PHILCO

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1936

CHANGES IN MODELS

Since Publication of Each Service Bulletin

RADIO MANUFACTURERS SERVICE — Your Guarantee of Best Radio Service — A PHILCO SERVICE PLAN

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Grouped under each model and arranged according to Run Number. — Current models included. — Jan. 1 to Dec. 15, 1936.

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 is stamped on the top of the chassis with a rubber stamp.

The Code Number of the set is given on the chassis name plate or name label (at rear of chassis).

MODEL 38 — Service Bulletin 166-A

Run 12

	Schematic No.	Old Part	New Part
Volume Control	(1)	33-5094	33-5154

The wiring of the volume control was also changed to eliminate noise caused by poor contact through the wiper arm. Referring to Fig. 3, condenser **(40)** was disconnected from the top of the volume control and connected to the wiper arm terminal (center). Resistor **(39)** was disconnected from the bottom of the primary and secondary of the antenna transformer **(2)** and connected to the top of the volume control.

MODEL 60 — Service Bulletin 164

	Old Part	New Part
Dial Assembly	31-1472	31-1792

MODEL 84 — Service Bulletin 178

	Old Part	New Part
Pilot lamp bracket assembly.....	38-5565	38-7578

MODEL 89 — Service Bulletin 146-B

	Schematic No.	Old Part	New Part
Resistor ...	(28)	4409 (1.0 meg. ½ watt)	33-510344

MODEL 116 — Service Bulletin 222

A condenser was added from the end terminal of condenser **(63)** to ground. This addition was made to prevent oscillation. Condenser (50 mmf. mica) Part No. 30-1029.

	Schematic No.	Old Part	New Part
Resistor ...	(81)	4409 (1.0 meg. ½ watt)	33-510344

Run No. 14

	Schematic No.	Bulletin	Old Part	New Part
Volume Control ..	(66)	222	33-5022	33-5153

This change due to new design in volume control contacts.

The Model K-17 Speaker, Part No. 36-1025 is used on the new Model 116B. The cone assembly No. is 02996; the field coil and pot assembly No. is 36-3104.

MODEL 116X — Service Bulletin 222-A

Figure 3 shows the field coil **(95)** resistance as 1125 ohms. The correct value is 1450 ohms.

	Schematic No.	Bulletin	Old Part	New Part
Volume Control ..	(68)	222A	33-5110	33-5155

MODEL 600 — Service Bulletin 236

Beginning with run No. 3, the tuning condenser was changed to the new type having a knurled shaft similar to the one used in the Philco Model 54.

	Schematic No.	Old Part	New Part
Tuning Condenser	(4)	31-1755	31-1801
Dial	..	27-5179	27-5188
Pointer	..	27-7933	28-3789
Knob (Tuning)	..	27-4302	27-4308
Knob (Volume Control)	..	27-4273	27-4309

MODEL 602 — Service Bulletin 237

The tap between the speaker voice coil and the hum bucking coil should be grounded to minimize hum.

B.C. resistor **(36)** (133-15 ohms), is listed as Part No. 33-3225. The correct Part No. is 33-3235. The list price is $0.55.

Beginning with run No. 3 the tuning condenser assembly was changed to a vernier type. The part number of the tuning condenser, scale and pointer remain as shown on Service Bulletin No. 237. The knobs were changed as follows:

	Old Part	New Part
Tuning Condenser	31-1755	31-1794
Tuning Knob	27-4302	27-4308
Volume Control Knob.....	27-4273	27-4309
Pointer	27-8236	28-3789

Resistor **(40)**, Part No. 33-510144 (1.0 meg. ¼ watt) should be replaced with Part No. 33-510344 (1.0 meg. ½ watt).

The Filament Resistor listed as Part 33-3225 should be 33-3235.

MODEL 610 — Service Bulletin 217

Change the Schematic Numbers in Fig. 3 as follows: No. 54 to 41; No. 41 to 56; No. 56 to 54; No. 39 to 40; No. 40 to 39. This will make the numbers of the wiring diagram, the base view, and the parts list agree.

