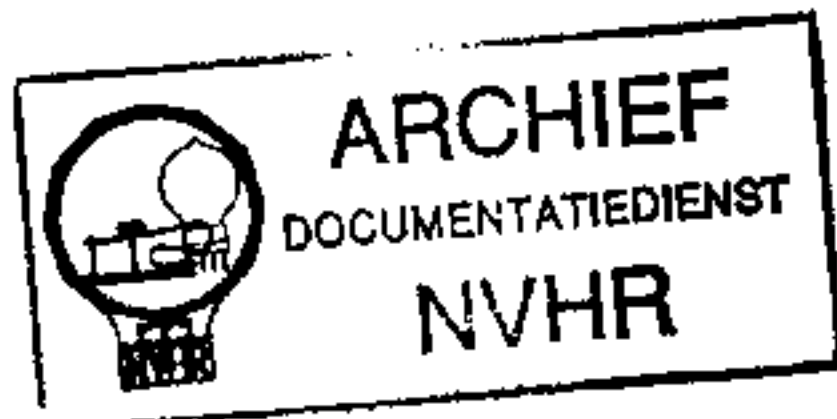


PHOTOFACT® Folder

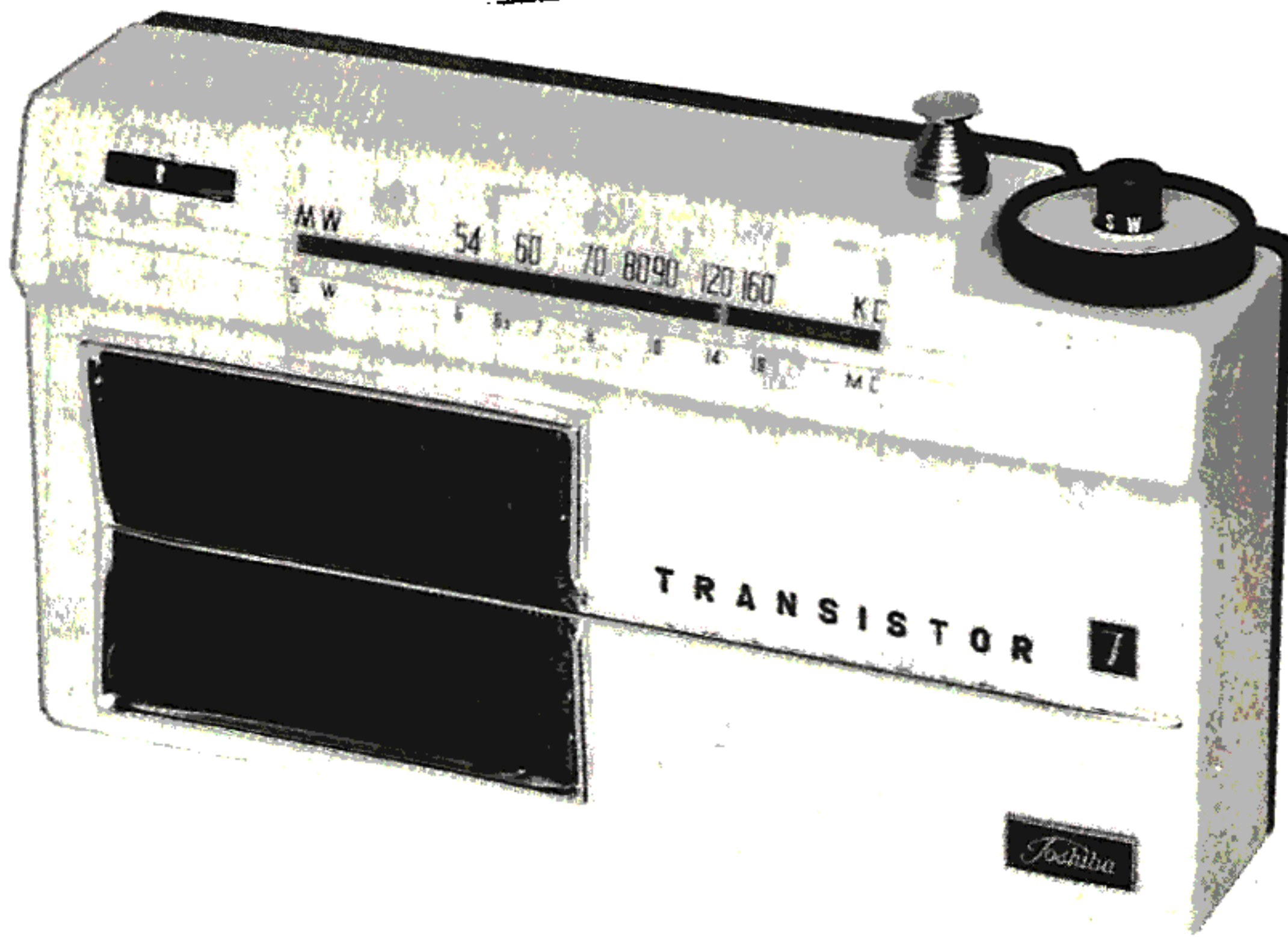
with CIRCUITRACE®

TOSHIBA MODEL
7TM-312S

Ned. Ver. v. Historie v/d Radio



Met dank aan Jef Bos



TRADE NAME	Toshiba Model 7TM-312S		
IMPORTER	Transistor World Corp., 52 Broadway, New York 4, N. Y.		
TYPE SET	Battery Operated Transistorized Portable BC-SW Receiver		
POWER SUPPLY	6 Volts DC	RATING	8MA @ 6 Volts DC (No Signal, Min. Volume)
TUNING RANGE—BROADCAST	540 — 1600KC		15MA @ 6 Volts DC (Signal, Normal Volume)
		SHORT WAVE	5.9 — 18MC

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 #5000, 5003, 5066, 8276, 8290, 9087, 9089 WALSCO #2512, 2525, 2528
