

# MODEL 41-258, CODE 122

## SPECIFICATIONS

Model 41-258, Code 122 is a six (6) tube A. C.-D. C. operated superheterodyne radio with two tuning ranges covering standard, state and local police, night aircraft and amateur station frequencies. In addition the radio is designed to receive the sound of television programs tuned in by special type Philco Television radios. The Philco built-in super-sensitive aerial system which operates without an outside aerial or ground is also incorporated in this Model.

Other features included are: Philco Loktal Tubes; two I. F. stages; Automatic Volume Control; Beam Power pentode audio output stage and a 10" permanent magnet dynamic speaker.

INTERMEDIATE FREQUENCY: 455 K. C.

TUNING BANDS: 540 to 1600 K. C.; 1.6 to 3.5 M. C.

POWER SUPPLY: 115 volts A. C.-D. C.

POWER CONSUMPTION: 35 watts.

AUDIO OUTPUT: 1 watt.

PHILCO TUBES USED: XXD, oscillator-converter; two 7B7, I. F. Amplifiers; 7C6, 2nd detector, 1st audio, A. V. C.; 50L6GT, Audio Output and a 35Z3, Rectifier.

AERIAL CONNECTIONS: The built-in loop aerial system is designed to operate without an outside aerial or ground, and to give exceptionally sensitive receiving performance.

In steel reinforced buildings, however, and other shielded locations, where station signal strength is weak, the Philco 1941 Outdoor Aerial, Part No. 45-2817, is recommended for maximum receiving performance. The outdoor aerial can be easily connected to the radio by inserting the plug attached to the transformer unit into the socket provided at the rear of the chassis. This aerial can be obtained from your local Philco distributor. A ground connection is not required with either type of installation.

CABINET DIMENSIONS: 36 $\frac{3}{4}$ " high, 24 $\frac{3}{4}$ " wide, 10 $\frac{1}{16}$ " deep.

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

### EQUIPMENT REQUIRED

1. SIGNAL GENERATOR: Covering the frequency range of the receiver, such as Philco Models 070 or 177.
2. ALIGNING INDICATOR: Either a vacuum tube voltmeter or an audio output meter may be used as an aligning indicator. Philco Models 027 and 028 circuit testers contain both these meters.
3. 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 mid. condenser to the stator plate lug of 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 of the compensations are shown in the Parts location diagram.

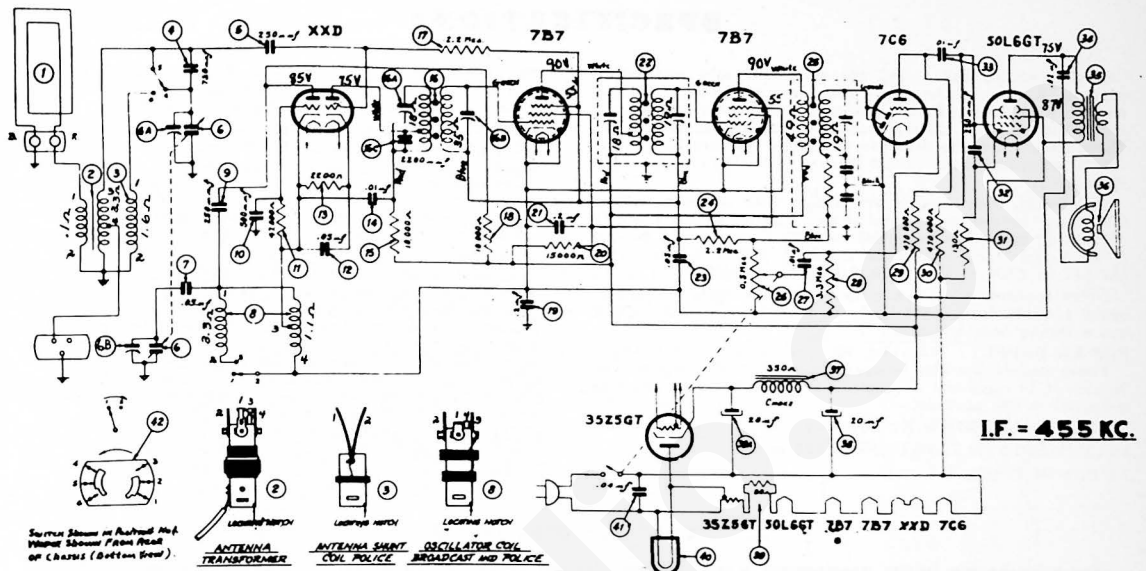
If the indicating meter pointer goes off scale when adjusting the compensator, reduce the strength of the signal from the generator.

