

487-15

A PHOTOFACT STANDARD NOTATION SCHEMATIC
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RESISTANCE READINGS

Pin	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
1	7AB	205	1000Ω	1000Ω	1.07KΩ	3.75KΩ	0Ω	25Ω
2	14A7	11.5KΩ	1000Ω	1.07KΩ	0Ω	3.75KΩ	0Ω	25Ω
3	14A7	11.5KΩ	1000Ω	1.07KΩ	0Ω	3.75KΩ	0Ω	25Ω
4	50A5	80Ω	1000Ω	1000Ω	8.75KΩ	4.75KΩ	100Ω	25Ω
5	35Z5GT	11Ω	110Ω	110Ω	1000Ω	1000Ω	80Ω	1000Ω

VOLTAGE READINGS
TAKEN WITH VACUUM TUBE VOLTMETER

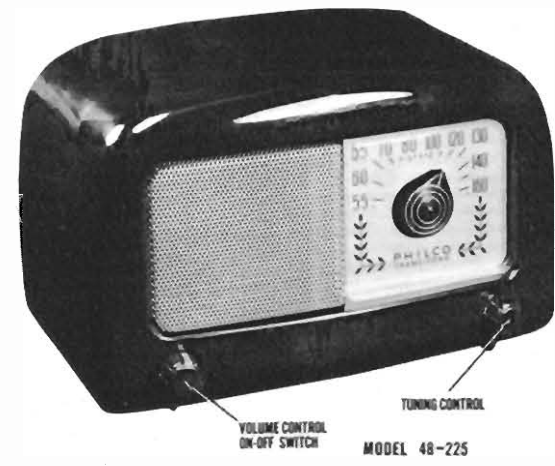
Pin	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
1	7AB	205V	475V	475V	475V	0V	0V	25V
2	14A7	15.5V	475V	475V	475V	0V	0V	25V
3	14A7	15.5V	475V	475V	475V	0V	0V	25V
4	50A5	80V	475V	475V	475V	0V	0V	25V
5	35Z5GT	11V	110V	110V	110V	110V	80V	1000V

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

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

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.

PHILCO MODELS
48-225, 48-230



PHILCO MODELS 48-225, 48-230

TRADE NAME	Philco, Models 48-225, 48-230					
MANUFACTURER	Philco Radio Corp., Tioga & "C" Sts., Philadelphia, Pa.					
TYPE SET	AC-DC Operated Superheterodyne Receiver with Loop Antenna					
TUBES (Five)	Types 7AB Converter, 14A7 IF Amp., 14B6 Det.-AVC-AF, 50A5 Power Output, 35Z5GT Rectifier					
POWER SUPPLY	110-120 Volts AC-DC			RATING .23 Amp. @ 117 Volts AC		
TUNING RANGE—BROADCAST	540-1700KC					
ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT						
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 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	.1MFD High side to rear stator or tuning capacitor. Low side to B-.	455KC	Tuning capacitor fully closed.	Across voice coil	A1, A2, A3, A4	Adjust for maximum output. If isolation transformer is not used reduce dummy ant. to .001 MFD. to reduce hum modulation.
2	Loop	1600KC	1600KC	Across voice coil	A5	Fashion loop of several turns of wire and radiate signal into loop of receiver.
3	Loop	1400KC	Tune for maximum output	Across voice coil	A6	Adjust for maximum output.

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Indianapolis Indiana

DATE 3/48-#487-15 SET #37-FOLDER #15

PHILCO MODELS
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PARTS LIST AND DESCRIPTIONS TUBES (SYLVANIA or Equivalent)

