PHILCO

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1938
CHANGES IN MODELS

Since Publication of Each Service Bulletin

Grouped under each model and arranged according to Run No. — Current models included.

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 models current at the time of printing. These are all the changes which have been made since 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. The Code Number is given on the chassis or cabinet name label.

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

MODEL 680 — Bulletin 228

Correction:	Incorrect	Correct
(5) Ant. Transformer Broadcast(3 and 4)	32-1811	32-1812
(5)a Ant. Transformer Broadcast(1 and 2)	32-1812	32-1811

MODEL 37-89 — Bulletin 247

Correction - Parts List

Schematic No.	Incorrect No.	Correct No.
(2) Compensator(Ant. 1500 K.C.)	31-6100	31-6101
(10) Compensator(R.F. 1500 K.C.)	31-6100	31-6101
(12) Compensator(Osc. 600-1500 K.C.)	31-6101	31-6100

MODEL 37-624 — CODE 125 — See Supplement to Bulletin 263

	Old Part	New Part
New Part	42-1283	42-1314
Range Switch (R.F.)	White - Green	Yellow-Brown
Identification colors on metal support		

MODEL 37-641 — CODE 125 — Bulletin 265

Correction: Schematic Diagram Fig. 5

The cathode of the 6K7G, R.F. tube should be connected at the junction of Resistors 6 and 9, and Condenser 28.

MODEL 38-1 — CODE 121 — Bulletin 293

The following parts must be changed in addition to the power transformer for 25 cycle operation.

Remove (100) resistor, 3,000 ohms, Part No. 33-230339 and (101) condenser .25 mfds., Part No. 30-4446. Add condenser Part No. 30-4549 and wire the white wires of this condenser across choke (99). The red wire is connected to the junction of condensers (67), resistor (62)and resistor (66). Ground the housing of the condenser to the chassis. Also, remove electrolytic condenser (102) 8, and 10 mfd. Part No. 30-2201 and replace with electrolytic condenser, Part No. 30-2183 20, and 10 mfd. The 20 mfd. replaces the 8 mfd. of 30-2201.

Run 3

A 250 mmfd. condenser, Part No. 30-1032, was connected from the screen of the 6U7G to ground to prevent parasitic oscillations.

Run 4

Beginning with Run 4 Receivers, the 6U7G R.F. tube is replaced with a 6K7G tube to eliminate parasitic oscillations. In addition to the tube change, the green wire connecting the screen contact of the 6U7G tube and Condenser (6) was increased in length. This wire should circle around the 6U7G tube socket towards the front of the R.F. unit and then back to condenser (6). Place the wire as close to the base as is possible. The 250 mmfd. condenser, Part No. 30-1032, added in Run 3 Receivers is removed on this Run.

MODEL 38-2 — CODE 121 — Bulletin 294

The following parts must be changed in addition to the power transformer for 25 cycle operation. Remove (98) condenser .25 mfd., Part No. 30-4446 and replace with condenser, 1 mf. - .5 mf. Part No. 30-4549.

Connect the white wires of condenser, 30-4549 across choke (99) and the red wire to the junctions of (59), (60) and (66). Also, remove electrolytic condenser (96) 8 mfd., Part No. 30-2211 and replace with electrolytic condenser, Part No. 30-2200 16 mfd.

Run 2 Intermediate Frequency Circuit Changes

Beginning with run 2, the I. F. circuit has been changed to use permeability tuned I. F. transformers. These changes and the locations of the Compensators are shown on the Schematic Diagram below. The schematic part numbers differ from those in Bulletin 294.

The wires from each circuit, however, on this diagram have been marked indicating the connecting points in the circuit diagram of Bulletin 294.

The Compensator adjustments are as follows:

A. Set the receiver and signal generator controls as follows:

1. Range Switch (Broadcast Position).
2. Volume Control (Maximum).
3. Magnetic Tuning Switch "Off."
4. Tone Control First Position.
5. Signal Generator Dial 470 K.C.

