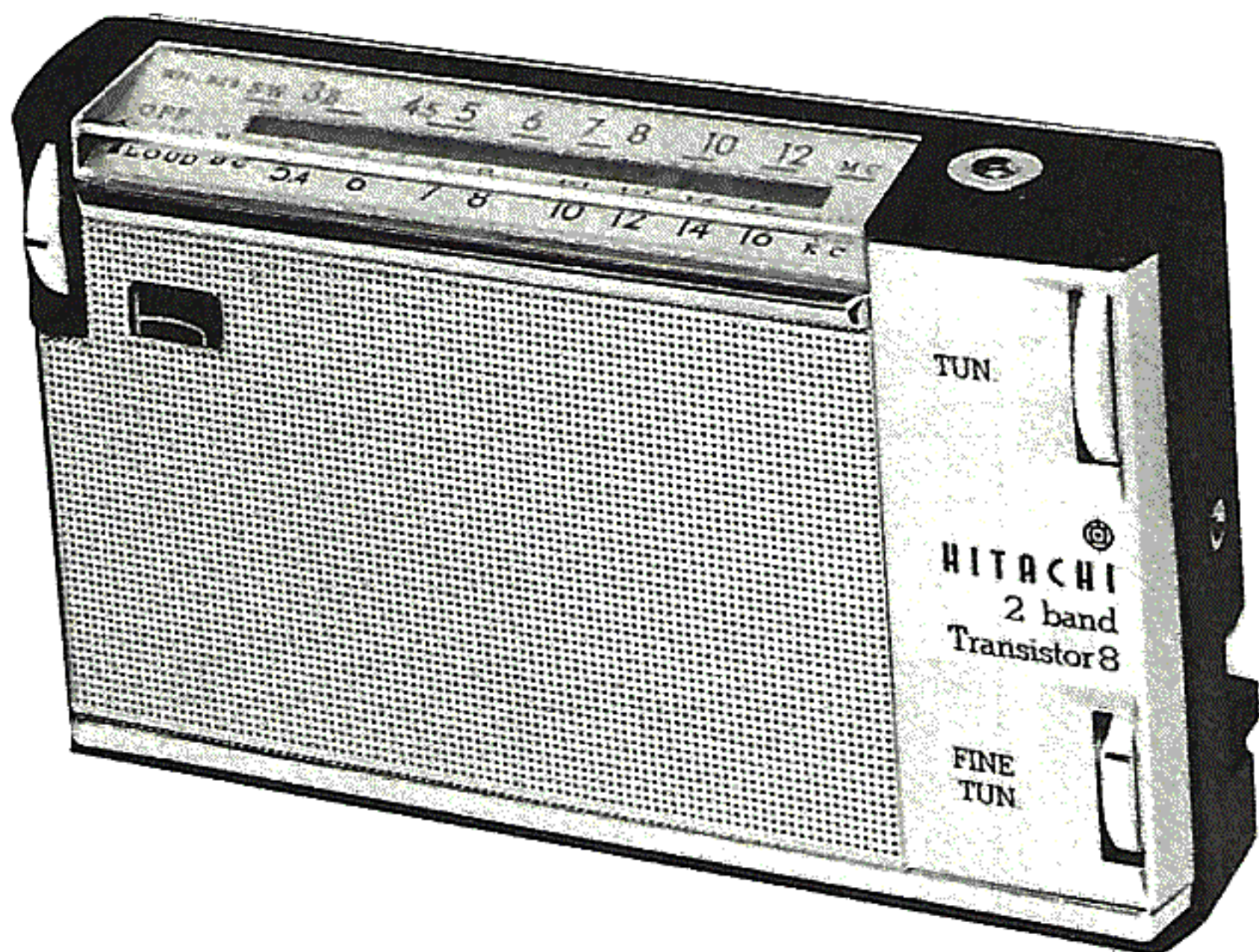
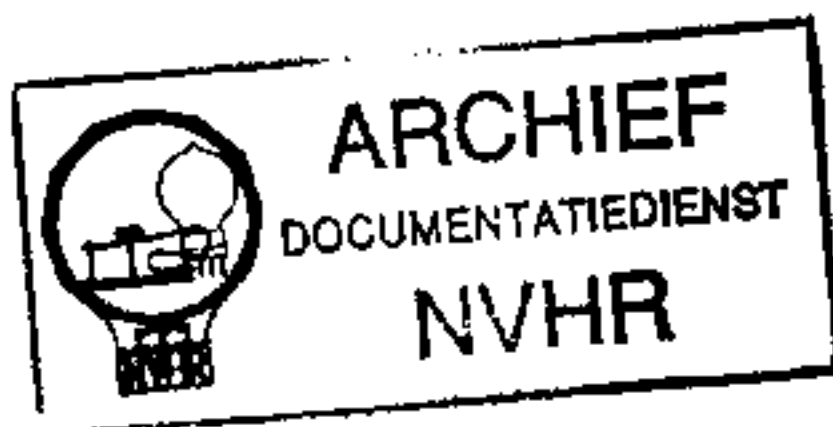


