

PHILCO

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1937

CHANGES IN MODELS

Since Publication of Each Service Bulletin



Grouped under each model and arranged according to Run No.—Current models included.—Dec. 15, 1936, to July 1, 1937.

The following pages contain complete listings of all major changes—involving changes in circuit, part numbers or anything of interest to the serviceman—in Philco receivers current at the time of printing. These changes date back to the date of publication of the last printing of the Philco Service Bulletin on each model; the number of the Bulletin is given in each case for reference.

Ownership of this folder in addition to Service Bulletins, gives the serviceman a complete record on each model; thus he will not be inconvenienced at finding, when servicing a current set, that it differs from that shown in the original Service Bulletin.

The Run Number on models prior to March, 1937, is stamped on the top of the chassis with a rubber stamp and the Code Number of the set is given on the chassis name plate or name label (at rear of chassis).

Beginning on March 1, 1937, the Model, Code and Run Numbers are stamped in one location on the rear of the chassis.

Model 37-9 (Code 121) Service Bulletin 269

Run 2	Old Part	New Part
(35) Elect. Cond. (16 mfd.)..	30-2118	30-2194—18 mfd.

To improve the I. F. Circuit operation, a Part No. 30-4455, .1 mfd. condenser is connected from the red primary lead of I. F. Transformer (53) to ground.

To prevent distortion at minimum volume, the green and white wire connecting the volume control (67) center lug to the automatic tuning dial audio switch (93), must be kept clear of compensator (54) and the diode circuit of the 6Q7G.

Run 3 CIRCUIT CHANGES

Electrolytic Condenser Change—

	Old Part	New Part
(70) Elect. Cond. (10, 20 mfd.) 8 mfd. section replaces (70) 10 mfd. section replaces (70)a	30-2183	30-2201 8, 10 mfd.

(72) Elect. Cond. (8) mfd....	30-2024	30-2200 18 mfd.
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Range Switch changed

	Old Part	New Part
(39) Range Switch R. F.	42-1283	42-1314

DIAL CALIBRATION

The dial calibration of this receiver is the same as that given for model 37-10 and 37-11 Bulletin 268.

Models 37-10—37-11

(Code 121) Service Bulletin 268

Run 2
2nd I. F. and Discriminator Transformer Change:

	Old Part	New Part
(48) Transformer	32-2335	32-2362

This change is shown on Service Bulletin.

Run 3

To improve the operation of the discriminator circuit, the transformer (48) wiring to the 6H6G is changed as follows:

Use Fig. 1, 6H6G socket, of Bulletin 268 for reference.

Interchange.....P1 and K1
Interchange.....P2 and K2

Also interchange the wires of resistors (65) and (66) on the terminal panel which is attached to condenser (63).

Run 4

The 6A8G tube is changed to self biasing as follows:
A resistor, 100 ohms, Part No. 33-1219 is connected in series with the 6A8G tube cathode and a condenser .01 mfd., Part No. 30-4479 is used to bypass the resistor.

To prevent audio interference, remove the green and white wire of audio switch (37) from the volume control center contact and connect it to the high side of Volume Control; that is, the contact which is connected to condenser (58).

Remove

	Old Part	New Part
Model 37-10 (S1) con- denser .05 mfd.....	3615SU	8326SU .05 mfd., 600 v.
Model 37-11 (S1) con- denser .03, .05 mfd....	3615YU	8326SU .05 mfd., 600 v.
Model 37-11 (S1A) con- denser .03 part of 81..		30-4447 .03 mfd., 600 v.

CORRECTION

Schematic Diagram, Fig. 4

The A. V. C. bias contacts of the R. F. transformers, shown as connected to D4 should be D3.

Lead No. 4 of R. F. transformer (33) is connected to the three contacts at D11 instead of one.

Models 37-10—37-11

(Code 125) Service Bulletin 268-A

Run 2

Elect. Condenser Change—

	Old Part	New Part
(31) Elect. Cond. (16 mfd.)...	30-2118	30-2194 (18 mfd.)

Run 3

Bleeder Resistor change to correct voltages of screens and oscillator.