	Schematic No.	Old Part	New Part
Resistor	(55)	33-1203 (750,000 ohm, ½ watt)	33-475133 (750,000 ohm, ¼ watt)

MODEL 610 — Service Bulletin 217-B

Beginning with Run No. 15, the oscillator circuit was changed to improve the oscillator action at 6.0 M. C. Resistors **(17)** (51,000 ohm) and **(18)** (25,000 ohm) were removed. A resistor (32,000 ohms), Part No. 33-332133 was added from the switch terminal side of condenser **(7)** to ground. A 20 ohm resistor, Part No. 33-020133 was connected between the 6A7 cathode and ground.

	Schematic No.	Old Part	New Part
Resistor	(29)	33-1188 (1.5 meg. ¼ watt)	33-515344 (1.5 meg. ½ watt)
Resistor	(56)a	33-1096 (1.0 meg. ¼ watt)	33-510344 (1.0 meg. ½ watt)

MODEL 611 — Service Bulletin 224

The following parts are to be used in conjunction with the new wave band indicator. (Run 5).

	Schematic No.	Old Part	New Part
Wave Band Switch.....	(3)	42-1112	42-1158
Pilot lamp bracket assembly			38-7445

MODEL 630 — Service Bulletin 219

The Schematic in Figure 3 indicates a field coil **(64)** resistance of 1140 ohms. The correct value is 640 ohms.

MODEL 641 — Service Bulletin 227

The tone control knob 27-4208 has been changed to 27-4291. The latter type uses a set screw instead of a spring.

MODEL 643 — Service Bulletin 226

The dial mask assembly was changed to the glowing arrow wave band indicator type.

	Schematic No.	Old Part	New Part
Pilot Lamp	(54)	34-2065	34-2081
Tuning Condenser	(4)	31-1634	31-1746
Screen Bracket			31-1751
Scale Guard			27-8140
Glowing Arrow			27-5171
Glowing Arrow Mask			27-5172
Mask Arm			29-3274
Link			29-3338
Coupling			29-3339
Bushing			27-8157
Stud			27-6358

MODEL 645 — Service Bulletin 234

Beginning with run No. 3, resistor **(16)** Part No. 33-351143 (51,000 ohms) was removed and a resistor, Part No. 33-332334 (32,000 ohms, ½ watt) was connected from the oscillator grid of the 6A7 to the suppressor grid of the 78 R.F. amplifier. Condenser **(61)** Part No. 3615-SG was removed. Resistor **(60)** Part No. 33-325243 (25,000 ohms, ⅓ watt) removed and a resistor Part No. 33-424143 (240,000 ohms, ¼ watt) is connected in its place.

A condenser, Part No. 30-4114 (.06 mfd.) was added from the C- end of the B.C. resistor to the junction of resistors **(66)** and **(67)**.

Fig. 3 shows the filament voltage of the type 80 tube as 6.3 volts. It should be 5.0 volts.

Beginning with Run No. 4, the green and yellow leads of the audio input transformer **(52)** were reversed to reduce hum.

MODEL 651 — Service Bulletin 233

To eliminate possibilities of I.F. oscillation the I.F. transformer leads should be separated from each other as much as possible. The 1st I.F. transformer leads separated from the 2nd I.F. transformer leads as much as possible.

To eliminate motor boating at 540 K.C., the B- lead from the suppressor plate terminal of the 78 R.F. tube to the wiring panel mounted on condenser **(72)** should be run close to the sub-base and away from the wave trap coil.

MODEL 655 — Service Bulletin 235

Beginning with run No. 2, resistor No. **(14)** Part No. 33-351143 (51,000 ohms) was removed, and a resistor Part No. 33-332334 (32,000 ohms, ½ watt) was connected from the oscillator grid of the 6A7 tube to the suppressor grid of the 78 R.F. amplifier tube.

Correction: The 2nd Det 1st Audio tube, shown as type 85 on Fig. 3 should be type 75.

A typographical error has occurred in "Police" paragraph of compensating condenser instructions, **(11)** should be **(12)** to conform with diagram Fig. 4.

Fig. 1 R. F. Transformers, to conform with diagram—**(15)**a Osc.; **(9)** Ant.; **(14)** Det.—should be changed to **(16)** Osc.; **(3)** Ant. and **(10)** Det.

To correct schematic Osc. Transformer **(16)** lead number on schematic diagram, Fig. 5, change **(3)** to **(7)**, **(7)** to **(5)**, **(5)** to **(4)**, and **(4)** to **(3)**.

