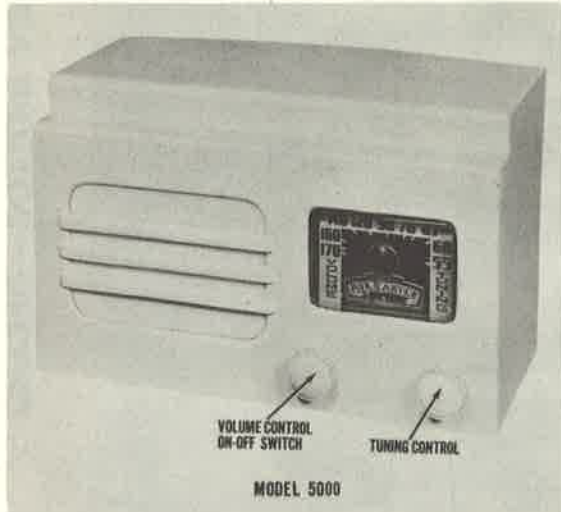


**AIRCASTLE
MODELS 5000, 5001**



**AIRCASTLE
MODELS 5000, 5001**

TRADE NAME Aircastle, Models 5000, 5001
SUPPLIER Spiegel, Inc., 1061 W. 35th St., Chicago, Ill.
TYPE SET AC-DC Superheterodyne Receiver-Self Contained Loop Antenna
TUBES (FIVE) Types, 12SA7GT Converter, 12BA6 or 12SK7GT IF Amp., 12AT6 or 12SQ7GT Det.-AVC-AF, 50L6GT Power Output, 35W4 or 35Z5GT Rectifier.

POWER SUPPLY 110-120 Volts AC
TUNING RANGE—BROADCAST 540-1720KC **RATING** .230 Amp. @ 117 Volts AC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

To set pointer, turn variable fully closed and set pointer at last reference mark at low frequency end of dial. Use isolation transformer if available. If not, connect a capacitor in series with low side of signal generator and B-. Volume control should be at maximum volume and output of signal generator no higher than is necessary to obtain output 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 stator of rear section of variable. Low side to B-.	455KC	High frequency end.	Across voice coil	A1,A2, A3,A4.	Adjust for maximum output. If isolation transformer is not used reduce dummy ant. to .001 to reduce hum modulation.
.1 MFD.	"	1720KC	"	"	A5	"
200MMFD.	High side to external ant. lead. Low side to B-.	1400KC	Tune for maximum output.	"	A6	Adjust for maximum output.

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

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PARTS LIST AND DESCRIPTIONS

AIRCATTLE
MODELS 500G, 500I

CHASSIS—TOP VIEW

TUBES

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	INSTALLATION NOTES
		AIRCATTLE PART No.	STANDARD REPLACEMENT		
1	Converter	12SA7GT	12SA7GT	8AD	
2A	IF Amp.	12BA6	12BA6	7BK	
B	IF Amp.	12SK7GT	12SK7GT	8N	
3A	Det.-AVC-AF	12AT6	12AT6	7BT	
B	Det.-AVC-AF	12SQ7GT	12SQ7GT	8Q	
4	Power Output	50L6GT	50L6GT	7AC	
5A	Rectifier	35W4	35W4	5BQ	
B	Rectifier	35Z5GT	35Z5GT	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 AND INSTALLATION NOTES	
			AIRCATTLE PART No.	SPRAGUE PART No.	AEROVOX PART No.	CORNFELT DUBILIER PART No.	MALLORY PART No.		SOLAR PART No.
	CAP.	VOLT							
6A	40	150	EC-3	TA-240	FR5A150-40	BRD4215	2N514	M-2x40-150	Filter - Red
B	20	150							" - White
7	.05	400	PC-5	TC-15	484-05	DT485	TP426	S-4-05	Line Filter
8	.01	400	PC-7	TC-11	484-01	DT481	TP421	S-4-01	Output Plate Bypass
9	.01	400	PC-7	TC-11	484-01	DT481	TP421	S-4-01	Audio Coupling
10	.01	400	PC-7	TC-11	484-01	DT481	TP421	S-4-01	"
11	.05	400	PC-5	TC-15	484-05	DT485	TP426	S-4-05	AVC Filter
12	.1	400	PC-9	TC-1	484-1	DT4P1	TP428	S-4-1	Line Isolation
13	.01	400	PC-7	TC-11	484-01	DT481	TP421	S-4-01	Ant. Coupling
14	200	500		1FM-32	1468-0002	5W5T2	MC237	MO.5-32	Audio Plate Bypass
15	220	500		1FM-32	1468-0002	5W5T2	MC237	MO.5-32	IF Bypass Diode
16	47	500		1FM-45	1468-00005	5W5Q5	MC225	MO.5-45	Osc. Grid Capacitor

