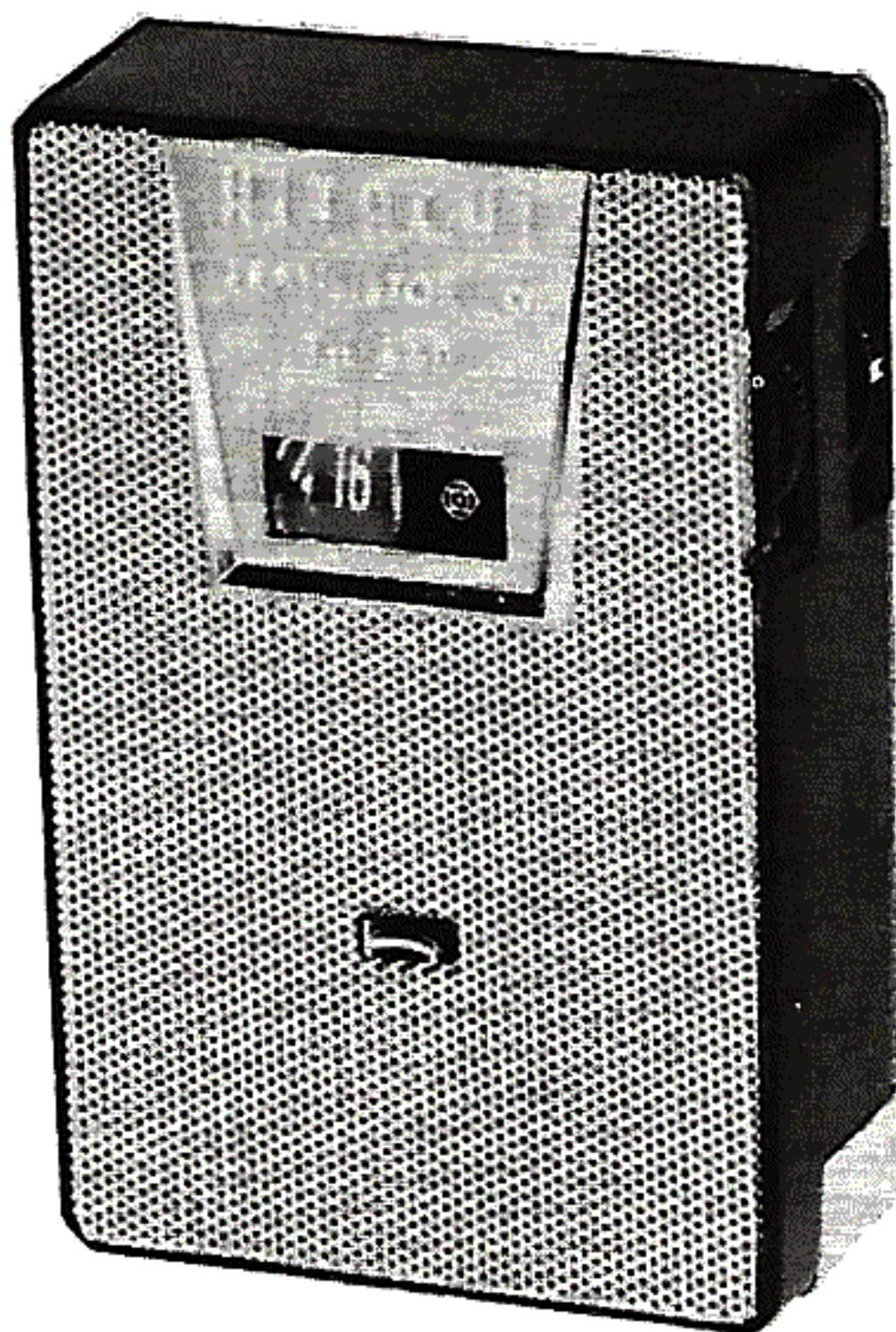


PHOTOFACT® Folder

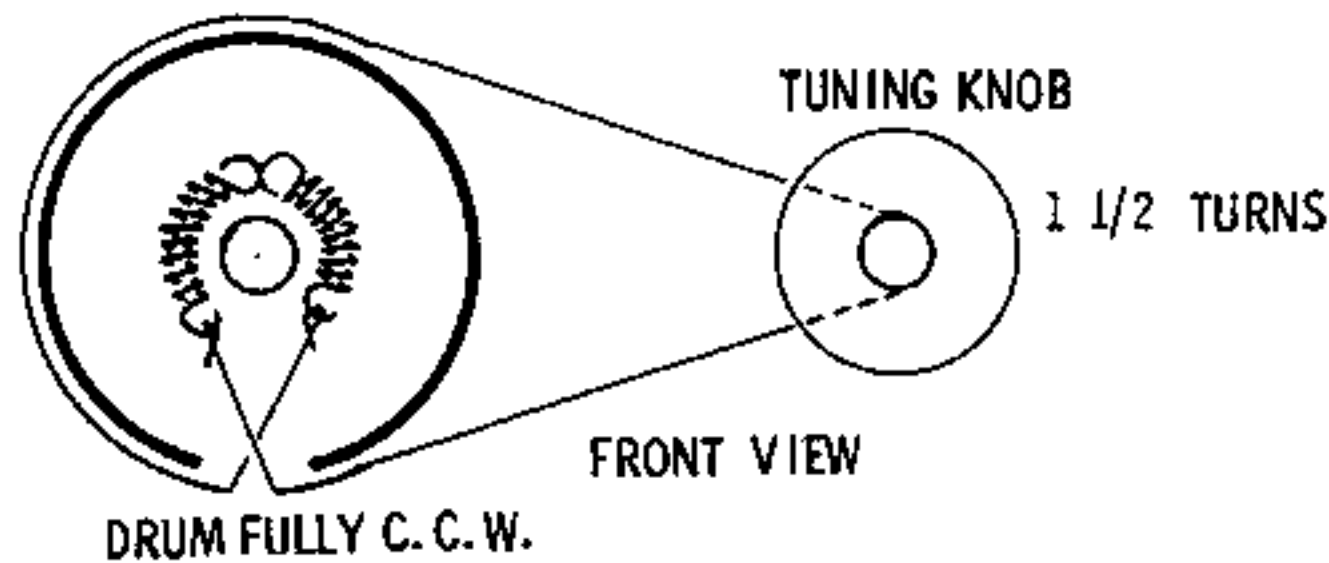
with CIRCUITRACE™

HITACHI
MODEL TH-660

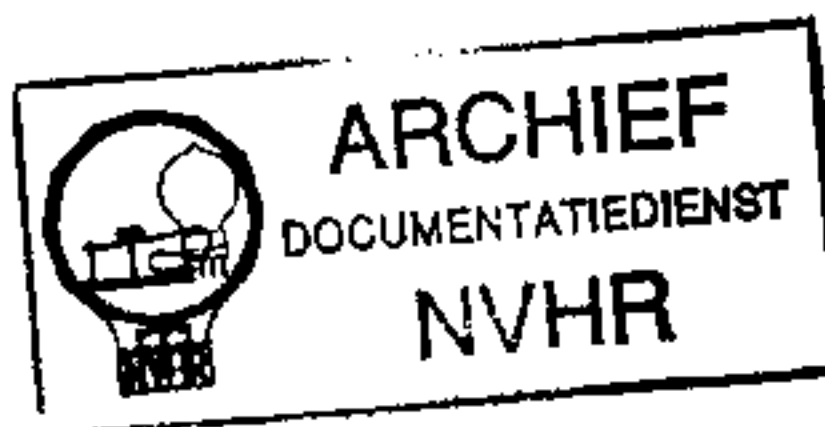
Met dank aan Jef Bos



DIAL CORD STRINGING



Ned. Ver. v. Historie v/d Radio



HITACHI
MODEL TH-660

TRADE NAME	Hitachi Model TH-660		
IMPORTER	Electronic Utilities Co., Div. of The Sampson Co., 2244 S. Western Ave., Chicago 8, Illinois		
TYPE SET	Battery Operated Transistorized Portable AM Receiver		
POWER SUPPLY	3 Volts DC	RATING	14MA@3 Volts DC (No Signal, Min. Volume)
TUNING RANGE—BROADCAST	535 - 1605KC		25 MA@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 output reading.

