



AUTOMATIC
MODEL B-44

AUTOMATIC, MODEL B-44

TRADE NAME Automatic, Model B-44 (Tom Thumb-Bike Radio)
MANUFACTURER Automatic Radio Mfg. Co., Inc., 122 Brookline Ave., Boston, Mass.
TYPE SET Battery Operated Portable Superheterodyne Receiver
TUBES(FOUR) Types 1R5 Converter, 1U4 or 1T4 IF Amp., 1S5 DET-AVC-AF, 3S4 Power Output.

POWER SUPPLY 1.5 Volts "A" Supply and 67.5 Volts "B" Supply

RATING 205MA @ 1.5 Volts DC and 8.4MA @ 67.5 Volts DC

TUNING RANGE—BROADCAST 530-1610KC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

To set pointer turn tuning cap. fully closed and set pointer to last reference mark at low freq. end of dial.

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 pin 6 (Grid) 1R5 (V1). Low side to chassis.	455KC	Tuning cap fully open	Across Voice Coil	A1, A2 A3, A4	Adjust for maximum output.
2. 250MMF	High side to Antenna. Low side to chassis.	1500KC	1500KC	"	A5	" " " "
3. 250MMF	"	1500KC	Tune for maximum signal.	"	A6	Adjust for maximum output. On some models this trimmer may not be adjustable.

HOWARD W. SAMS & CO., INC. • Indianapolis 7, Indiana

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DATE 4/49 498-5 SET #60 FOLDER 5

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PARTS LIST AND DESCRIPTIONS

AUTOMATIC
MODEL B-44

CHASSIS—TOP VIEW

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		BMA BASE TYPE	INSTALLATION NOTES
		AUTOMATIC PART No.	STANDARD REPLACEMENT		
V1	Converter	1R5	1R5	7AT	
V2A	IF Amp.	1U4	1U4	6AR	
V2B	IF Amp.	1T4	1T4	6AR	
V3	DET-AVC-AF	1S5	1S5	6AU	
V4	Power Output	354	354	7BA	

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING CAP.	AUTOMATIC PART No.	REPLACEMENT DATA			IDENTIFICATION CODES AND INSTALLATION NOTES
			AEROVOX PART No.	CORNELL- DUBILIER PART No.	ERIE PART No.	
C1	.12	100	PRS150/8	BR815	GP1K-15	M-8-150
C2	.05	200	1468-00001	5W5Q1	MS-41	RF Bypass
C3	.05	200	1468-00001	GT255	TST-2-05	RF Coupling
C4	.05	200	1468-00001	5W5T1	MO.5-31	AVC Filter
C5	.05	200	1468-00002	GT255	TST-2-05	Osc. Grid Cap
C6	.200	400	1468-00002	5W5T2	MO.5-32	Decoupling
C7	.002	400	P688-002	GT6D2	TST-6-002	Diode Filter
C8A	2000	See Note	1468-0005	5W5Q5	68P2	Diode Coupling
C8B	50	"	P688-002	GT6D2	TST-6-002	"
C8C	5000	"	P688-002	GP2M-002	MO.5-45	AF Plate Bypass
C9	.002	400			TST-6-006	AF Screen Bypass
					TST-6-002	Output Plate Bypass

Item C8A, C8B, C8C, R6A, R6B, and R6C are combined into one unit obtainable under MGRS Part No. YA002-001.

Item C8A, C8B, C8C, R6A, R6B, and R6C are combined into one unit obtainable under MGRS Part No. YA002-001.

CONTROLS

ITEM No.	RATING RESIST- ANCE	AUTOMATIC PART No.	REPLACEMENT DATA		INSTALLATION NOTES
			IRC PART No.	CLAROSTAT PART No.	
R1A	1 Meg. B Shaft C Switch	RV-58	D13-137	M-63-Z Not Req.	Volume Control Attach to R1A Per Instructions
			42	SM-A2	

RESISTORS

ITEM No.	RATING	AUTOMATIC PART No.	REPLACEMENT DATA		IDENTIFICATION CODES
			IRC PART No.	PART No.	
R2	100KΩ	BTS-100K	BTS-100K	Br.-Blk.-Y1.	Osc. Grid Network
R3	3 Meg.	BTS-3.3 Meg.	BTS-3.3 Meg.	Or.-Blk.-Grn.	AVC Network
R4	7500Ω	BTS-8200	BTS-8200	V1.-Grn.-Red.	Decoupling
R5	10 Meg.	BTS-10 Meg.	BTS-10 Meg.	Br.-Blk.-Blue	AF Grid
R6A	4.7 Meg.	BTS-4.7 Meg.	BTS-4.7 Meg.	"	AF Screen
R6B	1. Meg.	BTS-1 Meg.	BTS-1 Meg.	"	"
R6C	2.2 Meg.	BTS-2.2 Meg.	BTS-2.2 Meg.	Output Grid	Output Grid
R7	820Ω	BTS-820	BTS-820	Gray-Red-Br.	Bias Network

Note Items C8A, C8B, C8C, R6A, R6B, and R6C are combined into one unit obtainable under MGRS Part No. YA002-001.