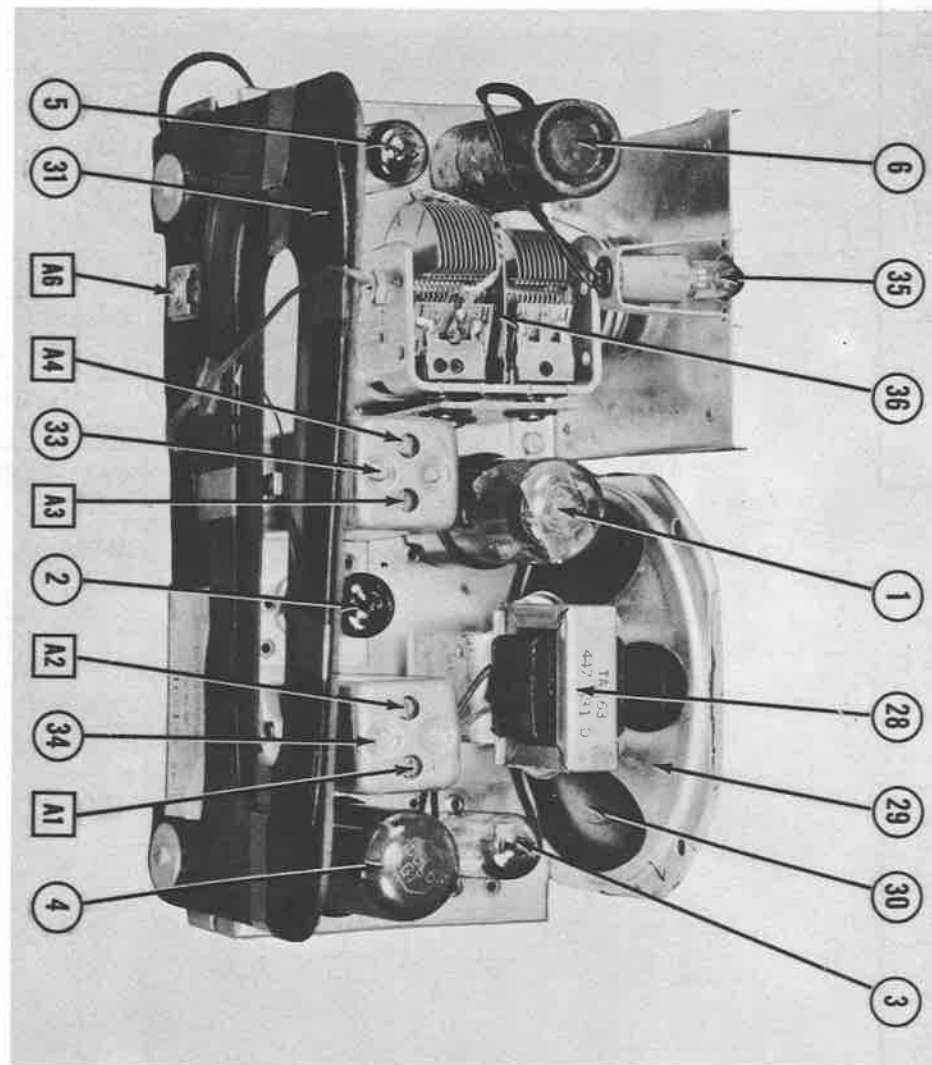
CONTROLS

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES
			AIRCATTLE PART No.	MALLORY PART No.	IRC PART No.	CLAROSTAT PART No.	
	RESISTANCE	WATTS					
17A	500K Ω	1		MR48	D13-133	M-60-Z	Volume Control-See Note 1
B	Shaft			Not Req.	A	Not Req.	Attach to 17A per instructions
C	Switch			M26	41	SW-A	
17A	1 Meg.	1		MR53	D13-137	M-63-Z	Volume Control-See Note 2
B	Shaft			Not Req.	A	Not Req.	Attach to 17A per instructions
C	Switch			M26	41	SW-A	
17A	500K Ω	1		MK401	D13-133	AM-60-Z	Volume Control - See Note 3
B	Shaft			Not Req.	E	KSS-3	Attach to 17A per instructions
C	Switch			M26	41	SW-A	
17A	1 Meg.	1		MK402	D13-137	AM-63-Z	Volume Control - See Note 4
B	Shaft			Not Req.	E	KSS-3	Attach to 17A per instructions
C	Switch			M26	41	SW-A	

Note 1-Used in later production when original has plain shaft.
 Note 2-Used in early production when original has plain shaft.
 Note 3-Used in later production when original has knurled shaft.
 Note 4-Used in early production when original has knurled shaft.

RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
			AIRCATTLE PART No.	IRC PART No.	
	RESISTANCE	WATTS			
18	33K Ω	$\frac{1}{2}$	IR-16	BTS-33K	Or.-Or.-Or. Oscillator Grid
19	2 Meg.	$\frac{1}{2}$	IR-13	BTS-2.2 Meg.	Red-Blk.-Grn. AVC Network
20	2 Meg.	$\frac{1}{2}$	IR-13	BTS-2.2 Meg.	Red-Blk.-Grn. AF Grid
21	470K Ω	$\frac{1}{2}$	IR-11	BTS-470K	Yl.-Vl.-Yl. AF Plate Load
22	470K Ω	$\frac{1}{2}$	IR-11	BTS-470K	Yl.-Vl.-Yl. Output Grid
23	150 Ω	$\frac{1}{2}$	IR-14	BW- $\frac{1}{2}$ -150	Br.-Grn.-Br. Output Cathode
24	1800 Ω	1		BTA-1800	Br.-Gray-Red Filter
25	47 Ω	$\frac{1}{2}$	IR-4	BW- $\frac{1}{2}$ -47	Yl.-Vl.-Blk. Rectifier Ballast
26	91 Ω	$\frac{1}{2}$		BW- $\frac{1}{2}$ -100	White-Br.-Blk. IF Cathode
27	50K Ω	$\frac{1}{2}$		BTS-47K	Grn.-Blk.-Or. Diode RF Filter



PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA			INSTALLATION NOTES
	IMPEDANCE		DC RES.		AIRCASTE PART No.	STANCOR PART No.	THORDAR'N PART No.	
	PRI.	SEC.	PRI.	SEC.				
28	2040Ω	2.8Ω	150Ω	.6Ω	Part of SPK-4	A-3876*	T22845*	*Bend mounting tabs down, file out slots and mount on original bracket.

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA		INSTALLATION NOTES
	FIELD	VC IMP.	AIRCASTE PART No.	JENSEN PART No.	
29	PM	2.8Ω	SPK-4	SP-105† Mod. P5-X	†Cut 3/8" from flange to clear dial.
30	4-9/16" CONE DIA.	1/2" VC DIA.	NOT READILY REPLACEABLE—USE COMPLETE SPEAKER UNIT.		

R F COILS

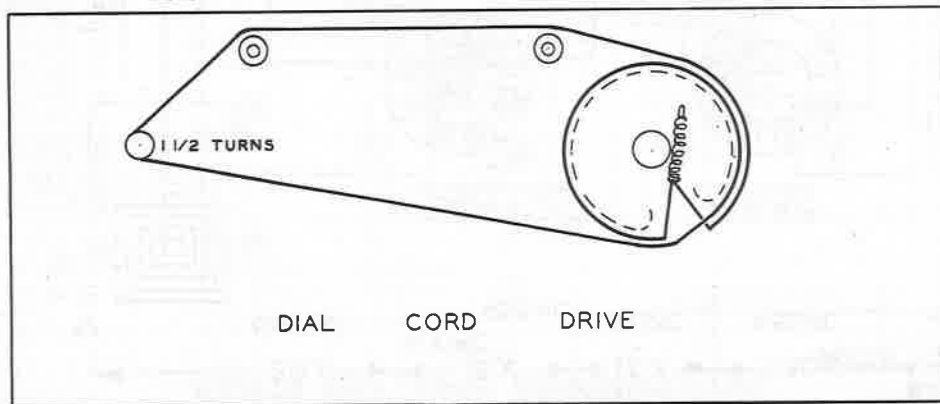
ITEM No.	USE	DC RES.		REPLACEMENT DATA	
		PRI.	SEC.	AIRCASTE PART No.	MEISSNER PART No.
		31	Loop Ant.	.1Ω	1.5Ω
32	Osc. Coil		7.8Ω	LO-2	
33	Input IF	19Ω	19Ω	LI-1	16-6666
34	Output IF	20.5Ω	19Ω	LI-2	16-6667

