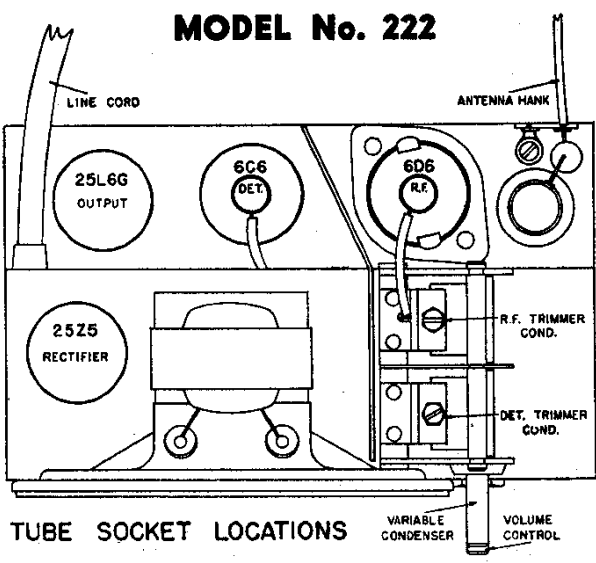
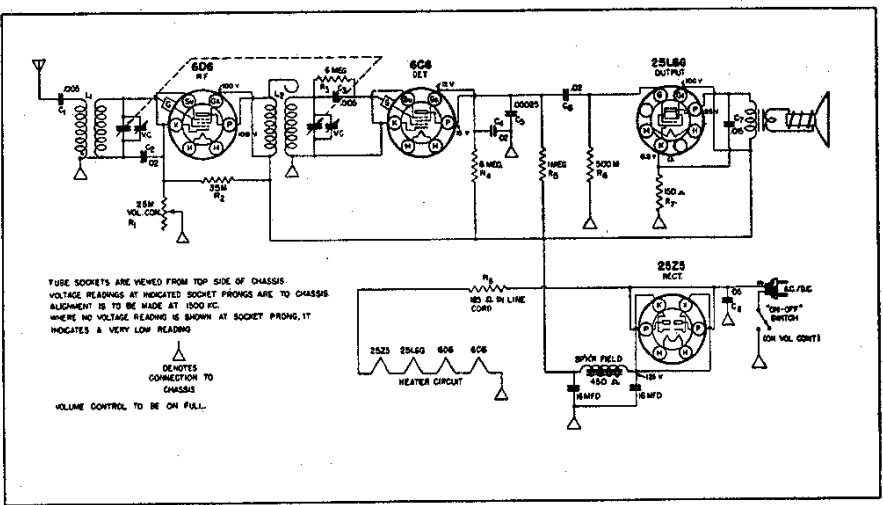


**MODEL 222**  
**Schematic Socket**  
**MODEL 250-B**  
**Schematic**

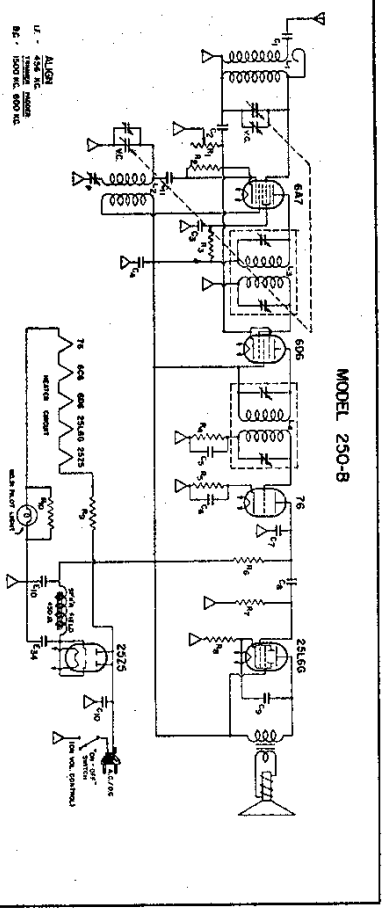
**AIR-KING PRODUCTS CORP.**



Do not connect ground wire to chassis.

The frequency range covered is 550-1700 kilocycles.