MODEL 680 — Service Bulletin 228

	Schematic No.	Old Part		New Part
Resistor	(148)	33-3187	(100 ohm)	33-1219
Resistor	(151)	33-3121	(300 ohm)	33-1214
Resistor	(161)	6099	(99,000 ohm)	33-399343

These changes are made to eliminate the possibility of a short circuit in these parts of the circuit.

MODEL 37-33 — Service Bulletin 255

To improve the operation of the Receiver, the filament wiring of the 1D5G, I. F. tube was reversed on Receivers beginning with Run 3.

Using Bulletin No. 255, Fig. 1 for reference, the left hand filament terminal marked "2 volts" is now grounded to the lug on the chassis.

To improve the sensitivity in center of the broadcast band, remove resistor **(8)** Fig. 3, from the R. F. terminal panel and connect it directly from the oscillator grid contact on the 1D7G socket to ground.

	Incorrect Part No.	Correct Part No.
Vernier Drive	31-1925	45-2171

MODEL 37-38 — Service Bulletin 256

To improve the operation of the Receiver, the filament wiring of the 1D5G, I. F. tube was reversed on Receivers beginning with Run 4.

Using Bulletin 256, Fig. 1 for reference, "F" of the 1D5G socket will become "F-" and grounded to the lug adjacent to the socket.

To improve the sensitivity in the center of the broadcast band, resistor **(8)** 32000 ohms is replaced with a 51000 ohm resistor, Part No. 33-351339. The resistor is removed from the range switch assembly and is connected directly to the oscillator grid of the 1C7G tube and ground.

MODEL 37-84 — (Code 122) Service Bulletin 244

Electrolytic Condenser **(29)** Part No. 30-2013, 4-8 mfd., has been changed to 30-2079, 8-8 mfd., on Receivers marked Run 5 and later.

MODEL 37-60 — Service Bulletin 245

The locations of parts in the power unit have been changed in Receivers marked Run 5, as follows: Bakelite Condenser **(46)** Part No. 3793-DG is removed from the front and placed in the rear section of the power unit; Tubular Condenser **(40)** Part No. 30-4380 is replaced with Part No. 8318-SU Bakelite Condenser, and mounted in the same location that Condenser **(46)** was removed from.

Beginning with Run 6, the Suppressor Grid of the 6K7G is removed from ground and connected to the -2.5 Negative Tap of Bias Resistor **(43)**.

Beginning with Run 2, Condenser **(11)** was changed from Part No. 30-4201, 1,000 mmfd Tubular, to Part No. 30-1032, 250 mmfd Mica, Resistor **(12)** changed from 33-351339 to 33-332339. This change made to prevent relaxation oscillation.

Beginning with Run 9, the I. F. transformers are changed as follows:

	Old Part	New Part
(15) 1st I. F. Transformer	32-2100	32-2274
(27) 2nd I. F. Transformer	32-2102	32-2276

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.

MODEL 37-61 — Service Bulletin 246

Beginning with Run 2, Condenser **(11)** Part No. 30-4455, 100 mmfd. is changed to Part No. 30-1032, 250 mmfd. Resistor **(12)** is changed from 33-351339 to 33-332339. Schematic diagram in the Service Bulletin shows this change.

The locations of parts in the Power Unit have been changed in Receivers marked Run 5 as follows: Bakelite Condenser **(46)** Part No. 3793-DG is removed from the front and placed in the rear section of the Power Unit. Tubular Condenser **(40)** Part No. 30-4380 is replaced with Part No. 8318-SU Bakelite Condenser and this Condenser is mounted in the same location that Condenser **(46)** was removed from in the front section of the Power Unit.

Beginning with Run 6, the Suppressor Grid of the 6K7G is removed from ground and connected to the -2.5 Negative Tap of the Bias Resistor **(43)**.

	Old Part	New Part
(15) 1st I. F. Transformer	32-2100	32-2274
(27) 2nd I. F. Transformer	32-2102	32-2276

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.

MODEL 37-600 — Service Bulletin 242

Receivers marked Run 2 have Condenser **(31)** Part No. 30-4025, .03 mfd. changed to 30-4113, .02 mfd. This change is shown on Bulletin 242.

