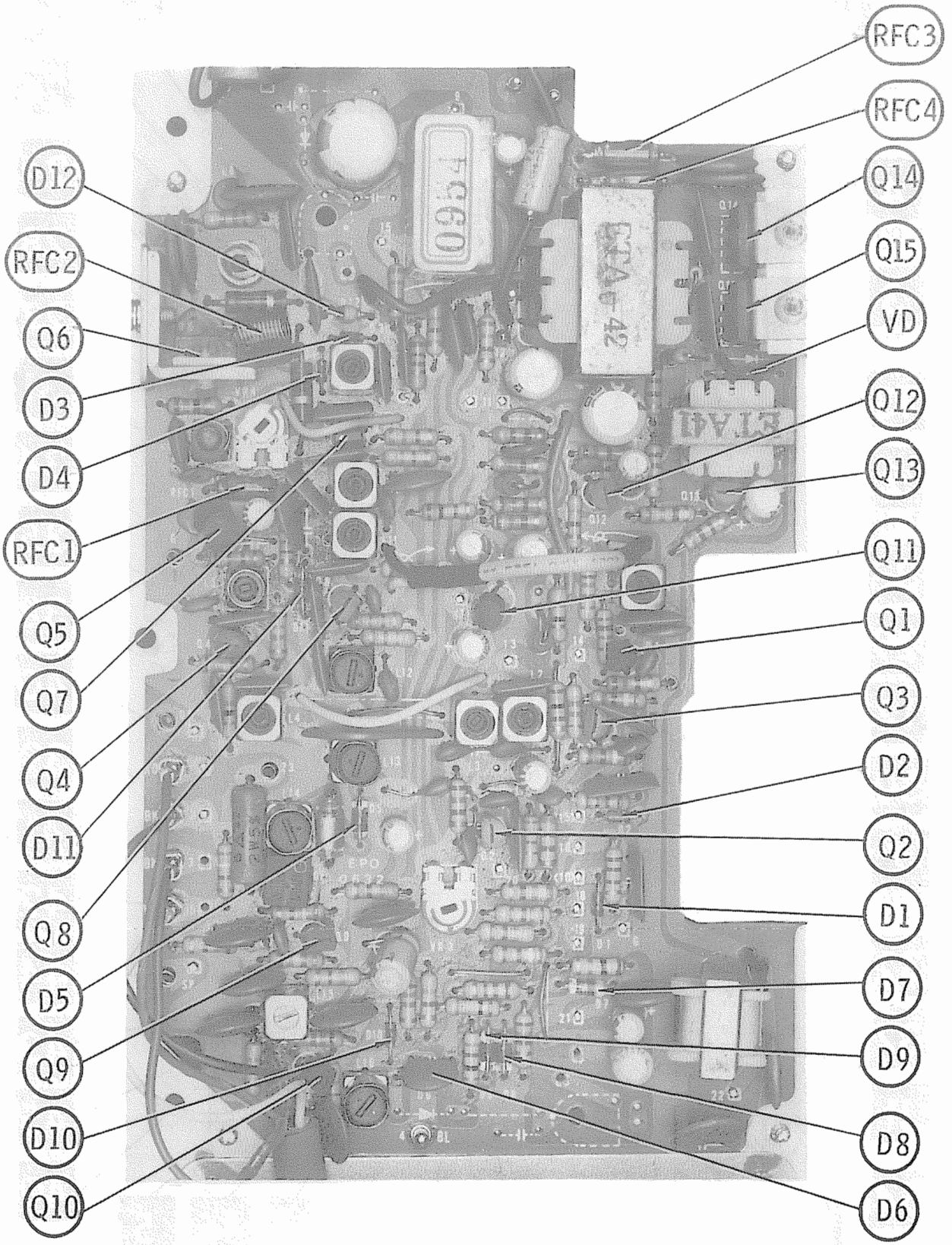
CRYSTAL BOARD



CRYSTAL BOARD

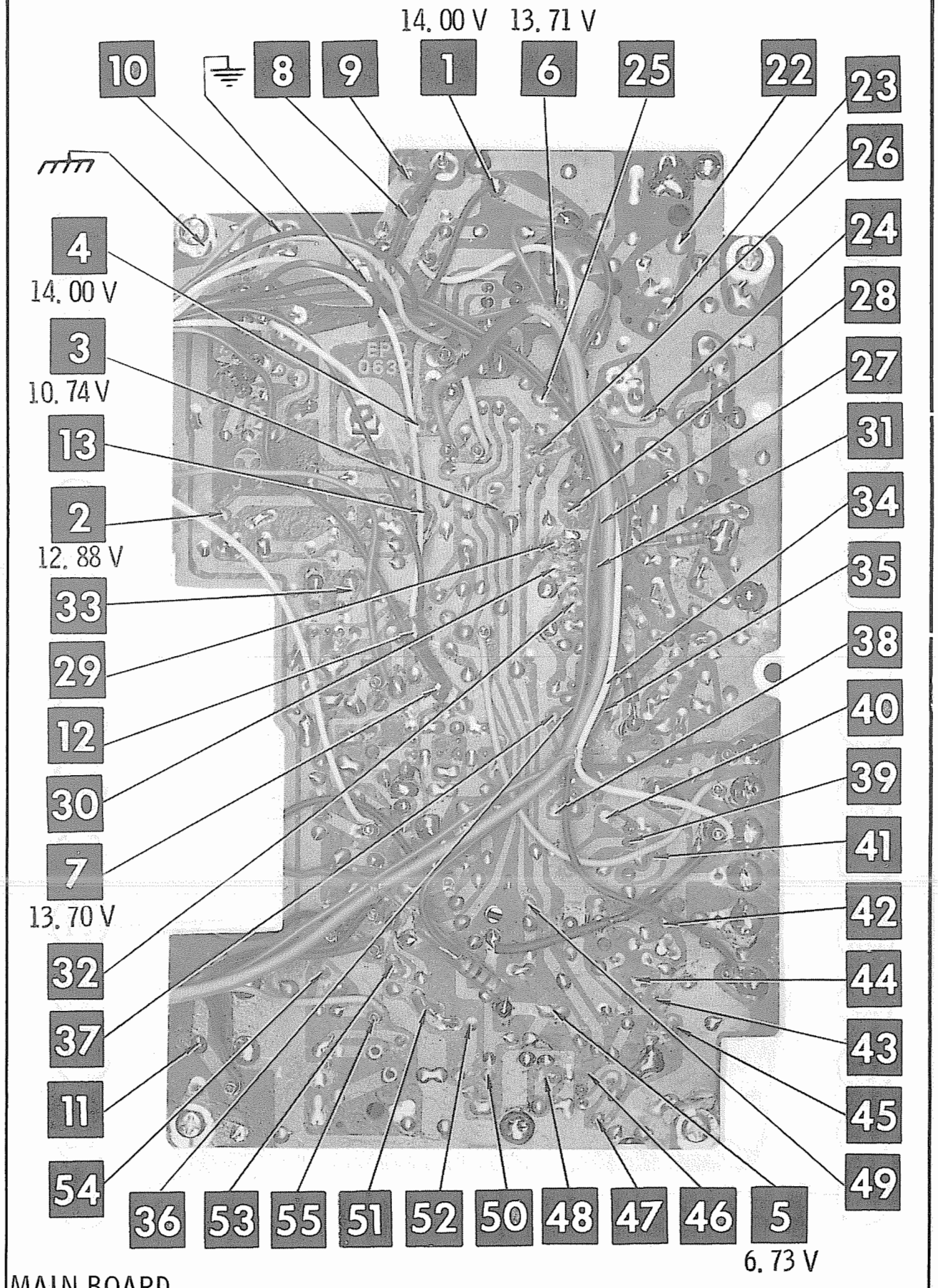

Q14
E
C
B
Q15
E
C
B
Q13
C
B
E
Q12
C
B
E
Q1
E
C
B
Q3
E
B
C
Q11
E
B
C
C
E
B
Q2
R48
B
C
E
Q10
B
C
E
Q9
Q7
B
E
C
Q6
B
C
E
R73
C
E
B
Q5
C
E
B
Q4
R71
E
B
C
Q8
D13

