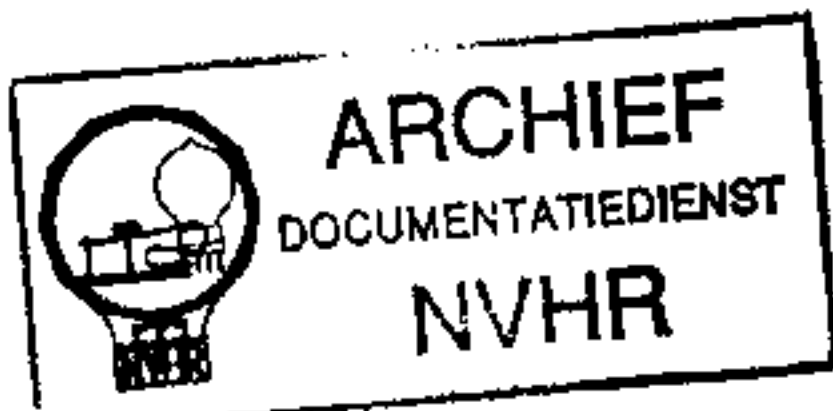


**PHOTOFACT® Folder**

with **CIRCUITRACE®**

**CROWN MODEL  
TR-999**

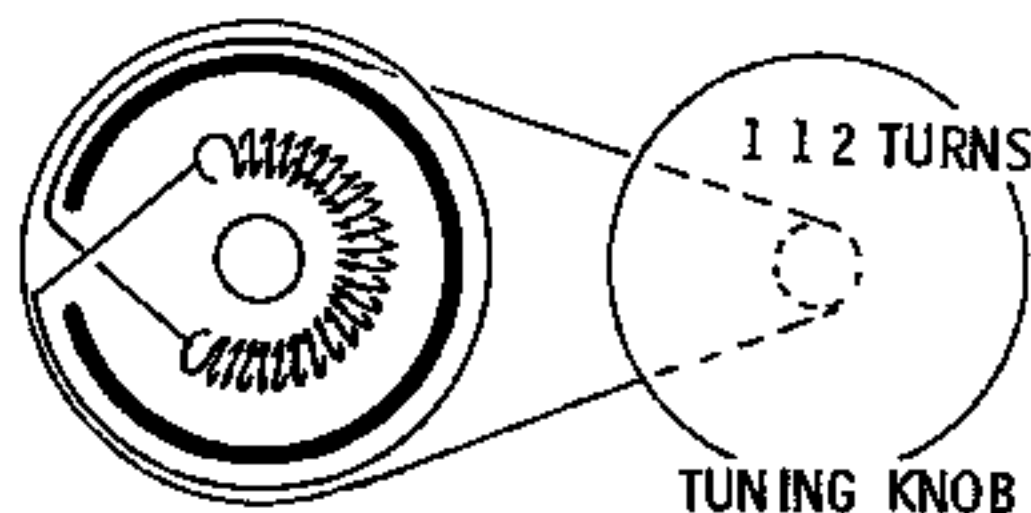
Ned. Ver. v. Historie v/d Radio



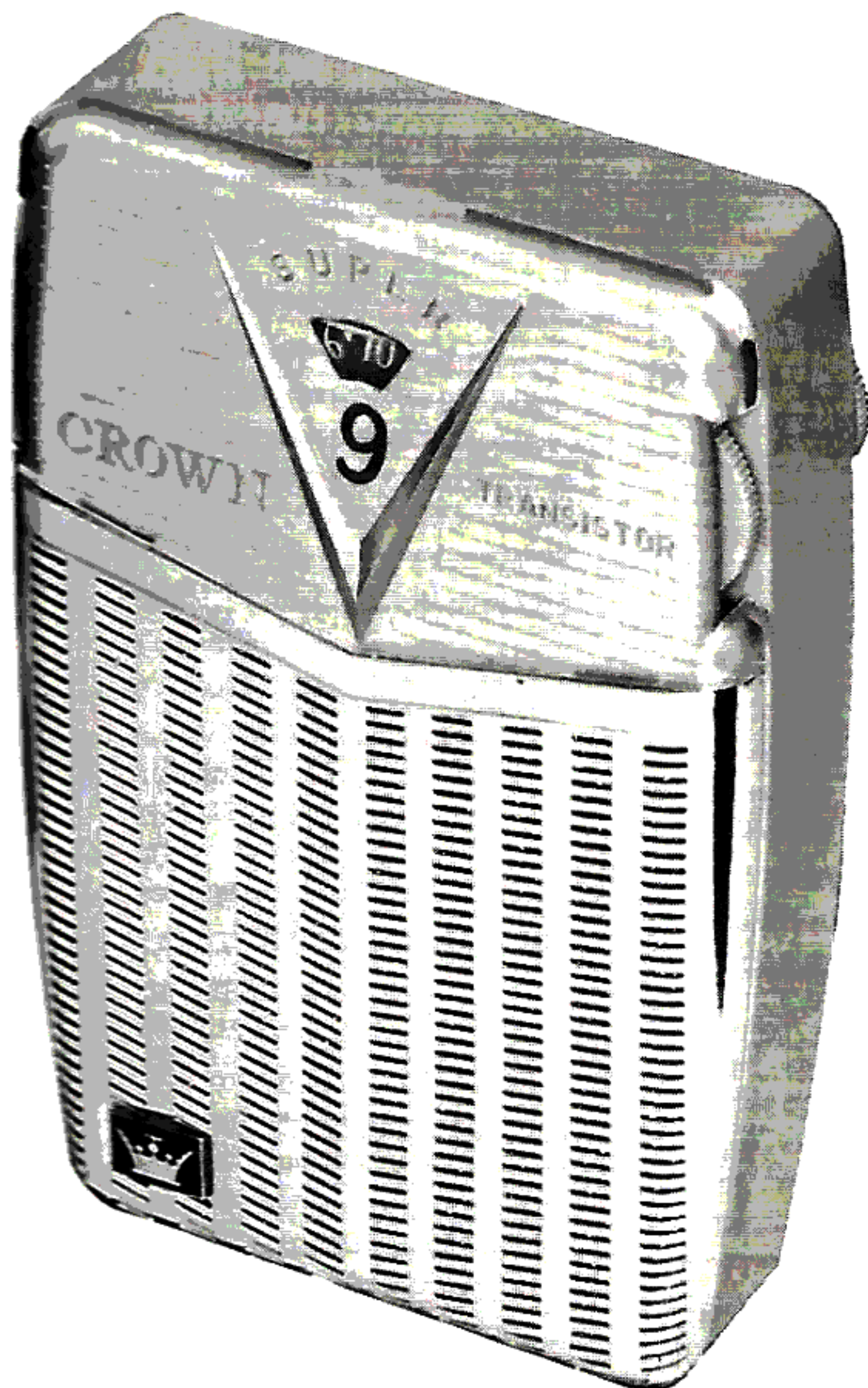
Met dank aan Jef Bos

## TUNING DRIVE CORD STRINGING

TUNING GANG FULLY CLOCKWISE



FRONT VIEW



<b>TRADE NAME</b>	Crown Model TR-999		
<b>IMPORTER</b>	Shriro, Inc., 276 Fourth Ave., New York 10, N. Y.		
<b>TYPE SET</b>	Battery Operated Transistorized Portable AM Receiver		
<b>POWER SUPPLY</b>	3 Volts DC	<b>RATING</b>	15MA@3 Volts DC (No Signal, Min. Volume)
<b>TUNING RANGE—BROADCAST</b>	540 — 1600KC		20MA@3 Volts DC (Signal, Normal Volume)

## ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an audible reading.

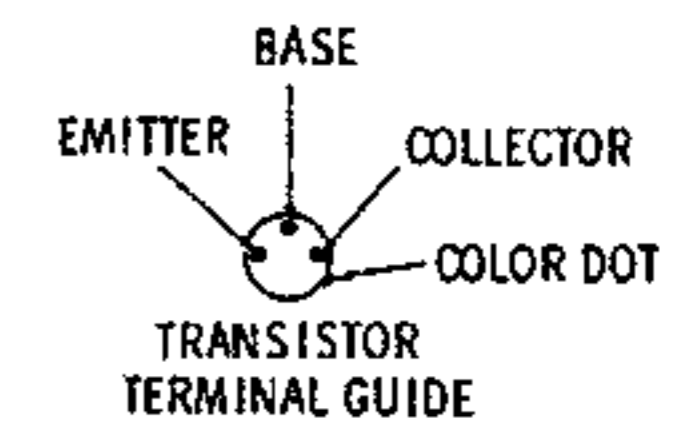
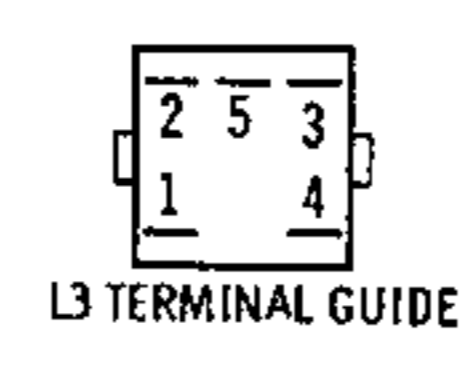
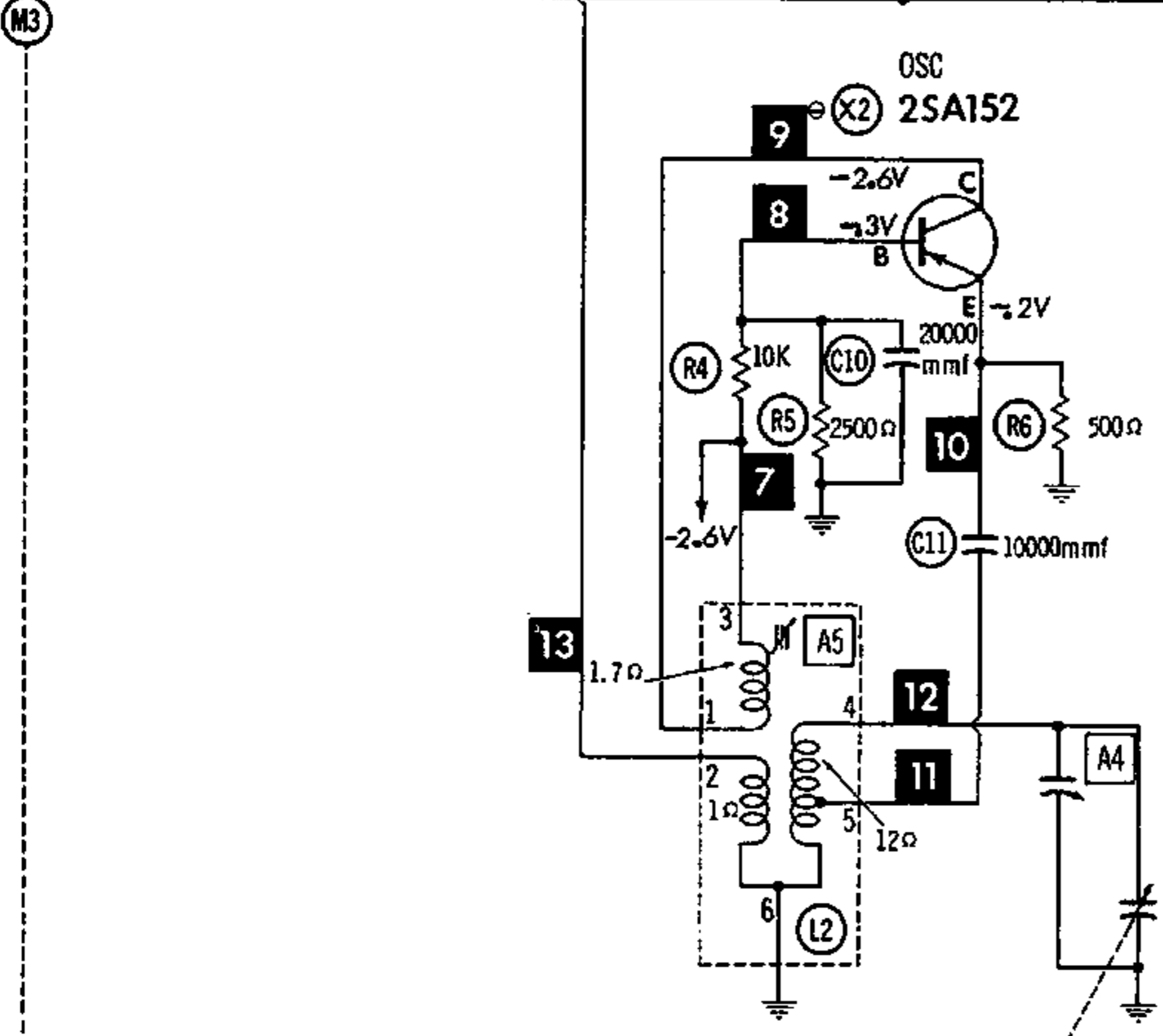
