

PHOTOFACT® Folder

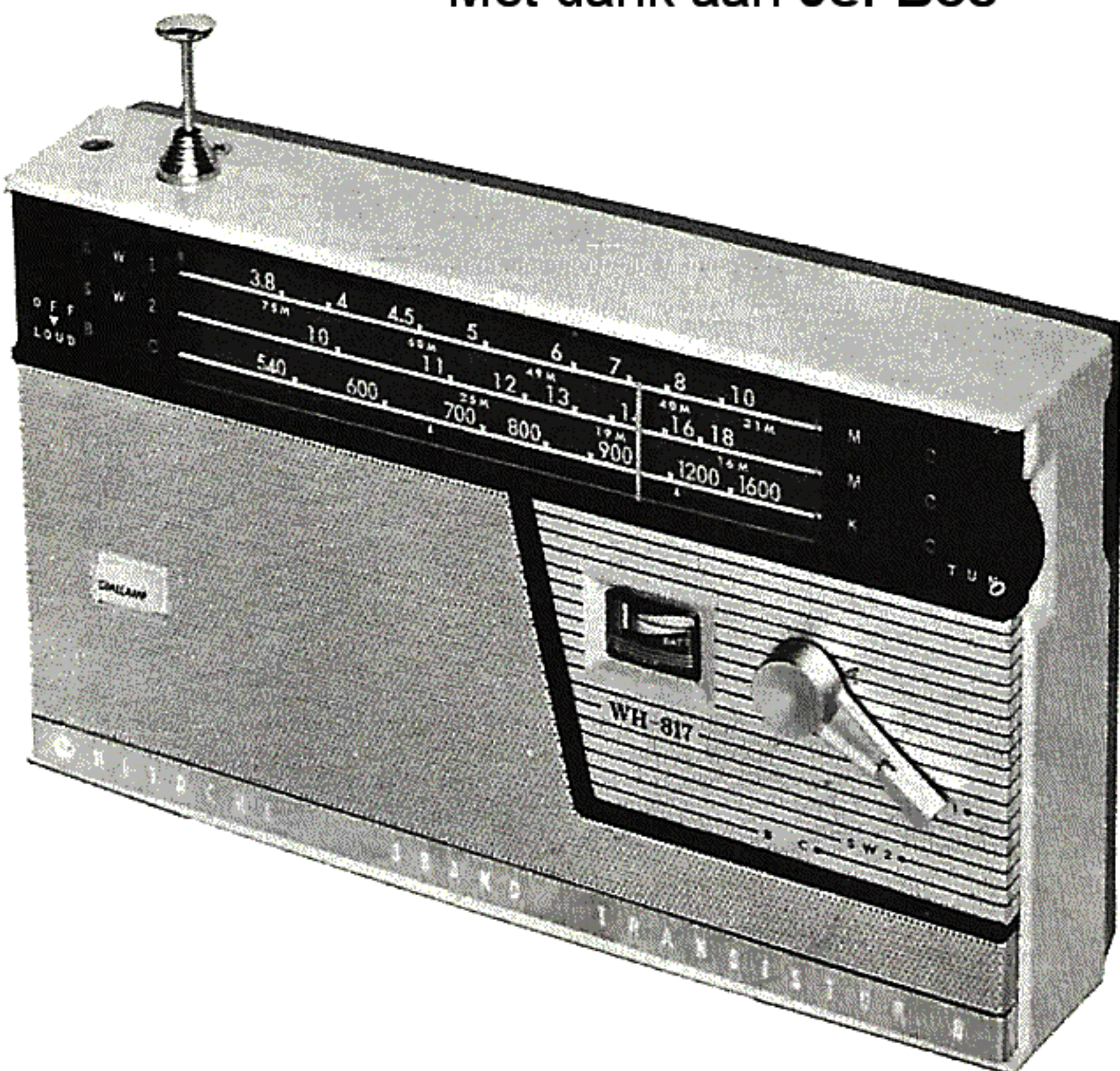
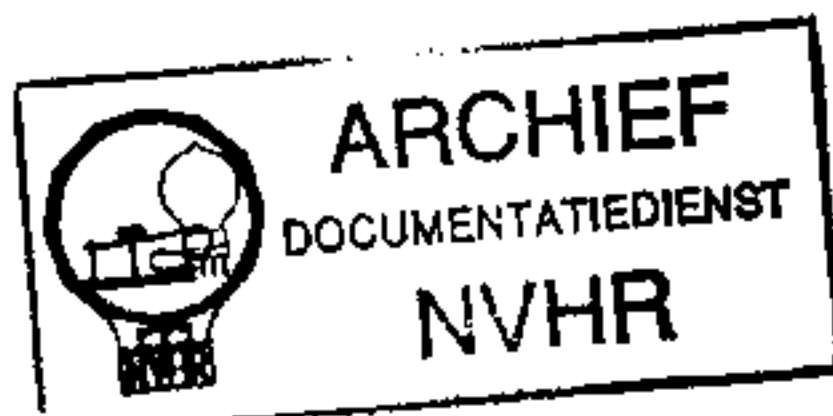
with CIRCUITRACE®

