

Philco Radio & Television Corp.

Model: 52-542-1

Chassis:

Year: Pre 1955

Power:

Circuit:

IF:

Tubes:

Bands:

Resources

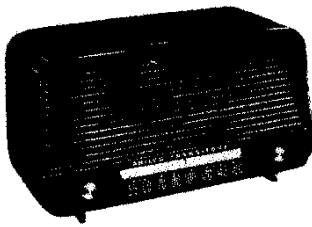
[Riders Volume 23 - PHILCO 23-1](#)

[Riders Volume 23 - PHILCO 23-2](#)

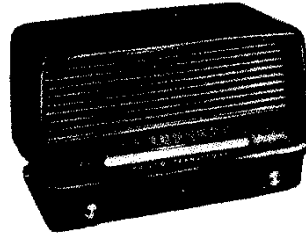
[Riders Volume 23 - PHILCO 23-3](#)

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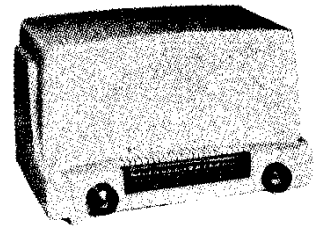
MODELS 52-540, 52-540-1, 52-541, 52-541-1, 52-542-1



MODEL 52-540



MODEL 52-541



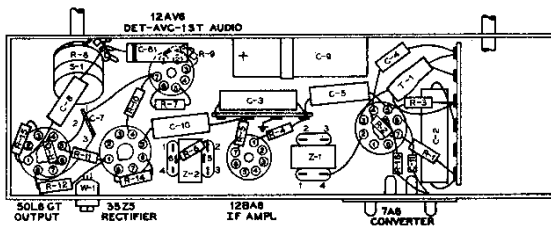
MODEL 52-542-1

SPECIFICATIONS

CABINET

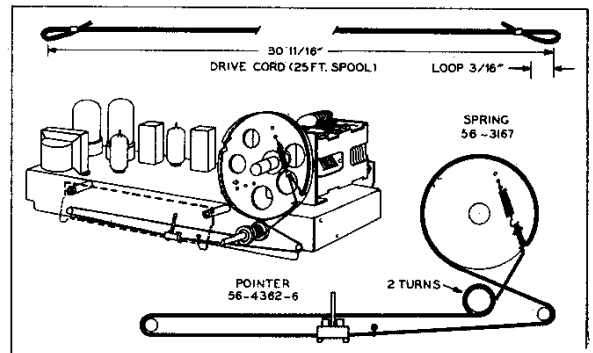
Model 52-540	Phenolic, mottled mahogany
Model 52-540-1	Phenolic, ivory
Model 52-541	Phenolic, mottled mahogany
Model 52-541-1	Phenolic, ivory
Model 52-542-1	Phenolic, ivory

CIRCUIT	5-tube superheterodyne
FREQUENCY RANGE	540—1630 kc.
AUDIO OUTPUT	1.2 watts
OPERATING VOLTAGE	105—125 volts, a.c. or d.c.
POWER CONSUMPTION	30 watts
AERIAL	High-impedance loop; connector for external aerial
INTERMEDIATE FREQUENCY	455 kc.
PHILCO TUBES (5)	7A8, 12BA6, 12AV6, 50L6GT, 35Z5GT



TP1-1136

Figure 1. Symbolized Chassis, Showing Parts Placement



TP-7865F-1

Figure 2. Drive-Cord Installation Details, Models 52-540 and 52-540-1

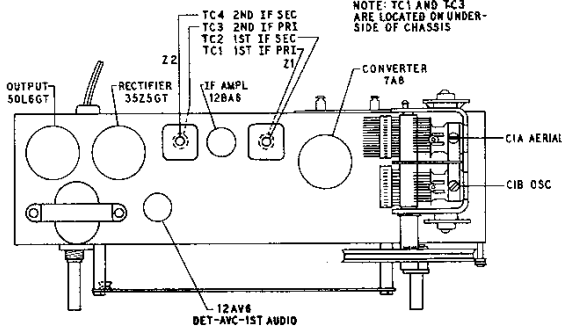
MODEL 52-541, CODE 123

Changes to parts list:

Backplate	76-7556
Springs, diffusion panel (2)	56-3587-1

The position of the pilot-lamp socket and mounting clip was changed from under the speaker to about center of the front side of the sub-base.

MODELS 52-540, 52-540-1, 52-541, 52-541-1, 52-542-1



TP1-1130

Figure 3. Top View, Showing Trimmer Locations

ALIGNMENT PROCEDURE

CONTROLS: Turn on radio and set volume control to maximum.

