

## Philco Radio & Television Corp.

**Model:** 39-70

**Chassis:**

**Year:** Pre August 1939

**Power:**

**Circuit:**

**IF:**

**Tubes:**

**Bands:**

### Resources

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PHILCO RADIO & TELEV. CORP.

MODELS 39-70, Code 121,  
39-75, Code 121, 122  
Schematic, Socket, Trimmers  
Chassis

Alignment Notes

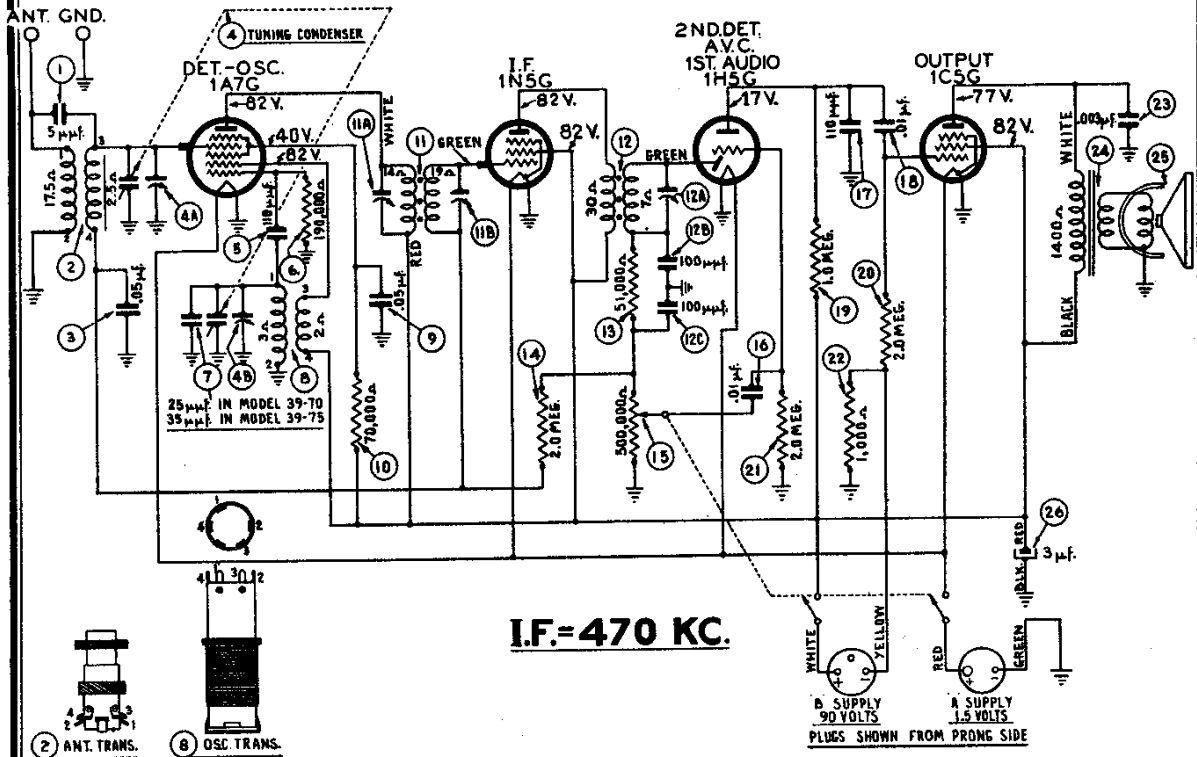
**NOTE A**—The "Dummy Antenna" consists of a condenser or resistor connected in series with the signal generator output lead (high side). Use the capacity or resistance as specified in each step of the above procedure.

**NOTE B**—**DIAL CALIBRATION:** In order to adjust the receiver correctly, the dial must be aligned to track properly with the tuning condenser.

**Model 39-70 and 39-80**—To adjust the dial proceed as follows: Turn the tuning condenser to maximum capacity (plates fully meshed). With the tuning condenser in this position, set the pointer horizontally across the dial.

**Model 39-75**—With the tuning condenser in the maximum capacity position (plates fully meshed), loosen the coupling screws connecting the push-button unit to the condenser. The pointer is then set on the extreme left edge of the index line (low frequency end of the scale) with the tuning condenser fully closed. The gang is then opened until the pointer is at the right edge of the index line. The push-button shaft is then turned counter-clockwise to its "stop." With the tuning condenser and push-button shaft in these positions tighten the coupling set screws.

**NOTE C**—The locations of the compensators in Models 39-70, 39-75 and 39-80 are shown in Figs. (1), (2) and (3) respectively.



