

PHOTOFACT® Folder

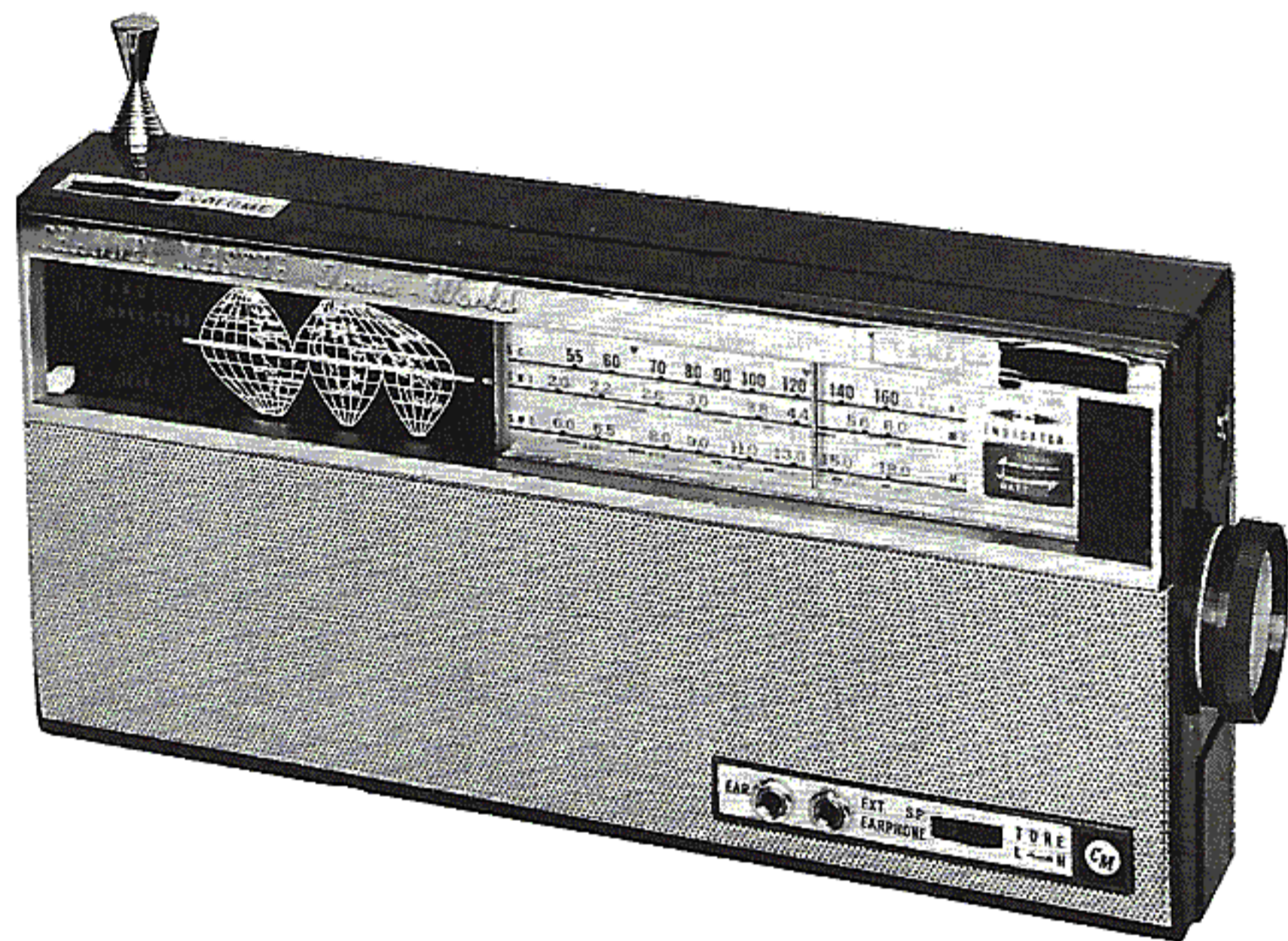
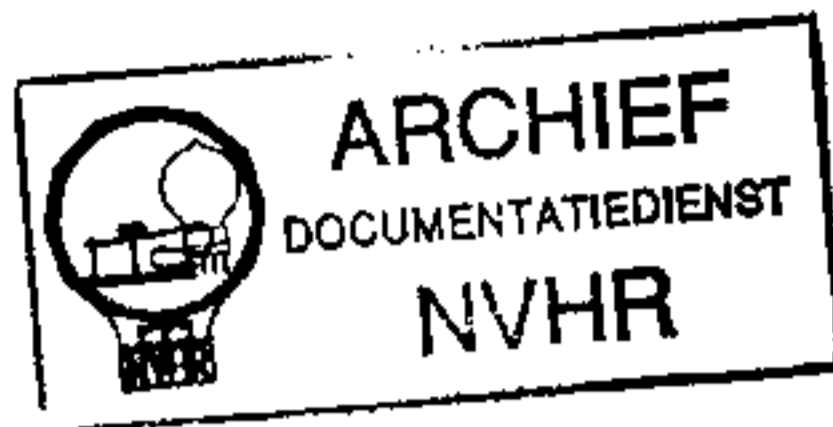
with CIRCUITRACE<sup>1</sup>