DIAL LIGHT

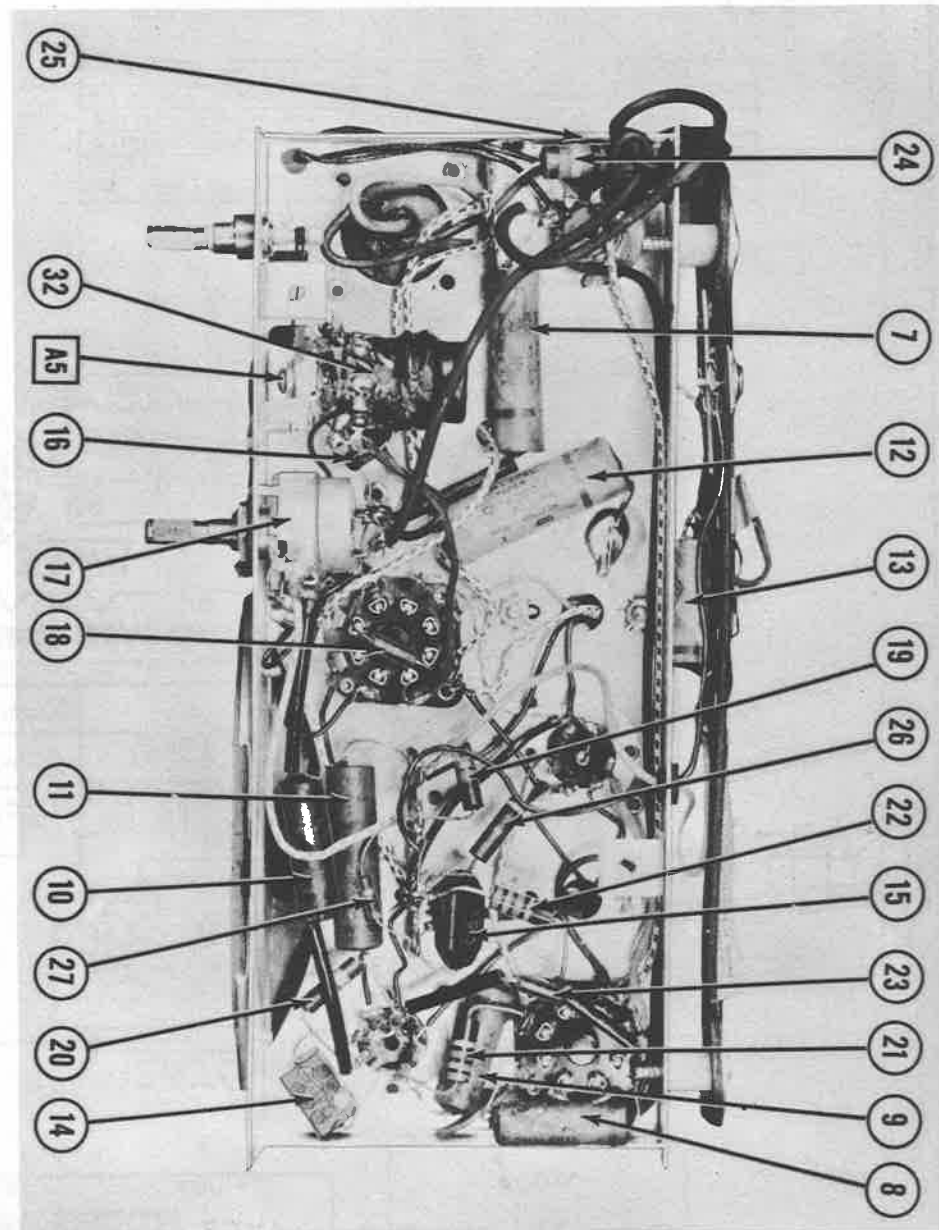
ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		INSTALLATION NOTES
					AIRCASTE PART No.		
35	Bayonet	6-8	0.15	Brown	PB-1		Type 47