PHOTOFACT® Folder

with CIRCUITRACE®

HITACHI MODEL
WH-829

Ned. Ver. v. Historie v/d Radio



TRADE NAME	Hitachi Model WH-829		
IMPORTER	Electronic Utilities Co., Div. of The Sampson Co., 2244 S. Western Ave., Chicago 8, Illinois		
TYPE SET	Battery Operated Transistorized Portable BC-SW Receiver		
POWER SUPPLY	4.5 Volts DC	RATING	15MA@4.5 Volts DC (No Signal, Min. Volume)
TUNING RANGE—BROADCAST	535 — 1605KC		35MA@4.5 Volts DC (Signal, Normal Volume)
		SHORT WAVE	3.8 — 12MC

ALIGNMENT INSTRUCTIONS

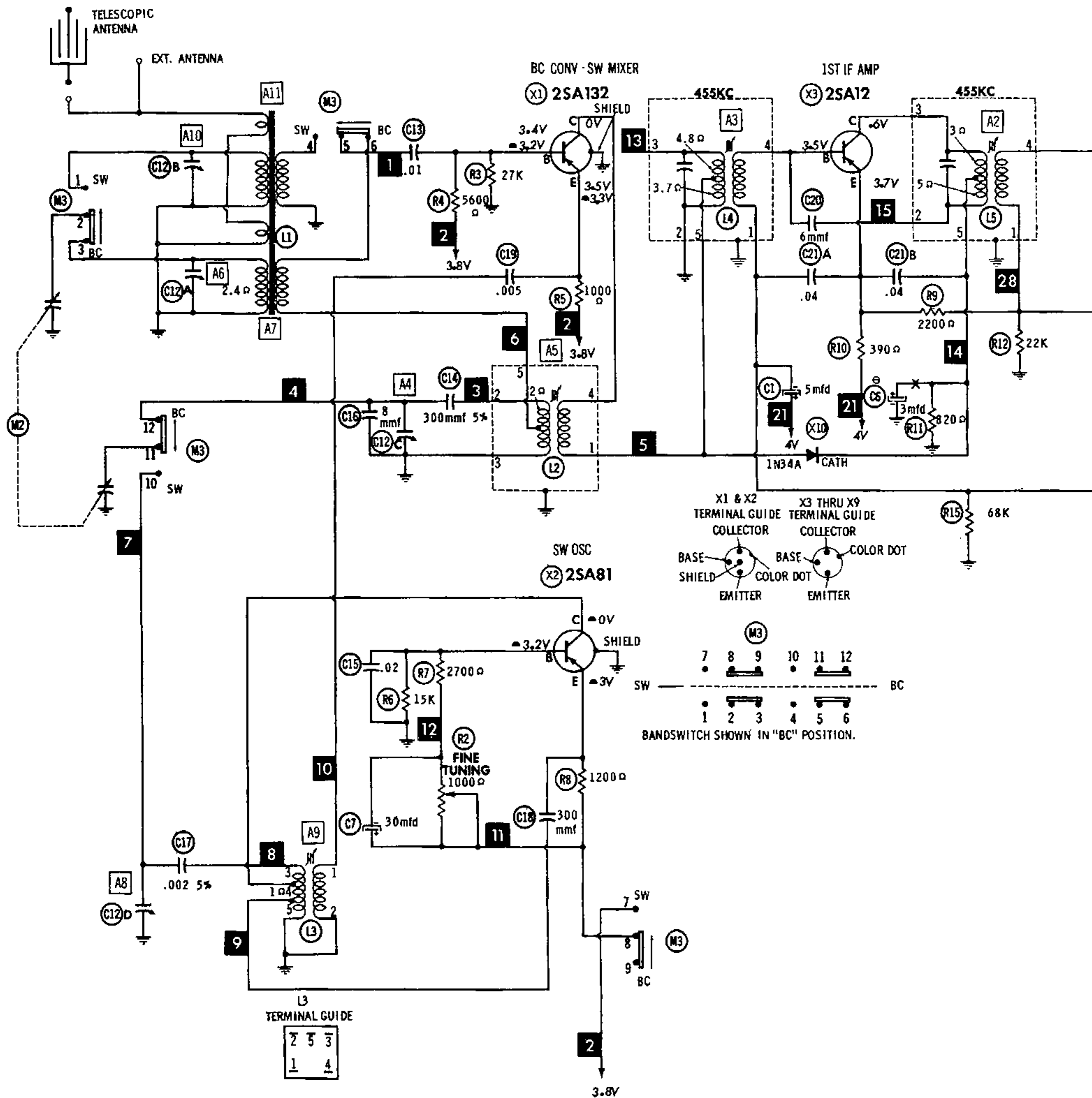
ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT					
Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading.					
Suggested Alignment Tools:					
A1, A2, A3, A5.....		GENERAL CEMENT #8607, 9291, 9294			
		WALSCO #2520, 2522, 2523, 2524, 2534, 2537			
A4, A6, A8, A10.....		GENERAL CEMENT #5004, 5008, 5009			
		WALSCO #2520			
A9.....		GENERAL CEMENT #9440			
SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1. Fashion loop of several turns of wire and radiate signal into loop of receiver.	455KC (400% Mod.)	(BC) Tuning gang fully open.	Across voice coil.	A1, A2, A3	Adjust for maximum output.
2. "	1600KC	1600KC	"	A4	"
3. "	600KC	600KC	"	A5	Adjust for maximum output while rocking tuning gang.
4. "	1400KC	1400KC	"	A6	Adjust for maximum output.
5. "	600KC	600KC	"	A7	Adjust for maximum output by moving antenna coil turns along ferrite core. Repeat steps 2 thru 5.
6. "	12MC	(SW) 12MC	"	A8	Adjust for maximum output.
7. "	4MC	4MC	"	A9	Adjust for maximum output while rocking tuning gang.
8. "	10MC	10MC	"	A10	Adjust for maximum output.
9. "	6MC	6MC	"	All	Adjust for maximum output by moving antenna coil turns along ferrite core. Repeat steps 6 thru 9.