CHANNEL MASTER  
MODEL 6523



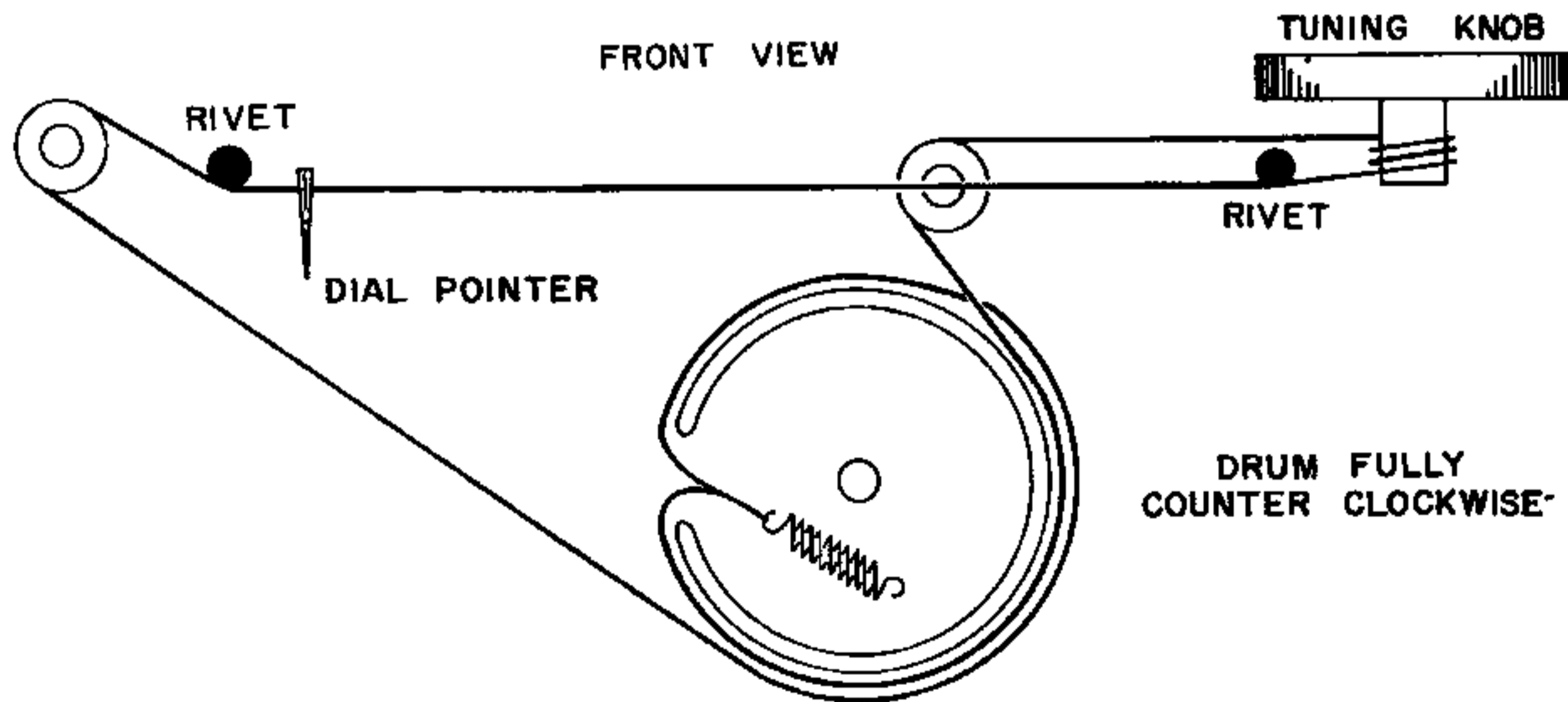
Met dank aan Jef Bos

Ned. Ver. v. Historie v/d Radio



TRADE NAME	Channel Master Model 6523		
SUPPLIER	Channel Master Corp., Ellenville, N. Y.		
TYPE SET	Battery Operated 10 Transistor Portable 3 Band Receiver		
POWER SUPPLY	6 Volts DC	RATING	9MA @ 6 Volts DC (No Signal, Min. Volume) 17MA @ 6 Volts DC (Signal, Normal Volume)
TUNING RANGE - BROADCAST	590-1650KC		
SHORT WAVE 1	1.95-6.2MC		
SHORT WAVE 2	5.8-17.5MC		

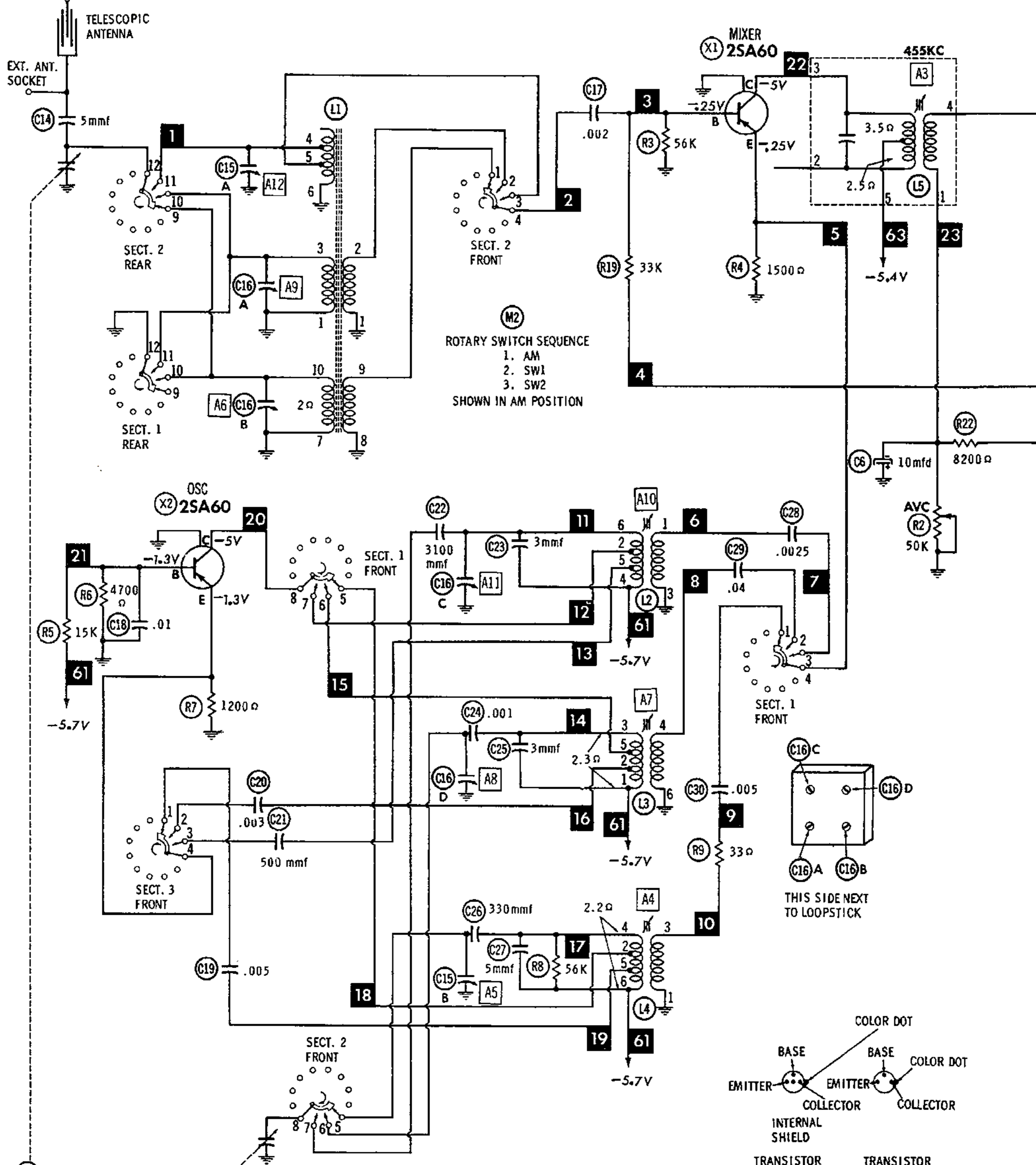
### DIAL CORD STRINGING



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

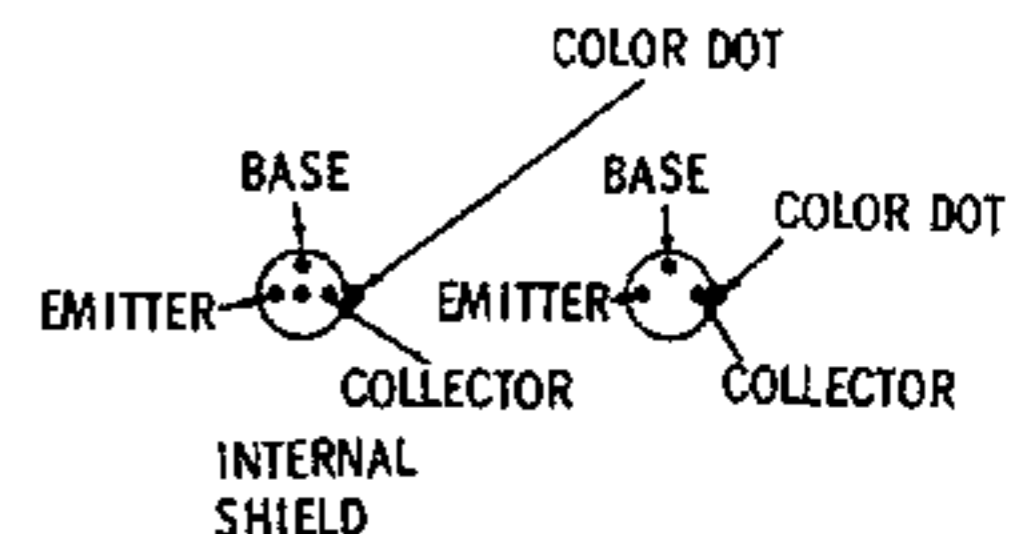
The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of LF504

the particular type of replacement part listed. Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. ©1962 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U.S. of America



