

# Philco Radio & Television Corp.

Model: 40-508	Chassis:	Year: Pre June 1940
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Power:	Circuit:	IF:
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Tubes:

Bands:

## Resources

Riders Volume 12 - PHILCO 12-16

Riders Volume 12 - PHILCO 12-32

Riders Volume 12 - PHILCO 12-33

Riders Volume 11 - PHILCO 11-63

SEE MODELS  
BELOW

PHILCO RADIO &amp; TELEVISION CORP.

**SETTING AND OPERATING ELECTRIC PUSH-BUTTON TUNING**

In order to adjust the electric automatic tuning push-button accurately for reception of broadcast stations, a signal generator, such as Philco Model 077, and a padding screw driver, Philco Part No. 45-2610, are required. With this equipment at hand, proceed as follows:—

1 — Select five (5); seven (7) or eight (8) of the most popular stations received in the locality (depending on the number of push-buttons on the model to be adjusted). Insert the station call letters into the windows above the buttons. The station with the lowest frequency is placed in the first button on the left and the highest frequency station in the extreme right button. Each push-button is adjusted by two set screws. These set screws are located on the rear of the chassis or push-button unit. Each set of screws is numbered and covers a frequency range as follows:—

**FREQUENCY RANGES OF PUSH-BUTTONS****Models 40-100, 40-110**

Push-Button	Frequency Range
1	540-1030 K. C.
2	650-1100 K. C.
3	650-1100 K. C.
4	740-1240 K. C.
5	1160-1600 K. C.
6	Dial

**Models 40-124, 40-125, 40-135, 40-145,  
40-503, 40-506, 40-507, 40-525 (121),  
40-526 (121)**

Push-Button	Frequency Range
1	540-1030 K. C.
2	650-1100 K. C.
3	740-1240 K. C.
4	900-1470 K. C.
5	1160-1600 K. C.
6	Dial

Looking at the front of the cabinet, the first button on the left is adjusted by "Osc." and "Ant." set screws No. 1; the next push-button by "Osc." and "Ant." set screws No. 2, and the remaining push-buttons in order.

2 — Turn the receiver "on" and set the "Tuning Range Selector" or push-button for "Dial" tuning.

3 — Set up the Model 077 signal generator about 3 feet from the receiver and connect a loop aerial (made from a few turns of wire 12 inches in diameter) to the "high" and "ground" output jacks of the signal generator. Turn the output controls to maximum and set the modulation control to "Mod. ON".

4 — Manually tune in on the radio the first station to be set up; (usually No. 1 push-button first). After doing this, set the indicator of the 077 signal generator to the frequency of the station being received. As the indicator approaches the frequency of the station, a whistle will be heard; leave the indicator at this point.

5 — Turn the receiver tuning range selector to "push-button" and press in No. 1 button. (Models without a tuning range selector, simply press in push-button to be set up). Using the insulated screw

driver, turn the No. 1 "Osc." screw until the broadcast station identified by the signal generator is heard; then turn signal generator indicator off the frequency of the station.

6 — Readjust No. 1 "Osc." and "Ant." screws until the station is heard clearly and distinctly. The adjustment of No. 1 push-button is then complete. After setting up the first station the same procedure as outlined above is used for the remaining stations.

While the above procedure is satisfactory in setting up push-buttons for stations, a very accurate adjustment can be obtained with a vacuum tube voltmeter. The instructions for using a vacuum tube voltmeter will be found on page 10 under "Using Vacuum Tube Voltmeter for Aligning Compensators and Adjusting Push-Buttons."

When any of these models are to be set up to receive the sound of television program, tuned in by special type Philco television sets, or if they are to be used in conjunction with a Philco Record Player, push-button No. 1 should be used. To adjust the push-button on these instruments, the same procedure as outlined above is used.

Further details for setting up this receiver for operation with Philco Television sets and Record Players are supplied with the instruments.

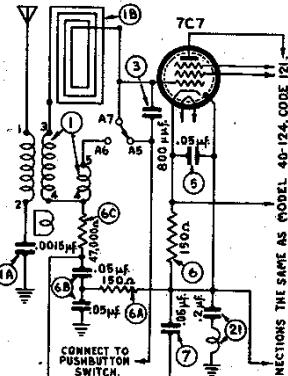
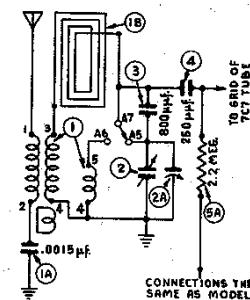
**MODEL 40-124, CODE 122**

Model 40-124, Code 122, is similar to Code 121 with the addition of a loop aerial mounted inside the cabinet and several part changes in the aerial circuit. These changes are shown in the following circuit diagram and parts list. The service information in RIDER'S VOLUME XI, for Model 40-124, Code 121, with these changes, applies to Model 40-124, Code 122.

