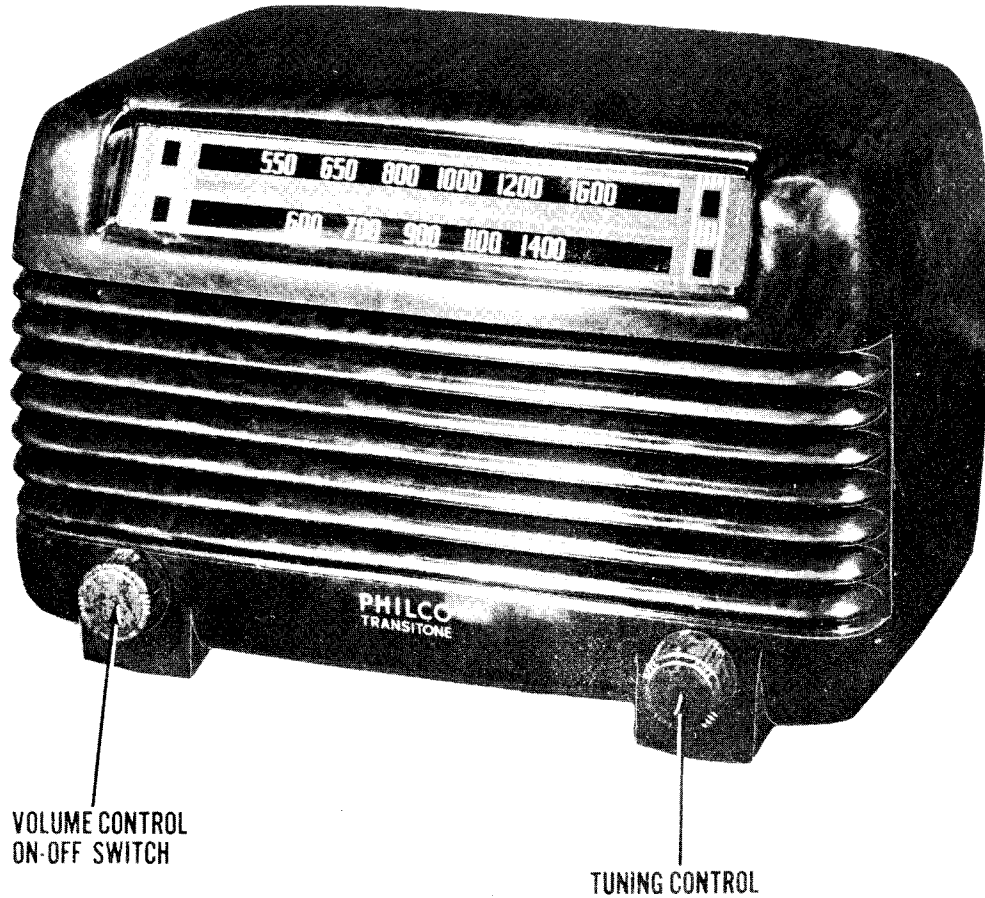


**PHOTOFACT\*** Folder  
TRADE MARK

**PHILCO MODEL  
 49-504, 49-504-I**

**PHILCO MODEL  
 49-504, 49-504-I**



**PHILCO MODEL  
 49-504, 49-504-I**

PHILCO MODEL 49-504

TRADE NAME	Philco, Models 49-504, 49-504-I		
MANUFACTURER	Philco Corp., Tioga & "C" Sts., Philadelphia, Pa.		
TYPE SET	AC-DC Operated Superheterodyne Receiver with Loop Antenna		
TUBES (FIVE)	Types 7A8 Converter, 14A7 IF Amp., 14B6 Det.-AVC-AF, 50A5 Power Output, 35Z5GT Rectifier		
POWER SUPPLY	105-120 Volts AC-DC		
TUNING RANGE--BROADCAST	540-1620KC	RATING	.22 Amp. @ 117 Volts AC

**ALIGNMENT INSTRUCTIONS--READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT**

Use isolation transformer if available. If not connect a .1 MFD capacitor in series with low side of signal generator and B-.  
 Loop should be maintained in same relative position to chassis as when receiver is in cabinet. 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 Pin 6 (grid) of 7A8. Low side to B-.	455KC	Tuning cap. fully closed.	Across voice coil	A1, A2, A3, A4	Turn A3 completely clockwise. Then adjust A1 thru A4 in order given, for maximum output.
2		Connect loop in cabinet to receiver. Connect sig. gen. to radiation loop.	1600KC	Tuning cap. fully open.	"	A5	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
3		Loop	1500KC	Tune for maximum output.	"	A6	Adjust for maximum output.

