

MODELS 40-150 and 40-155

SPECIFICATIONS

TYPE OF CIRCUIT: Models 40-150 and 40-155 are Electric Push-button and dial tuned radios incorporating the new Philco Built-in Super Aerial system which eliminates an outside aerial and reduces local static interference to a minimum. These radios are also designed to receive the sound of a television program tuned in by special type *Philco Television Sets*.

PHILCO BUILT-IN SUPER AERIAL SYSTEM—Included in the built-in super aerial system is a statically shielded loop for broadcast band reception and a short wave receiving loop. The feature of the built-in broadcast band statically shielded loop is that it may be turned to the position in which it picks up a minimum amount of interference, or if interference is not present the loop may be set in the position where best reception is obtained.

In general, these models are similar with the exception of the number of tubes used and cabinet design. Model 40-150 employs seven (7) tubes and Model 40-155, eight (8) tubes.

In addition, other features of design are: Continuously variable tone control; three tuning ranges covering the frequencies listed below; automatic bass compensation and a degenerative push-pull pentode audio output circuit. Outside aerial connections are also provided for remote localities where station signal strength is very weak.

Each model is equipped with eight electric tuning push buttons for automatically selecting stations. Six of the push buttons are used for broadcast stations, one for selecting dial tuning and one push button may be set up for use with a Philco Record Player or in combination with Philco Television sets for reception of television sound programs.

POWER SUPPLY: 115 Volts, 25 and 60 cycle AC.

POWER CONSUMPTION: 60 watts.

FREQUENCY TUNING RANGES: Three.

540 to 1550 K. C.

1.35 to 3.5 K. C.

6.0 to 18 M. C.

INTERMEDIATE FREQUENCY: 455 K. C.

AUDIO OUTPUT: 2 watts.

PHILCO TUBES USED:

MODEL 40-150—1232, R. F.; 7J7, Converter; 7B7, I. F.; 7C6, Second Detector and First Audio; two 41, Audio Power Outputs; 84, Rectifier.

MODEL 40-155—1232, R. F.; 7J7, Converter; 7B7, I. F.; 7A6, Diode Detector; 7C6, First Audio; two 41, Power Outputs; 84, Rectifier.

CABINET DIMENSIONS:	Height	Width	Depth
Model 40-150, type T.....	10½	18½	12½
Model 40-155, type T.....	11	18	12½

CIRCUIT ADJUSTMENTS:

The procedure for adjustment of electric push button tuning will be found on page 9. The procedure for aligning the R. F. and I. F. compensators is the same as that given on page 65 for Models 40-180 and 40-185.