To prevent reduction in sensitivity at low frequency end of band, Resistor **(7)** Part No. 7217, 200 ohms is changed to Part No. 33-3010, 300 ohms on Run 3. This change is noted in Parts List of Bulletin 242. However, the schematic diagram shows Resistor **(7)** as 200 ohms and should be changed to 300 ohms.

The Suppressor Wire of the 6J7G I. F. Tube is removed from the Cathode Terminal of the tube socket and connected to the lug of Sensitivity Control **(23)**, to which the Secondary Lead of I. F. Transformer **(19)** is connected.

MODEL 37-602 — Service Bulletin 243

Receivers marked Run 2 have Condenser **(48)** Part No. 30-4025, .03 mfd. changed to Part No. 30-4113, .02 mfd. This change is shown on Bulletin 243.

Receivers marked Run 5 have Resistor **(19)** Part No. 7217, 200 ohms changed to Part No. 33-3010, 300 ohms. This change is noted on Parts List of Bulletin 243. However, the schematic diagram shows Resistor **(19)** as 200 ohms and should be changed to 300 ohms.

MODEL 37-610 — (Codes 121, 122) Service Bulletin 249

The locations of parts in the Power Unit have been changed in Receivers marked Run 2, as follows: Bakelite Condenser **(59)** Part No. 3793-DG is removed from the front and placed in the rear section of the Power Unit. Tubular Condenser **(50)** Part No. 30-4380 is replaced with Part No. 8318-SU Bakelite Condenser and this Condenser is mounted in the same location that Condenser **(59)** was removed from in the front section of the Power Unit.

Beginning with Run 3, the Suppressor Grid of the 6K7G Tube is removed from ground and connected to the -2.5 Volt Tap of the Bias Resistor **(54)**. The schematic diagram on Service Bulletin 249 already shows this change.

Power Transformer, Part No. 32-7583 listed as $4.25 was changed on June 16, 1936 to $4.50.

To reduce crack up at low volume, a condenser Part No. 30-1031, 110 mmfd. was connected from the arm of the volume control to ground.

New Part Numbers		Former Part No.	New Part No.
(61)	Ant. Range Switch	42-1170	42-1200
(62)	Osc. Range Switch	42-1172	42-1246

Beginning with Run 5, the I. F. transformers are changed as follows:

	Old Part	New Part
(24) 1st I. F. Transformer	32-2100	32-2274
(27) 2nd I. F. Transformer	32-2102	32-2276

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 rubber lead is connected to the ground lug and the long rubber lead to the suppressor grid.

MODEL 37-620 (Codes 121, 124) Service Bulletin 250

Chassis marked Run 3 have the new I. F. Transformer Assembly, Part No. 32-2100-X, 1st I. F. and Part No. 32-2102-X, 2nd I. F. Transformer. These transformers are designed to prevent microphonics.

To prevent oscillation in the I. F. stage, the following Parts are changed on Receivers after May 20, 1936:

Schematic No.	Part	Original Part No.	New Part No.
(34)	Resistor	33-1211—400 ohms	33-1220—700 ohms
(35)	Condenser	30-4020—.05 mfd.	30-4446—.25 mfd.

To reduce crack up at low volume, a condenser Part No. 30-1031, 110 mmfd. was connected from the arm of the volume control to ground.

New Part Numbers		Former Part No.	New Part No.
(68)	Ant. Range Switch.....	42-1170	42-1200
(69)	R. F. Range Switch.....	42-1171	42-1245
(70)	Osc. Range Switch.....	42-1172	42-1246

		Old Part	New Part
(32)	1st I. F. Transformer.....	32-2100	32-2274
(36)	2nd I. F. Transformer.....	32-2102	32-2276

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.

Code 124

Parts in Model 37-620, code 124, which differ from those in the code 121 receiver are as follows:

	Old Part No.		New Part No.
Electrolytic Condenser (18)..	30-2118	16 mfd.	30-2126 16 mfd.
Electrolytic Condenser (60)..	30-2024	8 mfd.	30-2014 8 mfd.
Electrolytic Condenser (62)..	30-2117	12 mfd.	30-2131 12 mfd.
Condenser (67)...	3793-DG	.05 mfd. Dual	3793-ODG
Condenser (57)...	8318-SU		8318-OSU

A resistor Part No. 33-010339 (10 ohms) is connected in series with electrolytic condenser (18).