ROTARY SWITCH SEQUENCE  
 1. AM  
 2. SW1  
 3. SW2  
 SHOWN IN AM POSITION

THIS SIDE NEXT TO LOOPSTICK

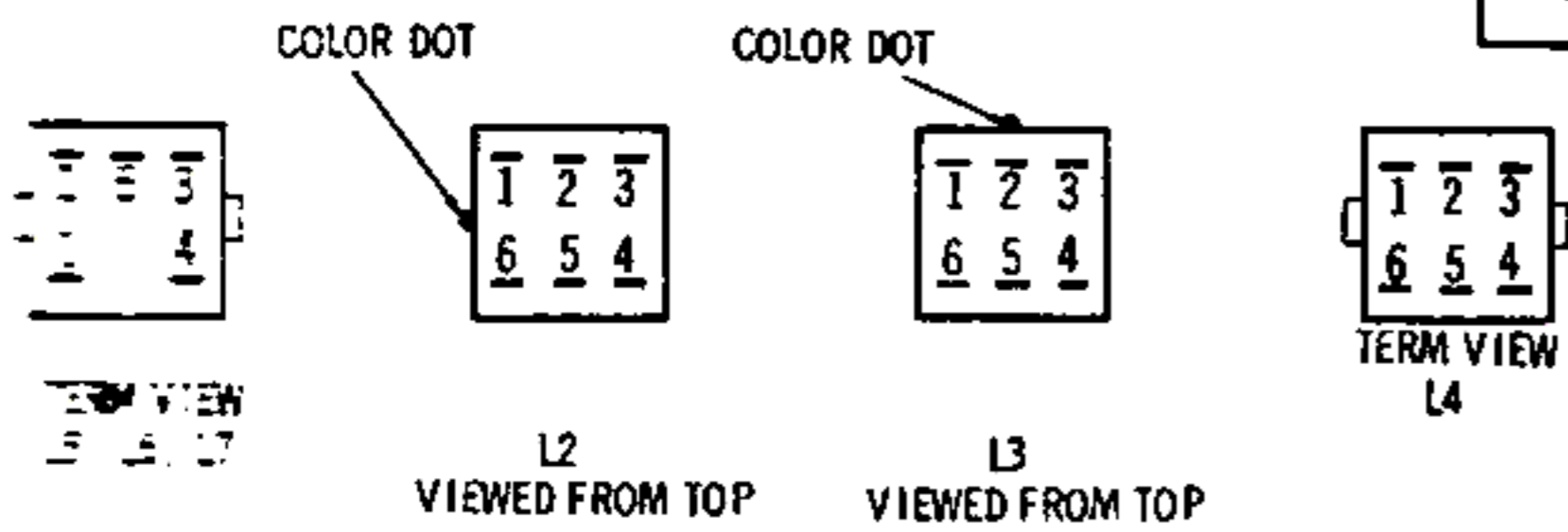
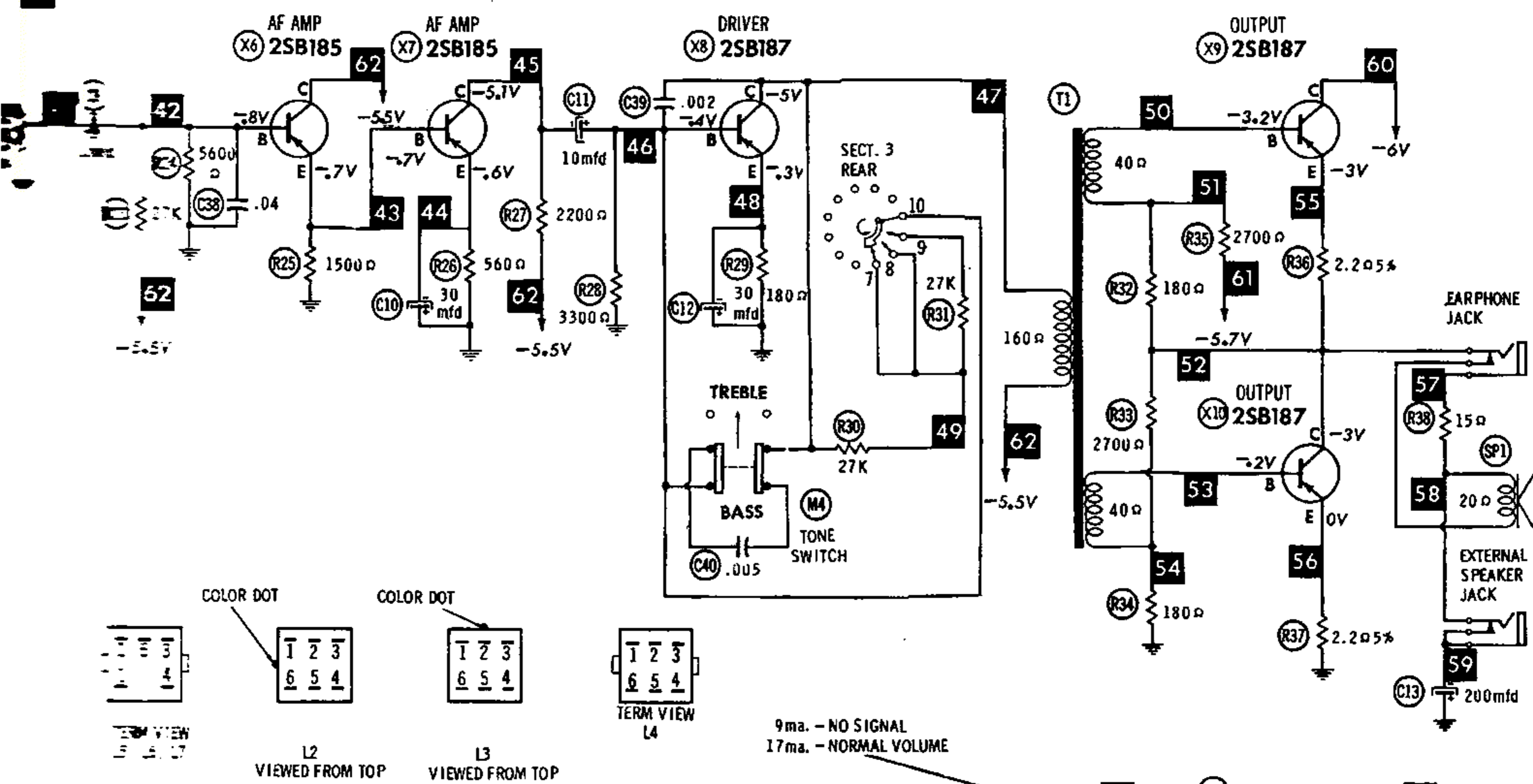
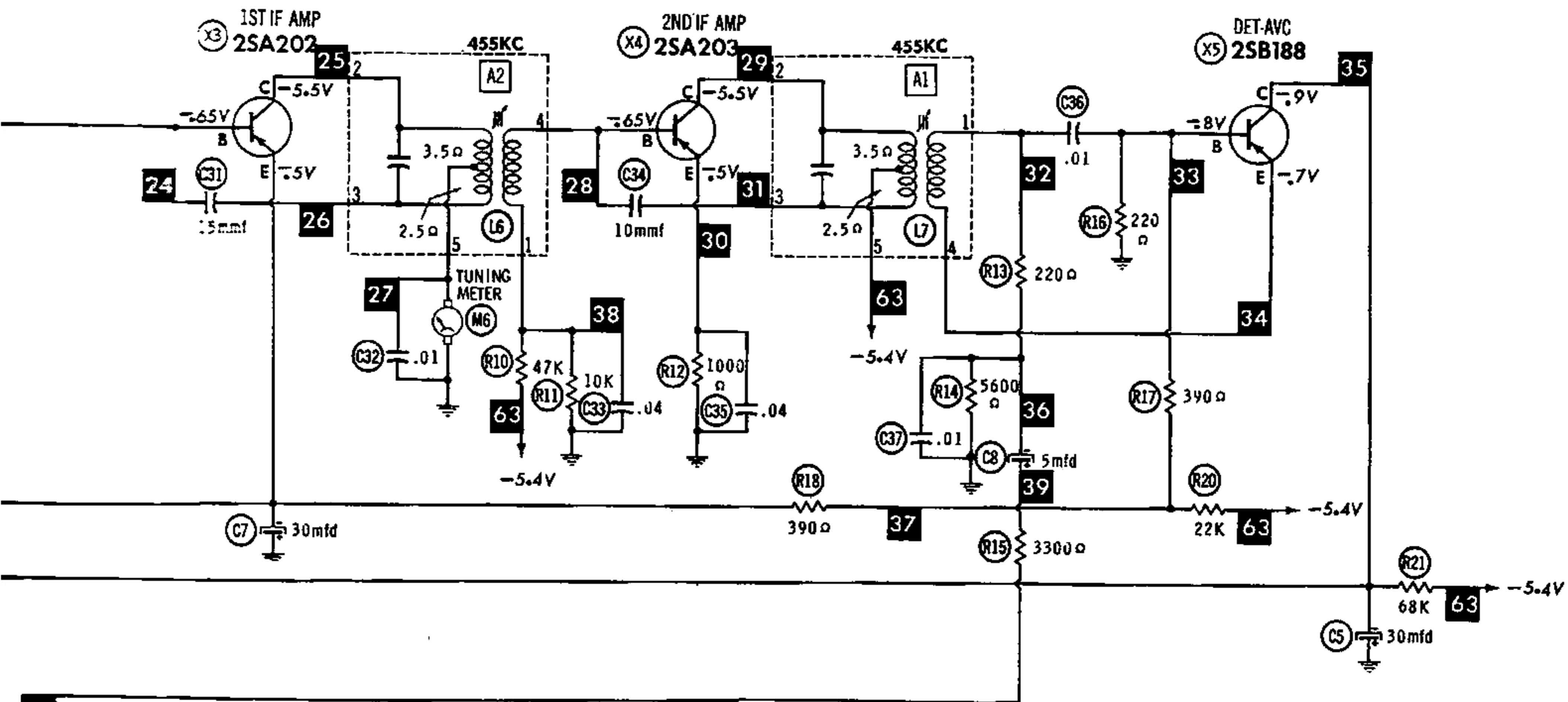


