



Model PT-12

SPECIFICATIONS

Model PT-12 is a six (6) tube A. C. or D. C. operated Super-heterodyne compact radio employing a built-in loop aerial.

Other features of design included are—R. F. amplifier stage, a tuning band from 540 to 1600 K. C., Automatic Volume Control; beam power pentode audio output stage and Philco Loktal Tubes.

INTERMEDIATE FREQUENCY: 455 K. C.

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

PHILCO TUBES USED: 7C7, R. F. stage; 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. 40-6384, 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 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. Locations are shown on Schematic.

After connecting the aligning instruments adjust the compensators as shown in the tabulation below.

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

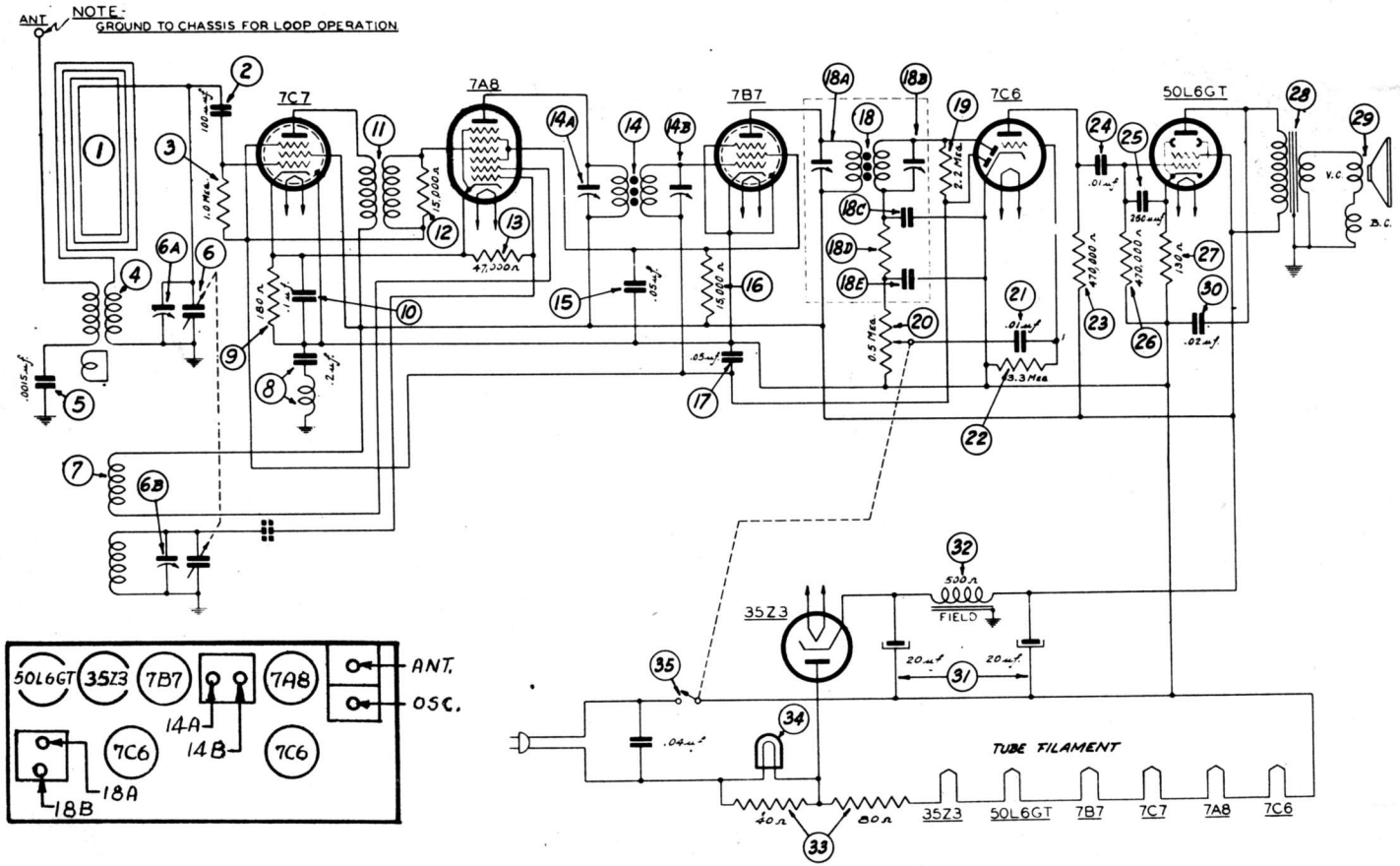
Operations in Order	SIGNAL GENERATOR		RECEIVER			SPECIAL INSTRUCTIONS
	Output Connections to Receiver	Dial Setting	Dial Setting	Control Setting	Adjust Compensators in Order	
1	Ant. Section of tuning	455 K. C.	540 K. C. Tuning Cond. Closed	Vol. Max. Range Switch Brdct.	18A, 18B, 14A, 14B	Note B
2	Loop see above instructions	1600 K. C.	1600 K. C.	Vol. Max. Range Switch Brdct.	(6B, Note C)	Note A
3	Loop see above instructions	1500 K. C.	1500 K. C.	Vol. Max. Range Switch Brdct.	(6A, 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 (14B) to tight position. Then adjust the compensators for maximum output in the following order: 18A, 18B, 14A and 14B.

