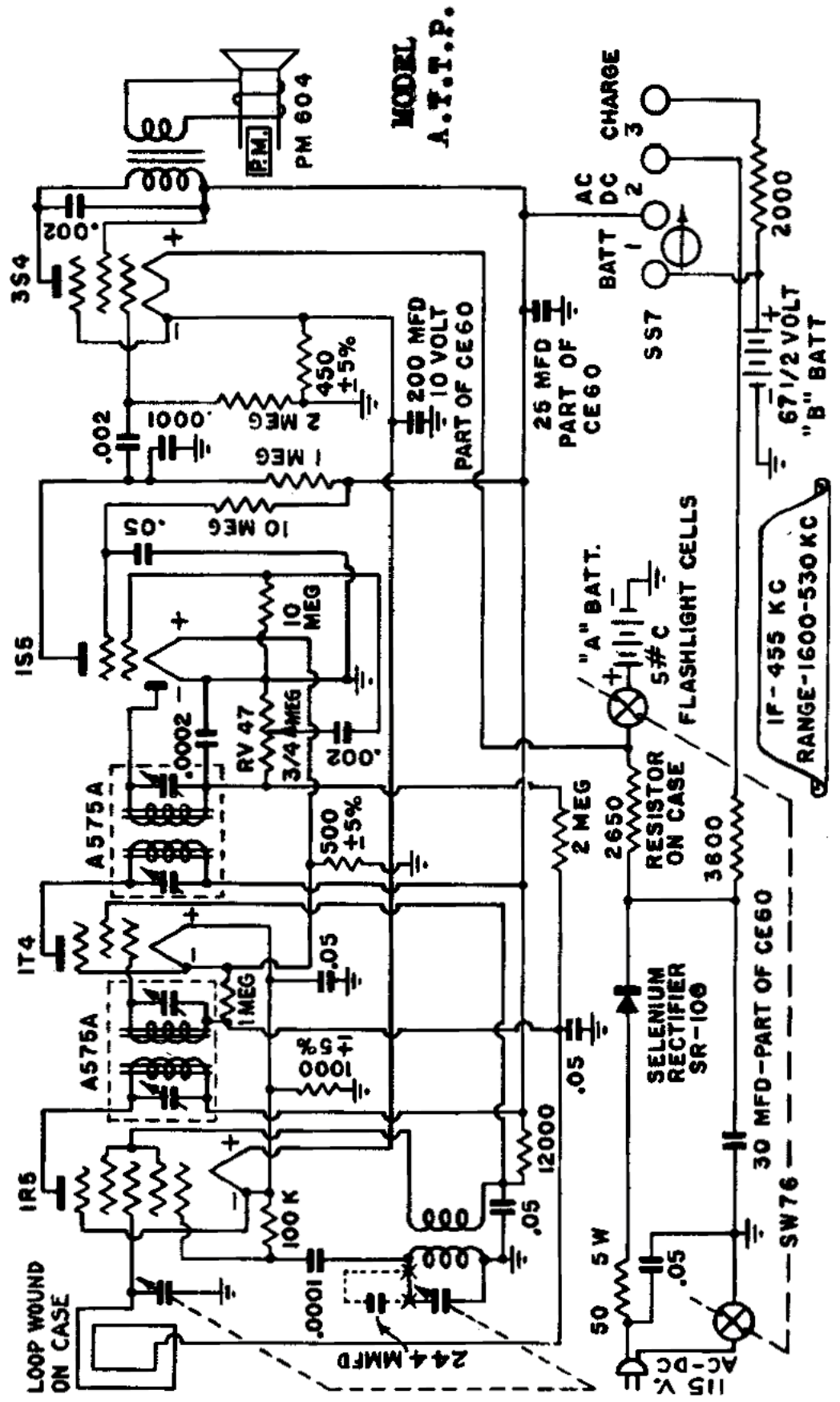


AUTOMATIC RADIO MFG. CO., INC.



MODELS 660, 662, 666

Series C

A.T.T.P.

