

MODELS PT-2, PT-4 AND PT-6

SPECIFICATIONS

Models PT-2, PT-4 and PT-6 are five (5) tube A. C. or D. C. operated Super-heterodyne compact radios employing a built-in loop aerial. These models are similar with the exception of the cabinets and loops. Models PT-2 and PT-4 are assembled in a bakelite cabinet and PT-6 in Wood Cabinet.

In addition each Model includes a tuning band from 540 to 1600 K. C., Automatic Volume Control; beam power pentode audio output stage and Philco Loktal tubes.

INTERMEDIATE FREQUENCY: 155 K. C.

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.

THE PHILCO UTILITY AERIAL, Part No. 49-6384, is especially designed for these radios, and can be obtained from your Philco Distributor.

ALIGNING R. F. AND I. F. COMPENSATORS

The following procedure covers both models.

EQUIPMENT REQUIRED

- SIGNAL GENERATOR:** Covering the frequency range of the receiver, such as Philco Models 077 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 or from the plate of the 50L6GT tube to the chassis. 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 voltmeter 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 section 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 around or 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. Range Switch Brdcast.	12A, 12B, 10A, 10B	Note B
2	Loop see above instructions	1600 K. C.	1600 K. C.	Vol. Max. Range Switch Brdcast.	(4B, Note C)	Note A
3	Loop see above instructions	1500 K. C.	1500 K. C.	Vol. Max. Range Switch Brdcast.	(4A, Note D)	

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 first small line stamped in the scale plate on the left side.

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.

NOTE C—Turn tuning condenser until dial pointer is on the first small line stamped in the scale plate from right side of chassis. Adjust padder (4B) to maximum at this point.

NOTE D—Turn tuning condenser until dial pointer is on the second small line stamped in the scale plate from right side of chassis. Adjust padder (4A) to maximum at this point.

PRODUCTION CHANGES

MODELS 41-PT-2, PT-6

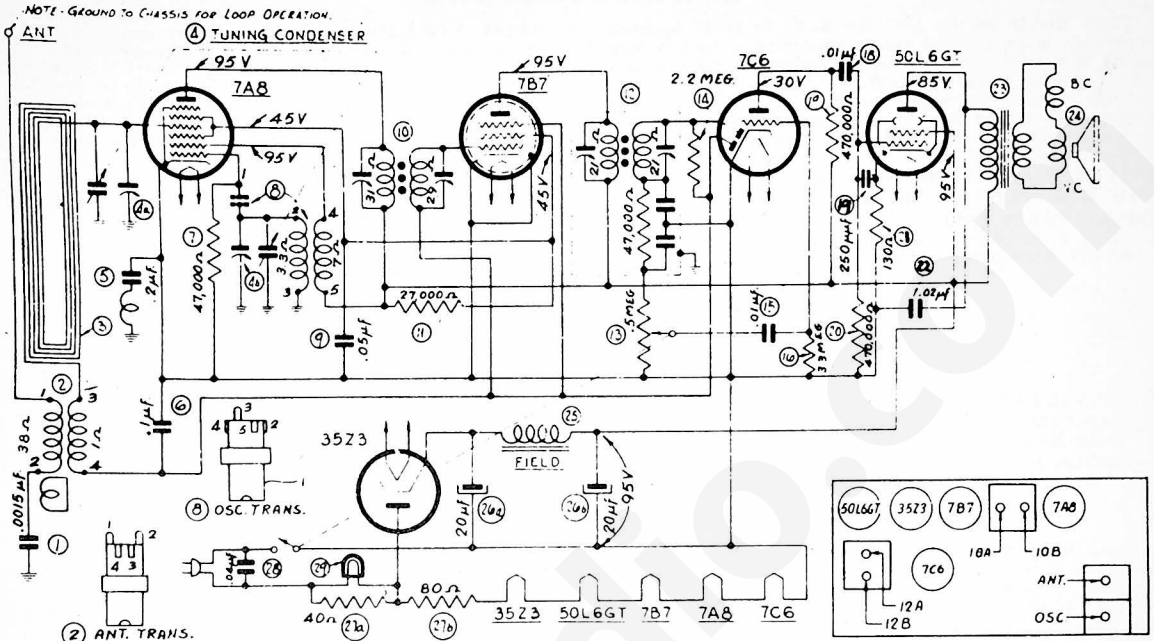
To prevent drive cord from rubbing subbase, the tuning shaft assembly was changed from Part No. 31-2528 to No. 31-2531.