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 LF162

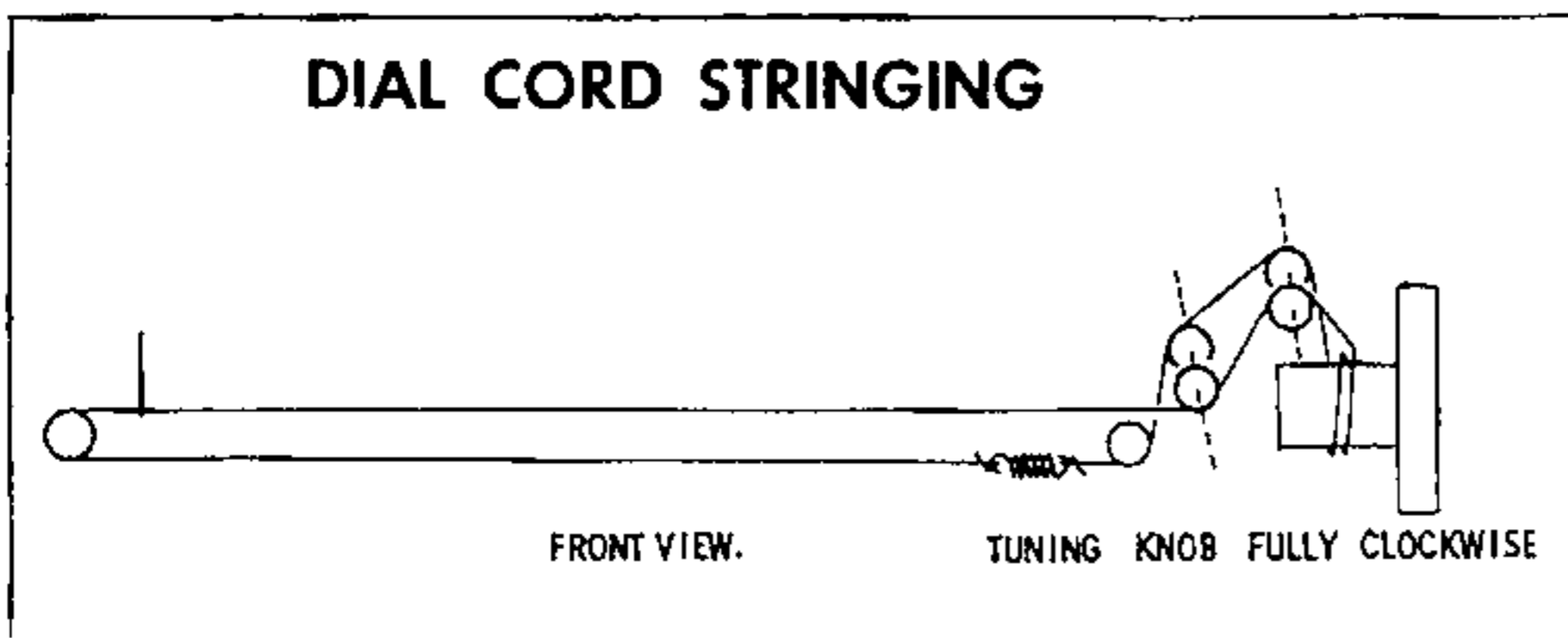
the particular type of replacement part listed. Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. © 1962 Howard W. Sams & Co., Inc., Indianapolis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