A4, A6, A7, A10.....	GENERAL CEMENT #5009, 8195, 8274, 8275, 8728, 8729, 8987, 8988, 8989 WALSCO #2515, 2531, 2532
A9.....	GENERAL CEMENT #8721, 8722 WALSCO #2519

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	Loop	455KC (400% Mod.)	(MW) 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	"
4.	"	1400KC	1400KC Signal.	"	A6	"
5.	"	18MC	(SW) 18MC	"	A7	"
6.	"	6MC	6MC	"	A8, A9	"
7.	"	16MC	16MC Signal.	"	A10	Adjust for maximum output. Repeat Steps 2 thru 7.

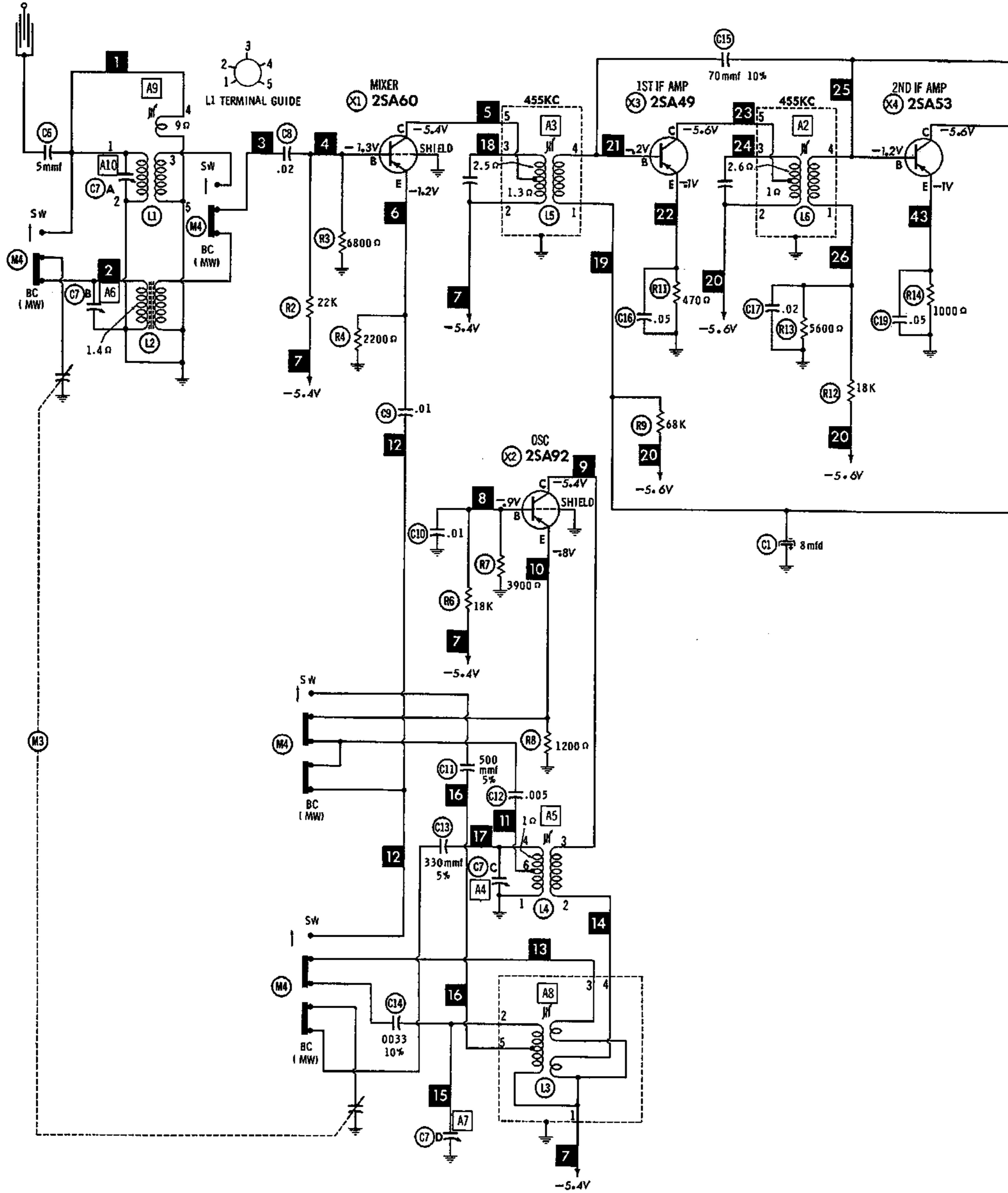
HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

