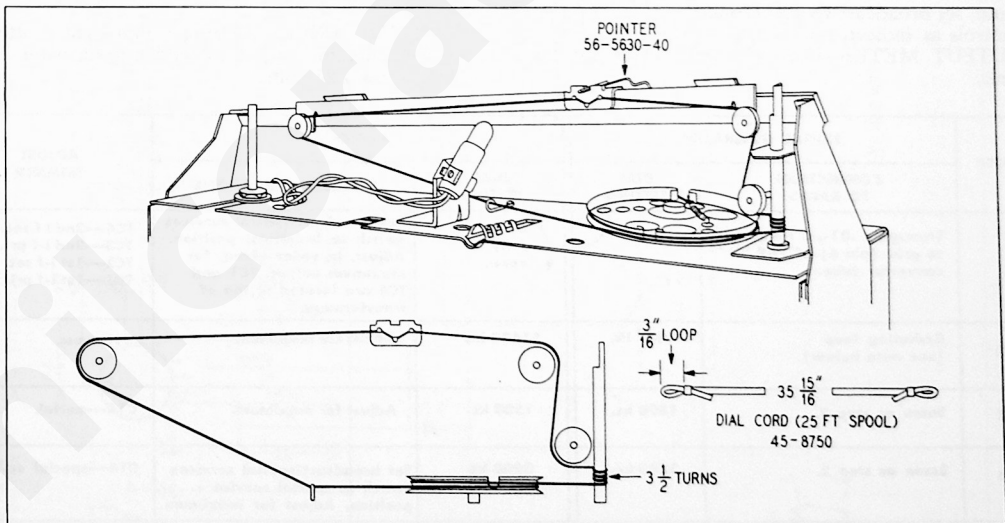
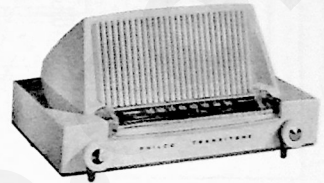


PHILCO RADIO MODEL 53-566

SPECIFICATIONS

CABINET	Molded plastic
CIRCUIT	Four-tube superheterodyne (plus rectifier)
FREQUENCY RANGES	
Standard broadcast	540-1620 kc.
Special service	1700-3400 kc.
AUDIO OUTPUT	1 watt
OPERATING VOLTAGE	105-120 volts, a.c. or d.c.
POWER CONSUMPTION	30 watts
INTERMEDIATE FREQUENCY	455 kc.
AERIAL	Magnecor high-impedance loop; provision for connecting external aerial
PHILCO TUBES	7A8 converter, 7B7 i-f amplifier, 7C6 2nd det., avc., 1st audio, 50C5 output, 35W4 rectifier



TP1-1839

Figure 1. Drive-Cord Installation Details

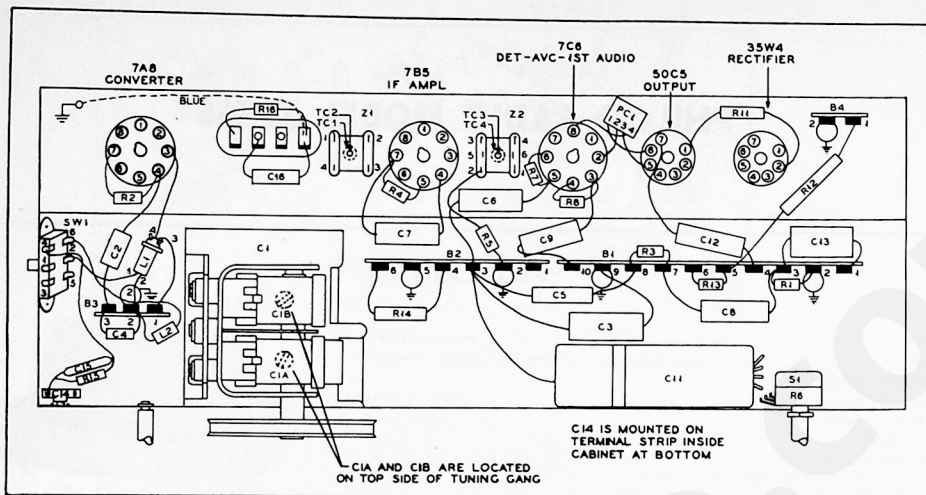


Figure 2. Base View, Showing Parts Placement and Alignment Points

ALIGNMENT PROCEDURE

DIAL POINTER—Turn tuning condenser to full-mesh position. Set dial pointer to index mark, located to the left of "55".