If trouble is experienced in padding the aerial padder 4A to maximum, the addition of a 10 mmfd. condenser Part No. 60-010137 across the aerial section of the tuning condenser will improve padding.

To prevent I. F. oscillation, the green lead from 2nd I. F. Transformer to diode must be dressed under volume control.

To prevent oscillation at the low frequency end of the dial (550 K. C.), the electrolytic condenser must be so located that the end having two leads is next to the volume control.

MODELS PT-2, PT-4 AND PT-6 (CONTINUED)



SCHEMATIC DIAGRAM — MODELS PT-2, PT-4, PT-6

Replacement Parts — Models PT-2, PT-4, PT-6

SCHE NO.	DESCRIPTION	PART NO.	SCHE NO.	DESCRIPTION	PART NO.	SCHE NO.	DESCRIPTION	PART NO.
1	Condenser (.0015 mfd., 200 volts)	30-4555		Cord (Power)	L-3277		Screw (Chassis Mtg.) PT-2	W-2110
2	Aerial Transformer	32-3394		Clip (Coil Mtg.)	28-5002		Screw (Chassis Mtg.) PT-6	W-2030
3	Loop Aerial (PT-2 Part of Cabinet)							
4	Loop Aerial (PT-6)	76-1196						
	Tuning Condenser	31-2527						
	Dial Pointer	56-2076						
	Spring Drive Cord	28-8954						
	Shaft Assembly	31-2528						
	Pointer	W-2157						
	Drive Cord	31-2529						
5	Condenser and Choke Assembly PT-2	76-1034						
	Condenser and Choke Assembly PT-6	76-1161						
6	Condenser (.1 mfd., 200 volts)	30-4586						
7	Resistor (47,000 ohms)	33-347339						
8	Oscillator Transformer	32-3562						
9	Condenser (.05 mfd., 200 volts)	30-4519						
10	1st I. F. Transformer	32-3603						
11	Resistor (27,000 ohms)	33-327339						
12	2nd I. F. Transformer	32-3604						
13	Volume Control	33-5434						
14	Resistor (2.2 megohms)	33-522339						
15	Condenser (.01 mfd., 400 volts)	30-4572						
16	Resistor (3.3 megohms)	33-533339						
17	Mica Condenser (250 mmfd.)	60-125157						
18	Condenser (.01 mfd., 400 volts)	30-4572						
19	Resistor (470,000 ohms)	33-447339						
20	Resistor (470,000 ohms)	33-447339						
21	Resistor (130 ohms)	33-113336						
22	Condenser (.02 mfd., 400 volts)	30-4516						
23	Output Transformer	32-8164						
24	Cone Assembly (For Speaker 36-1533-9)	36-4190						
25	Field Coil (Replace Speaker 36-1533)							
26A	Electrolytic Condenser (20-20 mfd.)	30-2382						
26B	Electrolytic Condenser (20 mfd.) Part of 26A							
	Clamp	56-1346						
27	Resistor (40-80 ohms)	33-3408						
28	Condenser (.04 mfd., 400 volts)	30-4119						
29	Pilot Lamp	34-2068						
	Socket Assembly	76-1177						

MISCELLANEOUS PARTS

Cabinet PT-6	10525A
Cardboard Back	27-9819
Cabinet PT-2	76-1195
Cardboard Back	27-9817

PARTS USED ON PT-4 ONLY

Cabinet	76-1219	Knob Assembly	27-4805
Cardboard Back	27-9870	Dial Scale	27-5495