Operations in Order	SIGNAL GENERATOR		RECEIVER			SPECIAL INSTRUCTIONS
	Output Connections to Receiver	Dial Setting	Dial Setting	Control Settings	Adjust Compensators in order	
1	Ant. Section of Tuning Cond.	455 K. C.	540 K. C. Tuning Cond. Closed	Vol Max. Range Switch Brdcst.	16A, 16B, 22A, 22B, 25A	
2	Loop see above instructions	1600 K. C.	1600 K. C.	Vol Max. Range Switch Brdcst.	6B Tuning Condenser	Note A
3	Loop see above instructions	1500 K. C.	1500 K. C.	Vol Max. Range Switch Brdcst.	6A Tuning Condenser	Note B

**NOTE A — DIAL CALIBRATION:** In order to adjust the receiver correctly, the dial must be aligned to track properly with the tuning condenser. To do this, proceed as follows: Turn the tuning condenser to the maximum capacity position (plates fully meshed). With the condenser in this position, set the tuning pointer on the small dot below 55 on the dial.

**NOTE B:** The police band padding is automatically adjusted by the standard broadcast padders.

# MODEL 41-258, CODE 122 (CONTINUED)



SCHMATIC DIAGRAM — MODEL 41-258, CODE 122

## Replacement Parts — Model 41-258, Code 122

SCH. No.	DESCRIPTION	PART No.	SCH. No.	DESCRIPTION	PART No.	SCH. No.	DESCRIPTION	PART No.
1	Loop Aerial	76-1155	<b>MISCELLANEOUS PARTS</b>				Knob (Tuning — Volume)	54-4005
	Sleeve (Mtg.)	28-2257		Cord (Power)	L-3199		Socket (Aerial)	28-6145
	Sleeve (Mtg.)	56-1907		Clip (R. F. Transformer)	28-5002		Socket (Octal)	27-6087
	Spring Washer	28-4186		Clamp (Elect. Cond.)	56-1346		Socket (Loktal)	27-6158-2
	Washer	W-151		Cabinet	10518A		Socket Assembly (Pilot lamp)	76-1178
	Screw	W-288		Cable Assembly (Speaker)	41-3466		Speaker	36-1518
	Spring Washer	W-425		Dial Scale	27-5667		Screw (Chassis Mtg.)	W-2030
2	Aerial Transformer	32-3571		Dial Pointer	27-4868		Washer (Chassis Mtg.)	W-410
3	Aerial Shunt Transformer (SW)	32-3572		Knob (Band Switch)	27-4809			
4	Mica Condenser (720 mmfd.)	60-173127						
5	Mica Condenser (250 mmfd.)	60-125157						
6	Tuning Condenser	31-2425						
	Spring (Drive Cord)	28-8954						
	Drive Cord	31-2489						
	Drive Shaft	31-2370						
	Pinnut	W-2157						
7	Condenser (.05 mfd., 400 volts)	30-4518						
8	Oscillator Transformer	32-3474						
9	Mica Condenser (250 mmfd.)	60-125157						
10	Mica Condenser (500 mmfd.)	60-150157						
11	Resistor (47,000 ohms)	33-347339						
12	Condenser (.05 mfd., 400 volts)	30-4518						
13	Resistor (2200 ohms, 1/2 watt)	33-222339						
14	Condenser (.01 mfd., 400 volts)	30-4572						
15	Resistor (10,000 ohms, 1/2 watt)	33-310339						
16	1st I. F. Transformer	32-3508						
17	Resistor (2.2 megohms)	33-522339						
18	Resistor (10,000 ohms, 1/2 watt)	33-310339						
19	Condenser (.2 mfd., 200 volts)	30-4536						
20	Resistor (27,000 ohms, 1/2 watt)	33-327339						
21	Condenser (.2 mfd., 400 volts)	30-4594						
22	2nd I. F. Transformer	32-3573						
23	Condenser (.05 mfd., 200 volts)	30-4519						
24	Resistor (2.2 megohms)	33-522339						
25	3rd I. F. Transformer	32-3538						
26	Volume Control	33-5405						
27	Pinnut	W-2157						
28	Condenser (.01 mfd., 400 volts)	30-4572						
29	Resistor (3.3 megohms)	33-533339						
30	Resistor (470,000 ohms)	33-447339						
31	Resistor (470,000 ohms)	33-447339						
32	Resistor (130 ohms)	33-113336						
33	Condenser (250 mmfd.)	60-125157						
34	Condenser (.01 mfd., 400 volts)	30-4572						
35	Condenser (.02 mfd., 400 volts)	30-4516						
36	Output Transformer	32-8127						
37	Cone Assembly (For Speaker 36-1518)	36-4171						
38	Field Coil (Replace Speaker 36-1518-4)	33-113336						
39	Electrolytic Condenser (20-20 mfd.)	30-2403						
40	Filament Resistor (80 ohms)	33-3406						
41	Pilot Lamp	34-2068						
42	Condenser (.04 mfd., 400 volts)	30-4119						
	Band Switch	42-1624						
	Pinnut	W-2157						

PART LOCATIONS, UNDERSIDE OF CHASSIS