A PHOTOFACIT STANDARD NOTATION SCHEMATIC
with CIRCUITRACE

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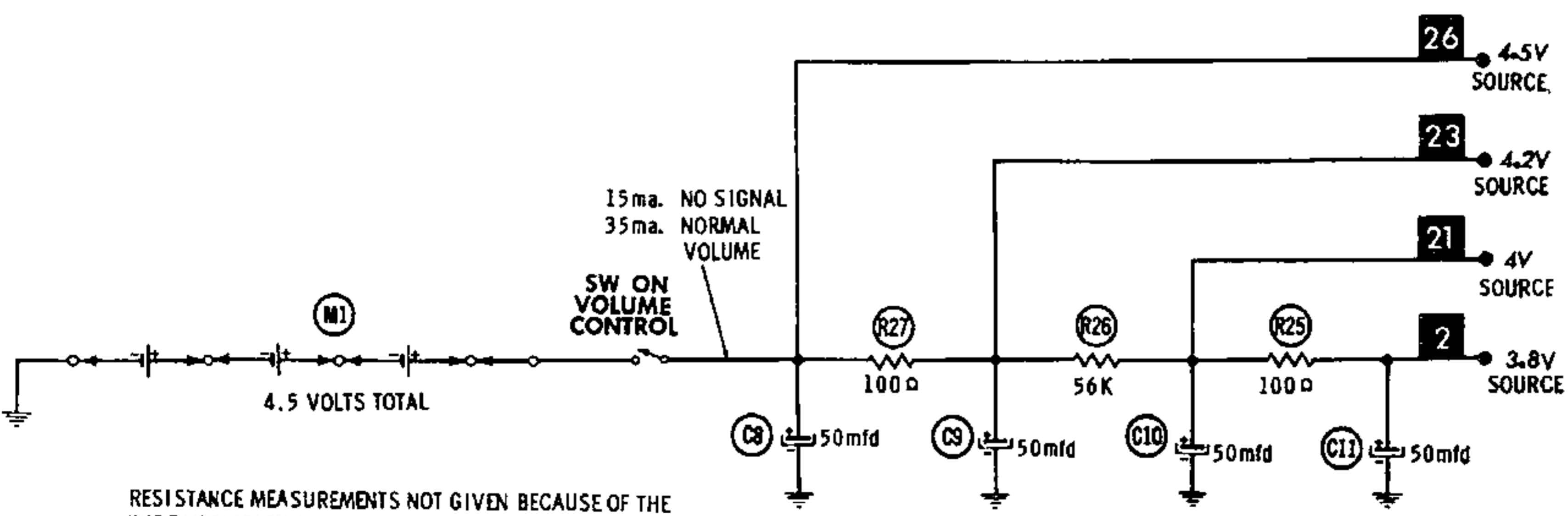