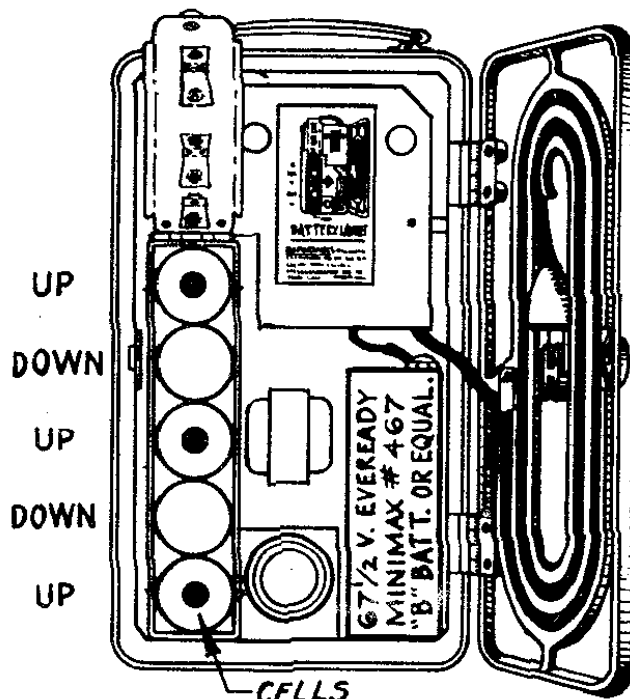
see Riders Manual Vol. XVI, Page 16-2

AUTOMATIC RADIO MFG. CO., INC.

Alignment Procedure

Connect "jumper" connections from contact pin leads on chassis to contact connections on inside of case. Connect output meter across speaker voice coil. Set volume control at maximum position. Keep output of signal generator at a low value to prevent AVC of receiver from affecting accurate alignment. Connect .1 MFD condenser in series with high side of signal generator. Make all adjustments for maximum output meter indication.

SIGNAL GENERATOR FREQUENCY	SIGNAL GENERATOR CONNECTION	POSITION OF VARIABLE	ORDER OF ADJUSTMENT
455 KC	GRID OF IR5	FULLY OPEN	A1, A2, A3, A4
1600 KC	GRID OF IR5	FULLY OPEN	A5
1400 KC	RADIATE SIGNAL INTO CASE LOOP WITH 2 TURN CONNECTION.	ROTATE UNTIL SIGNAL FROM GENERATOR IS PICKED UP.	A6



BATTERY LAYOUT

IMPORTANT: 5 FLASHLIGHT CELLS SIZE "C". MUST BE INSERTED IN BATT. CASE AS SHOWN.

Battery Charging

The following procedure should be followed when a battery charge is required. (Refer to figure 3 for switch detail.)

1. Plug power line cord into AC or DC 115 Volt power line.
2. Slide "Off-On" switch to "On" position.
3. Slide 3-position Operation Selector Switch to AC-DC position. If radio operates, power outlet is working satisfactorily.
4. Slide 3-position Operation Selector Switch to charge position.

The batteries are now on charge.

Battery Installation Instructions

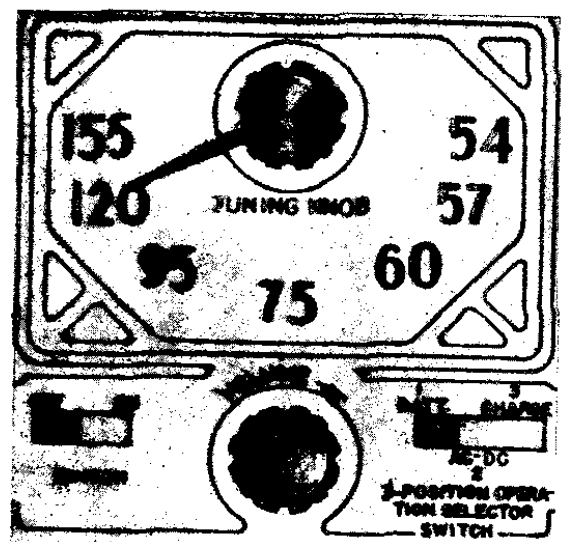
Place hand on back of radio with thumb in notch on left of back and swing back door open.

