

VOLUME CONTROL
ON-OFF SWITCH

TUNING CONTROL

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			INSTALLATION NOTES
		AUTOMATIC PART No.	STANDARD REPLACEMENT	RMA BASE TYPE	
V1	Converter	1R5	7AT	7AT	
V2A	IF Amp.	1U4	6AR	6AR	
V2B	IF Amp.	1T4	6AR	6AR	
V3	DET-AVC-AF	1R5	6AU	6AU	
V4	Power Output	3R4	7BA	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. VOLT	REPLACEMENT DATA				IDENTIFICATION CODES AND INSTALLATION NOTES
		AUTOMATIC PART No.	AEROVOX PART No.	CORNEILL DUBILIER PART No.	ERIE PART No.	SOLAR PART No.
C1	8		PRS150/8	BR815	GP1K-15	M-8-150
C2	12		1468-00001	5W5Q1		MO.5-41
C3	0.05		P288-05	GT2S5		TST-2-05
C4	100		1468-0001	5W5T1	GP1K-100	MO.5-31
C5	0.05		P288-05	GT2S5		TST-2-05
C6	200		1468-0002	5W5T2	GP2K-200	MO.5-32
C7	0.002		P688-002	GT6D2	GP2M-002	TST-6-002
C8A	2000	See Note				TST-8-002
C8B	50	" "	1468-0005	5W5Q5	GP1K-50	MO.5-45
C8C	5000	" "				TST-6-006
C9	0.002		P688-002	GT6D2	GP2M-002	TST-6-002

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

CONTROLS

ITEM No.	RATING RESISTANCE WATTS	REPLACEMENT DATA			INSTALLATION NOTES
		AUTOMATIC PART No.	IRC PART No.	CLAROSTAT PART No.	
R1A	1 Meg. Shaft Switch	RV-58 Not Req.	D13-137 A	M-63-Z Not Req.	Volume Control Attach to R1A Per Instructions
			42	SW-A2	

