

PHOTOFACT* Folder

PHILCO
MODEL 46-1201 (REVISED)

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TUNING CONTROL

PHONO-RADIO
VOLUME CONTROL
ON-OFF SWITCH

PHILCO
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TRADE NAME	Philco, Model 46-1201 (Revised)		
MANUFACTURER	Philco Corp., Tioga & "C" Sts., Philadelphia, Pa.		
TYPE SET	AC Operated Combination Phono-Radio Superheterodyne with Loop Antenna		
TUBES (FIVE)	Types, 7A8 Converter, 7B7 IF Amp., 7C6 Det.-AVC-AF, 50A5 or 50B5 Power Output, 50X6 or 50Y6 or 35Y4 Rectifier.		
POWER SUPPLY	105-120 Volts AC		
TUNING RANGE—BROADCAST	540-1600KC	RATING	.340 Amp. @ 117 Volts AC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Alignment should be performed with chassis installed in cabinet and loop connected. Record player must be removed to gain access to adjustment points. To set pointer turn tuning cap. fully closed and set pointer to last reference mark at low freq. end of dial. Use isolation transformer if available. If not, connect a .1 MFD capacitor in series with low side of signal generator and chassis. 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	.05 MFD	High side to blue ant. lead after disconnecting same from chassis. Low side to chassis.	455KC	Tuning cap. fully closed	From voice coil connection on Ant. terminal strip to chassis.	A1,A2, A3,A4.	Preset A4 by turning it until tight. Then adjust in order given for maximum output. If isolation transformer is not used reduce dummy ant. to .001 to reduce hum modulation.
2	.05 MFD	"	1600KC	1600KC	"	A5	Adjust for maximum output.
3	.05 MFD	"	1500KC	Tune for maximum output	"	A6	" " " "

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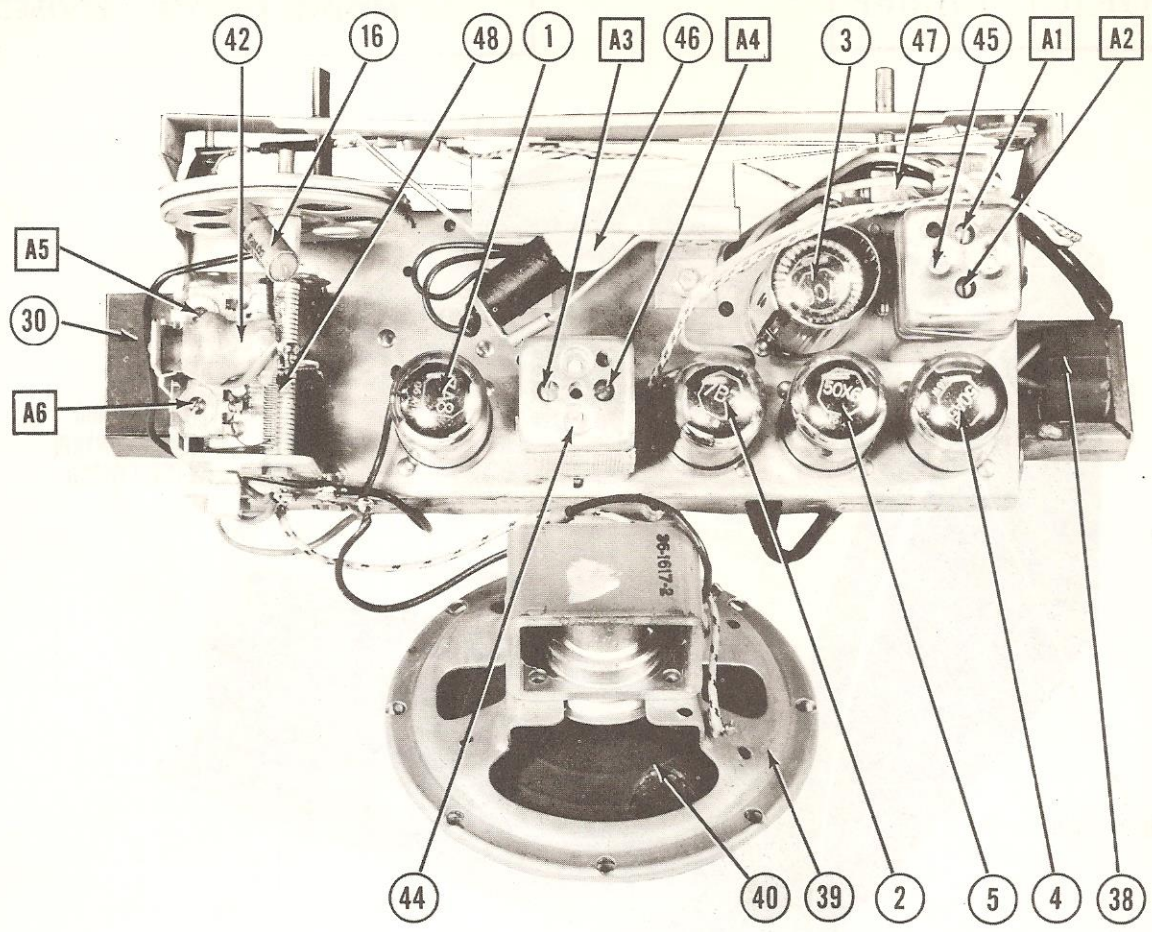
DATE 12/47 SET #29 FOLDER #4719-21

PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

PHILCO MODEL
46-1201 (Revised)

CHASSIS—TOP VIEW



ITEM No.	USE	REPLACEMENT DATA			INSTALLATION NOTES
		PHILCO PART No.	STANDARD REPLACEMENT	RMA BASE TYPE	
1	Converter	7A8	7A8	8U	
2	IF Amp.	7B7	7B7	8V	
3	Dev.-AVC-AP	7C6	7C6	8W	
4A	Power Output	50A5	50A5	6AA	
B	"	50B5	50B5	7BZ	Code 130
5A	Rectifier	50X6	50X6	7AJ	Code 126, Code 128
B	"	35Y4	35Y4	5AL	Code 122
C	"	50Y6	50Y6	7Q	Code 125, Code 127

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.	MALLOY PART No.	SOLAR PART No.	SPRAGUE PART No.			
6	15 CAP. 1VOLT	TC44	TC44	M-16-150	UT-161	FRS150-16	BR1615	Filter *
7	15	30-2559	TC44	M-16-150	UT-161	FRS150-16	BR1615	"
8A	40	30-2559	TC44	M-40-350	UT-402	FRS4250-20-20	BR4025	"
B	10	30-2554	TC44	M-8-250	UT-122	FRS250-20	BR1225	"
9	.05		TP415	NF-6-05	TC-15	684-05	DT685	Line Filter
10	.05		TP426	S-4-05	TC-15	484-05	DT485	Output Plate Bypass
11	.01		TP421	S-4-01	TC-11	484-01	DT481	Audio Coupling
12	.01		TP421	S-4-01	TC-11	484-01	DT481	"
13	.2		TP429	S-4-2	TC-2	484-2	DT4P2	Phono Isolation
14	.05		TP426	S-4-05	TC-15	484-05	DT485	Screen Bypass
15	.1		TP428	S-4-1	TC-15	484-1	DT4P1	AVC Filter
16	.0015		TP404	S-6-001	TC-21	684-001	DT6D1	Ext. Ant. Isolation
17	.2		TP429	S-4-2	TC-2	484-2	DT4P2	Line Isolation
18	240		MG240	MO-5-325	LFM-325	1466-00025	SM5T25	Output Grid Bypass
19	100		MG235	MO-5-21	LFM-31	1468-0001	SM5T1	RF Bypass Vol. Cont.
20	100		MG235	MO-5-21	LFM-31	1468-0001	SM5T1	RF Coupling†

†Used in models Code 123 and above. *Items 6, 7 and 8 not used on Code 122. Code 122 used Philco Part #30-2573 (30-25-20 mfd).

CONTROLS

ITEM No.	RATING	REPLACEMENT DATA			INSTALLATION NOTES
		PHILCO PART No.	MALLOY PART No.	IRC PART No.	
21	1 Meg. 1/2	33-5519			Volume Control & Switch—See Note

Note—Item 21 acts as two 500KΩ controls tapered opposite each other from center tap.

