

# PHILCO RADIO-PHONOGRAPH MODEL 52-1730

## SPECIFICATIONS

CABINET .....	Wood console, mahogany
CIRCUIT .....	6-tube superheterodyne (with t-r-f stage)
FREQUENCY RANGE .....	540—1620 kc.
AUDIO OUTPUT .....	3 watts
OPERATING VOLTAGE .....	105—120 volts, 60 cycles, a.c.
POWER CONSUMPTION	
Radio .....	50 watts
Phonograph .....	65 watts, total
INTERMEDIATE FREQUENCY .....	455 kc.
AERIAL .....	Built-in low-impedance loop; provision for external aerial
PHILCO TUBES (6) .....	7B7 r-f ampl., 7B7 i-f ampl., 7A8 converter, 7B6 det.-a.v.c.-1st audio ampl., 6W6GT output, 7X6 rectifier
PHONOGRAPH .....	Philco Model M-22 All-Speed Automatic Record Changer. (For service information, refer to the Record Changer section of this Yearbook.)

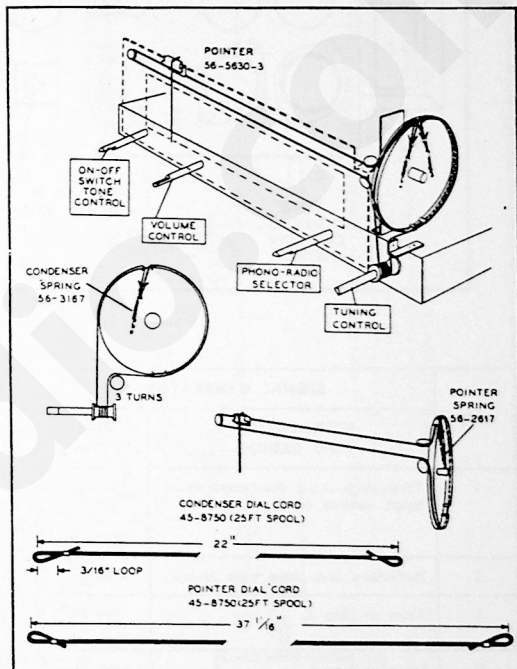


Figure 1. Drive-Cord Installation Details

## ALIGNMENT PROCEDURE

**DIAL POINTER**—With tuning gang fully meshed, set pointer to coincide with the first scribe mark from the left on the dial backplate.

**RADIO CONTROLS**—Set volume control to maximum, tone control fully counterclockwise, and RADIO-PHONO switch to RADIO position.

**OUTPUT METER**—Connect across voice-coil terminals.

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

**OUTPUT LEVEL**—During alignment, attenuate input signal to maintain an output-meter indication of 1.25 volts.

ALIGNMENT PROCEDURE (Continued)