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 KF706

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

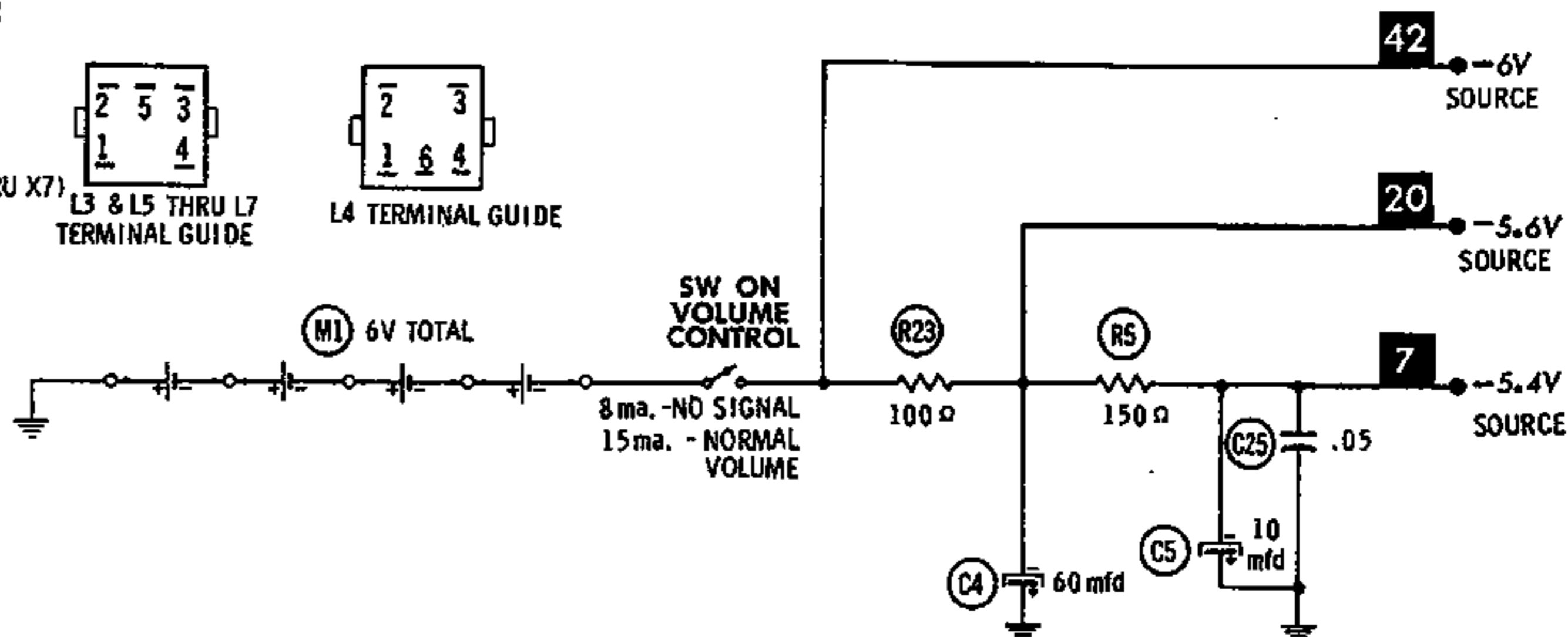