**HOWARD W. SAMS & CO., INC. • Indianapolis 7, Indiana**

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 DATE 1/40-#492-17 SET #54-FOLDER #17

# PARTS LIST AND DESCRIPTIONS

## TUBES (SYLVANIA or Equivalent)

PHILCO MODELS  
49-504, 49-504-1

# CHASSIS—TOP VIEW

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	INSTALLATION NOTES
		PHILCO PART No.	STANDARD REPLACEMENT		
1	Converter	7A8	7A8	8U	
2	IF Amplifier	1447	1447	8V	
3	Det.-AVC-AF	14B6	14B6	8M	
4	Power Output	50A5	50A5	6AA	
5	Rectifier	35Z5	35Z5	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
		PHILCO PART No.	AEROVOX PART No.	CORNELL DUBIER PART No.	SPRAGUE PART No.	
6A	30	FRSA150/20-30	FRSA150/20-30	EZ42215	DSB403020-150D10005	Filter-Orange
B	150					Decoupling-Red
C	25					Line Filter
7	.04	434-05	434-05	DT454	ST-6-04	Output Plate Bypass
8	.2					Audio Coupling
9	.02	484-02	484-02	DT452	ST-4-02	AVC Filter
10	.01	484-01	484-01	DT451	ST-4-01	Screen Bypass
11	.01	484-01	484-01	DT451	ST-4-01	Output Grid Bypass-Cer.
12	.05	484-05	484-05	DT285	ST-4-05	Osc. Grid Cap.
13	.05	484-05	484-05	DT285	ST-4-05	EXT. Ant. Coupling-Cer.
14	220	62-122001001	1468-0002	SW572	MO.5-32	
15	47	60-04515307	1468-0005	SW485	MO.5-45	
16	5	60-30618007	1468-00005	SW495	MO.5-55	

