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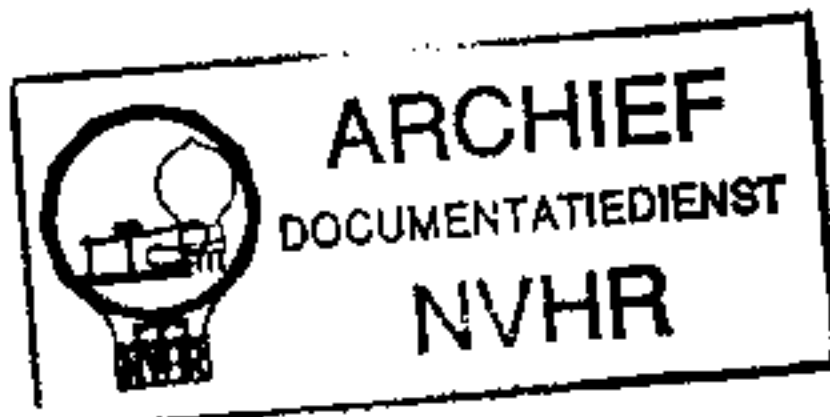
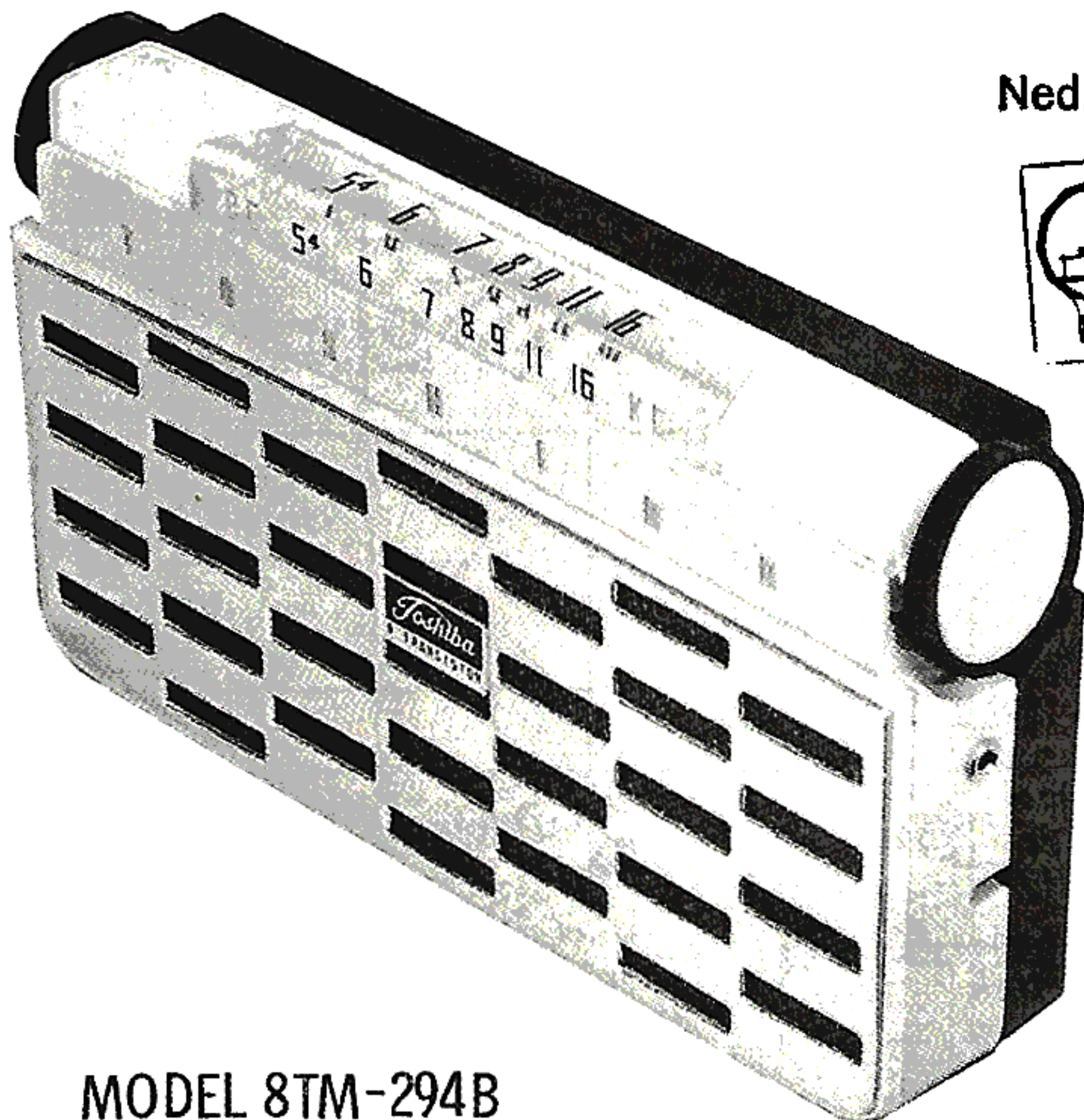
with CIRCUITRACE™

