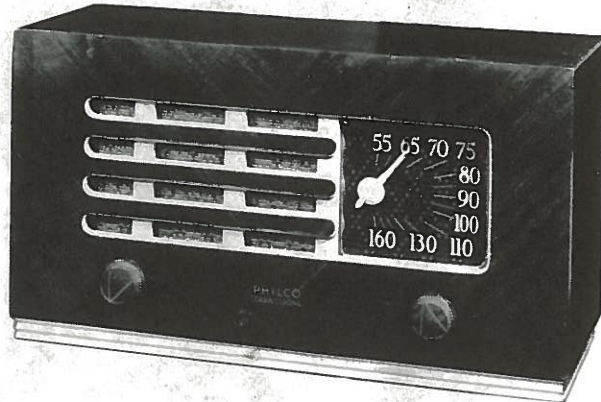


**PHILCO MODELS 48-200,
48-200-I, 48-214**



MODEL 48-200-I



MODEL 48-214

**PHILCO MODELS 48-200,
48-200-I, 48-214**

TRADE NAME	Philco, Models 48-200, 48-200-I, 48-214		
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 or 50L6GT Power Output, 35Z5GT or 35Y4 Rectifier.		
POWER SUPPLY	105-120 Volts AC-DC	RATING	.23 Amp. @ 117 Volts AC
TUNING RANGE—BROADCAST	540-1620KC		

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

To set pointer turn tuning cap. fully closed and set pointer to index dot to left of "55" on dial.
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 rear stator of tuning cap. Low side to B-.	455KC	Tuning cap. fully closed	Across voice coil	A1, A2, A3, A4.	Preset A4 by turning down tight. If isolation trans. is not used reduce dummy ant. to .001 MFD to reduce hum modulation. Adjust A1, A2, A3 and A4 for maximum output.
2	100MMFD	High side to ext. ant. lead. (Disconnect from grounding self-tapping screw) Low side to B-.	1600KC	1600KC	"	A5	Adjust for maximum output.
3	100MMFD	"	1500KC	Tune for maximum output.	"	A6	" " " "

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PARTS LIST AND DESCRIPTIONS

PHILCO MODELS
48-200, 48-200-I, 48-214

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	INSTALLATION NOTES
		PHILCO PART No.	STANDARD REPLACEMENT		
1	Converter	7A5	7A5	8U	
2	IF Amp.	14A7	14A7	8V	
3	Det.-AVC-AF	14B6	14B6	8W	
4A	Power Output	50A5	50A5	6AA	
B	"	50L8GT	50L8GT	7AC	
5A	Rectifier	35Z5GT	35Z5GT	6AD	
B	"	35Y4	35Y4	5AL	

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	PHILCO PART No.	SOLAR PART No.	SPRAGUE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	
6A	30	150	30-2573	DSB-403020-	TA-330	PR8150-30-30	EZ42215	Filter - Or. " - Blue " - Red
B	25	150		150				
C	20	150			UT-201	PR8150-20		
7	.04	400	45-3500-2	MPH-4-05	TC-14	484-04	DT484	Line Filter
8	.02	400	61-0108	S-6-02	TC-12	484-02	DT482	Output Plate Bypass
9	.01	400	61-0120	S-4-01	TC-11	484-01	DT481	Audio Coupling
10	.01	400	61-0120	S-4-01	TC-11	484-01	DT481	"
11	.05	200		S-4-05	TC-15	484-05	DT285	AVC Filter
12	.2	400	30-4644					Line Isolation*
13	.05	200	61-0122	S-4-05	TC-15	484-05	DT285	Screen Bypass
14	220		60-10205307	MO.5-45	LFM-325	1468-00025	5W5T25	Output Grid Bypass-Cer.
15	47		60-00515307	MO.5-45	LFM-45	1468-00005	5W5Q5	Osc. Grid Cap.
16	5		60-90505007	MO.5-55	MG-55	1468-00005	5W5V5	RF Coupling

*Special resonant cap.

