

# Models PT-91, PT-92, PT-93, PT-94, PT-95

## SPECIFICATIONS

Models PT-91, PT-92, PT-93, PT-94 and PT-95 are five (5) tube A.C. or D.C. operated Superheterodyne compact radios employing a built-in loop aerial. These models are similar with the exception of the cabinets and loops. Model PT-91 is assembled in a walnut plastic cabinet, Model PT-92 in a white plastic cabinet, Model PT-93 in a dark wood cabinet, PT-94, walnut cabinet, and PT-95, walnut cabinet, ivory trim.

In addition each Model includes a tuning band from 535 to 1620 K.C., Automatic Volume Control; Beam power pentode audio output stage and Philco Loktal tubes.

INTERMEDIATE FREQUENCY: 455 K.C.

AUDIO OUTPUT: 1 Watt.

### CABINET DIMENSIONS:

	Height	Width	Depth
Models PT-91, PT-92	6 $\frac{1}{16}$ "	10 $\frac{1}{16}$ "	5 $\frac{1}{8}$ "
Model PT-93	8 $\frac{1}{8}$ "	11 $\frac{3}{4}$ "	6 $\frac{1}{16}$ "
Models PT-94, PT-95	7"	13"	6"

POWER SUPPLY: 115 Volts, A.C. or D.C.

PHILCO TUBES: 7A8, converter; 7B7, I. F. Amplifier; 7C6, 2nd detector, A. V. C., 1st audio; 50L6GT, beam power audio output and a 35Z3, rectifier.

**AERIAL AND GROUND:** Under ordinary operating conditions an outside aerial or ground is not required. In some locations, however, such as steel reinforced buildings and other shielded areas, an outside aerial should be used for maximum performance. For this purpose an outside aerial connection is located on the rear lower left corner of the chassis. Simply remove the lug from under the screw and attach the aerial lead to the lug. **PHILCO AERIAL**, Part No. 40-6370, is especially designed for these radios, and can be obtained from your Philco Distributor.

## ALIGNING R. F. AND I. F. COMPENSATORS

### EQUIPMENT REQUIRED

- SIGNAL GENERATOR:** Covering the frequency range of the receiver, such as Philco Models 070 or 177.
- ALIGNING INDICATOR:** Either a vacuum tube voltmeter or an audio output meter may be used as an aligning indicator. Philco Models 027 or 028 circuit testers contain both these meters.
- TOOLS:** Philco Fiber Screw Driver, Part No. 45-2610.

### CONNECTING ALIGNING INSTRUMENTS

**Audio Output Meter:** If this type of aligning meter is used, connect it to the voice coil terminals of the speaker on the outside aerial terminal panel, or from the plate of the 50L6GT tube to B (—) negative. Adjust the meter for the 0 to 10 volt scale.

**Vacuum Tube Voltmeter:** To use the vacuum tube voltmeter as an aligning indicator, make the following connections: Attach the negative (—) terminal of the voltmeter to any point in the circuit where the A. V. C. voltage can be obtained. Connect the positive (+) terminal of the vacuum tube volt meter to the chassis.

**Signal Generator:** When adjusting the I.F. padders, the high side of the signal generator is connected through a .1 mfd. condenser to the antenna sec-

tion of the tuning condenser. Connect the ground or low side of the generator to the chassis.

When aligning the R. F. padders a loop is made from a few turns of wire and connected to the signal generator output terminals; the signal generator is then placed close to the loop of the radio.

The receiver can be adjusted in the cabinet or removed from the cabinet.

When adjusting the radio outside the cabinet the loop aerial should be placed in approximately the same position near the chassis as when assembled.