B. Connect the signal generator output cable through a .1 mfd. condenser to the grid of the 6A8G Det. Osc. tube and connect the cable-ground to the receiver chassis. Set the generator "attenuator" for maximum output. Adjust the I. F. Compensators as follows:

1. Turn compensator (1XB) in until the output meter reading decreases almost to zero.
2. Now adjust the compensator (1XA) and (1XC) for maximum output; then readjust (1XB) for maximum output.
3. Turn compensator (2XC) in about three turns; then adjust compensators (2XA) and (2XB) for maximum output. The adjustment procedure for compensator (2XC) is the same as that given in the "Magnetic Tuning Circuit Adjustments" of Bulletin 294.

MODEL 38-2 Con't. — CODE 121 — Bulletin 294

Replacement Parts
RUN 2

Schem. No.	Description	Part No.	List Price
1X	1st I. F. Transformer	32-2741	$3.50
2X	2nd I.F. Transformer	32-2742	4.00
3X	Condenser .05 mfd. bakelite	3615 SG	.35
4X	Resistor 4.0 meg., ½ watt	33-540339	.20
5X	Resistor 4.0 meg., ½ watt	33-540339	.20
6X	Resistor 1.0 meg., ½ watt	33-510339	.20
7X	Resistor 1.0 meg., ½ watt	33-510339	.20
8X	Resistor 1.0 meg., ½ watt	33-510339	.20
9X	Resistor 1.0 meg., ½ watt	33-510339	.20
10X	Condenser 110 mmfd. mica	30-1031	.20
11X	Condenser 110 mmfd. mica	30-1031	.20
12X	Resistor 490,000 ohms, ½ watt	33-449339	.20
13X	Resistor 490,000 ohms, ½ watt	33-449339	.20
14X	Resistor 1000 ohms, ½ watt	33-210339	.20
15X	Resistor 51,000 ohms, ½ watt	33-351339	.20
16X	Condenser 110-110 mmfd. bakelite	8035 DG	.25
17X	Condenser .01 mfd. tubular	30-4479	.20
18X	Resistor 330,000 ohms, ½ watt	33-433339	.20
19X	Volume Control	33-5233	1.00
20X	Resistor 51,000 ohms, ½ watt	33-351339	.20
21X	Condenser .015 mfd. tubular	30-4226	.20
22X	Resistor 1.0 meg., ½ watt	33-510339	.20
23X	Audio shorting switch	See Bul. No. 294	
24X	Condenser .006 mfd. tubular	30-4467	.20
25X	Condenser .03 mfd., .03 mfd. bakelite	8318 DU	.40
26X	Resistor 490,000 ohms, ½ watt	33-449339	.20
27X	Resistor 1.0 meg., ½ watt	33-510339	.20
28X	Condenser .1 mfd. tubular	30-4455	.25
29X	Condenser .015 mfd. tubular	30-4226	.20
30X	Condenser .03 mfd. tubular	30-4449	.20
31X	Resistor 32,000 ohms, ½ watt	33-332339	.20
32X	Resistor 99,000 ohms, ½ watt	33-399339	.20
33X	Condenser Part of 25X		
34X	Condenser .1 mfd. tubular	30-4455	.25
35X	Resistor 240,000 ohms, ½ watt	33-424339	.20
36X	Condenser .1 mfd. tubular	30-4499	.20
37X	Resistor 70,000 ohms, ½ watt	33-370339	.20

For Schematic Diagram showing Run No. 2 Changes in Model 38-2 Code 121, See Page 4.

Run 3

A 250 mmfd. Condenser, Part No. 30-1032, was connected from the screen of the 6U7G to ground to prevent parasitic oscillations.

Run 4

Beginning with Run 4 Receivers, the 6U7G R. F. tube is replaced with a 6K7G tube to eliminate parasitic oscillations. In addition to the tube change, the green wire connecting the screen contact of the 6U7G tube and Condenser 6 was increased in length. This wire should circle around the 6U7G tube socket towards the front of the R. F. unit and then back to Condenser 6. Place the wire as close to the base as is possible. The 250 mmfd. Condenser, Part No. 30-1032, added in Run 3 Receivers is removed on this Run.

MODELS 38-4 and 38-5 — CODE 121 — Bulletin 281

For 25 cycle operation, using power transformer 32-7598, a condenser 30-4289, .1 mfd. is connected across the speaker field coil (65).

MODEL 38-4

The following parts were changed in the Bass Compensation Circuit in order to reduce station rumble.

