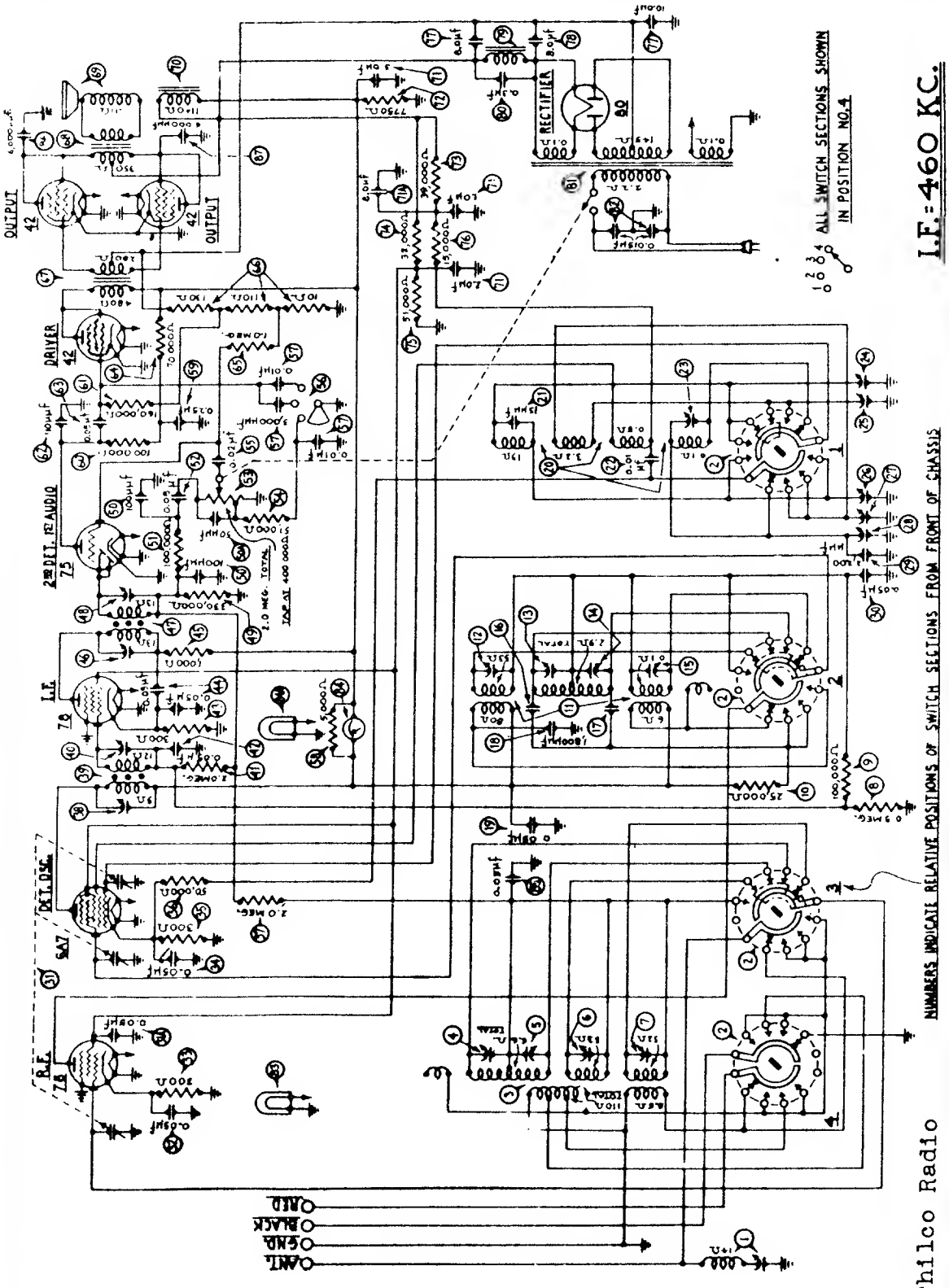
# Philco Radio & Television Corp.