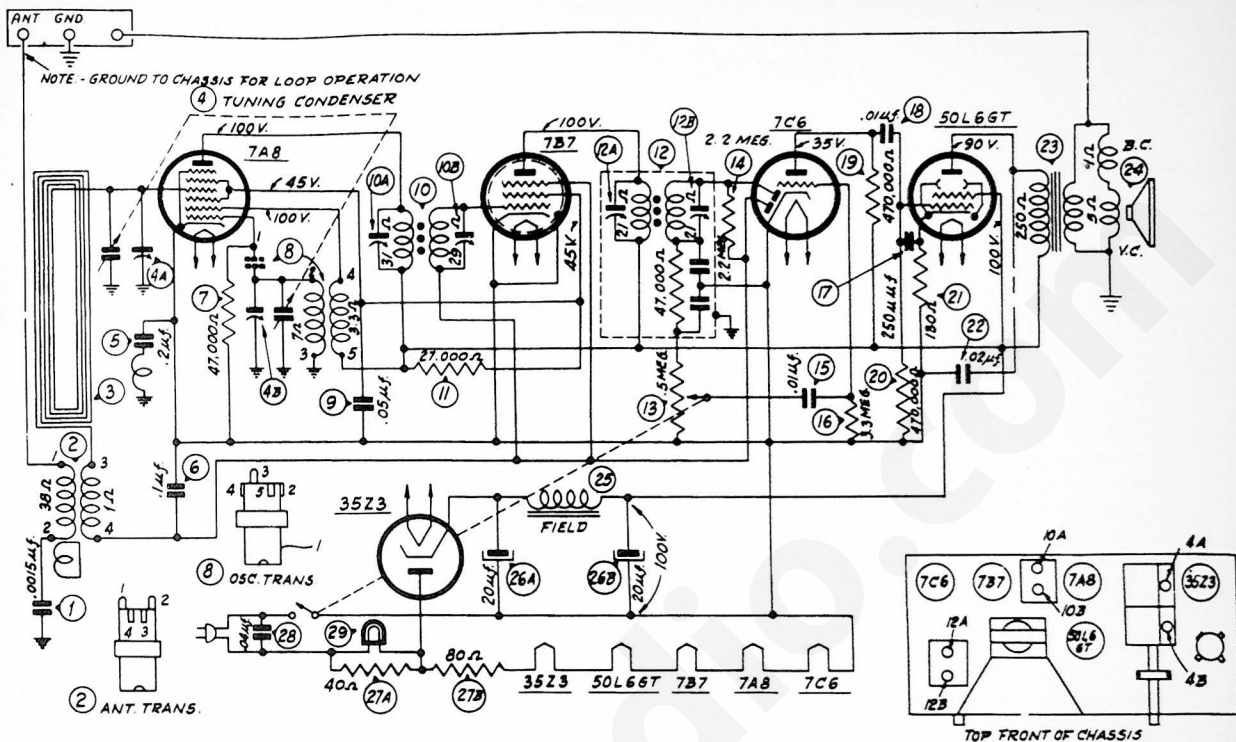
After connecting the aligning instruments adjust the compensators as shown in the tabulation below. Locations are shown on Schematic.

If the indicating meter pointer goes off scale when adjusting the compensators, reduce the strength of the signal from the generator.

Operations In Order	SIGNAL GENERATOR		RECEIVER			SPECIAL INSTRUCTIONS
	Output Connections to Receiver	Dial Setting	Dial Setting	Control Setting	Adjust Compensators in Order	
1.	Ant. Section of tuning	455 K.C.	540 K.C. Tuning Cond. Closed	Vol. Max.	12A, 12B, 10A, 10B	Note B
2.	Loop see above instructions	1500 K.C.	1500 K.C.	Vol. Max.	4B	Note A
3.	Loop see above instructions	1500 K.C.	1500 K.C.	Vol. Max.	4A	

**NOTE A: DIAL POINTER CALIBRATION** — In order to adjust the receiver correctly, the pointer must be adjusted to track properly with the tuning condenser. To do this, turn the tuning condenser to the maximum capacity (plates fully meshed). With the condenser in this position, set the tuning pointer on the small dot below 550 K.C.

**Note B** — Before adjusting compensators, turn down (10B) to tight position. Then adjust the compensators for maximum output in the following order: 12A, 12B, 10A and 10B.



SCHEMATIC DIAGRAM — MODELS PT-91, PT-92, PT-93, PT-94, PT-95

The tube socket voltages indicated on the diagram were measured with a 1,000 ohms per voltmeter — PHILCO Model 027, line voltage 117 volts A.C.