Schematic No.	Original Part No.	New Part No.
(36) Condenser (.01 mfd.)	30-4125	30-4555 (.0015 mfd.)
(38) Resistor (40,000 ohms ½ watt)	33-340339	33-332339(32,000 ohms)

Run 3

In order to further reduce frequency drift at the high frequency end of the broadcast tuning range, Compensator (16), 1500 K.C., Part No. 31-6196 was replaced with Part No. 31-6206, and two Condensers, Part No. 30-1097 connected in parallel with the new condenser.

Range 1 Oscillator Transformer (15 also changed from Part No. 32-2631 to 32-2894 in Receivers of Run 3.

Run 4 MODEL 38-4
Run 2 MODEL 38-5

To improve the performance of the Oscillator Circuit on the short wave bands. Resistor (19) 70,000 ohms, Part No. 33-370339 was changed to 51,000 ohms, Part No. 33-351339.

The part number for the tone control (40) should be listed as follows:

(40) Tone Control and Off-on Switch (38-5) 42-1341
Tone Control and Off-on Switch (38-4) 42-1346

MODEL 38-7 — CODE 121, 124 — Bulletin 280

Run 2

To provide uniform performance of the oscillator circuit, a 20 ohm resistor, Part No. 33-020339 was connected in series with the cathode of the 6A8G Det. osc. tube.

The following parts in Code 124 Chassis were changed to reduce bass response.

Schematic No.	Old Part	New Part
(24) Condenser (.01 mfd.)	30-4479	30-4201 (.001 mfd.)
(32) Resistor (51,000 ohms, ½ watt)	33-351339	33-340339 (40000 Ω ½W)
(38) Condenser (.006 mfd.)	30-4467	30-4479 (.01 mfd.)

Run 3

In order to further reduce frequency drift at the high frequency end of the broadcast tuning range, compensator (7A) 1500 K.C., Part No. 31-6196 was replaced with Part No. 31-6206.
In addition to this change a new thermal compensator, Part No. 31-6232 was connected in parallel with compensator (7A) and mounted adjacent to resistor (12). The resistor is mounted to the chassis with a mounting clamp, Part No. 28-5388 and an asbestos insulator, Part No. 27-8977. The resistor must be mounted in this manner, otherwise the thermal compensator will not function properly.

Run 4

The new Thermal Compensator, Part No. 31-6232 which was added to the Receiver in Run 3, is replaced with two fixed Condensers, Part No. 30-1097 in Run 4 Receivers.

Run 5

The 20 ohm Resistor, Part No. 33-020339 Resistor connected in series with the 6A8G Det-Osc. tube cathode in Run 3 Receiver was removed.

The Part Numbers for the Volume Control (26), Tone Control (39) and Range Switch (48) as listed in the bulletin are correct for Models 38-8 and 38-9. The correct part numbers, however, for these parts in the Model 38-7, codes 121-124 are as follows:

(26) Volume Control (38-7)	33-5225
(39) Tone Control (38-7)	42-1347
(48) Range Switch (38-7)	42-1339

MODEL 38-8 — Code 121 — Bulletin 280

Run 2

The following parts were changed to increase the sensitivity of the shadowmeter:

Schematic No.	Old Part	New Part
(12) Resistor (10,000 ohms, 3 watt)	33-310639	33-313639 (13,000 ohms)
(17) Condenser (.05 mfd.)	30-4454	30-4134 (.25 mfd.)

Run 3

To provide uniform performance of the oscillator circuit, a 20 ohm resistor, Part No. 33-020339 was connected in series with the cathode of the 6A8G Det. Osc. tube.

Run 4

Schematic	Original Part Number	New Part Number
(40) Condenser (.008 mfd.)	30-4112	30-4456 (.004 mfd.)

The above change was made to increase the audio response in the high frequencies.

MODEL 38-9 — Code 121 — Bulletin 280

Run 2

To provide uniform performance of the oscillator circuit, a 20 ohm resistor, Part No. 33-020339 was connected in series with the cathode of the 6A8G Det. Osc. tube.

Run 3 MODEL 38-9
Run 5 MODEL 38-8

The 20 ohm Resistor, Part No. 33-020339, connected in the 6A8G cathode circuit in Run 2 was removed in the above Run Numbers.

MODEL 38-10 — Code 121 — Bulletin 283

Run 2

To provide uniform performance of the oscillator circuit, a 20 ohm resistor, Part No. 33-020339 was connected in series with the Cathode of the 6A8G, Det. Osc. tube.

