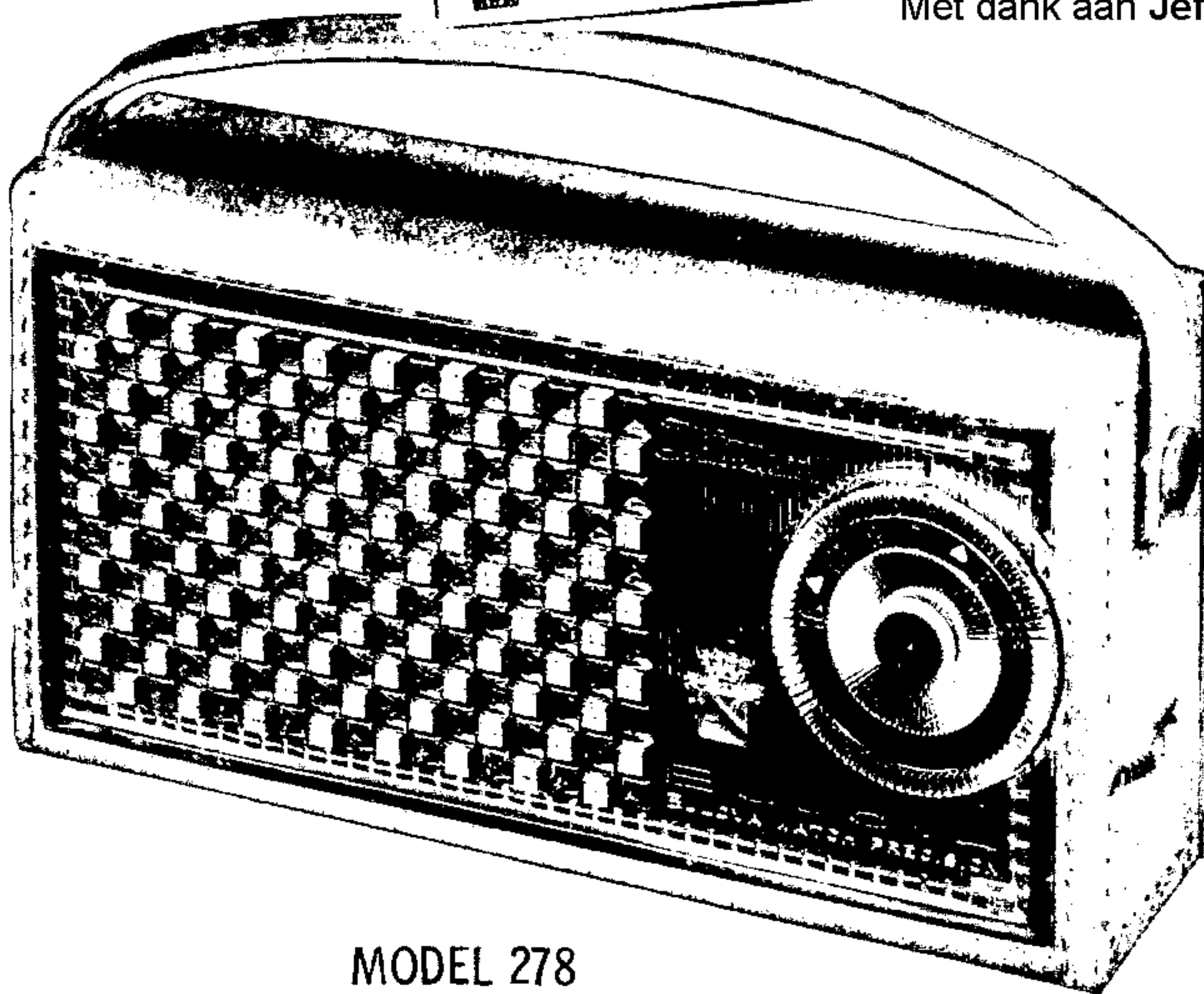




Met dank aan Jef Bos



MODEL 278

TRADE NAME	Bulova Model 270 Series
MANUFACTURER	Electronics Guild, Inc., Sunrise Highway, Valley Stream, Long Island, N. Y.
TYPE SET	Battery Operated Portable AM Transistorized Receiver