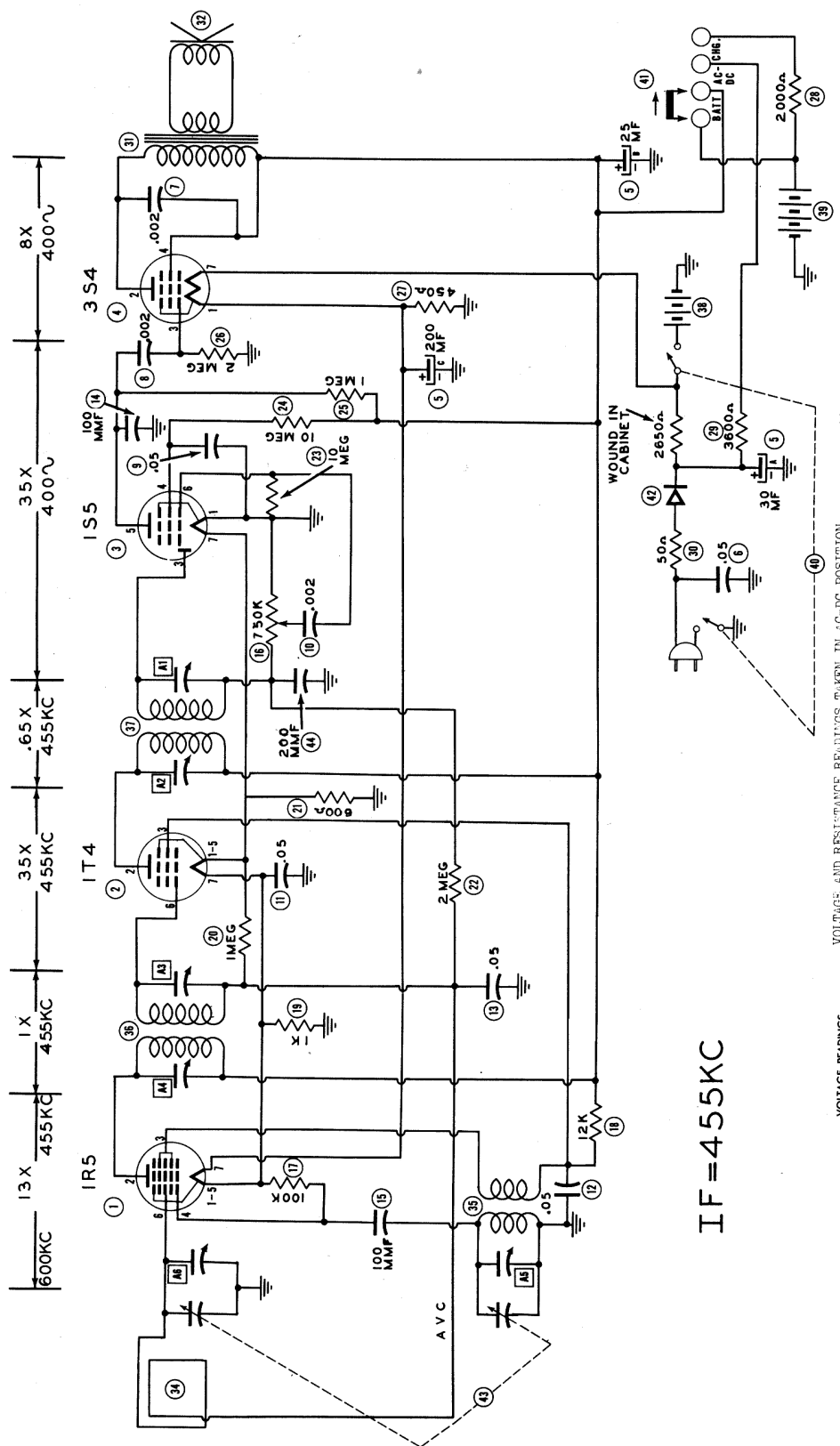
Flashlight Cell Installation

1. Turn latch, located on lower part of flashlight cell case, to the left until latch is disengaged from battery case.
2. Swing up top of battery case by lifting end containing latch.
3. Insert flashlight cells in order indicated in Figure 4.

"B" Battery Installation

1. Snap socket connector on red battery lead over connection on battery marked "+" (plus).
2. Insert stud connector on black battery lead into battery connection marked "-" (minus).
3. Slide battery into cabinet in position indicated in Figure 4.





