

1. DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1,000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Meas. equivalent circuit pin to common negative.
4. Line voltage tolerance of 117.
5. Nominal tolerance on component values makes possible a variation of  $\pm 10\%$  in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

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

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

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
1	12SK7	0 $\Omega$	0 $\Omega$	0 $\Omega$	2.4 MEG.	0 $\Omega$	35 K $\Omega$	35 K $\Omega$	39 K $\Omega$
2	12SA7	0 $\Omega$	170 $\Omega$	0 $\Omega$	35 K $\Omega$	35 K $\Omega$	170 K $\Omega$	5 $\Omega$	380 K $\Omega$
3	12SK7	0 $\Omega$	15 $\Omega$	0 $\Omega$	2.4 MEG.	0 $\Omega$	35 K $\Omega$	145 $\Omega$	35 K $\Omega$
4	12SQ7	0 $\Omega$	9 MEG.	0 $\Omega$	2.4 MEG.	225 K $\Omega$	235 K $\Omega$	135 $\Omega$	145 $\Omega$
5	35L6GT	0 $\Omega$	210 $\Omega$	35 K $\Omega$	35 K $\Omega$	100 K $\Omega$	135 $\Omega$	180 $\Omega$	0 $\Omega$
6	35Z5GT	0 $\Omega$	250 $\Omega$	10 $\Omega$	248 $\Omega$	0 $\Omega$	210 $\Omega$	35 K $\Omega$	35 K $\Omega$

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
1	12SK7	0V	38V AC	0V	-4V DC	0V	90V DC	20V DC	57V DC
2	12SA7	0V	5V AC	90V DC	-7.2V DC	0V	38V AC	-9V DC	0V
3	12SK7	0V	26V AC	0V	-9V DC	0V	90V DC	14V AC	90V DC
4	12SQ7	0V	-7V DC	0V	-9V DC	93V DC	67V DC	8.6V AC	14V AC
5	35L6GT	0V	67V AC	12V DC	90V DC	-2.8V DC	8.4V DC	5V AC	0V
6	35Z5GT	0V	107V AC	13V AC	0V	113V AC	8.6V AC	87V AC	125V DC

The stage gain measured values listed above are approximate values for an average operative stage, rather than an absolute value. It should be borne in mind that it is possible to introduce so many variables into the measurement operation, such as, type of equipment used for measuring, handling and placement of probes, the accuracy of alignment, etc., that an absolute reading is impractical. AVC is made inoperative and 3-volt battery bias substituted for measurement.

# PHOTOFACT\* Folder

## AUTOMATIC MODEL 620



## AUTOMATIC MODEL 620

AUTOMATIC MODEL 620

TRADE NAME	Automatic, Model 620					
MANUFACTURER	Automatic Radio Mfg. Co., Inc., 122 Brookline Ave., Boston, Mass.					
TYPE SET	AC-DC Operated Superheterodyne Receiver - Self Contained Loop Antenna					
TUBES (SIX)	Types, 12SK7 RF Amp., 12SA7 Converter, 12SK7 IF Amp., 12SQ7 Det.-AVC-AF, 35L6GT Power Output, 35Z5GT Rectifier.					
POWER SUPPLY	110-125 Volts AC-DC		TUNING RANGE—BROADCAST		530-1630KC	
			RATING		.235 Amp. @ 117 Volts AC	
ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT						
To set pointer turn tuning shaft completely clockwise and set pointer to left edge of number 45. Use isolation transformer if available. If not, connect a capacitor in series with low side of signal generator and chassis. Volume control should be at maximum and output of signal generator no higher than necessary to obtain reading. Use insulated alignment screwdriver for adjusting.						
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
.1 MFD.	High side to pin 8 of 12SA7. Low side to chassis.	455KC	High freq. end of dial.	Across voice coil	A1, A2, A3, A4.	Adjust for maximum output. If isolation transformer is not used reduce dummy to .001 MFD to reduce hum modulation.
.1 MFD.	High side to ext. ant. lead. Low side to chassis.	"	Low freq. end of dial.	"	A5	Adjust for minimum output.
200 MFD	"	1630KC	High freq. end of dial.	"	A6, A7.	Adjust for maximum output in order given.
200 MFD	"	1400KC	Tune for maximum output.	"	A8	"