TOSHIBA MODELS
8TM-294A, 8TM-294B



Met dank aan Jef Bos

Ned. Ver. v. Historie v/d Radio



MODEL 8TM-294B

TRADE NAME	Toshiba Models 8TM-294A, 8TM-294B		
IMPORTER	Transistor World Corp., 52 Broadway, New York 4, N. Y.		
TYPE SET	Battery Operated Transistorized Portable AM Receiver		
POWER SUPPLY	6 Volts DC	RATING	9MA @ 6 Volts DC (No Signal, Min. Volume)
TUNING RANGE—BROADCAST	540 — 1600KC		20MA @ 6 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 output reading.

Suggested Alignment Tools: A1, A2, A3, A5.... GENERAL CEMENT #5004, 5009, 8195, 8274, 8275, 8607, 8728, 8987, 8988, 8989, 9291
WALSCO #2515, 2520, 2522, 2523, 2531, 2532, 2534, 2537, 2538
A4, A7..... GENERAL CEMENT #5009, 8195, 8274, 8275, 8728, 8729, 8987, 8988, 8989
WALSCO #2515, 2531, 2532

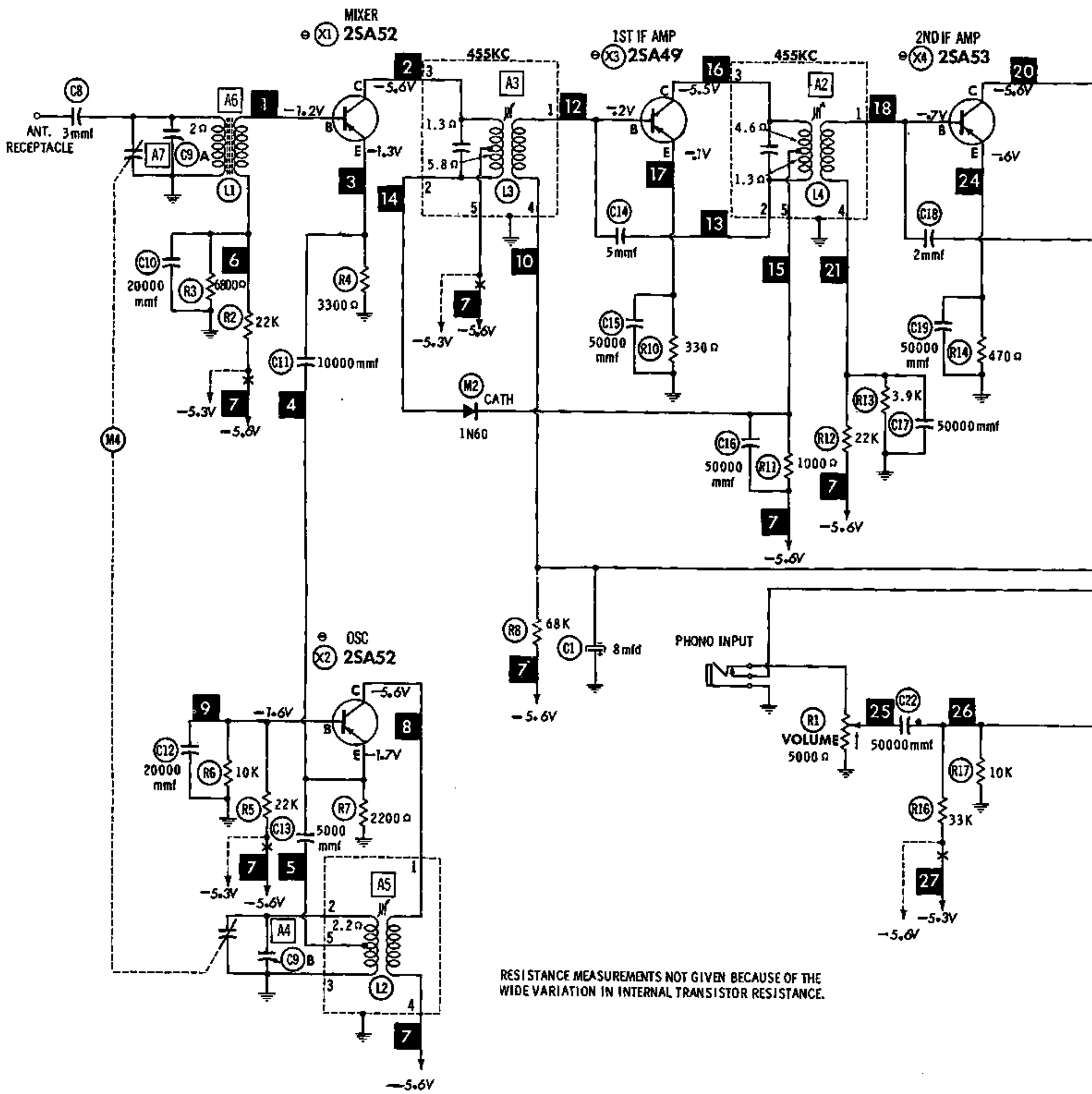
	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	Loop	455KC (400% Mod.)	Tuning gang fully open.	Across voice coil.	A1, A2, A3	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
2.	"	1600KC	1600KC	"	A4	"
3.	"	600KC	600KC	"	A5, A6	Adjust for maximum output. A6 is adjusted by sliding coil along core.
4.	"	1400KC	1400KC Signal.	"	A7	Adjust for maximum output. Repeat Steps 2, 3 and 4.

