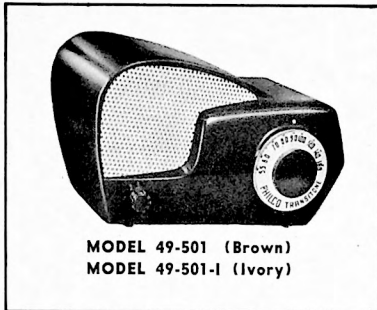


PHILCO RADIO MODELS 49-501 AND 49-501-I



MODEL 49-501 (Brown)
MODEL 49-501-I (Ivory)

SPECIFICATIONS

CABINET	
Model 49-501	Phenolic plastic, brown
Model 49-501-I	Phenolic plastic, ivory
CIRCUIT	
	Five-tube superheterodyne
FREQUENCY RANGE	
	540-1620 kc.
AUDIO OUTPUT	
	1 watt
OPERATING VOLTAGE	
	117 volts, a.c. or d.c.
POWER CONSUMPTION	
	30 watts
AERIAL	
	Loop fastened to cabinet; terminal provided for external aerial.
INTERMEDIATE FREQUENCY	
	455 kc.
PHILCO TUBES (5)	
	7A8, 14A7, 14B6, 50A5, 35Y4

TP-5859

SYMBOLIZATION

The components in the radio circuit are symbolized according to the types of parts and the sections of the radio in which the parts are located. The prefix letter of the symbol designates the type of part as follows:

C—condenser	R—resistor
I—pilot lamp	S—switch
L—choke or coil	T—transformer
LA—loop aerial	W—line-cord-and-plug assembly
LS—loud-speaker	Z—electrical assembly

The number of the symbol designates the section in which the part is located as follows:

- 100-series components are in Section 1—the power supply.
- 200-series components are in Section 2—the audio circuits.
- 300-series components are in Section 3—the i-f, detector, and a-v-c circuits.
- 400-series components are in Section 4—the r-f and converter circuits.

REPLACEMENT PARTS LIST

NOTE: Part numbers identified by an asterisk (*) indicate general replacement items. These numbers may not be identical with those on factory assemblies; also, the electrical values of some replacement items may differ from the values indicated in the schematic diagram and replacement parts list. The values substituted in any case are so chosen that the operation of the radio will be either unchanged or improved. When ordering replacements, use only the "Service Part No."

SECTION 1 POWER SUPPLY

Reference Symbol	Description	Service Part No.
C100	Condenser, line filter, .04 mf.	45-3500-2
C101	Condenser, electrolytic, 3-section	30-2575-10*
C101A	Condenser, filter, 30 mf.	Part of C101
C101B	Condenser, filter, 25 mf.	Part of C101
C101C	Condenser, filter, 20 mf.	Part of C101
I100	Lamp, pilot, 6.3v	34-2068

SECTION 1 (Continued) POWER SUPPLY

Reference Symbol	Description	Service Part No.
R100	Resistor, filter, 220 ohms	66-1224340*
R101	Resistor, filter, 1200 ohms	66-2123340*
R102	Resistor, leakage, 150,000 ohms	66-4153340*
S100	Switch, on-off	Part of R200
W100	Line cord	L-2183*