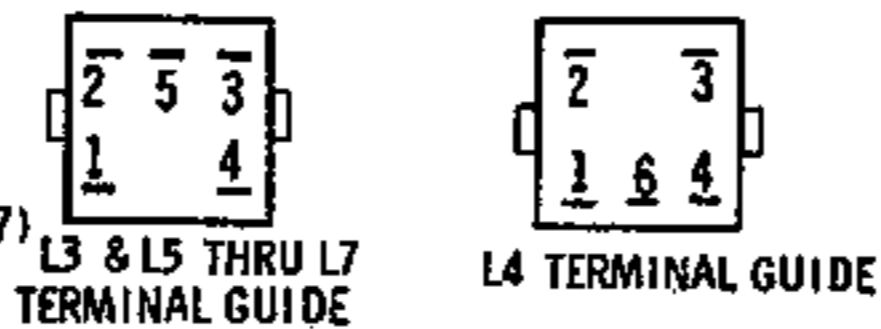
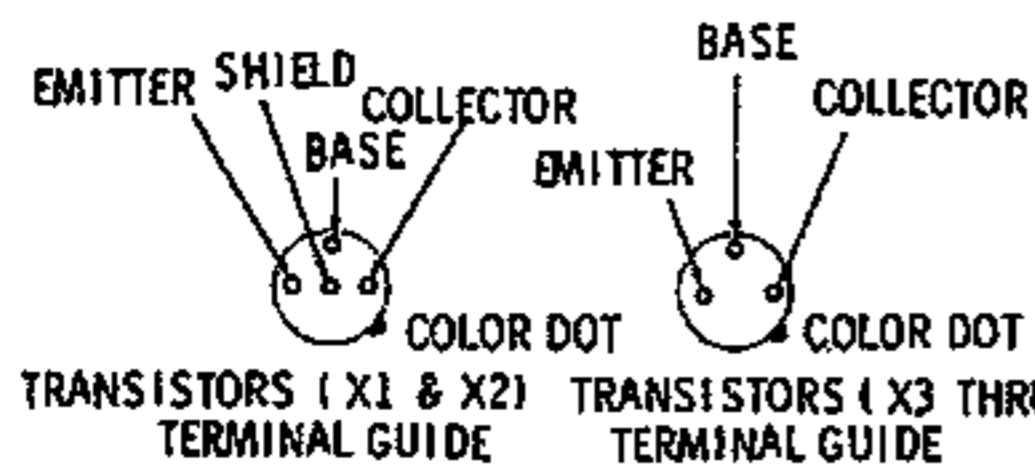
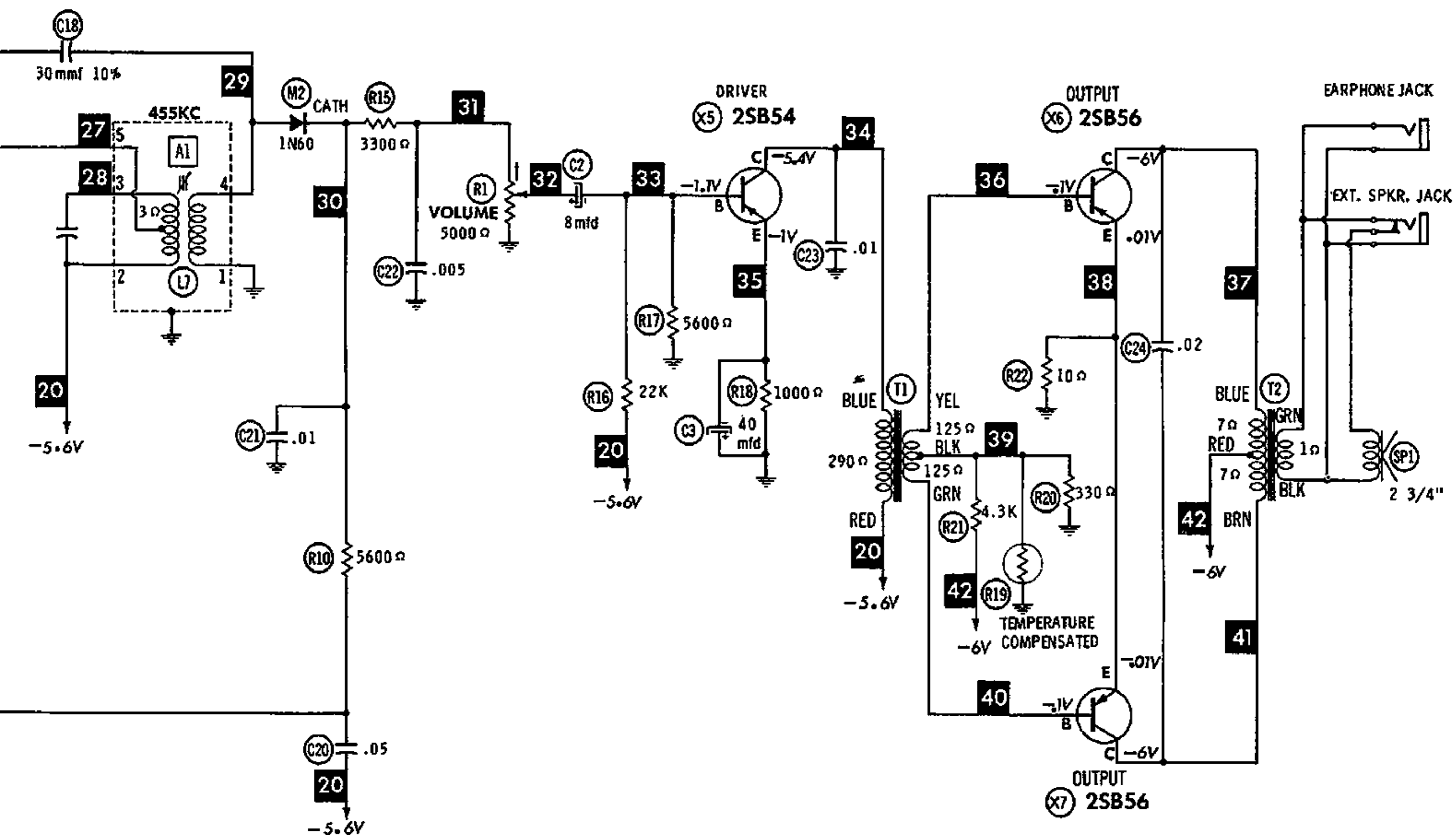


