

SPECIFICATIONS

TYPE OF CIRCUIT: Models 39-6, code 121; and 39-7, code 121, employ a five-tube A.C. operated superheterodyne circuit, covering standard broadcast frequencies; Automatic Volume Control, and Pentode Audio Output. In general the two models are similar but differ in their tuning mechanisms and cabinets.

Model 39-6 is manually tuned and is assembled in cabinet type C.

Model 39-7, code 121, in addition to being manually tuned, is equipped with six Electric Automatic Push-Buttons. Five push-buttons are used for selecting any one of five stations in the standard broadcast range, and one push-button for changing to manual tuning. The procedure for adjusting the push-

buttons for reception of stations will be found in the instructions supplied with each set.

FREQUENCY RANGE: 530 to 1720 K.C.

INTERMEDIATE FREQUENCY: 470 K.C.

PHILCO TUBES USED: 6A7, First Detector Oscillator; 78, I.F. Amplifier; 75, Second Detector, A.V.C., First Audio; 41, Audio Output and 84, Rectifier.

POWER SUPPLY: 115 V., 50 to 60 cycle A.C.

Power Transformers are available for operation on 115 V., 25 to 40 cycles A.C.

POWER CONSUMPTION: 30 watts.

AUDIO OUTPUT: One (1) watt.

Alignment of Compensators

EQUIPMENT REQUIRED:

(1) Signal Generator; 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 Handle Screw Driver, Part No. 27-7059, and Fiber Wrench, Part No. 3164.

OUTPUT METER: The Philco 027 Output Meter is connected to the plate and screen terminals of the type 41 tube 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 Fig. 2. If the output meter pointer goes off scale when adjusting the compensators, reduce the strength of the signal from the generator.

Operation in Order	SIGNAL GENERATOR			RECEIVER			Special Instructions
	Output Connections to Receiver	Dummy Antenna Note A	Dial Setting	Dial Setting	Control Setting	Adjust Compensators in Order	
1	6A7	.1 mf.	470 K.C.	580 K.C.	Vol. Cont. Max.	11A, 7B, 7A	Adjust for max. output
2	Ant. Lead	100 mmf.	1550 K.C.	1550 K.C.	Vol. Cont. Max.	3B, 3A	Adjust for max. output Note A, B

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

NOTE B—DIAL CALIBRATION: With the tuning condenser in "maximum capacity" position (plates fully meshed), set the dial pointer between the two horizontal lines at the low frequency end of the scale (550 K.C.).

MODEL 39-6, CODE 121 PRODUCTION CHANGES

Run 1-3 Beginning with run 1-3 the electrolytic condensers were changed as follows:

Schem. No.	Original Run	Run 1-3
(25) Electrolytic Cond. 4 mfd. 300 V.	30-2327	30-2030 or 30-2179
(26) Electrolytic Cond. 12 mfd. 300 V.	30-2328	30-2212 or 30-2217

The difference in these condensers is the type of mounting. When replacing the electrolytic condensers, the "original run" type can be used in place of those used in Run 1-3.

MODEL 39-7, CODE 124 PRODUCTION CHANGES

Code 124 was designed for use in a chairside cabinet.