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

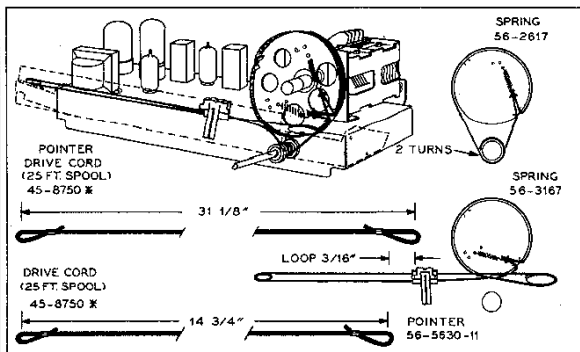
OUTPUT METER: Connect across voice-coil terminals.

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

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

STEP	SIGNAL GENERATOR		RADIO		ADJUST
	CONNECTION TO RADIO	DIAL SETTING	DIAL SETTING	SPECIAL INSTRUCTIONS	
1	Ground lead to B—; output lead through .1-uf. condenser to pin 6 of 7A8 converter.	455 kc.	540 kc. (gang fully meshed)	Adjust tuning cores, in order given, for maximum output.	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.	1600 kc.	1600 kc.	Adjust trimmer for maximum output.	C1B—osc.
3	Same as step 2.	1500 kc.	1500 kc.	Adjust trimmer for maximum output.	C1A—aerial

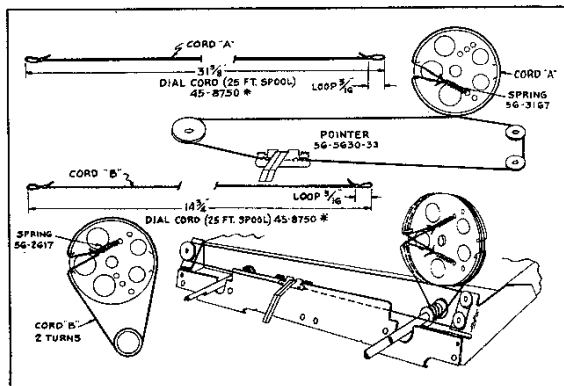
RADIATING LOOP: Make up a 6—8 turn, 6-inch-diameter loop from insulated wire; connect to signal-generator leads and place near radio loop antenna.