Suggested Alignment Tools:

- A1, A2, A3..... GENERAL CEMENT #5009, 8195, 8274, 8275, 8728, 8729, 8987, 8988, 8989
WALSCO #2515, 2531, 2532
- A4, A6..... GENERAL CEMENT #5000, 5003, 5066, 8276, 8290, 9087, 9089
WALSCO #2512, 2525, 2528
- A5..... GENERAL CEMENT #8282, 8606, 8606-L, 9091
WALSCO #2526, 2541, 2542, 2543, 2544

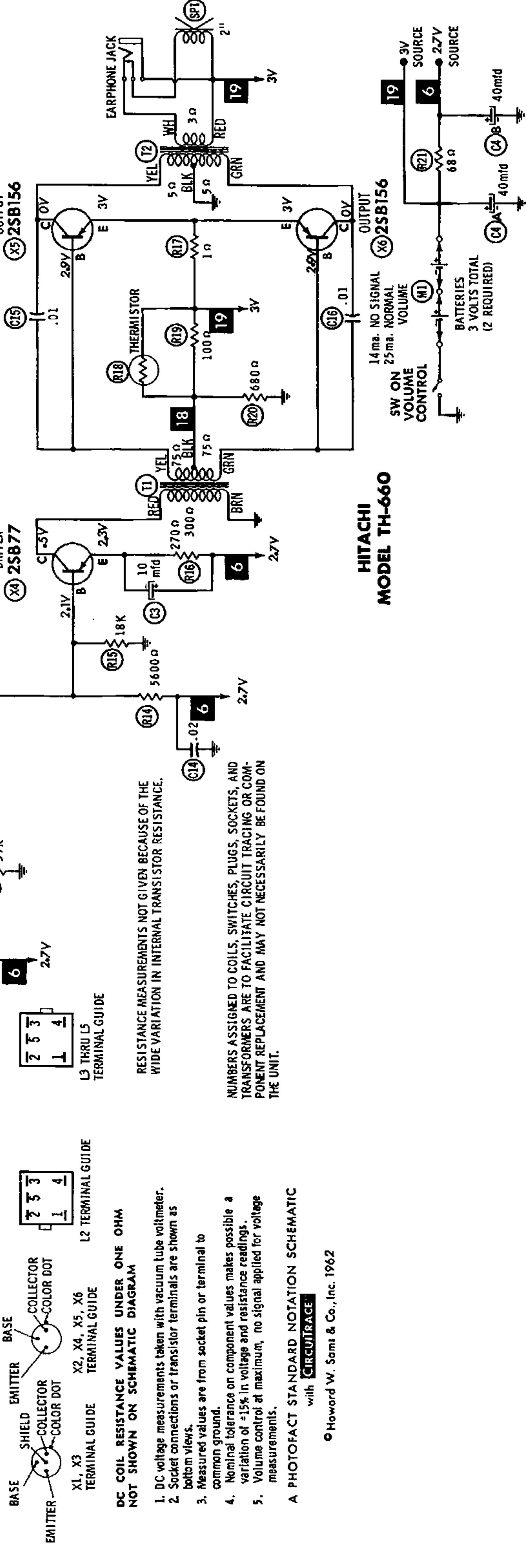
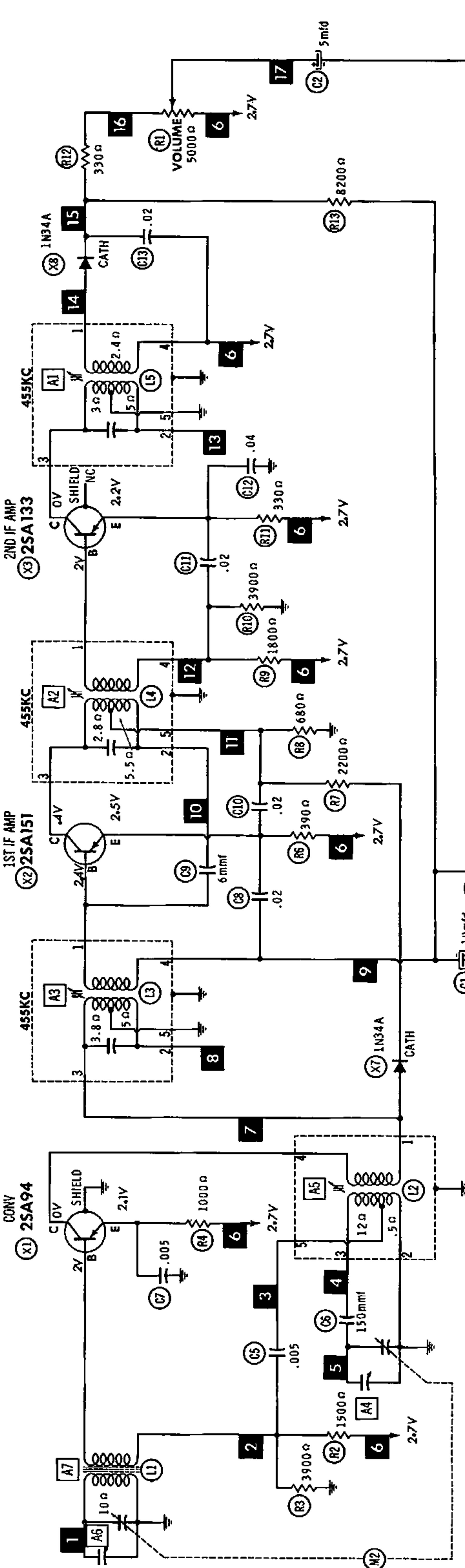
	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
1.	Fashion loop of several turns of wire and radiate signal into loop of receiver.	455KC (Unmod.)	Tuning gang fully open.	DC probe to high side of Volume control, common to chassis.	A1, A2, A3	Adjust for maximum deflection.
2.	"	1605KC	"	"	A4	"
3.	"	600KC	600KC Signal.	"	A5	Adjust for maximum deflection while rocking tuning gang. Repeat steps 2 & 3.
4.	"	1400KC	1400KC Signal.	"	A6	Adjust for maximum deflection.
5.	"	600KC	600KC Signal.	"	A7	Adjust for maximum output by moving antenna coil turns along ferrite core.