## CONTROLS

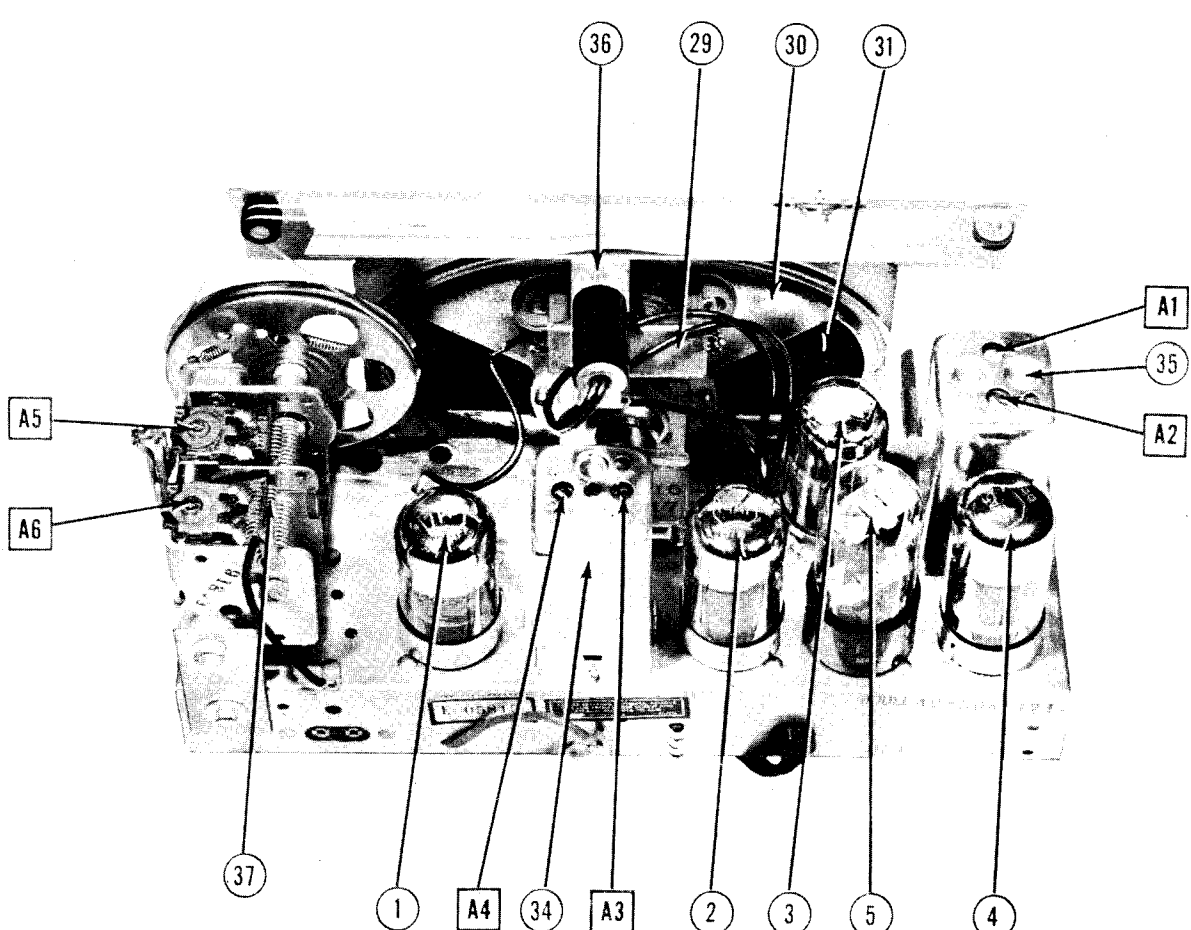
ITEM No.	RATING	REPLACEMENT DATA		INSTALLATION NOTES
		PHILCO PART No.	CLAROSTAT PART No.	
17A	500KΩ	45-5019	M-60-Z	Volume Control
B	Switch	Not Req.	Not Req.	Attach to 17A per instructions
C	Switch	A	SM-A	

## RESISTORS

ITEM No.	RATING	REPLACEMENT DATA		IDENTIFICATION CODES
		PHILCO PART No.	IRC PART No.	
18	150KΩ	66-4153340	BTS-150K	Br.-Grn.-Yl. Antenna Loading
19	100KΩ	66-4102340	BTS-100K	Br.-Blk.-Yl. Osc. Grid
20	27KΩ	66-3272340	BTS-27K	Red-Vl.-Or. Screen Dropping
21	5.5 Meg.	66-5353340	BTS-5.3 Meg.	Or.-Or.-Grn. AF Plate Load
22	470KΩ	66-4472340	BTS-470K	Yl.-Vl.-Yl. Output Grid
23	470KΩ	66-4472340	BTS-470K	Yl.-Vl.-Yl. Output Grid
24	150Ω	66-1123340	BM-2-150	Br.-Red-Br. Filler
25	1200Ω	66-2123340	BW-1-1200	Br.-Red-Br. Filler
26	220Ω	66-1224340	BM-1-220	Br.-Red-Br. Filler
27	150KΩ	66-4153340	BTS-150K	Br.-Grn.-Yl. Line Isolation
28	2.2 Meg.	66-5222340	BTS-2.2 Meg.	Req.-Red-Grn.-AVC Network

## TRANSFORMER (OUTPUT)

ITEM No.	RATING	REPLACEMENT DATA		INSTALLATION NOTES
		PHILCO PART No.	THORDARIN PART No.	
29	IMPEDANCE PRI. SEC. 2000Ω 5.4Ω 180Ω	1615	T22845	
	PRI. SEC. 5.4Ω 180Ω	1615	A-3876	A-2328