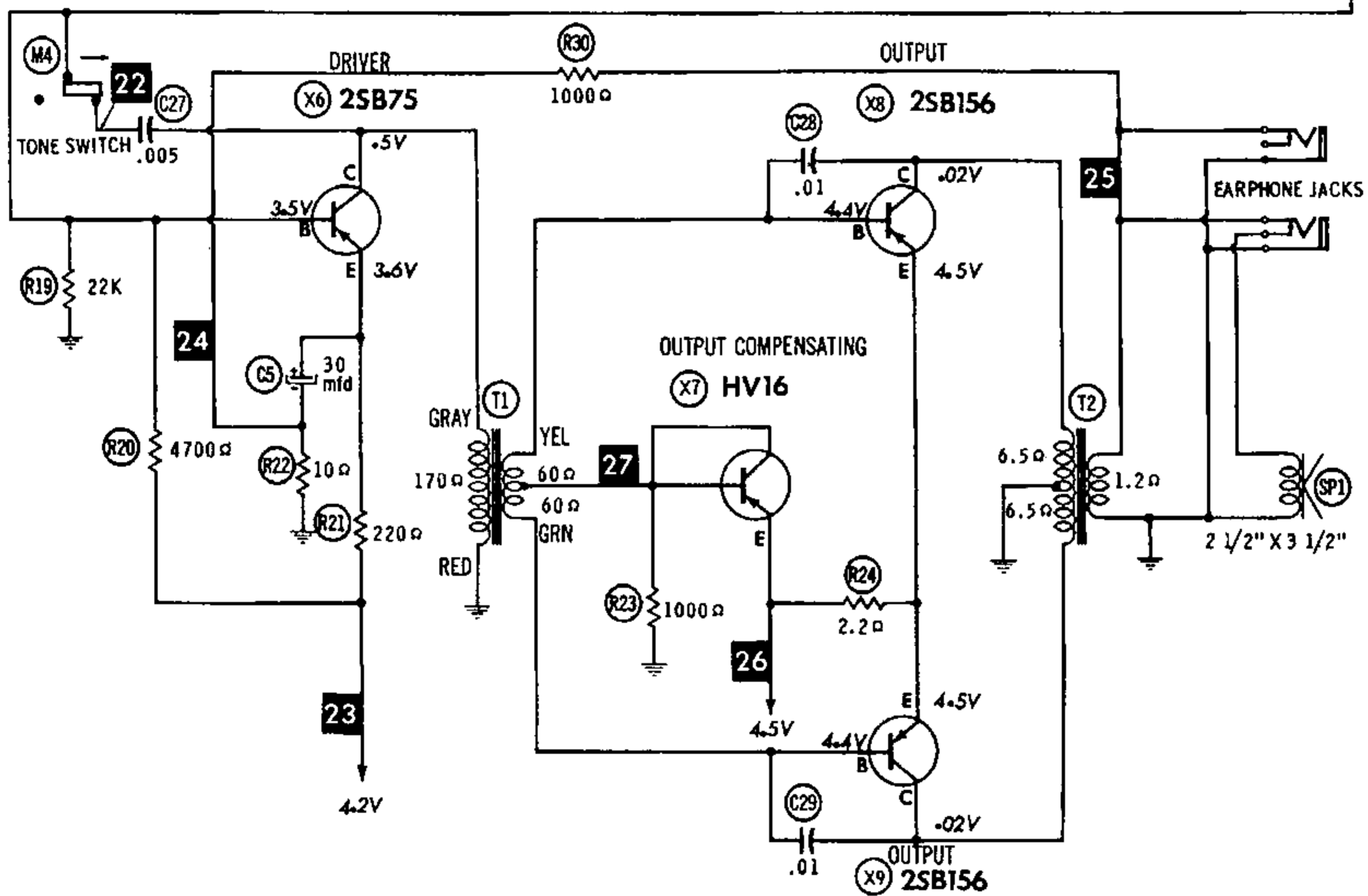
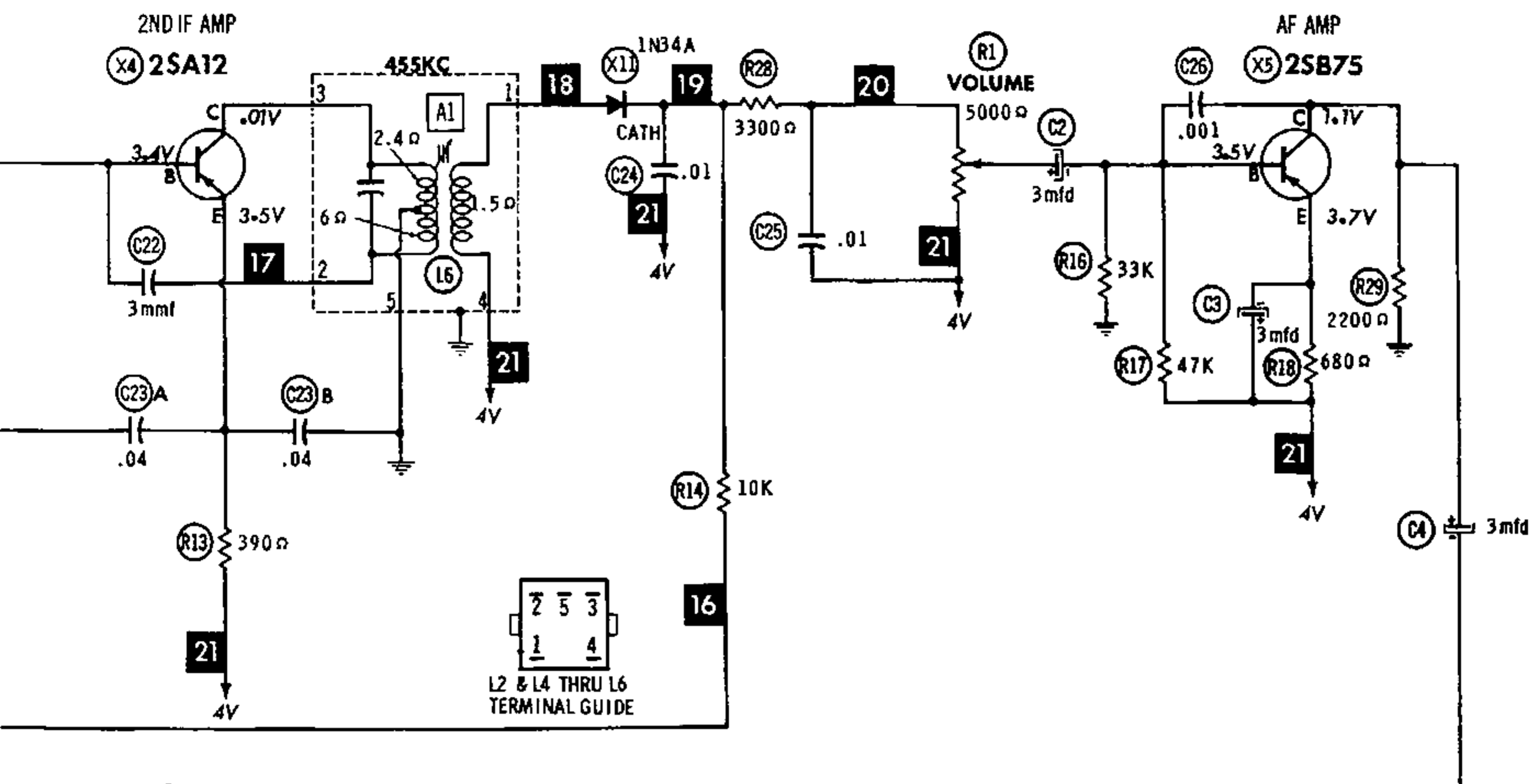
ALL MEASUREMENTS MADE IN "BC" POSITION UNLESS OTHERWISE DESIGNATED.