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA			INSTALLATION NOTES
	RESISTANCE	WATTS	PHILCO PART No.	IRC PART No.	CLAROSTAT PART No.	
17A	500K Ω	$\frac{1}{2}$	33-5429	D13-133	M-60-Z	Volume Control
B	Shaft		Not Req.	A	Not Req.	" " " "
C	Switch		"	41	SW-A	" " " "

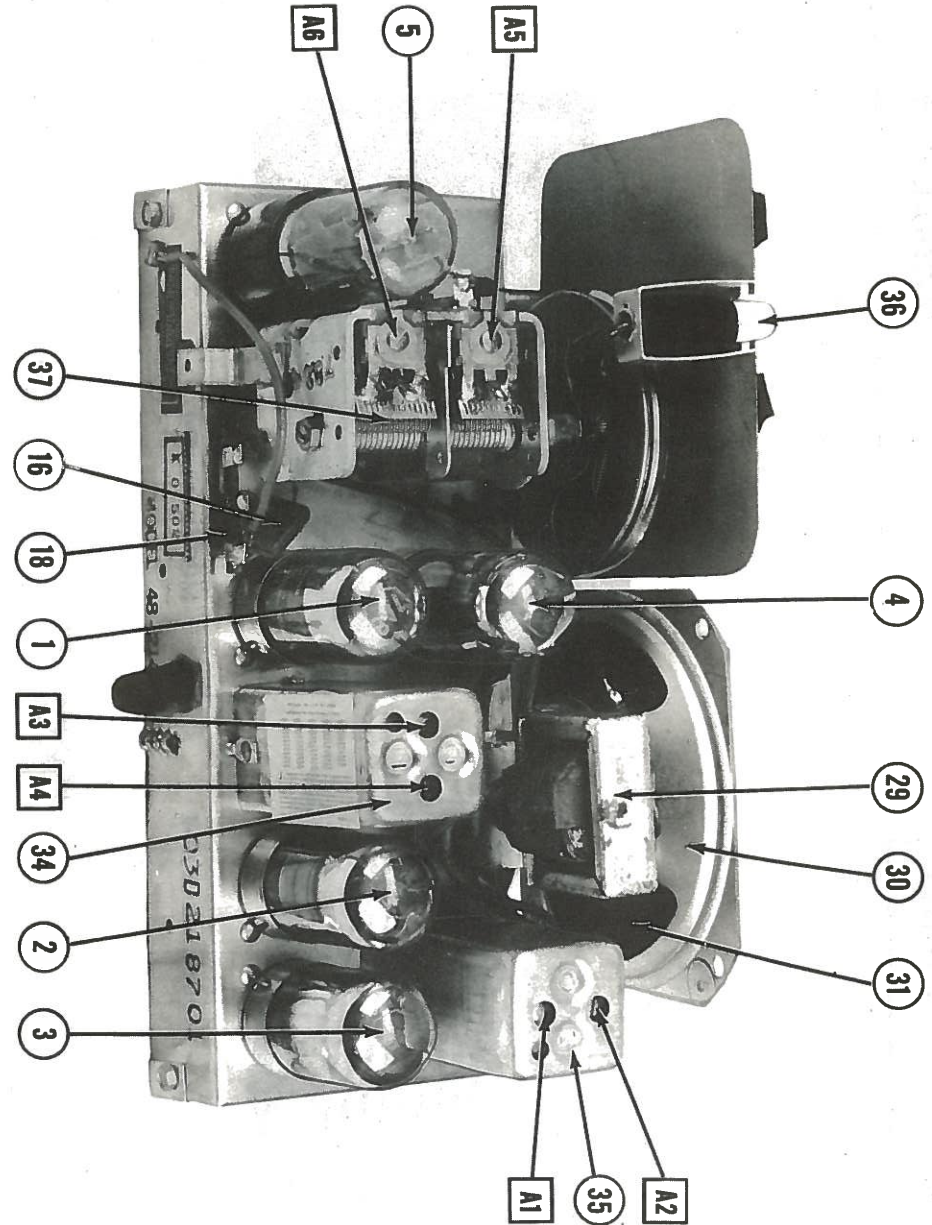
RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	PHILCO PART No.	IRC PART No.	
18	150K Ω		66-4153340	BTS-150K	Br.-Grn.-Yl. Antenna Loading
19	100K Ω		66-4103340	BTS-100K	Br.-Blk.-Yl. Oscillator Grid
20	27K Ω		66-3273340	BTS-27K	Red-Vl.-Or. Screen Dropping
21	2.2 Meg.		66-5223340	BTS-2.2 Meg.	Red-Red-Grn. AVC Network
22	3.3 Meg.		66-5333340	BTS-3.3 Meg.	Or.-Or.-Grn. AF Grid
23	470K Ω		66-4473340	BTS-470K	Yl.-Vl.-Yl. AF Plate Load
24	470K Ω		66-4473340	BTS-470K	Yl.-Vl.-Yl. Output Grid
25	130 Ω		66-1133340	BW- $\frac{1}{2}$ 120	Br.-Or.-Br. Output Cathode
26	220 Ω		66-1224340	BW-1-220	Red-Red-Br. Filter
27	1200 Ω		66-2123340	BTS-1200	Br.-Red-Red "
28	150K Ω		66-4153340	BTS-150K	Br.-Grn.-Yl. Line Isolation

