

PHILCO RADIO-CLOCK MODELS 52-544, 52-544-I AND 52-544-W

SPECIFICATIONS

CABINET

Model 52-544	Molded phenolic, mahogany
Model 52-544-I	Molded phenolic, ivory
Model 52-544-W	Molded phenolic, white
FREQUENCY RANGE	540—1600 kc.
AUDIO OUTPUT	1 watt
OPERATING VOLTAGE	117 volts, a-c.
POWER CONSUMPTION	30 watts
AERIAL	High-impedance loop; connector for external aerial
INTERMEDIATE FREQUENCY	455 kc.
PHILCO TUBES (5)	7A8, 12BA6, 12AV6, 50L6GT, 35Z5



MODEL 52-544-I

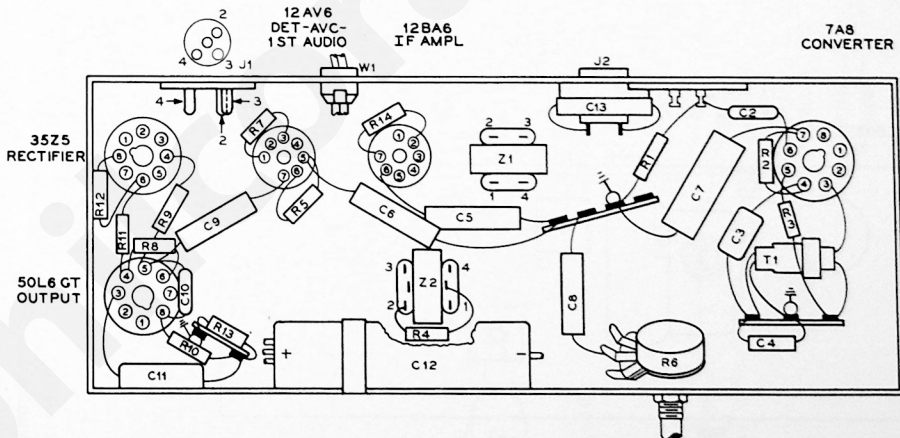


Figure 1. Base View, Showing Symbolized Chassis

TP1-1139

ALIGNMENT PROCEDURE

RADIO CONTROLS — Set volume control to maximum. Set tuning control as indicated in chart.

OUTPUT METER — Connect across voice-coil terminals.

SIGNAL GENERATOR — Connect generator and set frequency as indicated in chart. Use modulated output.

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

STEP	SIGNAL GENERATOR		RADIO		ADJUST
	CONNECTION TO RADIO	DIAL SETTING	DIAL SETTING	SPECIAL INSTRUCTIONS	
1	Connect ground lead to B—; output lead through .1- μ f. condenser to grid (pin 6) of 7A8.	455 kc.	Tuning condenser 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 aerial.