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

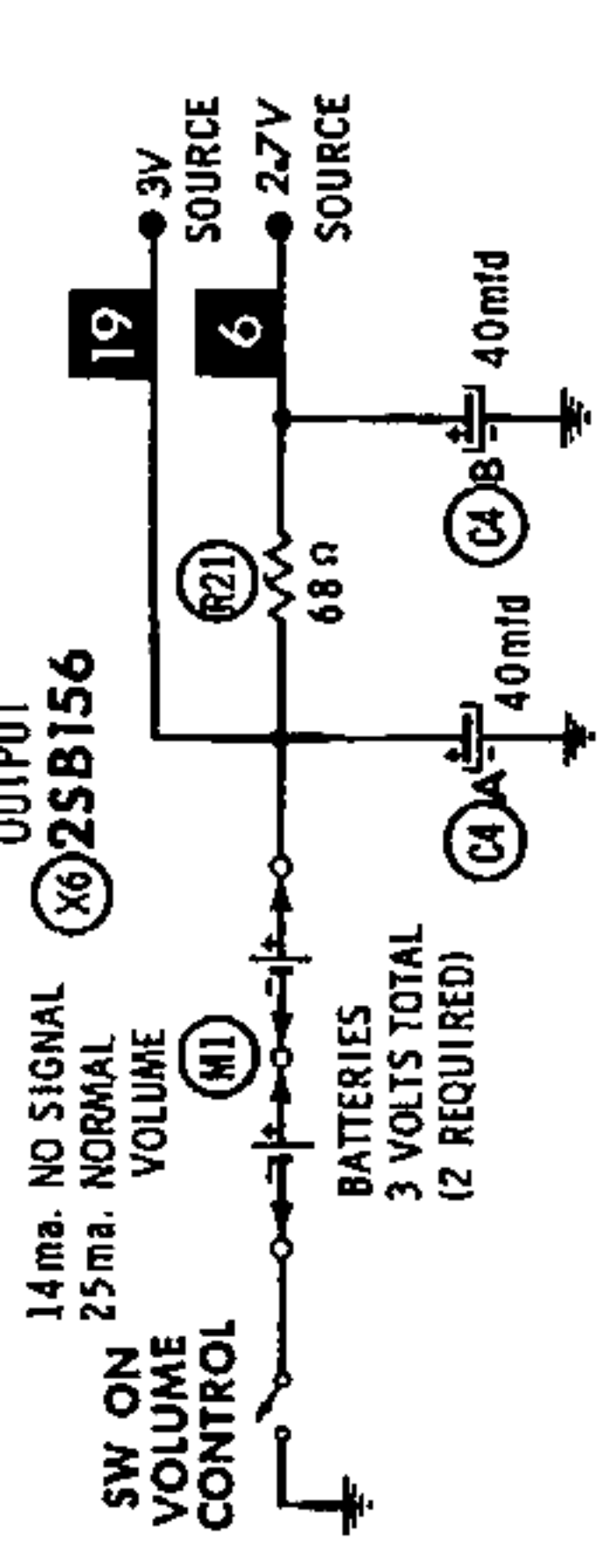
The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of LF293