MAIN BOARD

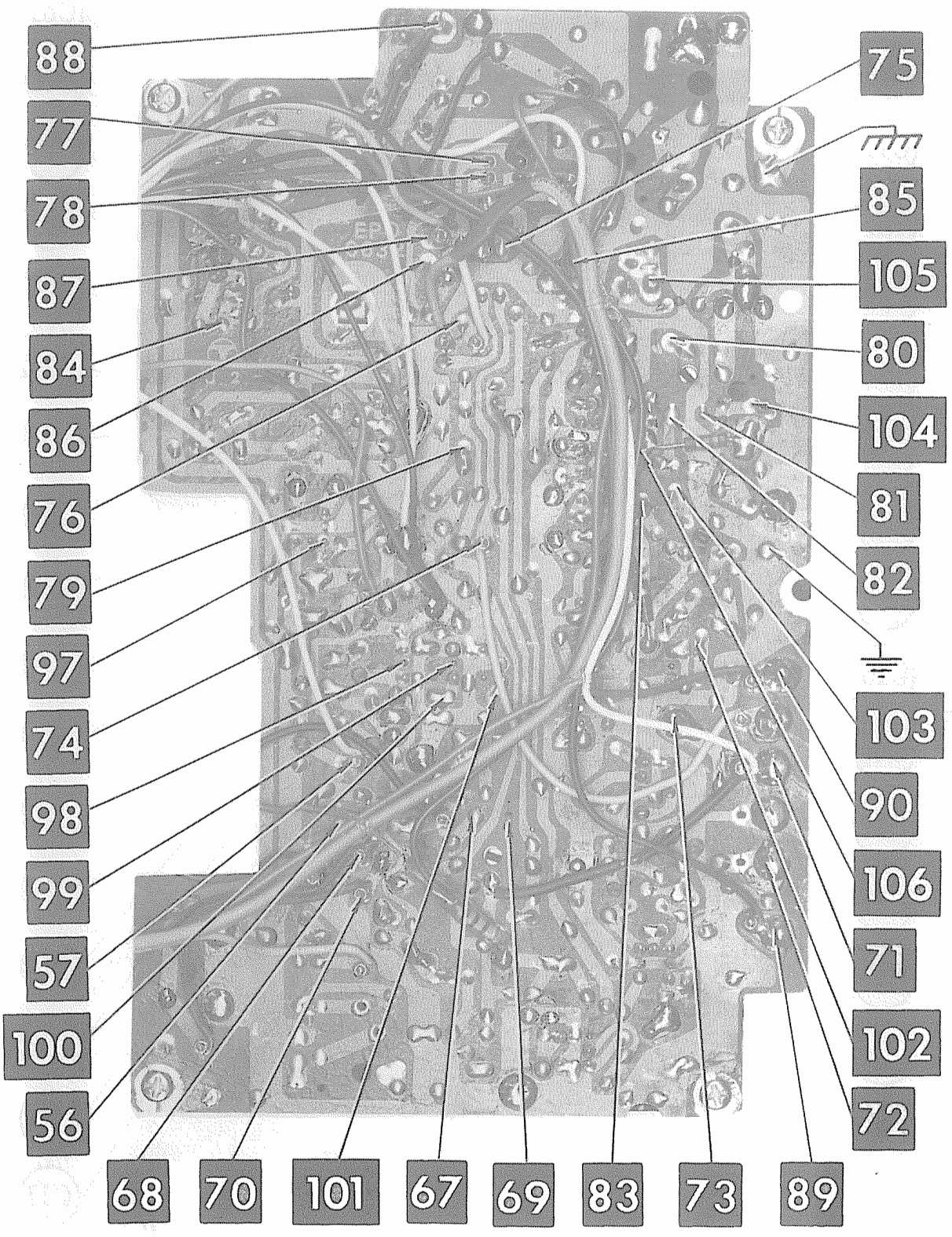

RFC3
RFC4
Q14
Q15
VD
Q12
Q13
Q11
Q1
Q3
D2
Q2
D1
D7
D9
D8
D6
Q10
D10
Q9
D5
Q8
D11
Q4
Q7
Q5
RFC1
D4
D3
Q6
RFC2
D12

MAIN BOARD

A Howard W. Sams CIRCUITRACE® Photo



MAIN BOARD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72
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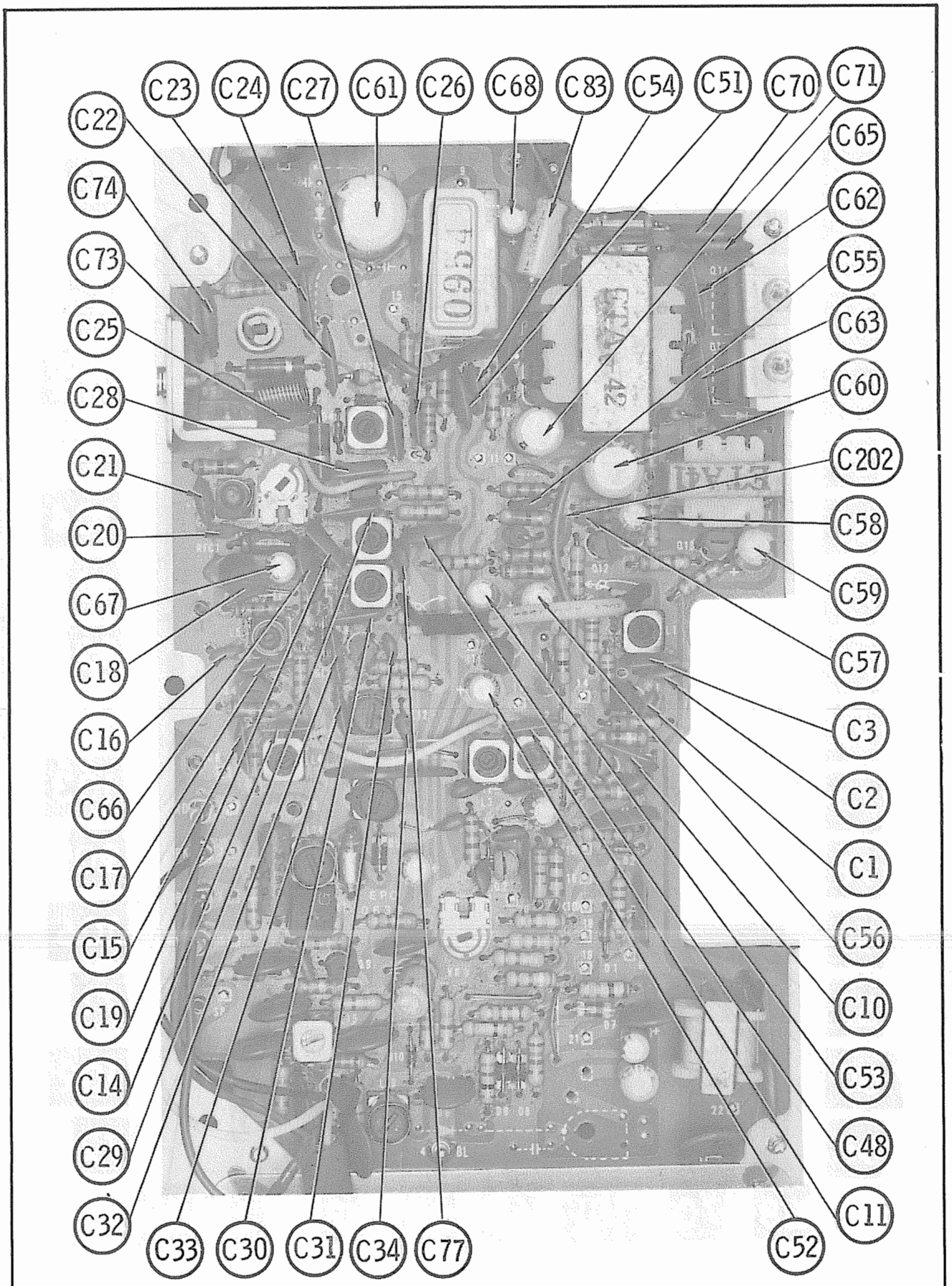
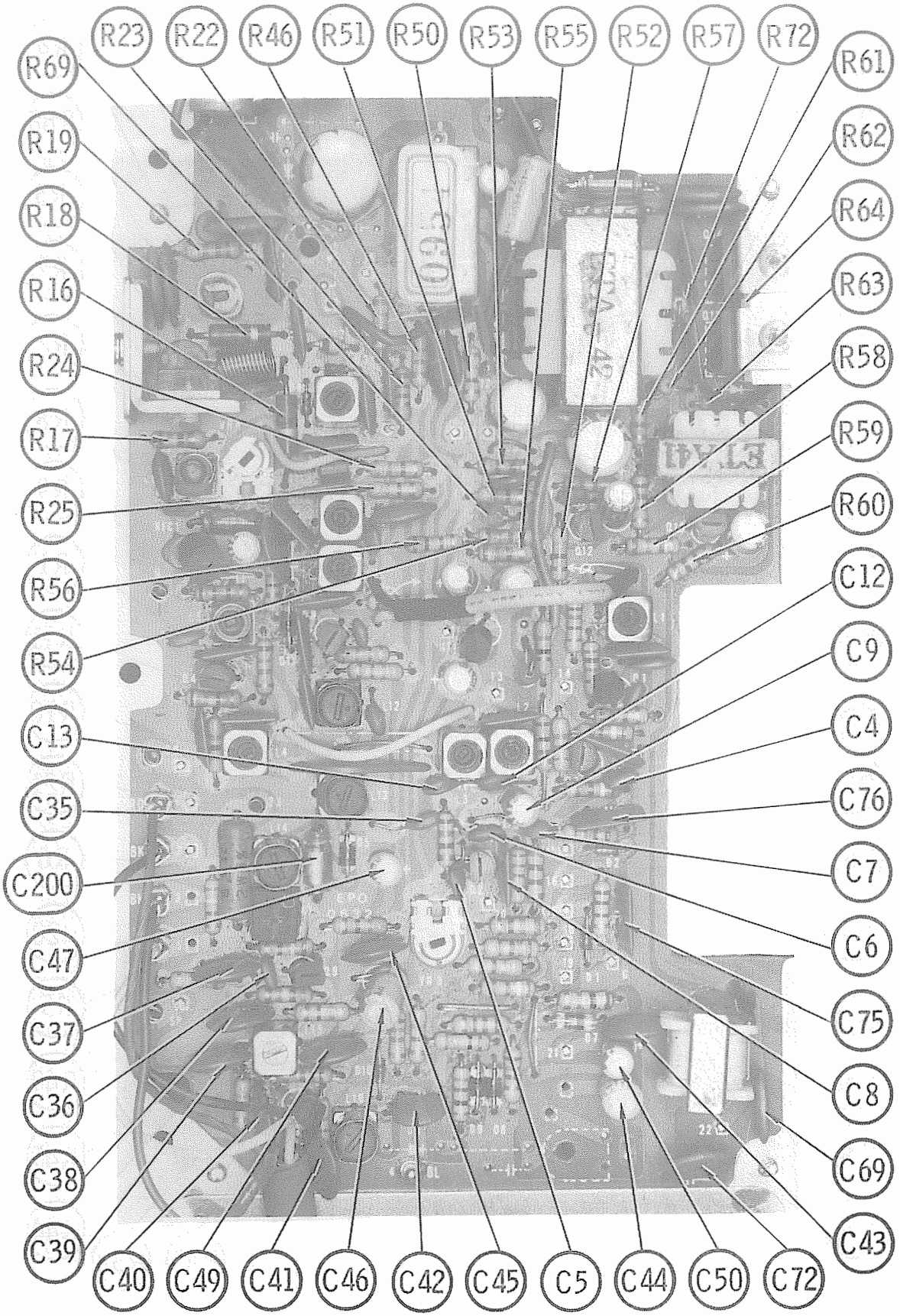
80
105
85
75