1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections or transistor terminals are shown as bottom views.
3. Measured values are from socket pin or terminal to common ground.
4. Nominal tolerance on component values makes possible a variation of  $\pm 15\%$  in voltage and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

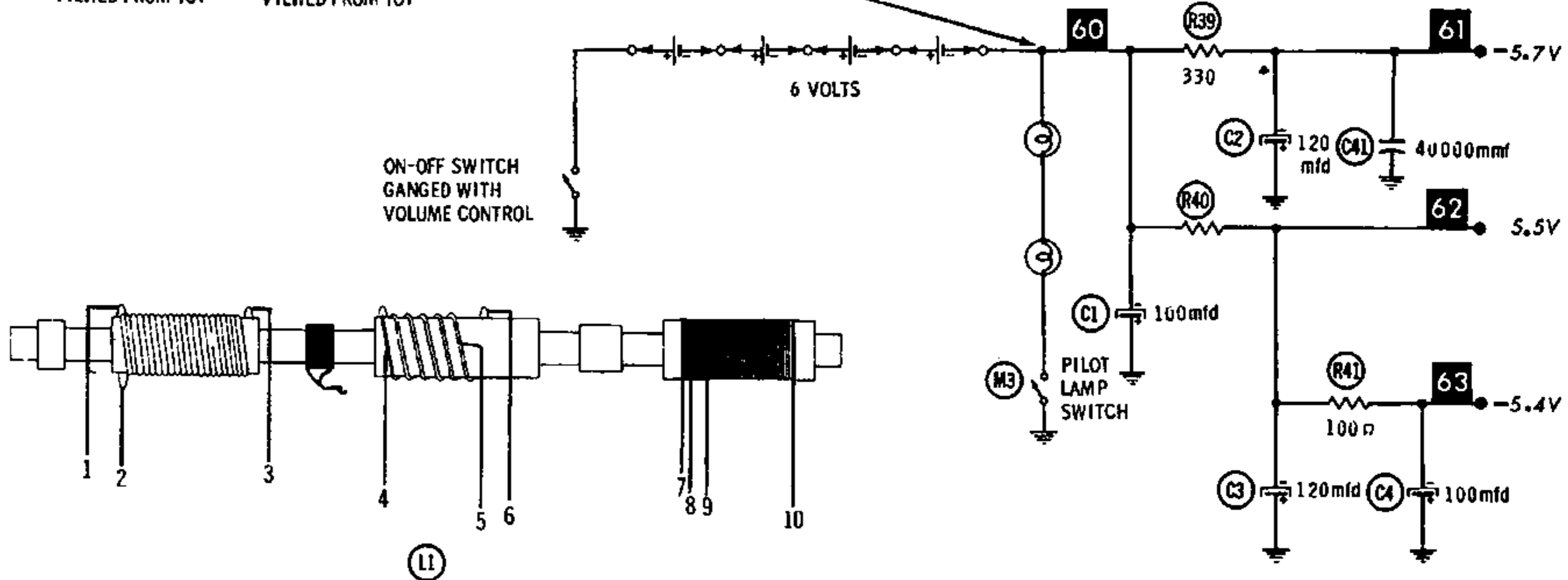
RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

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.