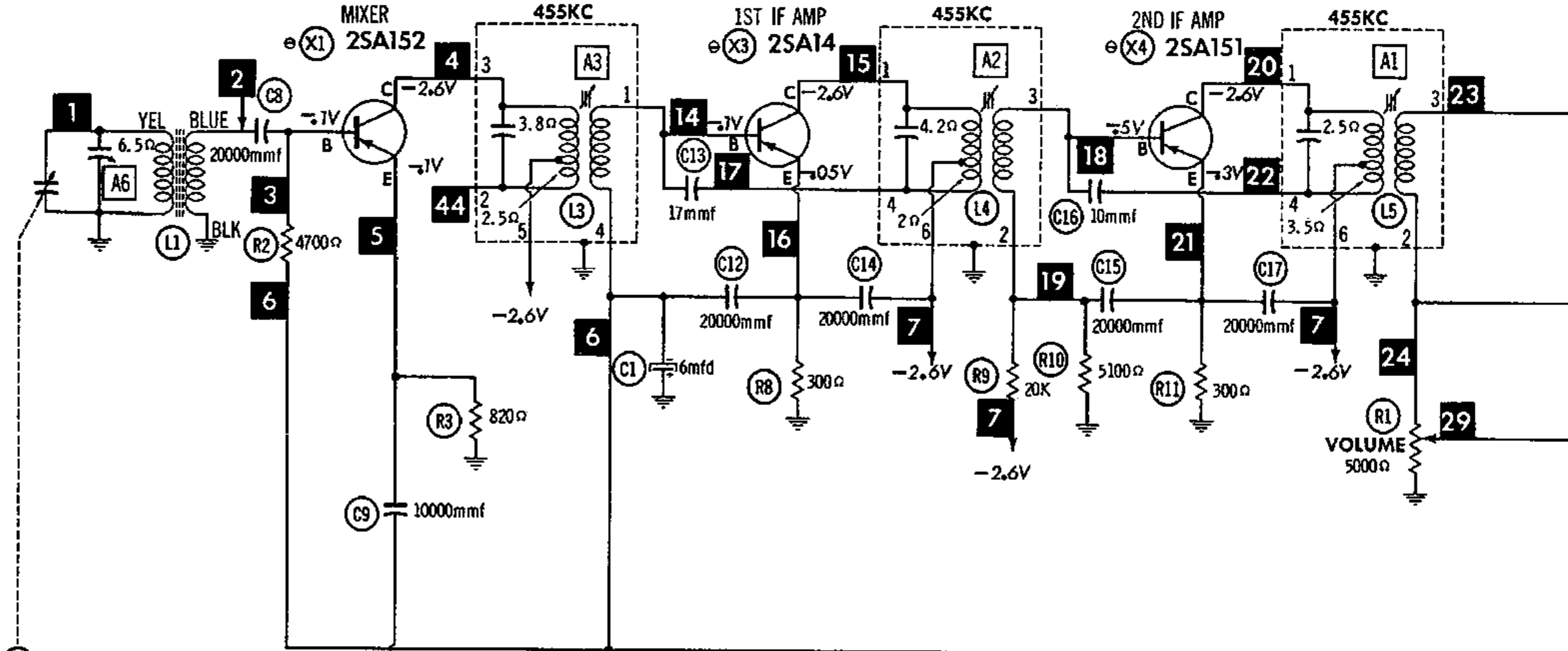
**Suggested Alignment Tools:** A4, A6..... GENERAL CEMENT #5000, 5003, 5066, 8271, 8272, 8276, 8277, 8290, 8609, 8722, 9150, 9298  
WALSCO #2515, 2516, 2518, 2519, 2525, 2541

SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
Loop	455KC (400% Mod.)	Tuning gang fully open.	Across voice coil.	A1, A2, A3	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
-	1600KC	1600KC	"	A4	"
1	600KC	600KC	"	A5	"
4	1400KC	1400KC Signal.	"	A6	"

**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 liability 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 by Howard W. Sams & Co., Inc., by the manufacturers of

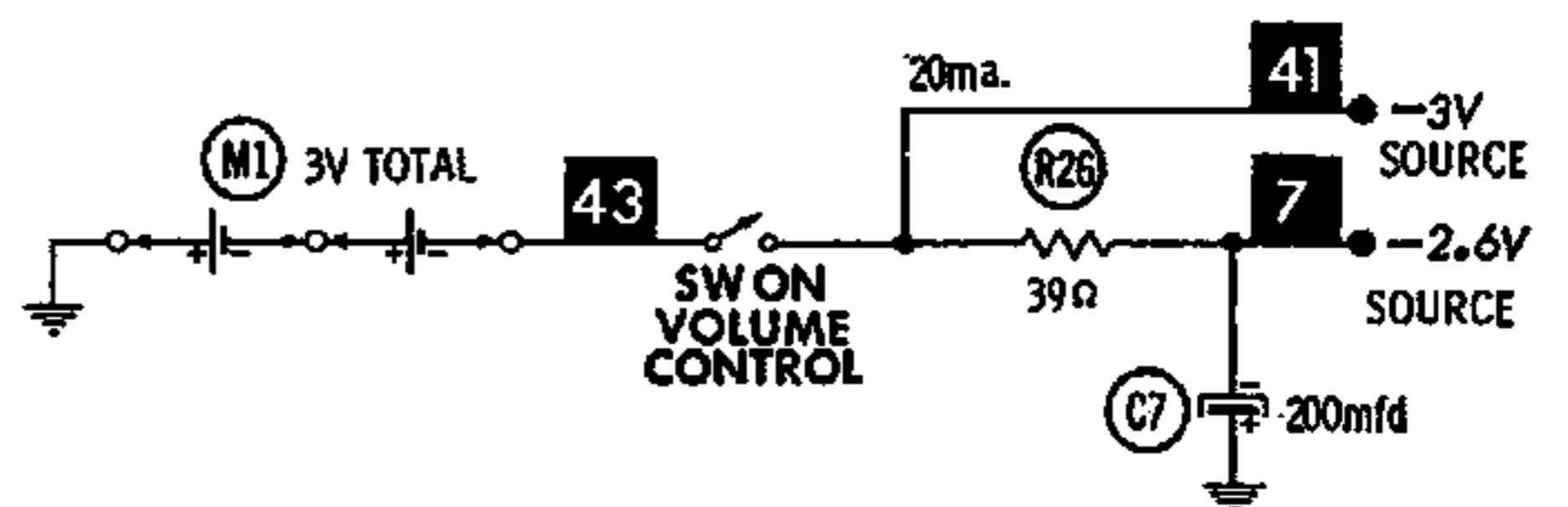
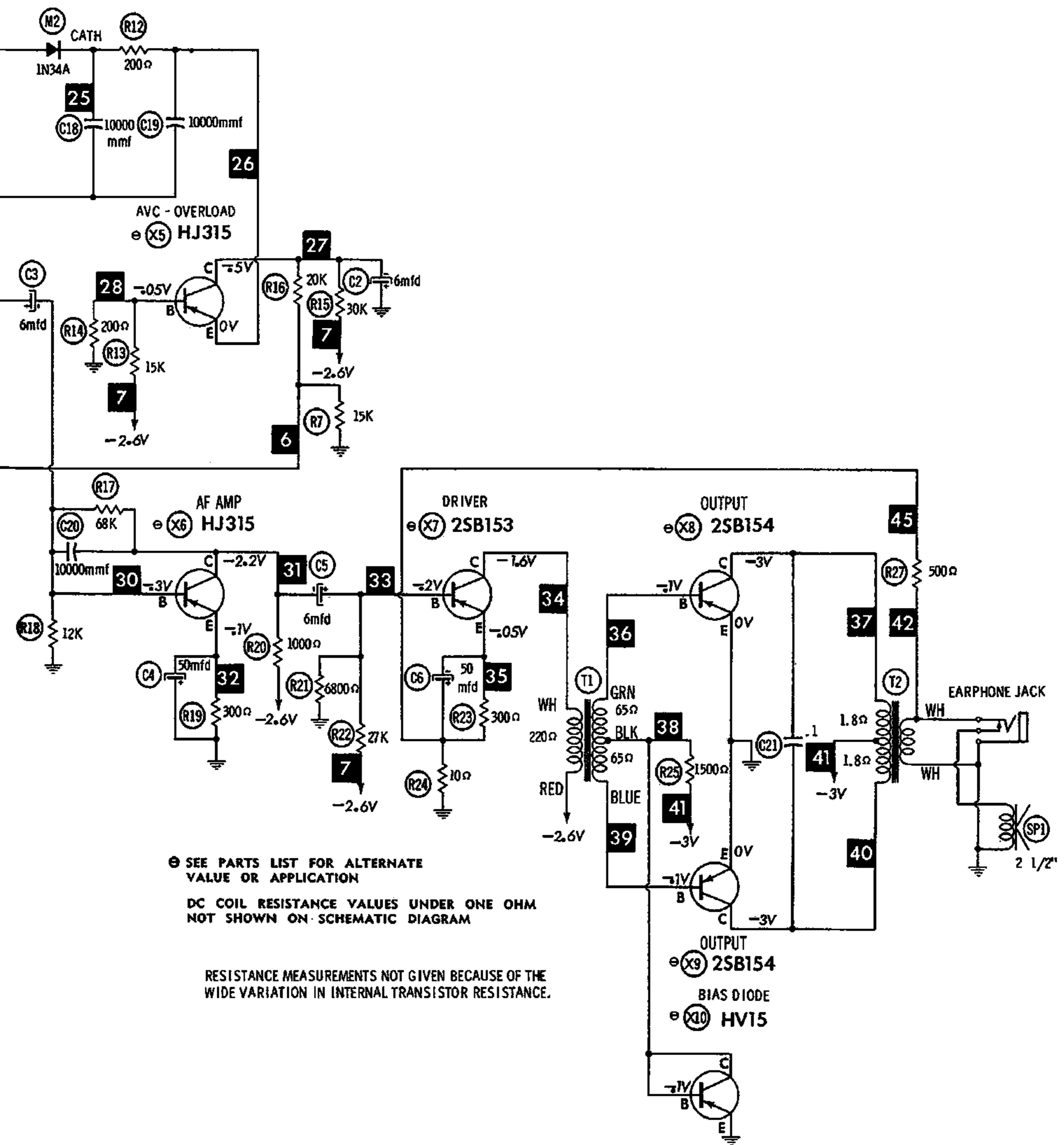
the particular type of replacement part listed. Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. © 1961 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U.S. of America