TELESCOPIC ANT.



A PHOTOFAC STANDARD NOTATION SCHEMATIC
with CIRCUITRACE

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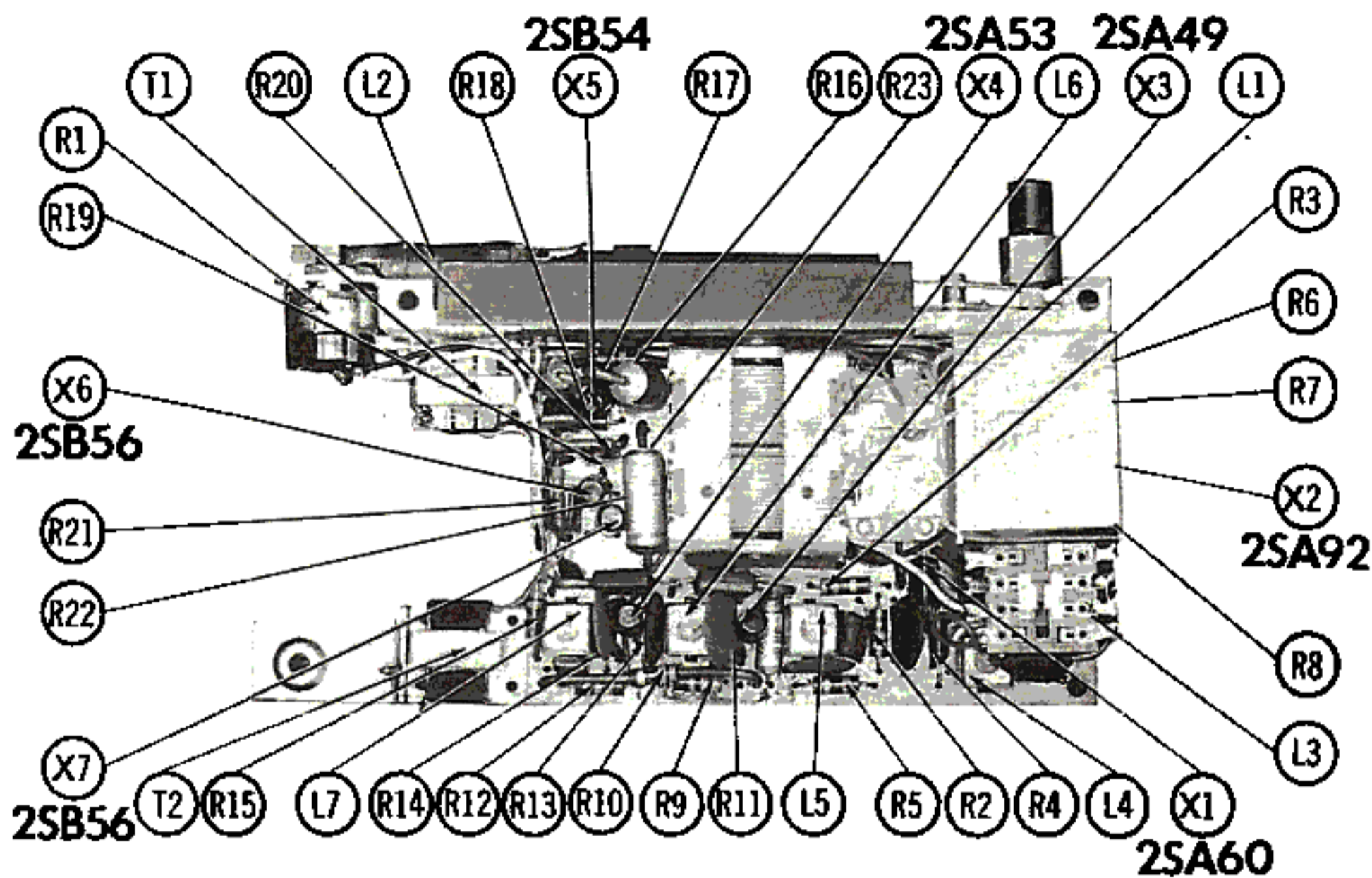
1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections or transistor terminals are shown as bottom views.
3. Measured values are from socket pin or terminal to common ground.
4. Nominal tolerance on component values makes possible a variation of $\pm 15\%$ in voltage and resistance 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.