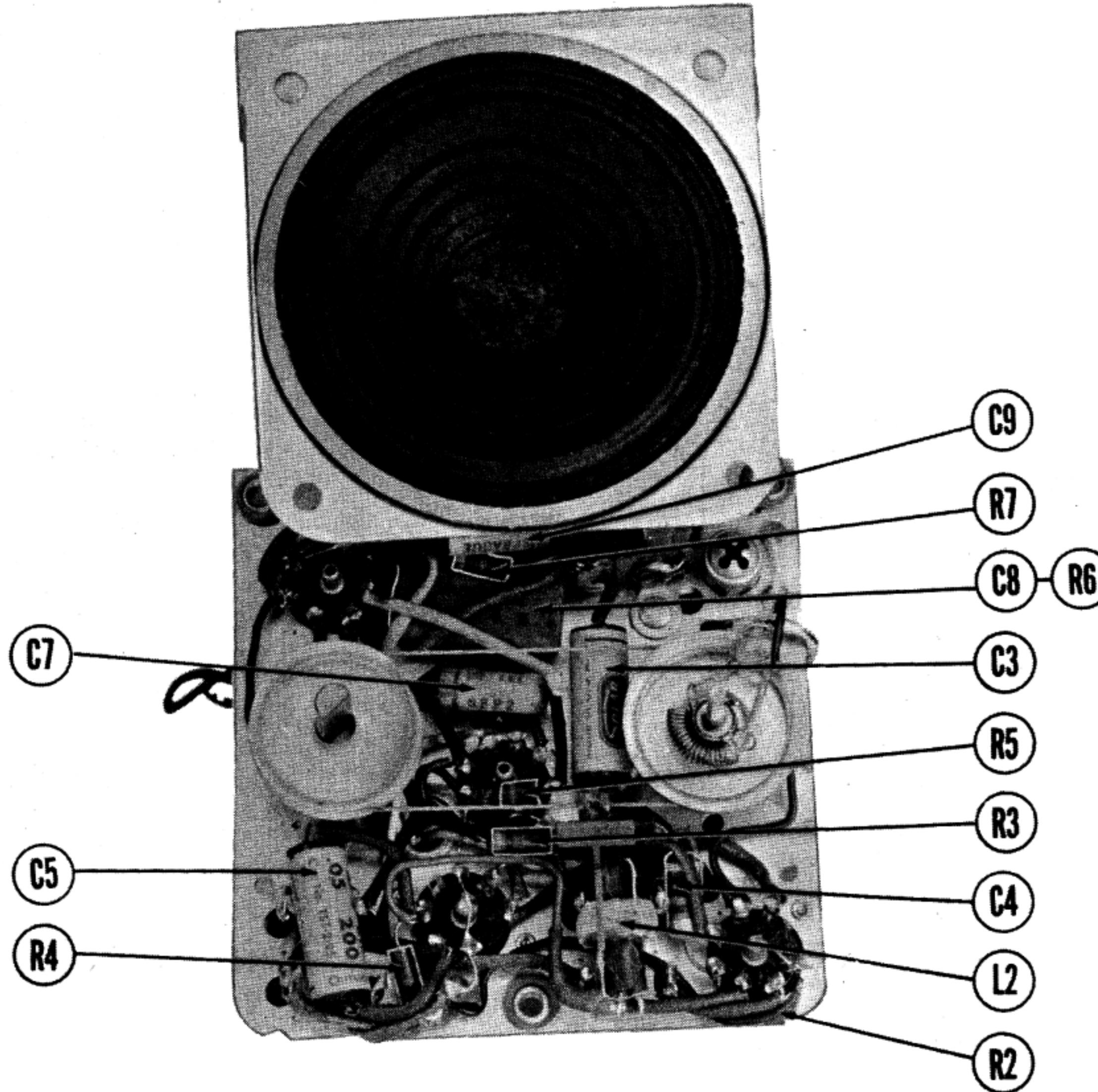
TRANSFORMER (OUTPUT)

ITEM No.	RATING	DC RES.	REPLACEMENT DATA		INSTALLATION NOTES
			PR. SEC.	SEC. PR.	
T1	4300Ω	3.5Ω	300Ω	.5Ω	RO-302 A-3026

PARTS LIST AND DESCRIPTIONS (Continued)

