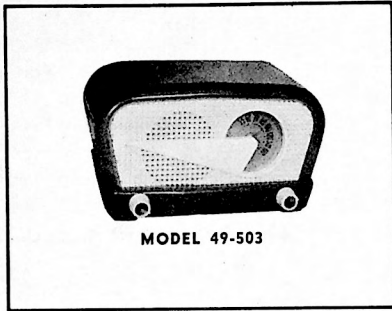
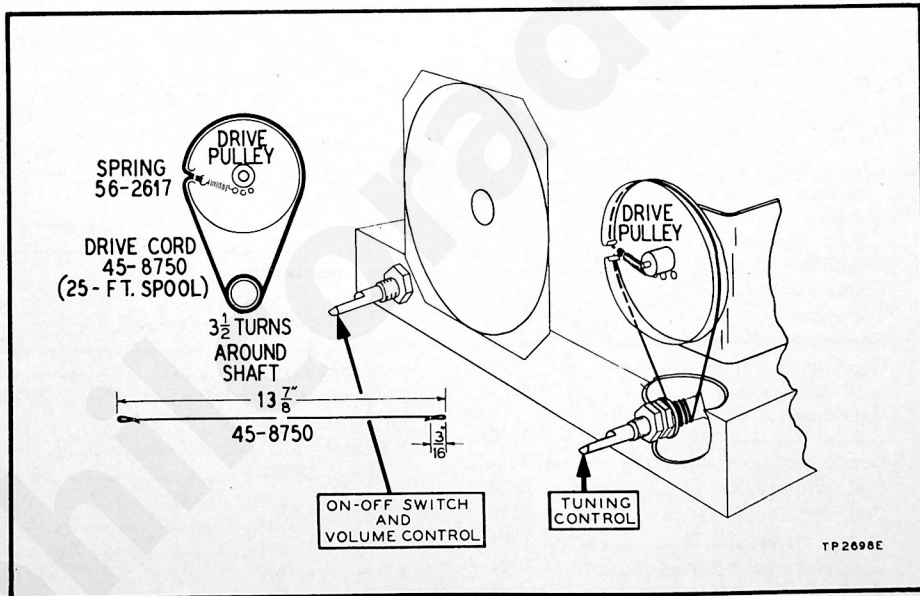


# PHILCO RADIO MODEL 49-503



## SPECIFICATIONS

CABINET .....	Plastic, ebony or green
CIRCUIT .....	Five-tube superheterodyne
FREQUENCY RANGE .....	.540 to 1620 kc.
AUDIO OUTPUT .....	.1 watt
OPERATING VOLTAGE.....	105 to 125 volts, a.c./d.c.
POWER CONSUMPTION .....	.30 watts
AERIAL.....	{ Built-in high-impedance loop; provision for connecting an external aerial
INTERMEDIATE FREQUENCY .....	.455 kc.
PHILCO TUBES (5).....	7A8, 14B6, 14A7, 50A5, 35Z5GT
	TP-5963A



**Figure 1. Drive-Cord Installation Details**



# ALIGNMENT PROCEDURE

**DIAL**—With tuning condenser fully meshed, set pointer to index dot located to left of 55.

**RADIO CONTROLS**—Set volume control to maximum.

**SIGNAL GENERATOR**—Connect generator ground lead to B—; connect output lead as indicated in chart. Use modulated output.

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

**OUTPUT METER**—Connect one lead to pin on left-hand side of plug at rear of chassis; connect other lead to B—.

STEP	SIGNAL GENERATOR		RADIO		ADJUST
	CONNECTION TO RADIO	DIAL SETTING	DIAL SETTING	SPECIAL INSTRUCTIONS	
1	Through .1-mf. condenser to pin 6 of 7A8.	455 kc.	540 kc.	Adjust trimmers, in order given, for maximum output.	C301B—2nd i-f sec. C301A—2nd i-f pri. C300B—1st i-f sec. C300A—1st i-f pri.
2	Through 100-mm.f. condenser to external aerial connector. (External aerial connector must be disconnected from chassis.)	1600 kc.	1600 kc.	Adjust trimmer for maximum output.	C400B—osc.
3	Same as step 2.	1500 kc.	1500 kc.	Adjust trimmer for maximum output.	C400A—aerial