When using Power Transformer, Part No. 32-7627 for 25 cycle operation, Condenser (35), Part No. 30-4215, .02 mfd. should be changed to Part No. 30-4373, .06 mfd.

Correction

The location of Compensators 7 and 9 shown in Figure 2 should be reversed.

MODEL 38-12 — Code 121 — Bulletin 284

Condenser changes for improved operation:

Schematic No.	Original No.	New Part No.
(2) Condenser (.05 mfd. tubular)	30-4444	30-4519 (.05 mfd.)
(19) Condenser (.01 mfd.)	30-4169	30-4514 (.01 mfd.)

Run 2

New type mounting on Tuning Condenser.

	Original Part No.	New Part No.
(3) Tuning Condenser Assembly	31-2068	31-2177

Run 3

IMPORTANT: Wire Dress to Eliminate Hum.

1. Dress the green wire connecting the Diodes of the 75 tube to the 2nd I.F. transformer as far as possible away from the filament prongs of the 75 tube.

2. The brown wire connecting resistor 12 to the high side of the Volume Control should be dressed under the coil of I.F. transformer 12.

3. The grid lead of the 75 tube should be dressed toward the back of the receiver and between the tube and shield.

The 2nd I.F. Transformer (12) changed from Part No. 32-2674 to Part No. 32-2944.

Note: Condenser (12B) and (12C) are part of the padder in these transformers.

The wiring of the new transformer 32-2944 is shown on this change notice.
For I.F. Transformer 32-2944 See Page 4.

MODEL 38-12 Con't. — Code 121 — Bulletin 284

Run 5

Speaker Unit changed from type "B0-1", Part No. 36-1366 to type "B-7", Part No. 36-1390. These speakers are interchangeable. The cone assembly for the "B-7" speaker is Part No. 45-1344 and the Field Coil, Part No. 32-9473.

MODEL 38-14 — CODE 121, 124 — Bulletin 288

Correction:

Schematic No.	Incorrect No.	Correct No.
12 Compensator	31-6209	31-6100
20 Volume Control	33-5236	33-5230

A Condenser, Part No. 30-1097, 5 mmfd. was connected across the secondary of shortwave transformer 2. The condenser is connected to lugs 3 and 4 of the transformer shown on the schematic diagram.

Run 2

The 2nd I.F. Transformer (17) is changed from Part No. 32-2674 to Part No. 32-2944. The wiring lugs of the compensator on the new transformer are slightly rearranged. A drawing of the transformer is shown on this change notice and indicates the correct wiring point of each lug in the circuit.

For I.F. Transformer 32-2944 see Page 4.

MODEL 38-15 — CODE 121, 124 — Bulletin 291

Run 2

The wiring of the 2nd detector circuit (75 tube) changed from a single rectifying circuit to a double rectifying circuit. Connect the 110 mmfd. condenser between the two diode contacts of the 75 tube socket. Remove the shorting wire that connects these two contacts and leave the wire from the 2nd transformer connected to one diode.
Connect one end of each of the one megohm resistors to the other diode. One of these one megohm resistors replaces the 2 megohm resistors 17, Part No. 33-520339, and the other is connected to the cathode of the 75 tube.

Remove the Volume Control lug that is connected to C Negative and connect to ground.

The same diode circuit as is shown in Service Bulletin 283 for Model 38-10 is now incorporated in Model 38-15.

Run 3

Wiring relocated, no change in the circuit.

Run 4

Sub-base wiring panel changed from Part No. 38-9226 to Part No. 38-9007. No change in circuit.

Run 5

The 2nd I.F. Transformer Assembly 15 changed from Part No. 32-2674 to Part No. 32-2944. The wiring of the new transformer, 32-2944, is shown on this change notice. Condenser (15B) and (15C) are part of the padder in these assemblies.

For I.F. Transformer 32-2944 See Page 4.

Run 6

Speaker unit in code 121 chassis changed from type B0-1, Part No. 36-1366, to type B-7, Part No. 36-1390. These speakers are interchangeable. The cone assembly for the B-7 speaker is 45-1344 and the field coil, Part No. 32-9473.