37-10

	Old Part	New Part
(80) Resistor (10,000 ohms, 3 watt)	33-310639	33-275639 (7500 ohms, 3 watt)
(83) Resistor (15,000 ohms, 3 watt)	33-315639	33-290539 (9000 ohms, 2 watt)
(86) Resistor (51,000 ohms, 1 watt)	33-351439	33-332339 (32000 ohms, 1/2 watt)

37-11

	Old Part	New Part
(80) Resistor (10,000 ohms, 3 watt)	33-310639	33-275639 (7500 ohms, 3 watt)
(83) Resistor (15,000 ohms, 3 watt)	33-315639	33-310539 (10000 ohms, 2 watt)
(86) Resistor (51,000 ohms, 1 watt)	33-351439	33-332439 (32000 ohms, 1 watt)

Run 4

Base Compensation change—

	Old Part	New Part
(41) Condenser .015 mfd. Bakelite...	3793SU	3615SU .05 mfd.

R. F. Range Switch change—

	Old Part	New Part
R. F. Range Switch.....	42-1283	42-1314

Model 37-33

Service Bulletin 255

Run 4 Change

	Old Part	New Part
(12) 1st I. F. Transformer.....	32-2100	32-2296
(13) 2nd I. F. Transformer.....	32-2102	32-2298

The second I. F. Transformer (13) has a tertiary winding which is connected in series with the 1D5G screen circuit.

Model 37-34

Service Bulletin 262

Run 2

	Old Part	New Part
(17) 1st I. F. Transformer.....	32-2100	32-2296
(18) 2nd I. F. Transformer.....	32-2102	32-2298

The second I. F. Transformer (18) has a tertiary winding which is connected in series with the 1D5G screen circuit.

Model 37-38

Service Bulletin 256

To prevent oscillation in the I. F. Circuit a tubular condenser, Part No. 30-4020 is connected from the screens of the 1C7G Det. Osc. and 1D5G I. F. tubes to ground.

Part Changes

	Old Part	New Part
(15) 1st I. F. Transformer.....	32-2100	32-2296
(28) 2nd I. F. Transformer.....	32-2102	32-2298

The 2nd I. F. Transformer (28) has a tertiary winding which is connected in series with the 1D5G screen circuit.

Model 37-60

Service Bulletin 245

Tone Control Circuit Changes

	Old Part	New Part
(40) Bakelite Condenser .03 mfd....	8318SU	8328SU
(See Change No. 1)	400 volt	600 volt
(41) Tubular Condenser .008 mfd.—		
400 volt	30-4112	30-4317
		600 volt

CORRECTION

	Incorrect	Correct
Drive Assembly	31-1879	31-1863

Model 37-61

Service Bulletin 246

Tone Control Circuit Changes

	Old Part	New Part
(40) Bakelite Condenser .03 mfd....	8318SU	8328SU
(See Change No. 1)		600 volt
(41) Tubular Condenser .008 mfd.—		
400 volt	30-4112	30-4317
		600 volt

Model 37-62

Service Bulletin 274

Run 2

Screen resistor change to eliminate oscillation.

Schematic No.

	Old Part	New Part
(11) Resistor 25,000 ohms, 1 watt	33-325439	33-332439
		(32,000 ohms)

Model 37-89

Service Bulletin 247

Run 5

The I. F. Transformers were changed beginning with Run 5 as follows:

Schematic

No.	Part	Old Part	New Part
(19)	1st I. F. Transformer.....	32-2100	32-2274
(20)	2nd I. F. Transformer.....	32-2102	32-2276
(24)	Resistor 700 ohm.....	33-1220	33-1211
			400 Ohms

The first I. F. Transformer, Part No. 32-2274 has a stabilizing winding which is placed in series with the suppressor grid of the 6K7G I. F. tube. The short or yellow colored lead is connected to the ground lug and the long lead to the suppressor grid.

Run 6

To improve oscillator action, change the following resistor:

(15) Resistor 32000 ohms.....	33-351339	33-370339
		70000 ohms

Tone control condensers changed to higher Voltage rating.