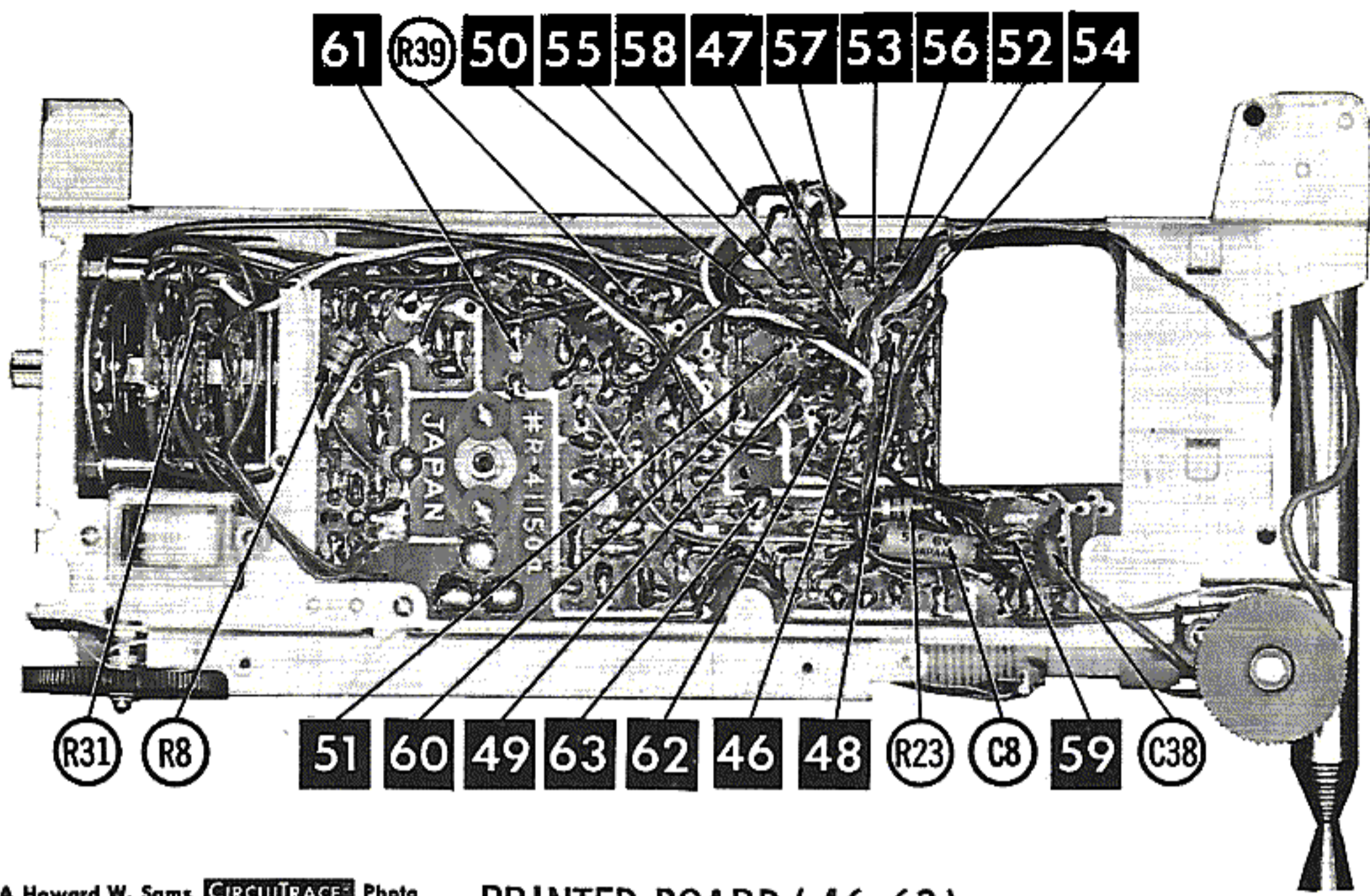
A PHOTOFACIT STANDARD NOTATION SCHEMATIC with **CIRCUITRACE**