MODEL 38-22 — Code 121 124 — Bulletin 285
MODEL 38-23 — Code 121

Run 2 — Change to prevent hum

To prevent hum when the volume control is on full, the red and brown leads from the 2nd I.F. Transformer (18) must be placed as far as possible away from the cable and pilot lamp leads at the rear of the chassis.

Pilot lamp resistor added

Resistor, Part No. 33-3027, 75 ohms was shunted across Pilot lamp (52) to prevent high voltage burning lamp out.

Run 3 MODEL 38-22

Replaced 3 wire speaker cables, Part No. 41-3336 (41-3337 in Code 124) with 5-wire speaker cables, Part No. 41-3366. The extra wires in the 5-wire cable are for shorting the Voice Coil when tuning Receiver automatically.

Run 4 MODEL 38-22

Cone-centric tuner insulated from chassis, using the following insulators:
Tuner Insulator, Part No. 27-8986 Brace Insulator, Part No. 27-8988 Bushing, Part No. 27-8987.

Remove the blue audio shorting wire from the terminal panel (underside of chassis) and connect to the Cone-centric Dial Mounting Frame.

Run 6 MODEL 38-22

In order to further reduce frequency drift at the high frequency end of the broadcast tuning range, compensator (10B) 1500 K.C., Part No. 31-6196 was replaced with compensator, Part No. 31-6206. In addition to this change a new thermal compensator, Part No. 31-6227 was connected in parallel with compensator (10B) and mounted in back of the 6A8G det. osc. tube socket.

Run 7

Two fixed condensers, Part No. 30-1097, connected in parallel with compensator (10B) in place of the new thermal compensator, Part No. 31-6227, which was used in Run 6 Receivers.

Run 8 MODEL 38-22 Run 4 MODEL 38-23

Replaced ballast resistor (51), Part No. 33-3334 with ballast lamp, Part No. 34-2193, for 110 V., A.C., D.C. operation; and pilot lamp (52), Part No. 34-2184 with Part No. 34-2192 in the 38-22 Receiver. The same ballast resistor change is made in the 38-23, the pilot lamp, however, is changed from Part No. 34-2064 to 34-2068.

The wiring of the socket for the new ballast lamp is as shown in the diagram on Page 4.

The filter choke (46) listed as 32-7744 should be 32-7544.

MODEL 38-33 Code 121 Bulletin 292

Correction:

	Incorrect No.	Correct No.
Schematic No.		
Bezel Throat	27-5248	28-5248

The pilot lamp (37) listed as 34-2150 should be 34-2065.

MODEL 38-35 Code 121 Bulletin 296

Wire dress to prevent hum

Beginning with Run 3 receivers, the red wire which connects the filament of the 6Q7G tube to the on-off switch has been lengthened. The wire now follows the rear, side and front channels of the chassis close to the bass, instead of being connected directly from the switch to the socket contact.

MODEL 38-38 Code 121 Bulletin 290

The cone assembly part number for the HR20 speaker is 36-3797.

Correction:

The schematic diagram, Figure 3 is correct. The sub title, however, shown as 38-10, Code 121, is incorrect and should be changed to 38-38, Code 121.

Run 3

Beginning with Run 3 resistor (21) 8000 ohms, Part No. 33-280339 was removed from the 90 volt tap and reconnected to the 135 volt tap of the battery cable. At the same time, the value was changed from 8000 ohms to 25000 ohms, Part No. 33-325339. The battery cable ass'y was also changed from Part No. 41-3198 to Part No. 41-3394.

Run 4

Resistor (38) 900 ohms, Part No. 33-1223 changed to 2000 ohms, Part No. 33-220339. This change made to decrease current drain on the "BC" battery.

MODEL 38-39 Code 121 Bulletin 287

In order to reduce maximum volume buzz, the following parts were changed:

Schematic No.

	Original No.	New Part No.	
(22) Resistor (11.7 ohms, ½ w.)	33-1264	33-1273	12.3 ohms
(30) Resistor (2 megohms, ½ w.)	33-520339	33-540339	4 megohms, ½ w.
(27) Resistor (160,000 ohms, ½ w.)	33-416339	33-424339	240,000 ohms, ½ w.