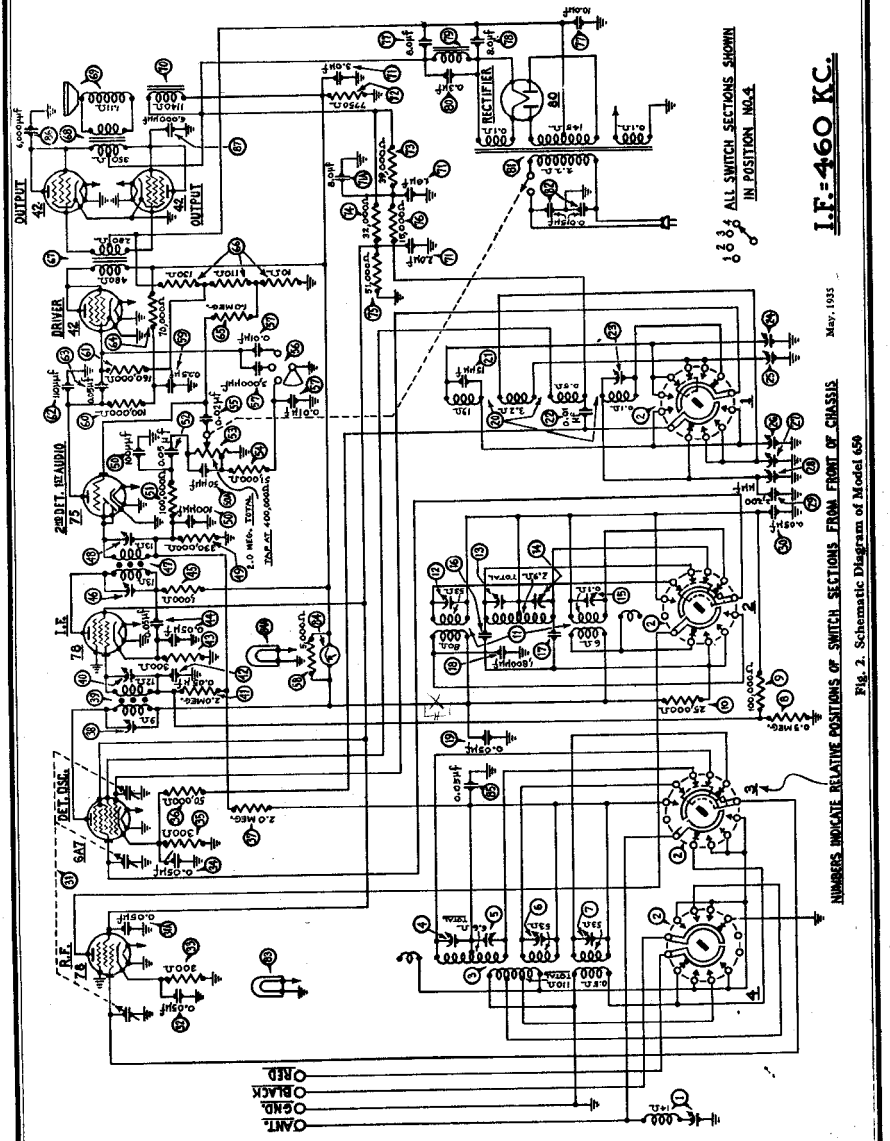
| | | | |
|---|---|---|---|
| | **Model:** 650 | **Chassis:** | **Year:** Pre October 1936 |
| | **Power:** | **Circuit:** | **IF:** |
| | **Tubes:** | | |
| | **Bands:** | | |

| Resources |
|---|
| Beitmans 1926-38 146 |
| Riders 6 (VI) PHILCO 6-37 |
| Riders 6 (VI) PHILCO 6-38 |
| Riders 6 (VI) PHILCO 6-39 |
| Riders 7 (VII) PHILCO 7-149 |
| Riders 7 (VII) PHILCO 7-150 |



PHILCO RADIO & TELEV. CORP.

MODEL 650
Schematic




May, 1935

Fig. 2. Schematic Diagram of Model 650

NUMBERS INDICATE RELATIVE POSITIONS OF SWITCH SECTIONS FROM FRONT OF CHASSIS

MODEL 650
Alignment, Trimmers
Voltage, Data

PHILCO RADIO & TELEV. CORP.

# Adjusting Compensating Condensers

Adjustment of compensating condensers in Model 650 requires an accurate signal generator covering long-wave, standard wave, police, and short-wave frequencies. The PHILCO Model 088 All-Wave Signal Generator, having a continuous range of from 100 to 20000 K.C., is ideal for this purpose.

An output meter is also needed. PHILCO Model 025 Circuit Tester includes a high grade output meter.