Speaker K-38	36-1262
Cone Assembly	36-3159
Field Coil Assembly	36-3787
Transformer	2580
Baffle and Silk Assembly	40-6026
Baffle and Silk Assembly	40-6027
Rubber Mtg. Washer	27-4197
Rubber Mtg. Washer	27-4202
Wiring Panel R. F. Unit	38-5864
Mtg. Bracket	28-4485

Codes 121 and 124

When using I. F. Transformer, Part No. 32-2274, 1st I. F., and 32-2276, 2nd I. F., bias resistor (34), must be 400 ohms. Part No. 33-140339.

MODEL 37-623 Service Bulletin 259

To improve the operation of the Receiver, the filament wiring of the 1D5G, I. F. tube was reversed on Receivers beginning with Run 3.

Using Fig. 1 of Bulletin 259 for reference, the ground terminal adjacent to the socket is now connected to the terminal marked "F" which is to the left of the centering pin. When connections are reversed be sure all connections are transferred from one contact to the other.

	Incorrect Part No.	Correct Part No.
Output Transformer (53).....	32-7638	32-7639
Compensator (16)	31-1621	31-6121

MODEL 37-630 (Codes 121, 122) Service Bulletin 251

Chassis marked Run 3, have the new I. F. Transformer, Part No. 32-2100-X, 1st I. F. and 32-2102-X, 2nd I. F. These transformers are designed to prevent microphonics.

To prevent oscillation in the I. F. stage, the following Parts are changed:

Schematic No.	Part	Original Part No.	New Part No.
(34)	Resistor	33-1211—400 ohms	33-1220—700 ohms
(34)	Condenser	30-4020—.05 mfd.	30-4446—.25 mfd.

Power Transformer (65), Part No. 32-7627 frequency rating listed as 50 to 60 cycles is incorrect and should be changed to 25 to 40 cycles.

	Incorrect Part No.	Correct Part No.
Mask guide and lamp bracket support....	28-7844	38-7844

New Part Numbers		Former Part No.	New Part No.
(68)	Ant. Range Switch.	42-1170	42-1200
(69)	R. F. Range Switch	42-1171	42-1245
(70)	Osc. Range Switch.	42-1172	42-1246

Beginning with Run 5, the I. F. transformers are changed as follows:

		Old Part	New Part
(32)	1st I. F. Transforme.....	32-2100	32-2274
(36)	2nd I. F. Transformer.....	32-2102	32-2276

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.

When using I. F. Transformer Part No. 32-2274, 1st I. F., and 32-2276, 2nd I. F., bias resistor (34), must be 400 ohms. Part No. 33-140339.

MODEL 37-640 (Code 121) Service Bulletin 253

Chassis marked Run 2, have the new I. F. Transformers, Part No. 32-2100-X, 1st I. F. and Part No. 32-2102-X, 2nd I. F. These transformers are designed to prevent microphonics.

The Electrolytic Condensers in the Power Unit were changed on Receivers marked Run 3. Electrolytic Condenser (69) Part No. 30-2117, 12 mfd. is changed to 30-2024, 8 mfd. Electrolytic Condenser (66) Part No. 30-2045, 8-10 mfd. is changed to 30-2163, 20-10 mfd.

To prevent oscillation in the I. F. stage, the following Parts are changed on Receivers after June 15, 1936.

Schematic No.	Part	Original Part No.	New Part No.
(30)	Condenser	30-4020—.05 mfd.	30-4446—.25 mfd.
(32)	Resistor	33-1121—400 ohms	33-1220—700 ohms

This change is shown on Bulletin 253.

Transformer (10), on wiring diagram, number 4 lead of this transformer is shown connected to (D11) which is correct, however, the three contacts should be connected together.

New Part Number		Former Part No.	New Part No.
(74)	Ant. Range Switch.	42-1170	42-1200
(75)	R. F. Range Switch	42-1171	42-1245
(76)	Osc. Range Switch.	42-1172	42-1246

		Old Part	New Part
(33)	1st I. F. Transformer.....	32-2100	32-2274
(34)	2nd I. F. Transformer.....	32-2102	32-2276

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.