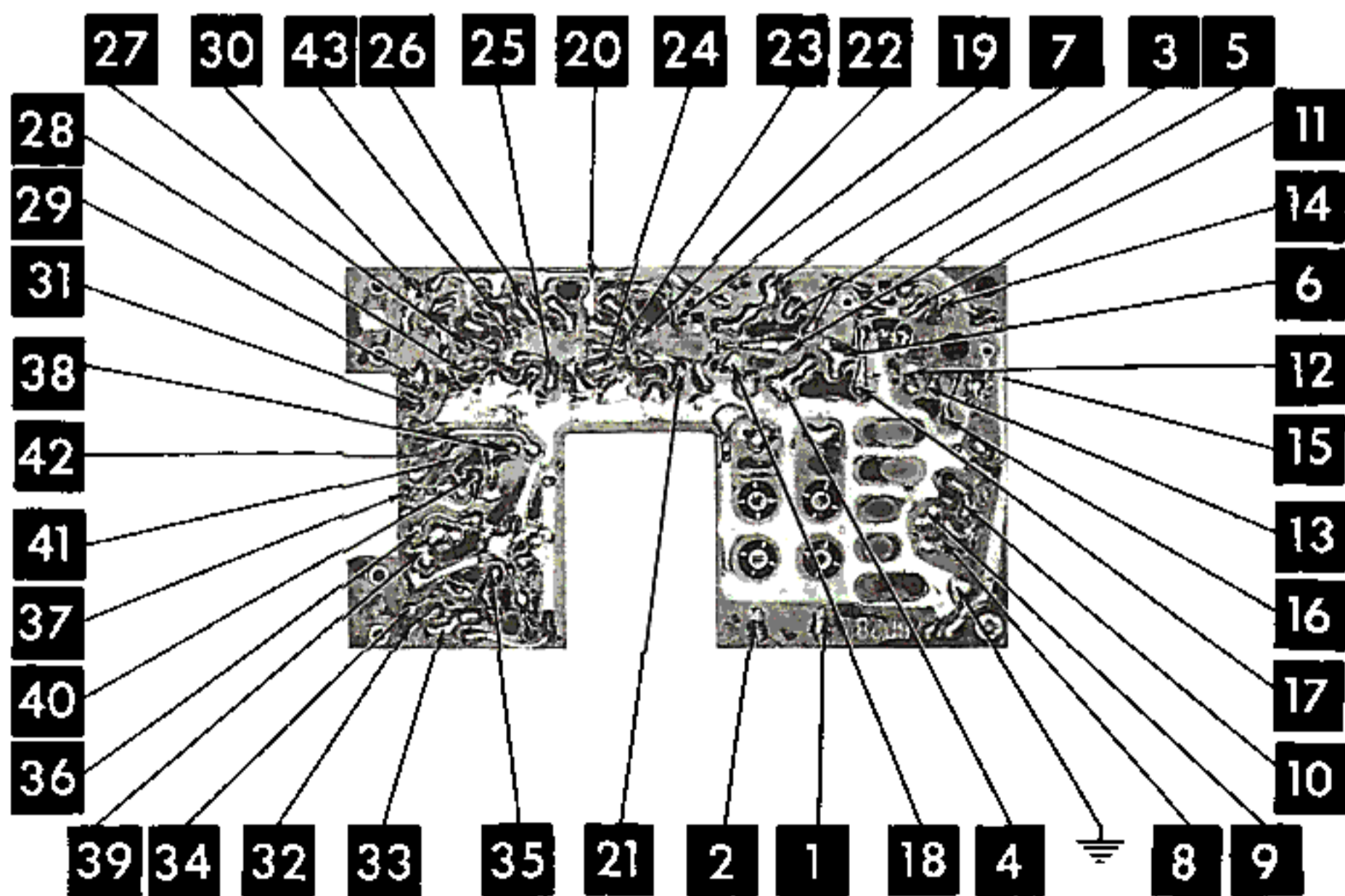
RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

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

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)



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	2SA60	Mixer				PNP
X2	2SA92	Oscillator				PNP
X3	2SA49	1st IF Amplifier				PNP
X4	2SA53	2nd IF Amplifier				PNP
X5	2SD54	Driver	2N408			PNP
X6	2SD56	Output	2N408			PNP
X7	2SD56	Output	2N408			PNP

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		TOSHIBA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.	NOTES
	CAP.	VOLT.							
C1	8	3		PTT5	NLW8-10	TT6X8	MLV10-3	TE-1052.5	
C2	8	3		PTT5	NLW8-10	TT6X8	MLV10-3	TE-1052.5	
C3	40	3		PTT11	NLW40-3	TT3X40	MLV40-3	TE-1057	
C4	60	6		PTT29	NLW75-10	TT6X60	MLV50-6	TE-1101	
C5	10	6		PTT23	NLW10-8	TT6X10	MLV10-6	TE-1087	

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.
C6 C7A B C D	5		NPO-DI 5.0	DTZ-4R7	C10V5C	CCTO-050	CNO-547	10TCC-V50