RADIO CONTROLS—Set volume control to maximum; set broadcast-special services switch, and tuning controls as indicated in chart.

OUTPUT METER—Connect across voice-coil terminals.

SIGNAL GENERATOR—Connect signal-generator ground lead to B-, and output lead as indicated in chart. Set frequency as indicated in chart. Use modulated output.

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

STEP	SIGNAL GENERATOR		RADIO		ADJUST TRIMMER
	CONNECTION TO RADIO	DIAL SETTING	DIAL SETTING	SPECIAL INSTRUCTIONS	
1	Through a .01- μ f. condenser to grid (pin 6) of 7A8 converter tube.	455 kc.	Gang fully open.	Set broadcast-special services switch to broadcast position. Adjust, in order given, for maximum output. TC1 and TC4 are located at top of transformers.	TC4—2nd i-f sec. TC3—2nd i-f pri. TC2—1st i-f sec. TC1—1st i-f pri.
2	Radiating loop (see note below).	1630 kc.	*1630 kc.	Adjust for maximum.	C1B—osc.
3	Same as step 2.	1500 kc.	1500 kc.	Adjust for maximum.	C1A—aerial.
4	Same as step 2.	3200 kc.	3200 kc.	Set broadcast-special services switch to special service position. Adjust for maximum.	C14—special services
5	Repeat steps 3 and 4.				

RADIATING LOOP: Make up a 6–8 turn, 8-inch-diameter loop from insulated wire, connect to signal-generator leads, and place near radio loop.

***NOTE:** For proper adjustment of the oscillator trimmer, fully open the tuning gang and insert a .006-inch, non-metallic shim between the heel of the rotor and the top of the stator plates. Close the tuning gang sufficiently to hold the shim in place, and then remove the shim without disturbing the gang setting.