▲ MEASURED IN "SW" POSITION

⊗ SEE PARTS LIST FOR ALTERNATE
VALUE OR APPLICATION

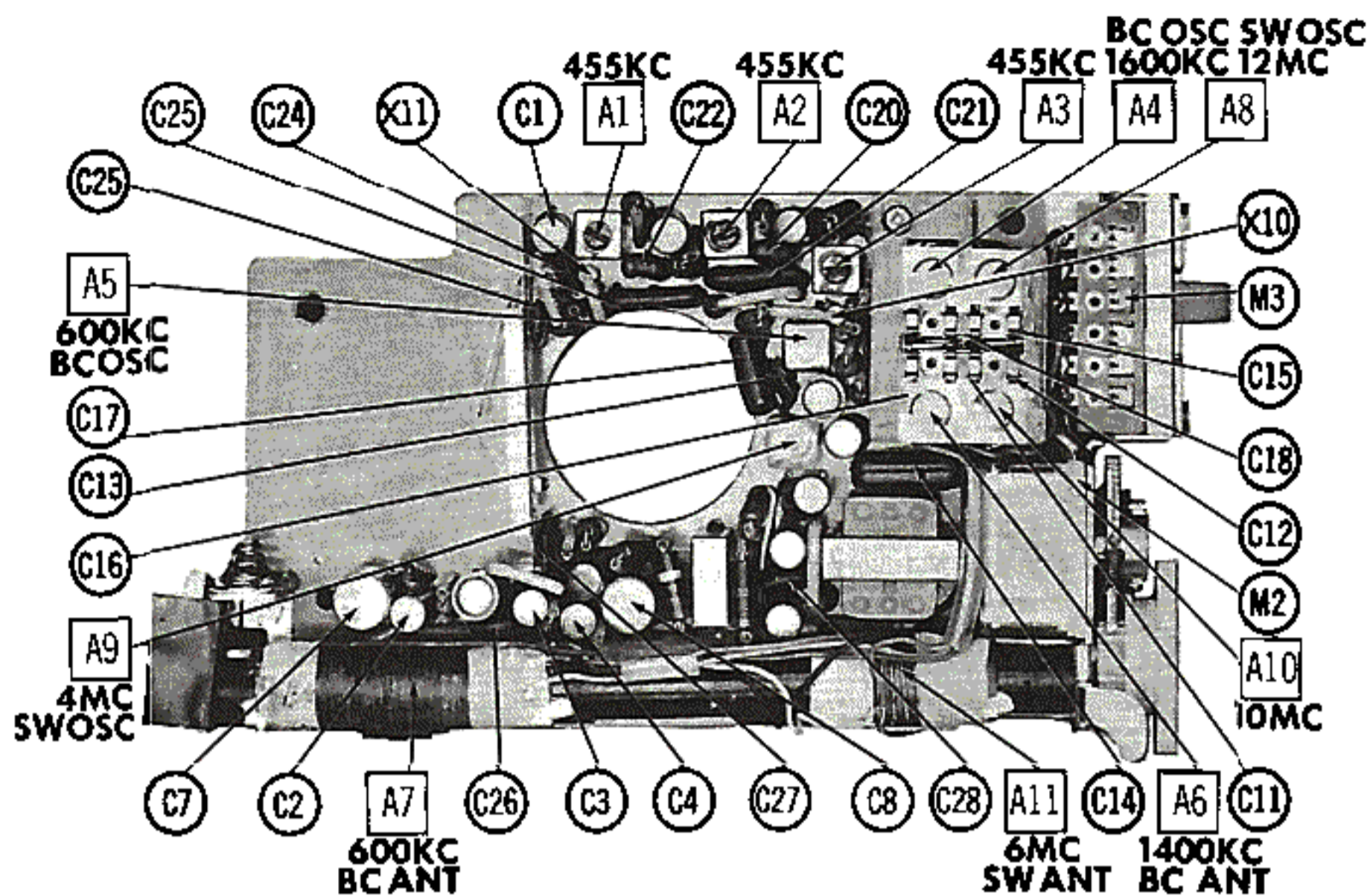
DC COIL RESISTANCE VALUES UNDER ONE OHM
NOT SHOWN ON SCHEMATIC DIAGRAM

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 ±15% in voltage and resistance readings.
5. Volume control at maximum, no signal applied for voltage measurements.