(44) Condenser .03 mfd.....	8318SU	8328SU
		.03 mfd. Bakelite
(45) Condenser .008 mfd.....	30-4112	30-4317
		.008 mfd. Tubular

Model 37-116

(Codes 121, 122, 126) Service Bulletin 258

The following paragraph should be added to the INTERMEDIATE FREQUENCY CIRCUIT adjustments, Paragraph 4, after the last word equalize. Also, change the padder adjustment from 71S to 71P.

"This adjustment is used to compensate for slight differences between peaks. If the padder must be turned more than 3/16 of a turn in either direction to equalize the peaks, all I. F. padders should be carefully readjusted as given in paragraph 2 and 3 above."

Code 121-122

Speaker Change

Speaker change from "W"-Part No. 37-1219 to "W4"—Part No. 36-1284.

W4—Part Nos.

Cone Ass'y	36-3808
Field Coil Ass'y.....	36-3788
Output Trans.	32-7751

CIRCUIT DIFFERENCE

Code 122 and 126 Automatic Tuning Models

Code 126 Receiver differs from Code 122 only in the pushpull audio output circuit.

In Code 126 the audio output circuit uses 6A5G cathode type tubes.

Potentiometer (128) is removed and the cathodes of the 6A5G tubes grounded.

CONVERSION FOR 25 CYCLE OPERATION

Code 125, 126

See information on differences between Codes 121, 122 and 125, 126 as given in Change Notice No. 5, for Bulletin 258.

	60 Cycle	25 Cycle
(126) Elect. Cond. 4 mfd...	30-2174	30-2026
		8 mfd.
(127) Elect. Cond. 4 mfd...	30-2174	30-2026
		8 mfd.
(129) Power Transformer—		
115 Volts, 50 to 60 cycle	32-7688	32-7689
		115 volt, 25 to 40 cycle

The following additional parts are used in 25 cycle Receivers only. A 1.5 mfd. Condenser, Part No. 30-4104 is connected across Filter Choke (125). This condenser is mounted in the space formerly occupied by potentiometer (128) in Code 121 and 122 Receivers.

An Electrolytic Condenser, Part No. 30-2058, 8 mfd. is connected from Electrolytic Condenser 62B to ground. This Condenser is mounted in the I. F. unit.

Condenser (116) is relocated in the power unit.

Model 37-602

Service Bulletin 243

	Old Part	New Part
(48) Condenser (.02 mfd. tubular)..	30-4113	30-4481
		.02 mfd.

Model 37-610

(Code 122) Service Bulletin 249

Schematic No.	Old Part	New Part
(51) Condenser .008 mfd. 400		
volt	30-4112	30-4317
		.008 mfd., 1,000 volt

Model 37-610

(Codes 125, 126) Service Bulletin 249-B

Incorrect Part Numbers

	Incorrect	Correct
(52) Power Trans. (115 volts, 50 to		
60 cycles, Code 126).....	32-7526	32-7626
Power Trans. (115 volts, 25 to 40 cy-		
cles, Code 126)	32-7527	32-7627

This correction is shown in Service Bulletin.

Model 37-611

(Code 121) Service Bulletin 252

Run 2

Filament voltage dropping resistor change. This change is shown on the service bulletin.

Old Part	New Part
33-3235	33-3292

Run 3

Tone control change. The correct Part No. 42-1224 is listed on the service bulletin.

Run 4

The following parts are changed, beginning with Run 4:

Schematic No.	Old Part	New Part
(18) Electrolytic Condenser	30-2157	30-2173
	(4-8 mfd.)	(10-10 mfd.)
(19) Condenser .01 mfd. tubular....	30-4122	4989-DU
		(.09 mfd. Dual)
(44) Elec. Cond. (10-20 mfd.).....	30-2166	30-2124
		(16 mfd.)

Resistor (43), 33-3122 is now wired in the R. F. unit.

Run 5

To eliminate oscillation below 550 K. C., connect a resistor, Part No. 33-210339, 1000 ohms, in series with the red primary lead of the 2nd I. F. transformer (23); also, connect a condenser 30-4123 .05 mfd. from the red wire contact to ground.