In order to increase oscillator strength the S. W. osc. coil was changed:

	Original No.	New Part No.
(7) Transformer (Osc. S. W.)	32-2668	32-2891

Correction:

	Incorrect No.	Correct No.
(6) Tuning Condenser	31-2065	31-2025
(56) Choke	32-2247	32-1374

MODEL 38-40 Code 121 Bulletin 298

Run 3

The following changes were made to improve the action of the oscillator circuit.

	Original Part No.	New Part No.	
(5) Oscillator Transformer (Range 2)	32-2668	32-2897	
(10) Resistor (8000 ohms)	33-280339	33-250339	(5000 ohms)
(14) Electrolytic Condenser (8-8 mfd.)	30-2079	30-2291	(8-8 mfd.)

The Electrolytic Condenser and resistor change is shown on the service bulletin.

Run 4

Beginning with Run 4, Condenser 28 .05 mfd. tubular and Condenser 42 .05 mfd. tubular, Part No. 30-4444 have been replaced with a dual bakelite condenser .05 -05 mfd., Part No. 3615 DG. The new condenser is mounted adjacent to the filter choke 26 . Other parts have been slightly rearranged in this section of the chassis. The circuit, however, remains the same as is shown on the service bulletin.

MODEL 38-116 Code 121 Bulletin 286

Run 2

To prevent audio leakage when volume control is off. Resistor (25) and (116) and Condenser (100) have been slightly rearranged in the I. F. unit (See Fig. 2) - beginning with this Run number. The audio shorting wire (Green wire) of switch (102) is now wired to the movable contact of volume control (101) instead of the high side as shown on the schematic diagram.

Correction

The Dial Part Number listed as 27-5340 should be 27-5207.

Correction

Schematic No.

	Incorrect No.	Correct No.
(1) Ant. Transformer (Range 1)	32-3208	32-2108

To improve the holding characteristics of the magnetic tuning circuit a Condenser, Part No. 30-1097, 5 mmfd., is connected from the grid (marked No. 2 on the Schematic diagram), of the 6J5G discriminator tube, to ground.

25 Cycle Operation

When operating the Receiver on 25 cycle current using Power Transformer 32-7700, Condenser (139), Part No. 30-4465 is replaced with two Condensers, Part No. 30-4227.

Correction - Schematic Diagram

A ground connection should be added to A1 at the point where the No. 2 connection of Ant. Trans. (5) is connected.

The screen grid of the 6L7G tube should be connected to Resistor (63) instead of the point as shown on the diagram.

Remove the connection from Resistor (29) and Condenser (46X) and reconnect between Resistor (28) and Condenser (46X).

Remove the connection from Resistor (29) and Condenser (46X). Then reconnect Condenser (46X) between Resistor (28) and the Range Switch Connection J9.

MODEL 38-116 Code 125 Bulletin 286 A

Run 3

Bass Compensation parts relocated and changed

Resistors (103) and (104) and Condensers (105) and (106) were removed from the audio unit and mounted in the Power Unit in back of the A. F. C. Switch (96). No change in the circuit.

Tubular Condenser (118) and (119), Part No. 30-4518, .05 mfd. changed to bakelite Condensers, Part No. 36158U .05 mfd.

Compensator change to improve padding of antenna short wave section.

	Original Number	New Part Number
(6) Compensator (Ant.)	31-6084	31-6237

Run 4

The parts in the oscillator section slightly rearranged -- no change in circuit.

Lead dress items to improve padding.

The white plate lead of the 6A8G Det. Osc. tube should be dressed away from the oscillator coil (30).

Orange Lead of 1500 K. C. Padder (36) should be separated from 4.5 M.C. Padder (36A).

6A8G Osc. Grid and plate leads should be dressed clear of each other and away from Resistor 19 .

Run 5

Bass Compensator Part relocated to eliminate hum at 50% rotation of the Volume Control.

Resistors (103) and (104) and Condenser (105) and (106) which were removed from audio unit and mounted in power (see Run 3 above) have been relocated in audio unit adjacent to the Volume Control 85 . No change in the circuit.

All leads coming from the tone control must be dressed clear of the A. C. Switch and Wires.

The following schematic numbers in the Change Notice for Runs 3 and 5 should be changed to correspond with the Diagram of Page 3.