PHILCO MODELS
48-225, 48-226

ITEM No.	USE	REPLACEMENT DATA			RMA BASE TYPE	INSTALLATION NOTES
		PHILCO PART No.	STANDARD REPLACEMENT	PHILCO PART No.		
1	Converter I.F. Amp.	7A8	7A8	8U		
2	Det.-AVC-AF	14A7	14A7	8V		
3	Power Output	14B6	14B6	8XA		
4	Rectifier	50A5	50A5	61A		
5	Rectifier	35Z50T	35Z50T	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 CAP. VOLTS	REPLACEMENT DATA			IDENTIFICATION CODES AND INSTALLATION NOTES
		PHILCO PART No.	SPRAGUE PART No.	AEROVOX DUBILIER PART No.	
6A	150	7A-820	FRS150-20	522315	50B403020-150
B	25	4T-201	FRS150-24	4R2015	
C	20	TC-14	484-05	D7454	
7	.04	TC-12	484-02	D7452	Filter-Orange
8	.02	TC-11	484-01	D7451	Filter-Blue
9	.01	TC-11	484-01	D7451	Filter-Red
10	.01	TC-11	484-01	D7451	Line Filter
11	.05	TC-15	484-05	D7455	Output Plate Bypass
12	.05	TC-15	484-05	D7455	Audio Coupling
13	.2	1FM-325	146-00025	5M325	Screen Bypass
14	200	1FM-45	148-00045	5M45	AVC Filter
15	47	MG-55	148B-00055	5M55	Line Isolation - See Note
16	500				Output Grid Bypass
17	500				Osc. Grid Cap.
18	500				Ext. Ant. Coupling

Note: Special Resonant Capacitor

CONTROLS

ITEM No.	RATING RESIST. WATTS	REPLACEMENT DATA			INSTALLATION NOTES
		PHILCO PART No.	IRC PART No.	CLAROSTAT PART No.	
17A	5000Ω	33-5429	D13-333	V-50-3	Volume Control
B	Switch	Not Req.	A	Not Req.	Attach to 17A per instructions.
C	Switch	Not Req.	41	5A-A	Attach to 17A per instructions.

RESISTORS

ITEM No.	RATING RESISTANCE WATTS	REPLACEMENT DATA			IDENTIFICATION CODES
		PHILCO PART No.	IRC PART No.	THOR-DAR-N PART No.	
18	1500Ω			EP3-150R	Pr.-Osc.-T1, Antenna Loading
19	2000Ω			EP3-200R	Pr.-Osc.-T1, Oscillator Grid
20	2000Ω			EP3-200R	Pr.-Osc.-T1, Screen Dropping
21	2.5 MΩ			EP3-2.5 MΩ	Pr.-Red-Osc. Avc. Network
22	2.5 MΩ			EP3-2.5 MΩ	Pr.-Osc.-T1, AP Grid
23	4700Ω			EP3-470R	Pr.-Osc.-T1, AP Plate Load
24	4700Ω			EP3-470R	Pr.-Osc.-T1, AP Plate Load
25	1500Ω			EP3-150R	Pr.-Osc.-T1, Output Cathode
26	1500Ω			EP3-150R	Pr.-Osc.-T1, Output Cathode
27	5000Ω			EP3-500R	Pr.-Osc.-T1, Filter
28	1500Ω			EP3-150R	Pr.-Osc.-T1, Line Isolation

TRANSFORMER (OUTPUT)

ITEM No.	RATING IMPEDANCE PRI. SEC.	DC RES. PRI. SEC.	REPLACEMENT DATA			INSTALLATION NOTES	
			PHILCO PART No.	STANCOR PART No.	THOR-DAR-N PART No.		
29	1750Ω	3.10	1750Ω	.7Ω	A-3978*	T222845*	Mounting tabs down. File notations and amount on original bracket.

PARTS LIST AND DESCRIPTIONS (Continued) SPEAKER

ITEM No.	RATINGS FIELD P.M. CONN. DIA. P. I. n.	REPLACEMENT DATA			INSTALLATION NOTES
		PHILCO PART No.	JENSEN PART No.	QUIAM PART No.	
30	VC 1/2 in. 8.25 in. 1.5 in.	36-1614	37-1131	4A071	*Fabricate new mounting bracket.
31	4 in. 8.25 in. 1.5 in.	36-1614	37-1131	4A071	COME HAS SPECIAL ADJUSTMENT FEATURE - ORDER FROM MANUFACTURER.