# PARTS LIST AND DESCRIPTIONS (Continued)

## SPEAKER

ITEM No.	RATINGS	REPLACEMENT DATA		INSTALLATION NOTES
		PHILCO PART No.	JENSEN PART No.	
30	FIELD VC IMP. 3.4Ω	36-1615		
31	CONE DIA. VC DIA. 4"x8" 9/16"		46A07	

## R F COILS

ITEM No.	USE	DC RES.		REPLACEMENT DATA	
		PRI.	SEC.	PHILCO PART No.	MEISSNER PART No.
32	Loop Ant.	3.5Ω	32-4052-4		
33	Osc. Coil	7.5Ω	32-4263		
34	Input IF	25Ω	32-3568	16-6658	
35	Output IF	22Ω	45-6395	16-6670	

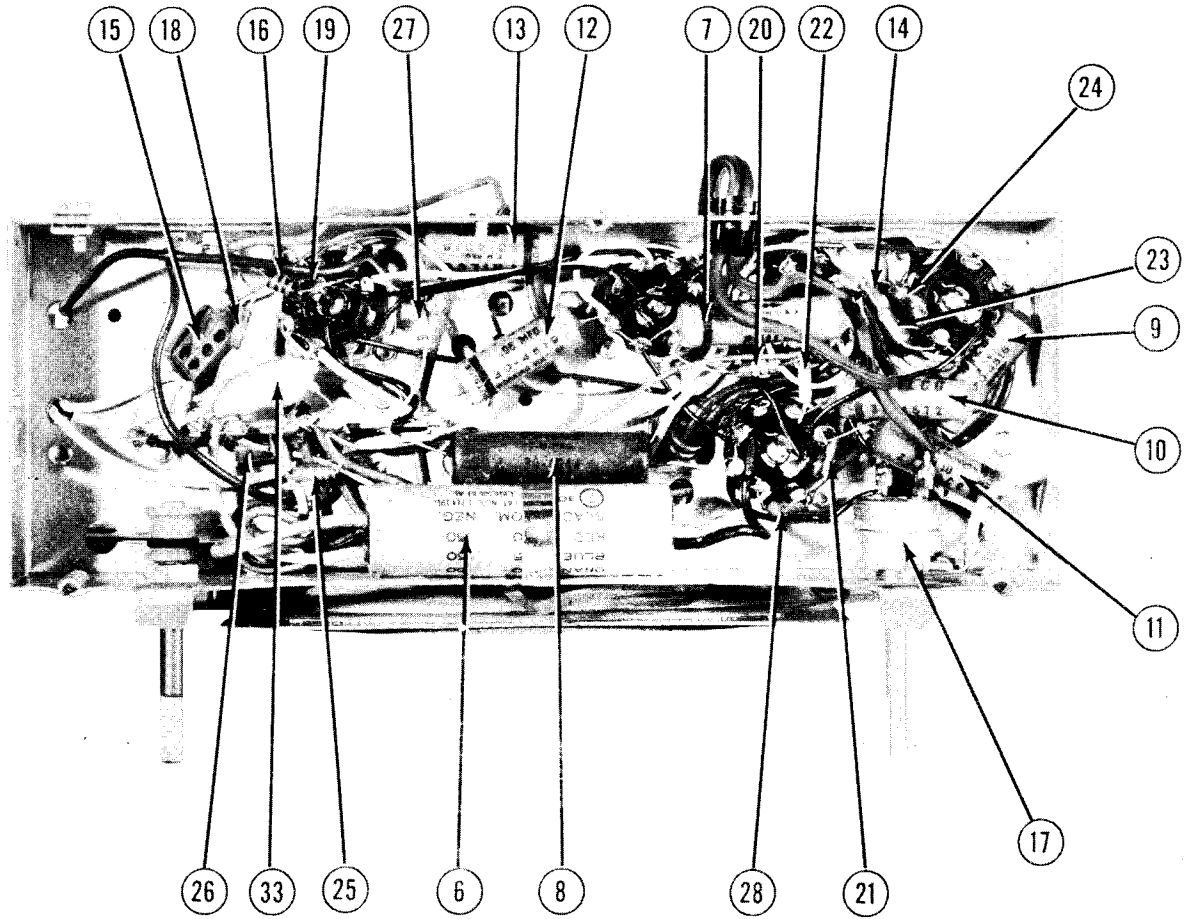
## DIAL LIGHT

ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		INSTALLATION NOTES
					PHILCO PART No.	MEISSNER PART No.	
36	Bayonet	6-8	0.15A	Brown	34-2068		Type 47