Philco No. 3164 fibre wrench and No. 27-7059 fibre-handled screwdriver complete the equipment needed for making these adjustments. The locations of the various compensating condensers is shown in Fig. 2. Connect the output meter to the plate contacts of the 42 output tubes (using the adapters provided with the "025") and set it at the 0-30 volt range.

**I.F.**—Set the Signal Generator at 460 K.C., and attach its antenna lead to the grid cap of the 6A7 tube on the Model 650 (having removed the grid clip from the tube). Connect the ground terminal of the Signal Generator to the ground terminal of the set. Turn on the set, turn the waveband switch to second position (standard) and set dial at 55. Now with the fibre screwdriver, adjust condensers ㊽ and ㊾ (2d I.F.) and then ㊼ and ㊿ (1st I.F.) until maximum reading is obtained in the output meter. Turn down the "attenuator" on the signal generator if the output meter needle goes off the scale.

## Tube Socket Voltages (Line Voltage 115)
Measured to Ground

| Tube | 78 R.F. | 6A7 Det. Osc. | 78 I.F. | 75 2d Det. | 42 Driver | 42 Output |
|---|---|---|---|---|---|---|
| Point | | | | | | |
| P | 55 | 200 | 200 | 115 | 200 | 300 |
| SG | 90 | 90 | 90 | ... | 200 | 300 |
| K | 2.2 | 2.3 | 2.6 | ... | ... | ... |
| | 6A7: $G_{3\&5}$ = 155 | | | | | |

Above voltages were obtained by using a PHILCO type 025 Circuit Tester (or 048A All-purpose Tester), using test prods applied to underside of chassis. Volume control at minimum; dial at 55; waveband switch counter-clockwise (band 1). Use Fig. 1 for test points. Type K-17 speaker employed.

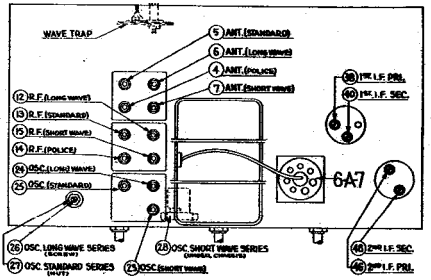



Fig. 2. Locations of Compensating Condensers

**WAVE TRAP**—Connect the Signal Generator antenna and ground leads to the antenna and ground posts of the set. Replace the grid clip on the 6A7 tube cap. With the signal generator operating at 460 K.C. and the set controls adjusted as for I.F., adjust wavetrap ① until the minimum reading is obtained in the out-put meter.

**SHORTWAVE**—Turn waveband switch to position 4 (extreme right). Set signal generator at 18 megacycles and dial of set at 18.0 (top scale). Now adjust the oscillator, R.F., and Antenna compensators in turn, for maximum reading. These are ㉙, ⑮ and ⑦ respectively.

Turn the dial to 6.0 M.C., set the signal generator at 6.0 M.C., and adjust condenser ㉘ for maximum reading. This compensator is located underneath the chassis and reached from underneath. (See Fig. 3).

**STANDARD WAVE**—Turn waveband switch to position 2 (standard broadcast), set signal generator at 1500 and dial of set at 150. Now adjust the oscillator, R.F., and antenna "Standard" condensers. These are ㉕, ⑬ and ⑤ respectively.

Now turn the dial to 60, set signal generator at 600 and adjust condenser ㉗ (oscillator standard-series) (nut) for maximum reading.

**POLICE BAND**—Turn waveband switch to position 3 from left (police band); set dial at 2.4 and signal generator at 2400 K.C. Adjust condensers ④ and ⑭ for maxmium reading. (Antenna and R.F. Police.)

**LONG WAVE (Weather) BAND**—Turn waveband switch to position 1 (left) (Longwave). Set dial at 35 and signal generator at 350 K.C. Adjust condensers ㉔, ⑫ and ④ (oscillator, R.F., and Antenna Longwave) for maximum reading.

Turn dial to 17, signal generator to 170 and adjust condenser ㉖ (longwave series) (screw) for maximum reading.

**Type Circuit:** Superheterodyne, with preselector R.F. amplifier, and push-pull pentode output (10 watts); built in connections for Philco All-wave aerial; aerial selector built into and operated by wave-band switch.

**Power Supply:** Alternating Current. Voltage and frequency as specified on chassis nameplate.

**Tubes Used:** 1 type 78, R.F.; 1 type 6A7, Detector-Oscillator; 1 type 78, I.F.; 1 type 75, 2d Detector and 1st A.F.; 1 type 42 Driver; 2 type 42 Push-Pull Output; 1 type 80 Rectifier.