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**HITACHI
MODEL TH-660**



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.

PARTS LIST AND DESCRIPTIONS

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid 22AWG) 8524 (Stranded 22AWG) 8570 (Stranded 28AWG)	Available in 12 Colors
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TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA		NOTES
			RCA PART No.	RAYTHEON PART No.	
X1	2SA94	Converter			PNP
X2	2SA151	1st IF Amplifier	2N410		PNP
X3	2SA133	2nd IF Amplifier			PNP
X4	2SB77	Driver	2N408		PNP
X5	2SB156	Output	2N408		PNP
X6	2SB156	Output	2N408		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.	RAYTHEON PART No.	
X7		1N34A			1N34A	Overload Detector
X8		1N34A			1N34A	

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	10	3							
C2	5	3							
C3	10	3							
C4A	40	3							
B	40	3							

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.	
C5	.005		C80V502AM	DM-502	H-05D5	CCD-502	TA-250	TG-D50	
C6	150		SI 150	D6-151	L10T15	CCD-151	GP315	10TS-T15	
C7	.005		C80V502AM	DM-502	H-05D5	CCD-502	TA-250	TG-D50	
C8	.02		C80V203AM	DA-203	H-05S2		TA-120	TG-S20	
C9	8		NPO-DI 6.8	DTZ-6R8	C10V6C	CCTO-6R8	CNO-568	10TCC-V68	
C10	.02		C80V203AM	DA-203	H-05S2		TA-120	TG-S20	
C11	.02		C80V203AM	DA-203	H-05S2		TA-120	TG-S20	
C12	.04								
C13	.02		C80V203AM	DA-203	H-05S2		TA-120	TG-S20	
C14	.02		C80V203AM	DA-203	H-05S2		TA-120	TG-S20	
C15	.01		C80V203AM	DM-103	H-05S1		TA-110	TG-S10	
C16	.01		C80V203AM	DM-103	H-05S1		TA-110	TG-S10	