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 KF582

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



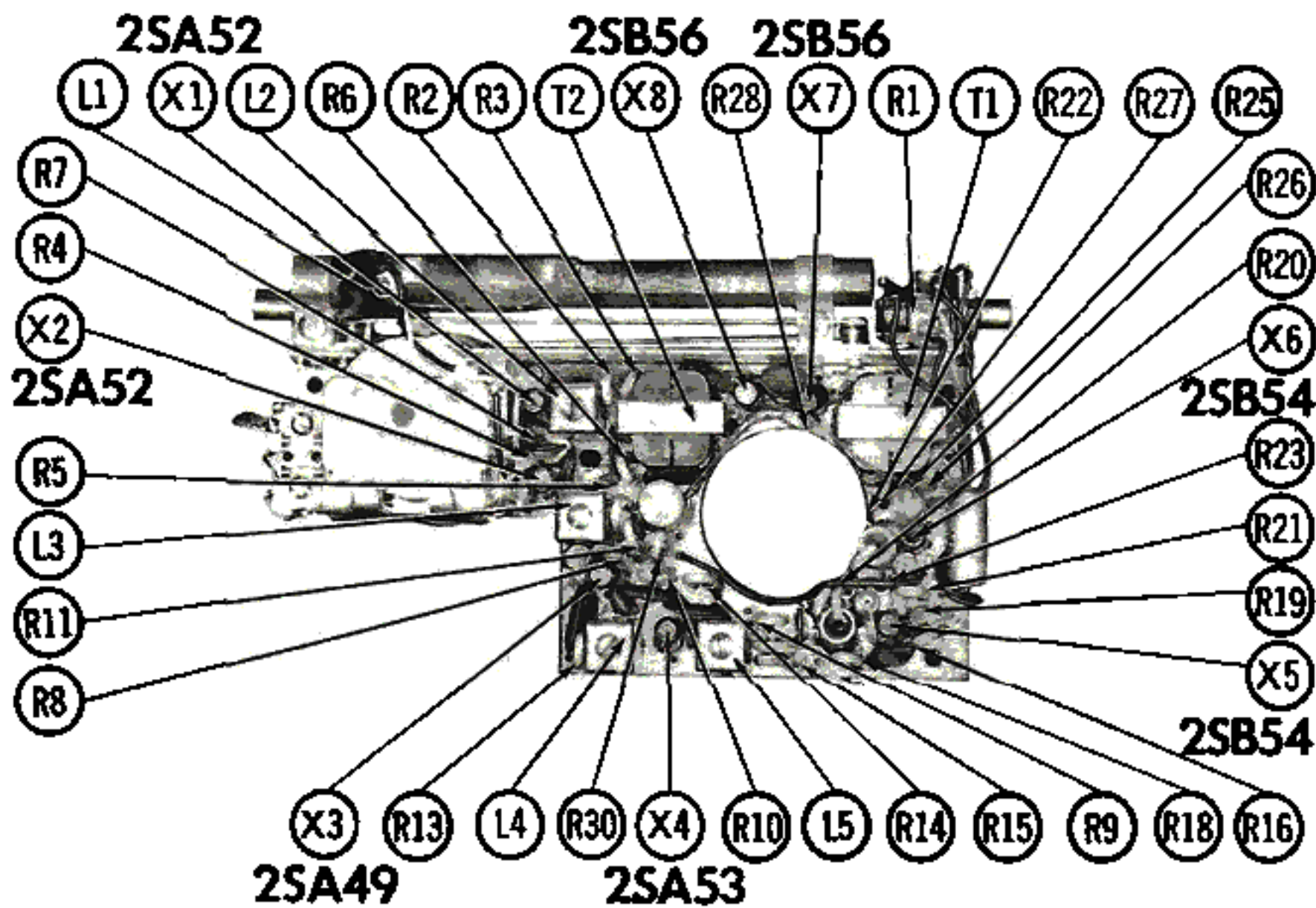


RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

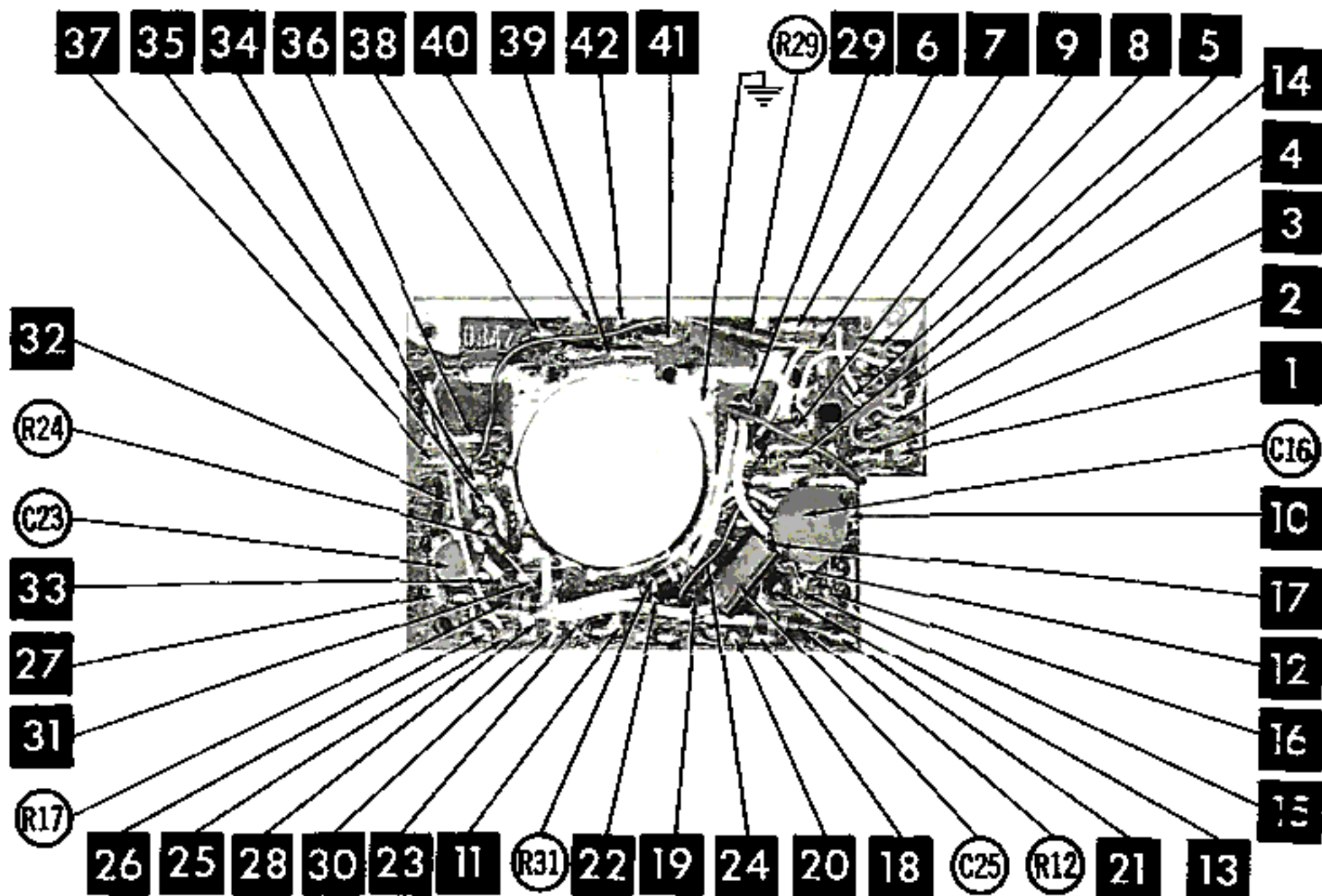
NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

- ⊙ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION
- DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM
- ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

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.



CHASSIS TOP VIEW-RESISTOR, INDUCTOR & TRANSISTOR IDENT.



TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	28A52 *	Mixer				PNP
X2	28A52 *	Oscillator				PNP
X3	28A49 *	1st IF Amplifier				PNP
X4	28A53 *	2nd IF Amplifier				PNP
X5	28B54 †	AF Amplifier	2N406			PNP
X6	28B54 †	Driver	2N406			PNP
X7	28B56 †	Output	2N408			PNP
X8	28B56 †	Output	2N408			PNP

* Some versions may omit letter "A".

† Some versions may omit letter "B".

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA					NOTES
	CAP.	VOLT.	TOSHIBA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	
C1	8	3		PTT-3008	NLW8-10	TT6X8	MLV10-3	TE-1052.5
C2	40	3		PTT-3040	NLW40-3	TT3X40	MLV40-3	TE-1057
C3	5	6		PTT-6005	NLW5-15	TT6X5	MLV5-6	TE-1084
C4	8	5		PTT-6008	NLW8-10	TT6X8	MLV10-6	TE-1086
C5	40	3		PTT-3040	NLW40-3	TT3X40	MLV40-3	TE-1057
C6	60	6		PTT-6050	NLW75-10	TT6X60	MLV50-6	TE-1101
C7	60	6		PTT-6050	NLW75-10	TT6X60	MLV50-6	TE-1101