MAIN BOARD


C23
C24
C27
C61
C26
C68
C83
C54
C51
C70
C71
C22
C65
C74
C62
C73
C55
C25
C63
C28
C60
C21
C202
C20
C58
C67
C59
C18
C57
C16
C3
C66
C2
C17
C1
C15
C56
C19
C10
C14
C53
C29
C48
C32
C11
C33
C30
C31
C34
C77
C52

MAIN BOARD


R23
R22
R46
R51
R50
R53
R55
R52
R57
R72
R69
R61
R19
R62
R18
R64
R16
R63
R24
R58
R17
R59
R25
R60
R56
C12
R54
C9
C13
C4
C35
C76
C200
C7
C47
C6
C37
C75
C36
C8
C38
C69
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C43
C40
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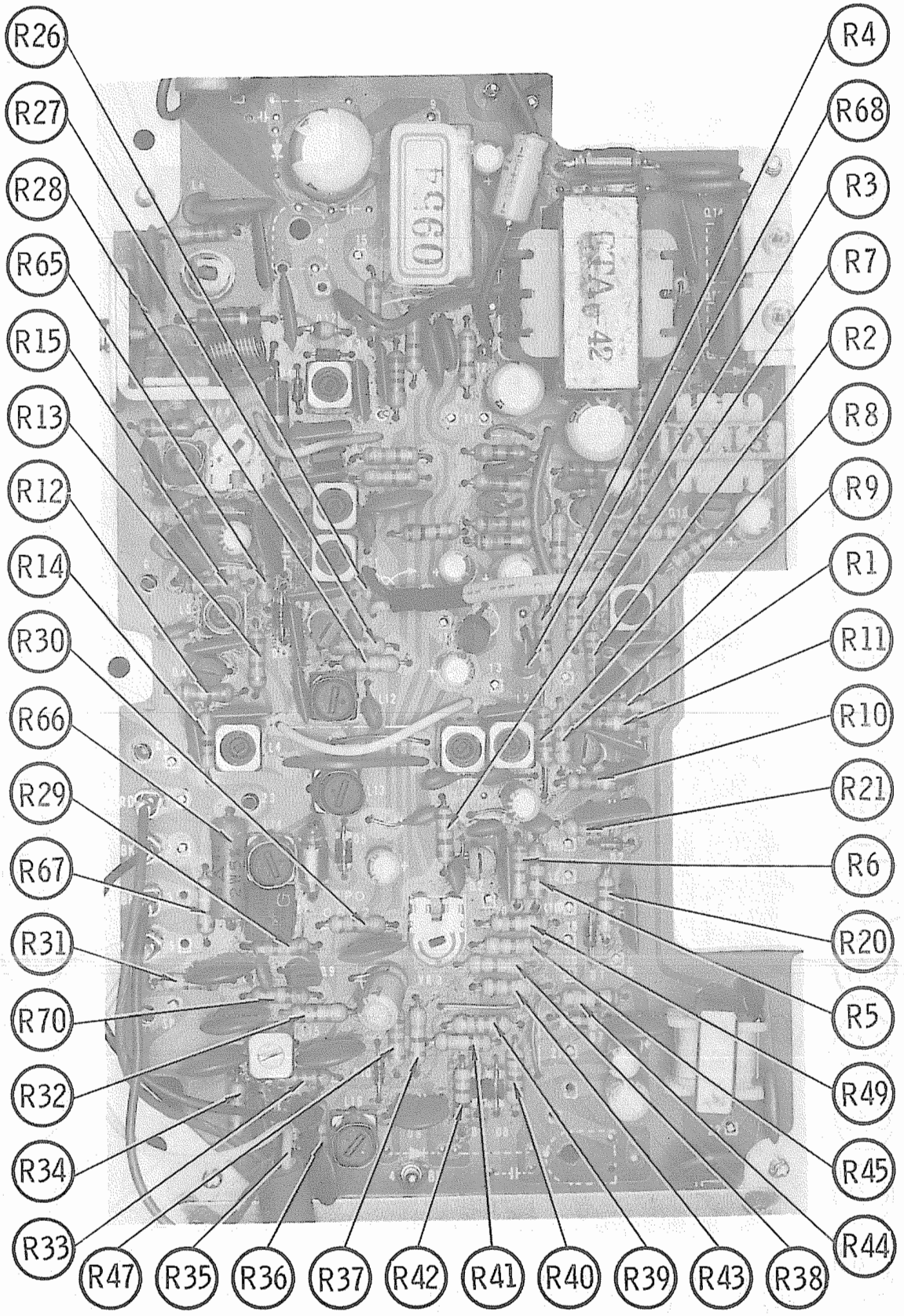
C41
C46
C42
C45
C5
C44
C50
C72

MAIN BOARD


R26
R27
R28
R65
R15
R13
R12
R14
R30
R66
R29
R67
R31
R70
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R34
R33
R47
R35
R36
R37
R42
R41
R40
R39
R43
R38
R44
R45
R49
R5
R20
R6
R21
R10
R11
R1
R9
R8
R2
R7
R3
R68
R4

MAIN BOARD

PARTS LIST AND DESCRIPTION

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

SEMICONDUCTORS (Select replacement transistor for best results)