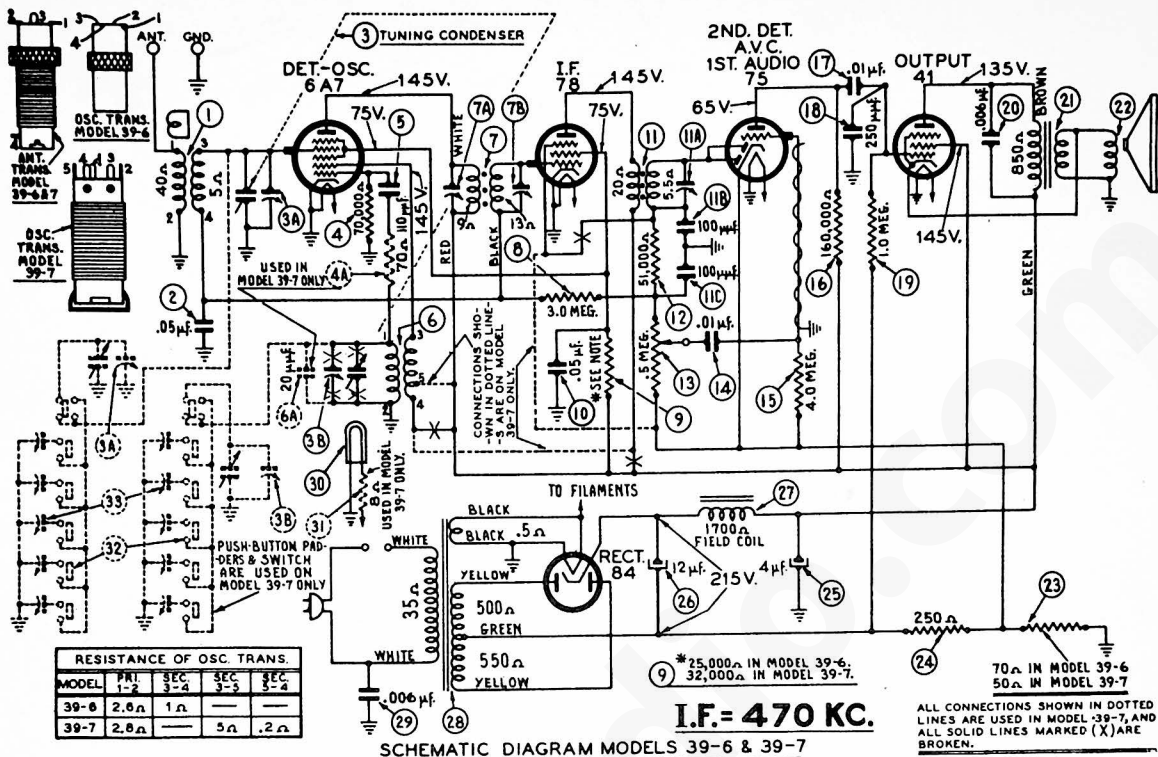
The circuit differences between code 121 and 124 are as follows:

Schem. No.	Original Run	Run 1-3
(21) Output Transformer		32-7980
(25) Elect. Cond. (12 mfd., 450 V.)		30-2091
(26) Elect. Cond. (2-4 mfd., 450V.)		30-2265
(22) Cone & Voice Coil for Speaker	36-1440-3	36-4086
Speaker		36-1440
25 cycle Power Supply		

Speaker Part No. 36-1461-6 must be used with 25 cycle receivers.

Replacement Parts

Schem. No.	Description	Part No.
1	Ant. Trans. (39-6)	32-2583
1	Ant. Trans. (39-7)	32-3039
2	Tubular Cond. (.05 mfd.)	30-4519
3	Tuning Cond. (39-6)	31-2335
3	Tuning Cond. (39-7)	31-2338
4	Resistor (70,000 ohms, ½ watt)	33-370339
4A*	Resistor (70 ohms, ½ watt) (39-7)	33-070339
5	Mica Cond. (110 mfd.)	30-1031
6	Oscillator Trans. (39-6)	32-3021
6	Oscillator Trans. (39-7)	32-2122
4A*	Silver Mica Cond. (20 mfd.) (39-7)	30-1123
7	1st I.F. Trans. Assy. (39-6)	32-3120
7	1st I.F. Trans. Assy. (39-7)	32-3121
8	Resistor (3.0 meg., ½ watt)	33-350339
9	Resistor (25,000 ohms, ½ watt) (39-6)	33-325339
	Resistor (32,000 ohms, ½ watt) (39-7)	33-332339
10	Tubular Cond. (.05 mfd.)	30-4444
11	2nd I.F. Trans. Assy.	32-2674
12	Resistor (51,000 ohms, ½ watt)	33-351339
13	Volume Control (.5 meg.)	33-5254
14	Tubular Cond. (.01 mfd.)	30-4479
15	Resistor (4.0 meg., ½ watt)	33-540339



ALL CONNECTIONS SHOWN IN DOTTED LINES ARE USED IN MODEL 39-7, AND ALL SOLID LINES MARKED (X) ARE BROKEN.