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 (6B) 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 (6A) to maximum at this point.



SCHEMATIC DIAGRAM — MODEL PT-12

Replacement Parts — Model PT-12

SCHE. No.	DESCRIPTION	PART No.	SCHE. No.	DESCRIPTION	PART No.	SCHE. No.	DESCRIPTION	PART No.
1	Loop Aerial	76-1196	Clip (R. F. Coil Mtg.)	28-5002	Socket (Tubes)	27-6151		
2	Mica Condenser (100 mmfd.)	60-110157	Dial Scale	76-1192	Socket (Tubes)	27-6164		
3	Resistor (1.0 megohms)	33-510154	Knob Assembly	54-4052	Socket Assembly (Pilot Lamp)	76-1177		
4	Aerial Transformer	32-3394	Screw (Chassis Mounting)	W-2030	Speaker	36-1533-9		
5	Condenser (.0015 mfd., 600 volts)	30-4555						
6	Tuning Condenser	31-2527						
	Pointer	56-2076						
	Spring (Drive Cord)	28-8954						
	Shaft Assembly	31-2528						
	Drive Cord	31-2529						
7	Oscillator Transformer	32-3613						
8	Condenser and Choke Assembly	76-1198						
9	Resistor (180 ohms)	33-118336						
10	Condenser (.01 mfd., 200 volts)	30-4499						
11	R. F. Transformer	32-3595						
12	Resistor (15,000 ohms)	33-315339						
13	Resistor (47,000 ohms)	33-347339						
14	1st I. F. Transformer	32-3615						
15	Condenser (.05 mfd., 200 volts)	30-4519						
16	Resistor (15,000 ohms)	33-315339						
17	Condenser (.05 mfd., 200 volts)	30-4519						
18	2nd I. F. Transformer	32-3604						
19	Resistor (2.2 megohms)	33-522339						
20	Volume Control	33-5434						
21	Condenser (.01 mfd., 400 volts)	30-4572						
22	Resistor (3.3 megohms)	33-533339						
23	Resistor (470,000 ohms)	33-447339						
24	Condenser (.01 mfd., 400 volts)	30-4572						
25	Mica Condenser (250 mmfd.)	60-125157						
26	Resistor (470,000 ohms)	33-447339						
27	Resistor (130 ohms)	33-113336						
28	Output Trans. (for Speaker 36-1533-9)							
29	Cone Assembly (for Speaker 36-1533-9)	36-4190						
30	Condenser (.02 mfd., 400 volts)	30-4516						
31	Electrolytic Condenser (20-20 mfd.)	30-2382						
32	Field Coil (Replace Speaker 36-1533-9)							
33	Resistor (Wirewound, 40-80 ohms)	33-3408						
34	Pilot Lamp	34-2068						
35	Condenser (.04 mfd., 400 volts)	30-4119						
MISCELLANEOUS PARTS								
	Cabinet	10526A						
	Cardboard Back	27-9828						
	Screw	W-2023						
	Cable (Power)	L-3199						