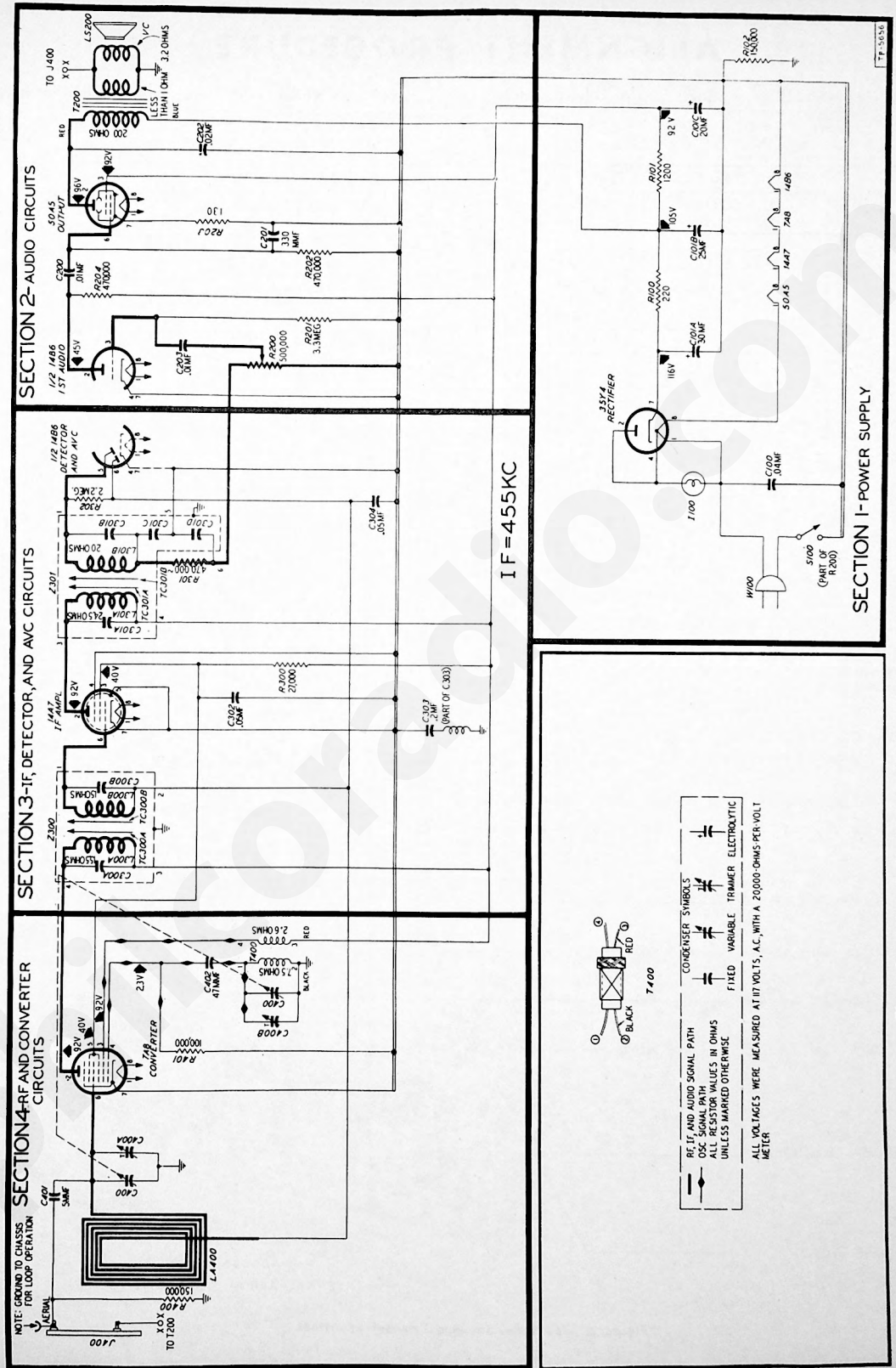


Figure 1. Philco Radio Models 49-501 and 49-501-1, Sectionalized Schematic Diagram.

ALIGNMENT PROCEDURE

OUTPUT METER — Connect across voice-coil terminals.

SIGNAL GENERATOR—Connect as indicated in chart. Use modulated output.

STEP	SIGNAL GENERATOR		RADIO		ADJUST
	CONNECTION TO RADIO	DIAL SETTING	DIAL SETTING	SPECIAL INSTRUCTIONS	
1	Ground lead to B-; output lead through .1-mf. condenser to pin 6 of 7A8.	455 kc.	Tuning condenser fully meshed.	Adjust tuning cores, in order given, for maximum output	TC301B—2nd i-f sec. TC301A—2nd i-f pri. TC300B—1st i-f sec. TC300A—1st i-f pri.
2	Radiating loop (see note below).	1600 kc.	1600 kc.	Adjust trimmer for maximum output.	C400B—Oscillator
3	Same as step 2.	1500 kc.	1500 kc.	Adjust trimmer for maximum output.	C400A—Aerial

RADIATING LOOP: Make up a 6 to 8 turn, 6-inch-diameter loop from insulated wire; connect to signal-generator leads and place near radio loop aerial. The loop aerial must be connected.

RADIO CONTROLS—Set volume control to maximum, and rotate tuning control until tuning condenser is fully meshed.

OUTPUT LEVEL—During alignment, adjust signal-generator output to maintain output-meter indication below 1.25 volts.

NOTE: TC300A AND TC301A ARE ACCESSIBLE FROM UNDERSIDE OF CHASSIS.