I. F. transformer changes are as follows:

Schematic No.	Old Part	New Part
(20) 1st I. F. Trans.....	32-2100	32-2296
(23) 2nd I. F. Trans.....	32-2102	32-2298

This change can be identified by a small dab of orange paint on the under side of the I. F. unit.

The 2nd I. F. Transformer, Part No. 32-2298 has a tertiary winding which is connected in series with the screen grid of the 6K7G I. F. tube. The short or colored rubber lead is connected to the screen of the 6K7G and the long yellow lead to the screen supply. The primary and secondary leads are connected as shown on the schematic diagram.

CORRECTION

	Incorrect	Correct
(30) Volume Control.....	33-5158	33-5166

Models 37-620—37-630

(Codes 125, 126) Service Bulletin 251-A

Incorrect Part No.

(29) Resistor (700 ohms, 1/2 watt) Part No. 38-7834 should be 400 ohms 1/2 watt, Part No. 33-1211 Bakelite.

Schematic No.	Bulletin Incorrect	Correct Early Run	New Switch Beginning 2/15/37
(69) R. F. Range Switch	42-1245	42-1283 White and Green Dot	42-1314 Yellow and Brown Dot
(70) R. F. Range Switch	42-1170	42-1282 Yellow and Green Dot	

The difference between the old range switch and new one is an additional contact and lug. A condenser, Part No. 30-1044, 35 mmfd. is wired from the lug to ground. This places the condenser across the R. F. Transformer (24) primary.

Model 37-623

Service Bulletin 259

Run 4

	Old Part	New Part
(28) 1st I. F. Transformer.....	32-2100	32-2296
(30) 2nd I. F. Transformer.....	32-2102	32-2298

The 2nd I. F. Transformer (30) has a tertiary winding which is connected in series with the screen of the 1D5G tube.

Model 37-624

Service Bulletin 263

	Old Part	New Part
(40) 1st I. F. Transformer.....	32-2100	32-2296
(41) 2nd I. F. Transformer.....	32-2102	32-2298

The 2nd I. F. Transformer (41) has a tertiary winding which is connected in series with the screen circuit of the 1D5G I. F. tube.

Model 37-640

(Codes 121, 125) Service Bulletin 253

CIRCUIT DIFFERENCES

Code 125 differs from Code 121 in the R. F. unit only. The same R. F. unit used in the 37-630, Code 125—Service Bulletin 251A—is also used for Model 37-640, Code 125. Therefore, the schematic diagram and parts used in the R. F. unit shown in Service Bulletin 251A apply to the 37-640, code 125.

Model 37-641

(Code 121) Service Bulletin 265

Run 4

Shadowmeter changed to plug-in type Part No. 45-2308.

Run 4-4

	Old Part	New Part
(21) Condenser .25 mfd. tubular....	30-4446	30-4191 .15 mfd.

I. F. Transformer change—

(38) 1st I. F. Transformer.....	32-2100	32-2296
(35) 2nd I. F. Transformer.....	32-2102	32-2298

This change can be identified by a small dab of orange paint on the under side of the I. F. unit.

The 2nd I. F. Transformer, Part No. 32-2298 has a tertiary winding in series with the screen grid of its 6K7G I. F. tube. The short or colored lead is connected to the screen of the 6K7G tube. The long yellow lead connects to the screen supply. The primary and secondary leads are connected as shown on the schematic diagram.

To improve operation of receiver at 18 megs, the following condensers are added:
30-1032 250 mmfd. from screen of det-osc. to ground.
30-4455 .1 mfd. condenser connects from B negative to ground in the I. F. unit.

See Supplement to

Model 37-641

(Code 125) Service Bulletin 265

Run 1-2

To improve operation of Receiver at 18 megs., the following condensers are added:

30-1032	250 mmfd. condenser from screen of det. osc. to ground.
30-4455	.1 mfd. condenser connects from B negative to ground in the I. F. unit.

Run 3

Resistor Part No. 33-1228, 33 ohms, 2 watts, shunted across pilot lamp to decrease voltage.

Range Switch changed and condenser added to improve performance on the broadcast range. See replacement parts change notice for Code 125.