105-125 volts, 50-60 cycles, a.c. or d.c. power



**ALIGNED**

1 - 450 WTC	7-1500 OHM VOL. CONTROL
2 - 1000 OHM VOL. CONTROL	3 - 1000 OHM VOL. CONTROL
4 - 1000 OHM VOL. CONTROL	5 - 1000 OHM VOL. CONTROL
6 - 1000 OHM VOL. CONTROL	7 - 1000 OHM VOL. CONTROL
8 - 1000 OHM VOL. CONTROL	9 - 1000 OHM VOL. CONTROL
10 - 1000 OHM VOL. CONTROL	11 - 1000 OHM VOL. CONTROL
12 - 1000 OHM VOL. CONTROL	13 - 1000 OHM VOL. CONTROL
14 - 1000 OHM VOL. CONTROL	15 - 1000 OHM VOL. CONTROL
16 - 1000 OHM VOL. CONTROL	17 - 1000 OHM VOL. CONTROL
18 - 1000 OHM VOL. CONTROL	19 - 1000 OHM VOL. CONTROL
20 - 1000 OHM VOL. CONTROL	21 - 1000 OHM VOL. CONTROL
22 - 1000 OHM VOL. CONTROL	23 - 1000 OHM VOL. CONTROL
24 - 1000 OHM VOL. CONTROL	25 - 1000 OHM VOL. CONTROL
26 - 1000 OHM VOL. CONTROL	27 - 1000 OHM VOL. CONTROL
28 - 1000 OHM VOL. CONTROL	29 - 1000 OHM VOL. CONTROL
30 - 1000 OHM VOL. CONTROL	31 - 1000 OHM VOL. CONTROL

**1 - ANTENNA COIL**

1 - 450 WTC	2 - 1000 OHM VOL. CONTROL
3 - 1000 OHM VOL. CONTROL	4 - 1000 OHM VOL. CONTROL
5 - 1000 OHM VOL. CONTROL	6 - 1000 OHM VOL. CONTROL
7 - 1000 OHM VOL. CONTROL	8 - 1000 OHM VOL. CONTROL
9 - 1000 OHM VOL. CONTROL	10 - 1000 OHM VOL. CONTROL
11 - 1000 OHM VOL. CONTROL	12 - 1000 OHM VOL. CONTROL
13 - 1000 OHM VOL. CONTROL	14 - 1000 OHM VOL. CONTROL
15 - 1000 OHM VOL. CONTROL	16 - 1000 OHM VOL. CONTROL
17 - 1000 OHM VOL. CONTROL	18 - 1000 OHM VOL. CONTROL
19 - 1000 OHM VOL. CONTROL	20 - 1000 OHM VOL. CONTROL
21 - 1000 OHM VOL. CONTROL	22 - 1000 OHM VOL. CONTROL
23 - 1000 OHM VOL. CONTROL	24 - 1000 OHM VOL. CONTROL
25 - 1000 OHM VOL. CONTROL	26 - 1000 OHM VOL. CONTROL
27 - 1000 OHM VOL. CONTROL	28 - 1000 OHM VOL. CONTROL
29 - 1000 OHM VOL. CONTROL	30 - 1000 OHM VOL. CONTROL
31 - 1000 OHM VOL. CONTROL	

1 - 200 - 800 V
2 - 200 - 800 V
3 - 200 - 800 V
4 - 200 - 800 V
5 - 200 - 800 V
6 - 200 - 800 V
7 - 200 - 800 V
8 - 200 - 800 V
9 - 200 - 800 V
10 - 200 - 800 V
11 - 200 - 800 V
12 - 200 - 800 V
13 - 200 - 800 V
14 - 200 - 800 V
15 - 200 - 800 V
16 - 200 - 800 V
17 - 200 - 800 V
18 - 200 - 800 V
19 - 200 - 800 V
20 - 200 - 800 V
21 - 200 - 800 V
22 - 200 - 800 V
23 - 200 - 800 V
24 - 200 - 800 V
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27 - 200 - 800 V
28 - 200 - 800 V
29 - 200 - 800 V
30 - 200 - 800 V
31 - 200 - 800 V