C8	.02		C80V203AM	DA-203	H-05S2		TA-120	TG-S20
C9	.01		C80V103AM	DM-103	H-05S1		TA-110	TG-S10
C10	.01		C80V103AM	DM-103	H-05S1		TA-110	TG-S10
C11	500 5%		1469-0005		5R5T5	CM-19B-501J	MCE245	MS-35
C12	.005		C80V502AM	DM-502	H-05D5	CCD-502	TA-250	TG-D50
C13	330 5%		1469-00033		5R5T33	CM-19B-331J		MS-333
C14	.0033 10%		1464-0033		1R5D33	CM-19B-332K	MCJ462	MS-233
C15	70 10%		1469-00007	TCZ-68	22R5Q7	CM-19B-680J	CNO-468	MS-47
C16	.05		C80V503AM	DA-503	H-05S5		TA-150	TG-S50
C17	.02		C80V203AM	DA-203	H-05S2		TA-120	TG-S20
C18	30 10%		1469-00003	TCZ-30	22R5Q3	CM-19B-300K	CNO-433	MS-43
C19	.05		C80V503AM	DA-503	H-05S5		TA-150	TG-S50
C20	.05		C80V503AM	DA-503	H-05S5		TA-150	TG-S50
C21	.01		C80V103AM	DM-103	H-05S1		TA-110	TG-S10
C22	.005		C80V502AM	DM-502	H-05D5	CCD-502	TA-250	TG-D50
C23	.01		C80V103AM	DM-103	H-05S1		TA-110	TG-S10
C24	.02		C80V203AM	DA-203	H-05S2		TA-120	TG-S20
C25	.05		C80V503AM	DA-503	H-05S5		TA-150	TG-S50