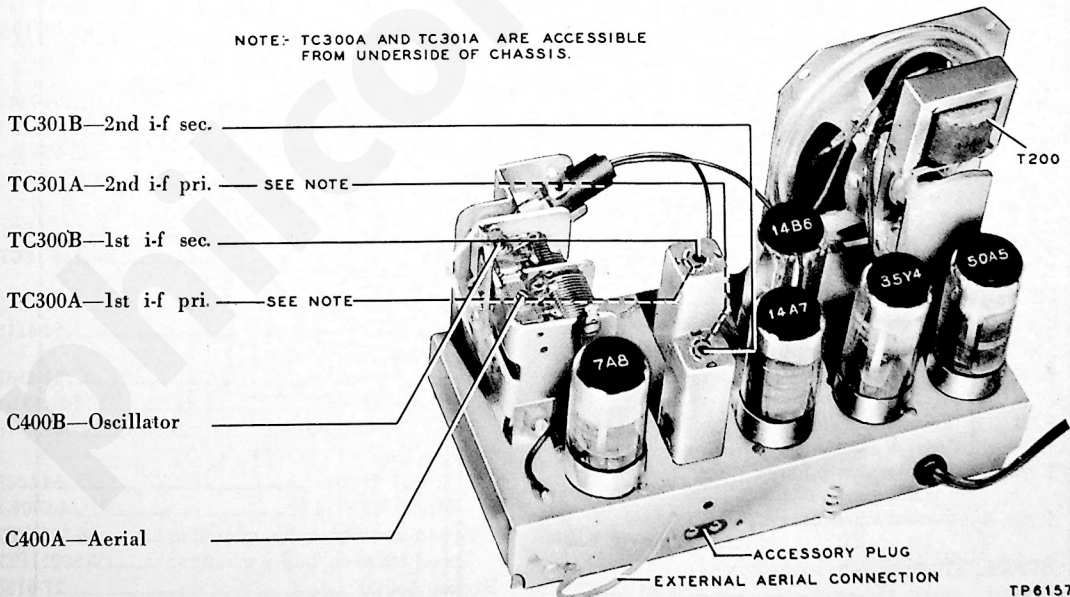


Figure 2. Top View, Showing Trimmer Locations

REPLACEMENT PARTS LIST - Continued

SECTION 2 AUDIO CIRCUITS

Reference Symbol	Description	Service Part No.
C200	Condenser, d-c blocking, .01 mf.	61-0120*
C201	Condenser, r-f by-pass, 330 mmf.	60-10335407*
C202	Condenser, tone compensation, .02 mf.	61-0108*
C203	Condenser, d-c blocking, .01 mf.	61-0120*
LS200	Speaker	36-1627
R200	Volume control, 5 megohm	33-5538-21*
R201	Resistor, grid return, 3.3 megohms	66-5333340*
R202	Resistor, grid return, 470,000 ohms	66-4473340*
R203	Resistor, cathode bias, 130 ohms	66-1123340*
R204	Resistor, plate load, 470,000 ohms	66-4473340*
T200	Transformer, output	Part of LS200

SECTION 3 I-F, DETECTOR, AND A-V-C CIRCUITS

C300A	Condenser, fixed trimmer, primary, 1st i-f	Part of Z300
C300B	Condenser, fixed trimmer, secondary, 1st i-f	Part of Z300
C301A	Condenser, fixed trimmer, primary, 2nd i-f	Part of Z301
C301B	Condenser, fixed trimmer, secondary, 2nd i-f	Part of Z301
C301C	Condenser, a-v-c filter	Part of Z301
C301D	Condenser, a-v-c filter	Part of Z301
C302	Condenser, screen by-pass, .05 mf.	61-0122*
C303	Condenser, special i-f by-pass, .2 mf.	30-4644†
C304	Condenser, a-v-c filter, .05 mf.	61-0122*
L300A	Coil, primary, 1st i-f	Part of Z300
L300B	Coil, secondary, 1st i-f	Part of Z300
L301A	Coil, primary 2nd i-f	Part of Z301
L301B	Coil, secondary, 2nd i-f	Part of Z301
R300	Resistor, screen dropping, 27,000 ohms	66-3273340*
R301	Resistor, diode load, 47,000 ohms	66-3473340*
R302	Resistor, a-v-c filter, 2.2 megohms	66-5223340*
TC300A	Tuning core, primary 1st i-f	Part of Z300
TC300B	Tuning core, secondary, 1st i-f	Part of Z300

† #304644 special inductive capacitor should be replaced by a .2 mfd. capacitor part #45-3500-3 to conform with latest run.

SECTION 3 (Continued) I-F, DETECTOR, AND A-V-C CIRCUITS

Reference Symbol	Description	Service Part No.
TC301A	Tuning core, primary 2nd i-f	Part of Z301
TC301B	Tuning core, secondary, 2nd i-f	Part of Z301
Z300	Transformer, 1st i-f	32-4160-6*
Z301	Transformer, 2nd i-f	32-4240*

SECTION 4 R-F AND CONVERTER CIRCUITS

C400	Condenser, tuning gang	31-2731*
C400A	Condenser, trimmer, aerial	Part of C400
C400B	Condenser, trimmer, osc.	Part of C400
C401	Condenser, isolating, 5 mmf.	30-1223*
C402	Condenser, isolating, 47 mmf.	30-1224-2*
LA400	Aerial, loop	32-4052-19
R400	Resistor, isolating, 150,000 ohms	66-4153340*
R401	Resistor, grid return, 100,000 ohms	66-4103340*
T400	Coil, oscillator	32-4263

MISCELLANEOUS

Description	Service Part No.
Bracket, speaker	56-5653FA3
Cabinet (less scale)	
Model 49-501	10710
Model 49-501-I	10710A
Cabinet Hardware	
Back	
Model 49-501	54-7619
Model 49-501-I	54-7619-1
Baffle, speaker	40-7605
Fastener, cabinet back	W2235-2FA9
Grille, metal	
Model 49-501	56-5769-FCP
Model 49-501-I	56-5769-1FCP
Knob	
Model 49-501	27-4815-3
Model 49-501-I	54-4118
Knob assembly	
Model 49-501	54-4581
Model 49-501-I	54-4581-1
Pilot-light assembly	27-6233-18
Scale, dial	
Model 49-501	54-5008
Model 49-501-I	54-5008-1
Speed fastener, baffle mounting	56-5857FE7
Speed fastener, baffle mounting	1W60211FE7
Socket, Loktal	27-6138*