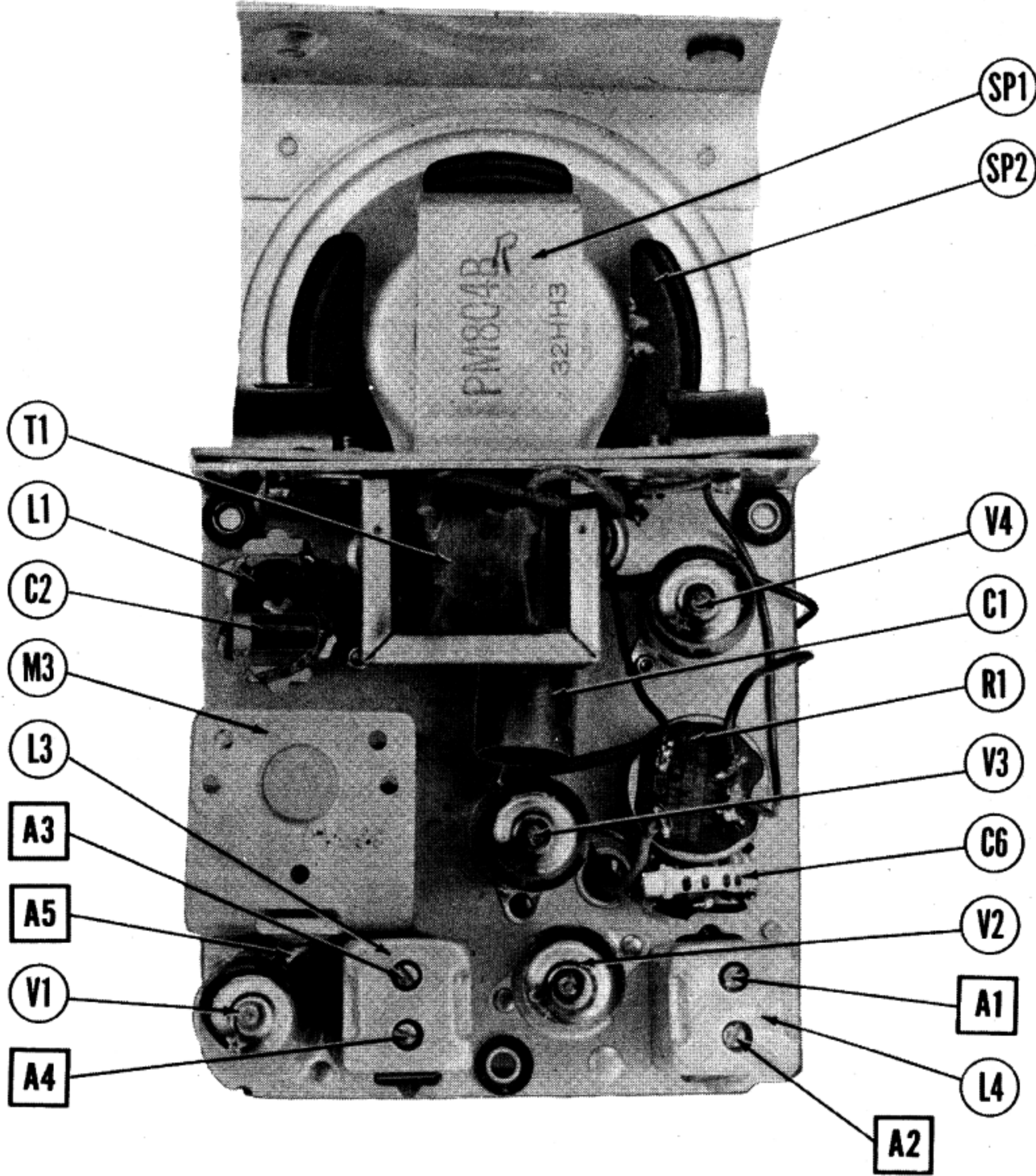
RESISTORS

ITEM No.	RATING RESISTANCE WATTS	REPLACEMENT DATA			IDENTIFICATION CODES
		AUTOMATIC PART No.	IRC PART No.		
R2	100K Ω		BTS-100K		Osc. Grid
R3	3 Meg.		BTS-3.3 Meg.		Br.-Blk.-Yl.
R4	7500 Ω		BTS-8200		Or.-Blk.-Grn.
R5	10 Meg.		BTS-10 Meg.		V1.-Grn.-Red
R6A	4.7 Meg.	See Note	BTS-4.7 Meg.		Br.-Blk.-Blue
R6B	1 Meg.	" "	BTS-1 Meg.		AF Screen
R6C	2.2 Meg.	" "	BTS-2.2 Meg.		" Plate
R7	820 Ω		BTS-820		Output Grid

Note Items C8A, C8B, C8C, R6A, R6B, and R6C are combined into one unit obtainable under MFGRS Part#YA002-001.

TRANSFORMER (OUTPUT)

ITEM No.	RATING		REPLACEMENT DATA			INSTALLATION NOTES
	IMPEDANCE PRI.	DC RES. SEC.	AUTOMATIC PART No.	STANCOR PART No.	CHICAGO PART No.	
T1	4300 Ω	3.5 Ω	300 Ω		RO-302	A-3026



PARTS LIST AND DESCRIPTIONS (Continued)