VOLTAGE AND RESISTANCE READINGS TAKEN IN AC-DC POSITION.

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
1	1R5	2.5VDC	65VDC	43VDC	-2.6VDC	2.6VDC	.2VDC	4.6VDC
2	1T4	1.4VDC	65VDC	43VDC	3.6VDC	1.4VDC	.2VDC	2.9VDC
3	1S5	OV.	.2VDC	-1.1VDC	13VDC	23VDC	-1.1VDC	1.4VDC
4	3S4	4.6VDC	66VDC	OV.	65VDC	6.2VDC	65VDC	7.6VDC

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
1	1B5	*	6.2K Ω	18K Ω	100K Ω	*	850K Ω	*
2	174	*	6.2K Ω	60K Ω	6.2K Ω	*	850K Ω	*
3	155	02	850K Ω	60K Ω	10 M Ω .	1 M Ω .	10 M Ω .	*
4	354	*	6.8K Ω	2 M Ω .	6.2K Ω	*	6.8K Ω	*

TAKEN WITH VACUUM TUBE VOLTMETER.

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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RESISTANCE READINGS IN THE B+ CIRCUITS MAY VARY WIDELY ACCORDING TO THE CONDITION OF THE FILTER CAPACITORS

4713-4

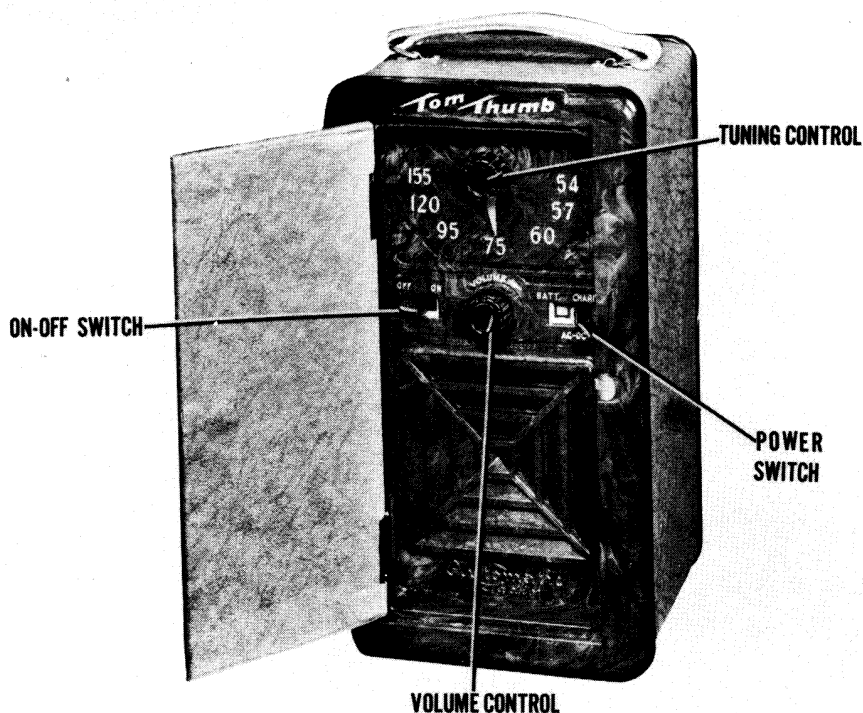
1. DC Voltage measurements are at 20,000 ohms per volts; AC Voltages measured at 1000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of $\pm 15\%$ in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

The stage gain measured values listed above are approximate values for an average operative stage, rather than an absolute value. It should be kept in mind that it is possible to introduce so many variables into the measurement operation, such as the type of equipment used for measuring, handling, and measuring, the accuracy of alignment, etc., that an absolute reading is impractical. AVC is made inoperative by shorting high side of volume control to chassis.