**Wave Bands:** Four: (1) Long-wave (U.S. Weather Forecasts); (2) Standard (with some Police); (3) Police; (4) Short-wave.

**Coverage of Each Band:** Band 1, 145 to 390 K.C.; Band 2, 540-1720 K.C.; Band 3, 2.2 to 2.6 M.C.; Band 4, 5800-18000 K.C. (5.8 to 18.0 megacycles).

**Tuning Drive:** Dual planetary, ball bearing. 80 to 1 ratio for slow-speed tuning.

**Tone Control:** 4-position, with bass compensation effective in first position (counter-clockwise).

**Intermediate Frequency:** 460 K.C.

**Power Consumption:** 98 watts.

**Speaker:** 650B (Code 121); K-17, 650X, 650MX, 650-H, (Code 122); H-13.

PHILCO RADIO & TELEV. CORP.

MODEL 650
Chassis, Socket
Parts, Data

# Replacement Parts—Model 650

| | Description | Part No. | List Price |
|---|---|---|---|
| (1) | Wave Trap | 38-6850 | $1.10 |
| (2) | Waveband Switch | 42-1114 | 2.50 |
| (3) | Antenna Transformer | 32-1708 | 4.00 |
| (4) | Compensating Condenser (Ant.) (Police) | Part of (5) | .... |
| (5) | Compensating Condenser (Ant.) (Standard) | Part of (6) | .... |
| (6) | Compensating Condenser (Ant.) (Longwave) | Part of (7) | .... |
| (7) | Compensating Condenser (Ant.) (Shortwave) | Part of (7) | .... |
| (8) | Resistor (.5 meg.) (Yellow-White-Yellow) | *5097 | .20 |
| (9) | Resistor (100000 ohms) (White-White-Yellow) | 6099 | .20 |
| (10) | Resistor (25000 ohms) (Red-Green-Yellow) | 3656 | .20 |
| (11) | R.F. Transformer | 32-1709 | 3.75 |
| (12) | Compensating Condenser (R.F. Longwave) | Part of (11) | .... |
| (13) | Compensating Condenser (R.F. Broadcast) | Part of (11) | .... |
| (14) | Compensating Condenser (R.F. Police) | Part of (11) | .... |
| (15) | Compensating Condenser (R.F. Shortwave) | Part of (11) | .... |
| (16) | Condenser | Part of (11) | .... |
| (17) | Condenser | Part of (11) | .... |
| (18) | Condenser (.0018 Mfd. Mica) | 6018 | .40 |
| (19) | Condenser (.05 Mfd. Bakelite Block) | 3615-SG | .35 |
| (20) | Oscillator Transformer | 32-1710 | 3.00 |
| (21) | Condenser (.000015 Mfd. Mica) | 30-1030 | .35 |
| (22) | Condenser (.01 Mfd. Tubular) | *30-4145 | .25 |
| (23) | Compensating Condenser (Osc. S.W.) | Part of (22) | .... |
| (24) | Compensating Condenser (Osc. Longwave) | Part of (22) | .... |
| (25) | Compensating Condenser (Osc. B.C. & Police) | Part of (22) | .... |
| (26) | Compensating Condenser (Osc. L.W. Series) | Part of 31-6044 | .50 |
| (27) | Compensating Condenser (Osc. B.C. Series) | Part of 31-6044 | |
| (28) | Compensating Condenser (Osc. S.W. Series) | 04000-R | .45 |
| (29) | Condenser (.0022 Mfd. Mica) | 30-1057 | .40 |
| (30) | Condenser (.05 Mfd. Tubular) | 30-4020 | .35 |
| (31) | Tuning Condenser Assembly | 31-1555 | 4.50 |
| (31a) | Condenser (.05 Mfd. Bakelite Block) | 3615-SG | .35 |
| (32) | Condenser (.05 Mfd. Tubular) | 30-4020 | .35 |
| (33) | Resistor (300 ohms) (Orange-Black-Black) | 33-3010 | .20 |
| (34) | Condenser (.05 Mfd. Tubular) (On top of chassis) | 30-4327 | .20 |
| (35) | Resistor (300 ohms Flexible) (Orange-Black-Black) | 33-3010 | .20 |
| (36) | Resistor (50000 ohms) (Green-Brown-Orange) | 6098 | .20 |
| (37) | Resistor (2 Megs.) (Red-Black-Green) | 33-1025 | .20 |
| (38) | Compensating Condenser (1st I.F. Primary) | Part of (39) | .... |
| (39) | 1st I.F. Transformer | 32-1711 | 2.00 |