HITACHI
MODEL WH-817



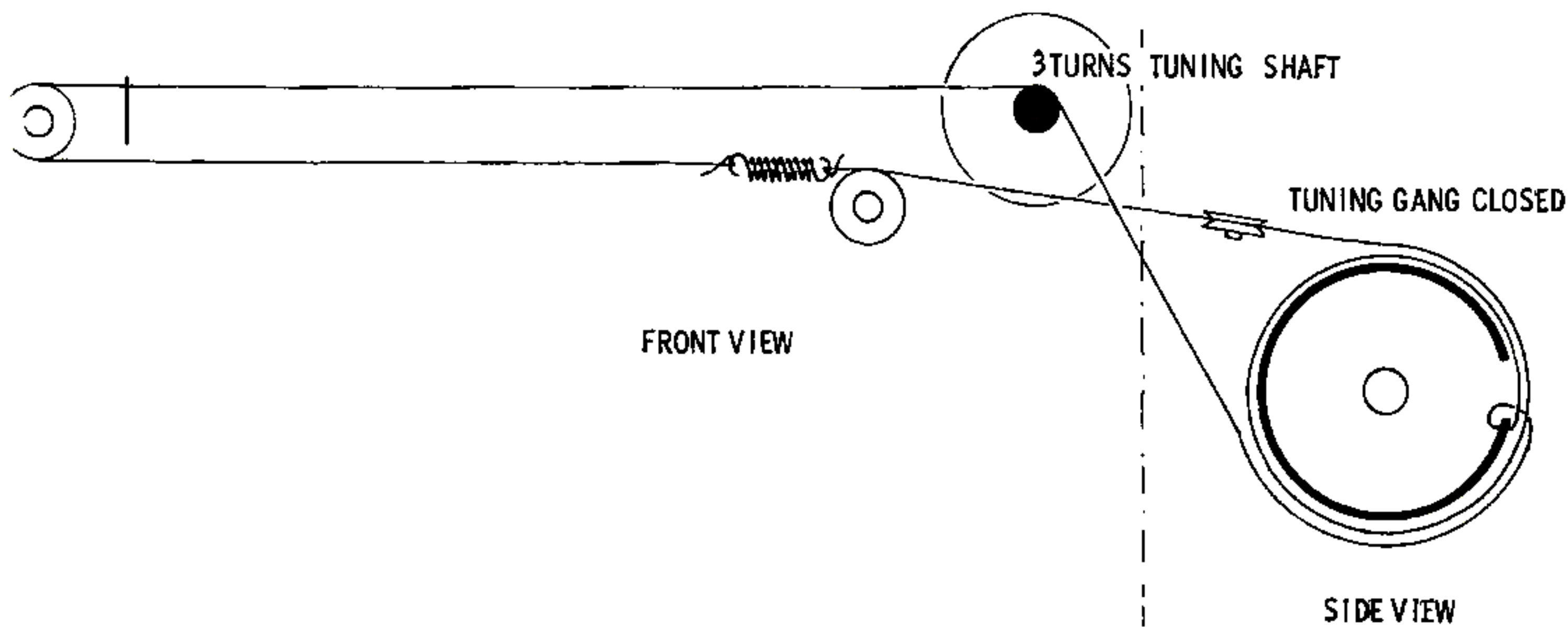
Ned. Ver. v. Historie v/d Radio

Met dank aan Jef Bos



TRADE NAME	Hitachi Model WH-817		
IMPORTER	Electronic Utilities Co., Div. of The Sampson Co., 2244 S. Western Ave., Chicago 8, Illinois		
TYPE SET	Battery Operated Transistorized 3 Band Portable AM Receiver		
POWER SUPPLY	4.5 Volts DC	RATING	20MA @ 4.5 Volts DC (No Signal, Min. Volume) 30MA @ 4.5 Volts DC (Signal, Normal Volume)
TUNING RANGE—BROADCAST	535—1605KC	SHORT WAVE 1	3.8—10MC SHORT WAVE 2 10—18MC