MODELS 39-6, 39-7
REPLACEMENT PARTS
(CONTINUED)

Schem. No.	Description	Part No.
16	Resistor (160,000 ohms, 1/2 watt).....	33-416339
17	Tubular Cond. (.01 mfd.).....	30-4169
18	Tubular Cond. (.01 mfd.) (39-7).....	30-4572
19	Mica Cond. (250 mmfd.).....	30-1032
20	Resistor (1.0 meg., 1/2 watt).....	33-510339
21	Tubular Cond. (.006 mfd.).....	30-4125
22	Output Trans. (Speaker 36-1461-2) 32-8040 (Speaker 36-1461-1) 32-8046	
23	Cone and Voice Coil Assy. (Speaker 36-1461-2).....	36-4095
24	Resistor (70 ohms, 1/2 watt), Model 39-6.....	36-4114
25	Resistor (50 ohms, 1/2 watt), Model 39-7.....	33-070339
26	Resistor (250 ohms, 1/2 watt).....	33-050339
27	Resistor (4 mfd., 300 V.).....	33-125339
28	Electrolytic Cond. (12 mfd., 300 V.).....	30-2327
29	Electrolytic Cond. (4 mfd., 300 V.).....	30-2328
30	Field Coil (Replace Speaker 36-1461)	
31	Power Trans. (115 V., 50 to 60 cycles).....	32-7979
32	Condenser (.006, moulded).....	32-8042
33	Condenser (.006, moulded).....	30-4423
34	Pilot Lamp.....	34-2064
35	Pilot Lamp Resistor (8 ohms, 1/2 watt).....	33-980331
36	Push-Button Switch.....	42-1477
37	Padder Strip Assy.....	31-6290

* Indicates parts used on Model 39-7 only.

MISCELLANEOUS PARTS
MODELS 39-6, 39-7, CODE 121

DESCRIPTION	PART NO.
Bezel (Dial).....	56-1305
Bezel (Station Tabs 39-7).....	28-5742
Dial (39-6).....	27-5426
Dial (39-7).....	27-5449
Dial Drive Cord (39-6).....	31-2318
Dial Drive Cord (39-7).....	31-2347
Dial Cord Spring.....	28-8751
Dial Pointer.....	28-5468
Knob (Tuning, Volume).....	27-4633
Push Buttons.....	27-4702
Speaker, Code 121.....	36-1461
Speaker, Code 124.....	36-1440

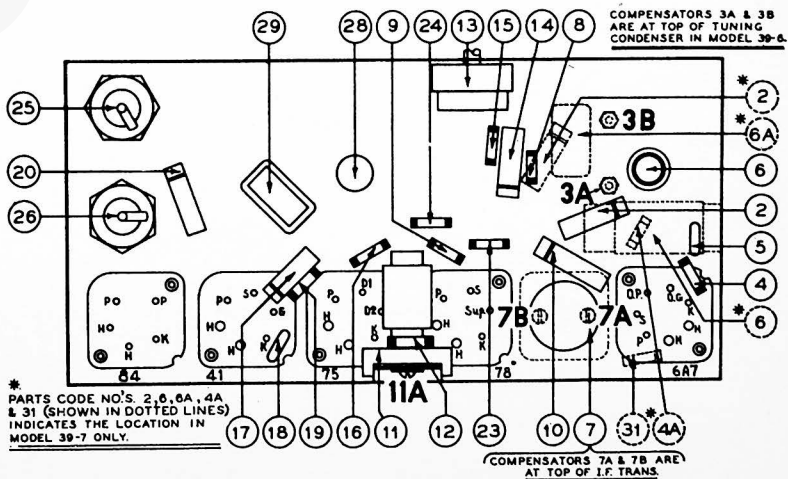


Fig. 2. Part Locations, Underside of Chassis