| (40) | Compensating Condenser (1st I.F. Secondary) | Part of (39) | .... |
| (41) | Resistor (2 Megs.) (Red-Black-Green) | 33-1025 | $0.20 |
| (42) | Condenser (.05 Mfd. Tubular) | 30-4020 | .35 |
| (43) | Resistor (300 ohms Flexible) (Orange-Black-Black) | 33-3010 | .20 |
| (44) | Condenser (.05 Mfd. Twin Bakelite Block) | 3615-DU | .40 |
| (45) | Resistor (1000 ohms) (Brown-Black-Red) | 5837 | .20 |
| (46) | Compensating Condenser (2d I.F. Primary) | Part of (47) | .... |
| (47) | 2d I.F. Transformer | 32-1712 | 2.00 |
| (47a) | Compensating Condenser (2d I.F. Secondary) | Part of (47) | .... |
| (48) | Resistor (330000 ohms) (Orange-Orange-Yellow) | 33-1200 | .20 |
| (49) | Condenser (.00011 Mfd. Twin Bakelite Block) | 3035-DG | .25 |
| (49a) | Condenser (.00005 Mfd. Mica) (Not shown Fig. 3) | 30-1029 | .35 |
| (50) | Resistor (100000 ohms) (White-White-Orange) | 6099 | .20 |
| (51) | Condenser (.05 Mfd. Tubular) | 30-4020 | .35 |
| (52) | Volume Control and On-Off Switch | 33-5108 | 1.45 |
| (53) | Resistor (51000 ohms) (Green-Brown-Orange) | 6098 | .20 |
| (54) | Condenser (.02 Mfd. Tubular) | 30-4113 | .30 |
| (55) | Tone Control | 30-4343 | .75 |
| (56) | Condensers in Tone Control | Part of (55) | .... |
| (57) | Resistor (5000 ohms) (Green-Black-Red) | 5310 | .20 |
| (58) | Condenser (.25 Mfd. Tubular) | 30-4134 | .40 |
| (59) | Resistor (100000 ohms) (White-White-Orange) | 6099 | .20 |
| (60) | Resistor (100000 ohms) (Brown-Blue-Yellow) | 33-1191 | .20 |
| (61) | Condenser (.00011 Mfd. Mica) | 30-1031 | .35 |
| (62) | Condenser (.05 Mfd. Bakelite Block) | 3615-SU | .35 |
| (63) | Resistor (70000 ohms) (Violet-Black-Orange) | 5385 | .20 |
| (64) | Resistor (1 Meg.) (Brown-Black-Green) | 33-1096 | .20 |
| (65) | B.C. Resistor (Wirewound) (10 ohms, 110 ohms, 130 ohms) | 33-3137 | .30 |
| (66) | Input Transformer | 32-7114 | 2.00 |
| (67) | Output Transformer | 32-7078 | 1.40 |
| (68) | Cone and Voice Coil Assembly (H-13) | 02625 | 1.20 |
| | Cone and Voice Coil Assembly (K-17) | 02996 | .90 |
| (69) | Field Coil and Pot Assembly (H-13 or K-17) | 36-3104 | 2.70 |
| (70) | Condenser (Electrolytic—3 Mfd., 1 Mfd., 2 Mfd.) | 30-2122 | 1.85 |
| (71) | Resistor (Wirewound) (7750 ohms) | 33-3211 | 1.60 |
| (72) | Resistor (39000 ohms) (Orange-White-Orange) | 33-1027 | .20 |
| (73) | Resistor (32000 ohms) (Orange-Red-Orange) | 33-1026 | .35 |
| (74) | Resistor (51000 ohms) (Green-Brown-Orange) | 4237 | .20 |
| (75) | Resistor (15000 ohms) (Brown-Green-Orange) | 6208 | .20 |
| (76) | Condenser (Electrolytic—8 Mfd., 10 Mfd.) | 30-3045 | 1.80 |
| (77) | Condenser (Electrolytic—8 Mfd.) | †30-2025 | 1.10 |
| (78) | Filter Choke | 32-7115 | 1.80 |
| (79) | Condenser (.3 Mfd. Bakelite Block) | *6287-DU | .40 |
| (80) | Power Transformer: 110 Volts 60 Cycles | 32-7402 | 4.50 |
| | 110 Volts 25 Cycles | 32-7403 | 9.00 |
| | 230 Volts 50 Cycles | 32-7404 | 7.50 |
| (81) | Condenser (.015 Mfd. Twin Bakelite Block) | 3793-DG | .40 |
| (82) | Pilot Lamp (Dial) | 34-2064 | .09 |
| (83) | Shadow Tuning Meter | **45-2086 | 2.00 |
| (83a) | Pilot Lamp (Shadowmeter) | Part of (83) | .... |
| (84) | Condenser (.05 Mfd. Tubular) | 30-4020 | .35 |
| (85) | Condenser (.006 Mfd. Tubular) | 30-4125 | .25 |
| (86) | Condenser (.006 Mfd. Tubular) | 30-4125 | .25 |