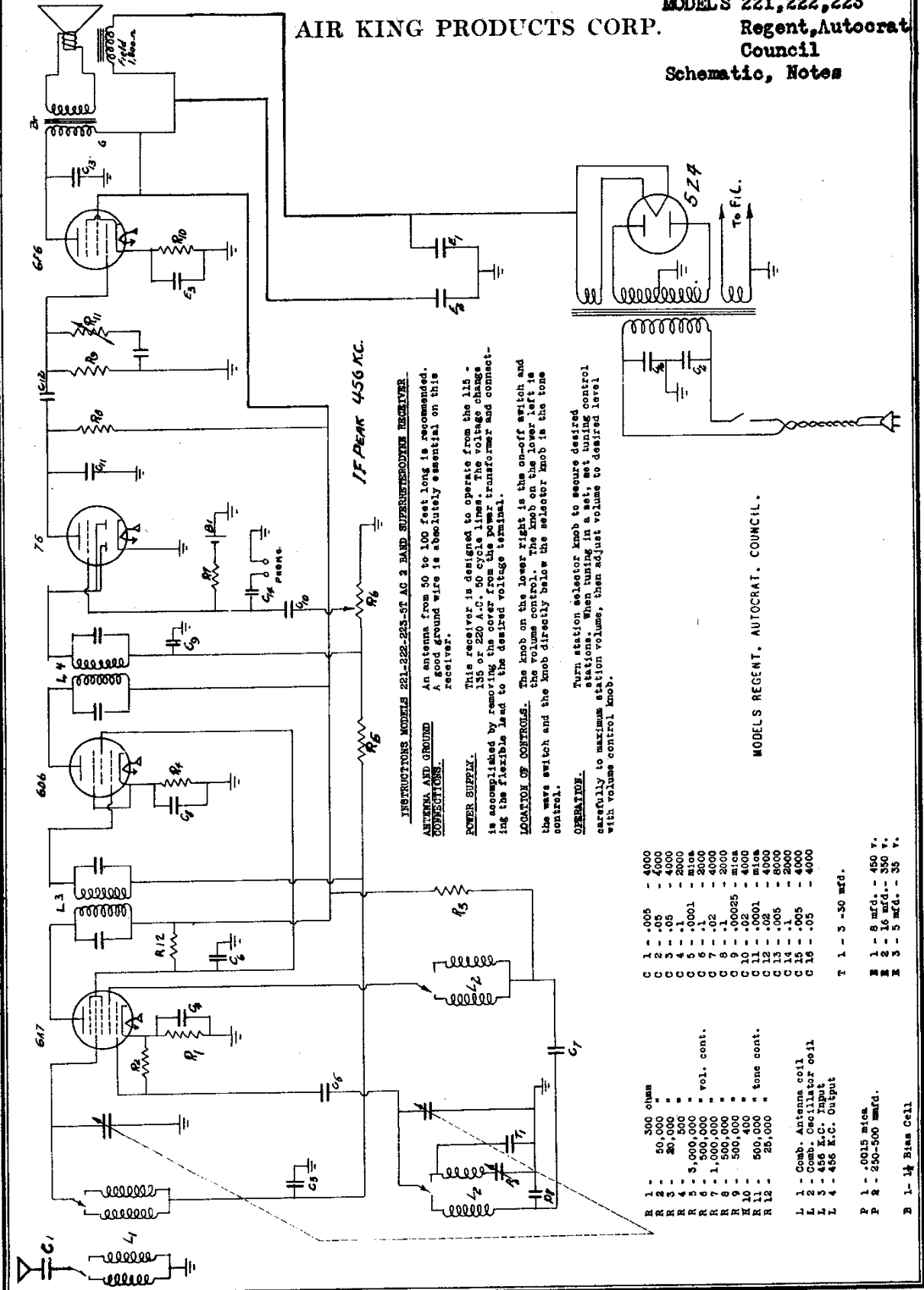
105-125 volts, 50-60 cycles AC or DC

The frequency range covered is 540-1750 kilocycles.

**CAUTION - Do Not Connect Ground Wire to Chassis.**

AIR KING PRODUCTS CORP.

MODELS 221, 222, 223  
Regent, Autocrat  
Council  
Schematic, Notes



**INSTRUCTIONS MODELS 221-222-223-5F AC 2 BAND SUPERHETERODYNE RECEIVER -**  
**ANTENNA AND GROUND**  
 An antenna from 50 to 100 feet long is recommended. Ground wire is absolutely essential on this receiver.

**POWER SUPPLY.**  
 This receiver is designed to operate from the 115 - 135 or 220 A.C. 50 cycle lines. The voltage change is accomplished by removing the cover from the power transformer and connecting the flexible lead to the desired voltage terminal.

**LOCATION OF CONTROLS.**  
 The knob on the lower right is the on-off switch and the volume control. The knob on the lower left is the wave switch and the knob directly below the selector knob is the tone control.

**OPERATION.**  
 Turn station selector knob to secure desired stations. When tuning in a set, set tuning control carefully to maximum station volume, then adjust volume to desired level with volume control knob.

- |      |        |      |
|------|--------|------|
| C 1  | .005   | 4000 |
| C 2  | .05    | 4000 |
| C 3  | .1     | 2000 |
| C 4  | .1     | 2000 |
| C 5  | .0001  | 2000 |
| C 6  | .1     | 2000 |
| C 7  | .02    | 4000 |
| C 8  | .1     | 2000 |
| C 9  | .00025 | 2000 |
| C 10 | .02    | 4000 |
| C 11 | .0001  | 2000 |
| C 12 | .005   | 2000 |
| C 13 | .005   | 2000 |
| C 14 | .1     | 2000 |
| C 15 | .005   | 4000 |
| C 16 | .05    | 4000 |
- T 1 - 3 - 30 mfd.
- |      |           |
|------|-----------|
| R 1  | 300 ohms  |
| R 2  | 50,000    |
| R 3  | 20,000    |
| R 4  | 100,000   |
| R 5  | 5,000,000 |
| R 6  | 500,000   |
| R 7  | 1,000,000 |
| R 8  | 500,000   |
| R 9  | 500,000   |
| R 10 | 400       |
| R 11 | 500,000   |
| R 12 | 25,000    |
- L 1 - Comb. Antenna coil  
 L 2 - Comb. Oscillator coil  
 L 3 - 456 K.C. Input  
 L 4 - 456 K.C. Output
- P 1 - .0015 mica  
 P 2 - 250-500 mmfd.  
 B 1 - 1/4 Bias Cell

MODELS REGENT, AUTOCRAT, COUNCIL.