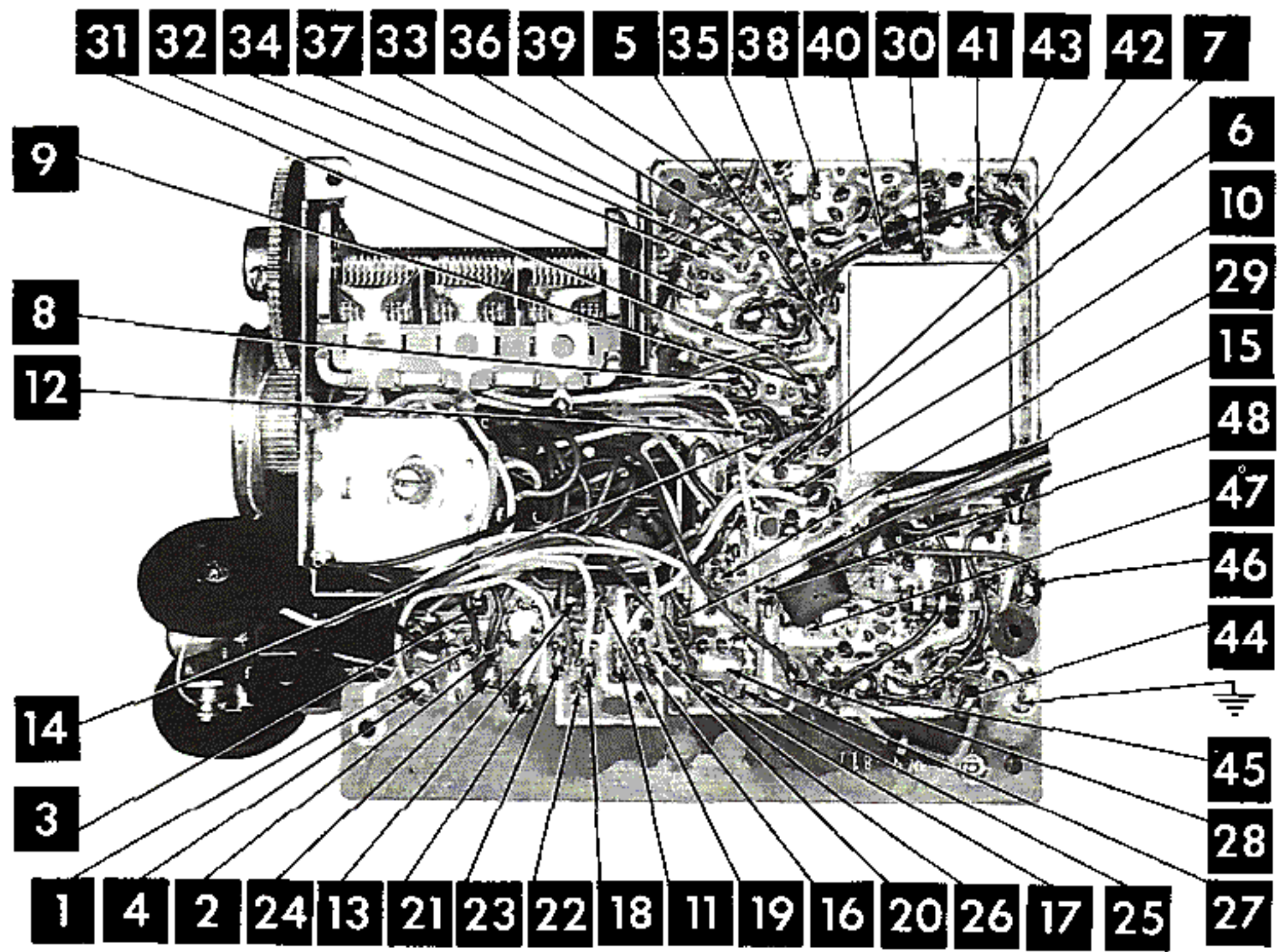
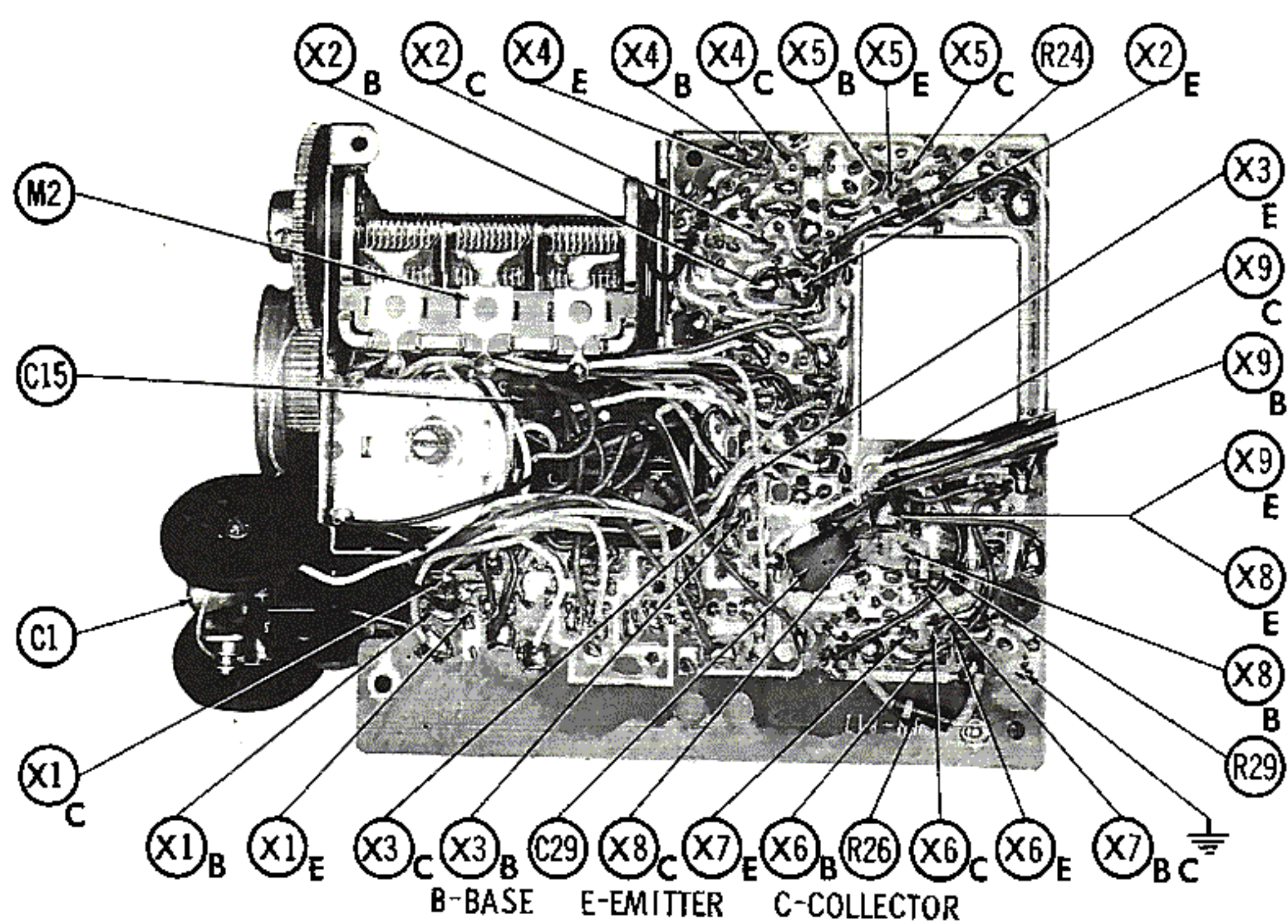
DIAL CORD STRINGING