Incorrect	Correct
Resistors (103) and (104)	(89), (95)
Condensers (105) and (106)	(91), (92)
Tubular Condensers (118) and (119)	(99), (104)

Run 6

The Primary Winding of Range 4 oscillator transformer, Part No.32-2628 has been redesigned to prevent parasitic oscillations. The revised coil can be identified by a daub of red, yellow and white paint on the coil tube and will be stocked as 32-2628A.

When this transformer is used, a 15,000 ohm resistor, Part No. 33-315339 shunted across Range 4 Primary of Transformer 33 prior to Run 6 is removed. This change is shown in Bulletin 286A.

Run 7

Condenser added and Range Switch changed to improve performance on Ranges 4 and 5.

	Original Part No.	New Part No.
128 Range Switch (R. F. Section)	42-1355	42-1404

The new switch, Part No. 42-1404 has an additional lug which grounds when switch is in Range 5 position. A 250 mmfd. condenser, Part No. 30-1032, is connected from this lug on the switch to compensator (36B). When connected between these two points, the condenser is shunted across the primary of Range 4 Osc. Transformer 33 . When this change was made, Transformer 33 , Part No. 32-2628A was changed to 32-2628B.

The identification color on Oscillator Transformer 33 , Part No. 32-2628B is red, yellow and black. The red, yellow, and black coils must be used when the 250 mmfd. condenser is used.

Run 8

To prevent parasitic oscillations and improve the performance of the oscillator circuit at 18 M.C., a 100 ohm resistor, Part No.33-110339, is connected between the 6A8G oscillator anode and the plate of the 6N7G.

The brown wire, which formerly connected these two socket contacts is removed, the resistor replacing the wire.

MODEL 38-690 Code 125 Supplement to Wiring Diagram

Run 1

To stabilize the oscillator circuit, a resistor, 15,000 ohms, Part No. 33-315339, was shunted across the primary of the Range 4 section of Oscillator Transformer 37 .

Run 2

The primary winding of Range 4, Oscillator Transformer 37, Part No. 32-2628, has been redesigned to prevent parasitic oscillations. The revised coil can be identified by a daub of red, yellow and white paint on the coil tube.

When the new transformer is used the 15,000 ohm Resistor, Part No. 33-315339 shunt across Range 4 primary of Transformer 37 in Run 1 Receiver is removed. This change is shown in the Schematic Diagram.

Run 3

Condenser added and range switch changed to improve the performance of the oscillator circuit on Ranges 4 and 5 as follows:

	Original Part No.	New Part No.
(182) Range Switch (R.F. Section)	42-1355	42-1404

The new switch, Part No. 42-1404 has an additional lug, which grounds when switch is in Range 5 position.

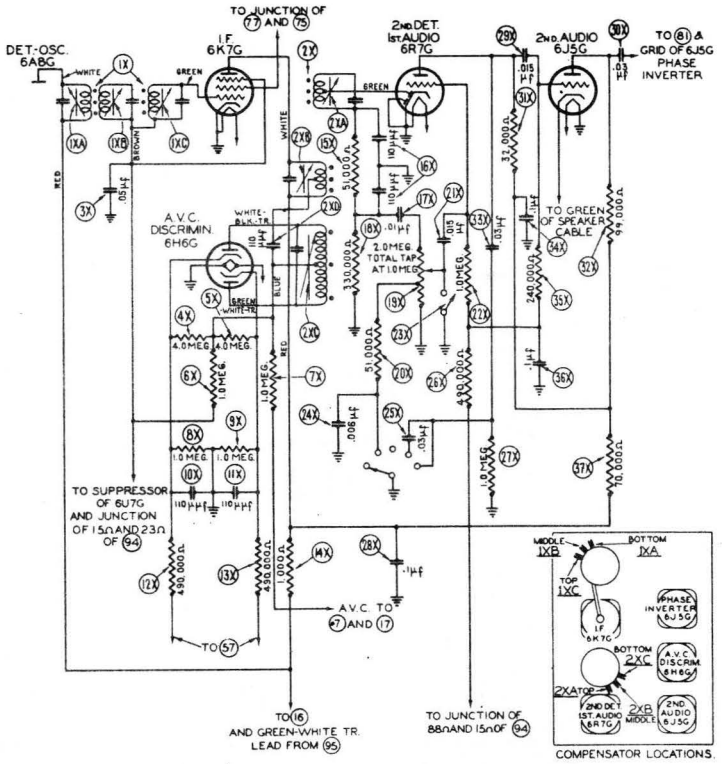
A 250 mmfd. condenser, Part No. 30-1032, is connected from this lug on the switch to Compensator (40B). When connected between these two points, the condenser is shunted across the primary of Range 4 oscillator transformer 37 in Range 5 position.