**SCHEMATIC**

NUMBER	DESCRIPTION	PART NO. CODE 122
1	Antenna Transformer	32-3404
1A	Tubular Condenser (.0015 mfd.)	30-4555
1B	Loop Assembly	32-3405
2	Tuning Condenser	31-2450
3	Mica Cor. emer (.800 mmfd.)	30-1135
Cabinet		10432B

SCHEMATIC NUMBER	DESCRIPTION	PART NO. CODE 122
1	Antenna Transformer	32-3404
1A	Tubular Condenser (.0015 mfd.)	30-4555
1B	Loop Assembly	32-3411
2	Tuning Condenser	31-2450
3	Mica Condenser (.800 mmfd.)	30-1135
4	Not used.	
5	Tubular Condenser (.05 mfd.)	30-4519
6	Resistor (150 ohm, $\frac{1}{2}$ watt.)	32-115336
6A	Resistor (150 ohm, $\frac{1}{2}$ watt.)	33-115336
6B	Tubular Condenser (.05, .05 mfd.)	30-4522
6C	Resistor (47,000 ohms, $\frac{1}{2}$ watt.)	33-347339
7	Tubular Condenser (.05 mfd.)	30-4519
21	Choke and Condenser Assembly (.2 mfd.)	76-1034

**CONNECTIONS FOR MODEL  
40-124 CODE 122.****CONNECTIONS FOR MODEL  
40-115 CODE 122.**

FEBRUARY, 1940.

**MODEL 40-115, CODE 122**

Model 40-115, Code 122, is similar to Code 121 with the addition of a loop aerial mounted inside the cabinet and several part changes in the aerial circuit. These changes are shown in the following circuit diagram and parts list. The service information in RIDER'S VOLUME XI, for Model 40-115, Code 121, with these changes, applies to Model 40-115, Code 122.

**MODEL 40-124, CODE 122**

Model 40-124, Code 122, is similar to Code 121 with the addition of a loop aerial mounted inside the cabinet and several part changes in the aerial circuit. These changes are shown in the following circuit diagram and parts list. The service information in RIDER'S VOLUME XI, for Model 40-124, Code 121, with these changes, applies to Model 40-124, Code 122.

SCHEMATIC NUMBER	DESCRIPTION	PART NO. CODE 122
1	Antenna Transformer	32-3404
1A	Tubular Condenser (.0015 mfd.)	30-4555
1B	Loop Assembly	32-3411
2	Tuning Condenser	31-2450
3	Mica Condenser (.800 mmfd.)	30-1135
4	Not used.	
5	Tubular Condenser (.05 mfd.)	30-4519
6	Resistor (150 ohm, $\frac{1}{2}$ watt.)	32-115336
6A	Resistor (150 ohm, $\frac{1}{2}$ watt.)	33-115336
6B	Tubular Condenser (.05, .05 mfd.)	30-4522
6C	Resistor (47,000 ohms, $\frac{1}{2}$ watt.)	33-347339
7	Tubular Condenser (.05 mfd.)	30-4519
21	Choke and Condenser Assembly (.2 mfd.)	76-1034