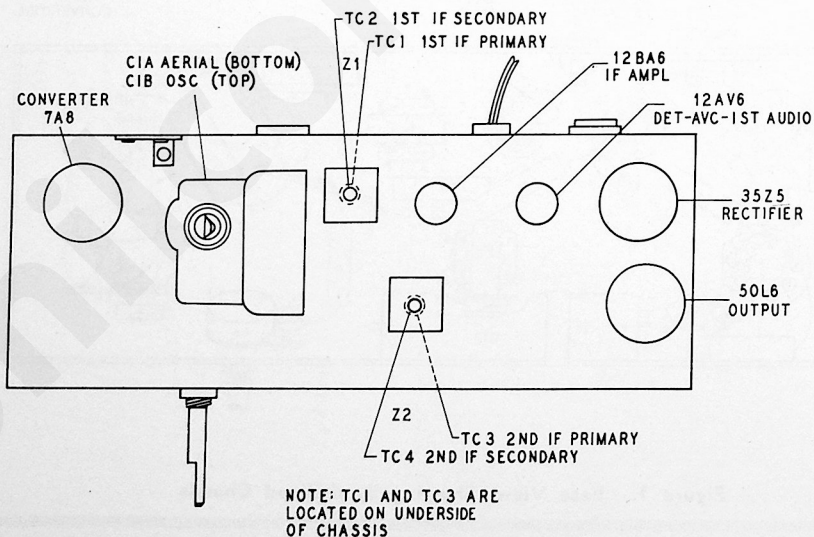
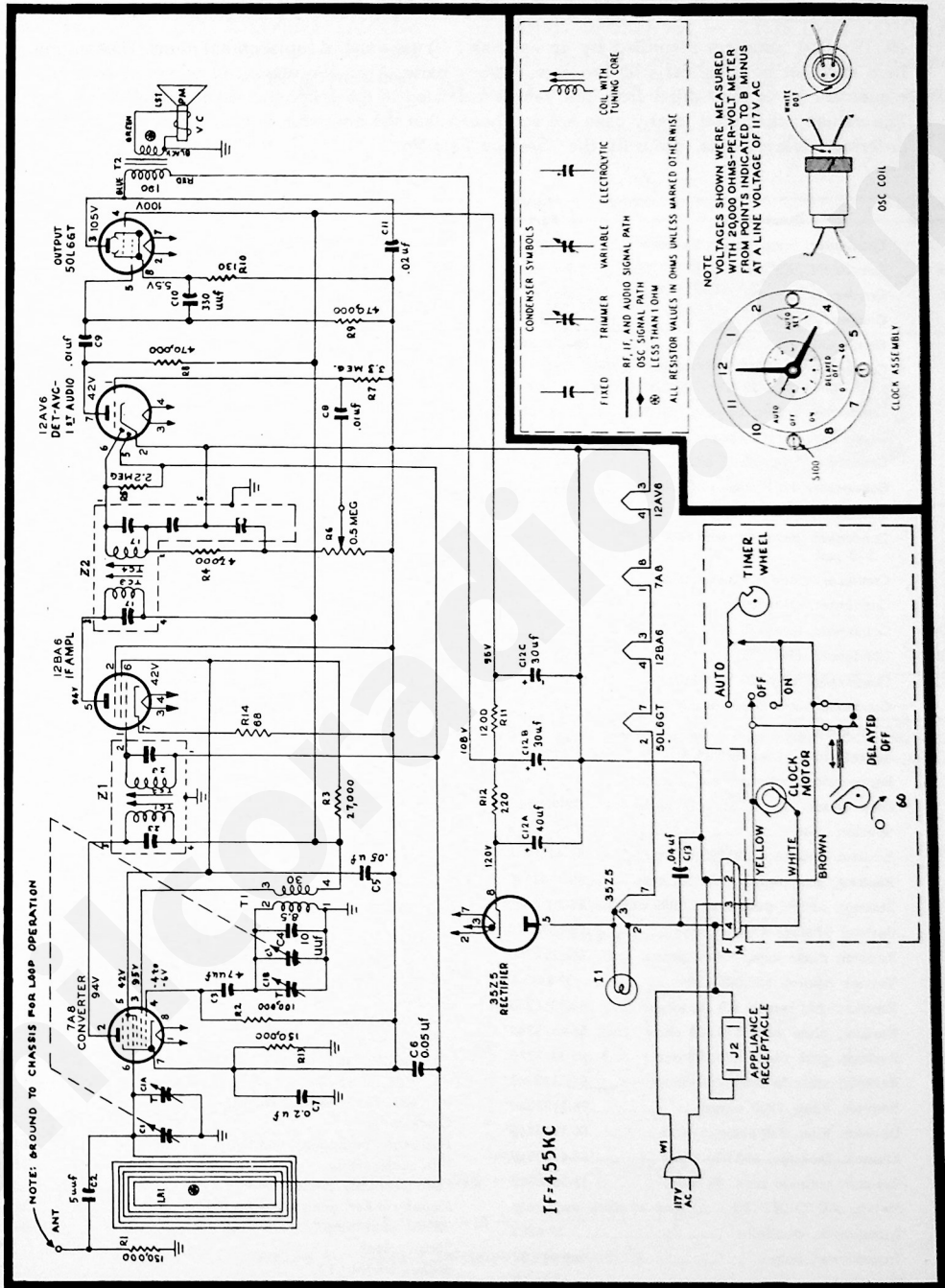