R F COILS

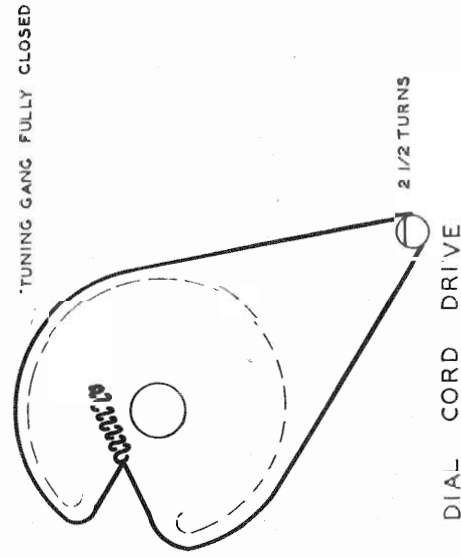
ITEM No.	USE	REPLACEMENT DATA		
		PHILCO PART No.	MEISSNER PART No.	PHILCO PART No.
32	Loop Ant.			14-1060
33	Osc. Coil			14-8659
34	Input I.F.			14-8670
35	Output I.F.			14-8670

DIAL LIGHT

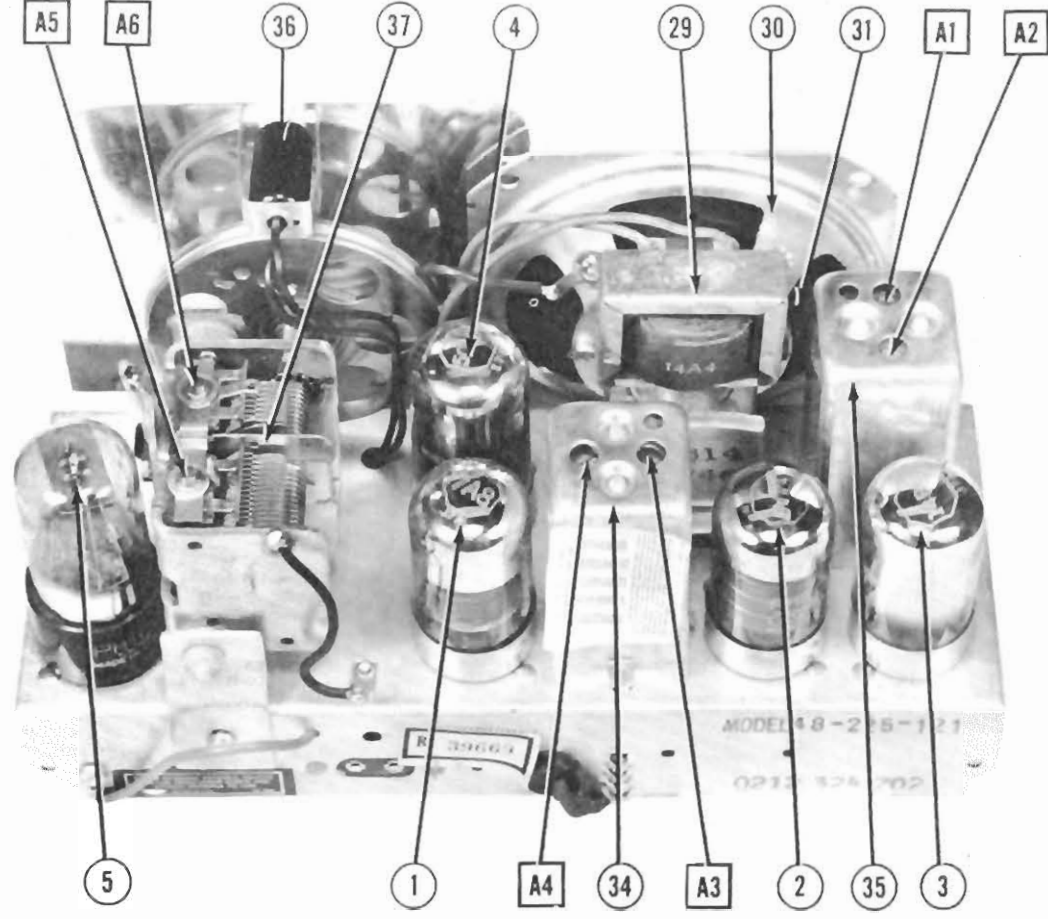
ITEM No.	BASE TYPE	VOLTS	AMPS.	REPLACEMENT DATA		INSTALLATION NOTES
				BEAD COLOR	PHILCO PART No.	
36	Bayonet	6-8V	.15A	Brown		Type 47