Shown on List

Incorrect Correct New Switch

(76) Range Switch (R. F.) 42-1245 42-1283 42-1314
A condenser, Part No. 30-1044, 35 mmfd. is connected across the primary of the R. F. Transformer (26). The condenser is wired from the additional lug on this new range switch to ground.

Model 37-650

Service Bulletin 254

Run 4

Beginning with Run 4, the following tone control condensers are changed to a higher voltage rating to prevent break down.

Schematic

No.	Part	Old Part	New Part
(54)	.03 mfd. Bakelite....	3615YU	30-4380 .03 mfd.
(54)A	.05 mfd.	Part of 54	8326SU .05 mfd.
(14)	Condenser .1 mfd.....	30-4170	30-4455 .1 mfd.

Model 37-660

Service Bulletin 257

CORRECTION

The rectifier tube is shown on Fig. 1 and under the Electrical Specifications as 5Y4G is incorrect. The correct Rectifier is 5X4G as shown on the Schematic Diagram Fig. 2.

Model 37-665

Service Bulletin 264

Run 3

Tone control condenser change to a higher voltage rating.

	Old Part	New Part
(65) Condenser (.05, .03 mfd. dual bakelite)	3615YU	30-4380 .03 mfd.
(65)A Condenser (.05 mfd. part of 65).....		8326SU .05 mfd.

Model 37-670

Service Bulletin 260

Range Switch Change to increase sensitivity.

	Early Production	Later Production
(94) Range Switch (R. F.)..	42-1212	42-1255

The difference in these switches is in the lug arrangement of "D" wafer. In 42-1212 switches, condenser (11) is wired from D2 to D4 as shown on the schematic diagram. Condenser (11) on 42-1255 switches is wired from D10 to E10 and E10 is wired to F2. Lug D2 and D4 have been eliminated on 42-1225 to separate the plate circuit of the 6K7G and the grid of the 6A8G tube.

The color markings of each switch is located on the sleeve holding the wafers together.

Model 37-675

Service Bulletin 261

Schematic No.	Part	Old Part	New Part
(84)	Magnetic Tuning Transformer	32-2217	32-2361

Model 37-690

(Code 121) Service Bulletin 267

Bias resistor (177) changed to eliminate noisy operation.

	Old Part	New Part
(177) Resistor three taps..	33-3302	33-3311 two taps

See Change No. 1 for replacing the 80 and 325 ohm section of Part No. 33-3302. The new resistor, Part No. 33-3311 replaces the 3000 and 2240 ohm sections of Part No. 33-3302.

To reduce rumble caused by extreme low frequency station response, the following condenser and resistor is changed.

Schematic No.	Old Part	New Part
(100)	490,000 ohm	33-449339 33-399339
(112X)	.1 mfd.	30-4455 30-4508 .13 mfd.