## PARTS LIST AND DESCRIPTIONS

### TUBES

ITEM No.	USE	REPLACEMENT DATA			RMA BASE TYPE	INSTALLATION NOTES
		AIR KING PART No.	STANDARD REPLACEMENT			
1	Converter	1427	1427	8AL		
2	IP Amp.	7C7	7C7	8V		
3	Det.-AVC-AF	1466	1466	8W		
4	Power Output	50L6GT	50L6GT	7AC		
5	Rectifier	35Y4	35Y4	6AL		

### 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
	CAP.	VOLT	AIR KING PART No.	MALLORY PART No.	SOLAR PART No.	SPRAGUE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	
6A	.40	150	2069-C	2069-C	2069-C	2069-C	2069-C	2069-C	Filter - Red
B	.40	150							Blue
C	.75	85							Yellow
7	.05	400		4C25		TC-25	4C25	4C25	Line Filter
8A	.05	400		TP426	8-4-06	TC-15	484-.06	DT452	50L6 Plate bypass*
B	.05	400		TP426	8-4-06	TC-12	484-.06	DT452	" " " "
9	.05	400		TP426	8-4-06	TC-15	484-.06	DT455	" " " "
10	.05	400		TP426	8-4-06	TC-11	484-.06	DT451	Audio Coupling
11	.05	400		TP426	8-4-06	TC-22	584-.06	DT452	RF Bypass Fwr. Supp.
12	.05	400		TP426	8-4-06	TC-16	484-.06	DT452	AVC Filter
13	.05	400		TP426	8-4-06	TC-25	484-.06	DT452	Ant. Coupling
14A	.05	400		TP426	8-4-06	TC-25	484-.06	DT452	Audio Plate Bypass†
B	.05	400		TP426	8-4-06	TC-25	484-.06	DT452	" " " "
15	.05	400		TP426	8-4-06	TC-25	484-.06	DT452	RF Bypass Vol. Cont.
16	.05	400		TP426	8-4-06	TC-25	484-.06	DT452	Osc. Grid Cap.

† Used in initial production  
\* used in later models

### CONTROLS

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES
	RESISTANCE	WATTS	AIR KING PART No.	MALLORY PART No.	IRC PART No.	CLAROSTAT PART No.	
17A	500K	1	2467	NR48	D13-153	N-60-2	Volume Control Attach to 17A per instructions
B	Shaft		Not Req.	Not Req.		Not Req.	
C	Switch				41	2W-A	

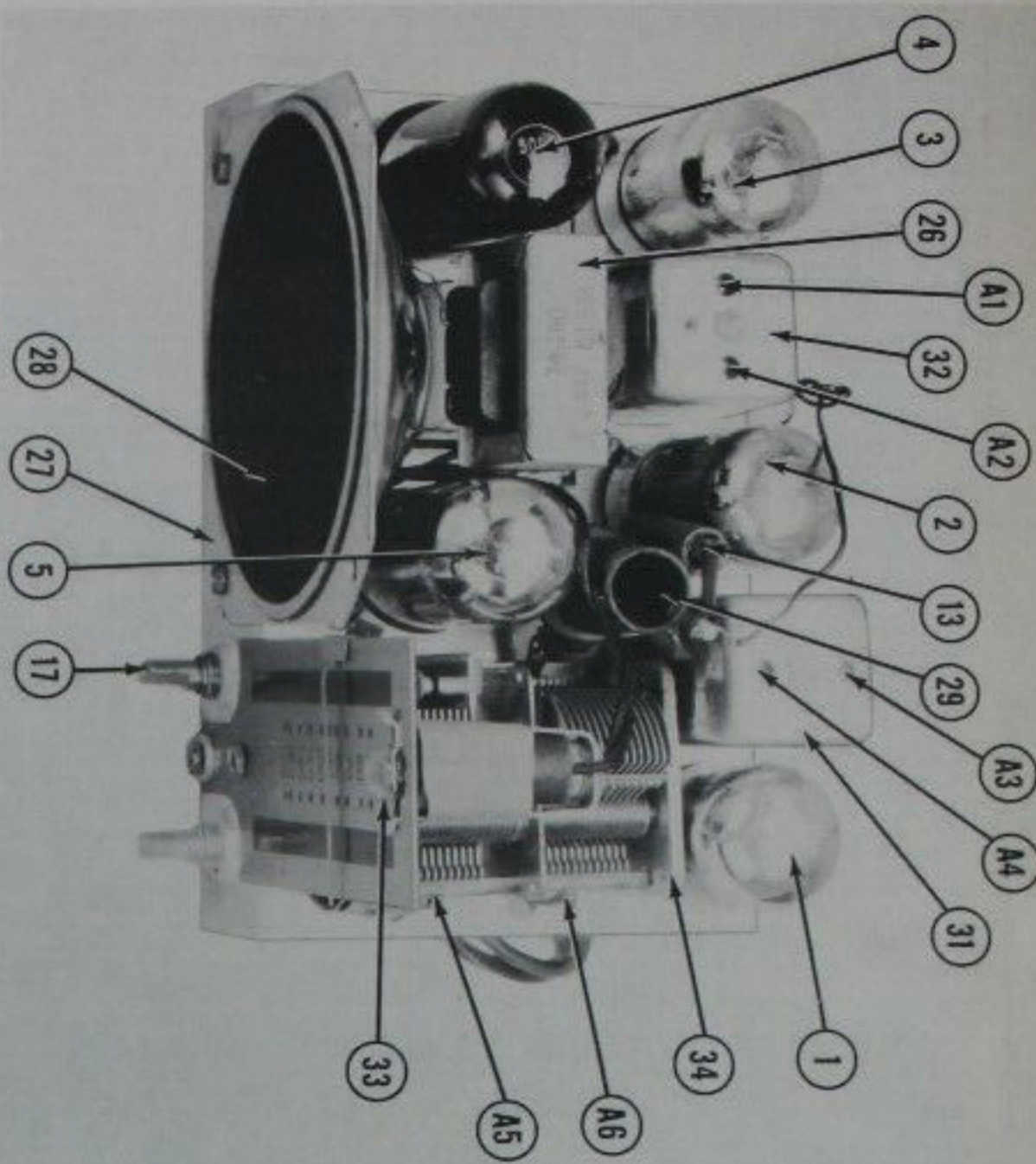
### RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	AIR KING PART No.	IRC PART No.	
18	250K	1/2		BTS-25K	Red-Red-Or. Osc. Grid
19	2.2 Meg.	1/2		BTS-2.2 Meg.	Red-Red-Grn. AVC Network
20	10 Meg.	1/2		BTS-10 Meg.	Br.-Blk.-Blue 1st AF Grid
21	270K	1/2		BTS-270K	Red-Vl.-Yl. 1st AF Plate Load
22	470K	1/2		BTS-470K	Yl.-Vl.-Yl. Output Grid
23	150K	1/2		SW-1-150	Br.-Grn.-Dr. Output Cathode
24	220K	1/2		ST-2-220K	Red-Red-Red Filter
25	25K	1/2		SW-1-25K	Red-Red-Blk. Rectifier Ballast