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

SPEAKER

R F COILS

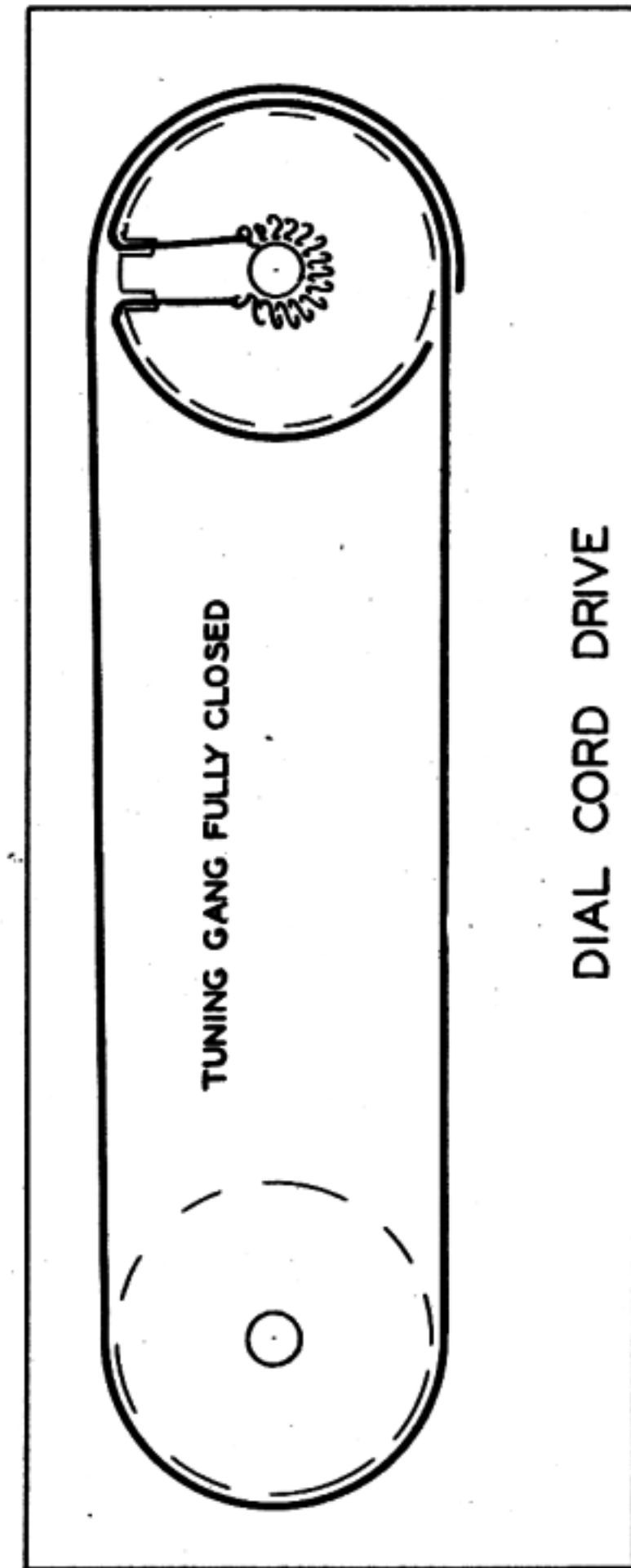
ITEM No.	USE	REPLACEMENT DATA		
		DC RES.	AUTOMATIC PART No.	MEISSNER PART No.
L1	Ant. Load- ing Coil	36Ω		
L2	Osc. Coil	2.5Ω		
L3	Input IF	15Ω		16-6668
L4	Output IF	20Ω		16-6669