PHOTOFACT* Folder

**AUTOMATIC
MODEL ATTP (TOM THUMB)
(BATTERY OPERATED)**

**AUTOMATIC
MODEL ATTP (TOM THUMB)
(BATTERY OPERATED)**



**AUTOMATIC
MODEL ATTP (TOM THUMB)
(BATTERY OPERATED)**

AUTOMATIC MODEL ATTP

TRADE NAME Automatic Tom Thumb Personal Model ATTP MANUFACTURER Automatic Radio Mfg. Co., Inc., 122 Brookline Ave., Boston 15, Mass. TYPE SET Three Power Portable Superheterodyne with Loop Antenna TUBES (FOUR) Types, 1R5 Converter, 1T4 IF Amp., 1S5 Det.-AVC-AF, 3S4 Power Output POWER SUPPLY 110-120 V AC-DC or 67½ V. "B" Supply & 7½ V "A" Supply RATING .170 Amp. @ 117V AC or 15MA @ 67½ V DC & 51MA @ 7½ V DC TUNING RANGE—BROADCAST 530-1600KC						
ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT						
Connect jumpers from contact pin leads on chassis to contact connections on inside of case. Use battery power when available. If AC power is used, use an isolation transformer when available. If not, connect a .1 MFD capacitor in series with the low side of signal generator and B-. 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 .1 MFD.	High side to rear stator of tuning cap. Low side to chassis.	455KC	Tuning cap. fully open.	Across voice coil	A1,A2, A3,A4.	Adjust for maximum output. If AC power is used without an isolation transformer reduce dummy ant. to 200 MMF to reduce hum modulation.
2 .1 MFD.	"	1600KC	"	"	A5	Adjust for maximum output.
3	Loop	1400KC	Tune for maximum output.	"	A6	Fashion loop of several turns of wire and radiate signal in- to loop of receiver. Adjust for maximum output. (This adjustment may not be found on some models.)

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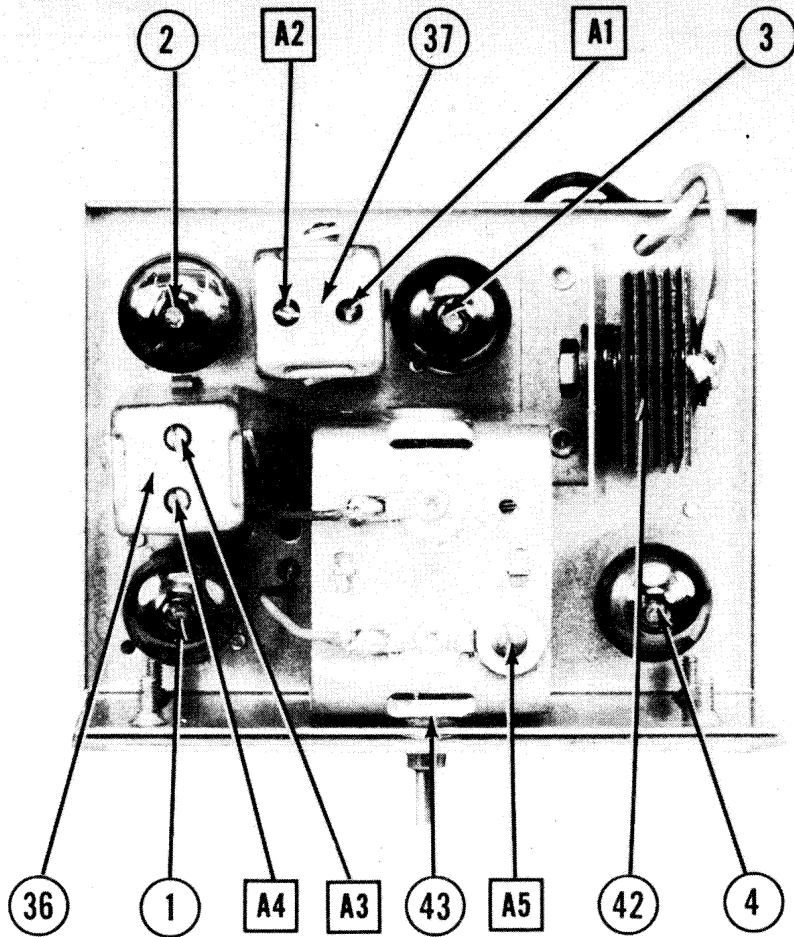
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PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