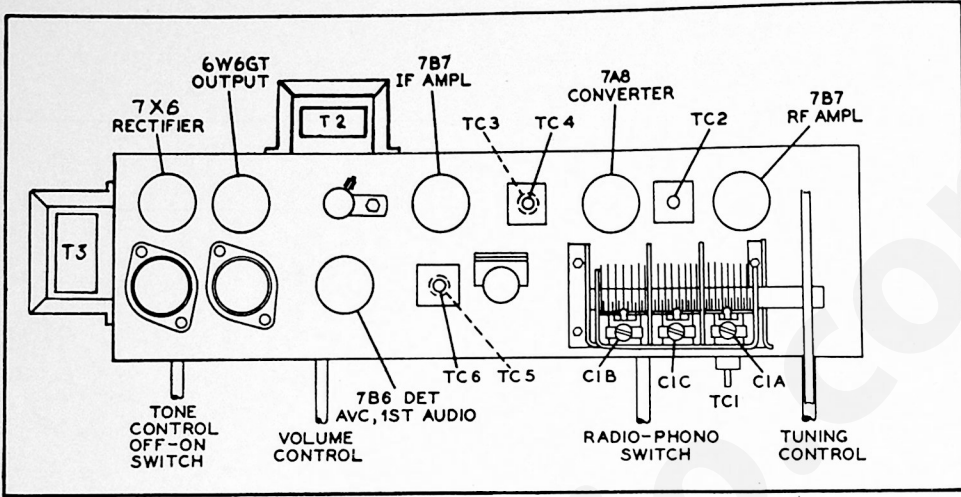


Figure 2. Top View, Showing Trimmer Locations

STEP	SIGNAL GENERATOR		RADIO		ADJUST
	CONNECTION TO RADIO	DIAL SETTING	DIAL SETTING	SPECIAL INSTRUCTIONS	
1	Through a .1- $\mu$ f. condenser to r-f. ampl. section of C1.	455 kc.	Gang fully meshed.	Adjust, in order given, for maximum output.	TC6—2nd if sec. TC5—2nd if pri. TC4—1st if sec. TC3—1st if pri.
2	Radiating loop (see note below).	1620 kc.	1620 kc.	Adjust for maximum.	C1C—osc. trimmer
3	Same as Step 2.	1500 kc.	1500 kc.	Adjust for maximum.	C1B—r-f trimmer C1A—ant. trimmer
4	Same as Step 2.	580 kc.	580 kc.	Adjust for maximum while rocking tuning control.	TC2—r-f core TC1—ant. core*

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

\* The aerial tuning core, TC1, should NOT be adjusted unless the coil has been replaced.