ITEM No.	TYPE No.	MFGR. 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.
D1	1S1555	100-435	GE-300	0200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D2	1S1555	100-435	GE-300	0200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D3	1S1555	100-435	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D4	1S1555	100-435	GE-300	D200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D5	1N60	100-436	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D6	1N60	100-436	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D7	1N60	100-436	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D8	1N60	100-436	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D9	1N60	100-436	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D10	MZ207	100-437	GEZD-6.8		ZB6.8B				RT-238	ECG5071
D11	1N60	100-439	1N60	1N60	PTC206	HEPR9135	RE 47	SK3088	RT-263	ECG109
D12	V06C	100-438	GE-504A	5A4D	PTC201	HEPR0052	RE 49	SK3030	RT-210	ECG116
D13	1S1555		GE-300	0200	PTC214	HEPR0602	RE 52	SK3100	RT-218	ECG177
D14	10D4	(1)	GE-504A	5A4D	PTC201	HEPR0053	RE 49	SK3016	RT-214	ECG116
Q1	2SC839J	90-452	GE-61	(IR)2SC644	PTC132	HEPS0015	RE 13	SK3018	RT-308	ECG123A
Q2	2SC839J	90-452	GE-61	(IR)2SC644	PTC132	HEPS0015	RE 13	SK3018	RT-308	ECG123A
Q3	2SC710C		GE-211	(IR)2SC710	PTC115	HEPS0016	RE 13	SK3018	RT-308	ECG123A
	2SC839J	90-453(1)	GE-61	(IR)2SC644	PTC132	HEPS0015	RE 13	SK3018	RT-308	ECG123A
Q4	2SC710C		GE-211	(IR)2SC710	PTC115	HEPS0016	RE 13	SK3018	RT-308	ECG123A
	2SC839J	90-453(1)	GE-61	(IR)2SC644	PTC132	HEPS0015	RE 13	SK3018	RT-308	ECG123A
Q5	2SC1760E	(10)			PTC180					ECG306
	2SC1475	90-454(1) (11)	GE-219	TR-65	PTC179	HEPS3001	RE 79	SK3046	RT-114	ECG315
Q6	2SC1306I	90-450(12)	GE-215		PTC186		RE 203	SK3197	RT-146	ECG235
Q7	2SC460A	90-455	GE-210	(IR)2SC403A	PTC101	HEPS0014	RE 10	SK3122	RT-134	ECG233
Q8	2SC839H	90-456	GE-61	(IR)2SC644	PTC132	HEPS0015	RE 13	SK3018	RT-308	ECG123A
Q9	2SC839J	90-457	GE-61	(IR)2SC644	PTC132	HEPS0015	RE 13	SK3018	RT-308	ECG123A
Q10	2SC839J	90-457	GE-61	(IR)2SC644	PTC132	HEPS0015	RE 13	SK3018	RT-308	ECG123A
Q11	2SC945Q	90-458	GE-210	(IR)2SC945	PTC121	HEPS0015	RE 192	SK3124	RT-308	ECG199
Q12	2SC945P	90-459	GE-210	(IR)2SC945	PTC121	HEPS0015	RE 192	SK3124	RT-308	ECG199
Q13	2SC945P	90-459	GE-210	(IR)2SC945	PTC121	HEPS0015	RE 192	SK3124	RT-308	ECG199
Q14	2SC1096L	90-451(13)	GE-28	TR-55	PTC110	HEPS5027	RE 42	SK3054	RT-167	ECG186A
Q15	2SC1D96L	90-451(13)	GE-28	TR-55	PTC110	HEPS5027	RE 42	SK3054	RT-167	ECG186A
VD	1S1209	80-1059								

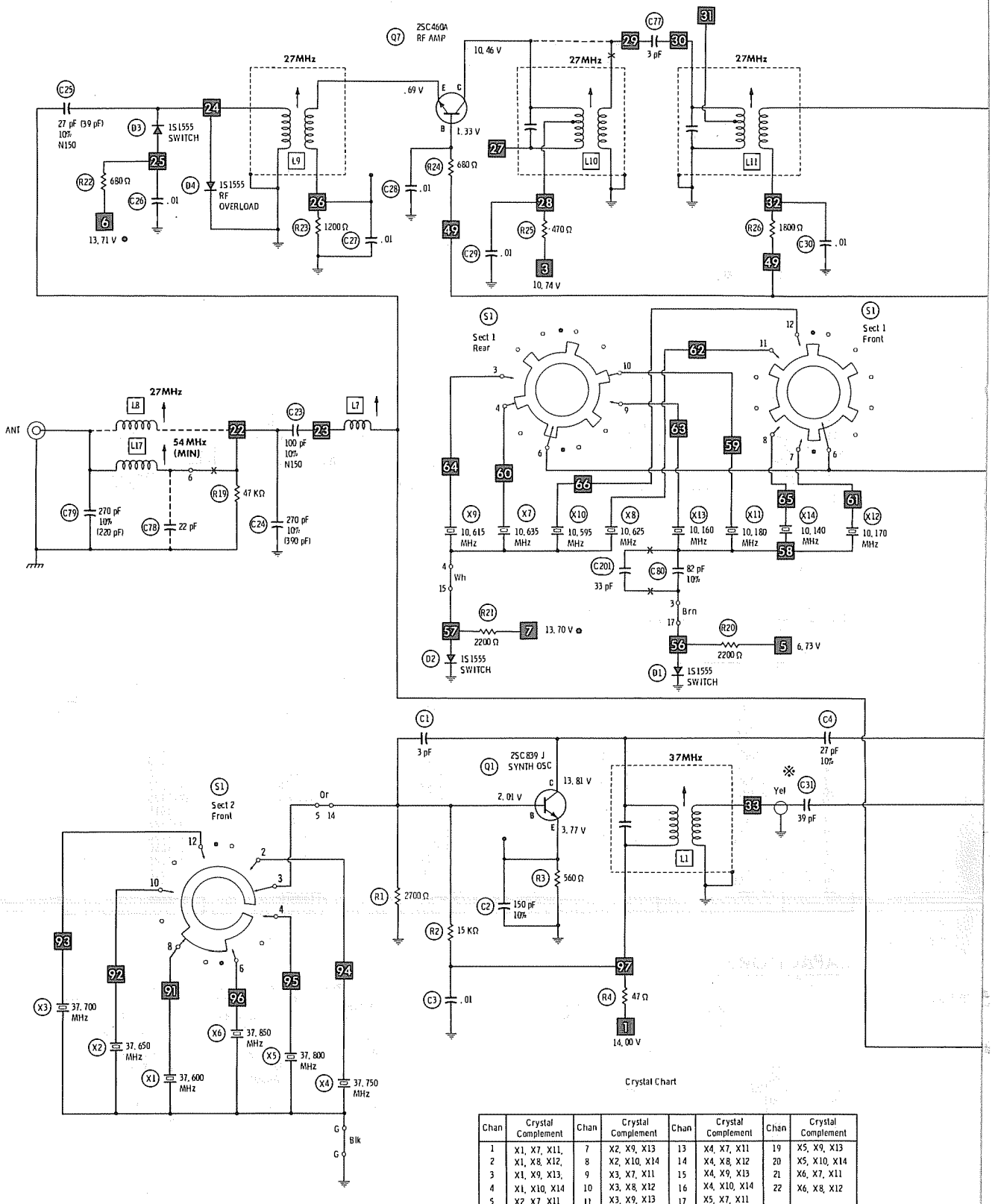
(1) Used in some versions.
(10) Rating, 950mw @ 500 mA.
(11) Rating, 750mw @ 500 mA.
(12) Rating, 12 watts @ 3.0 amps.
(13) Rating, 10 watts @ 2.0 amps.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	REPLACEMENT DATA			
		MFGR. PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C9	10 16V	80-1010	PC10-25	VTT10A25	EV-1222
C44	33 10V	80-1032	PC30-25	VTT33A10	EV-1125
C46	33 10V	80-1034	PC30-25	VTT33A10	EV-1125
C47	10 16V	80-1035	PC10-25	VTT10A25	EV-1222
C50	1 30V	80-1037	PC1-50	VTT1B63	EV-1615
C52	10 16V	80-1039	PC10-25	VTT10A25	EV-1222
C53	10 16V	80-1339	PC10-25	VTT10A25	EV-1222
C56	33 10V	80-1042	PC30-25	VTT33A10	EV-1125
C58	1 50V	80-1044	PC1-50	VTT1B63	EV-1615
C59	33 10V	80-1045	PC30-25	VTT33A10	EV-1125
C60	100 16V	80-1046	PC100-16	VTT100F16	EV-1230
C61	47D 16V	80-1047	PC500-16	VTT470J16	EV-1250
C65	33 16V	80-1050	PC30-25	VTT33A10	EV-1125
C67	10 16V	80-1052	PC10-25	VTT10A25	EV-1222
C68	3.3 25V	80-1053	PC5-5D	VTT3R3A50	EV-1318
C83	33 10V		PC30-25	VTT33A10	EV-1125