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## Indianapolis Indiana

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## AUTOMATIC MODEL 620

PARTS LIST AND DESCRIPTIONS  
 TUBES

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	INSTALLATION NOTES
		AUTOMATIC PART No.	STANDARD REPLACEMENT		
1	RF Amp.	128K7	128K7	8K	
2	Converter	128A7	128A7	8R	
3	IF Amp.	128K7	128K7	8M	
4	Det.-AFC-AF	128C70T	128C70T	8Q	
5	Power Output	25L60T	25L60T	7AC	
6	Rectifier	35Z50T	35Z50T	6AD	

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
		AUTOMATIC PART No.	SOLAR PART No.	SPRAGUE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.
7	50 CAP. 150		M-50-150	UT-501	PRS150-50	BR5015
8	30 150		M-30-150	UT-501	PRS150-30	TC47
9	.05 600		S-6-05	TC-15	684-05	TR3015
10	.01 400		S-4-01	TC-11	484-01	TR421
11	.01 400		S-4-01	TC-11	484-01	TR421
12	.002 600		S-6-02	TC-22	684-02	TR405
13	.1 200		S-4-1	TC-1	484-1	TR428
14	200 500		50-5-22	1R7-22	1488-0002	5A572
15	150 500		50-5-35	1R7-35	1488-0005	5A575
16	100 500		50-5-31	1R7-31	1488-0001	5A571
17	500 500		50-5-35	1R7-35	1488-0005	5A575

CONTROLS

ITEM No.	RATING	REPLACEMENT DATA				INSTALLATION NOTES
		AUTOMATIC PART No.	MALLORY PART No.	IRC PART No.	CLAROSTAT PART No.	
18A	250KΩ		RV-48	Not Req.	D12-120	Volume Control
B	Switch		Not Req.	A	M-54-2	Attach to 18A per instructions
C	Switch		Not Req.	M23	SA-A	

RESISTORS

ITEM No.	RATING	REPLACEMENT DATA		IDENTIFICATION CODES
		AUTOMATIC PART No.	IRC PART No.	
19	500KΩ		5R1-500	V1-BLK-Red RF Plate Load
20	500KΩ		5R5-500	Or-White-V1 Connector Grid
21	200KΩ		5R5-200	Red-BLK-Or. Oscillator Grid
22	200KΩ		5R5-200	Red-BLK-Or. ALC Network
23	10MΩ		5R5-10M	Red-BLK-Blk. ALC Network
24	200KΩ		5R5-200	Red-BLK-Blk. 1st AF Grid
25	500KΩ		5R5-500	Red-BLK-V1 1st AF Plate Load
26	500KΩ		5R5-500	Or-White-V1. Output Grid
27	150KΩ		5R1-150	Or-Orn.-Gr. Bias
28	1000Ω		5R1-1000	5R-5BK-500 Filter

PARTS LIST AND DESCRIPTIONS (Continued)  
 TRANSFORMER (OUTPUT)

ITEM No.	RATING	REPLACEMENT DATA		INSTALLATION NOTES
		AUTOMATIC PART No.	STANCOR THORDARN PART No.	
29	250VA		PM-601	*Bend mounting tabs down, file out slots and mount on original bracket.

SPEAKER

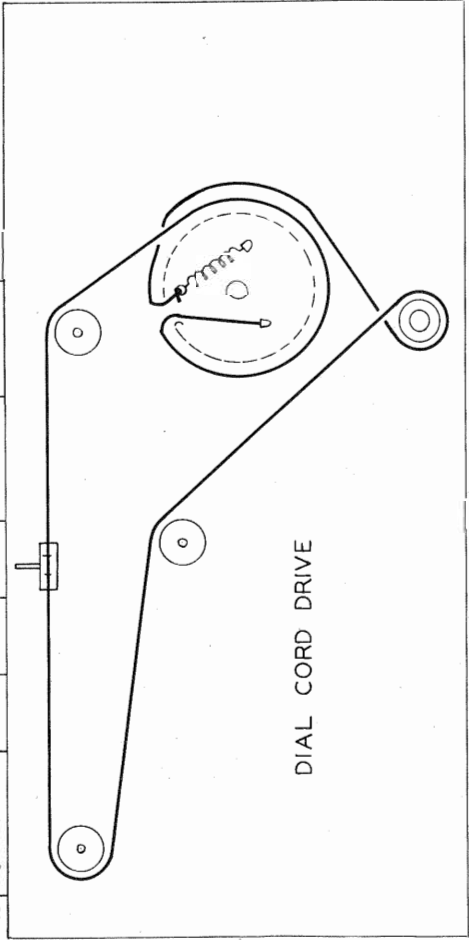
ITEM No.	RATINGS	REPLACEMENT DATA		INSTALLATION NOTES
		AUTOMATIC PART No.	JENSEN PART No.	
30	FIELD		SP-106	
31	COIL DIA. 1 1/2"		PM-601	