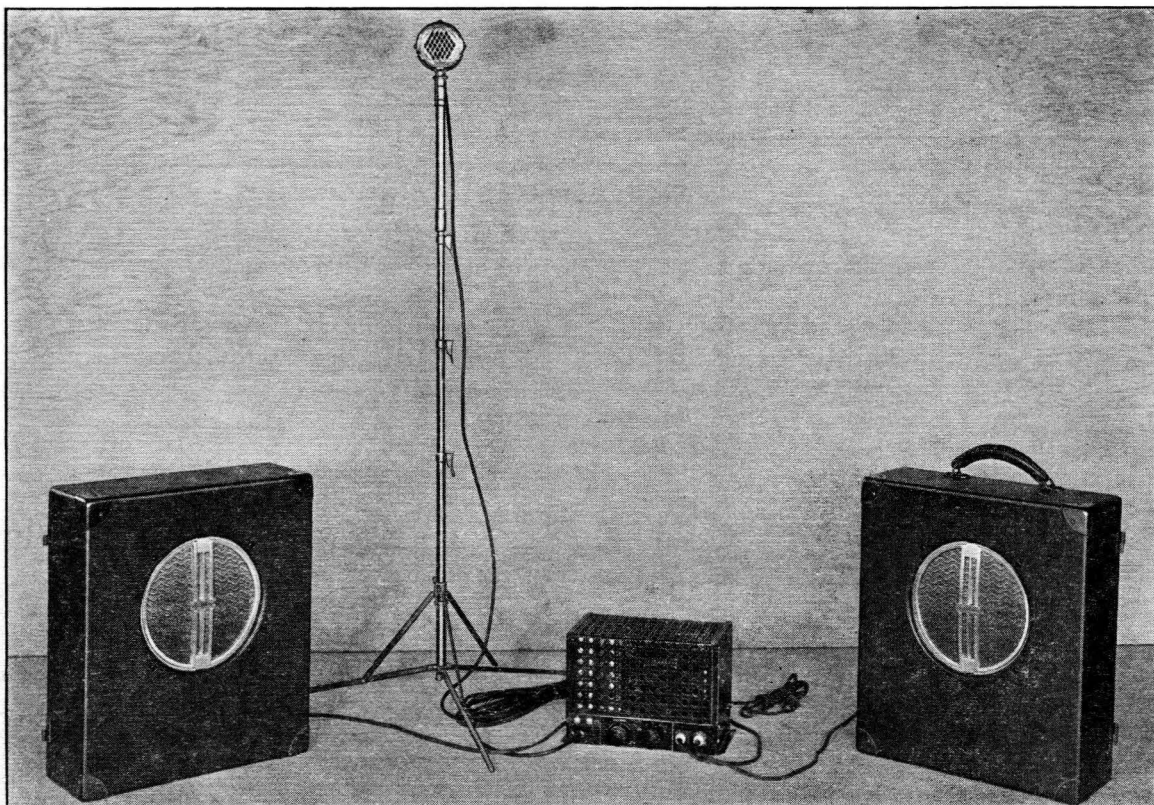
The 80 and 300 ohm sections of Resistor (177), Part No. 33-3302, which were changed to flexible resistors on Change Notice No. 1, are now replaced with bakelite resistors as follows:

	Old Part	New Part
33-3027, 75 ohms—flexible		33-1229, 75 ohms—bakelite
33-3121, 300 ohms—flexible		33-1214, 300 ohms—bakelite

Schematic No.	Shown on Bulletin as	New
(197) Field Coil CB2....	37-3739	36-3836

New PHILCO Model 905

PORTABLE SOUND AMPLIFIER



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Dealer Price
\$66.00
Complete
Ready to Use

High-Power
Two Speakers
3-Purpose
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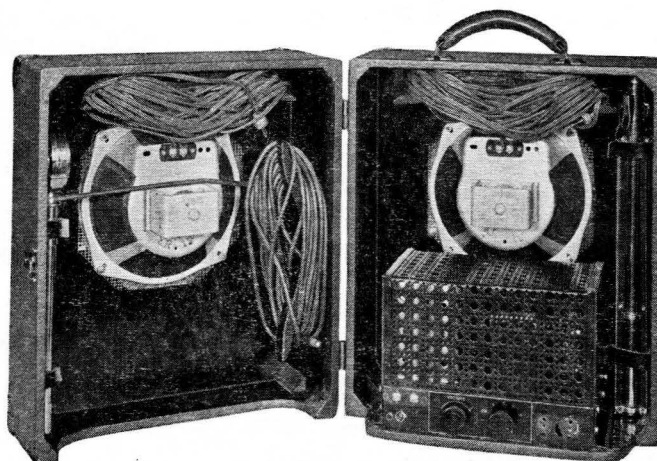
Every radio dealer and service organization should have one of these new portable amplifiers, (1) For demonstrating its many valuable and practical uses to prospective purchasers, (2) For advertising his own business, and (3) For rental purposes to business, charitable, social, and religious organizations. A splendidly engineered, ruggedly-built, high performance unit. . . . Philco quality and dependability throughout.

High-gain high-power amplifier conservatively rated at 10 watts undistorted output. Two eight-inch special perma-dynamic speakers covering full frequency range—one in each half of case—each supplied with 35' of flexible two-conductor rubber covered cable.

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REAR VIEW COMPLETELY ASSEMBLED

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