AUTOMATIC TON
THRU PERSONAL AMP

CHASSIS—TOP VIEW



ITEM No.	USE	REPLACEMENT DATA			INSTALLATION NOTES
		AUTOMATIC PART No.	STANDARD REPLACEMENT	RMA BASE TYPE	
1	Converter	1R5	1R5	7AT	
2	1F Amp.	1T4	1T4	6AR	
3	Det.-AVC-AF	1S5	1S5	6AU	
4	Power Output	3S4	3S4	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	REPLACEMENT DATA					IDENTIFICATION CODES AND INSTALLATION NOTES
		AUTOMATIC PART No.	CORNELL DUBILIER PART No.	MALLORY PART No.	SOLAR PART No.	SPRAGUE PART No.	
5A	30 CAP.	CE-60					Filter
5B	25 VOLT						
5C	150						
6	200						
7	10						
8	.05						
9	.002						
10	.002						
11	.002						
12	.05						
13	.05						
14	.05						
15	200						
44	200						

CONTROLS

ITEM No.	RATING	REPLACEMENT DATA				INSTALLATION NOTES
		AUTOMATIC PART No.	MALLORY PART No.	IRC PART No.	CLAROSTAT PART No.	
16A	750KΩ	RV47	MR51	DI3-137	M-63-Z	Volume Control
B	Shaft	Not Req.	Not Req.	A	Not Req.	Attach to 16A per instructions

RESISTORS

ITEM No.	RATING	REPLACEMENT DATA			IDENTIFICATION CODES
		AUTOMATIC PART No.	MALLORY PART No.	IRC PART No.	
17	100KΩ				Br.-Blk.-Yl. Oscillator Grid
18	12KΩ				BTS-12K
19	1000Ω				Br.-Red.-Or. Screen Dropping
20	1 Meg.				Br.-Blk.-Red. Filament String
21	600Ω				Br.-Blk. Grn. IF Grid
22	2 Meg.				Blue-Blk.-Br. Filament String
23	10 Meg.				Red-Blk.-Grn. AVC Network
24	10 Meg.				Br.-Blk.-Blue AF Grid
25	1 Meg.				Br.-Blk.-Blue AF Screen Dropping
26	2 Meg.				Br.-Blk.-Grn. AF Plate Load
27	450Ω				Red-Blk.-Grn. Output Grid
28	2000Ω				Yl.-Grn.-Br. Filament String
29	3600Ω				Red-Blk.-Red Series Battery Charge
30	50Ω				Or.-Blue-Red Filter Rectifier Ballast

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (OUTPUT)

ITEM No.	RATING			REPLACEMENT DATA		INSTALLATION NOTES
	IMPEDANCE	DC RES.	THORDAR'N	AUTOMATIC	STANCOR	
	PRI. SEC.	PRI. SEC.	PRI. SEC.	PART No.	PART No.	
31	4600Ω	3.2Ω	410Ω	.5Ω	A-3876*	T22S45*
					PM-604	*Bend mounting tabs down, file out slots and mount on original bracket.

SPEAKER

ITEM No.	RATINGS			REPLACEMENT DATA		INSTALLATION NOTES
	FIELD	VC IMP.	JENSEN	AUTOMATIC	PART No.	
32	PM	3.2Ω	PM-604			
33	CONC DIA.	VC DIA.	NOT READILY REPLACEABLE-USE COMPLETE SPEAKER UNIT			
	3-3/8"	1 1/2"				

R F COILS

ITEM No.	USE	DC RES.		REPLACEMENT DATA		INSTALLATION NOTES
		PRI.	SEC.	AUTOMATIC	MEISSNER	
34	Loop Ant.	12	2Ω		14-1040	
35	Osc. Coil	33Ω	6Ω		16-6668	
36	Input IF	34Ω	32Ω		16-6669	
37	Output IF	34Ω	32Ω			Add 200MFD from high side volume control to ground.