ND DESCRIPTIONS

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	1/2						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				R13	5600Ω			
R3	6800Ω				R14	1000Ω			
R4	2200Ω				R15	3300Ω			
R5	150Ω				R16	22K			
R6	18K				R17	5600Ω			
R7	3900Ω				R18	1000Ω			
R8	1200Ω				R19	Temp. Comp.			
R9	68K				R20	330Ω			
R10	5600Ω				R21	4300Ω			
R11	470Ω				R22	10Ω			
R12	18K				R23	100Ω			

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	SW Ant.						
L2	Loopstick						
L3	SW Osc.						
L4	BC Osc.						
L5	1st IF						
L6	2nd IF						
L7	3rd IF						

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	TOSHIBA PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	1.5	1	0513A		TA-28			

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	500Ω CT	10-12Ω	0574A					

PARTS LIST AND DESCRIPTIONS (Continued)

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	TOSHIBA PART No.	QUAM PART No.	
SP1	2 3/4"	PM	10-12Ω	SP-3003C	27A06Z12	

BATTERIES

ITEM No.	VOLTAGE	TOSHIBA PART No.	REPLACEMENT DATA						NOTES
			BURGESS		EVEREADY		MALLORY		
			"A"	"B"	"A"	"B"	"A"	"B"	
M1	1.5V	UM-3A		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	Detector (Pigtail)

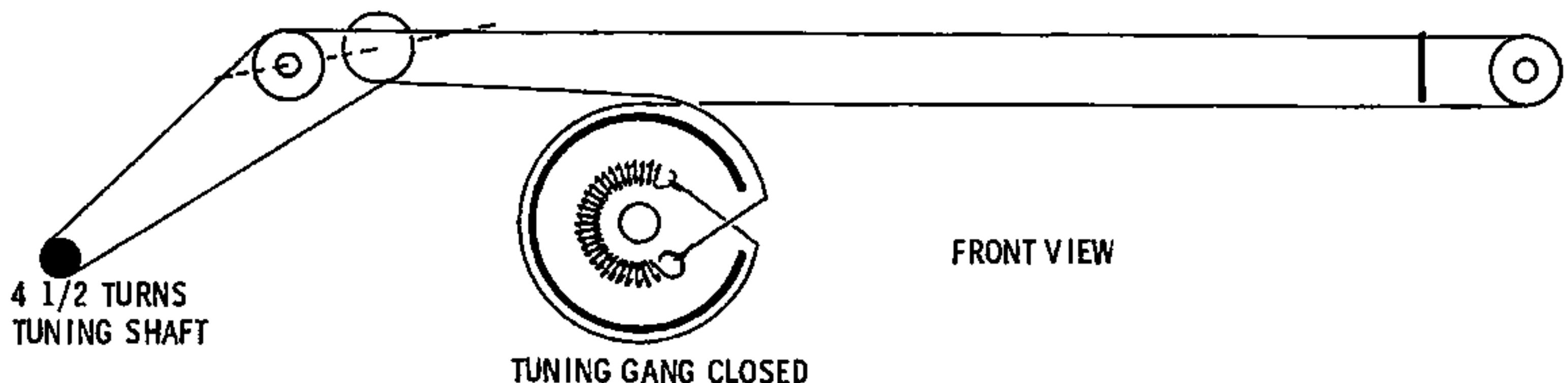
MISCELLANEOUS

ITEM No.	PART NAME	TOSHIBA PART No.	NOTES
M3 M4	Tuning Cap. Switch		2 Gang Band Selector (Slide Type)

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors

DIAL CORD STRINGING



CHASSIS—TOP VIEW