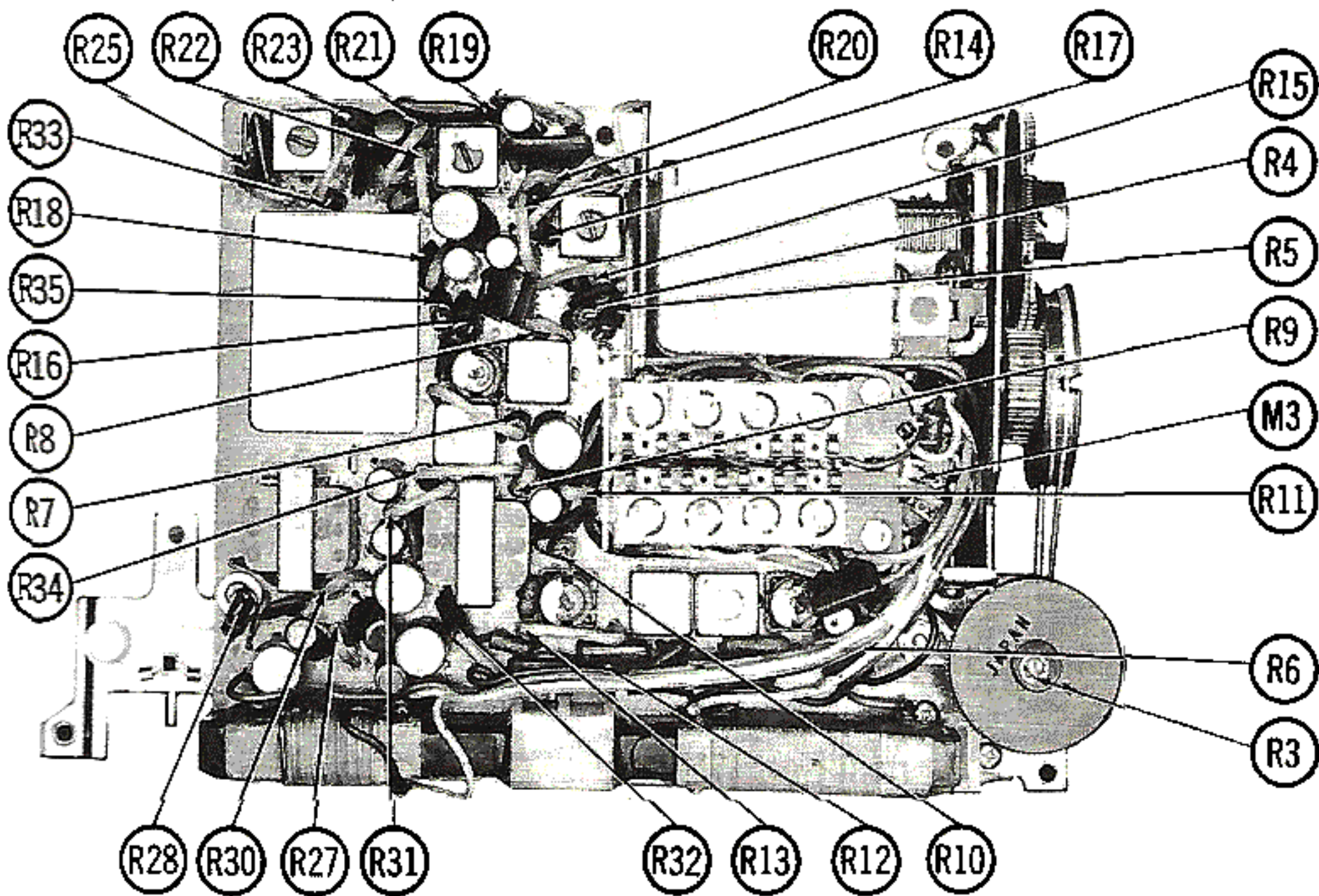


HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

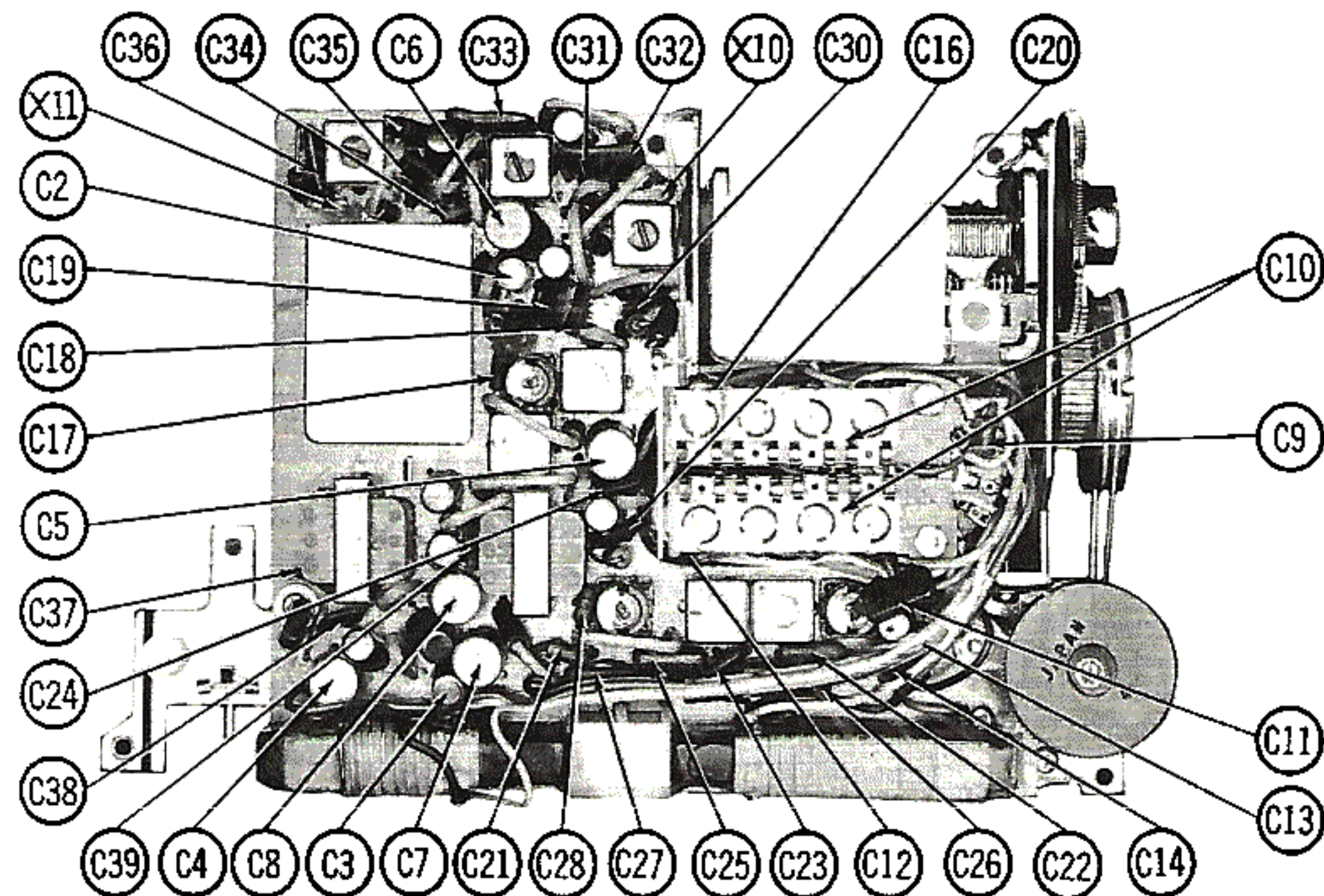