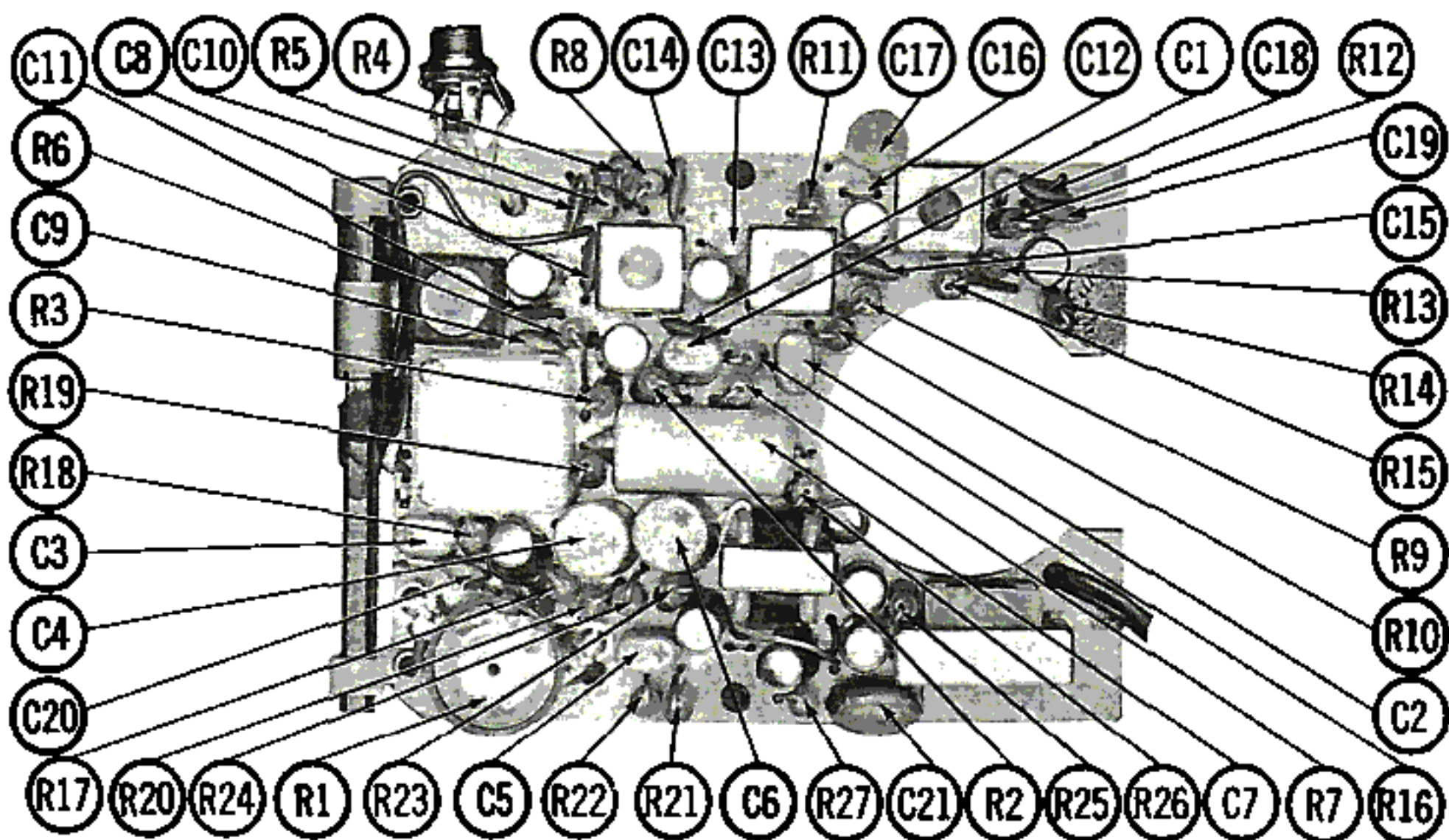


1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections or transistor terminals are shown as bottom views.
3. Measured values are from socket pin or terminal to common ground.
4. Nominal tolerance on component values makes possible a variation of  $\pm 15\%$  in voltage and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