REPLACEMENT PARTS

SCHE. No.	DESCRIPTION	PART No.
1	Loop Ass'y (Broadcast).....	38-9994
1A	Mica Cond. (250 mmfd.).....	61-0033
1B	Resistor (10,000 ohms, ½ watt).....	33-310339
1C	Compensator Ass'y.....	31-6138
2	Loop Ass'y (Short Wave).....	38-9884
3	Compensator.....	31-6508
4	Mica Cond. (5 mmfd.).....	30-1120
5	Mica Cond. (1500 mmfd.).....	7139
5A	Ant. Loading Trans.....	32-3290
6	Mica Cond. (250 mmfd.).....	61-0033
7	Resistor (390 ohms, ½ watt).....	33-139339
8	Tubular Cond. (.05 mfd.).....	30-4519
9	Resistor (1.0 meg., ½ watt).....	33-510339
10	Tubular Cond. (.05 mfd.).....	30-4123
11	Resistor (33,000 ohms, ½ watt).....	33-333339
12	Resistor (10,000 ohms, ½ watt).....	33-310339
13	R. F. Coupling Trans.....	32-3194
14	Mica Cond. (100 mmfd.).....	30-1128
15	Resistor (47,000 ohms, ½ watt).....	33-347339
16	Resistor (4700 ohms, ½ watt).....	33-247339
17	Tubular Cond. (.05 mfd.).....	30-4123
18	Oscillator Trans.....	32-3195
19	Compens. (2 section).....	31-6298
20	Mica Cond. (5300 mmfd.).....	30-1134
21	Tuning Cond. Ass'y.....	31-2401
22	Mica Cond. (250 mmfd.).....	61-0033
23	Silver Mica Cond. (370 mmfd.).....	30-1110
24	Silver Mica Cond. (370 mmfd.).....	30-1110
25	Resistor (33,000 ohms, ½ watt).....	33-333339
26	Push Button Switch.....	42-1489
27	Padder Strip (Pushbutton).....	31-6299
28	Coil Strip Ass'y.....	31-3193
28A	Coil No. 2.....	540-1030 K. C. 32-3042
28B	Coil No. 3.....	
28C	Coil No. 4.....	650-1110 K. C. 32-3042
28D	Coil No. 5.....	
28E	Coil No. 6.....	
28F	Coil No. 7.....	920-1600 K. C. 32-3041
28G	Coil No. 8.....	
29	Resistor (4700 ohms, ½ watt).....	33-247339
30	1st I. F. Trans. Ass'y.....	32-3245
31	Tubular Cond. (.05 mfd.).....	30-4123
32	Tubular Cond. (.05 mfd.).....	30-4519
33	Resistor (150 ohms, ½ watt).....	30-4587
34	Resistor (150 ohms, ½ watt).....	33-115339
35	Resistor (33,000 ohms, ½ watt).....	33-333339
36	Resistor (1000 ohms, ½ watt).....	33-210339
37	2nd I. F. Trans. Ass'y.....	32-3246
38	Tubular Cond. (.01 mfd.).....	30-4581
39	Resistor (470,000 ohms, ½ watt).....	33-347339
40	Resistor (33,000 ohms, ½ watt).....	33-333339
40A	Tubular Cond. (.01 mfd.).....	30-4581
41	Volume Control (2.0 meg.).....	33-5275
42	Tubular Cond. (.01 mfd.).....	30-4581
43	Resistor (2.2 meg., ½ watt).....	33-522339
44	Resistor (10.0 meg., ½ watt).....	33-610339
45	Mica Cond. (110 mmfd.).....	30-1130

SCHE. No.	DESCRIPTION	PART No.
46	Tubular Cond. (.01 mfd.).....	30-4572
47	Resistor (220,000 ohms, ½ watt).....	33-422339
48	Resistor (1.0 meg., ½ watt).....	33-510339
49	Resistor (470,000 ohms, ½ watt).....	33-447339
50	Tubular Cond. (.003 mfd.).....	30-4469
51	Tone Control & On-Off Switch.....	33-5314
52	Tubular Cond. (.01 mfd.).....	30-4572
53	Resistor (3900 ohms, ½ watt).....	33-239339
54	Resistor (470,000 ohms, ½ watt).....	33-447339
55A	Tubular Cond. (.006 mfd.).....	30-4504
56	Output Trans.....	32-8053
57	Cone and Voice Coil Ass'y (Spkr. Part No. 36-1483-2).....	36-4127
58	Electrolytic Cond. (16 mfd., 200 V.).....	30-2406
59	Resistor (15 ohms, ½ watt).....	33-015351
60	Resistor (150 ohms, 1 watt).....	33-115451
61	Electrolytic Cond. (12 mfd., 350 V.).....	30-2405
62	Field Coil (Replace Spkr. Part No. 36-1483).....	32-8065
63	Power Trans. (110 Volts, 60 Cycles).....	32-8074
	Power Trans. (115 Volts, 25 Cycles).....	32-8092
	Power Trans. (220 Volts, 60 Cycles).....	32-8092
64	Line Cond. (Bakelite, .01-.01 mfd.).....	3903-DG
65	Pilot Lamp.....	34-2210
66	Wave Switch.....	42-1490