9ma. - NO SIGNAL  
 17ma. - NORMAL VOLUME

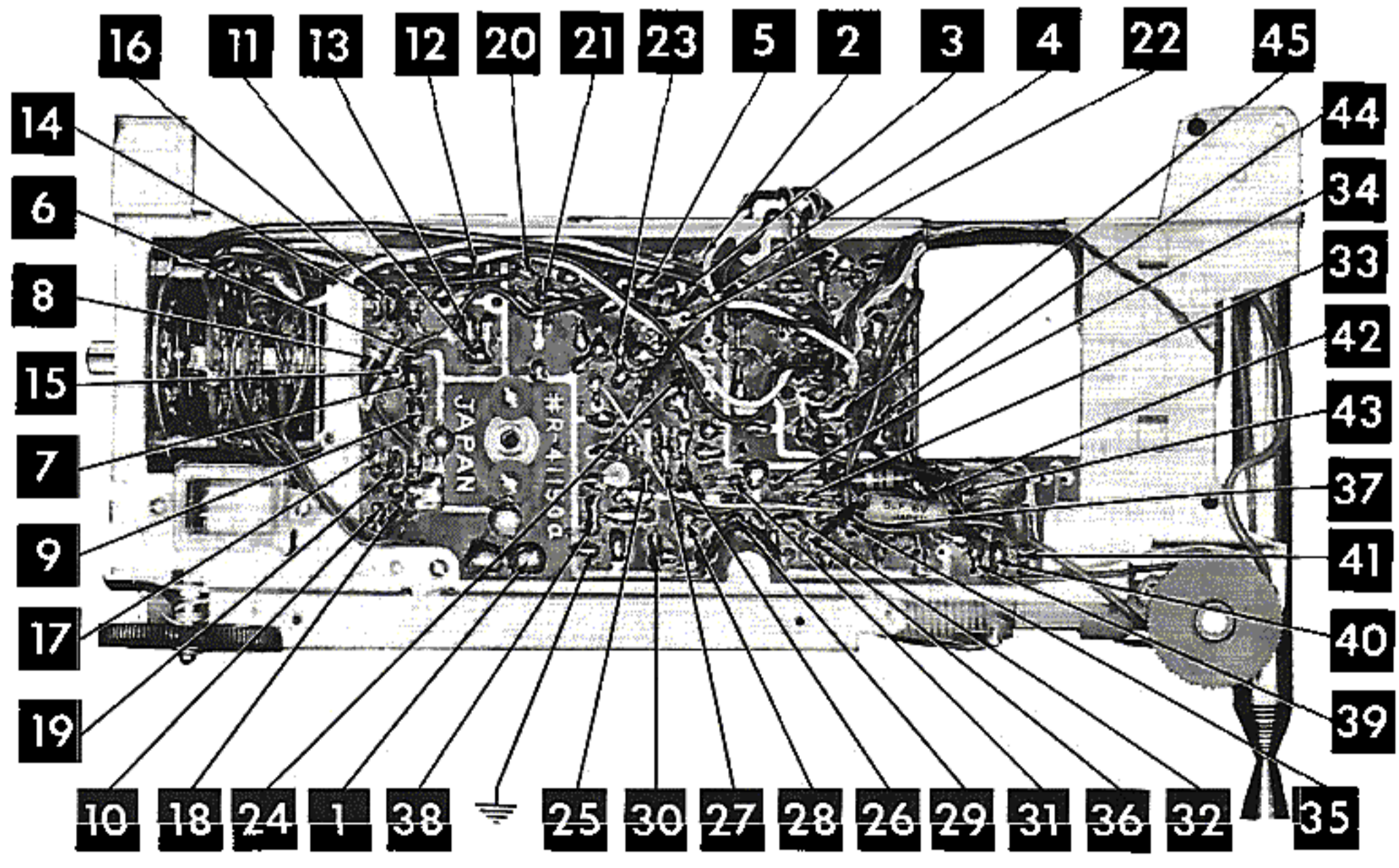


**CHANNEL MASTER MODEL 6523**



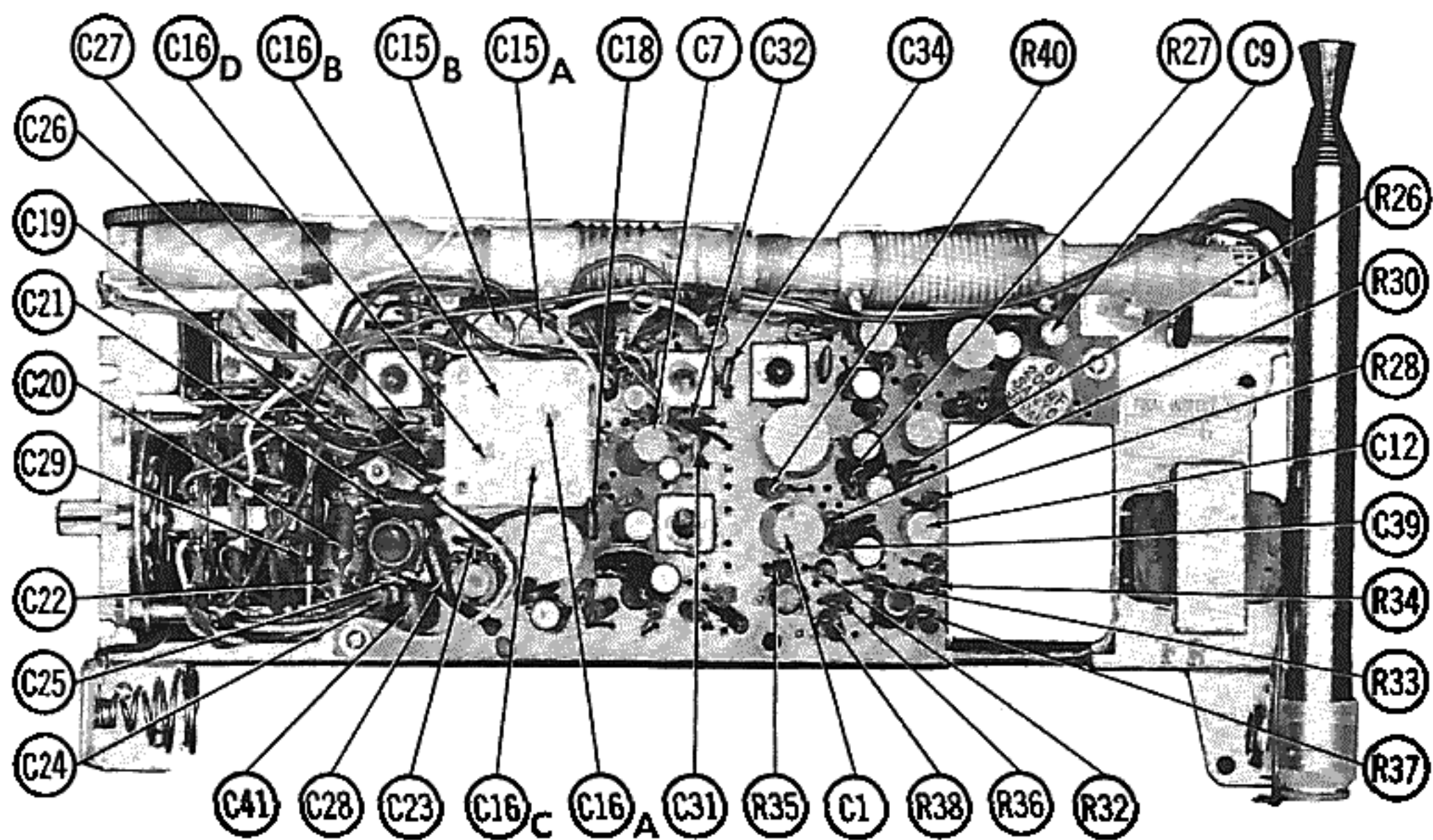
A Howard W. Sams **CIRCUITRACE** Photo

PRINTED BOARD ( 46 -63 )