TRANSFORMER (OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		PHILCO PART No.	STANCOR PART No.	THORDAR'N PART No.	MERIT PART No.	
	PRI.	SEC.	PRI.	SEC.					
29	1750 Ω	3.1 Ω	175 Ω	.7 Ω	Part of 36-1614	A-3876*	T22845*	A-2928*	*Bend mounting tabs down, file out slots and mount on original bracket.

CHASSIS-TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

SPEAKER

ITEM No.	RATINGS	REPLACEMENT DATA		INSTALLATION NOTES
		PHILCO PART No.	JENSEN PART No.	
30	FIELD VC IMP. PM 8.1Ω CONE DIA. VC DIA. 4" 1/2"	36-1614	ST-1131 Mod. P4-X	Fabricate new mounting bracket.
31		NOT READILY REPLACEABLE-USE COMPLETE SPEAKER UNIT		

R F COILS

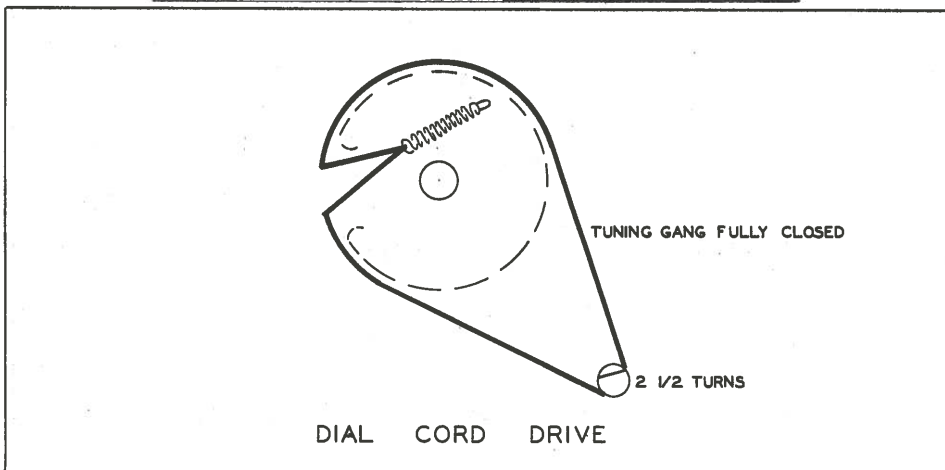
ITEM No.	USE	DC RES.		REPLACEMENT DATA		INSTALLATION NOTES
		PRI.	SEC.	PHILCO PART No.	MEISSNER PART No.	
32A	Loop Ant.			32-4052-5		For Model 48-200, 48-200-I only For Model 48-214 only.
B	"			32-4052-6		
33	Osc. Coil	2.5Ω	2.9Ω	32-3880	14-1040	
34	Input IF	24.1Ω	7.5Ω	32-3967	16-6658	
35	Output IF	20.2Ω	23.9Ω	32-3952	16-6670	