CAPACITORS

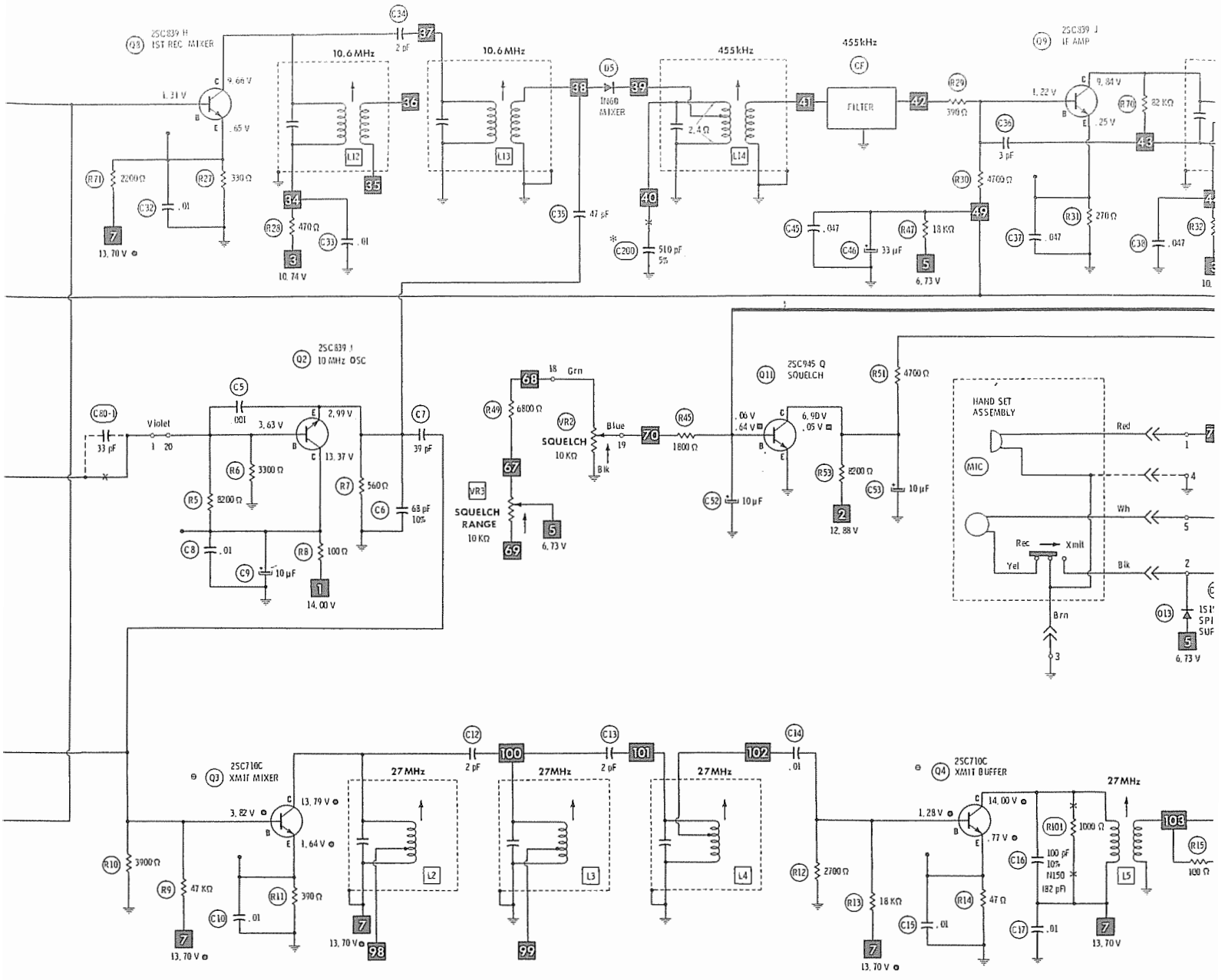
ITEM No.	RATING	MFGR. PART No.	REPLACEMENT DATA			
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	3		OTZ-3R3	NP03P3	CN0533	10TCC-V33
C2	150 10%		DD-151		GP315	10TS-T15
C3	.01		UK50-103		MAG5011	
C4	27 10%	80-1005				
C5	.001		DO-102G	GP100D	GP210	5GA-D10
C6	68 10%		DD-680	GP68	GP468	10TS-Q68
C7	39	80-1008				
C8	.01		UK50-103		MAG5011	
C10	.01		UK50-103		MAG5011	
C11	.01		UK50-103		MAG5011	
C12	2		DTZ-2R2	NP02P2	CN0522	10TCC-V22
C13	2		OTZ-2R2	NP02P2	CN0522	10TCC-V22
C14	.01		UK50-103		MAG5011	
C15	.01		UK50-103		MAG5011	
C16	100 10% N150	80-1014				10TCP-T10
C17	.01		UK50-103		MAG5011	
C18	220 10%			CD15FD221J03	SX322	MWA-221
C19	.01		UK50-103		MAG5011	
C20	68 10% N150	80-1018				10TCP-Q68
C21	220 10%			CD15F0221J03	SX322	MWA-221
C22	.D22		UK50-223		MAG5012	
C23	100 10% N150	80-1020				10TCP-T10

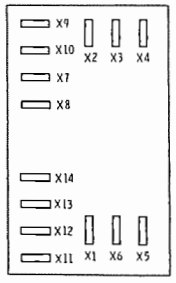


Crystal Chart

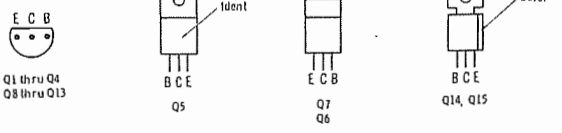
Chan	Crystal Complement	Chan	Crystal Complement	Chan	Crystal Complement	Chan	Crystal Complement
1	X1, X7, X11,	7	X2, X9, X13	13	X4, X7, X11	19	X5, X9, X13
2	X1, X8, X12,	8	X2, X10, X14	14	X4, X8, X12	20	X5, X10, X14
3	X1, X9, X13,	9	X3, X7, X11	15	X4, X9, X13	21	X6, X7, X11
4	X1, X10, X14	10	X3, X8, X12	16	X4, X10, X14	22	X6, X8, X12
5	X2, X7, X11	11	X3, X9, X13	17	X5, X7, X11		
6	X2, X8, X12	12	X3, X10, X14	18	X5, X8, X12	23	X6, X10, X14