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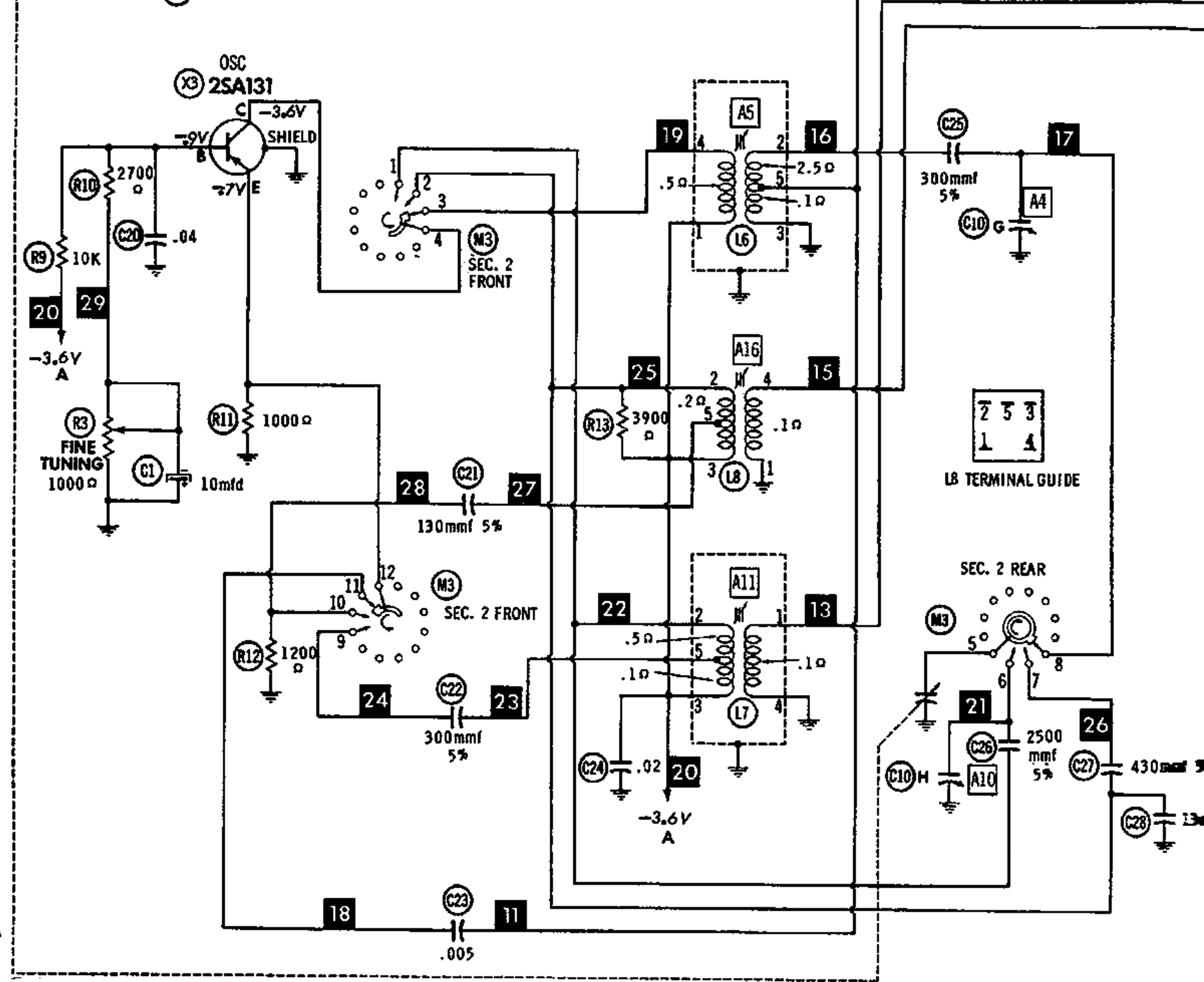
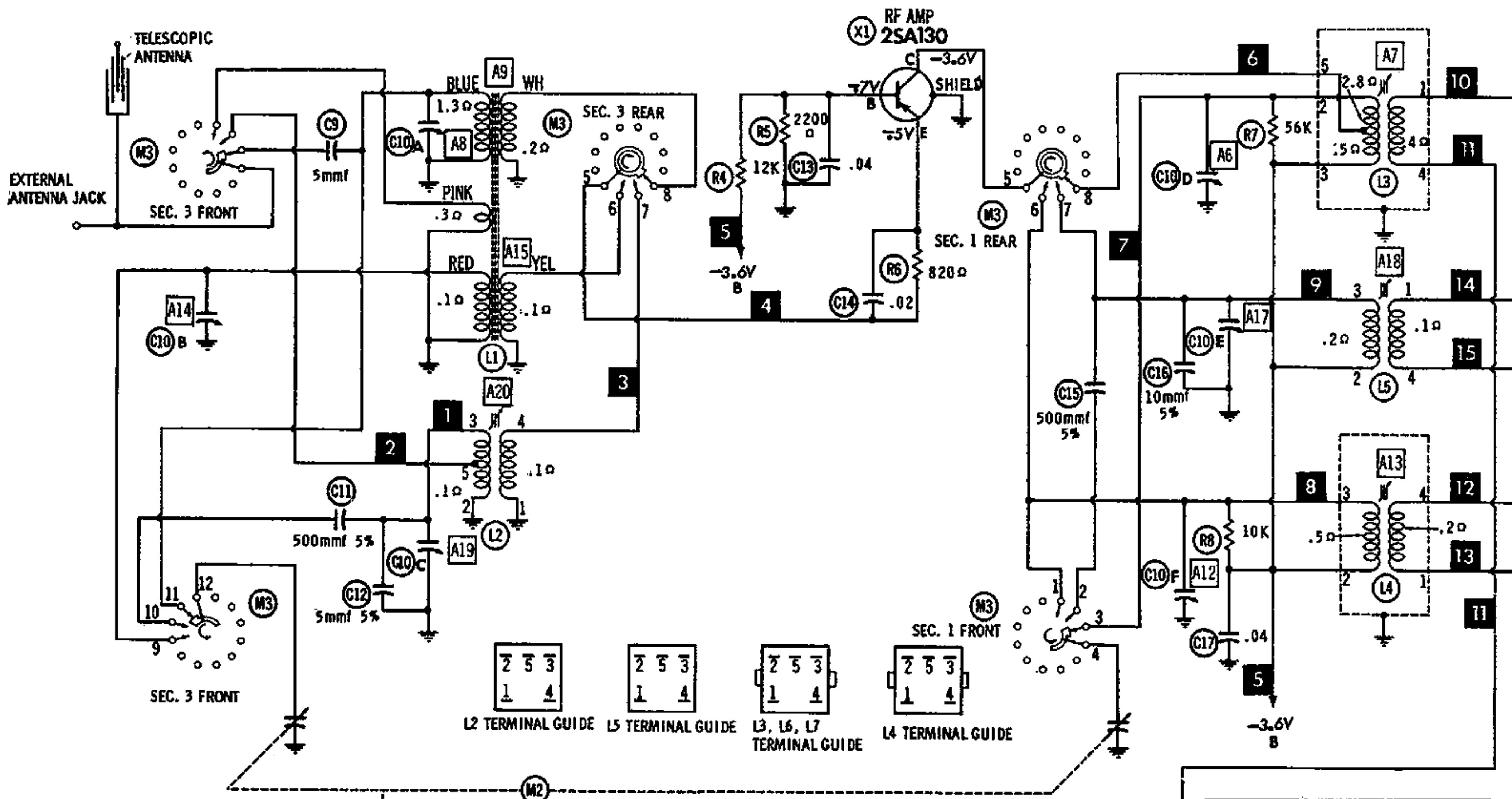