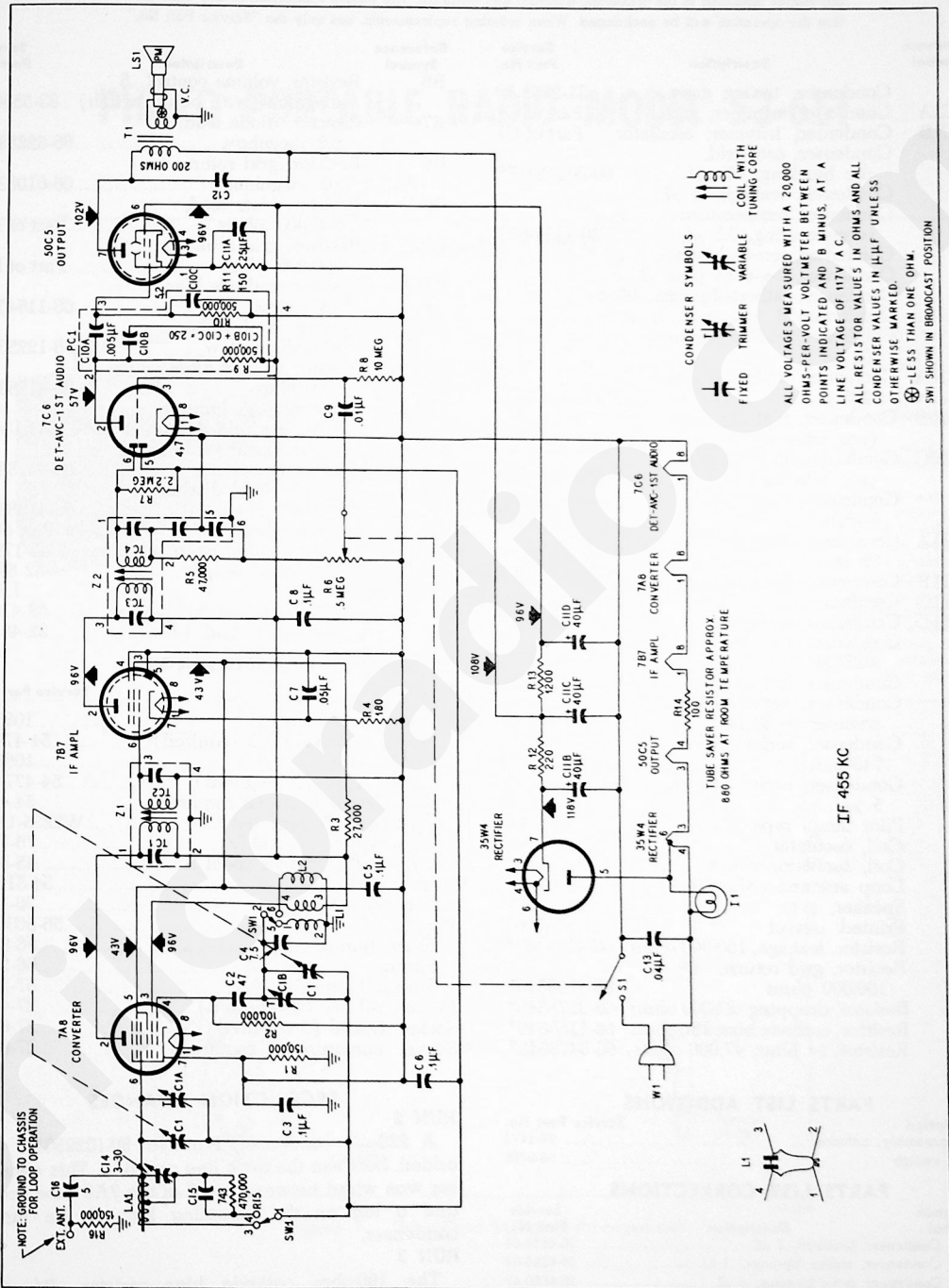


Figure 3. Philco Radio Model 53-566, Schematic Diagram

TP2-975

REPLACEMENT PARTS LIST

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

Reference Symbol	Description	Service Part No.	Reference Symbol	Description	Service Part No.
C1	Condenser, tuning gang	31-2751-10	R6	Resistor, volume control, .5 megohm (with off-on switch)	33-5566-36
C1A	Condenser, trimmer, aerial	Part of C1	R7	Resistor, diode load, 2.2 megohms	66-5228340*
C1B	Condenser, trimmer, oscillator	Part of C1	R8	Resistor, grid return, 10 megohms	66-6108340*
C2	Condenser, osc. grid, d-c blocking, 47 μ f.	60-00475417*	R9	Resistor, plate load, 500,000 ohms	Part of PC1
C3	Condenser, leakage, .1 μ f.		R10	Resistor, grid return, 500,000 ohms	Part of PC1
C4	Condenser, temperature compensating, 7.5 μ f.	30-1224-65*	R11	Resistor, cathode bias, 150 ohms	66-1154340*
C5	Condenser, screen by-pass, .1 μ f.		R12	Resistor, B plus filter, 220 ohms, 2 w	66-1225340*
C6	Condenser, a-v-c by-pass, .1 μ f.		R13	Resistor, B plus filter, 1200 ohms	66-2128340*
C7	Condenser, cathode by-pass, .05 μ f.		R14	Resistor, surge limiting, 880 ohms cold, 100 ohms hot	33-1343-3
C8	Condenser, B + by-pass, .1 μ f.		R15	Resistor, aerial loading, 470,000 ohms	66-4478340*
C9	Condenser, audio coupling, .01 μ f.		R16	Resistor, aerial discharge, 150,000 ohms	66-4158340*
C10A	Condenser, audio coupling, .005 μ f.	Part of PC1	S1	Switch, off-on	Part of R6
C10B	Condenser, plate by-pass (see schematic)	Part of PC1	SW1	Switch, d.p.d.t., band selector	42-1796-2
C10C	Condenser, grid by-pass (see schematic)	Part of PC1	T1	Transformer, output	32-8384*
C11	Condenser, electrolytic, 4-section	30-2575-32*	W1	Line cord	L2183
C11A	Condenser, cathode by-pass, 25 μ f.	Part of C11	Z1	Transformer, 1st i-f	32-4160A
C11B	Condenser, filter, 40 μ f.	Part of C11	Z2	Transformer, 2nd i-f	32-4517A
C11C	Condenser, filter, 40 μ f.	Part of C11			
C11D	Condenser, filter, 40 μ f.	Part of C11			
C12	Condenser, tone compensation, .022 μ f.				
C13	Condenser, line by-pass, .04 μ f.	30-1226-17*			