BATTERIES

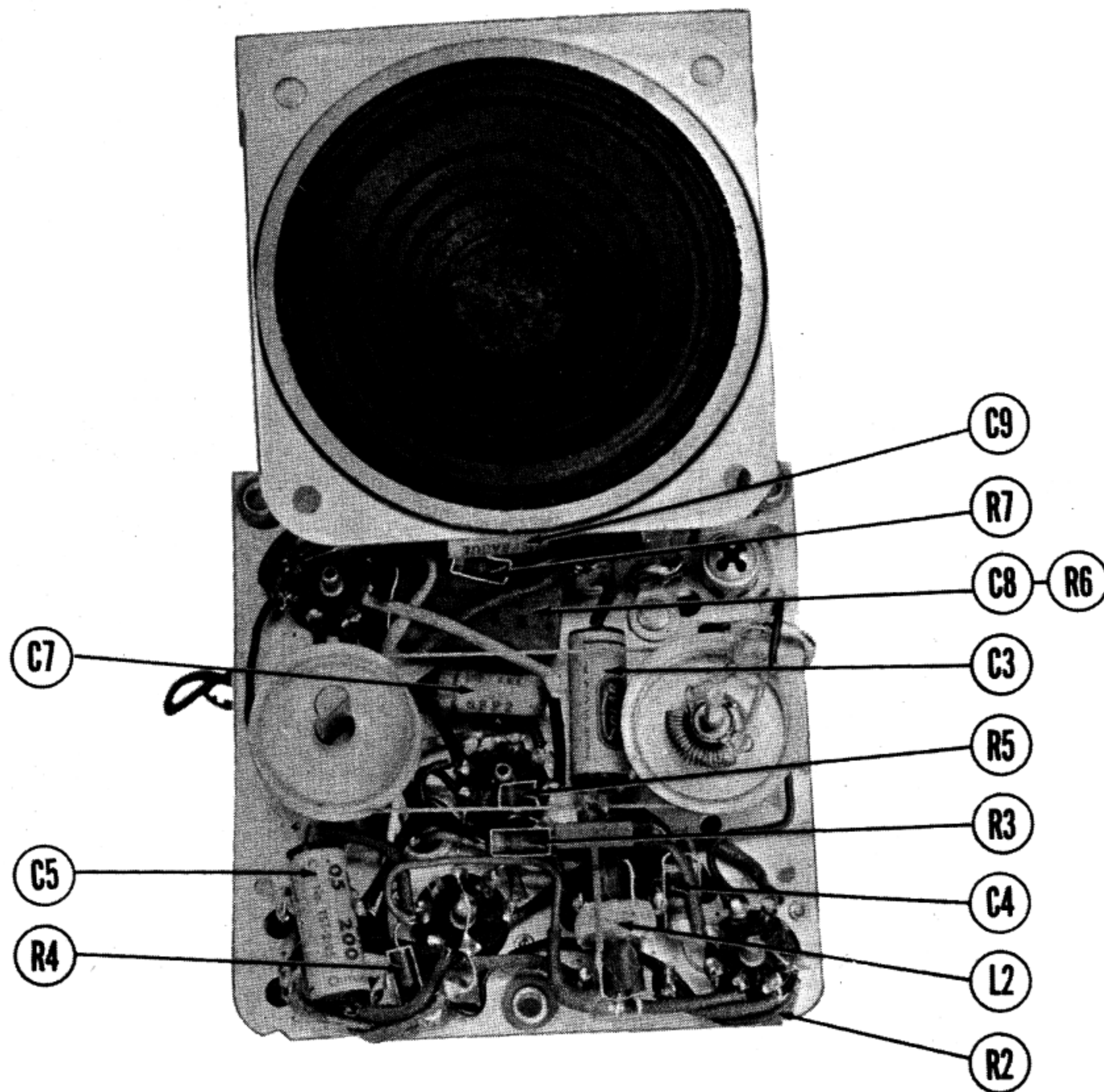
ITEM No.	VOLTAGE	AUTOMATIC PART No.	REPLACEMENT DATA			INSTALLATION NOTES
			EVEREADY	BURGESS		
M1	1.5V "A"		"A"	"A-B"	"A-B"	
M2	67.5V "B"		950	467	2	2 used in parallel