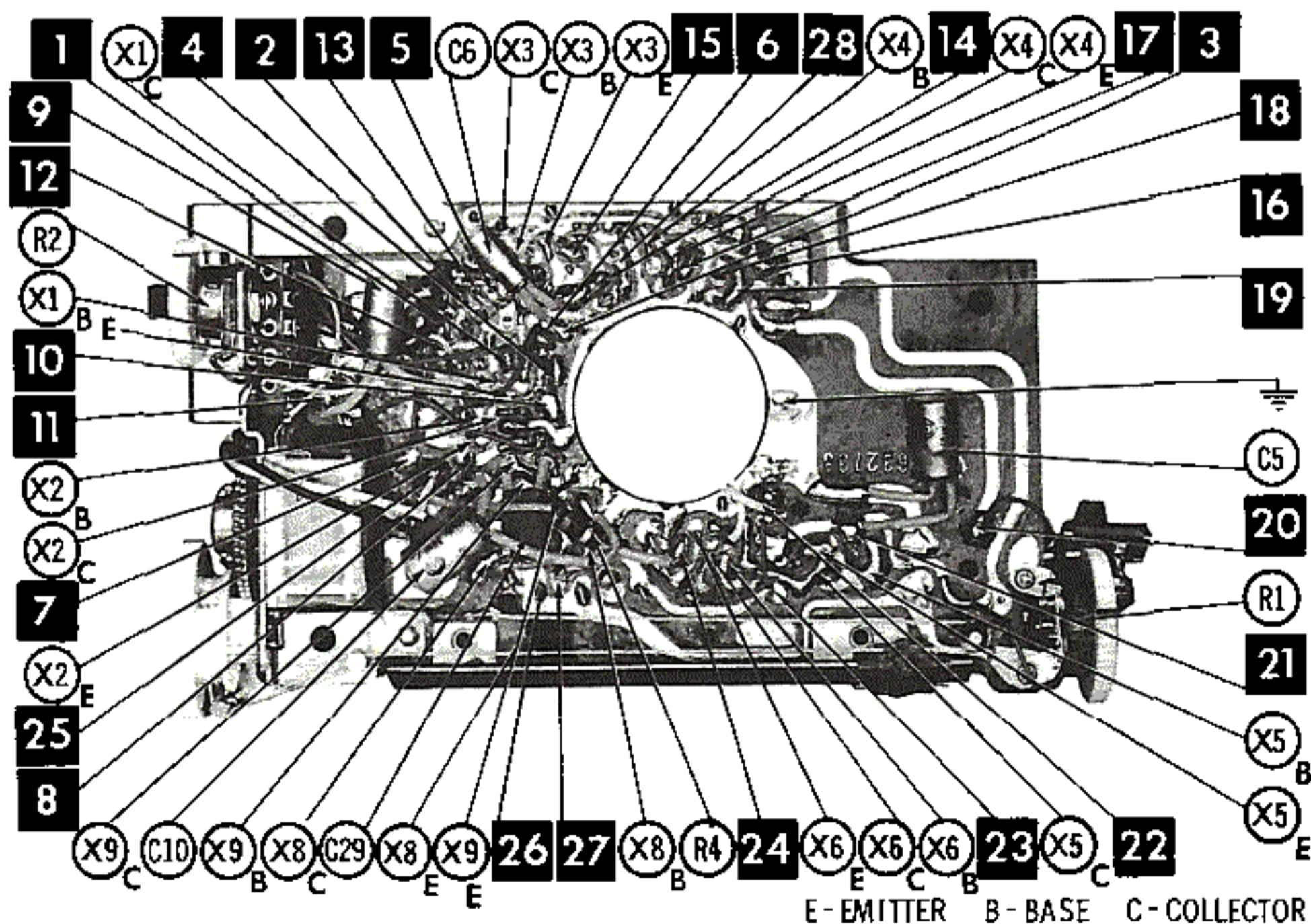


RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

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.