CHASSIS—BOTTOM VIEW

SPEAKER			
ITEM No.	RATINGS	REPLACEMENT DATA	
		AUTOMATIC PART No.	JENSEN PART No.
SP1	FIELD V. C. IMP.		QUAM PART No.
	PM V. 3.5Ω	PM-804	
SP2	CONE DIA. V. C. DIA.		
	3 1/4" 9/16"		



R F COILS

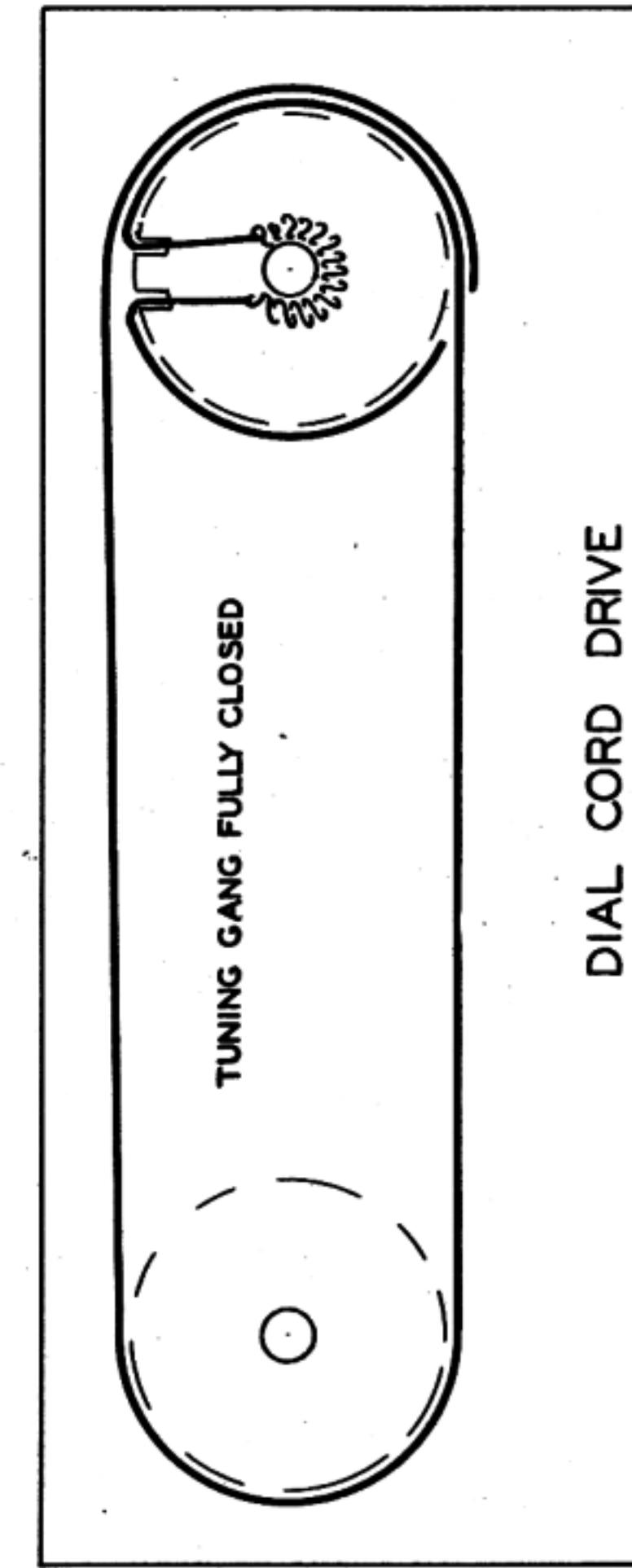
ITEM No.	USE	DC RES.	REPLACEMENT DATA		INSTALLATION NOTES
			PRI.	SEC.	
L1	Ant. Load- ing Coil	36Ω	11Ω		
L2	Osc. Coil	2.5Ω	1.0Ω		
L3	Input IF	15Ω	20Ω		
L4	Output IF	15Ω	20Ω		