POWER SUPPLY	9 Volts DC	RATING	20 MA @ 9 Volts DC
TUNING RANGE—BROADCAST	540KC-1620KC		

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

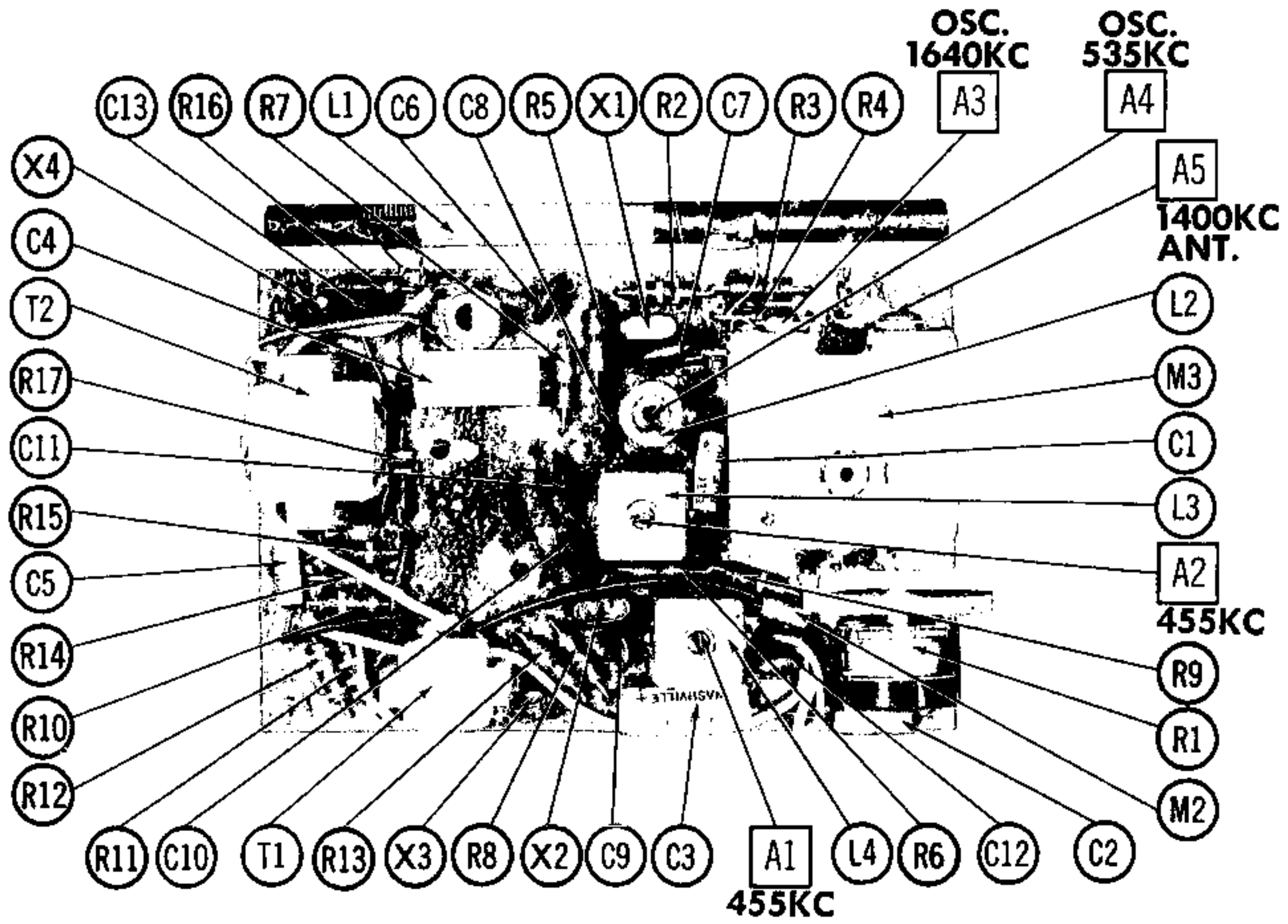
Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1 .05MFD	High side to base of CK766 (X1). Low side to B-	455KC (400v Mod.)	Tuning gang fully open	Across voice coil	A1, A2,	Adjust for maximum output. Repeat until no further improvement is noted.
2 "	"	1640KC	"	"	A3	Adjust for maximum output.
3 "	"	535KC	Tuning gang fully closed	"	A4	"
4 "	"	1640KC	Tuning gang fully open	"	A3	"
5	Loop	1400KC	Tune to 1400KC signal	"	A5	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output. Rock tuning gang while adjusting A5. Check tracking at 600 & 1000KC.