The identification color on the Oscillator Transformer 37 , Part No. 32-2628, which was changed to red, yellow and white is now changed to red, yellow and black. The red, yellow and black coils must be used when the 250 mmfd. condenser is used.

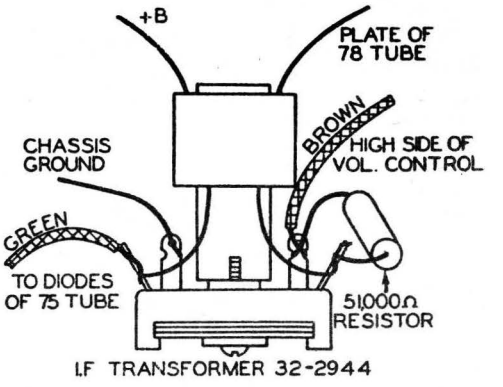
Run 4

To prevent oscillation and to improve the performance of the oscillator circuit at 18 M.C., a 100 ohm resistor, Part No. 33-110339, is connected between the 6A8G oscillator anode and the plate of the 6N7G tube. The brown wire which formerly connected these two socket contacts is removed - the resistor replacing the wire.

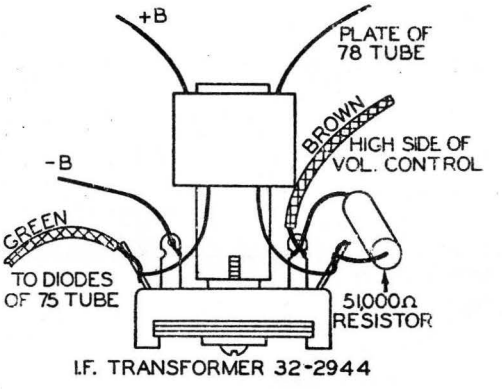
Service Note: To prevent hum, Condenser (123) must be placed as far as is possible away from the A.C. switch of the audio bass control (122).



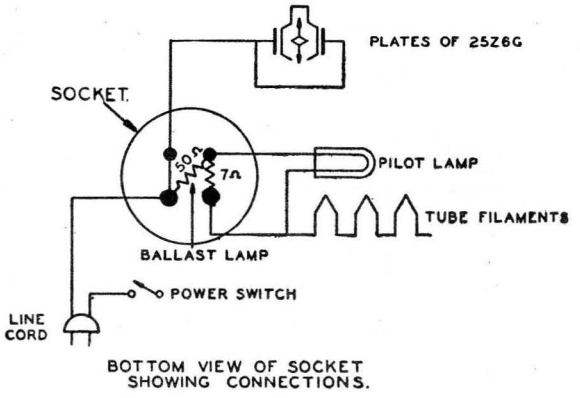
SCHEMATIC DIAGRAM SHOWING RUN No. 2 CHANGES IN MODEL 38-2 CODE 121. CONNECTING POINTS LABELED IN RESPECT TO SCHEMATIC MODEL 38-2 IN BULLETIN No. 294.



MODEL 38-12 - Code 121
Run 3

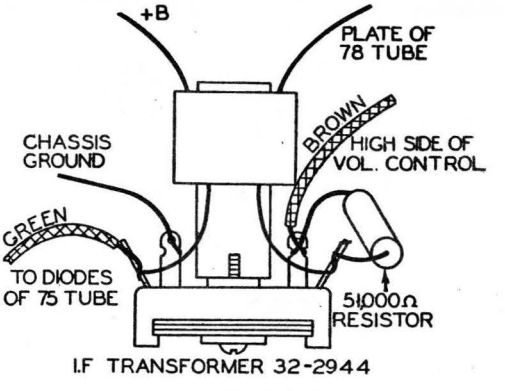


MODEL 38-14 - Code 121, 124
Run 2



BOTTOM VIEW OF SOCKET SHOWING CONNECTIONS.

MODEL 38-22 - Code 121, 124
Run 8
MODEL 38-23 - Code 121
Run 4



MODEL 38-15 - Code 121, 124
Run 5