CHASSIS TOP VIEW - RESISTOR & MISC. IDENT.



CHASSIS TOP VIEW - CAPACITOR & TRANSISTOR IDENT.



RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections or transistor terminals are shown as bottom views.
3. Measured values are from socket pin or terminal to common ground.
4. Nominal tolerance on component values makes possible a variation of $\pm 15\%$ in voltage and resistance readings.
5. Volume control at maximum, no signal applied for voltage measurements.

A PHOTOFACIT STANDARD NOTATION SCHEMATIC with CIRCUITRACE

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Use only enough generator output to provide a usable indication.

Suggested Alignment Tools:

A1, A2, A3, A5, A7, A11, A13. . . .GENERAL CEMENT #8607, 9291, 9294

WALSCO #2520, 2522, 2523, 2524, 2534, 2537

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	High side thru .1mfd to base of Mixer, common to ground.	455KC (Unmod.)	(BC) Tuning gang fully open.	Across volume control.	A1, A2, A3	Adjust for maximum deflection.
2.	Fashion loop of several turns of wire and radiate signal into loop of receiver.	1605KC	"	"	A4	"
3.	"	535KC	Tuning gang fully closed.	"	A5	Adjust for maximum deflection. Repeat Steps 2 & 3.
4.	"	1400KC	1400KC	"	A6	Adjust for maximum deflection.
5.	"	600KC	600KC	"	A7	Adjust for maximum deflection. Repeat Steps 4 & 5.
6.	"	1400KC	1400KC	"	A8	Adjust for maximum deflection.
7.	"	600KC	600KC	"	A9	Adjust for maximum output by moving antenna coil turns along ferrite core. Repeat Steps 6 & 7.
8.	"	10MC	(SW1) Tuning gang fully open.	"	A10	Adjust for maximum deflection.
9.	"	3.8MC	Tuning gang fully closed.	"	A11	Adjust for maximum deflection. Repeat Steps 8 & 9.
10.	"	8MC	8MC	"	A12	Adjust for maximum deflection.
11.	"	4MC	4MC	"	A13	Adjust for maximum deflection. Repeat Steps 10 & 11.
12.	"	8MC	8MC	"	A14	Adjust for maximum deflection.
13.	"	4MC	4MC	"	A15	Adjust for maximum output by moving antenna coil turns along ferrite core. Repeat Steps 12 & 13.
14.	"	10MC	(SW2) Tuning gang fully closed.	"	A16	Adjust for maximum deflection.
15.	"	17MC	17MC	"	A17	"
16.	"	11MC	11MC	"	A18	Adjust for maximum deflection. Repeat Steps 15 & 16.
17.	"	17MC	17MC	"	A19	Adjust for maximum deflection.
18.	"	11MC	11MC	"	A20	Adjust for maximum deflection. Repeat Steps 17 & 18.