MODELS 40-508,  
40-509, 40-515

## PHILCO RADIO &amp; TELEVISION CORP.

## Replacement Parts — Models 40-508, 40-509

SCHE. No.	DESCRIPTION	PART No.	SCHE. No.	DESCRIPTION	PART No.
1	Loop Assembly (Broadcast)	38-9340	34	Tubular Cond. (.001 mfd.)	30-4370
1A	Micra Cond. (100 ohms)	61-00340	35	Resistor (70,000 ohms, $\frac{1}{2}$ watt)	32-43730
1B	Resistor (10,000 ohms)	61-00341	40	Resistor (20,000 ohms, $\frac{1}{2}$ watt)	32-43731
2	Loop Assembly (Short Wave)	38-9342	41	Varia. Control (100 ohms)	38-9433
3	Compensator	31-43004	42	Tubular Cond. (.001 mfd.)	30-43720
4	Micra. Cond. (.05 mfd.)	61-00342	43	Tubular Cond. (.001 mfd.)	30-43721
5	Micra. Cond. (1250 mfd.)	61-00343	44	Resistor (2.2 mfd., $\frac{1}{2}$ watt)	32-43722
6	Micra. Cond. (100 mfd.)	61-00344	45	Micra. Cond. (.10 mfd.)	32-43723
7	Resistor (300 ohms, $\frac{1}{2}$ watt)	8846	46	Tubular Cond. (.002 mfd.)	30-43724
8	Resistor (100 ohms, $\frac{1}{2}$ watt)	32-34732	47	Resistor (100,000 ohms, $\frac{1}{2}$ watt)	32-43725
9	Resistor (100 ohms, $\frac{1}{2}$ watt)	30-43726	48	Tubular Cond. (.002 mfd.)	30-43726
10	Resistor (100 ohms, $\frac{1}{2}$ watt)	30-43727	49	Resistor (100,000 ohms, $\frac{1}{2}$ watt)	32-43728
11	Resistor (100 ohms, $\frac{1}{2}$ watt)	30-43728	50	Tubular Cond. (.002 mfd.)	30-43729
12	Resistor (100 ohms, $\frac{1}{2}$ watt)	30-43729	51	Turn. Control and On-Off Switch	32-4314
13	R. F. Coupling Trans.	32-34730	52	Turn. Control and On-Off Switch	32-4315
14	Micra. Cond. (.100 mfd.)	61-00345	53	Tubular Cond. (.001 mfd.)	32-43730
15	Resistor (47,000 ohms, $\frac{1}{2}$ watt)	30-43731	54	Resistor (70,000 ohms, $\frac{1}{2}$ watt)	32-43731
16	Resistor (4700 ohms, $\frac{1}{2}$ watt)	30-43732	55	Resistor (470,000 ohms, $\frac{1}{2}$ watt)	32-43732
17	Resistor (100 ohms, $\frac{1}{2}$ watt)	30-43733	56	Resistor (47,000 ohms, $\frac{1}{2}$ watt)	32-43733
18	Resistor (100 ohms, $\frac{1}{2}$ watt)	30-43734	57	Tubular Cond. (.002 mfd.)	30-43734
19	Resistor (100 ohms, $\frac{1}{2}$ watt)	30-43735	58	Tubular Cond. (.002 mfd.)	30-43735
20	Compensator (2 Sections)	31-43193	59	Resistor (47,000 ohms, $\frac{1}{2}$ watt)	32-43736
21	Micra. Cond. (1000 mfd.)	31-43194	60	Resistor (4700 ohms, $\frac{1}{2}$ watt)	32-43737
22	Resistor (100 ohms, $\frac{1}{2}$ watt)	31-43195	61	Resistor (4700 ohms, $\frac{1}{2}$ watt)	32-43738
23	Micra. Cond. (1000 mfd.)	61-00343	62	Output Transformer	32-43710
24	Silver Micra. Cond. (100 mfd.)	61-00344	63	Cone and Voice Coil Assy.	32-43710
25	Resistor (33,000 ohms, $\frac{1}{2}$ watt)	30-43736	64	Baker, Part No. 34-3482-2	36-4009
26	Push Button Switch	30-43737	65	Resistor (100 ohms)	32-43737
27	Padde. (Push Buttons)	45-14389	66	Tubular Cond. (.001 mfd.)	32-43738
28	Clip Strip Assy.	21-43209	67	Electrical Cond. (.10 mfd., .100 V.)	32-43739
29A	Coil No. 1	540-10880	68	Resistor (100 ohms, $\frac{1}{2}$ watt)	32-43740
29B	Coil No. 2	540-10880	69	Electrolytic Cond. (.12 mfd., .450 V.)	32-43741
30C	Coil No. 3	650-1110	70	Field Coil (Regis. Part No. 34-3480-5)	30-2413
30D	Coil No. 4	650-1110	71	Power Trans. (115 V., 500 cycles)	32-43742
30E	Coil No. 5	650-1110	72	Resistor (100 ohms, $\frac{1}{2}$ watt)	32-43743
30F	Coil No. 6	650-1100	73	Crystal Gitter (100 mfd.)	38-43020
30G	Coil No. 7	920-18000	74	Filter Lamp (Chassis)	32-43210
30H	Coil No. 8	920-18000	75	Tubular Cond. (.001 mfd.)	32-43210
30I	Coil No. 9	920-18000	76	Resistor (100 ohms, $\frac{1}{2}$ watt)	32-43744
31	1st I. F. Trans. Assy.	32-34738	77	Resistor (100 ohms, $\frac{1}{2}$ watt)	32-43745
32	Tubular Cond. (.05 mfd.)	30-43123	78	Phone Pickup Cable (100 ohms)	32-43746
33	Tubular Cond. (.2 mfd.)	20-43119	79	Phone Pickup Cable (100 ohms)	32-43747
34	Resistor (150 ohms, $\frac{1}{2}$ watt)	30-43136	80	Phone Pickup Cable (100 ohms)	32-43748
35	Resistor (15,000 ohms, $\frac{1}{2}$ watt)	32-34739	81	Resistor (10,000 ohms, $\frac{1}{2}$ watt)	32-43749
36	Resistor (4700 ohms, $\frac{1}{2}$ watt)	32-34730	82	Teleg. Switch (Model 40-509)	32-43193
37	2nd I. F. Trans. Assy.	32-34745	83	Phone Motor (Model 40-509)	32-43197
		32-34746	84	Parallel Switch Assy. (Model 40-509)	32-1585