When using I. F. Transformer, Part No. 32-2274, 1st I. F., and 32-2276, 2nd I. F., bias resistor (32), must be 400 ohms. Part No. 33-140339.

MODEL 37-650 (Code 121) Service Bulletin 254 Service Bulletin 254

Beginning with Run 2, the 6A8G Tube Shield, Part No. 28-2726 and Shield Base, Part No. 28-3898 were removed.

Interchange parts (39) and (43) on the parts list to conform with the diagram.

MODEL 37-660 Service Bulletin 257

The following parts changed to increase bass response:

	Former Part No.	New Part No.
Condenser (77)	30-4112—.008 mfd.	30-4125—.006 mfd.
Resistor (36)	33-351339—½ watt	33-340339—½ watt

HUM ELIMINATION IN I. F. UNIT

To eliminate hum due to proximity of filament and grid lead, it is necessary to dress filament lead wiring from the 6K5G tube to the 6J5G tube as far as possible away from the 6K5G control grid lead.

MODEL 37-690 Service Bulletin 267

ELIMINATING NOISY RESISTORS IN POWER UNIT

To eliminate the noise caused by the 80 and 325 ohm sections of resistor (177), (referring to Fig. 6 and the schematic diagram of Bulletin No. 267) two flexible resistors, Part No. 33-3027, 75 ohms and Part No. 33-3121, 300 ohms, are now used in place of these sections. To replace these resistors proceed as follows:

First install a wiring panel (Part No. 03103) under condenser (175) mounting screw. (Be sure condenser lug is grounded after panel is in place). Then disconnect the green and white wire, from terminal 4 of resistor (177) and connect it to the wiring panel lug. Remove wire between terminal 5 of resistor (177) and terminal 6 of power cable socket. Now connect resistor 33-3121, 300 ohms between the terminal panel lug and terminal 6 of power cable socket. Then add the 75 ohm resistor, Part No. 33-3027 between the terminal panel and terminal 3 of resistor (177). After doing this disconnect the brown wire from terminal 5 of (177) and connect it to any ground on the chassis.

Magnetic Tuning transformer change.

Schematic No.	Former Part No.	New Part No.
119	32-2217	32-2361

The wiring of the new transformer, Part No. 32-2361 is shown on Service Bulletin No. 267, page 2.

HUM ELIMINATION

The following changes are made to reduce hum. All changes up to Run 5 are shown on the schematic diagram of Bulletin 267. Therefore, the following instructions give the receiver circuit differences before and after Run 5.

DISCRIMINATOR UNIT

Part Changes	Old Part No.	New Part No.
Condenser (112X) .008 mfd.	30-4112	30-4455 (.1 mfd.)
Condenser (107) .06 mfd. tubular	30-4378	33-340339 Resistor (40,000 ohms)
Condenser (143) .02 mfd. tubular	30-4215	8318-DU (Part of 144)
Condenser (144) .03 Bakelite	8318-SU	8318-DU (.03 mfd. Double)

Condenser (143) .03 mfd. which is now part of (144) .03 mfd. (Part No. 8318-DU in run 5 receivers) and connected as shown in the schematic diagram of Bulletin No. 267, was formerly a tubular condenser, Part No. 30-4215 —.02 mfd. This condenser (143), prior to run 5 was connected to the same terminal as condenser (142) .05 mfd., which goes to the volume control center lug.

A 60,000 ohm resistor, Part No. 33-360339 was removed in the discriminator unit. This resistor connected from resistor **(108)** 60,000 ohm, to the lug where Parts **(99a)** and **(107)** connects to choke **(104)**.

The position of choke **(104)** is changed by rotating it 135° counterclockwise or to the minimum hum position with the bass control **(120)** in the expanded position.

On receivers prior to Run 4, the screen circuit of the 6K7G automatic bass amplifier was broken by the range switch contacts C-10 and C-11. The screen was formerly connected to C-10 and electrolytic condenser **(99)**. The mid-tap of resistors **(131)** and **(137)** was connected to C-11. The plate circuit of the tube is now broken, in Run 4 and 5 receivers, and is connected as shown on the schematic diagram.