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 C9A B	3		NPO-DI 3.0	DTZ-3R3	C10V3C	CCTO-3R3	CNO-533	10TCC-V33
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	5000		C80V502AM	DM-502	H-05D5	CCD-502	TA-250	TG-D50
C14	5		NPO-DI 5.0	DTZ-4R7	C10V5C	CCTO-050	CNO-555	10TCC-V50
C15	50000		C80V503AM	DA-503	H-05S5		TA-150	TG-S50
C16	50000		C80V503AM	DA-503	H-05S5		TA-150	TG-S50
C17	50000		C80V503AM	DA-503	H-05S5		TA-150	TG-S50
C18	2		NPO-DI 2.0	DTZ-2R2	C10V2C	CCTO-2R2	CNO-522	10TCC-V22

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.
C19	50000	Note 1	C80V503AM	DA-503	H-05S5	CCD-202	TA-150	TG-S50
C20	10000		C80V103AM	DM-103	H-05S1		TA-110	TG-S10
C21	10000		C80V103AM	DM-103	H-05S1		TA-110	TG-S10
C22	50000		C80V503AM	DA-503	H-05S5		TA-150	TG-S50
C23	10000		C80V103AM	DM-103	H-05S1		TA-110	TG-S10
C24	100000		C80V104AM	DA-104	H-05P1		TA-010	TG-P10
C25	2000		BPD-002	DA-202	BYA10D2		B-220	5HK-D20
C26	50000		C80V503AM	DM-503	H-05S5		TA-150	TG-S50

Note 1. Used in Model 8TM-294A.

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES	
	RESISTANCE	WATTS	TOSHIBA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.		MALLORY PART No.
R1	5000Ω	1/4	40285					Volume & Switch

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 TV PART No.	REMARKS			IRC PART No.	WORKMAN TV PART No.	REMARKS
R2	22K				R17	10K			
R3	6800Ω				R18	22Ω			
R4	3300Ω				R19	1000Ω			
R5	22K				R20	1000Ω			
R6	10K				R21	22K			
R7	2200Ω				R22	5600Ω			
R8	68K				R23	1000Ω			
R9	5600Ω				R24	12K			(15K) *
R10	330Ω				R25	4700Ω			
R11	1000Ω				R26	330Ω			
R12	22K				R27	Temp. Comp			
R13	3900Ω				R28	10Ω			
R14	470Ω				R29	100Ω			
R15	470Ω				R30	220Ω			
R16	33K				R31	4700Ω			Note 1

* Alternate Value.

Note 1. Not used in Model 8TM-294A.

PARTS LIST AND DESCRIPTIONS (Continued)

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		TOSHIBA PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman TV PART No.	
L1	Loopstick	20291					
L2	Osc.	161					
L3	1st IF	1038					
L4	2nd IF	1039					
L5	3rd IF	1040					

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			TOSHIBA PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
	PRI.	SEC.						
T1	1.2	1	0530 ①					① Model 8TM-294A uses Part #0509.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	TOSHIBA PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	150Ω CT	8-8Ω	0595 ①					① Model 8TM-294A uses Part #0567

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	TOSHIBA PART No.	QUAM PART No.	
SP1	3½"	PM	8-8Ω	SP-3503B * 50094 †		* Model 8TM-294B † Model 8TM-294A

BATTERIES

ITEM No.	VOLTAGE	TOSHIBA PART No.	REPLACEMENT DATA						NOTES
			BURGESS		EVEREADY		MALLORY		
			"A"	"B"	"A"	"B"	"A"	"B"	
M1	1.5V	UM-3 *		930 *		1015 *		M-15R *	* 4 Required

SIGNAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA				NOTES
		TOSHIBA PART No.	GENERAL ELECTRIC PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
M2	1N60	1N60		1N60	1N60	Overload Detector
M3	1N60	1N60		1N60	1N60	

MISCELLANEOUS

ITEM No.	PART NAME	TOSHIBA PART No.	NOTES
M4	Tuning Cap.	30445	2 Gang

WIRING DATA

General-use Unshielded Hook-up Wire Use DICKEN No. 8630 (Solid) Available in Ten Colors
8624 (Stranded) Available in Ten Colors

CHASSIS—TOP VIEW