MISCELLANEOUS

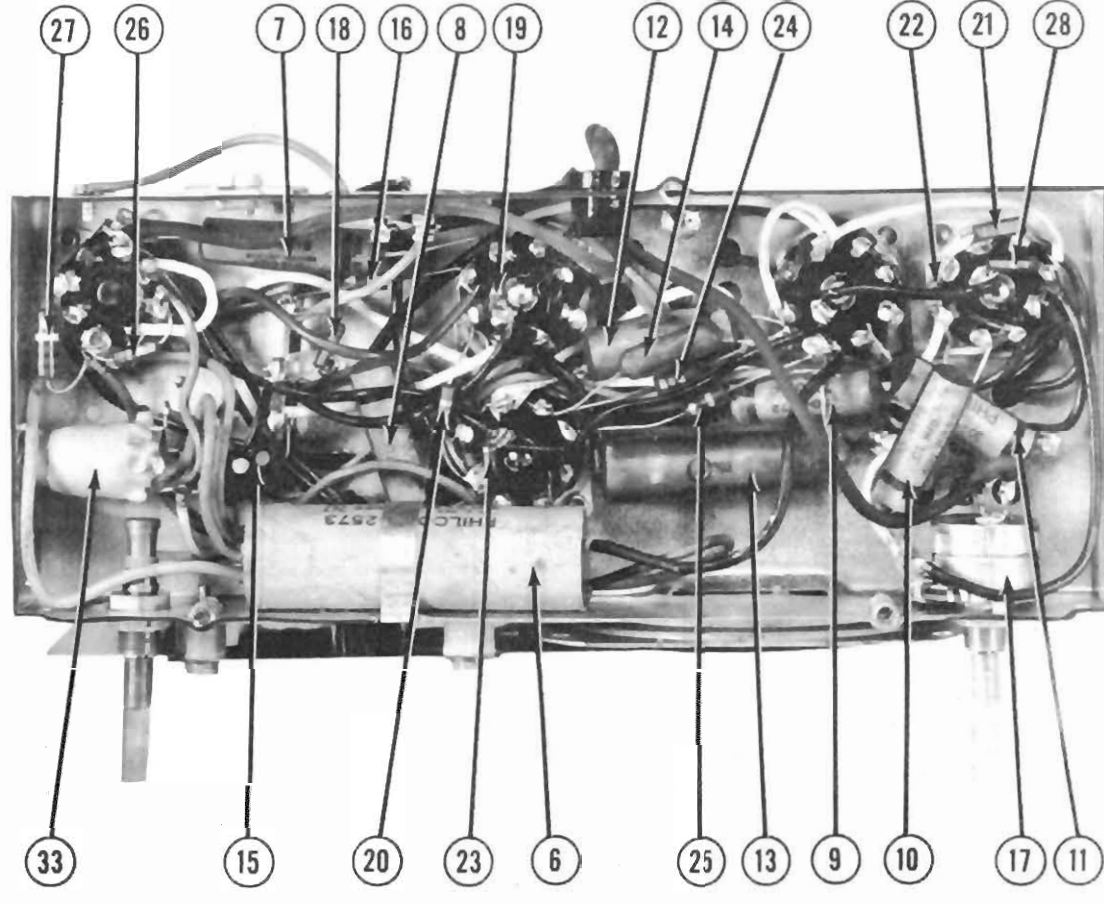
ITEM No.	PART NAME	PHILCO PART No.	NOTES
37	2 Ohm Var. Cap.		(18-479 100%, 19-185 100%)



CHASSIS—TOP VIEW



CHASSIS—BOTTOM VIEW



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