▲ Omitted after Run 5.
*In Model 650A (115 Volts 25 Cycles) this is part No. 04357, List .75.
†In Code 122 (650X, 650MX, 650H) this is part No. 30-2014, List 1.50.
**In Code 122 (650X, 650MX, 650H) this is part No. 45-2082.
* After Run 2, this is 30-1032 mica, List .35.

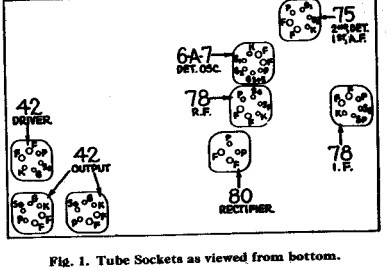



Fig. 1. Tube Sockets as viewed from bottom.

## Power Transformer Data

| Terminals | A.C. Volts | Current | Circuit | Color |
|---|---|---|---|---|
| 1–2 | 120 | ..... | Primary | White |
| 3–5 | 760 | 140 M.A. | Secondary | Yellow |
| 6–7 | 5.0 | 2.0 A. | Fil. Rect. | Blue |
| 8–9 | 6.3 | 3.75 A. | Filaments | Black |
| 4 | ... | ..... | Center Tap of 3–5 | Yellow, Green Tracer |

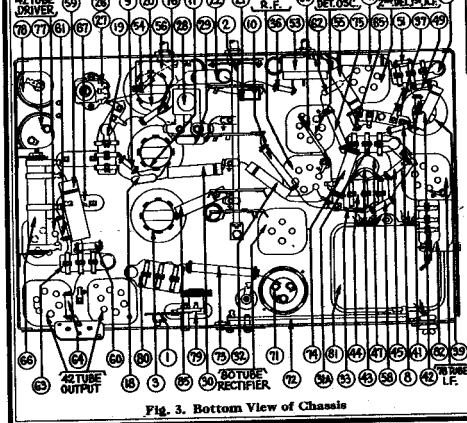



Fig. 3. Bottom View of Chassis

# PHILCO RADIO & TELEV. CORP

MODELS 623, 623B, 623F
630, 630(121)
640(121) 640B
641, 642, 643, 650

Changes

## MODEL 623 (Continued)

| Approximate Date of Change | Run No. | CHANGES |
|---|---|---|
| .. | 9 | **S. W. SECTION OF OSC. TRANSFORMER**<br>Condenser ㉜ and Resistor ㉞ were removed and the wires connected to the ends of these parts were connected together. The wires between the police tap at the left of Switch Section No. 2 and the joint in the wire just above that was broken and Condenser No. 30-1049 inserted.<br>The connection between the bottom (S. W.) primary and secondary of the Oscillator Transformer was broken and condensers ⑭ and ⑮ connected between the bottom of the secondary and ground. Resistor ⑰ removed. The lead connected to the top of the primary disconnected and brought down to the bottom of the secondary. Resistor ⑤ also removed.<br>A lead from the bottom of the primary was connected to the lead running from Condenser ⑤ to Resistor ⑱. The oscillator plate wire was disconnected from this lead and brought down to the top of the primary.<br>**BROADCAST AND POLICE SECTION OF OSC. TRANSFORMER**<br>Resistor ⑰ was disconnected from the bottom of the upper section of the Osc. Transformer and connected to the switch side of the Condenser ⑤. |