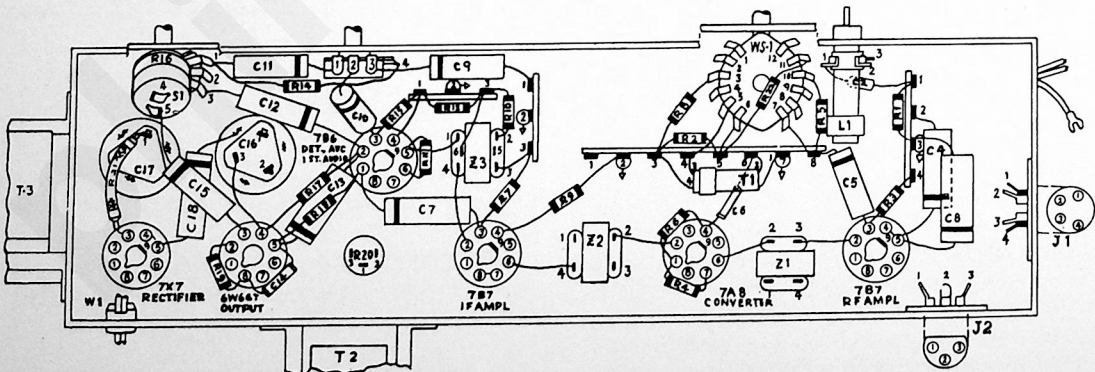


Figure 3. Symbolized Chassis, Showing Parts Placement

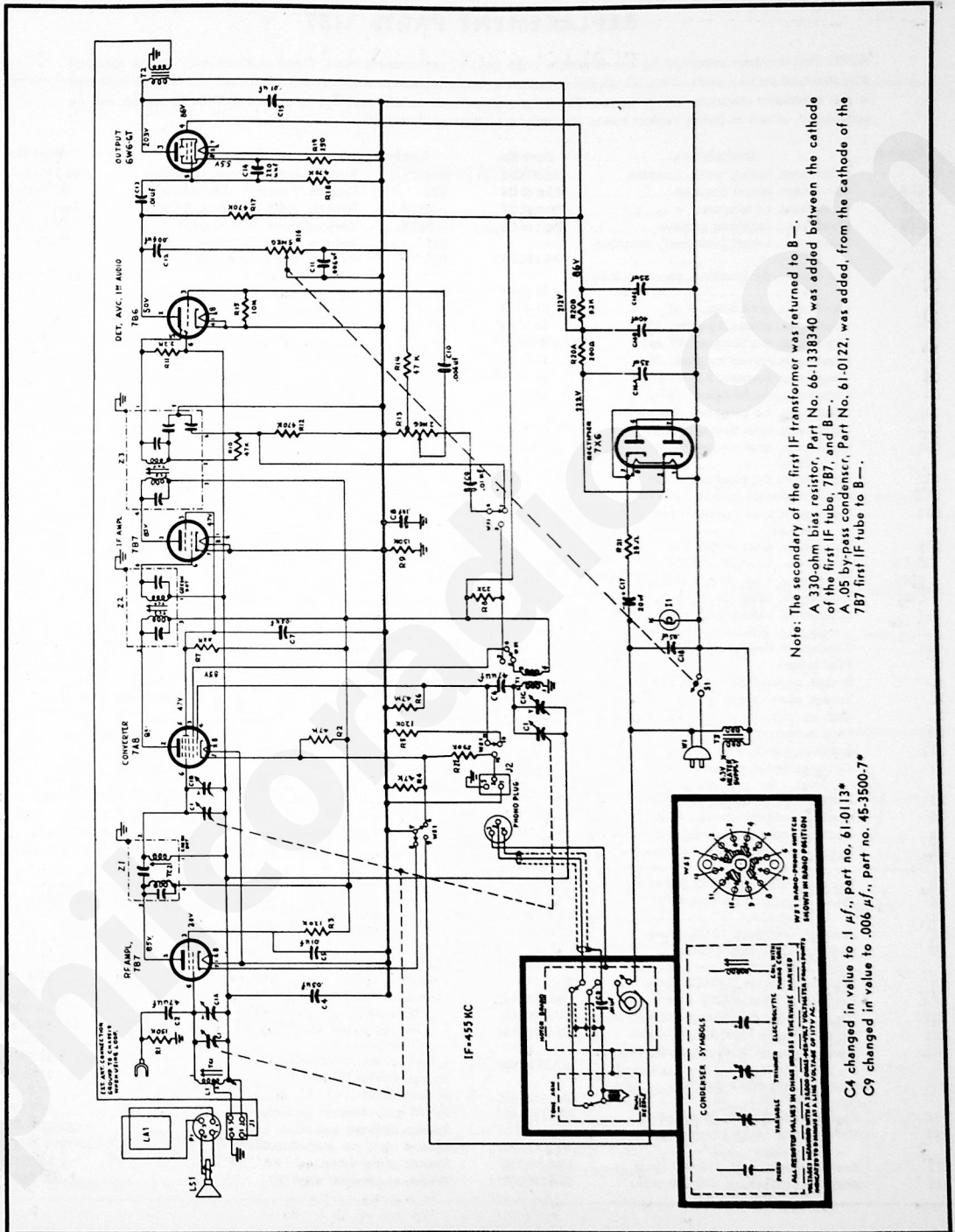


Figure 4. Philco Radio-Phonograph Model 52-1730, Schematic Diagram

## 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."

Symbol	Description	Part No.	Symbol	Description	Part No.
C1	Condenser, tuning gang, 3-section	31-2748-2	R19	Resistor, cathode bias, 150 ohms	66-1154340*
C1A	Condenser, aerial trimmer	Part of C1	R20	Resistor, 2-section, wire-wound	33-3445-1
C1B	Condenser, r-f trimmer	Part of C1	R20A	Resistor, filter, 200 ohms, 2 watts	Part of R20
C1C	Condenser, oscillator trimmer	Part of C1	R20B	Resistor, filter, 9200 ohms, 4 watts	Part of R20
C2	Condenser, aerial (external) coupling, 4.7 $\mu$ f.	30-1221-5*	R21	Resistor, current limiting, 25 ohms	33-1334-5
C3	Condenser, d-c blocking, phono isolation, .01 $\mu$ f.	61-0120*	R22	Resistor, phono tone compensation, 390,000 ohms	66-4398340*
C4	Condenser, a-v-c filter, .1 $\mu$ f.	61-0113*	S1	Switch, off-on	Part of R16
C5	Condenser, screen by-pass, .01 $\mu$ f.	61-0120*	T1	Transformer, oscillator	32-4263
C6	Condenser, d-c blocking, 47 $\mu$ f.	60-00475417*	T2	Transformer, output	32-8460-1
C7	Condenser, screen by-pass, .05 $\mu$ f.	61-0122*	T3	Transformer, filament	32-8461
C8	Condenser, by-pass, B— to ground, .1 $\mu$ f.	61-0113*	W1	Line cord	L-2183*
C9	Condenser, d-c blocking, .006 $\mu$ f.	45-3500-7*	WS1	Switch, wafer, radio-phon	42-1926
C10	Condenser, d-c blocking, .006 $\mu$ f.	61-0105*	Z1	Transformer, r-f	32-4399-4A
C11	Condenser, tone compensation, .01 $\mu$ f.	61-0120*	Z2	Transformer, 1st i-f	32-4160A
C12	Condenser, tone compensation, high-cut, .004 $\mu$ f.	61-0179*	Z3	Transformer, 2nd i-f	32-4240A
C13	Condenser, d-c blocking, .01 $\mu$ f.	61-0120*	<b>MISCELLANEOUS</b>		
C14	Condenser, grid by-pass, 220 $\mu$ f.	62-122001001*	<b>Description</b>	<b>Service Part No.</b>	
C15	Condenser, tone compensation, .0068 $\mu$ f.	45-3505-57*	Cabinet, 52-1730	10821	
C16	Condenser, electrolytic, 3-section	30-2568-45	Dial scale	54-5100-1	
C16A	Condenser, filter, 35 $\mu$ f., 250v	Part of C16	Domes (4)	45-6190	
C16B	Condenser, filter, 40 $\mu$ f., 250v	Part of C16	Door pull	56-6493	
C16C	Condenser, filter, 25 $\mu$ f., 250v	Part of C16	Door support	76-6275	
C17	Condenser, electrolytic, voltage doubler, 20 $\mu$ f., 150v	30-2568-22	Frame, changer mounting	76-6264	