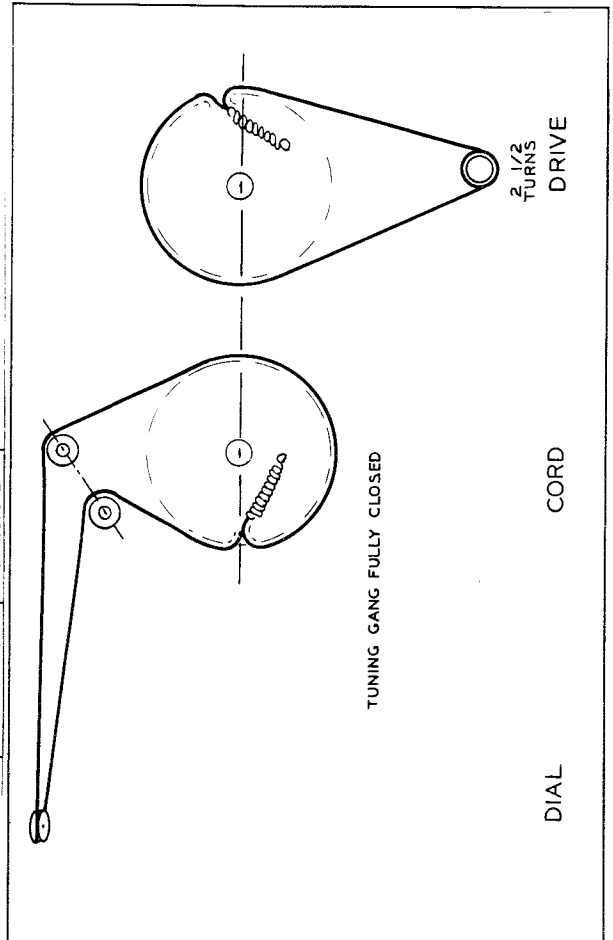
## MISCELLANEOUS

ITEM No.	PART NAME	PHILCO PART No.	NOTES
37	12 Gang Var. Cap Cabinet	31-2527-2 10524P 10524R	(18-49677, 20-17517F) Model 49-504 Model 49-504-I Model 49-504 Model 49-504-I Model 49-504 Model 49-504-I Model 49-504-I
	Knob Assembly	54-4052	
	Dial Scale	27-5907	
	Dial Pointer	27-5908	
		56-2076-1	