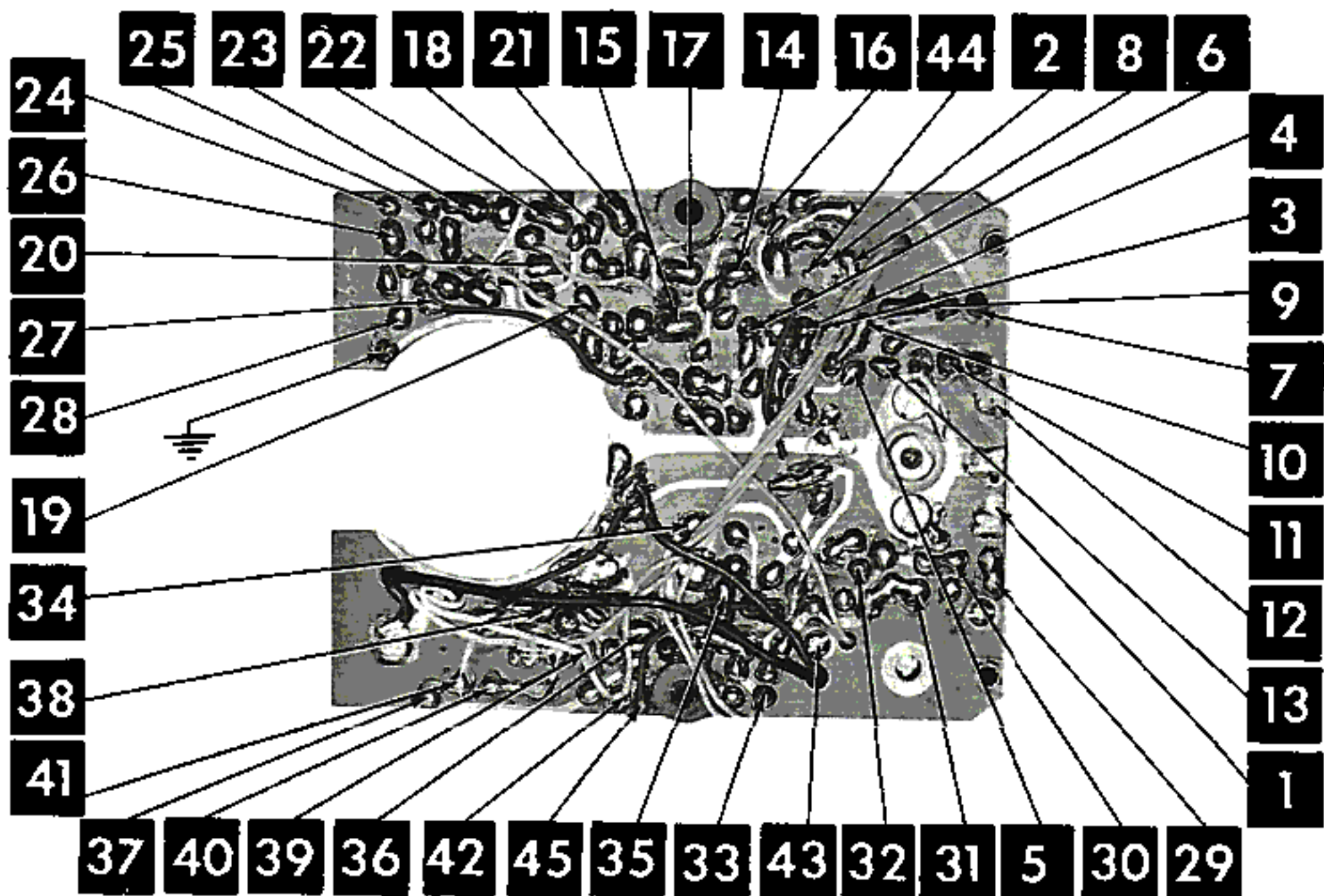
NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.







PRINTED BOARD-CAPACITOR AND RESISTOR IDENTIFICATION



PRINTED BOARD

# PARTS LIST

## TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2SA152 ①	Mixer				PNP
X2	2SA152 ①	Oscillator				PNP
X3	2SA14 ②	1st IF Amplifier				PNP
X4	2SA151 ③	2nd IF Amplifier				PNP
X5	HJ-315 ④	AVC- Overload	2N406			PNP
X6	HJ-315 ④	AF Amplifier	2N406			PNP
X7	2SB153 ⑤	Driver	2N406			PNP
X8	2SB154 ⑥	Output	2N408			PNP
X9	2SB154 ⑥	Output	2N408			PNP
X10	HV-15 ⑦	Bias Diode	1N2326			PNP

① Alternate Type HJ-319. ② Alternate Type HJ-62. ③ Alternate Type HJ-318. ④ Alternate Type 2SB153. ⑤ Alternate Type HJ-317, 2SB156. ⑦ Alternate Type HV-18.

## ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA					NOTES
	CAP.	VOLT.	CROWN PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	
C1	6	6			NLW6-15	TT10X6	ML6-6	TE-1085
C2	6	6			NLW6-15	TT10X6	ML6-6	TE-1085
C3	6	6			NLW6-15	TT10X6	ML6-6	TE-1085
C4	50	6		BCD6050		TT6X50	ML50-6	TE-1100
C5	6	6			NLW6-15	TT10X6	ML6-6	TE-1085
C6	50	6		BCD6050		TT6X50	ML50-6	TE-1100
C7	200	6						TE-1064

## FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic 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.
C8	20000		C80V203AM	DA-203	H-05S2		TA-120	TG-S20
C9	10000		C80V103AM	DM-103	H-05S1		TA-110	TG-S10
C10	20000		C80V203AM	DA-203	H-05S2		TA-120	TG-S20
C11	10000		C80V103AM	DM-103	H-05S1		TA-110	TG-S10
C12	20000		C80V203AM	DA-203	H-05S2		TA-120	TG-S20
C13	17				C10Q18C	CCTO-180	CNO-418	10TCC-Q18
C14	20000		C80V203AM	DA-203	H-05S2		TA-120	TG-S20
C15	20000		C80V203AM	DA-203	H-05S2		TA-120	TG-S20
C16	10		NPO-DI 10	DTZ-10	C10Q1C	CCTO-100	CNO-410	10TCC-Q10



# ND DESCRIPTIONS

## 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.
C17	20000		C80V203AM	DA-203	H-05S2		TA-120	TG-S20
C18	10000		C80V103AM	DM-103	H-05S1		TA-110	TG-S10
C19	10000		C80V103AM	DM-103	H-05S1		TA-110	TG-S10
C20	10000		C80V103AM	DM-103	H-05S1		TA-110	TG-S10
C21	.1 50V		C80V103AM	DA-104	H-05P1		TA-010	TG-P10

## CONTROLS

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES	
	RESISTANCE	WATTS	CROWN PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.		MALLORY PART No.
R1	5000Ω	1/4	G-5KΩ	B16-214				Volume & Switch

## RESISTORS (IRC or EQUIVALENT)

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

ITEM No.	RATING	REMARKS
R2	4700Ω	
R3	820Ω	
R4	10K	
R5	2500Ω	
R6	500Ω	
R7	15K	
R8	300Ω	
R9	20K	
R10	5100Ω	

ITEM No.	RATING	REMARKS
R11	300Ω	
R12	200Ω	
R13	15K	
R14	200Ω	
R15	30K	
R16	20K	
R17	68K	
R18	12K	
R19	300Ω	

ITEM No.	RATING	REMARKS
R20	1000Ω	
R21	6800Ω	
R22	27K	
R23	300Ω	
R24	10Ω	
R25	1500Ω	
R26	39Ω	
R27	500Ω	

## COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		CROWN PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	
L1	Loopstick	AM-L-8				
L2	Osc. Coil	AM-8048				
L3	1st IF Trans.	FMC-6088				
L4	2nd IF Trans.	FMC-5485				
L5	3rd IF Trans.	FMC-6019				

# PARTS LIST AND DESCRIPTIONS (Continued)

## TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	CROWN PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	1.7	1	AM-T-35					

## TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	CROWN PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	80Ω CT	6-8Ω	AM-T-36					

## SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	CROWN PART No.	QUAM PART No.	
SP1	2½"	PM	6-8Ω	PF-250A		

## BATTERIES

ITEM No.	VOLTAGE	CROWN PART No.	REPLACEMENT DATA						NOTES
			BURGESS		EVEREADY		MALLORY		
			"A"	"B"	"A"	"B"	"A"	"B"	
M1	1.5V	UM-3A *		930 *		1015 *		M-15R *	* 2 Required

## CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		CROWN PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
M2	1N34A		1N34A	1N34A	Detector (Pigtail)

## MISCELLANEOUS

ITEM No.	PART NAME	CROWN PART No.	NOTES
M3	Tuning Cap	PVP-5	2 Gang (Ant. 146.6mmf Max., Osc. 63.2mmf Max.)

## WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors  
8624 (Stranded) Available in Ten Colors

**CHASSIS—TOP VIEW**