DIAL LIGHT

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

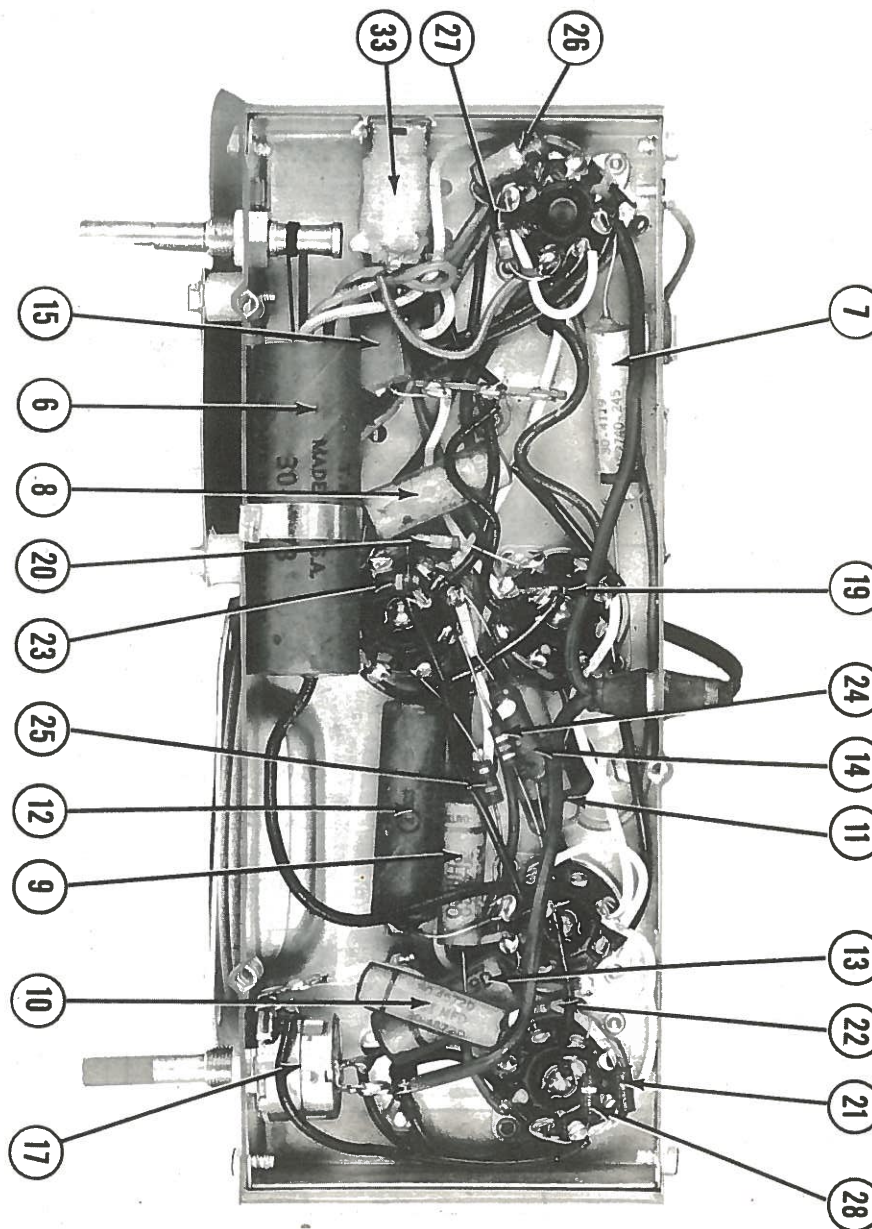
MISCELLANEOUS

ITEM No.	PART NAME	PHILCO PART No.	NOTES
37	2 Gang Var. Cap	31-2527-2	(18-496 MMF, 20-175MMF)
	Dial Pointer	27-4891	Models 48-200, 48-200-I
	"	54-4148-2	Model 48-214
	Dial Scale	25-5713	Model 48-200
	"	27-5840	Model 48-200-I
	"	27-5839	Model 48-214