R F COILS

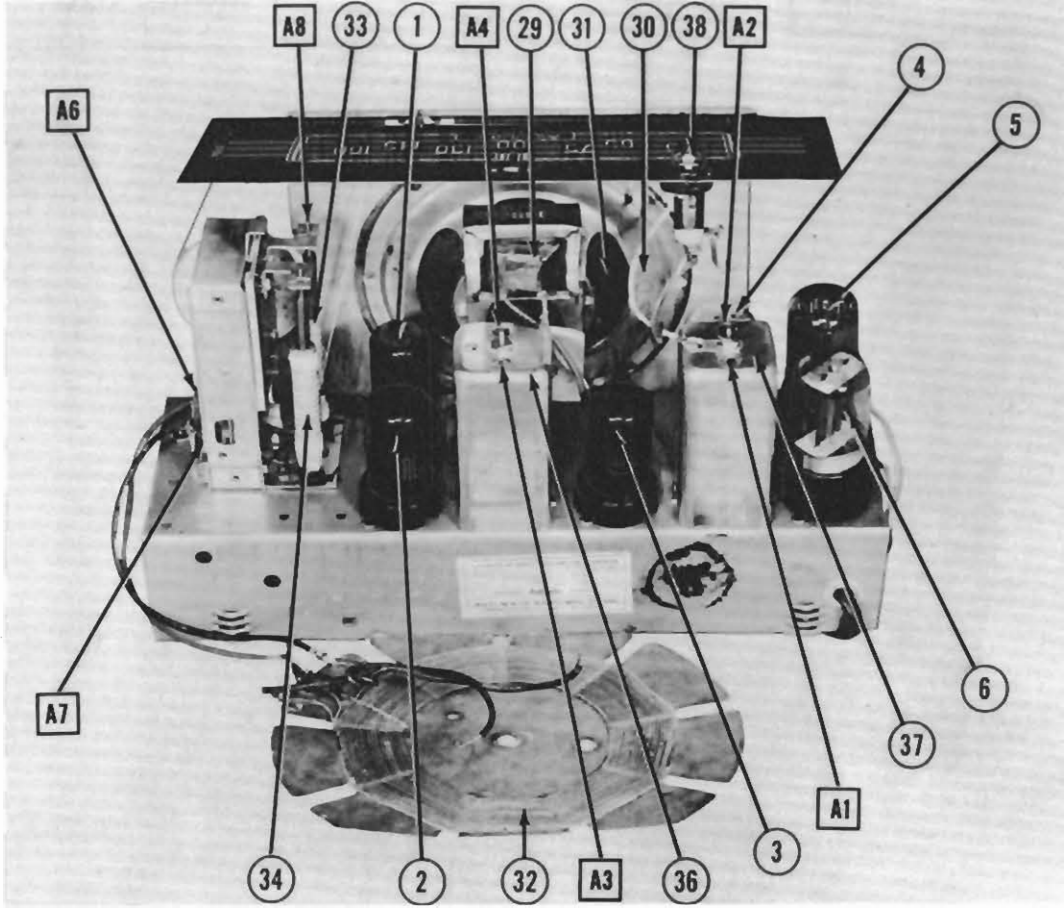
ITEM No.	USE	REPLACEMENT DATA		INSTALLATION NOTES
		DC RES.	WEISSNER PART No.	
32	Loop	PRI. 15Ω		
33	RF Coil	SEC. 21Ω		
34	Dec. Coil	.5Ω		
35	Wave Trap	44Ω		
36	Input IF	17Ω	16-6358	
37	Output IF	17Ω	16-6360	

DIAL LIGHT

ITEM No.	BASE TYPE	VOLTS	AMPS.	REPLACEMENT DATA		INSTALLATION NOTES
				AUTOMATIC PART No.	BEAD COLOR	
38	Bayonet	6-8	0.15		Brown	TYPE 47



CHASSIS—TOP VIEW



CHASSIS—BOTTOM VIEW