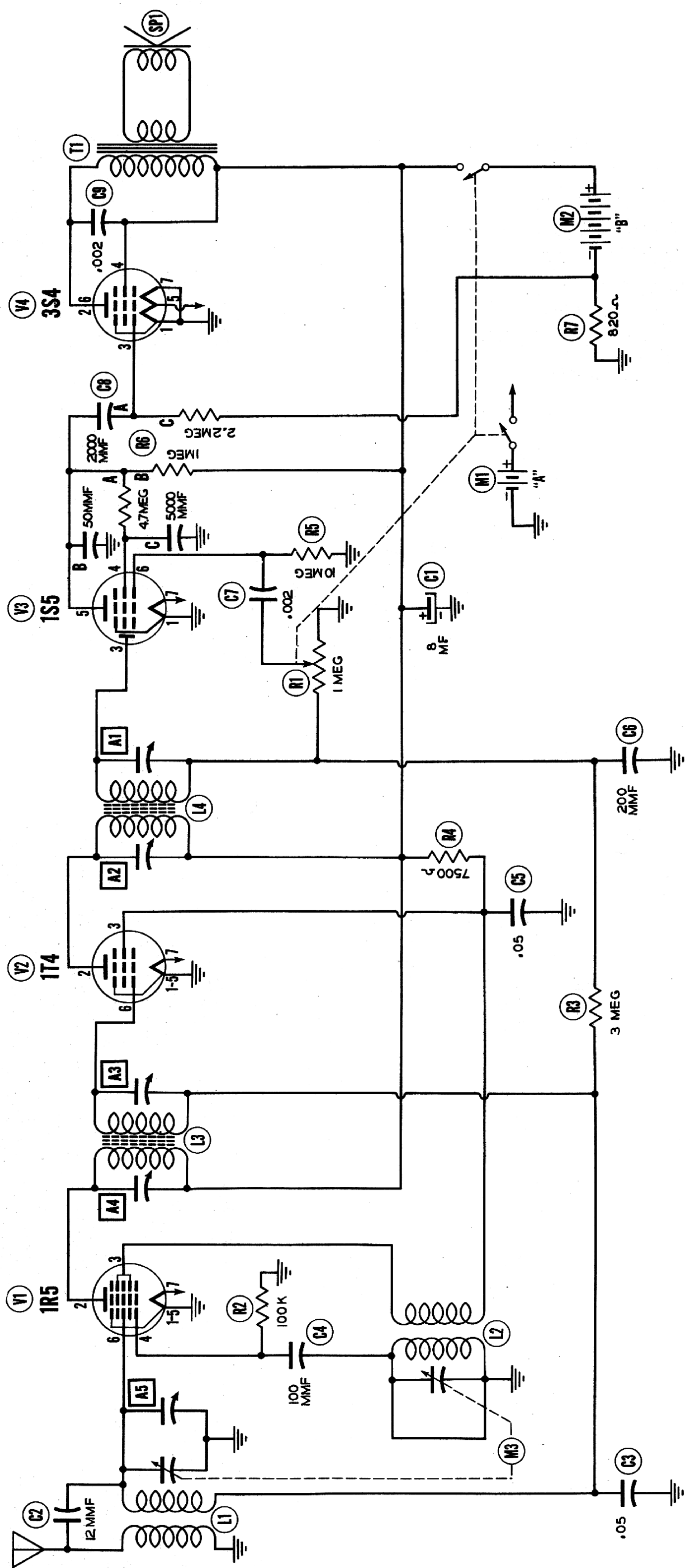
MISCELLANEOUS

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



CHASSIS—BOTTOM VIEW





IF = 455 KC

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V 1	1R5	0V	60VDC	47VDC	5-9.7VDC	0V	0V	1.5VDC
V 2	1U4	0V	60VDC	47VDC	0V	0V	0V	1.5VDC
V 3	1S5	0V	0V	0V	2.5VDC	15VDC	0V	1.5VDC
V 4	3S4	0V	58VDC	-9VDC	60VDC	1.5VDC	58VDC	0V

§ TAKEN 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	1U4	*	115Ω	17.5KΩ	Inf.	*	4 Meg.	*
V 3	1S5	*	26Ω	1 Meg.	14.7Meg	1 Meg.	10 Meg.	*
V 4	3S4	*	1300Ω	2.2 Meg.	10Ω	*	1300Ω	*

* Measured from B+ side of sw tch.

† 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 PHOTOFACT 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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