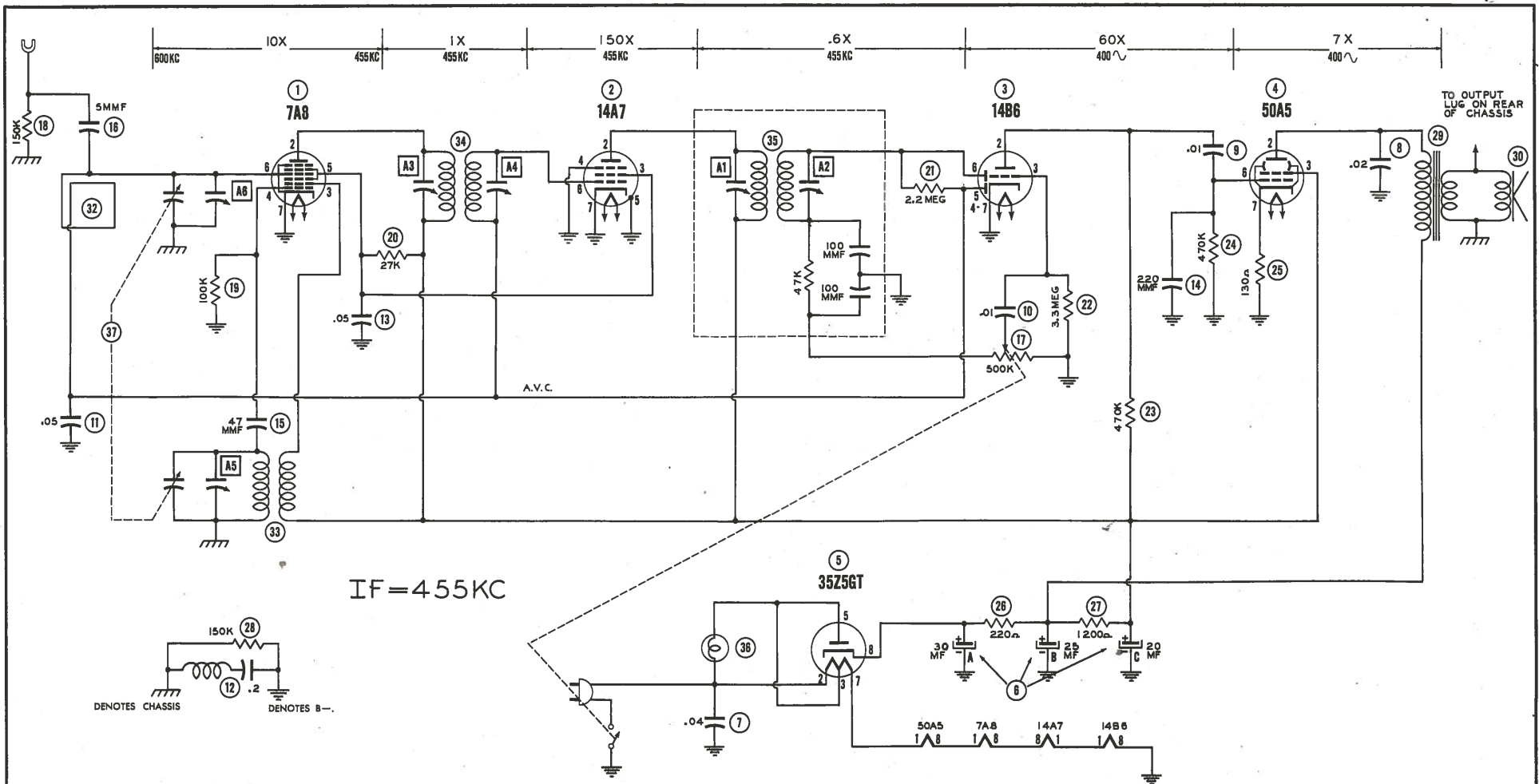
DATE 2/48 SET #33 FOLDER #483-19

CHASSIS—BOTTOM VIEW

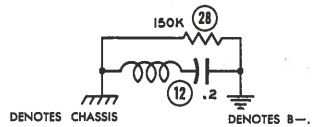


PHILCO MODELS 48-200, 48-200-I, 48-214

PHILCO MODELS 48-200, 48-200-I, 48-214



IF = 455 KC



VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
1	7A8	34VAC	100VDC	100VDC	-14VDC‡	42VDC	-.8VDC	0V.	27VAC
2	14A7	13.5VAC	100VDC	42VDC	0V.	0V.	-.8VDC	0V.	27VAC
3	14B6	13.5VAC	55VDC	-.8VDC	0V.	-.8VDC	-.8VDC	0V.	0V.
4	50A5	85VAC	105VDC	100VDC	55VDC	-.8VDC	0V.	6.1VDC	34VAC
5	35Z5	0V.	117VAC	112VAC	100VDC	112VAC	112VDC	85VAC	125VDC

‡ TAKEN 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	32Ω	50KΩ	50KΩ	100KΩ	77KΩ	3 Meg.	0Ω	25Ω
2	14A7	12.5Ω	50KΩ	77KΩ	0Ω	0Ω	3 Meg.	0Ω	25Ω
3	14B6	12.5Ω	520KΩ	3.5 Meg.	0Ω	3 Meg.	500KΩ	0Ω	0Ω
4	50A5	80Ω	50KΩ	50KΩ	520KΩ	3 Meg.	500KΩ	140Ω	32Ω
5	35Z5	INF.	105Ω	102Ω	50KΩ	102Ω	50KΩ	80Ω	50KΩ

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

A PHOTOFAC STANDARD NOTATION SCHEMATIC

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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, e.c., 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.