Figure 2. Top View, Showing Trimmer Locations

TPI-1140



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.
C1	Condenser, tuning gang, 2-section	31-2751-5
C1A	Condenser, trimmer, aerial	Part of C1
C1B	Condenser, trimmer, oscillator	Part of C1
C2	Condenser, aerial coupling, 5 μ f.	30-1230
C3	Condenser, d-c blocking, 47 μ f.	60-00475417*
C4	Condenser, temperature compensating, 7.5 μ f.	30-1224-65
C5	Condenser, screen by-pass, .05 μ f.	61-0122*
C6	Condenser, α -v-c by-pass, .05 μ f.	61-0122*
C7	Condenser, by-pass, .2 μ f.	45-3500-3*
C8	Condenser, d-c blocking, .01 μ f.	45-3505-58
C9	Condenser, d-c blocking, .01 μ f.	45-3505-58
C10	Condenser, parasitic suppressor, 330 μ f.	60-10335417*
C11	Condenser, tone compensation, .02 μ f.	61-0108*
C12	Condenser, electrolytic, 3-section	30-2575-27
C12A	Condenser, filter, 30 μ f., 150v	Part of C12
C12B	Condenser, filter, 25 μ f., 150v	Part of C12
C12C	Condenser, filter, 20 μ f., 150v	Part of C12
C13	Condenser, line filter, .04 μ f.	45-3500-2*
I1	Pilot lamp	34-2068
J1	Socket, clock motor and switch	27-6273
J2	Receptacle, appliance, α -c	76-3931
LA1	Loop aerial	32-4052-32
LS1	Speaker, p-m	36-1627-8
R1	Resistor, isolating, 150,000 ohms	66-4158340*
R2	Resistor, grid return, 100,000 ohms	66-4108340*
R3	Resistor, screen dropping, 27,000 ohms	66-3278340*
R4	Resistor i-f filter 47,000 ohms	66-3478340*
R5	Resistor, diode load, 2.2 megohms	66-5228340*
R6	Volume control, 500,000 ohms	33-5565-6
R7	Resistor, grid return, 3.3 megohms	66-5338340*
R8	Resistor, plate load, 470,000 ohms	66-4478340*
R9	Resistor, grid return, 470,000 ohms	66-4478340*
R10	Resistor, cathode bias, 130 ohms	66-1138340*
R11	Resistor, filter, 1200 ohms	66-2128340*
R12	Resistor, filter, 220 ohms, 1 watt	66-1224340*
R13	Resistor, leakage, 150,000 ohms	66-4158340*
R14	Resistor, cathode bias, 68 ohms	66-0688340
S1	Switch, AUTO-OFF-ON	Part of clock assembly
T1	Transformer, oscillator	32-4263
T2	Transformer, output	Part of LS1
W1	Line cord	L-2183*
Z1	Transformer, 1st i-f	32-4160-6A
Z2	Transformer, 2nd i-f	32-4240A

MISCELLANEOUS

Description	Service Part No.
Cabinet	
MODEL 52-544	10745
MODEL 51-544-I	10745-1
MODEL 52-544-W	10745-4
Back	
Fastener (4), back mounting	W2235FA9
Baffle-and-cloth assembly	
Model 52-544	40-7730
Model 52-544-I	40-7730-1
Model 52-544-W	
Jewel (used on mahogany and ivory cabinets)	54-4304
Jewel (used on white cabinet only)	54-4304-1
Knobs	
MODEL 52-544	
VOLUME	27-4820
AUTO-OFF-ON	54-4736
DELAYED OFF	54-4736
AUTO SET	54-4736-2
TIME SET	54-4736-4
MODEL 52-544-I	
VOLUME	54-4118
AUTO-OFF-ON	54-4736-1
DELAYED OFF	54-4736-1
AUTO SET	54-4736-3
TIME SET	54-4736-4
MODEL 52-544-W	
VOLUME	27-4815-7
AUTO-OFF-ON	54-4736-5
DELAYED OFF	54-4736-5
AUTO SET	54-4736-6
TIME SET	54-4736-7
Clamp, electrolytic mounting	56-1466
Clip, pilot-lamp mounting	56-3545-6FA3
Clock-and-cable assembly	
MODEL 52-544, 60-cycle	76-6723
MODEL 52-544-I, 60-cycle	76-6724
MODEL 52-544-W, 60-cycle	76-6725
Clock cover	56-6710
Dial scale, mahogany and ivory	54-5055-2
Dial scale, white	54-5055-4
Lead assembly, aerial	76-1472
Mount, rubber, gang mounting (3)	27-4771-1
Shield, pilot lamp	56-9074-3
Socket, clock	27-6273
Socket, Loktal (1)	27-6269
Socket, octal (2)	27-6174
Socket, miniature (1)	27-6265
Socket assembly, pilot lamp	27-6233-6

PRODUCTION CHANGES

Code 122, Run 1

The 50L6 output tube was replaced by a 35L6, with necessary wiring changes.

The "tube saver" resistor, Part No. 33-1343-3, was added, and is connected in series in the filament string, between the 35L6 output tube and the 12BA6 i-f amplifier.