PARTS LIST AND DESCRIPTIONS

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid 22AWG) 8524 (Stranded 22AWG) 8570 (Stranded 26AWG)	Available in 12 Colors
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TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA		NOTES
			RCA PART No.	RAYTHEON PART No.	
X1	2SA130	RF Amplifier			PNP
X2	2SA132	Mixer			PNP
X3	2SA131	Oscillator			PNP
X4	2SA12	1st IF Amplifier	2N410		PNP
X5	2SA12	2nd IF Amplifier	2N410		PNP
X6	2SB77	Driver	2N406		PNP
	2SB75*	Driver			PNP
X7	HV16	Bias Regulator	1N2326		PNP
X8	2SB156	Output	2N408		PNP
X9	2SB156	Output	2N408		PNP

* Alternate

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	CURRENT RATING (Measured)	ORIGINAL Part or Type No.	RECTIFIERS		DIODES	NOTES
			RCA PART No.	SARKES TARZIAN PART No.	RAYTHEON PART No.	
X10		1N34A			1N34A	Overload Detector
X11		1N34A			1N34A	

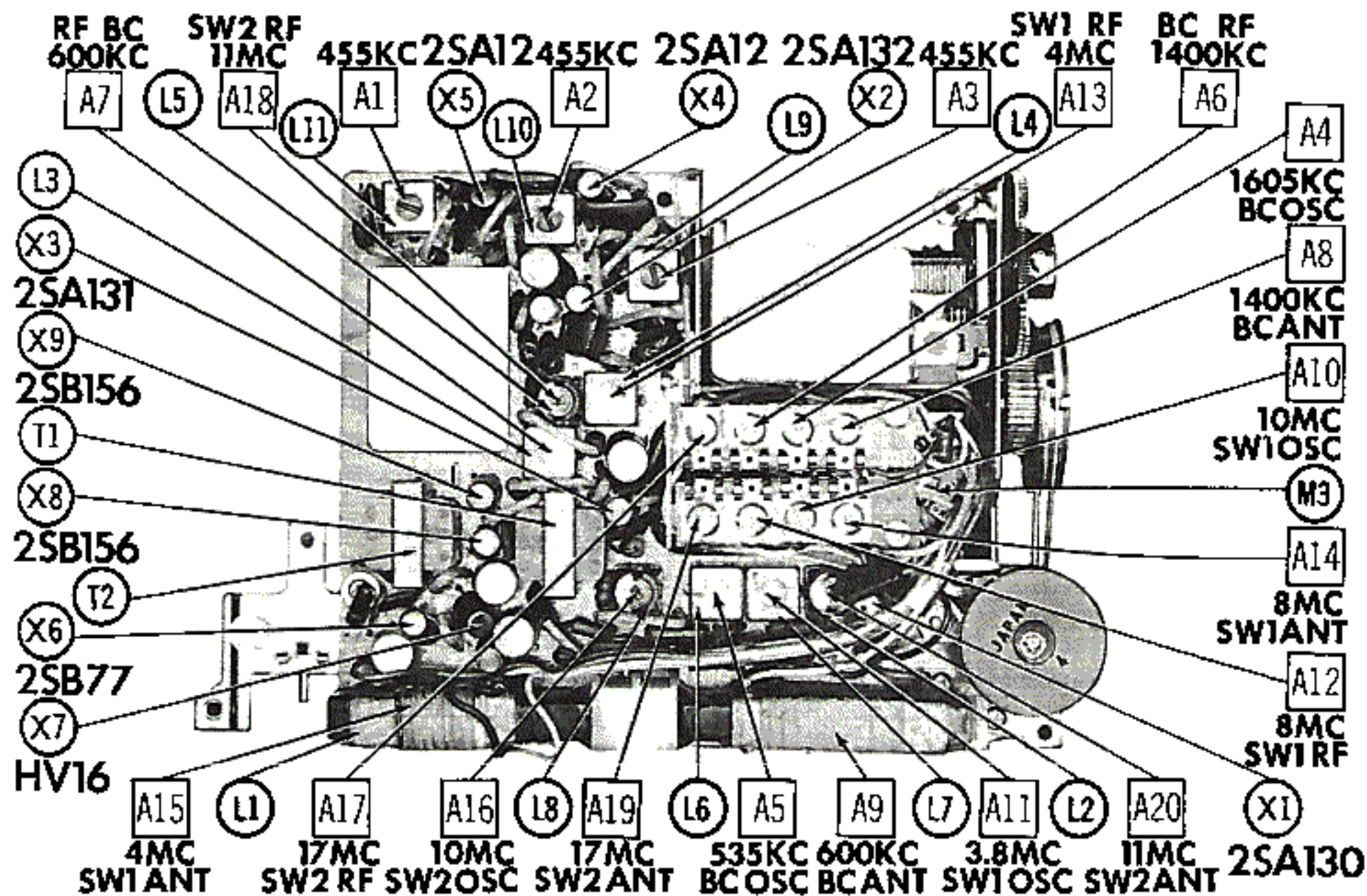
ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	HITACHI PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1	10	6		BCD6010	ECPB408	MT1-5	TT6X10	MLV10-6	VL-1087
C2	5	6		PTT21	NLW5-15	MT1-3	TT6X5	MLV5-6	TE-1084
C3	3	10		PTT36	NLW3-25	MT1-3	TT10X6	MLV5-12	TE-1122
C4	30	6		BCD6026	ECPB412	MT1-13	TT6X30	MLV30-6	TE-1092
C5	50	6		BCD6050	ECPB115	MT1-15	TT6X50	MLV50-6	TE-1100
C6	50	6		BCD6050	ECPB115	MT1-15	TT6X50	MLV50-6	TE-1100
C7	50	6		BCD6050	ECPB115	MT1-15	TT6X50	MLV50-6	TE-1100
C8	50	6		BCD6050	ECPB115	MT1-15	TT6X50	MLV50-6	TE-1100