### TRANSFORMER (OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA			INSTALLATION NOTES
	IMPEDANCE	DC RES.	PRI.	SEC.	AIR KING PART No.	STANCOR PART No.	THORDAR'N PART No.	
26	2000Ω	2.99	144Ω	.54Ω	Part of 6677	A-3-7934	T-145824	Wound mounting tabs down, file slots and mount on original bracket.

## CHASSIS—TOP VIEW



## PARTS LIST AND DESCRIPTIONS (Continued)

### SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA		INSTALLATION NOTES
	FIELD	VC IMP.	AIR KING PART No.	JENSEN PART No.	
27	PH	2.9K	5867	ST-113	
28	3-15/16"	1/2"	NOT READILY REPLACEABLE—USE COMPLETE SPEAKER UNIT.		

### R F COILS

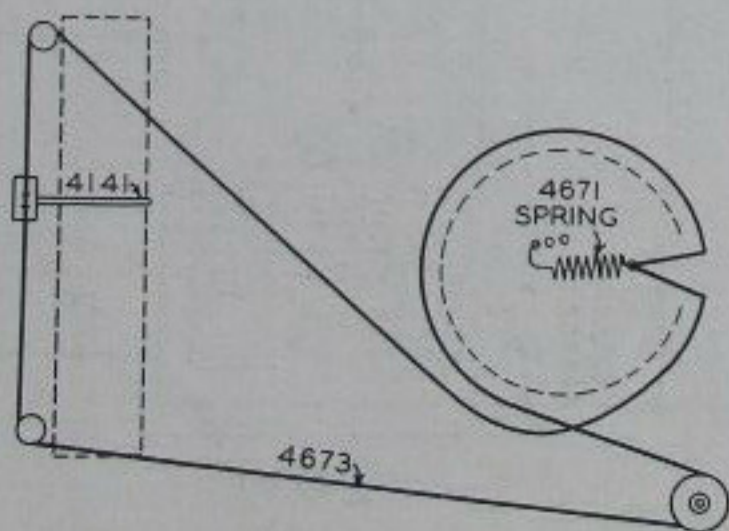
ITEM No.	USE	DC RES.		REPLACEMENT DATA		INSTALLATION NOTES
		PRI.	SEC.	AIR KING PART No.	MEISSNER PART No.	
29	Ant. Coil	60Ω	5Ω			
30	Osc. Coil	4.5Ω				
31	Input IF	11.5Ω	12Ω	3364-A	16-6626	
32	Output IF	11.5Ω	11.5Ω	3365-A	16-6627	

### DIAL LIGHT

ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		INSTALLATION NOTES
					AIR KING PART No.		
33	Bayonet	6-8	0.15	brown	4925		Type 47