MISCELLANEOUS PARTS

Bezel Ass'y.....	40-6489
Bezel Gasket.....	27-9175
Cable & Plug (Power Supply).....	L-3199
Clip (Ant. coil mtg.).....	28-5002
Clip (Osc. coil mtg.).....	28-5003
Dial.....	27-5508
Dial Tuning Drum Ass'y.....	31-2856
Drive Cord Ass'y.....	31-2383
Knobs (Tuning, Tone, Volume & Wave Switch).....	27-4332
Knobs (Pushbuttons).....	27-4852
Pilot Lamp Socket Ass'y.....	38-9607
Pointer (Dial).....	56-1516
Screws (Bezel mtg.).....	W-1834-FG1
Spring (Drive Cord).....	28-8913
Spring (Mtg. Dial Background Plate).....	28-8908
Socket (Type 84 Tube).....	27-6035
Socket (Type 41 Tube).....	27-6036
Socket (Loktal, Type 7J7 Tube).....	27-6129
Socket (Loktal, Type 7A6, 7C6, etc., Tubes).....	27-6131
Speaker.....	36-1483
Tab (Dial).....	27-5530
Tab (Television).....	27-9449
Tab Kit.....	40-6475
Tuning Shaft Ass'y.....	38-9874
Washer ("C" Type, Tuning Shaft Ass'y).....	28-2043
Washer (Spring Type, Tuning Shaft Ass'y).....	28-4186