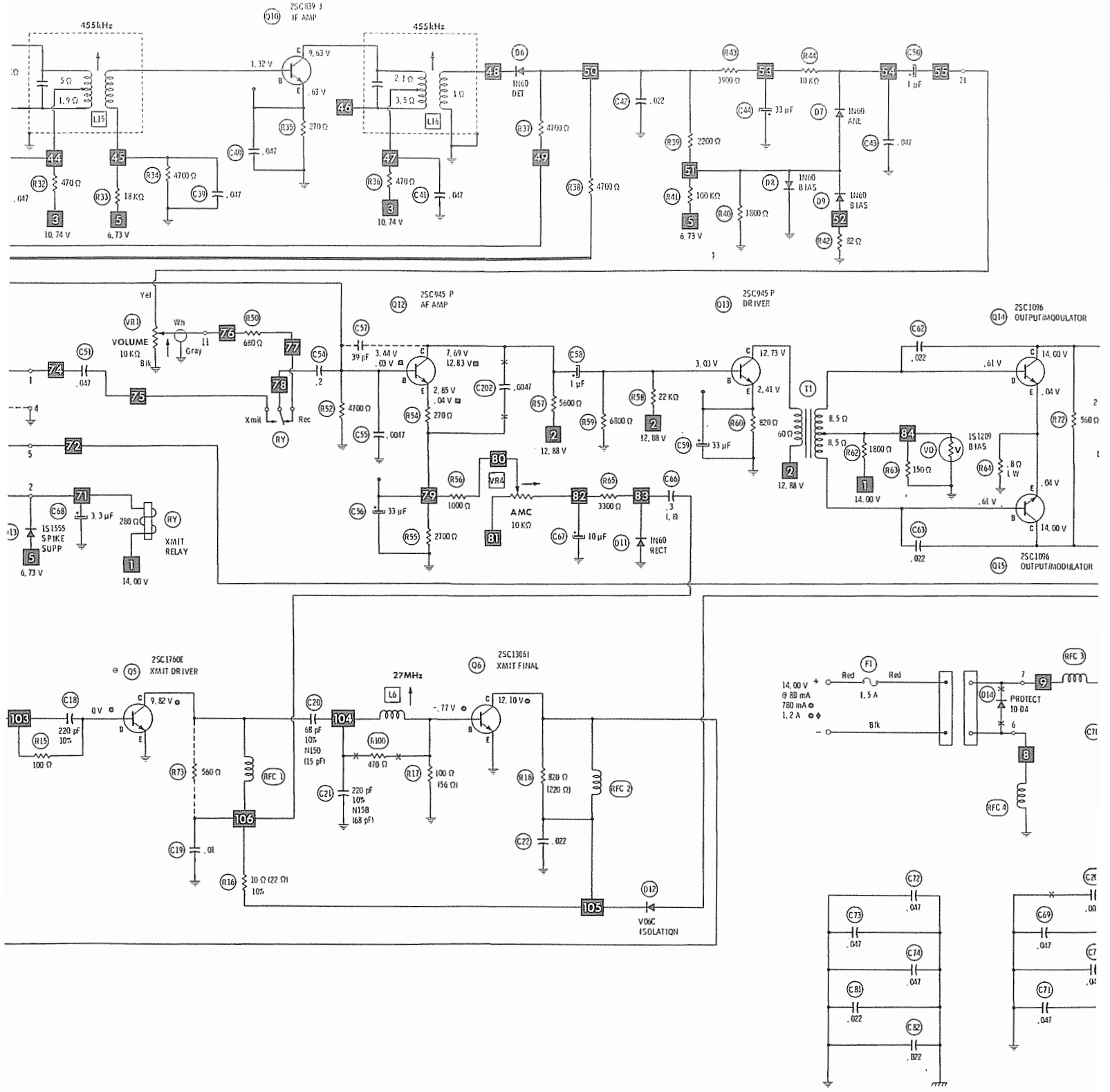
A PHOTOFACT STANDARD NOTATION SCHEMATIC WITH CIRCUITRACE®





Terminal Guides

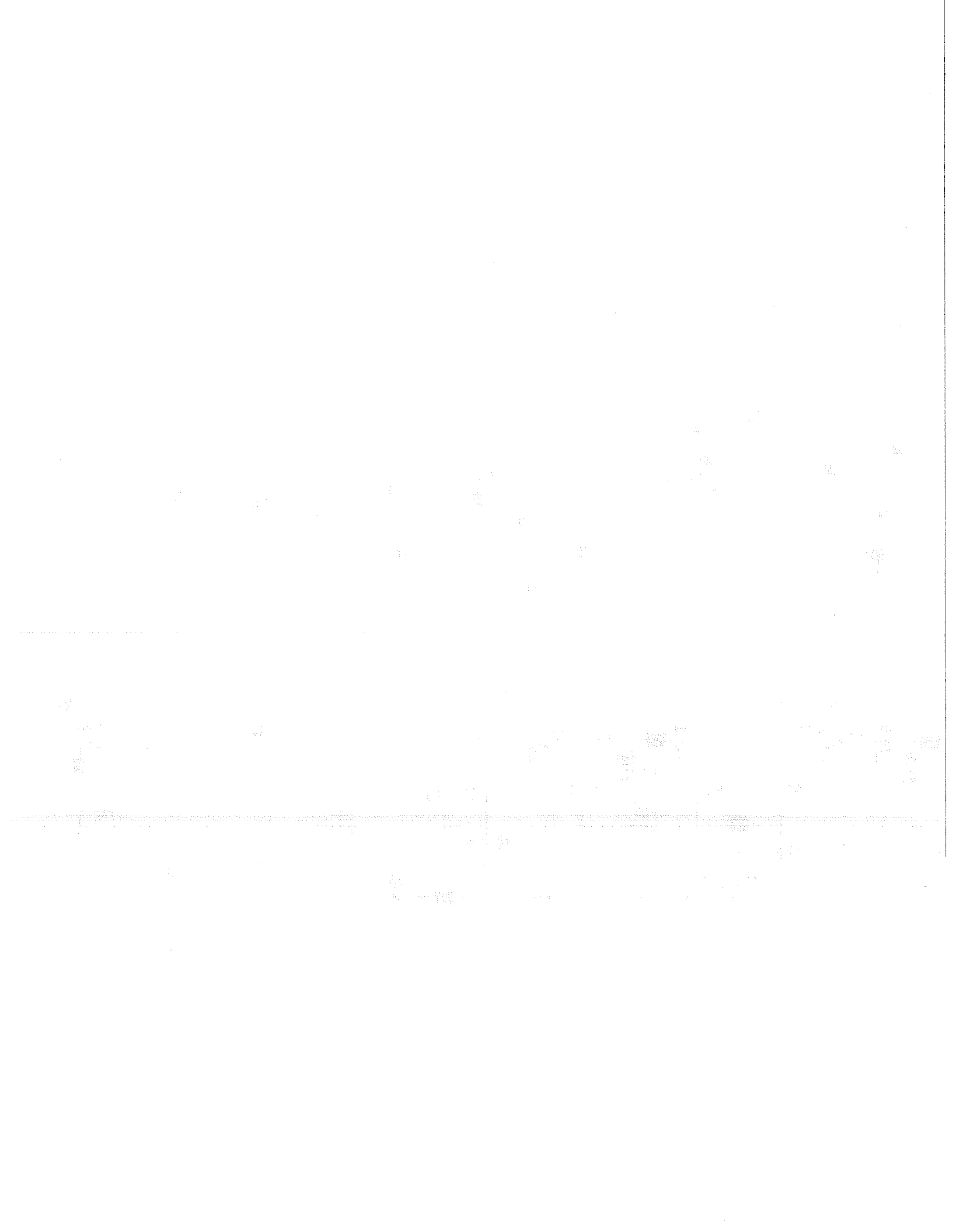



455kHz
Q10 2SC839 J IF AMP
455kHz
L15
L16
D6 1N60 DET
R43 3900 Ω
R44 10 KΩ
C56 1 μF
C42 .022
C44 33 μF
D7 1N60 ANL
C43 .047
R39 2200 Ω
R37 4700 Ω
R38 4700 Ω
R41 100 KΩ
R40 1800 Ω
D8 1N60 BIAS
D9 1N60 BIAS
R42 82 Ω
C40 .047
R35 270 Ω
R36 470 Ω
C41 .047
R32 470 Ω
R33 18 KΩ
R34 4700 Ω
C39 .047
10, 74 V
6, 73 V
6, 73 V
Yel
VR1 VOLUME 10 KΩ
Wh
Gray
Blk
L1
R50 680 Ω
Q12 2SC945 P AF AMP
Q13 2SC945 P DRIVER
Q14 2SC1096 OUTPUT/MODULATOR
Q15 2SC1096 OUTPUT/MODULATOR
C51 .047
C57 39 pF
C54 .2
C202 .0047
C58 1 μF
R57 5600 Ω
R58 22 KΩ
R59 6800 Ω
R52 4700 Ω
R54 270 Ω
C55 .0047
C59 33 μF
R60 820 Ω
T1
C62 .022
R72 560 Ω
R62 1800 Ω
R63 150 Ω
VD 1S1209 BIAS
R64 .8 Ω 1 W
C63 .022
Xmit
Rec
RY
C56 33 μF
R56 1000 Ω
VR4 AMC 10 KΩ
R65 3300 Ω
C66 .3
R55 2700 Ω
C67 10 μF
D11 1N60 RECT
C68 3.3 μF
280 Ω
1S1555 SPIKE SUPP
XMIT RELAY
6, 73 V
14, 00 V
12, 88 V
14, 00 V
14, 00 V