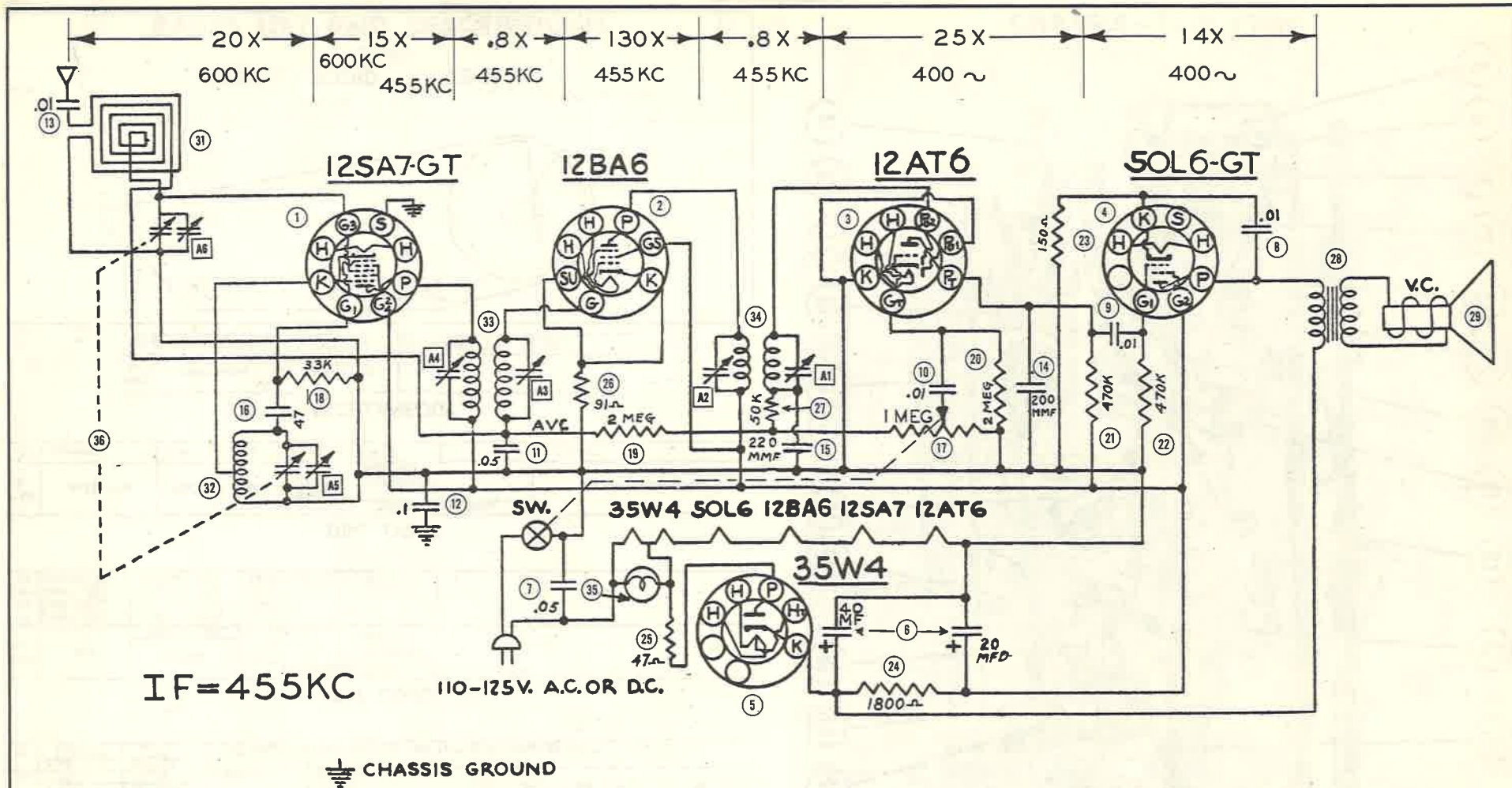
MISCELLANEOUS

ITEM No.	PART NAME	AIRCASTE PART No.	NOTES
36	2 Gang Var. Cap.	GC-2	(8-366MMF, 29-194MMF).



CHASSIS—BOTTOM VIEW





VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
1	12SA7GT	0V.	23V.AC	82V.DC	82V.DC	-3.5V.DC	0V.	12V.AC	-2V.DC
2	12BA6	-2V.DC	0V.	23V.AC	35V.AC	82V.DC	82V.DC	1V.DC	
3	12AT6	-0.8V.DC	0V.	12V.AC	0V.	-5.5V.DC	-55V.DC	35V.DC	
4	50L6GT	0V.	88V.AC	113V.DC	82V.DC	0V.	118V.DC	35V.DC	5.1V.DC
5	35W4	0V.	0V.	88V.AC	117V.AC	108V.AC	113V.AC	118V.DC	

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
1	12SA7GT	0 Ω	22 Ω	400K Ω	400K Ω	32K Ω	5 Ω	12 Ω	2.5MEG
2	12BA6	2.5MEG	0 Ω	22 Ω	34 Ω	400K Ω	400K Ω	90 Ω	
3	12AT6	1.8MEG	0 Ω	12 Ω	0 Ω	490K Ω	490K Ω	870K Ω	
4	50L6GT	1NF.	79 Ω	400K Ω	400K Ω	400K Ω	400K Ω	3.4 Ω	125 Ω
5	35W4	1NF.	1NF.	79 Ω	105 Ω	145 Ω	103 Ω	400K Ω	

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

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

476-2

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.

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