MODELS 40-150 and 40-155

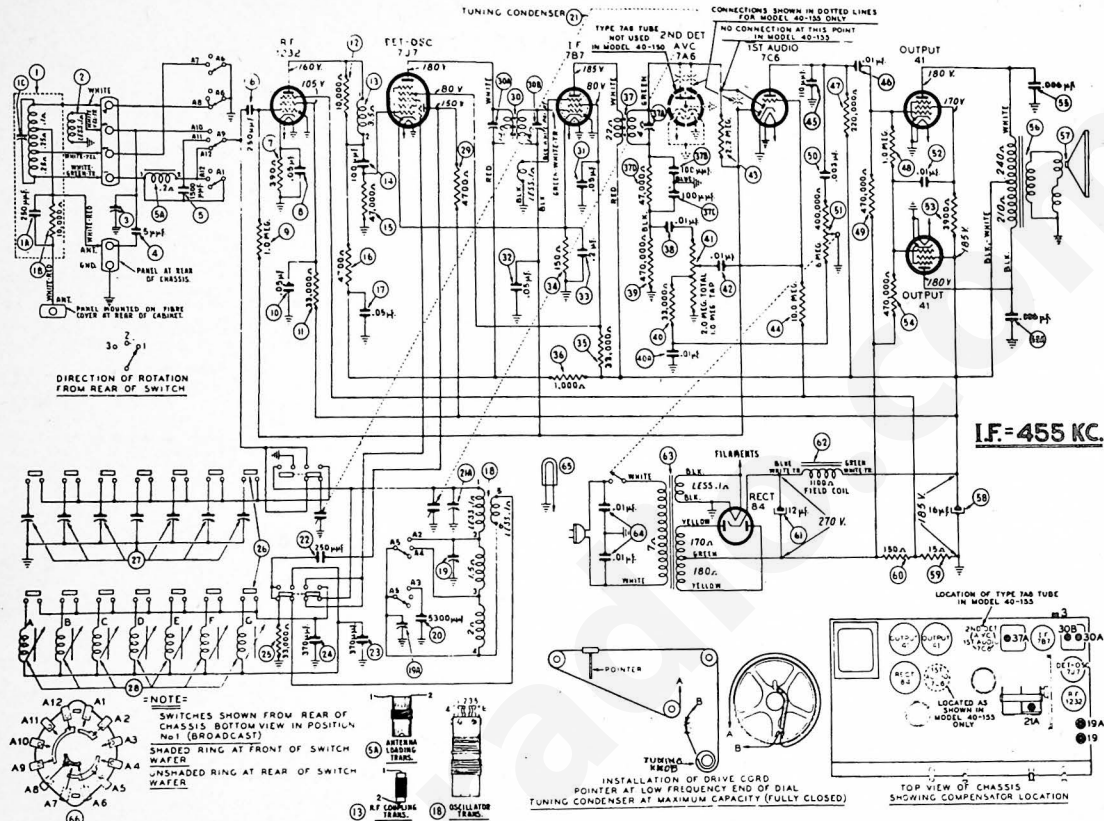


Fig. 1. Schematic diagram, models 40-150, 40-155

PRODUCTION CHANGES

MODEL 40-150

Run 1—Beginning with Run 1 receivers the converter tube was changed from a 7J7 loktal type to a 6J8G octal type. Tube sockets changed from Part 27-6129 loktal to 27-0120 octal.

Run 2—New resistor Part No. 33-115339, 150 ohms connected in series with 6J8G tube plate to stabilize oscillator action at 18 M. C. Cathode resistor (34) changed from Part No. 33-115339 to 33-115336. Power transformer Part No. changed from 32-8065 to 32-8052.

Run 3—Receivers marked with this run number have the converter changed from a 6J8G to a 7J7 loktal tube as indicated in Service Bulletin. When this change was made, the resistor Part No. 33-115336 in Run 2 was removed. Shortwave loop changed from Part No. 38-0884 to 38-0935.

MODEL 40-155

Run 1—Beginning with Run 1 receivers the converter tube was changed from a 7J7 loktal type to a 6J8G octal type. Tube sockets changed from Part 27-6129 (loktal) to 27-0120 octal.

Run 2—New resistor Part No. 33-115339, 150 ohms connected in series with 6J8G tube plate. Change made to stabilize oscillator action at 18 M. C. Cathode resistor (34) Part No. 33-115339 changed to wirewound type Part No. 33-115336.

Run 3—Power transformer changed from Part No. 32-8065 to Part No. 32-8052. Run 3—Receivers marked with this run number have the converter tube changed from a type 6J8G octal tube to a 7J7 loktal tube. When this change was made the resistor Part No. 33-115339 added in Run 2 was removed.

MODELS 40-150, 40-155

To prevent oscillation at the low end of the broadcast band the 2nd I. F. transformer (27) changed from Part No. 32-3246 to Part No. 32-3383.

Loop assembly (1) (Broadcast) Part No. 38-0894 is changed to Part No. 38-0994, a production design change.

The physical location of condenser (4) as shown in Fig. 2 of the service bulletin has been changed to prevent oscillation at 540 K. C. The condenser is now wired to a three lug wiring panel between the range switch and volume control. The antenna lead is connected to one lug of this panel. This change is made on all sets marked Run No. 6.

Primary Wiring 220 Volt Operation
 Power Supply: 220 Volts—Wiring to Red and Yellow, 110 Volts—Red to White.
 Connect together: 220 Volt—Black and White to Red.
 110 Volt—Black and White to Red and Yellow.

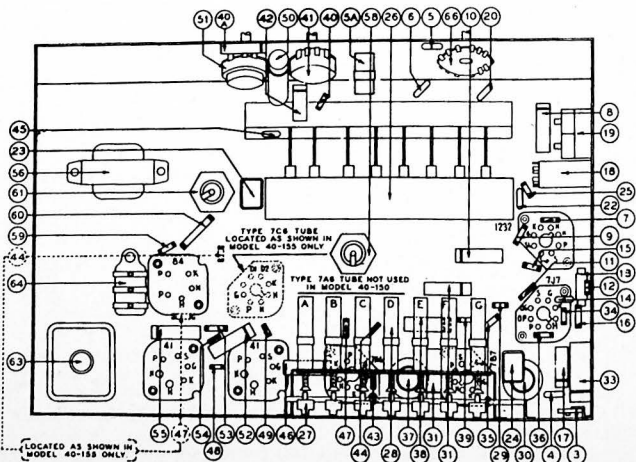


Fig. 2. Part locations, underside of chassis.