RESISTORS

ITEM No.	RATING	REPLACEMENT DATA			IDENTIFICATION CODES
		PHILCO PART No.	MALLOY PART No.	IRC PART No.	
22	120K	66-4123340		BTS-120K	Br.-Red-Yl. Oscillator Grid
23	1 Meg.	66-5103340		BTS-1 Meg.	Br.-Blk.-Grn. Converter Grid
24	47K	66-2473340		BTS-47K	Yl.-Vl.-Or. Screen Dropping
25	10 Meg.	66-6103340		BTS-10 Meg.	Br.-Blk.-Blue AF Grid
26	2.2 Meg.	66-5223340		BTS-2.2 Meg.	Red-Red-Grn. AVC Network
27	470KΩ	66-1223340		BTS-470K	Yl.-Vl.-Yl. AF Plate Load
28	150K	66-2824340		BM-120	Br.-Or.-Br. Output Cathode
29	8200Ω	33-3435-5		AB-500	Gray-Red-Red Filter
30	500Ω	33-3435-5		AB-500	Rectifier Ballast
31	80Ω	66-4223340		BTS-220K	Red-Red-Yl. Phono Shunt
32	220KΩ	66-4223340		BTS-150K	Br.-Grn.-Vl. Phono Shunt
33	150KΩ	66-4123340		BTS-120K	Br.-Red-Yl. Line Isolation
34	120KΩ	66-1224340		BM-1-220	Red-Red-Br. Filter - See Note
35	220Ω	66-2123340		BTA-1200	Br.-Red-Red
36	1200Ω	66-2123340		BTA-1200	Yl.-Vl.-Yl. Output Grid
37	470KΩ			BTS-470K	

Note - Used in Code 122 only.

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (OUTPUT)

ITEM No.	RATING		REPLACEMENT DATA		INSTALLATION NOTES
	IMPEDANCE	DC RES.	PHILCO PART No.	STANCOR THORDARN PART No.	
38	PRI. SEC. 3-52 3-52	3000Ω 3000Ω	32-8210 A-3876	T228S45	A-2923

SPEAKER

ITEM No.	RATINGS	REPLACEMENT DATA		INSTALLATION NOTES
		PHILCO PART No.	JENSEN PART No.	
39	VC IMP. 3-53	36-1617-2	ST-107	
40	CONE DIA. 4-8/8	Mod. P5-V		NOT READILY REPLACABLE—USE COMPLETE SPEAKER UNIT

R F COILS

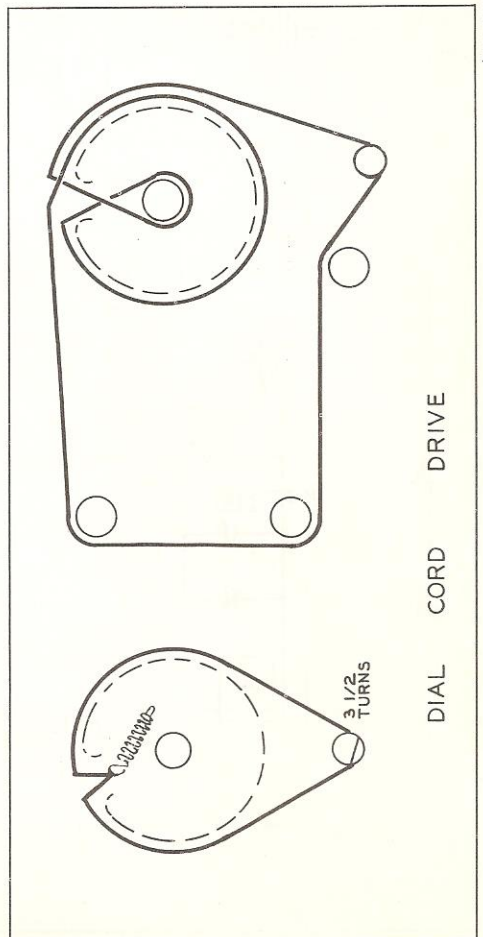
ITEM No.	USE	DC RES.		REPLACEMENT DATA		INSTALLATION NOTES
		PRI.	SEC.	PHILCO PART No.	MEISSNER PART No.	
41	Loop Ant.	3.3Ω	3.3Ω	14-1040		Add 50 MFD from grid to high side tuning cap.
42	Ant. Coil	32Ω	.5Ω	16-6658		
43	Osc. Coil	39	7Ω	16-6670		
44	Input IF	25Ω	25Ω			
45	Output IF	21Ω				