Q5 2SC1760E XMIT DRIVER
Q6 2SC1306I XMIT FINAL
27MHz
L6
C18 220 pF 10%
R15 100 Ω
R73 560 Ω
RFC 1
C19 .01
R16 10 Ω (22 Ω) 10%
C20 68 pF 10% N150 (15 pF)
R100 470 Ω
C21 220 pF 10% N150 (68 pF)
R17 100 Ω (56 Ω)
R18 820 Ω (220 Ω)
RFC 2
C22 .022
D12 V06C ISOLATION

F1
Red
Red
1, 5 A
14, 00 V @ 88 mA 780 mA 1, 2 A
Blk
RFC 3
D14 PROTECT 10 D4
RFC 4

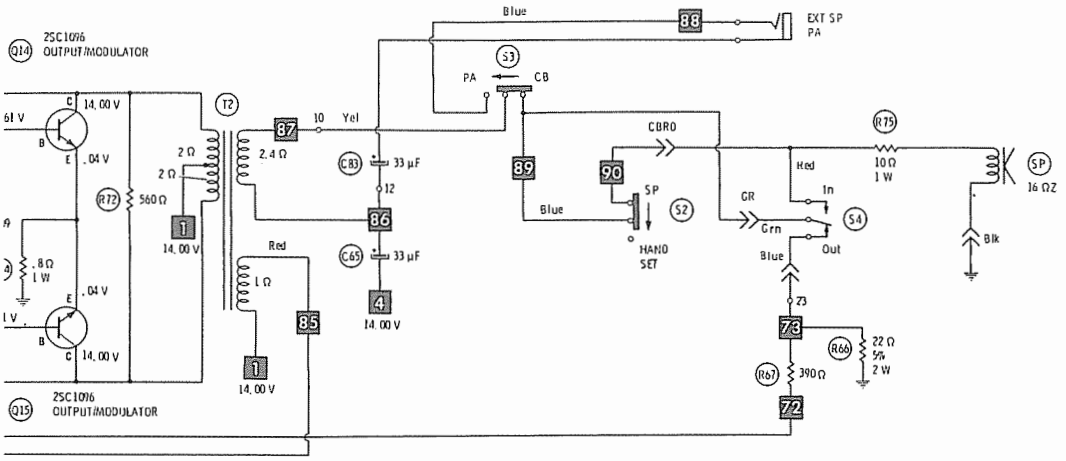
C72 .047
C73 .047
C74 .047
C81 .022
C82 .022
C69 .047
C71 .047

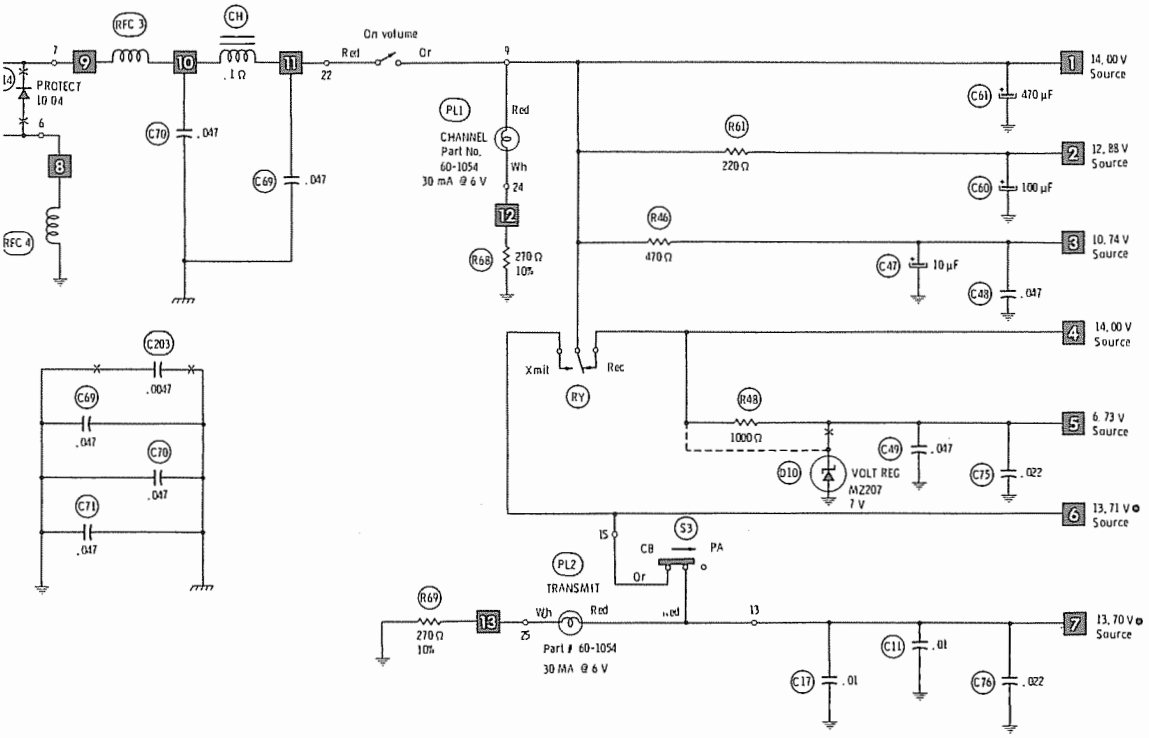


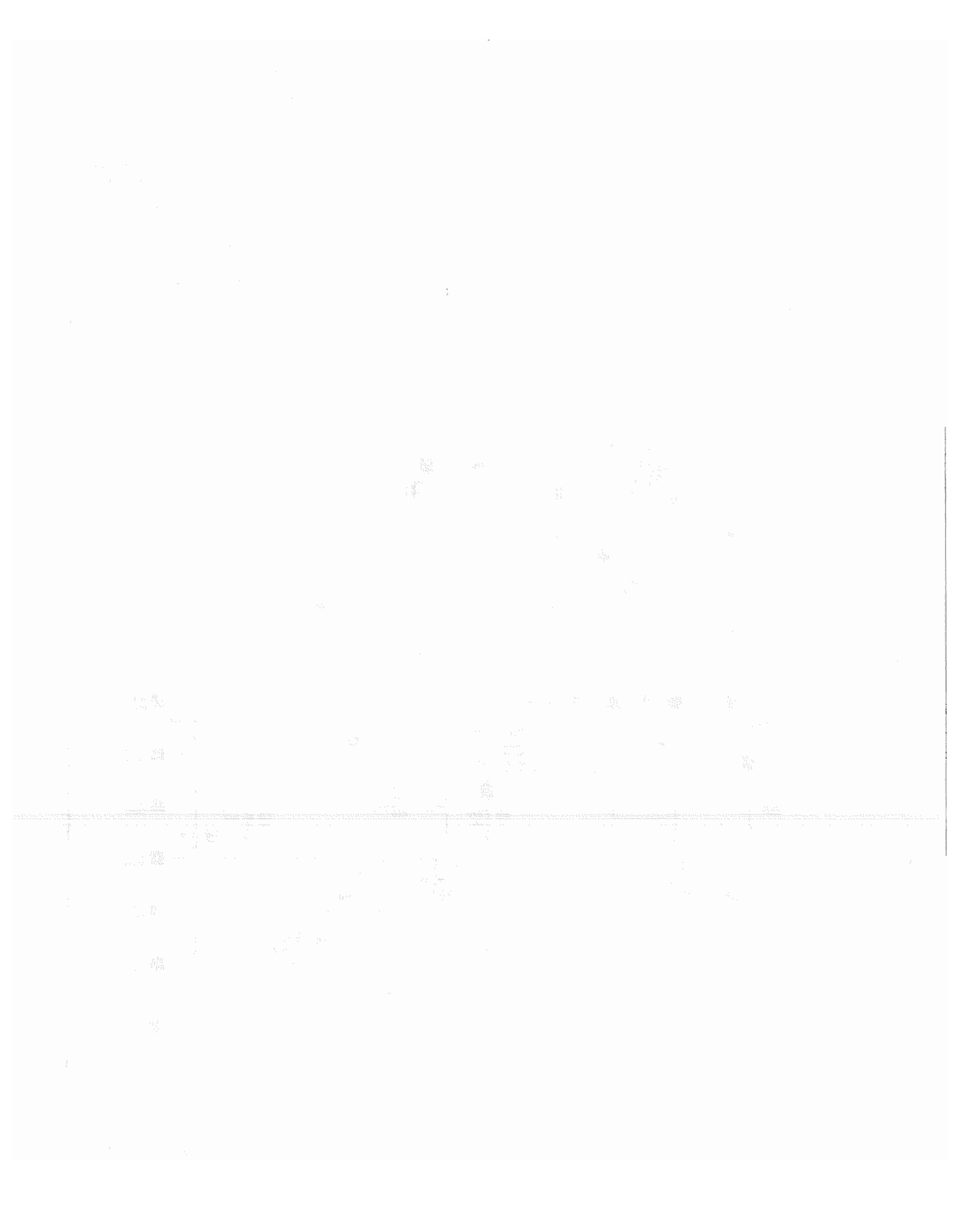
—✳— Circuitry not used in some versions
– – – Circuitry used in some versions
⊖ See parts list
※ Nominal value
⏚ Ground
Chassis
▽ Common tie point

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.