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



WIRING DATA

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

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA		NOTES
			RCA PART No.	RAYTHEON PART No.	
X1	2SA132	BC Converter-SW Mixer			PNP
X2	2SA81	SW Oscillator			PNP
X3	2SA12	1st IF Amplifier	2N410		PNP
X4	2SA12	2nd IF Amplifier	2N410		PNP
X5	2SB75	AF Amplifier	2N408		PNP
X6	2SB75	Driver	2N408		PNP
X7	HV16	Output Compensating	1N2328		PNP (Diode Connected)
X8	2SB156	Output			PNP
X9	2SB156	Output			PNP

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	CURRENT RATING (Measured)	ORIGINAL Part or Type No.	RECTIFIERS		DIODES		NOTES
			RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.	RAYTHEON PART No.	
X10		1N34A				IN34A	Overload Detector
X11		1N34A				IN34A	

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	5	6		PTT21	NLW5-6	MT1-3	TT6X5	MLV5-6	TE-1084
C2	3	10		PTT36	NLW3-25	MT1-3	TT12X3	MLV10-3	TE-1122
C3	3	10		PTT36	NLW3-25	MT1-3	TT12X3	MLV10-3	TE-1122
C4	3	10		PTT36	NLW3-25	MT1-3	TT12X3	MLV10-3	TE-1122
C5	30	6		PTT27	NLW30-6	MT1-13	TT6X30	MLV30-6	TE-1092
C6	3	10	Note 1	PTT36	NLW3-25	MT1-3	TT12X3	MLV10-3	TE-1122
C7	30	3		PTT10	NLW30-6	MT1-13	TT6X30	MLV30-6	TE-1092

DESCRIPTIONS

ELECTROLYTIC CAPACITORS (cont)

ITEM No.	RATING		PART No.	REPLACEMENT DATA					
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C8	50	6		PTT29	NLW50-10	MT1-16	TT6X50	MLV50-6	TE-1100
C9	50	6		PTT29	NLW50-10	MT1-16	TT6X50	MLV50-6	TE-1100
C10	50	6		PTT29	NLW50-10	MT1-16	TT6X50	MLV50-6	TE-1100
C11	50	6		PTT29	NLW50-10	MT1-16	TT6X50	MLV50-6	TE-1100

Note 1. Not used in some versions.

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.	
C12A B C D									
C13	.01			DM-103	H-05S1			TA-110	TG-S10
C14	300 5%		ADM-15-301	TCZ-300	5R5T3			MCE-241	MS-33
C15	.02			DA-203	H-05S2			TA-120	TG-S20
C16	8		NPO-SI 8.2		C10V8C				10TCC-V82
C17	.002 5%		ADM-19-202		5R5D2			MCE-457	MS-22
C18	300		SI 300	D6-301	L10T3	CCD-301		GP330	10TS-T30
C19	.005		BPD-005	DM-502	BYA10D5	CCD-502		TA-250	TG-D50
C20	6				C10V6C				10TCC-V56
C21A B	.04 .04			DA-503 DA-503	H-05S5 H-05S5			TA-150 TA-150	TG-S50 TG-S50
C22	3		NPO-SI 3.0	TCZ-3R3	C10V3C	CCTO-3R3		CNO-533	10TCC-V30
C23A B	.04 .04			DA-503 DA-503	H-05S5 H-05S5			TA-150 TA-150	TG-S50 TG-S50
C24	.01			DM-103	H-05S1			TA-110	TG-S10
C25	.01			DM-103	H-05S1			TA-110	TG-S10
C26	.001		BPD-001	DM-102	BYA10D1	CCD-102		GP210	5HK-D10
C27	.005		BPD-005	DM-502	H-05D5	CCD-502		TA-250	TG-D50
C28	.01			DM-103	H-05S1			TA-110	TG-S10
C29	.01			DM-103	H-05S1			TA-110	TG-S10

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	Fine Tuning	1000Ω					

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	27K				R17	47K			
R4	5600Ω				R18	680Ω			
R5	1000Ω				R19	22K			
R6	15K				R20	4700Ω			
R7	2700Ω				R21	220Ω			
R8	1200Ω				R22	10Ω			
R9	2200Ω				R23	1000Ω			
R10	390Ω				R24	2.2Ω			
R11	820Ω				R25	100Ω			
R12	22K				R26	56K			
R13	390Ω				R27	100Ω			
R14	10K				R28	3300Ω			
R15	68K				R29	2200Ω			
R16	33K				R30	1000Ω			

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		HITACHI PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman TV PART No.	
L1A	BC Loopstick						
B	SW Loopstick						
L2	BC Osc.						
L3	SW Osc.						
L4	1st IF						
L5	2nd IF						
L6	3rd IF						

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	HITACHI PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	1.2	1	441016			TR-38		

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	HITACHI PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	160Ω CT	10-12Ω	451025			TR-12	① Tape secondary CT	

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	HITACHI PART No.	QUAM PART No.	
SP1	2½" x 3½"	PM	10-12Ω	526007		

BATTERIES

ITEM No.	VOLTAGE	HITACHI PART No.	REPLACEMENT DATA						NOTES
			BURGESS		EVEREADY		MALLORY		
			"A"	"B"	"A"	"B"	"A"	"B"	
M1	1½V			930		1015		M-15R	3 Required

MISCELLANEOUS

ITEM No.	PART NAME	HITACHI PART No.	NOTES
M2	Tuning Cap.		2 Gang Band Selector (Slide Type) Tone (Slide Type, SPST)
M3	Switch		
M4	Switch		

CHASSIS—TOP VIEW