DIAL LIGHT

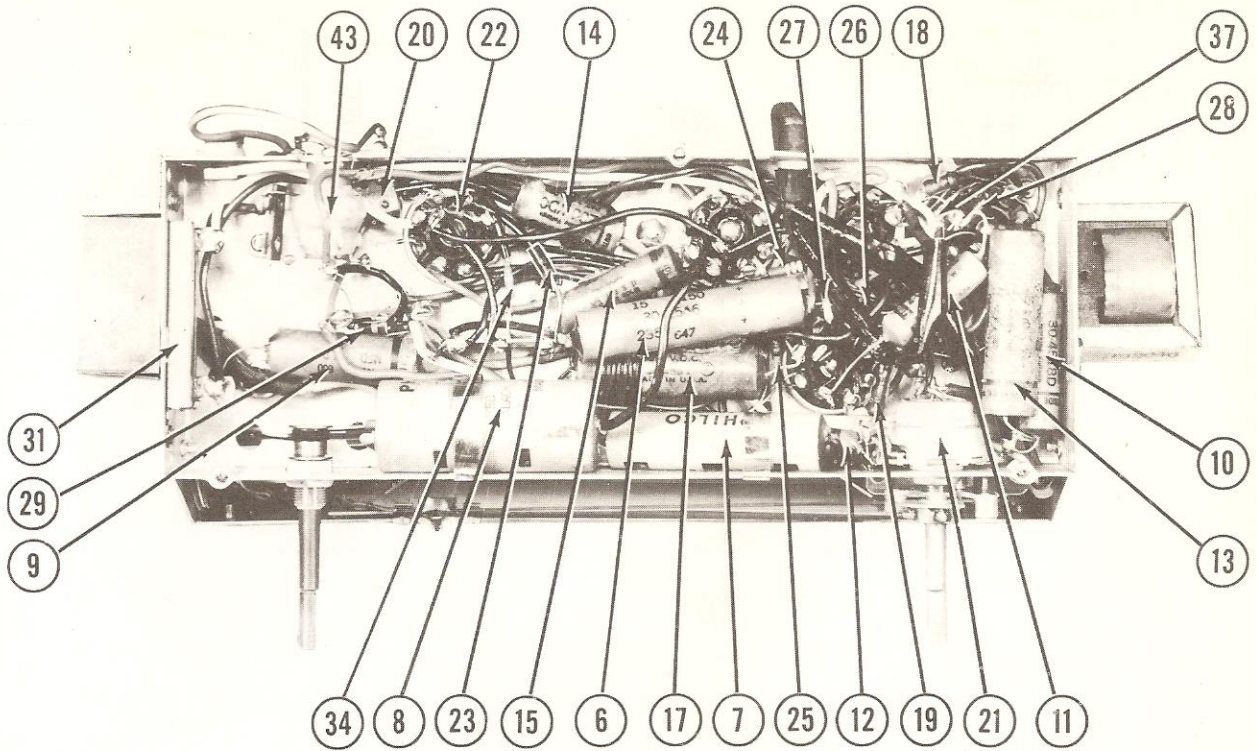
ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		INSTALLATION NOTES
					PHILCO PART No.	MEISSNER PART No.	
46	Screw E Bayonet	120 6-8	.15	Brown	34-2068		Type 7M Type 47 Code 122

MISCELLANEOUS

ITEM No.	PART NAME	PHILCO PART No.	NOTES
47	Switch		Radio-Phono (DPDT)
48	2 Gang Var. Cap.	31-2527-1	(28-502MFD, 28-175 MFD)