SCHEMATIC DIAGRAM MODEL 39-70 & 39-75

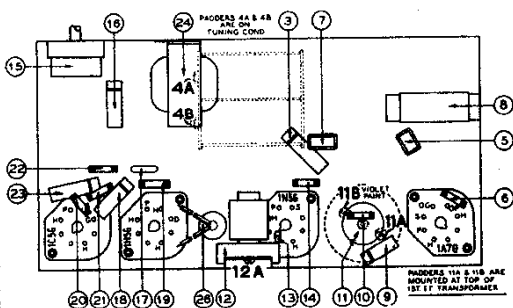


Fig. 1. Compensator and Part Locations  
Model 39-70, Code 121  
Underside of Chassis

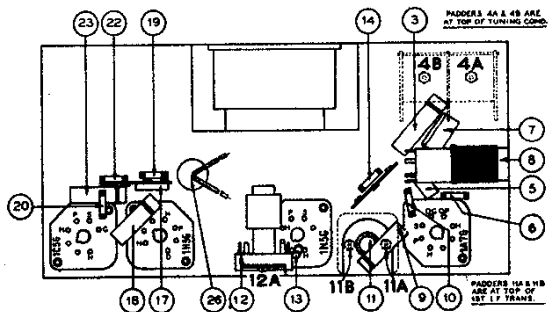


Fig. 2. Compensator and Part Locations  
Model 39-75, Code 121-122  
Underside of Chassis

**MODELS 39-70, Code 121, 39-75, Code 121, 122 PHILCO RADIO & TELEV. CORP. Alignment, Parts List MODEL 39-80, Code 121 Alignment**

**REPLACEMENT PARTS Models 39-70, Code 121, and 39-75, Codes 121-122**

Schem. No.	Description	Part No.
1	Condenser (5 mmf. mica).....	30-1097
2	Antenna Transformer (Includes No. 1).....	32-3680
3	Condenser (.05 mf. tubular).....	30-4519
4	Tuning Condenser Assembly, 39-70.....	31-2300
5	Tuning Condenser Assembly, 39-75.....	31-2265
6	Condenser (110 mmf. mica).....	30-1031
7	Resistor (190,000 ohms, 1/2 watt).....	33-4191359
8	Condenser (25 mmf. mica), 39-70.....	30-1067
9	Condenser (35 mmf. silver plated mica), 39-75.....	30-1113
10	Oscillator Transformer, 39-70.....	32-3019
11	Oscillator Transformer, 39-75.....	32-3083
12	Condenser (.03 mf. tubular).....	30-1031
13	Resistor (40,000 ohms, 1/2 watt).....	33-370339
14	1st I. F. Transformer Assembly, 39-70.....	32-2841
15	1st I. F. Transformer Assembly, 39-75.....	32-3078
16	2nd I. F. Transformer Assembly.....	33-3081
17	Resistor (11,000 ohms, 1/2 watt).....	33-351339

Schem. No.	Description	Part No.
14	Resistor (2.0 megohms, 1/2 watt).....	33-420339
15	Volume Control and On-Off Switch, 39-70.....	33-5290
16	Volume Control and On-Off Switch, 39-75.....	33-5291
17	Condenser (.01 mf. tubular).....	30-4572
18	Condenser (110 mmf. mica).....	30-1031
19	Condenser (.01 mf. tubular).....	30-4572
20	Resistor (1.0 megohm, 1/2 watt).....	33-101339
21	Resistor (2.0 megohm, 1/2 watt).....	33-520339
22	Resistor (1000 ohms, 1/2 watt).....	33-203339
23	Condenser (.003 mf. tubular).....	30-4469
24	Output Transformer.....	32-7995
25	Conc. and Voice Coil Assemblies.....	
39-70 "B" Spr. Pt. No. 36-1435.....		36-4090
39-70 "B" Spr. Pt. No. 36-1447.....		36-4090
39-75 "B" Spr. Pt. No. 36-1442.....		36-4090
39-75 "B" Spr. Pt. No. 36-1447.....		36-4092
26	Electrolytic Condenser (3 mf.).....	30-2146

**MISCELLANEOUS PARTS**

**Model 39-70, Code 121**

Bezel Window.....	27-5417
Cable (Battery).....	41-3427
Dial.....	27-5416
Dial Drive Cord.....	31-2317
Dial Drive Spring.....	28-4751
Dial Pointer.....	28-5468
Knob.....	27-4332

**On-Off Indicator Parts—**

Hub and Lever.....	38-9658
Toggle Link and Brkt. Assy.....	38-9700
Spring (Toggle Link and Brkt. Assy.).....	38-9895
Snap Fastener.....	56-1156
Fulley (Tuning Condenser).....	28-6662
Fulley Screw (Tuning Condenser).....	31-1400
Shaft Assy. (Tuning).....	31-2320
Speaker ("B" Cabinet).....	36-1433
Speaker ("P" Cabinet).....	36-1447

**Model 39-75, Code 121-122**

Automatic Tuning Unit Complete.....	31-2282
Bezel (Dial).....	40-6164
Bezel Gasket (Dial).....	27-9174
Bezel (Push-Button).....	28-5829
Bezel Gasket (Push-Button).....	27-9218
Dial.....	27-5420
Dial Pointer.....	28-5468
Dial Drive Cord.....	31-2317
Dial Drive Cord Spring.....	28-4751
Dial Drive Drum (Tuning Condenser).....	31-2321