## MODEL 623-B and 623-F

| | | |
|---|---|---|
| 9-1-35 | .. | Remove bezel glass gasket, Part No. 27-7981, and replace with Part No. 27-8036. |

## Model 630 (Code 121)

| | | |
|---|---|---|
| 10-1-35 | 4 | |

| | Old Part | New Part |
|---|---|---|
| Resistor ㉜ | 33-1040 (½ watt) 4,000 ohms | 33-1031 (¾ watt) 6649 (1 watt) |
| Resistor ㉞ | 6650 (½ watt) 20,000 ohms | |

| | | |
|---|---|---|
| 11-1-35 | 7 | Remove Shadowmeter Shunt Resistor ㊱, Part No. 33-1040 (4,000 ohms). |

| Part | Schematic No. | Old Part | New Part |
|---|---|---|---|
| Shadowmeter | ㊱ | 45-2086 | 45-2083 |

## MODEL 630

| Schematic No. | Old Part No. | New Part No. |
|---|---|---|
| Ant. Transformer ② | 32-1699 | 32-1867 |
| Det. Transformer ⑦ | 32-1636 | 32-1868 |
| Osc. Transformer ⑪ | 32-1637 | 32-1869 |

## MODEL 640 (Code 121)

| | | |
|---|---|---|
| 8-1-35 | 6 | Replace Resistor ⑤, Part No. 6650 (20,000 ohms) with Part No. 33-1177. |
| | | Replace speaker plug socket, No. 27-6033 with No. 27-6043. |
| | 4 | Replace 1st I. F. Transformer, Part No. 32-1835 with No. 32-1917 to prevent microphonics.<br>Remove rubber bumper, No. 27-4150 to prevent microphonics.<br>Remove Bezel Light Guard No. 27-8001. Part ㊴ on base view in bulletin should be 2nd I. F. Part ㉑, 1st I. F.<br>Replace Bezel Glass Gasket No. 27-7981 with No. 27-8036.<br>Add No. 27-7972 Bezel Frame Gasket. |

| | | |
|---|---|---|
| 11-1-35 | 9 | |

| Part | Schematic No. | Old Part | New Part |
|---|---|---|---|
| Tuning Condenser | ㉛ | 31-1556 | 31-1671 |
| Run No. 10 | | | |
| Shadow Meter | ㊱ | 45-2086 | 45-2083 |
| Resistor | ㉞ | 33-1040 | Removed |

## MODEL 640-B

| Approximate Date of Change | Run No. | CHANGES |
|---|---|---|
| 9-1-35 | .. | Uses K31 instead of K21 Speaker. |

## MODEL 641

| | | |
|---|---|---|
| 9-1-35 | .. | Connect an 8,000 ohm resistor, Part No. 33-1114, across shadow meter. |
| | | **Corrections in Replacement Parts List** |
| 10-1-35 | .. | Part ㉑ .015 mf. Condenser is part of (64-A).<br>Part ㉚ should be .03 mf. and the correct Part Number is 30-4025.<br>Part ㊸ should be 3615-DG.<br>Referring to bottom view of chassis, condenser marked ㊽ should be ㊾ and condenser ㊾ changed to ㊽.<br>Capacity of sections in ㊸ is (.05 — .2 — .75 — .09 — .25).<br>Part Number of B-C Resistor is 33-8214.<br>List Price 25c.<br>Price of No. 27-4225 Waveband Knob, List 10c. |

| | | |
|---|---|---|
| 11-1-35 | .. | |

| Part | Old Part | New Part |
|---|---|---|
| Bezel Assembly | 40-5722 | 40-5724 |

| | | |
|---|---|---|
| 12-1-35 | 2 | A .00011 Mf. Condenser, Part No. 30-1031 is connected from the plate of the 85 Detector Tube to the Cathode Circuit. |

## MODEL 642

| | | Old Part | New Part |
|---|---|---|---|
| 9-1-35 | Tone Control ㊷ | 30-4316 | 30-4382 |

| | | |
|---|---|---|
| 12-1-35 | 2 | The Dial and Mask Assembly were changed to the Glowing Arrow Wave Band Indicator Type. |

| Part | Schematic No. | Old Part No. | New Part No. |
|---|---|---|---|
| Tuning Condenser | ㉛ | 31-1526 | 31-1741 |
| Hub and Set Screw Assembly | | 31-1550 | 31-1724 |
| Mask Assembly | | | 27-5137 |
| Glowing Arrow Screen | | | 27-5166 |
| Screen Bracket | | | 31-1760 |
| Glowing Arrow Mask | | | 27-5167 |
| Mask Arm | | | 29-3274 |
| Link | | | 29-3285 |
| Coupling | | | 29-3586 |
| Pilot Lamp Assembly | | 38-7032 | |
| Wave Switch | ㉑ | 42-1107 | 42-1152 |