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C9 C10A B C D E F G H	5		NPO-SI 5.0	TCZ-4R7	C10V5C	CCTO-050	CNO-547	10TCC-V50
C11 C12	500 5% 5 5%		1469-0005 NPO-SI 5.0	TCZ-547	5R5T5 C10V5C	CM-19B-50LJ CCTO-050	MCE245 CNO-547	MS-35 10TCC-V50

CHASSIS—TOP VIEW



PARTS LIST AND DES

FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C13	.04							
C14	.02		C80V203AM	DA-203	H-05S2		TA-120	TG-S20
C15	500 5%		1469-0005		5R5T5	CM-19B-50LJ	MCE245	MS-35
C16	10 5%		NPO-SI 10	TCZ-10	C10Q1C	CCTO-100	CNO-410	10TCC-Q10
C17	.04							
C18	.02		C80V203AM	DA-203	H-05S2		TA-120	TG-S20
C19	.04		C80V503AM	DA-503	H-05S5		TA-150	TG-S50
C20	.04							
C21	130 5%			TCZ-130	22R5T13	CM-19B-131J		MS-313
C22	300 5%			TCZ-300	5R5T3	CM-19B-301J	MCE241	MS-33
C23	.005		C80V502AM	DM-502	H-05D5	CCD-502	TA-250	TG-D50
C24	.02		C80V203AM	DA-203	H-05S2		TA-120	TG-S20
C25	300 5%		1469-0003	TCZ-300	5R5T3	CM-19B-301J	MCE241	MS-33
C26	2500 5%		1464-0025		1R5D25	CM-20B-252J	MCE480	MS-25
C27	430 5%		1469-00043		5R5T43	CM-19B-431J		MS-343
C28	13 5%		NPO-SI 12	TCZ-12	C10Q13C	CCTO-120	CNO-412	10TCC-Q12
C29	.04		C80V503AM	DA-503	H-05S5		TA-150	TG-S50
C30	.04							
C31	8 5%		NPO-SI 8.2		C10V8C			10TCC-V82
C32A	.04		C80V503AM	DA-503	H-05S5		TA-150	TG-S50
C33A	.04		C80V503AM	DA-503	H-05S5		TA-150	TG-S50
C34	6 5%		C80V503AM	DA-503	H-05S5		TA-150	TG-S50
C35	.04		NPO-SI 5.0	TCZ-4R7	C10V5C	CCTO-050	CNO-547	10TCC-V50
C36A	.01		C80V103AM	DM-103	H-05S1		TA-110	TG-S10
C37	.002		C80V103AM	DM-103	H-05S1		TA-110	TG-S10
C38	.005		BPD-002	DM-202	BYA10D2	CCD-202	B-220	5HK-D20
C39	.04		C80V502AM	DM-502	H-05D5	CCD-502	TA-250	5HK-D50
			C80V503AM	DA-503	H-05S5		TA-150	TG-S50

CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			HITACHI PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume & Switch	5000Ω					
R2	Tone	5000Ω					
R3	Fine Tuning	1000Ω	35.10				

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	REMARKS			IRC PART No.	WORKMAN PART No.	REMARKS
R4	12K				R20	1200Ω			
R5	2200Ω				R21	22K			
R6	820Ω				R22	5600Ω			
R7	56K				R23	680Ω			
R8	10K				R24	10K			
R9	10K				R25	1000Ω			
R10	2700Ω				R26	1000Ω			
R11	1000Ω				R27	22K			
R12	1200Ω				R28	220Ω			
R13	3900Ω				R29	39K			
R14	27K				R30	680Ω			
R15	4700Ω				R31	2.2Ω			
R16	1500Ω				R32	100Ω			
R17	820Ω				R33	100Ω			
R18	68K				R34	270Ω			
R19	470Ω				R35	390Ω			

DESCRIPTIONS (Continued)

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		HITACHI PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman PART No.	
L1	BC & SW 1 Ant. SW 2 Ant. BC RF SW 1 RF SW 2 RF BC Osc. SW 1 Osc. SW 2 Osc. 1st IF 2nd IF 3rd IF						
L2							
L3							
L4							
L5							
L6							
L7							
L8							
L9				BC-579			
L10				BC-579			
L11							

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
			HITACHI PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
	PRI.	SEC.						
T1	160Ω CT	10-12Ω	451025			TR-12①		① Tape Secondary Center Tap

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			HITACHI PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
	PRI.	SEC.						
T2	1.2	1	441017					

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
				HITACHI PART No.	QUAM PART No.	
	SIZE	FIELD	V. C. IMP.			
SP1	3"	PM	10-12Ω	522021		

BATTERIES

ITEM No.	VOLTAGE	HITACHI PART No.	REPLACEMENT DATA						NOTES
			BURGESS		EVEREADY		MALLORY		
			"A"	"B"	"A"	"B"	"A"	"B"	
M1	1½V			130		695		M-14R	3 Required

MISCELLANEOUS

ITEM No.	PART NAME	HITACHI PART No.	NOTES
M2	Tuning Cap.		3 Gang Band Selector (Rotary Wafer) Tuning Indicator
M3	Switch		
M4	Meter		