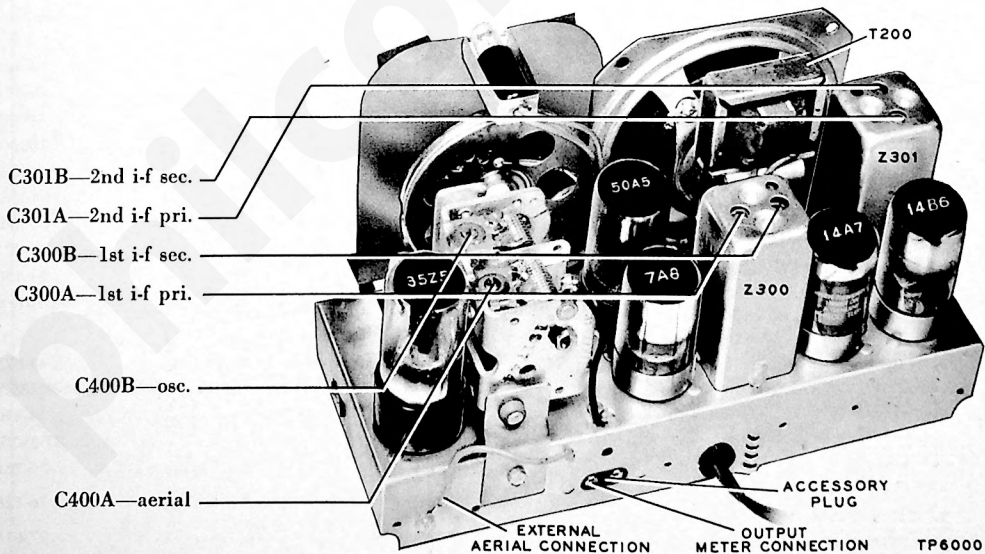


Figure 3. Top View, Showing Trimmer Locations

# 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 .....	30-2573
C101A:	Condenser, filter, 30 mf., 150 v.....	Part of C101
C101B:	Condenser, filter, 25 mf., 150 v.....	Part of C101
C101C:	Condenser, filter, 20 mf., 150 v.....	Part of C101
I100	Lamp, pilot .....	34-2068*
R100	Resistor, leakage, 150,000 ohms.....	66-4153340*
R101	Resistor, filter, 220 ohms .....	66-1224340*
R102	Resistor, filter, 1200 ohms.....	66-2123340*
S100	Switch, on-off .....	Part of R200
W100	Line cord and plug.....	L-2183*

## SECTION 2—AUDIO CIRCUITS

C200	Condenser, blocking, .01 mf.....	61-0120*
C201	Condenser, d-c blocking, .01 mf.....	61-0120*
C202	Condenser, parasitic suppressor, 220 mmf. ....	62-122001001*
C203	Condenser, tone compensation, .02 mf....	61-0108*
LS200	Speaker .....	36-1614
R200	Volume control (with power switch), 500,000 ohms .....	33-5429
R201	Resistor, grid return, 3.3 megohms....	66-5333340*
R202	Resistor, plate load, 470,000 ohms....	66-4473340*
R203	Resistor, grid return, 470,000 ohms....	66-4473340*
R204	Resistor, cathode bias, 130 ohms....	66-1123340*
T200	Output transformer .....	Part of LS200

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

C300A	Condenser, trimmer, 1st i-f primary..	Part of Z300
C300B	Condenser, trimmer, 1st i-f secondary..	Part of Z300
C301A	Condenser, trimmer, 2nd i-f primary..	Part of Z301
C301B	Condenser, trimmer, 2nd i-f secondary .....	Part of Z301
C301C	Condenser, by-pass, 100 mmf.....	Part of Z301
C301D	Condenser, by-pass, 100 mmf.....	Part of Z301
C302	Condenser, a-v-c by-pass, .05 mf.....	61-0122*
C303	Condenser, screen by-pass, .05 mf.....	61-0122*
C304	Condenser-and-choke assembly, .1 mf....	30-4644-1
R300	Resistor, diode load, 470,000 ohms....	66-4473340*

† #30-4644-1 special inductive capacitor should be replaced by a .1 mfd. capacitor part #61-0113 to conform with latest run.

Reference Symbol	Description	Service Part No.
R301	Resistor, screen dropping, 27,000 ohms .....	66-3273340*
R302	Resistor, a-v-c filter, 2.2 megohms....	66-5223340*
Z300	Transformer, 1st i-f .....	32-3967
Z301	Transformer, 2nd i-f .....	32-3952

## SECTION 4—R-F AND CONVERTER CIRCUITS

C400	Condenser, tuning gang .....	31-2727-1
C400A:	Condenser, trimmer, aerial .....	Part of C400
C400B:	Condenser, trimmer, oscillator .....	Part of C400
C401	Condenser, aerial isolating, 5 mmf.....	30-1224-5
C402	Condenser, isolating, 47 mmf.....	30-1224-2
C403	Condenser, blocking, 100 mmf.....	60-10105407*
*C404	Condenser, fixed trimmer, 10 mmf....	30-1224-26
LA400	Aerial, high-impedance loop .....	32-4052-11
R400	Resistor, grid return, 100,000 ohms...	66-4103340*
R401	Resistor, aerial discharge, 150,000 ohms .....	66-4153340*
R402	Resistor, grid return, 1 megohm.....	66-5103340*
T400	Transformer, oscillator .....	32-4263

## MISCELLANEOUS

Description	Service Part No.
<b>Cabinet and Cabinet Parts</b>	
Back-and-clip assembly .....	76-4268
Baffle and cloth .....	40-6945
Cabinet, ebony .....	10690B
Cabinet, green .....	10690A
Grille, plastic .....	54-4506-3
Knob assembly, ebony (2 required).....	54-4486-4
Knob assembly, green (2 required).....	54-4486-3
Shaft assembly .....	31-2718
Window, acetate .....	54-4504
Window fastener (4 required).....	56-6161FE7
<b>Dial-Scale Hardware</b>	
Drive cord (25-ft. spool).....	45-8750*
Fastener, speed .....	56-5028FA9
Pointer .....	54-4505
Scale .....	27-5978-2
Spring .....	56-2617
Pilot-lamp-socket assembly .....	76-1280
Socket, Loktal .....	27-6138
Socket, octal .....	27-6174

† #30-4644 special inductive capacitor should be replaced by a .2 mfd. capacitor part #45-3500-3 to conform with latest run.