Knob (Volume).....	27-4753
Knob (Tuning).....	27-4750
Knob Screw (Tuning).....	38-6882
Push-Button.....	27-4749
Push-Button Spring.....	28-8918
Slide-Screw (Tuning Shaft, Code 121-122).....	31-1400
Speaker ("B" Cabinet).....	36-1447
Socket (1A7G).....	27-6999
Socket (6 prong).....	36-1446
Socket (7 prong).....	27-6082

**Model 39-75, Code 122**

Extension Shaft (Volume).....	38-9640
Extension Shaft (Tuning).....	38-6928
Extension Sleeve—Long (Tuning Shaft).....	38-6935

Socket (Speaker).....	27-6115
Spring (Retaining Vol. Knob).....	36-1447
Speaker ("P" Cabinet).....	36-8915

**Specifications**

**TYPE OF CIRCUIT:** Models 39-70, 39-75 and 39-80 are four tube battery operated superheterodyne receivers covering standard broadcast and set police stations. The receivers employ a 100% A.C. radio receiver type of circuit. The tuning mechanism consists of an Automatic Volume Control and a Philco Speaker designed especially for battery radio. In general these models are similar but differ in their tuning mechanisms, speakers and cabinets.

Model 39-70 is manually tuned and is assembled in cabinet type "A" floor model and 122 (cable model) in automatic push-button and manual tuning. The automatic tuning mechanism contains six push-buttons for selecting any of six stations in the standard broadcast band. The procedure for adjusting and operating the push-buttons will be found in the instructions supplied with each set.

Code 121 of Model 39-70 is assembled in cabinet type "B" (table model) and Code 121 in cabinet type "P" (table model). Model 39-80 is manually tuned and is assembled in cabinet type "B" (table model) and cabinet type "P" (table model).

In addition to the new Philco speaker in Model 39-80 a sound chamber is also built into the cabinet. This sound chamber reinforces the sound produced by the speaker and results in greater clarity of tone and intensity of sound output. Bass compensation is also included in the volume control circuit.

**TUNING RANGE:** 530 to 1720 K. C.  
**INTERMEDIATE FREQUENCY:** 470 K. C.  
**PHILCO TUBES:** One 1A7G, First Detector and Oscillator; one 1N5G, I. F. Amplifier; one 1H5G, Second Detector; First Audio and Automatic Volume Control, and one 1C55 (1A5G Model 39-80) Pentode Output.

**BATTERIES REQUIRED:** One (1) Philco "A" Pack, Part No. 41-8014; one (1) Philco "B" Pack, Part No. 41-8015.  
**INSTALLING BATTERIES:** The batteries are arranged in the cabinet in such a manner that they form part of the sound chamber air column.

**CABINET DIMENSIONS:**

Model	Height	Width	Depth
39-70F.....	13 1/2"	11 1/2"	6 1/2"
39-70B.....	37 1/4"	23"	9 1/2"
39-75T.....	38 1/2"	13"	6 1/2"
39-80B.....	37 1/4"	17 1/2"	9 1/2"
39-80XF.....	39 1/4"	24 1/4"	12 1/2"

**Alignment of Compensators**

**EQUIPMENT REQUIRED:** Philco Model 077 Signal Generator which has a fundamental frequency range from 115 to 36,000 K. C. is the correct instrument for this purpose.  
(2) Output Meter, Philco Model 027 Circuit Tester, incorporates a sensitive output meter and is recommended.  
(3) Philco Fiber Strand Speed Driver, Part No. 27-7059, and Fiber Wrench, Part No. 3164.

**PROCEDURE FOR MODELS 39-70 AND 39-75:** The Philco 027 Output Meter is connected to the plate and screen terminals of the type 1C5G tube in Models 39-70 and 39-75 (1A5G Model 39-80) and adjusted for the 0 to 30 V. A. C. scale. After connecting the output meter, adjust the compensators in the order as shown in the tabulation below. Locations of the compensators are shown on page 2. If the compensators are shown on page 2, if the compensators, reduce the strength of the signal from the generator.

Operations in Order	SIGNAL GENERATOR				RECEIVER			
	Output Connections to Receiver	Dummy Antenna Note A	Dial Setting	Control Setting	Dial Setting	Control Setting	Adjust Compensators	Special Instructions
1	1A7G Grid	1 mfd.	470 K. C.	Vol. Max.	580 K. C.	Vol. Max.	12A, 11B, 11A	Note B
2	Ant. (White)	225 mfd.	1550 K. C.	Vol. Max.	1500 K. C.	Vol. Max.	4B, 4A	Note C

Operations in Order	SIGNAL GENERATOR				RECEIVER			
	Output Connections to Receiver	Dummy Antenna Note A	Dial Setting	Control Setting	Dial Setting	Control Setting	Adjust Compensators	Special Instructions
1	1A7G Grid	1 mfd.	470 K. C.	Vol. Max.	580 K. C.	Vol. Max.	13A, 12B, 12A	Note B
2	Ant. (White)	225 mfd.	1550 K. C.	Vol. Max.	1500 K. C.	Vol. Max.	4B, 4A	Note C

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