Models 40-508 and 40-509 are radio-phonograph combinations consisting of an 8 tube electric push button tuning superheterodyne radio and an automatic record changer. The same radio receiver is used in each model. The automatic record changer and cabinet, however, are different.

Model 40-508 employs an improved type automatic record changer, Philco Part No. 35-1180, which plays twelve 10" records or ten 12" records at one loading.

Model 40-509 incorporates the Philco Inter-Mix Record Changer Part No. 35-1176. This record changer plays fourteen 10" and 12" records intermixed, or fifteen 10" or thirteen 12" records at one loading.

The radio receiver of these models contains 8 electric push buttons; 6 of the electric push buttons are used for reception of stations, one for television sound and one to switch to dial tuning.

In addition, the Philco Built-In Super Aerial System is included in these models. This system eliminates an outside aerial and reduces local static interference to a minimum. Included in the Built-In Super Aerial System is a statistically shielded loop for broadcast band reception and a shortwave receiving loop. A feature of the built-in broadcast band statistically 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. Outside aerial connections are also provided for remote localities where signal strength is weak.

## POWER SUPPLY: 115 volts, 60 cycle A. C.

## POWER CONSUMPTION:

Model 40-508—90 watts.

Model 40-509—110 watts.

## TUNING RANGES: Three

540 to 1550 K. C.

1.5 to 3.4 M. C.

6 to 18 M. C.