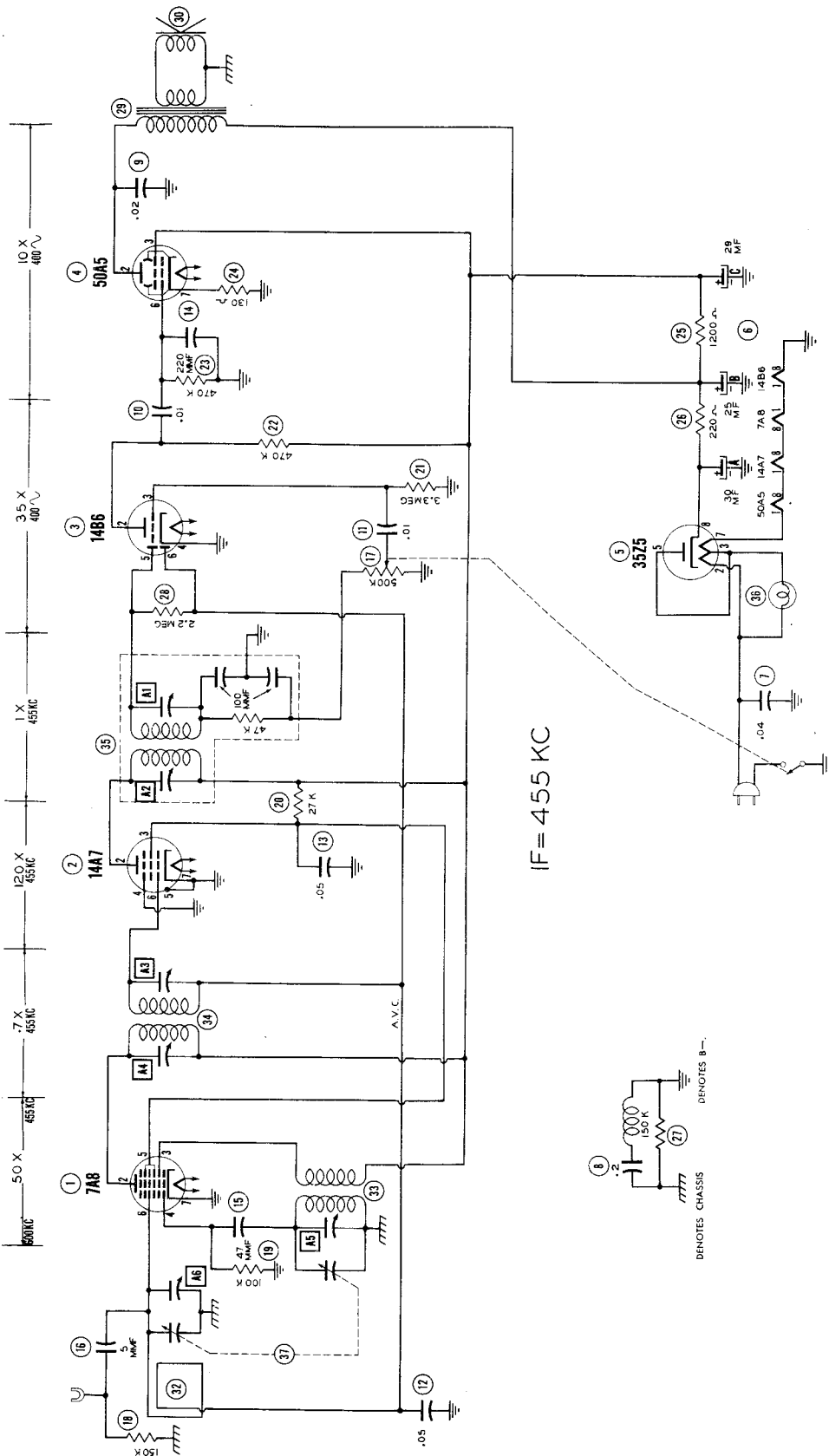
# CHASSIS—BOTTOM VIEW



PHILCO MODELS  
48-504, 49-504-I



PHILCO MODELS  
48-504, 49-504-I



VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
1	7A8	150VAC	50VDC	50VDC	27.4VDC	40VDC	-0.6VDC	0V	1.0VAC
2	14A7	50VAC	50VDC	40VDC	0V	-0.5VDC	0V	0V	1.0VAC
3	14B6	15VAC	15VDC	0V	0V	-0.5VDC	-0.6VDC	0V	0V
4	50A5	85VAC	100VAC	90VAC	0V	0V	0V	0V	0V
5	3575	0V	1.0VAC	1.0VAC	1.0VAC	1.0VAC	0V	0V	1.0VAC

STAKEN WITH VACUUM TUBE VOLTMETER.

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
1	7A8	150K	50K	50K	27.4K	40K	-0.6K	0K	1.0K
2	14A7	50K	50K	40K	0K	-0.5K	0K	0K	1.0K
3	14B6	15K	15K	0K	0K	-0.5K	-0.6K	0K	0K
4	50A5	85K	100K	90K	0K	0K	0K	0K	0K
5	3575	0K	1.0K	1.0K	1.0K	1.0K	0K	0K	1.0K

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

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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. Normal 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.