HOWARD W. SAMS & CO., INC. • Indianapolis 5, 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 H86

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CHASSIS-TOP VIEW

PARTS LIST AND DESCRIPTIONS

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA		NOTES
			CBS PART No.	SYLVANIA PART No.	
X1	CK786	Converter			
X2	2N112A	IF Amplifier			
X3	2N132	Driver			
X4	2N138A	Output			

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	BULOVA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1	5	3		XPP3V6	NL5-6	TT6X5	ML5-6		TE-1084
C2	5	3		XPP3V6	NL5-6	TT6X5	ML5-6		TE-1084
C3	50	3		XPP3V50	NL50-3	TT6X50	ML50-3		TE-1100
C4	40	10		XPP10V40	NL50-10	TT10X50	ML40-15		R2329 *
C5	5	3		XPP3V6	NL5-6	TT6X5	ML5-6		TE-1084

* Non Catalog Item

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		REPLACEMENT DATA						NOTES
	CAP.	VOLT.	BULOVA PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	
C6	10000								TG-S10
C7	5000								TG-D50
C8	20000								
C9	22			BPD-000022	DD-220	L10Q22	ED-22	UC-5422	5GA-Q22
C10	20000								
C11	20000								
C12	10000								TG-S10
C13	10000								TG-S10

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES	
	RESISTANCE	WATTS	BULOVA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.		MALLORY PART No.
R1	10000Ω	1/4	22-9					Volume & Switch

RESISTORS

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

ITEM No.	RATING		REPLACEMENT DATA		NOTES	ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	BULOVA PART No.	IRC PART No.			OHMS	WATT	BULOVA PART No.	IRC PART No.	
R2	33K			BTS-33K		R10	150K			BTS-150K	
R3	15K			BTS-15K		R11	33K			BTS-33K	
R4	5100Ω	5%		BTS-5100	5%	R12	8200Ω			BTS-8200	
R5	1000Ω			BTS-1000		R13	1000Ω			BTS-1000	
R6	1000Ω			BTS-1000		R14	5100Ω	5%		BTS-5100	5%
R7	1000Ω			BTS-1000		R15	750Ω	5%		BTS-750	5%
R8	1000Ω			BTS-1000		R16	56Ω	5%		BTS-56	5%
R9	10K			BTS-10K		R17	470Ω			BTS-470	

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (INPUT)

ITEM No.	Turns Ratio		REPLACEMENT DATA					NOTES	
	PRI.	SEC.	BULOVA PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.		Triad PART No.
T1	6:	1	24-23	GH119 ①			TR-19 ①		① Tape center tap on primary winding.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES	
	PRI.	SEC.	BULOVA PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.		Triad PART No.
T2	898Ω	14Ω	24-24	GB7 ①			TA-9 ①		① Bend ears down.

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	BULOVA PART No.	QUAM PART No.	
SP1	2 3/4"	PM	14Ω	26-11		

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		BULOVA PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	
L1 L2 L3 L4	Loop Stick Osc. Coil Input IF Output IF		16-9002 16-9002			

BATTERIES

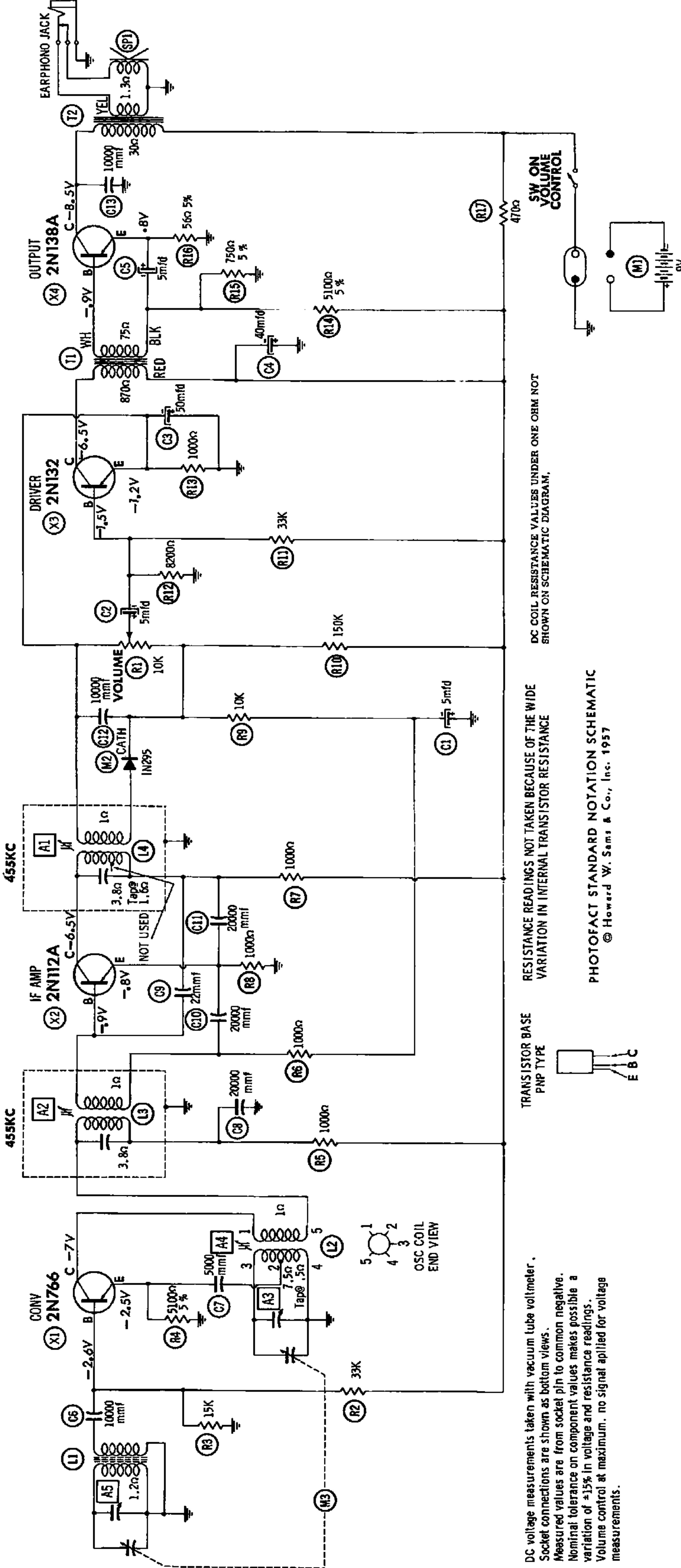
ITEM No.	VOLTAGE	BULOVA PART No.	REPLACEMENT DATA								NOTES
			BURGESS		EVEREADY		MALLORY		RAY-O-VAC		
			"A"	"B"	"A"	"B"	"A"	"B"	"A"	"B"	
M1	9V			2N6		246		M-1602		1600	