### REPLACEMENT PARTS

SCHEM. No.	DESCRIPTION	PART No.	SCHEM. No.	DESCRIPTION	PART No.	SCHEM. No.	DESCRIPTION	PART No.	
1.	Condenser (.0015 mfd., 200 volts)	30-4621	26B.	Electrolytic Condenser (20 mfd., part of 26A)	32-3394		Bezel	54-4152	
2.	Aerial Transformer	28-5002		Clamp	56-1346		Baffle & Cloth	40-6693	
3.	Loop Aerial (PT-91 part of Cabinet)	32-3835	27.	Resistor (40-80 ohms)	30-4119		Cable (Power)	L-3199	
	Loop Aerial (PT-92 part of Cabinet)	32-3855	28.	Cond. (.04 mfd., 400 volts)	34-2048		Dial Scale (PT-91, PT-92)	27-5713	
	Loop Aerial (PT-93)	31-2539	29.	Pilot Lamp	76-1280		Mtg. Screw (Dial) PT-91	W-523	
	Loop Aerial (PT-94, PT-95)	31-2539	MISCELLANEOUS PARTS					Dial Scale (PT-93)	27-5797
4.	Tuning Cond.	31-2539	Cabinet PT-91	76-1249			Mtg. Screw (PT-93)	W-758	
	Dial Pointer	54-4043	Cardboard back PT-91	27-9879			Dial Scale (PT-94, PT-95)	27-5802	
	Mtg. Grammet	27-4610	Mtg. Fastener	45-6196			Dial (Window) PT-91, PT-92	54-4088	
	Spring (Drive cord)	28-8954	Cabinet PT-92	27-9922			Dial (Window) PT-94, PT-95	27-5616	
	Tuning Shaft	31-2518	Cardboard back PT-92	27-9922			Fastener (Dial Window)	56-1387	
	Mtg. Nut	W-2157	Mtg. Fastener	45-6196			Screw	W-523	
	Drive Cord	31-2541	Cabinet PT-93	10585A			Washer	W-152	
5.	Condenser & Choke Assembly	76-1161	Cardboard back PT-93	27-9952			Knob Assembly (PT-91)	27-4820	
6.	Condenser (.1 mfd., 200 volts)	30-4586	Cabinet (PT-94)	10553A			Knob (PT-92)	27-4820	
7.	Resistor (47,000 ohms)	32-347339	Cabinet back	10553A			Knob (PT-93)	54-4118	
8.	Oscillator Transformer	32-3686	Bezel	54-4117			Knob (PT-94)	54-4137	
9.	Mtg. Clip	28-5002	Baffle & Cloth	40-6691			Knob (PT-95)	27-4809	
10.	Condenser (.05 mfd., 200 volts)	30-4519	Cabinet (PT-95)	10553A			Sockets (tubes)	27-4810	
11.	1st I. F. Transformer	32-3673	Cabinet back	27-9973			Sockets (50L6GT)	27-6177	
	Mtg. Nut	W-624					Speaker	36-1542	
12.	Resistor (27,000 ohms)	33-327339					Washer (Chassis)	W-410	
	Mtg. Nut	W-624					Screw (Chassis)	W-1921	
13.	Volume Control	W-1949							
	Nut	W-1949							
14.	Resistor (2.2 megohms)	33-522339							
15.	Cond. (.01 mfd., 400 volts)	30-4572							
16.	Resistor (3.3 megohms)	33-533339							
17.	Mica Cond. (.250 mmd.)	60-125157							
18.	Cond. (.01 mfd., 400 volts)	30-4572							
19.	Resistor (470,000 ohms)	33-447339							
20.	Resistor (470,000 ohms)	33-447339							
21.	Resistor (130 ohms)	30-4516							
22.	Condenser (.02 mfd., 400 volts)	32-8164							
23.	Output Transformer	32-8164							
24.	Cone Assembly (for Speaker 36-1542-9)	36-4204							
25.	Field Coil (Replace Speaker 36-1542)	30-2382							
26A.	Electrolytic Condenser (20-20 mfd.)	30-2382							

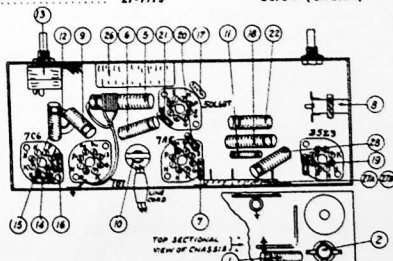


FIG. 1 — LOCATIONS OF PARTS — UNDERSIDE OF CHASSIS.