C14	Condenser, aerial, adjustable trimmer, 3-30 μ f.	31-6473-30			
C15	Condenser, series tracking, 743 μ f.	60-10755311			
C16	Condenser, aerial coupling, 5 μ f.	30-1221-5			
I1	Pilot lamp, type 47	34-2068			
L1	Coil, oscillator	32-4263			
L2	Coil, oscillator shunt	32-4562-3			
LA1	Loop antenna (Magnecor)	32-4565-1			
LS1	Speaker, p-m	36-1639-9			
PC1	Printed circuit	30-6001			
R1	Resistor, leakage, 150,000 ohms	66-4158340*			
R2	Resistor, grid return, 100,000 ohms	66-4108340*			
R3	Resistor, dropping, 27,000 ohms	66-3278340*			
R4	Resistor, cathode bias, 180 ohms	66-1188340*			
R5	Resistor, i-f filter, 47,000 ohms	66-3478340*			

MISCELLANEOUS

Description	Service Part No.
Cabinet, mahogany	10887-4
Knob, mahogany (2 required)	54-4774-9
Cabinet, ivory	10887-5
Knob, ivory (2 required)	54-4774-10
Knob escutcheon (2 required)	54-4927
Fastener (5 required)	W2235-1FA9
Dial-backplate assembly	76-7056
Drive cord, 25-foot spool	45-8750
Dial scale	54-5128-2
Lamp assembly, pilot	76-1472
Pointer	56-5630-40
Shaft, tuning	56-9272
Spring	56-2617
Spring hairpin	57-1468
Mount, rubber (3 required)	27-4596
Socket, Loktal (3 required)	27-6207
Socket, miniature (2 required)	27-6265

PARTS LIST ADDITIONS

Description	Service Part No.
Lead assembly, antenna	76-1472
Lever, switch	56-9796

PARTS LIST CORRECTIONS

Reference Symbol	Description	Service Part No.
C3	Condenser, leakage, .1 μ f.	30-4650-64
C5	Condenser, screen by-pass, .1 μ f.	30-4650-64
C6	Condenser, a-v-c by-pass, .1 μ f.	30-4650-47
C7	Condenser, cathode by-pass, .047 μ f.	30-4650-45
C8	Condenser, B+ by-pass, .1 μ f.	30-4650-64
C9	Condenser, audio coupling, .01 μ f.	30-4650-41
C12	Condenser, tone compensation, .022 μ f.	36-4650-60

PRODUCTION CHANGES

RUN 2

A 220- μ f. condenser, Part No. 60-10225017, was added, between the a-v-c line and B—. This condenser was wired between pin 7 of the 7A8 tube socket and a lug on the mounting bolt of the tuning condenser.

RUN 3

The 180-ohm cathode bias resistor, R4, was changed to 330 ohms, Part No. 66-1338340.