CAPACITORS (cont)

ITEM No.	RATING	MFGR. PART No.	REPLACEMENT DATA			
			CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C24	270 10%			CD15FD271J03	SX327	MWB-271
C25	27 10% N150	80-1022				10TCP-Q27
C26	.01		UK50-103		MAG5011	
C27	.01		UK50-103		MAG5011	
C28	.01		UK50-103		MAG5011	
C29	.01		UK50-103		MAG5011	
C30	.01		UK50-103		MAG5011	
C32	.01		UK50-103		MAG5011	
C33	.01		UK50-103		MAG5011	
C34	2		DTZ-2R2	NP02P2	CN0522	10TCC-V22
C35	47					
C36	3		DTZ-3R3	NP03P3	CN0533	10TCC-V33
C37	.047 25V		UK25-503		MAG2515	HY-735
C38	.047 25V		UK25-503		MAG2515	HY-735
C39	.047 25V		UK25-503		MAG2515	HY-735
C40	.047 25V		UK25-503		MAG2515	HY-735
C41	.047 25V		UK25-503		MAG2515	HY-735
C42	.022 25V		UK25-223			HY-725
C43	.047 25V		UK25-503		MAG2515	HY-735
C45	.047 25V		UK25-503		MAG2515	HY-735
C48	.047 25V		UK25-503		MAG2515	HY-735
C49	.047 25V		UK25-503		MAG2515	HY-735
C51	.1 12V		UK12-104		MAG1201	
C54	.2 12V	80-1040				
C55	.0047		DC-502	MGP005	TA250	TG-D50
C57	39	80-1043				
C62	.022		UK50-223		MAG5012	
C63	.022		UK50-223		MAG5012	
C66	.3 25V	80-1051				
C69	.047	80-1054			MAG5015	
C70	.047	80-1054			MAG5015	
C71	.047	80-1054			MAG5015	
C72	.047	80-1054			MAG5015	
C73	.047	80-1054			MAG5015	
C74	.047	80-1054			MAG5015	
C75	.022		UK50-223		MAG5012	
C76	.022		UK50-223		MAG5012	
C77	3		DTZ-3R3	NP03P3	CN0533	10TCC-V33
C79	270 10%				CN7327	10TCU-T27
C80	33 10%	80-1058				
C81	.022		UK50-223		MAG5012	
C82	.022		UK50-223		MAG5012	
C200	510 5%			CD15FD511J03	SX351	MWA-511
C201	33		DTZ-33	NP033	CN0433	10TCC-Q33
C202	.0047		DC-502	MGP005	TA250	TG-D50
C203	.047		UK50-503		MAG5015	

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

ITEM No.	FUNCTION	RESIST-ANCE	REPLACEMENT DATA				
			MFGR. PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	MALLORY PART No.	TRW PART No.
VR1	Volume/Power Switch	10K	40-587				
VR2	Squelch	10K	40-588				
VR3	Squelch Range	10K	70-994				
VR4	Modulation	10K	70-994				

COILS (RF-IF)

ITEM No.	FUNCTION	REPLACEMENT DATA			REMARKS
		PART No.	OTHER IDENTIFICATION	MILLER PART No.	
L1	Rec Mixer (37MHz)	50-539	ETR-196-5425		
L2	Xmit Mixer (27MHz)	50-540			
L3	Xmit Mixer (27MHz)	50-540	R-30-5435		
L4	Xmit Mixer (27MHz)	50-541	R-31-5435		
L5	RF Amp (27MHz)	50-542			
L6	Xmit Final (27MHz)	50-543			
L7	RF Choke	50-544			
L9	Rec Antenna (27MHz)	50-546	ETR-328-5435		
L10	Rec RF (27MHz)	50-547			
L11	Rec RF (27MHz)	50-547	ETR-104-543J		
L12	Rec Mixer (10.6MHz)	50-548			
L13	Rec Mixer (10.6MHz)	50-548			
L14	IF (455kHz)	50-549			
L15	IF (455kHz)	50-550	ETI-17-5435		
L16	IF (455kHz)	50-551			
L17	TVI Trap (54MHz)				
RFC1	RF Choke	50-555			
RFC2	RF Choke	50-556			
RFC3	Line Choke	50-557			
RFC4	Line Choke	50-557			

PARTS LIST AND DESCRIPTION (CONTINUED)

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

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	CURRENT (Meosured)	DC RES.	INDUCTANCE (0 CURRENT 1000~)	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
CH	1.2A	.1	.21mH	50-554 ELA-2 (1)	TR504		(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.	
T1	2	1		50-552 ETA-41 (1)	TR618		(1) Number on unit.

TRANSFORMER (Audio Output)

ITEM No.	IMPEDANCE		REPLACEMENT DATA			NOTES
	PRI.	SEC.	MFGR. PART No.	THORDARSON PART No.	TRIAD PART No.	
T2	36	16	50-553 ETA-0065 (1)			(1) Number on unit.

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MFGR. PART No.	QUAM PART No.	
SP	2 3/4" PM 8 Ohms	60-1053	30A05Z8R	

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	1.5A, Fast Acting			AGC1-1/2	HOJ	31201.5	150145	FG1-1 1/2

CRYSTALS

ITEM No.	CRYSTAL FREQUENCY IN MHz	MFGR. PART No.	CTS KNIGHTS PART No.	CHANNEL
X1	37.600	60-1100	DA14W37.600	1,2,3,4
X2	37.650	60-1101	DA14W37.650	5,6,7,8
X3	37.700	60-1102	DA14W37.700	9,10,11,12
X4	37.750	60-1103	DA14W37.750	13,14,15,16
X5	37.800	60-1104	DA14W37.800	17,18,19,20
X6	37.850	60-1105	DA14W37.850	21,22,23
X7	10.635	60-1106	DB80W10.635	1,5,9,13,17,21

ITEM No.	CRYSTAL FREQUENCY IN MHz	MFGR. PART No.	CTS KNIGHTS PART No.	CHANNEL
X8	10.625	60-1107	DB80W10.625	2,6,10,14,18,22
X9	10.615	60-1108	DB80W10.615	3,7,11,15,19
X10	10.595	60-1109	DB80W10.595	4,8,12,16,20,23
X11	10.180	60-1110	DC80W10.180	1,5,9,13,17,21
X12	10.170	60-1111	DC80W10.170	2,6,10,14,18,22
X13	10.160	60-1112	DC80W10.160	3,7,11,15,19
X14	10.140	60-1113	DC80W10.140	4,8,12,16,20,23

MISCELLANEOUS

ITEM No.	PART NAME	PART No.	NOTES
CF	Ceramic Filter	60-1095	Rec IF (455kHz)
R1	Relay	60-1096	280 Ohms
S1	Switch	40-641	Channel Selector
S2	Switch	40-620	Hand Set (Push-To-Talk)
S3	Switch	40-585	PA/CB
S4	Switch	40-586	Power (On/Off)
	Hand Set	40-589	Complete
	Mike Cartridge	60-1091	
	Speaker Cartridge	60-1092	
	Printed Circuit Board	EPA-0585A	Main (Complete)
	Printed Circuit Board	EPO-0632-01	Crystal

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

ITEM	PART No.
Chassis	60-1057
Cabinet, Top	60-1055
Cabinet, Bottom	60-1056
Hand Set Holder	40-594
Mobile Mfg. Bracket	40-612

ITEM	PART No.
Wall Hanger Bracket	40-613
Channel Dial	60-1059
Knob, Channel Selector	40-605
Knob, Control	40-606

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. 8240 (Solid) Miniature (RG-58/U) 8259 (Stranded) Miniature (RG-58A/U)
Shielded Cable	Use BELDEN No. 8499 Single-conductor Shielded (Neoprene)