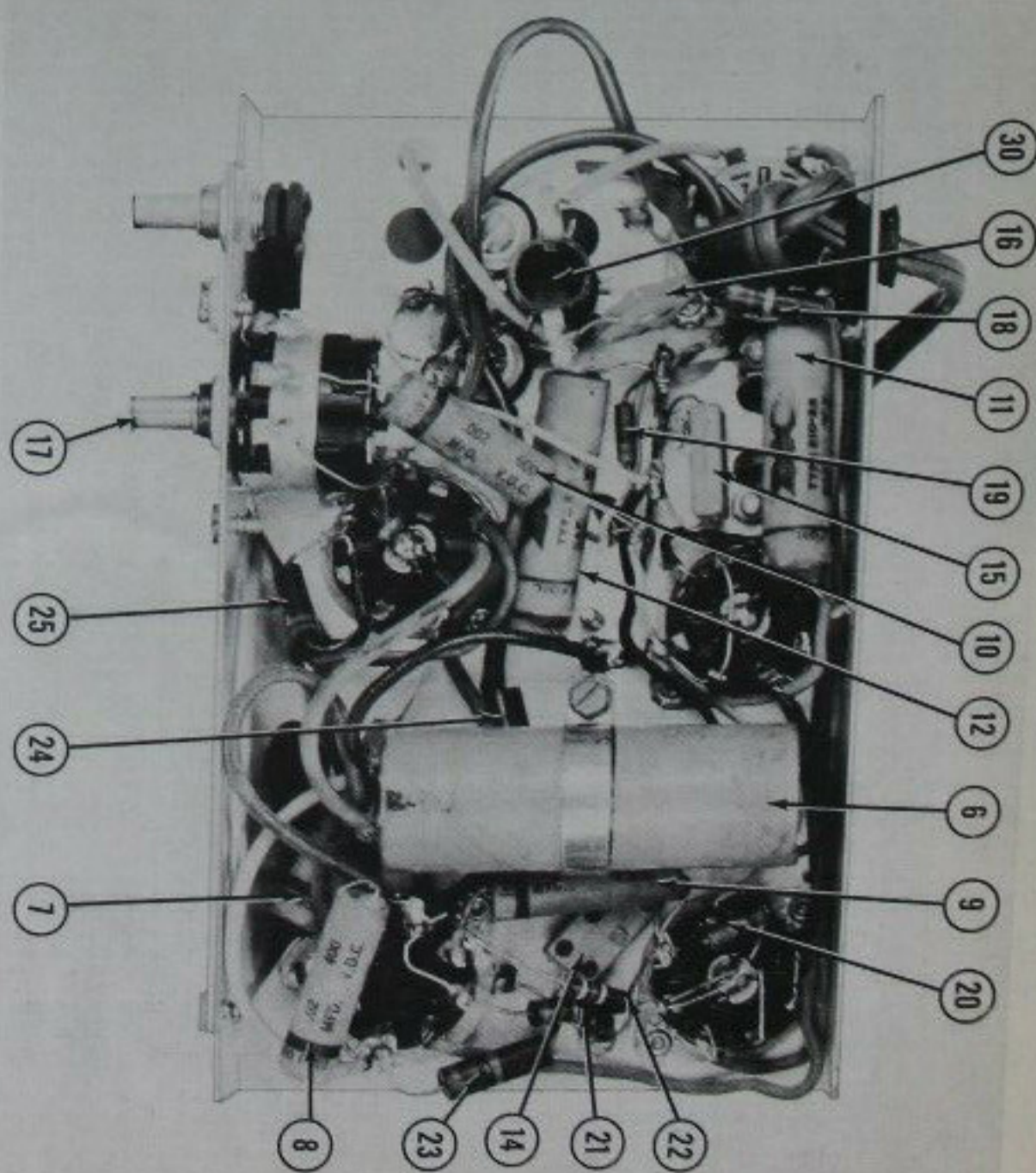
### MISCELLANEOUS

ITEM No.	PART NAME	AIR KING PART No.	NOTES
34	Tuning Cap. Cabinet	1662-D	2 Gang Variable Cap.
	Knobs	8001	Walnut or Ivory
	Dial	3812B	Volume and Tuning
	Antenna Hook	4011D-A	Calibration and Plate
		5680-A	