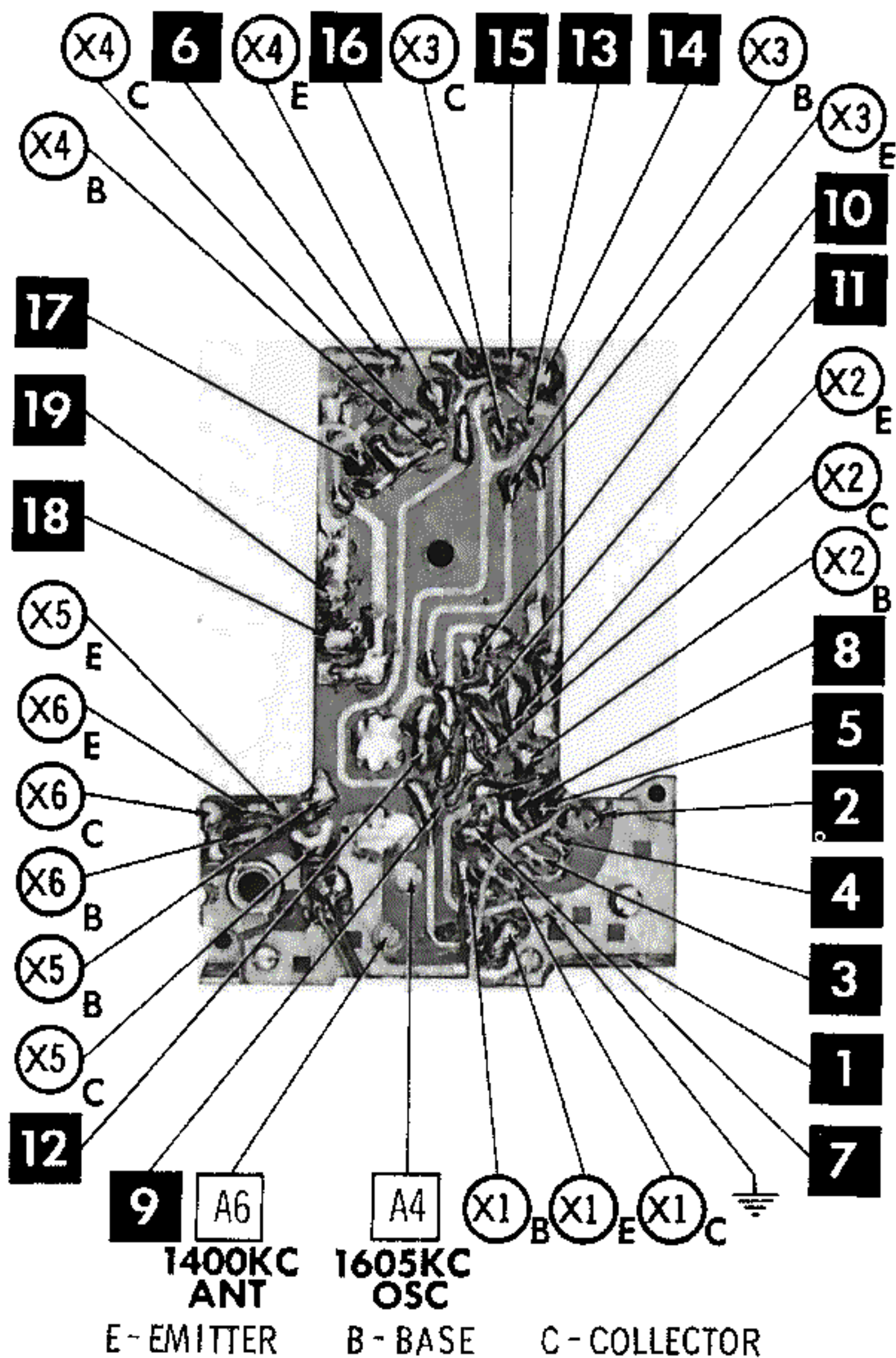
CONTROLS

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	36.05				

PRINTED BOARD

A Howard W. Sams **CIRCUITRACE** Photo



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
R2	1500Ω				R12	330Ω			
R3	3900Ω				R13	8200Ω			
R4	1000Ω				R14	5600Ω			
R5	39K				R15	18K			
R6	390Ω				R16	270Ω			
R7	2200Ω				R17	1Ω			
R8	680Ω				R18	Thermistor			
R9	1800Ω				R19	100Ω			
R10	3900Ω				R20	680Ω			
R11	330Ω				R21	68Ω			

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		HITACHI PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman PART No.	
L1	Loopstick						
L2	Osc.						
L3	1st IF						
L4	2nd IF						
L5	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	2	1						

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	27Ω CT	10-12Ω						

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	HITACHI PART No.	QUAM PART No.	
SP1	2"	PM	10-12Ω	521018		

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	2 Required

MISCELLANEOUS

ITEM No.	PART NAME	HITACHI PART No.	NOTES
M2	Tuning Cap.		2 Gang

CHASSIS—TOP VIEW