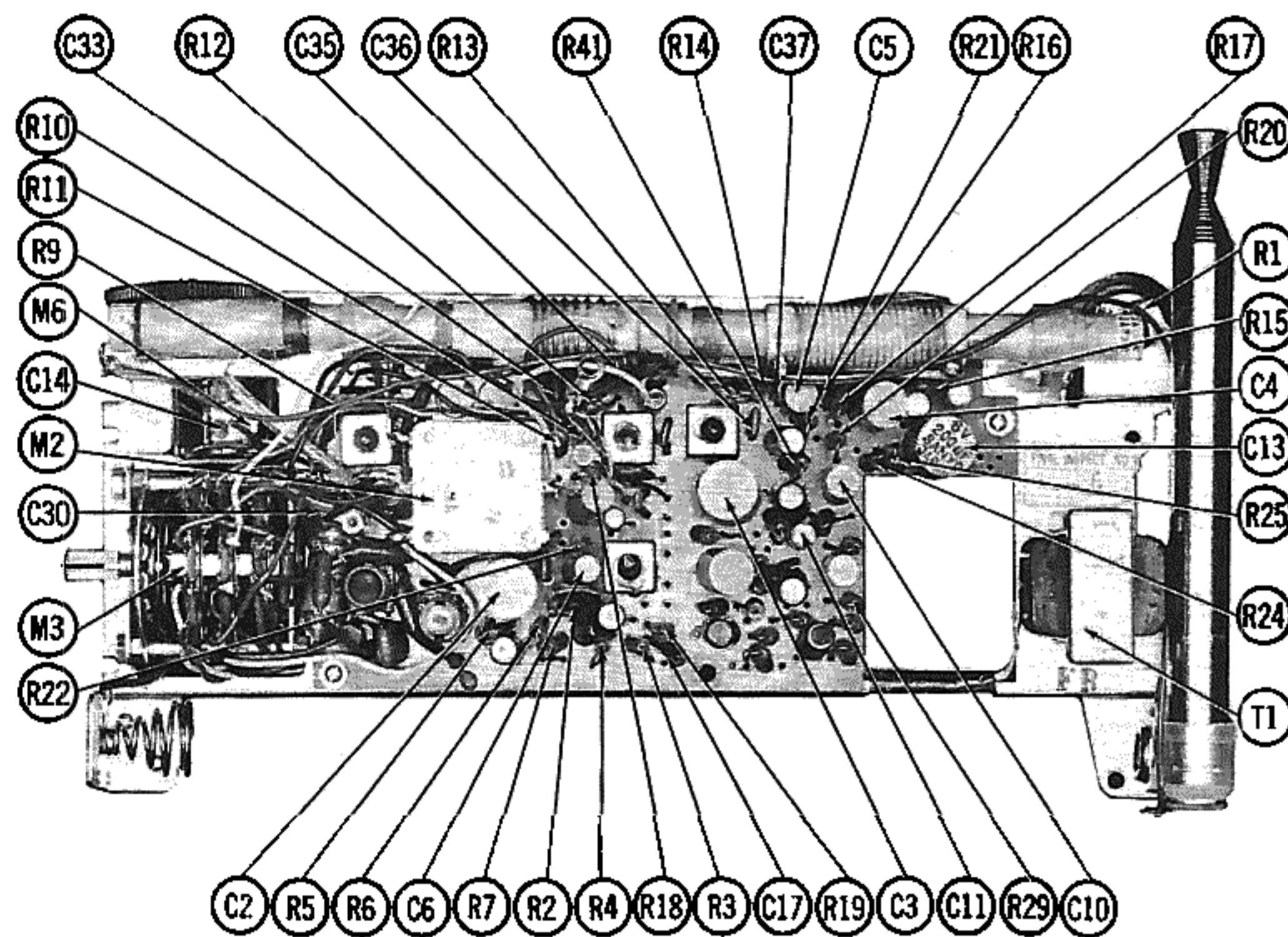


A Howard W. Sams **CIRCUITRACE** Photo

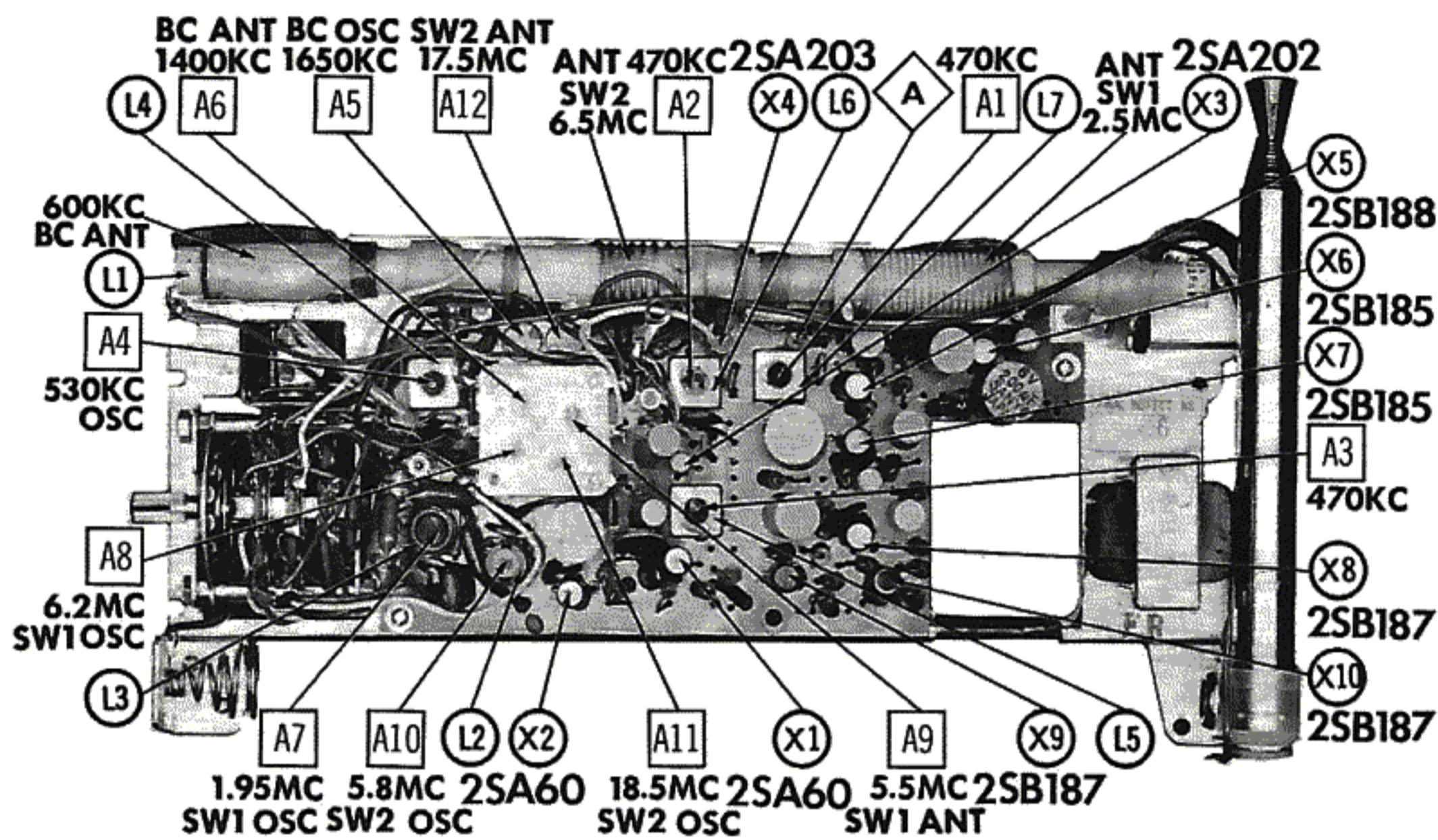
PRINTED BOARD ( 1 -45 )



CHASSIS TOP VIEW - RESISTOR & CAPACITOR IDENT.



CHASSIS TOP VIEW - RESISTOR, CAPACITOR & MISC. IDENT.



## CHASSIS—TOP VIEW ALIGNMENT INSTRUCTIONS

### ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Use only enough generator output to provide a usable indication.  
Adjust R2 (AVC Adjust) for maximum voltage drop across R14.  
Set Selector switch as indicated.

**Suggested Alignment Tools:**

- A1, A2, A3, A4, A7..... GENERAL CEMENT #5097, 8727  
WALSCO #2515
- A5, A6, A8, A9, A11, A12... GENERAL CEMENT #5000, 5003, 5066, 8276, 8290, 9087, 9089  
WALSCO #2512, 2525, 2528
- A10..... GENERAL CEMENT #8282, 8606, 8606-L, 9091  
WALSCO #2526, 2541, 2542, 2543, 2544

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side thru .1mf to antenna lug of tuning gang. Low side to chassis.	470KC (Unmod.)	(BC) Tuning gang fully closed.	DC probe of VTVM to point $\Delta$ , common to chassis.	A1, A2, A3	Adjust for maximum deflection.
2.	Fashion loop of several turns of wire and radiate signal into loop of receiver.	530KC	"	"	A4	"
3.	"	1650KC	Tuning gang fully open.	"	A5	"
4.	"	1400KC	1400KC	"	A6	"
5.	"	1.95MC	(SW1) 1.95MC	"	A7	"
6.	"	6.2MC	6.2MC	"	A8	"
7.	"	5.5MC	5.5MC	"	A9	"
8.	"	5.8MC	(SW2) 5.8MC	"	A10	"
9.	"	18.5MC	18.5MC	"	A11	"
10.	"	17.5MC	17.5MC	"	A12	"