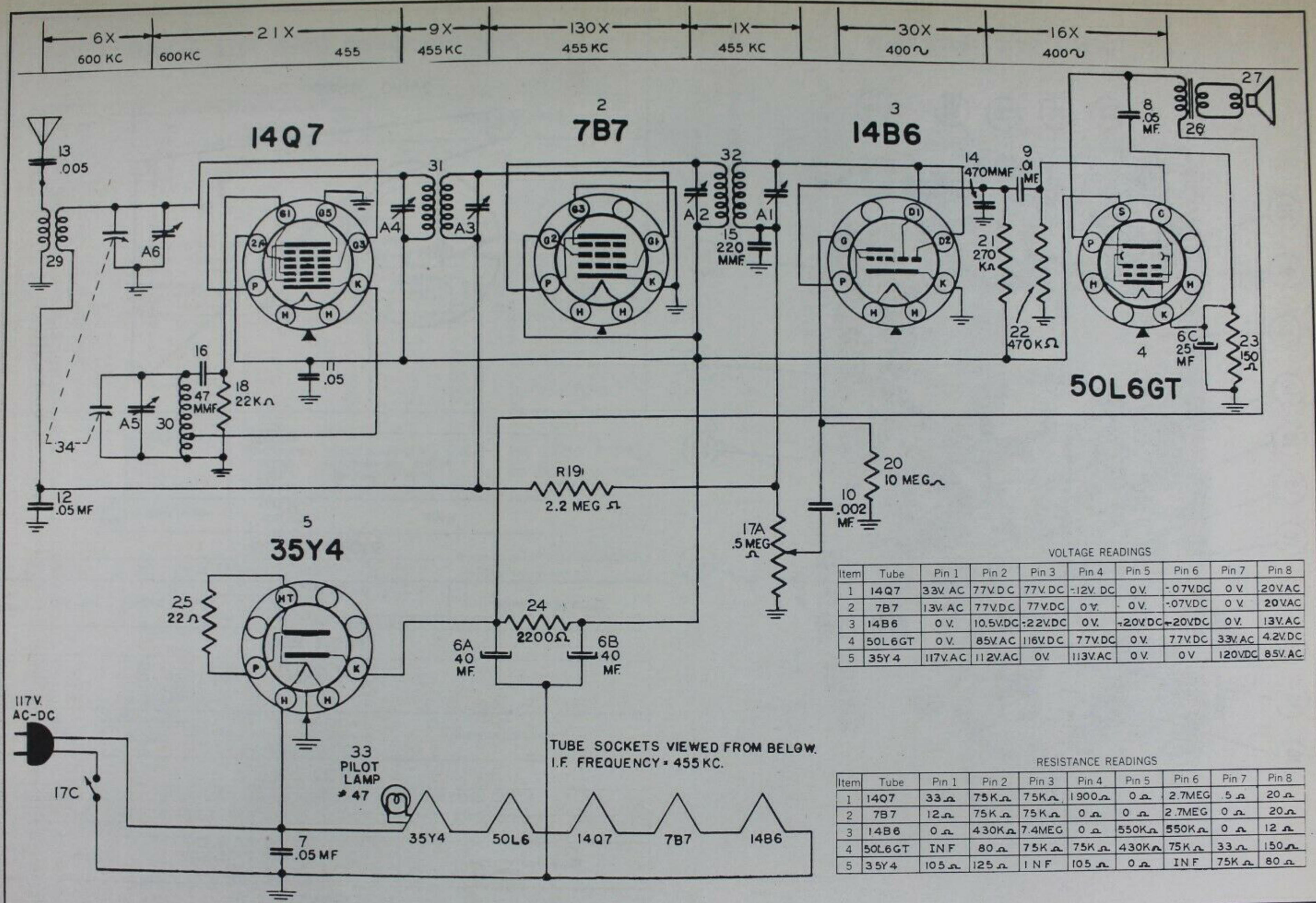


DIAL CORD DRIVE

## CHASSIS—BOTTOM VIEW







VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
1	14Q7	33V. AC	77V. DC	77V. DC	-12V. DC	0V.	-07V. DC	0V.	20V. AC
2	7B7	13V. AC	77V. DC	77V. DC	0V.	0V.	-07V. DC	0V.	20V. AC
3	14B6	0V.	10.5V. DC	+22V. DC	0V.	+20V. DC	+20V. DC	0V.	13V. AC
4	50L6GT	0V.	85V. AC	116V. DC	77V. DC	0V.	77V. DC	33V. AC	4.2V. DC
5	35Y4	117V. AC	112V. AC	0V.	113V. AC	0V.	0V.	120V. DC	85V. AC