CRYSTAL DIODES

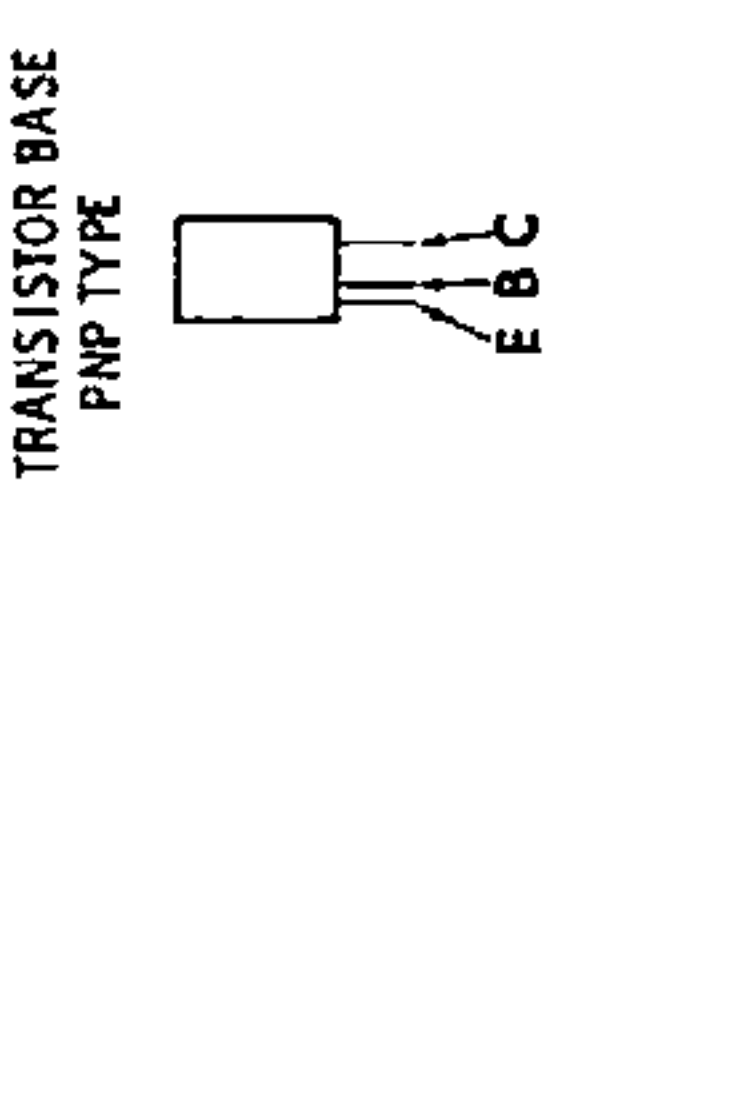
ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		BULOVA PART No.	CBS PART No.	SYLVANIA PART No.	
M2	1N295		1N60	1N60	Audio Det. (Pigtall)

MISCELLANEOUS

ITEM No.	PART NAME	BULOVA PART No.	NOTES
M3	Tuning Cap.		2 Gang (Ant. 12-140MMF)



1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
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 READINGS NOT TAKEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE

PHOTOFACT STANDARD NOTATION SCHEMATIC
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DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM.

SW ON VOLUME CONTROL

M1

9V