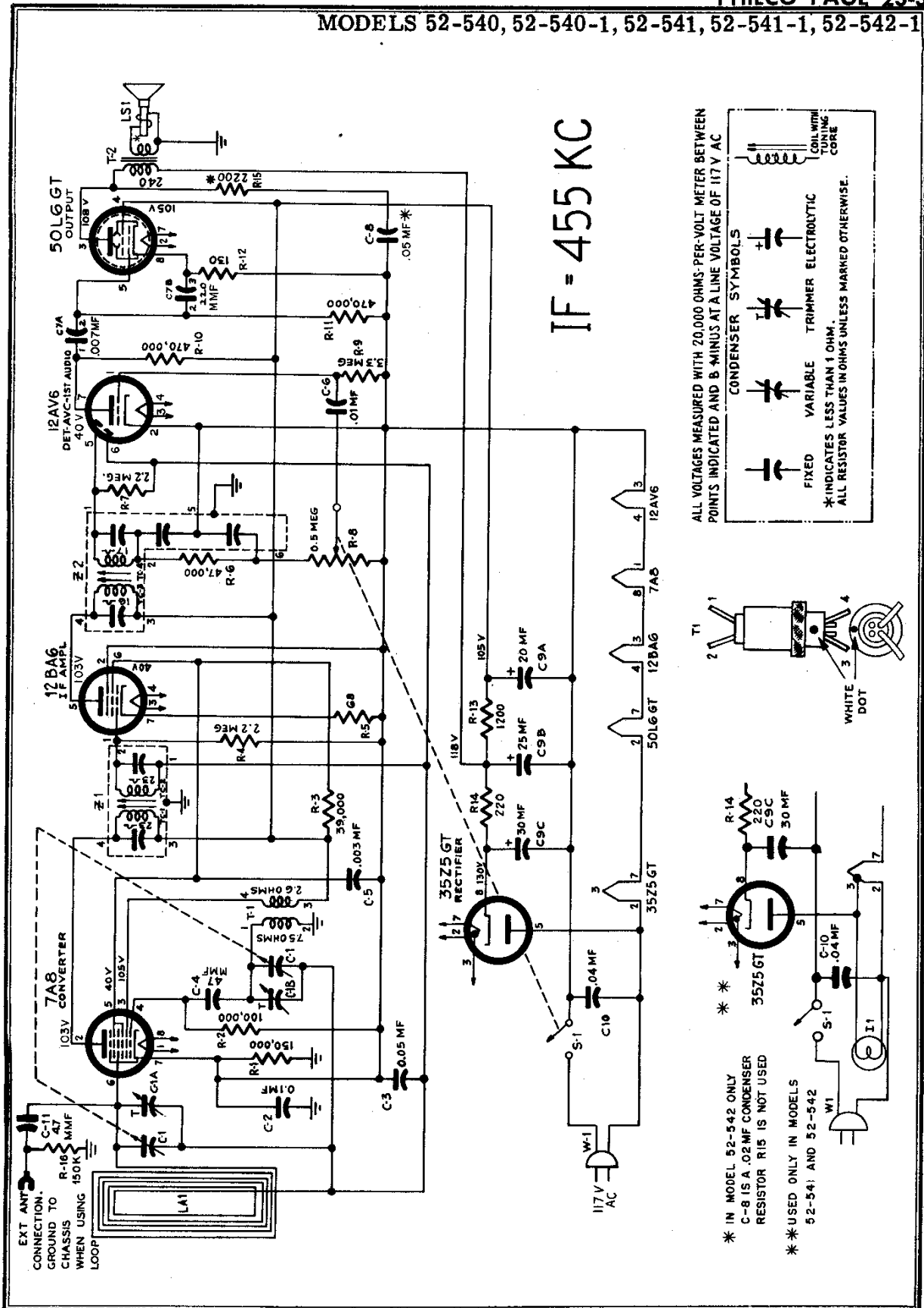
TP-7865E-1

Figure 5. Drive-Cord Installation Details, Model 52-542-1

Figure 4. Drive-Cord Installation Details, Models 52-541 and 52-541-1



TP1-1131



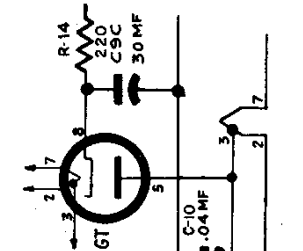
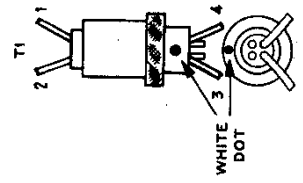
IF = 455 KC

ALL VOLTAGES MEASURED WITH 20,000 OHMS-PER-VOLT METER BETWEEN POINTS INDICATED AND B MINUS AT A LINE VOLTAGE OF 117 V AC

CONDENSER SYMBOLS

- FIXED
- VARIABLE
- TRIMMER
- ELECTROLYTIC
- COIL WITH TUNING CORE

* INDICATES LESS THAN 1 OHM.
* ALL RESISTOR VALUES IN OHMS UNLESS MARKED OTHERWISE.



* IN MODEL 52-542 ONLY
C-8 IS A .02 MF CONDENSER
RESISTOR R15 IS NOT USED

* USED ONLY IN MODELS
52-541 AND 52-542

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 either unchanged or improved. When ordering replacements, use only the "Service Part No."