RESISTANCE READINGS

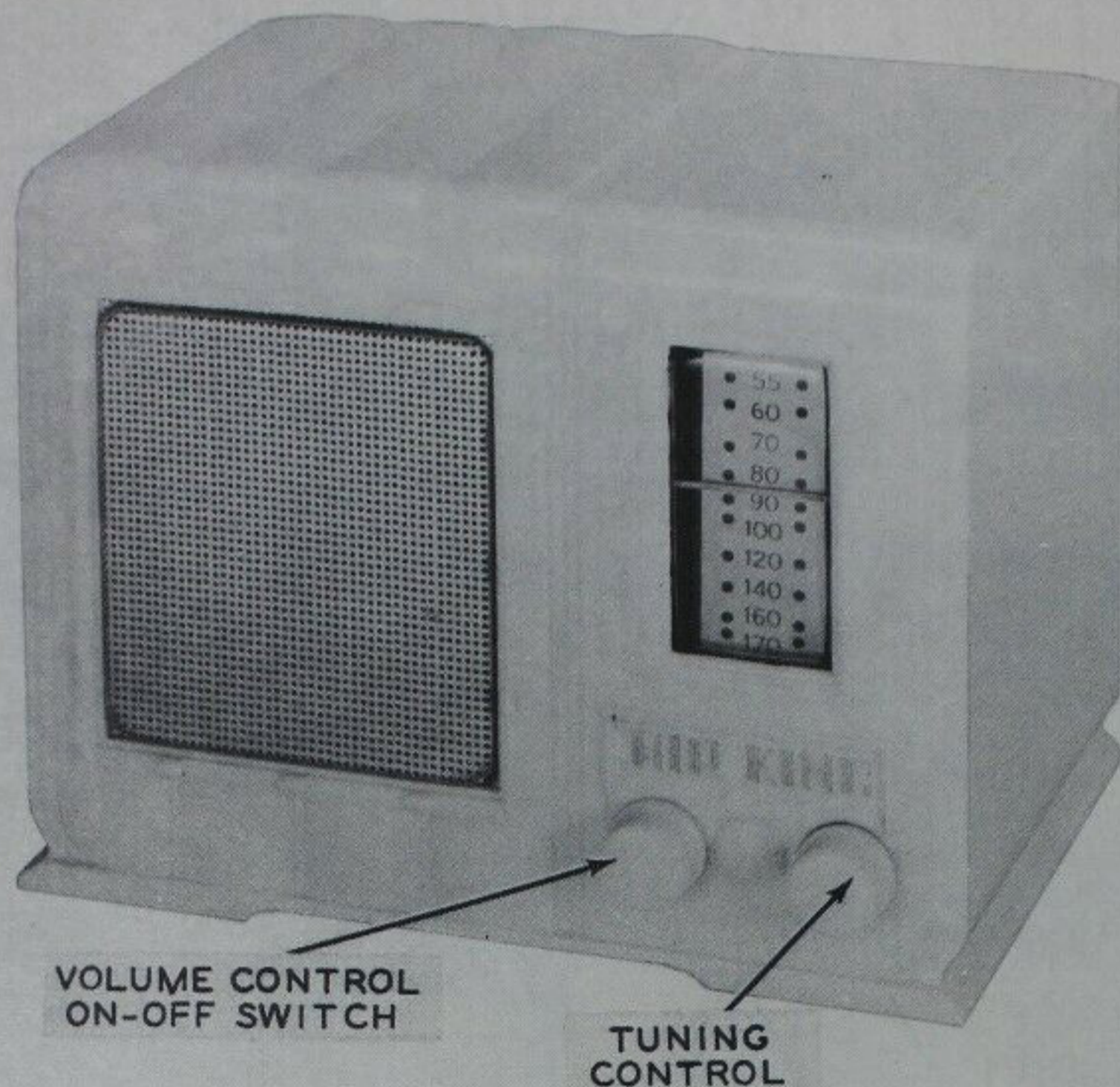
Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
1	14Q7	33Ω	75KΩ	75KΩ	1900Ω	0Ω	2.7MEG	.5Ω	20Ω
2	7B7	12Ω	75KΩ	75KΩ	0Ω	0Ω	2.7MEG	0Ω	20Ω
3	14B6	0Ω	430KΩ	7.4MEG	0Ω	550KΩ	550KΩ	0Ω	12Ω
4	50L6GT	INF	80Ω	75KΩ	75KΩ	430KΩ	75KΩ	33Ω	150Ω
5	35Y4	105Ω	125Ω	INF	105Ω	0Ω	INF	75KΩ	80Ω

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.

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. 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 + 10% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.



AIR KING  
MODELS 4607, 4608



AIR KING  
MODELS 4607, 4608

AIR KING MODEL 4608

TRADE NAME Air King Models 4607, 4608  
 MANUFACTURER Air King Products Co., Inc., 1523 63rd Street, Brooklyn 19, N.Y.  
 TYPE SET AC - DC Superheterodyne  
 TUBES (FIVE) Types, 14Q7 Converter, 7B7 IF Amp., 14B6 Det.-AVC-AF, 50L6G1 Power Output, 35Y4 Rectifier.

POWER SUPPLY 110-125 Volts AC-DC Rating .225 Amps. @ 117 V AC  
 TUNING RANGE—BROADCAST 540-1720KC SHORT WAVE

ALIGNMENT INSTRUCTIONS

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
.05 MFD	High side to pin #8 (grid) of 14Q7. Low side to chassis.	455KC	Point of no interfering signal.	Across voice coil	A1,A2 A3,A4.	Adjust for maximum output. Use isolation transformer if available. If not, connect isolation capacitor in series with ground lead and decrease dummy antenna to .001 MFD to prevent excessive hum modulation.
200 MMFD	High side to ant. lead. Low side to B-.	1600KC	1600KC	"	A5	Adjust for maximum output. Use isolation transformer or capacitor in ground lead.
"	"	1400KC	1400KC	"	A6	"

Volume control at maximum volume and output from signal generator no higher than is necessary to obtain output reading. Use insulated alignment screwdriver for adjusting.

HOWARD W. SAMS & CO., INC. • 2924 East Washington Street • Indianapolis 6, Indiana

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