BATTERIES

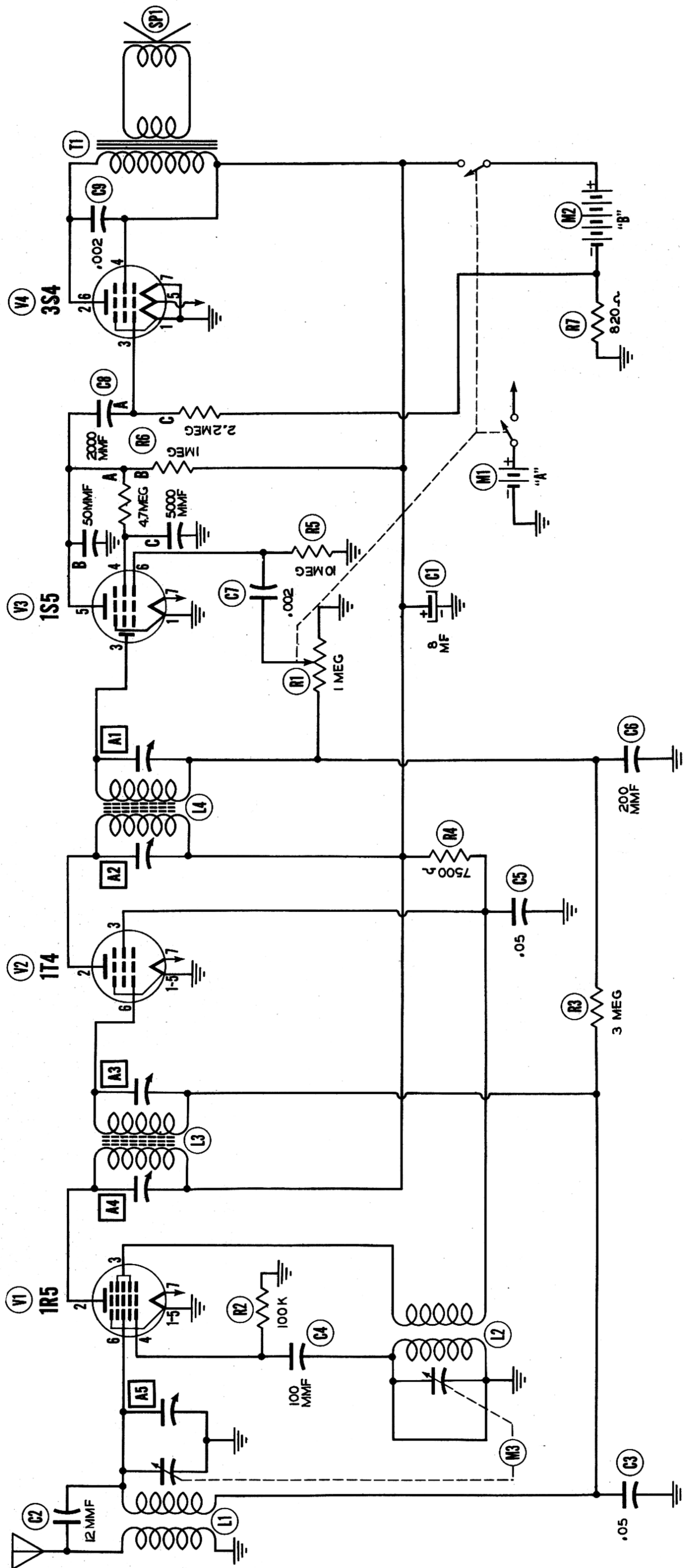
ITEM No.	VOLTAGE	AUTOMATIC PART No.	REPLACEMENT DATA				INSTALLATION NOTES
			"A"	"B"	"A-B"	"B"	
M1	1.5V "A"	950					
M2	67.5V "B"		467		2	XX45	2 used in parallel

MISCELLANEOUS

ITEM No.	PART NAME	AUTOMATIC PART No.	NOTES
M3	2 Gang Var. Cap	CV-98	(13-373MF, 18-135MF)



DIAL CORD DRIVE



VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V 1	1R5	OV	60VDC	47VDC	\$-9.7VDC	OV	OV	1.5VDC
V 2	1L4	OV	60VDC	47VDC	OV	OV	1.5VDC	
V 3	1S5	OV	OV	OV	2.5VDC	15VDC	OV	1.5VDC
V 4	3S4	OV	58VDC	-.9VDC	60VDC	1.5VDC	58VDC	OV

STAKEN WITH VACUUM TUBE VOLTmeter.

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V 1	1R5	*	115Ω	17.5KΩ	100KΩ	*	*	4 Meg.
V 2	1L4	*	115Ω	17.5KΩ	Inf.	*	*	4 Meg.
V 3	1S5	*	26Ω	1 Meg.	14.7Meg.	1.1 Meg.	10 Meg.	*
V 4	3S4	*	1300Ω	2.2 Meg.	10Ω	*	1:3000Ω	*

† Measured from B+ side of SWL trch.

*DO NOT USE OHMMETER TO MEASURE FILAMENT RESISTANCE.

THE COOPERATION OF THE MANUFACTURER OF THIS
RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

A PHOTOFAC STANDARD NOTATION SCHEMATIC
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1. DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1000 ohms per volt.
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 $\pm 15\%$ in voltage and resistance readings.
5. Volume control at maximum, no signal applied for voltage measurements.

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