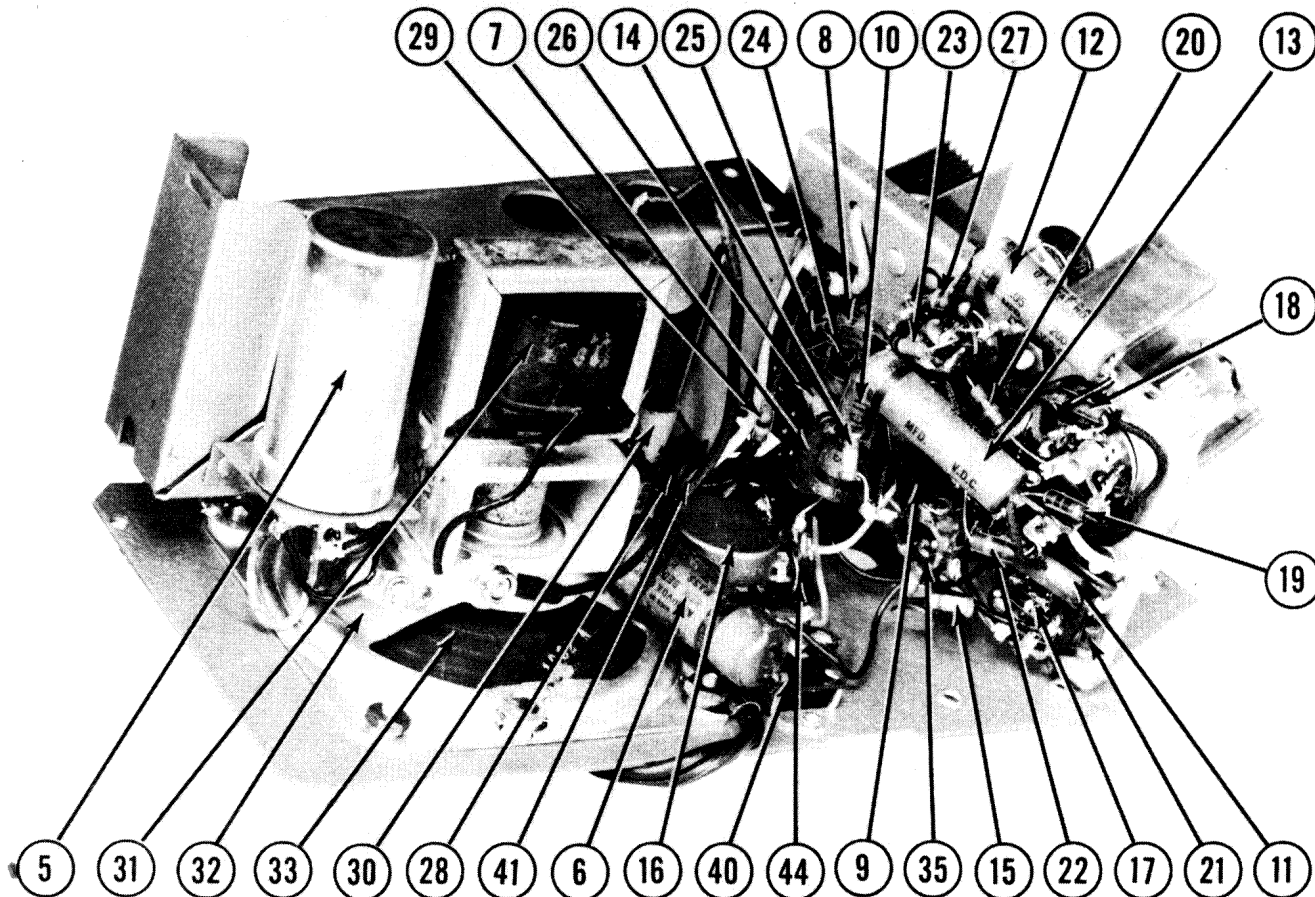
BATTERIES

ITEM No.	VOLTAGE	AUTOMATIC PART No.	EVEREADY		INSTALLATION NOTES
			"A"	"B"	
38	1.5 V "A"		(5)		
39	67.5V "B"		#1085	#467	Five 1 1/2 Volt Batteries in Series

MISCELLANEOUS

ITEM No.	PART NAME	AUTOMATIC PART No.	NOTES
40	Switch	SR-100	On-Off
41	Rectifier	SR-100	Batt.-AC/DC-Charge
42	Tuning Cap.		Seelenium
43			(15-367 MUF, 24-141 MUF)

CHASSIS—BOTTOM VIEW



AUTOMATIC TONE
THUMB PERSONAL ATTP

AUTOMATIC TONE
THUMB PERSONAL ATTP