Reference Symbol	Description	Service Part No.	MISCELLANEOUS	
C1	Condenser, tuning gang Model 52-540 31-2751-6 Models 52-541 and 52-542 31-2751		MODELS 52-540 AND 52-540-1 Cabinet, mottled mahogany 10750 Cabinet, ivory 10750-1 Back 54-7777 Fastener, back mounting (4) W2235-2FA9 Baffle, speaker 54-7761 Dial-backplate assembly 76-4658 Knob (2) 54-4527-11 Mount, rubber (3) 27-4771-1 Pointer 56-4962-6 Pulley-and-shaft assembly 76-3671-3	
C2	Condenser, i-f bypass, .1 μ f. 61-0113*			
C3	Condenser, a-v-c by-pass, .05 μ f. 61-0122*		MODELS 52-541 AND 52-541-1 Cabinet, mahogany 10747 Knob (2) 54-4674 Cabinet, ivory 10747-1 Knob (2) 54-4674-1 Back 54-7767 Fastener, back mounting (4) W2235FA9 Baffle, speaker 54-7761 Backplate, bracket and pulley assembly 76-6235 Dial-backplate assembly 76-4570 Fastener, pilot-lamp shield mounting (2) W2235-1FA9 Speed clip, grille mounting (4) 1W56920FE7 Jewel 54-4304 Mount, rubber (3) 27-4771-1 Pointer <i>See 5630-11 Code 123, 56-8774-2 F.C.P.</i> Spring, pointer drive 56-3167 Pulley-and-shaft assembly 76-3671-2 Scale strap, dial mounting LH 56-7373 RH 56-7373-1 Socket assembly, pilot lamp 27-6233-6	
C4	Condenser, d-c blocking, 47 μ f. 60-00475417*			
C5	Condenser, screen by-pass, .003 μ f. 61-0109*		MODEL 52-542-1 Cabinet, ivory 10769-8 Back 5479-11 Fastener, back mounting (4) W2235FA9 Clips, baffle mounting 1W56920FE7 Baffle, speaker 54-7761 Dial scale 54-5104 Screw, scale mounting (2) 1W14504FA1 Dial-backplate assembly 54-4929 Knob (2) 54-4718-33 Backplate, bracket-and-pulley assembly 76-7048 Fastener, pilot-lamp shield mounting (2) W2235-1FA9 Grille, plastic 54-4919-1 Mount, rubber (3) 27-4771-1 Pointer 56-5830-33 Spring, pointer drive 56-3167 Pulley-and-shaft assembly 76-3671-2 Socket assembly, pilot lamp 27-6233-6	
C6	Condenser, d-c blocking, .01 μ f. 61-0120*			
C7	Condenser, dual ceramic 30-1239-4		PARTS COMMON TO ALL MODELS Bushing, pulley and shaft 27-9437 Clamp, electrolytic mounting 56-1466 Drive cord, 25-foot spool 45-8750* Fastener, hairpin, pulley and shaft 57-1468FA3 Socket, Loktal (1) 27-6269 Socket, miniature (2) 27-6265 Socket, octal (2) 27-6174 Spring, gang drive 56-2617	
C7A	Condenser, d-c blocking, .007 μ f. Part of C7			
C7B	Condenser, grid by-pass, 220 μ f. Part of C7			
C8	Condenser, tone compensation Models 52-540 and 52-541: .05 μ f. 61-0122* Model 52-542: .02 μ f. 61-0108*			
C9	Condenser, electrolytic, 3-section 30-2573			
C9A	Condenser, filter, 20 μ f., 150v Part of C9			
C9B	Condenser, filter, 25 μ f., 150v Part of C9			
C9C	Condenser filter, 30 μ f., 150v Part of C9			
C10	Condenser, line by-pass, .04 μ f. 45-3500-2*			
C11	Condenser, external-aerial coupling, 4.7 μ f. 30-1230			
II	Pilot lamp (Models 52-541 and 52-542-1 only) 34-2068			
LA1	Loop aerial Models 52-540 and 52-540-1 32-4052-33 Models 52-541 and 52-541-1 32-4052-31 Model 52-542-1 32-4052-38			
LS1	Speaker, p-m Models 52-540, 52-540-1, 52-541 and 52-541-1 36-1627-5 Model 52-542-1 36-1625-3			
R1	Resistor, leakage, 150,000 ohms 66-4158340*			
R2	Resistor, grid return, 100,000 ohms 66-4108340*			
R3	Resistor, screen dropping, 39,000 ohms 66-3398340*			
R4	Resistor, grid return, 2.2 megohms 66-5228340*			
R5	Resistor, cathode bias, 68 ohms 66-0688340*			
R6	Resistor, i-f filter, 47,000 ohms 66-3478340*			
R7	Resistor, diode load, 2.2 megohms 66-5228340*			
R8	Volume control, 500,000 ohms Models 52-540 and 52-540-1 33-5538-7 Models 52-541 and 52-541-1 33-5566-4 Model 52-542-1 33-5566-4			
R9	Resistor, grid return, 3.3 megohms 66-5388340*			
R10	Resistor, plate load, 470,000 ohms 66-4478340*			
R11	Resistor, grid return, 470,000 ohms 66-4478340*			
R12	Resistor, cathode bias, 130 ohms 66-1133260*			
R13	Resistor, filter, 1200 ohms 66-2128340*			
R14	Resistor, filter, 220 ohms, 1 watt 66-1224340*			
R15	Resistor, tone compensation, 2200 ohms (Models 52-540, 52-540-1, 52-541 and 52-541-1 only) 66-2228340			
R16	Resistor, aerial isolating, 150,000 ohms 66-4158340			
S1	Switch, off-on Part of R8			
T1	Transformer, oscillator 32-4263			
T2	Transformer, output 32-8384			
WI	Line cord L-2183*			
Z1	Transformer, st i-f 32-4180-6A			
Z2	Transformer, 2nd i-f 32-4240-A			