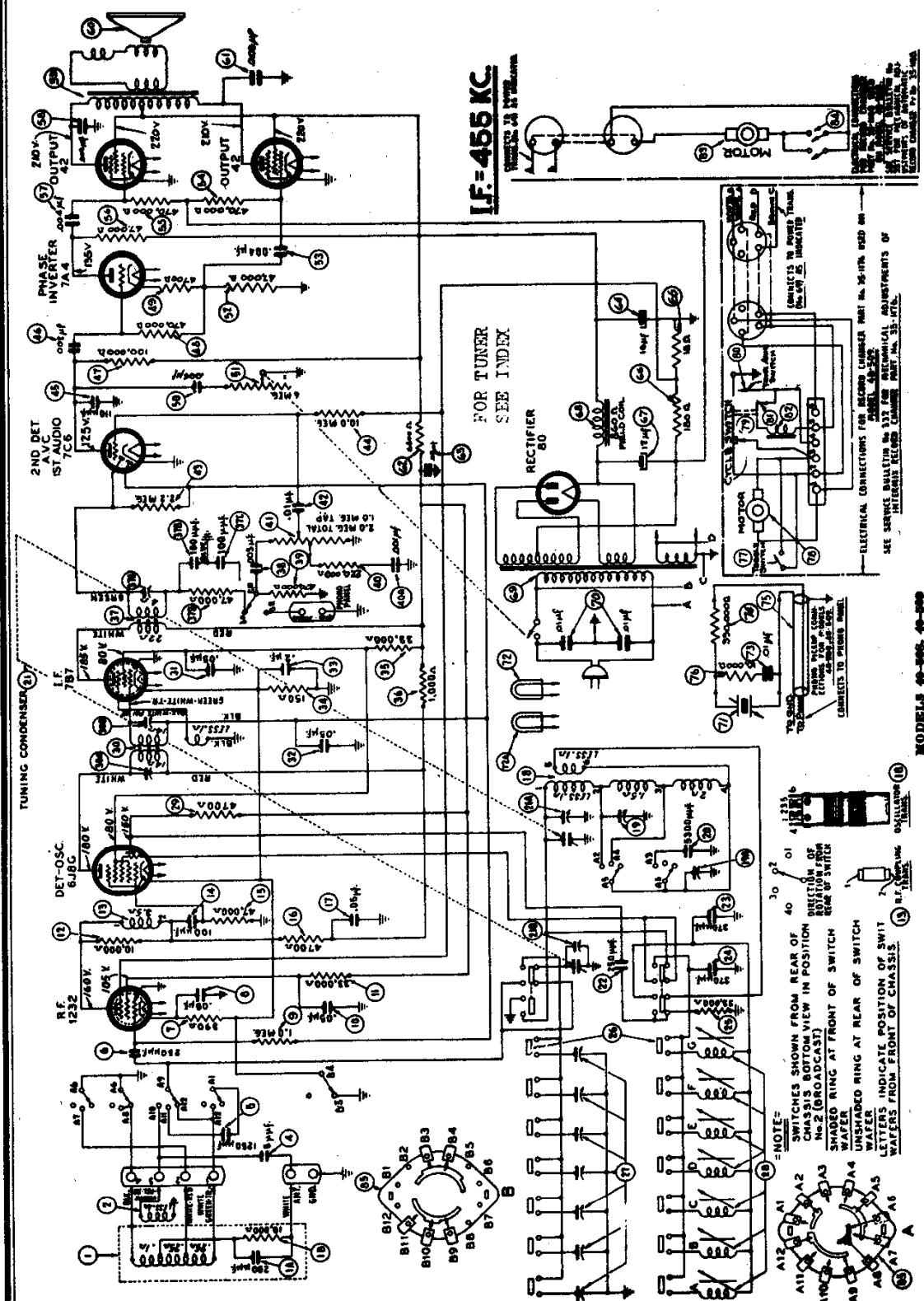
## INTERMEDIATE FREQUENCY: 455 K. C.

## AUDIO OUTPUT: 2 watts.

## MISCELLANEOUS PARTS

SCHE. No.	DESCRIPTION	PART No.
1	Automatic Record Changer (Model 40-509)	35-1176
2	Automatic Record Changer (Model 40-508)	35-1176
3	Additional Parts Bulletin	327
4	Gene Assembly	40-446
5	Panel Cabinet	27-3178
6	Cable Speaker (Model 40-509)	31-2448
7	Cable Speaker (Model 40-508)	41-3483
8	Cable (Basis to Changer, Model 40-509)	31-3199
9	Cable (Basis to Changer, Model 40-508)	41-3199
10	Cable (Model 40-509)	10-1816
11	Cable (Model 40-508)	10-1816
12	Drive Card (Printed)	32-43177
13	Drive Card (Printed)	32-43178
14	Jewel (Cabinet Pilot Lamp)	27-43777
15	Knob Assy. (Tuning, Tone, Vol.)	27-43232
16	Knob (Push-Button)	27-43232
17	Motor (Automatic Record Changer Model 40-509)	10-1816
18	Phaser	32-1585
19	Printed Circuit Board	32-43177
20	Speaker Assembly (Speaker, Chassis)	32-43178
21	Speaker Assembly (Speaker, Chassis)	32-43178
22	Speaker (Speaker)	32-43178
23	Speaker (Speaker)	32-43178
24	Speaker (Speaker)	32-43178
25	Terminal Panel (Loop)	32-4370
26	Terminal Panel (Loop)	32-4370
27	Terminal Panel	32-4370
28	Terminal Panel	32-4370
29	Terminal Panel	32-4370
30	Terminal Panel	32-4370
31	Terminal Panel	32-4370
32	Terminal Panel	32-4370
33	Terminal Panel	32-4370
34	Terminal Panel	32-4370
35	Terminal Panel	32-4370
36	Terminal Panel	32-4370
37	Terminal Panel	32-4370
38	Terminal Panel	32-4370
39	Terminal Panel	32-4370
40	Terminal Panel	32-4370

## PHILCO RADIO &amp; TELEVISION CORP.

MODELS 40-508  
40-509

Beginning with Run "45" receivers, the converter tube is changed from a type 6J8G octal to a 7JJ 10kolt. The tube sockets are changed from Part No. 27-6120 to Part No. 27-32383.

MODELS 40-508, 40-509