I. F. UNIT

Connect resistor **(64)** 490,000 ohms, Part No. 33-449339 across the expander potentiometer **(63X)**.

Change **(62)** condenser, Part No. 30-1033, 150 mfd. to 30-1031, **110 mfd.**

POWER UNIT

Beginning with Run 3, the following changes are made:

To eliminate hum the connections from the 2nd Bass Amplifier 6J5G tube to the cable socket contacts, No. 11 and 18, in the power unit are reversed. This change is necessary due to wrong wiring. The grid of the 6J5G tube was wired to the shield and the shielded wire was grounded. Therefore, make sure the shielded wire is connected to the grid and the shield is grounded.

Connect a resistor **(157X)** 240,000 ohms, Part No. 33-424339 from Condenser **(160)** and Resistor **(161)** to the B supply contact of transformer **(156)**.

Beginning with Run 6, electrolytic condenser **(153)** 2, 3, 3 mfd. Part No. 30-2159 is replaced with Part No. 30-2169. This change is to reduce minimum hum.

Interchange the condenser connections as follows:

Part-No. 30-2159		Part No. 30-2169
(153)	2 mfd.—yellow	2 mfd.—yellow
(153a)	3 mfd.—green	3 mfd.—green
(153b)	3 mfd.—green	8 mfd.—red

CORRECTION

A tubular condenser **(57X)**, Part No. 30-4123, .05 mfd. is missing on the schematic diagram and the parts list. This condenser connects from the screen of the 6K7G R. F. Tube to ground.

MODEL 37-116

Service Bulletin 258

Resistor **(50)** was changed from 10,000 to 20,000 ohms on receivers marked Run No. 3. This change is shown on the service bulletin.

A condenser Part No. 30-4444, connected between the heater contact and ground of the 6K7G, R. F. tube, was removed on receivers beginning with Run 4. This condenser was removed to prevent hum modulation on Range 5. This change is shown on Service Bulletin 258.

Electrolytic Condensers **(126)** and **(127)** Part No. 30-2026, 8 mfd. is changed to Part No. 30-2174, 4 mfd. beginning with receivers marked Run No. 5.

Resistors **(110)** and **(111)** 25,000 ohms have been removed from the audio unit, and relocated in the power unit, near the 6B4G Sockets, beginning with receivers marked Run No. 6.

To obtain the proper selectivity curve in expanded position of I. F. Expanding Unit, and to avoid regeneration, dress the plate lead (white) of the 6L7G tube as follows: The plate lead should lay across the 6L7G socket, then pass into oscillator section close to the base, from here the wire must pass through the second aperture from front of R. F. Unit into the I. F. Unit.

Standard changes, all codes.

	Former Part No.	New Part No.
Resistor **(48)** 100 ohms	33-3023	33-1219
Condenser **(63)** .05 mfd.	30-4123	30-4454
Dial Screen Holder (Code 121)	31-1900	31-1945
Dial Screen Holder (Code 122)	31-1900	31-1946
Pilot Lamp Assembly	38-7909	38-8051

To prevent clicks when tuning the bass compensation control on a very strong carrier, a 2 megohm resistor, Part No. 33-520339 was connected from the lug on which Resistor **(103)** and Condenser **(104)** are connected in the Audio unit to ground.

Two parts on the schematic diagram are listed as **(135)**. One is a pilot lamp, the other a switch. The pilot lamp is correct as the number appears on the parts list. The switch is incorrect and should be changed to **(137)**. This switch is used on the automatic dial mechanism and is listed on the parts list under "code 122" as "Plunger Stop and Switch Assembly, Part No. 45-2330."

Another switch located between parts **(100)** and **(103)** on the diagram with the wording "used on code 122 only" is used to short the audio system when using the automatic dial. This switch is located on the vernier drive assembly. The part numbers of the removable sections which contains the riveted contacts are **45-2350** and **28-4110.**

Correction	Incorrect Part	Correct Part
Condenser **(131)**	4898-DG .09 mfd.	3793-DG .015 mfd.

New Parts	Old Part	New Part
Magnetic Tuning Transformer **(81)**	32-2217	32-2361

DIAL DRIVE ASSEMBLIES

Service Bulletin 231

Drive assembly listed as No. 06522 on Model 50 should be 03430.