# PARTS LIST AND DESCRIPTIONS

## WIRING DATA

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

## TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			GENERAL ELECTRIC PART No.	RCA PART No.	RAYTHEON PART No.	
X1	2SA60	Mixer	GE-1		2N486	PNP
X2	2SA60	Oscillator	GE-1		2N481	PNP
X3	2SA202	1st IF Amplifier	GE-1		2N483	PNP
X4	2SA203	2nd IF Amplifier	GE-1		2N483	PNP
X5	2SB188	Detector-AVC	GE-2	2N406	2N363	PNP
X6	2SB185	Emitter Follower	GE-2	2N406	2N363	PNP
X7	2SB185	AF Amplifier	GE-2	2N406	2N363	PNP
X8	2SB187	Driver	GE-2	2N408	2N362	PNP
X9	2SB187	Output	GE-2	2N270	2N631	PNP } Matched
X10	2SB187	Output	GE-2	2N270	2N631	PNP } Pair

## ELECTROLYTIC CAPACITORS

ITEM No.	RATING		Channel Master PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
	CAP.	VOLT.							
C1	100	6	A029	BCD6100	ECPB117	MT1-18	PET1400	MLV100-6	VL-1100
C2	120	10	A147		ECPB418		PET1400		VL-1144
C3	120	10	A147		ECPB418		PET1400		VL-1144
C4	100	6	A029	BCD6100	ECPB117	MT1-18	PET1400	MLV100-6	VL-1100
C5	30	3	A046	BCD3035	ECPB412	MT1-13	PET130	MLV30-6	VL-1043
C6	10	3	A038	BCD3010	ECPB408	MT1-5	TT3X10	MLV10-3	VL-1038
C7	30	3	A046	BCD3035	ECPB412	MT1-13	PET130	MLV30-6	VL-1043
C8	5	6	A010	PTT21	NLW5-15	MT1-3	TT6X5	MLV5-6	VL-1084
C9	10	3	A038	BCD3010	ECPB408	MT1-5	TT3X10	MLV10-3	VL-1038
C10	30	3	A046	BCD3035	ECPB412	MT1-13	PET130	MLV30-6	VL-1043
C11	10	3	A038	BCD3010	ECPB408	MT1-5	TT3X10	MLV10-3	VL-1038
C12	30	3	A046	BCD3035	ECPB412	MT1-13	PET130	MLV30-6	VL-1043
C13	200	6	A114	BCD6200	ECPB121	MT1-24	TT6X200	MLV200-6	VL-1108

## 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.
C14	5	#E046	DI-5	DD-050	L10V5	CCD-050	GP550	10TS-V50
C15A								
C16A								
C17	.002			BPD-002	DM-202	BYA10D2	CCD-202	B-120
C18	.01		C80V103AM	DM-103	H-05S1	CCD-103	BT-110	TG-S10
C19	.005		C80V502AM	DM-502	H-05D5	CCD-502	BT-250	TG-D50
C20	.003		BPD-003	DM-302	BYA10D3	CCD-302	B-230	5HK-D30
C21	500		DI-500	DM-501	L10T5	CCD-501	B-350	10TS-T50
C22	.0031		BPD-0033	DM-302	BYA10D33	CCD-332	B-233	5HK-D33
C23	3		DI-3.3	DD-3R3	L10V33	CCD-3R3	GP533	10TS-V33
C24	.001		C80V102AM	DM-102	H-05D1	CCD-102	B-210	5HK-D10
C25	3		DI-3.3	DD-3R3	L10V33	CCD-3R3	GP533	10TS-V33
C26	330		DI-330	DD-331	L10T33	CCD-331	GP333	10TS-T33
C27	5		DI-5	DD-050	L10V5	CCD-050	GP550	10TS-V50
C28	.0025		BPD-0025	DM-302	BYA10D25	CCD-252	B-225	5HK-D25
C29	.001	(.04) †	C80V102AM	DM-102	H-05D1	CCD-102	B-210	5HK-D10
C30	.005		C80V502AM	DM-502	H-05D5	CCD-502	BT-250	TG-D50
C31	15		DI-15	DD-150	L10Q15	CCD-150	GP415	10TS-Q15
C32	.01		C80V103AM	DM-103	H-05S1	CCD-103	BT-110	TG-S10
C33	.04		C80V503AM	DF-403	H-05S5		BT-150	TG-S50
C34	10		DI-10	DD-100	L10Q1	CCD-100	GP410	10TS-Q10
C35	.04		C80V503AM	DF-403	H-05S5		BT-150	TG-S50
C36	.01		C80V103AM	DM-103	H-05S1	CCD-103	BT-110	TG-S10
C37	.01		C80V103AM	DM-103	H-05S1	CCD-103	BT-110	TG-S10
C38	.04		C80V503AM	DF-403	H-05S5		BT-150	TG-S50
C39	.002		BPD-002	DM-202	BYA10D2	CCD-202	B-220	5HK-D20
C40	.005		C80V502AM	DM-502	H-05D5	CCD-502	BT-250	TG-D50
C41	.04		C80V503AM	DF-403	H-05S5		BT-150	TG-S50

Note 1. Part of M2.

# Channel Master Part Number.

† Alternate Value.

## CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			Channel Master PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume & Switch AVC Bias Adj.	5000Ω	E008				
R2		50K	F269				

# PARTS LIST AND DESCRIPTIONS (Continued)

## 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
R3	56K				R23	27K			
R4	1500Ω				R24	5600Ω			
R5	15K				R25	1500Ω			
R6	4700Ω				R26	560Ω			
R7	1200Ω				R27	2200Ω			
R8	56K				R28	3300Ω			
R9	33Ω				R29	180Ω			
R10	47K				R30	27K			
R11	10K				R31	27K			
R12	1000Ω				R32	180Ω			
R13	220Ω				R33	2700Ω			
R14	5600Ω				R34	180Ω			
R15	3300Ω				R35	2700Ω			
R16	220Ω				R36	2.2Ω			
R17	390Ω				R37	2.2Ω			
R18	390Ω				R38	15Ω			
R19	33K				R39	330Ω			
R20	22K				R40	220Ω			
R21	68K				R41	100Ω			
R22	8200Ω								

## COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		Channel Master PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman PART No.	
L1	Loopstick	E051					
L2	SW. 1 Osc.	F294					
L3	SW. 2 Osc.	F295					
L4	BC Osc.	F272					
L5	1st IF	C010					
L6	2nd IF	C074					
L7	3rd IF	C075					

## TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			Channel Master PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	SEC.1						
T1	2	1	C073					
		SEC.2						
		1						

## SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
				Channel Master PART No.	QUAM PART No.	
	SIZE	FIELD	V. C. IMP.			
SP1	3½"	PM	20Ω	G101		

## BATTERIES

ITEM No.	VOLTAGE	Channel Master PART No.	REPLACEMENT DATA						NOTES
			BURGESS		EVEREADY		MALLORY		
			"A"	"B"	"A"	"B"	"A"	"B"	
M1	1½			130		635		M-14R	4 Required

## MISCELLANEOUS

ITEM No.	PART NAME	Channel Master PART No.	NOTES
M2	Tuning Cap.	A117	2 Gang Band (Rotary Wafer Type) Tone (Slide Type) Dial Lamp (Momentary Contact Push-button Type) Tuning Indicator Telescoping
M3	Switch	F265	
M4	Switch	E050	
M5	Switch	F266	
M6	Meter	F297	
	Antenna	E044	

## CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Pointer	F262	Volume Tuning Band Switch Black Red
Knob	F258	
Knob	F259	
Knob	F293	
Cabinet	G038	
Cabinet	G039	