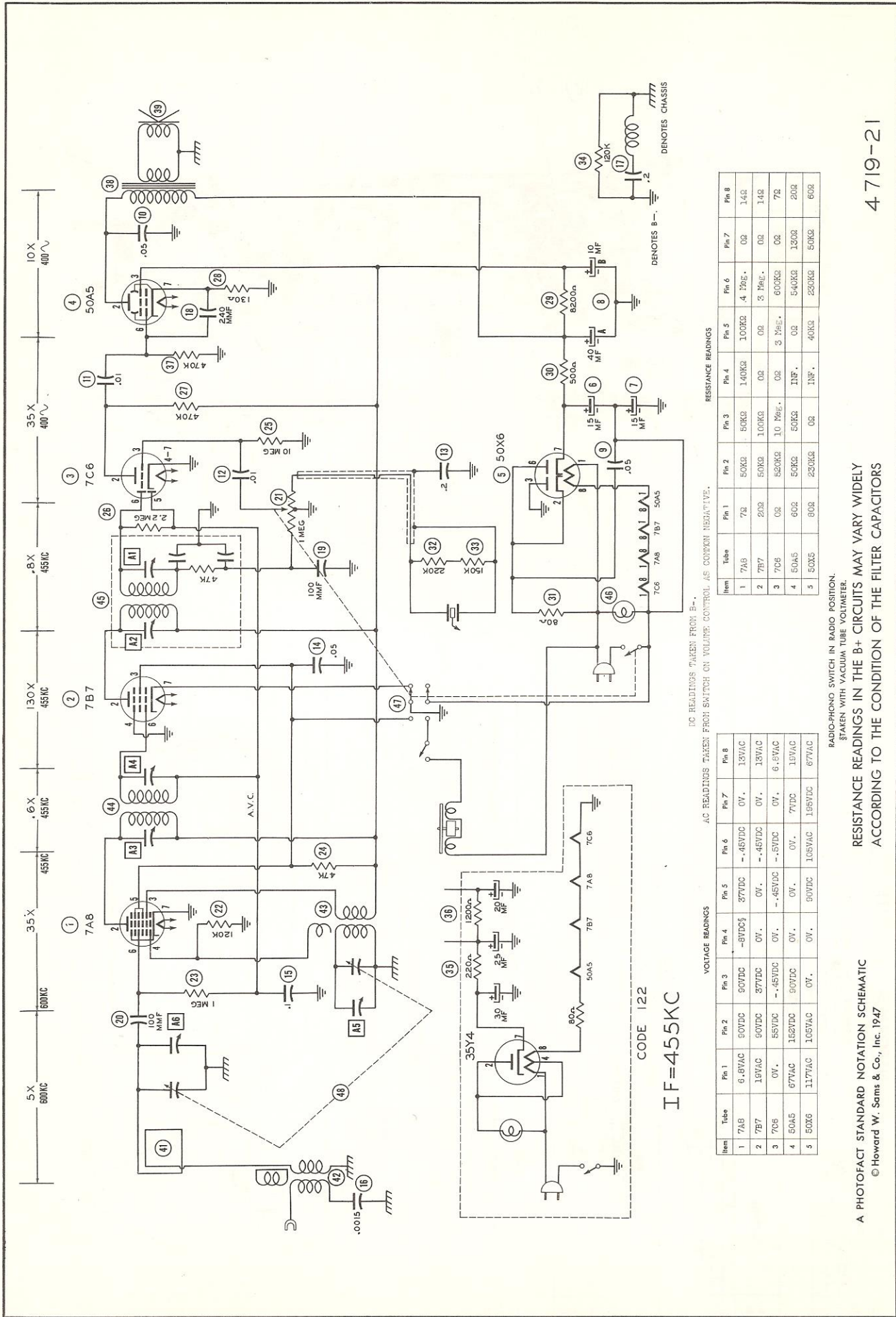


CHASSIS—BOTTOM VIEW



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DC READINGS TAKEN FROM B-...

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
1	7A8	7Ω	50KΩ	50KΩ	1.40KΩ	100KΩ	4.15KΩ	0Ω	1.4Ω
2	7B7	20Ω	50KΩ	100KΩ	0Ω	0Ω	3.75KΩ	0Ω	1.4Ω
3	7C6	0Ω	50KΩ	1.0 MΩ	0Ω	3.75KΩ	600KΩ	0Ω	7Ω
4	50A5	60Ω	50KΩ	50KΩ	11KΩ	0Ω	5.40KΩ	130Ω	20Ω
5	50X6	80Ω	230KΩ	0Ω	11KΩ	40KΩ	250KΩ	50KΩ	60Ω

AC READINGS TAKEN FROM SWITCH ON VOLUME CONTROL AS COMMON NEGATIVE.

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
1	7A8	6.8VAC	50VDC	50VDC	-8VDC	37VDC	-45VDC	0V	13VAC
2	7B7	10VAC	50VDC	37VDC	0V	0V	-45VDC	0V	13VAC
3	7C6	0V	55VDC	-45VDC	0V	-45VDC	-5VDC	0V	6.8VAC
4	50A5	67VAC	50VDC	50VDC	0V	0V	0V	7VDC	13VAC
5	50X6	11.7VAC	105VAC	0V	0V	90VDC	105VAC	195VDC	67VAC

RADIO-PHONO SWITCH IN RADIO POSITION.
TAKEN WITH VACUUM TUBE VOLTMETER.

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, 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.