C18	Condenser, line by-pass, .047 $\mu$ f.	45-3505-62*	Knife hinge (2), RH and LH	45-6036	
I1	Pilot lamp	34-2064	Rubber band (2), scale mounting	54-4480	
J1	Socket, aerial input and speaker	27-6214-1	Scale strap (2), ends	56-4860	
J2	Socket, phono input	27-6126*	Scale, strap, middle	56-4756FE11	
L1	Coil, aerial	32-4413-1	Screw (6), scale strap mounting	1W25328FE11	
LA1	Loop aerial	32-4394-8	Speaker bolts (4)	W-700-2	
LS1	Speaker, 8-inch, p-m	36-1626-1	Tapped stud (2)	56-6296	
P1	Cable-and-plug assembly, speaker and loop	41-3948-3	Washer, fiber (4), speaker mounting	27-7467	
R1	Resistor, aerial isolating, 150,000 ohms	66-4158340*	Dial backplate assembly	76-5723	
R2	Resistor, voltage divider, 47,000 ohms	66-3478340*	Bracket-and-pulley assembly	76-4003	
R3	Resistor, screen dropping, 120,000 ohms	66-4128340*	Bumper, rubber (2)	54-4181	
R4	Resistor, voltage divider (phono), 4700 ohms	66-2478340*	Diffusing panel	54-7606-1	
R5	Resistor, grid return, 120,000 ohms	66-4128340*	Fastener, snap	28-4342FA3	
R6	Resistor, grid return (phono), 4.7 megohms	66-5478340*	Spring (2)	56-3841	
R7	Resistor, dropping, 22,000 ohms	66-3228340*	Drive cord, 25-foot spool	48-8750*	
R8	Resistor, plate load (phono), 22,000 ohms	66-3228340*	Pointer	56-5630-3FCP	
R9	Resistor, leakage, 150,000 ohms	66-4158340*	Spring, pointer drive	56-2617	
R10	Resistor, i-f filter, 47,000 ohms	66-3478340*	Fish paper	27-9111	
R11	Resistor, a-v-c diode load, 2.2 megohms	66-5228340*	Knob (1)	54-4718-12	
R12	Resistor, diode load, 470,000 ohms	66-4478340*	Knob (3)	54-4718-6	
R13	Volume control, 2 megohms, tapped at 1 megohm	33-5535-29	Mount, rubber, gang mounting (4)	27-4771-1	
R14	Resistor, tone compensation, 47,000 ohms	66-3478340*	Pilot-lamp-socket assembly	27-6233-2	
R15	Resistor, grid return, 10 megohms	66-6108340*	Rubber band, around electrolytic	54-4480	
R16	Tone control (with off-on switch), 5 megohms	33-5566-19	Shaft-and-pulley assembly, drive	76-3959-3	
R17	Resistor, plate load, 470,000 ohms	66-4478340*	Bushing	27-9437	
R18	Resistor, grid return, 470,000 ohms	66-4478340*	Spring, hairpin (2)	57-1468FA3	
			Spring, hairpin	57-0985	
			Sleeve, changer mounting (3)	54-7798	
			Socket, Loktal (5)	27-6207	
			Socket, octal	27-6174	
			Speed nut, changer mounting (3)	W-2554	
			Spring, changer mounting, heavy (3)	56-7059FA9	
			Spring, changer mounting, light (3)	56-7059-1FI47	
			Spring, gang drive	56-3167	
			Water, electrolytic mtg. (2)	27-9508	