## MODEL 643

| | | |
|---|---|---|
| 9-1-35 | .. | Filament current reads (point) .750MA., it should read 750MA. |
| | | Part No. 33-5119 ㊽ in Model 643, Bulletin No. 226, listed at $1.10 changed to $1.45. |
| 12-1-35 | .. | Change Chassis Mounting Washer (rubber) listed as 27-4021 to 27-4201. |
| | | Pilot Lamp ㊽, Part No. 5316, should be Part No. 34-2065. |
| 11-1-35 | 8 | |

| Part | Schematic No. | Old Part | New Part |
|---|---|---|---|
| Condenser | ㉑ | 6359 (.006 mf.) | 30-1031 (.00011 mf.) |

## MODEL 650

| | |
|---|---|
| 11-1-35 | 13 |

| Part | Schematic No. | Old Part | New Part |
|---|---|---|---|
| Tuning Condenser | ㉛ | 31-1556 | 31-1671 |
| Code 121, Run No. 15.<br>Code 122, Run No. 13. | | | |
| Shadow Meter | ㊱ | 45-2086 & 45-2082 | 45-2083 |
| Resistor | ㉞ | 6096 | Removed |

MODELS 650,660,680(122)
Parts Catalog PHILCO RADIO & TELEV. CORP.
Changes

## MODEL 650

| Approximate Date of Change | Run No. | CHANGES |
|---|---|---|
| 8-1-35 | 9 | Add Part No. 27-8001 Bezel Light Guard. Part ⑱ on base view in bulletin should be 2nd I. F., Part ㉕, 1st I. F.<br>PRICE CORRECTION—<br>Part No. 33-3211 ⑲ resistor; correct list price is $.65 instead of $1.60.<br>Part No. 30-4185 tubular condenser (used in several models) price changed from $0.40 to $0.25 list. Effective July 15, 1935. |

| Part | Remove | Schematic No. | Install |
|---|---|---|---|
| 1st I. F. Transformer | 32-1835 | ㉕ | 32-1917 |
| Condenser | 3615-DG | | 3615-DU |
| Rubber Bumper | 27-4150 | | |
| Bezel Glass Gasket | 27-7981 | | 27-8036 |
| Bezel Frame Gasket | | | 27-7972 |
| Conversion Code 121 to 123 (RX) — | | | |
| Electrolytic Condenser | 30-3025 | ⑤ | 7464 |
| Dial Assembly | 31-1533 | | 31-1651 |
| Line Cord | L-943A | | |
| Antenna Power Cord | | | 41-3104 |
| Shadow Meter | 45-2086 | ㉑ | 45-2083 |
| Tone Control | 30-4343 | ㉓ | 30-4378 |
| By-Pass Condenser | 3615-SU | ㉘ | 3615-OSU |
| By-Pass Condenser | 6287-DU | ㉚ | 6287-ODU |
| By-Pass Condenser | 3615-SG | ㉙ | 3615-OSG |
| By-Pass Condenser | 3793-DG | ㉜ | 3793-ODU |
| By-Pass Condenser | 3615-DU | ㉛ | 3615-ODU |
| By-Pass Condenser | 8035-DG | ㉝ | 8035-ODG |

| | | |
|---|---|---|
| 9-1-35 | 12 | Replace Part No. 30-4351 ㉓ Tone Control with Part No. 30-4379 . 110 mmfd. condenser, Part No. 30-1081 ㉔ removed. |

Code 123, Run No. 8. Code 151, Run No. 11.
Code 121, Run No. 12. Code 122, Run No. 9.

| Part | Old Part | | New Part |
|---|---|---|---|
| Resistor ⑰ | 5385 | (70,000 ohms) | 33-1115 |
| Resistor ⑱ | 6208 | (15,000 ohms) | 33-1177 |
| Resistor ⑲ | 5310 | ( 5,000 ohms) | 6096 |
| Resistor ⑳ | 5837 | ( 1,000 ohms) | 33-1028 |
| | Wiring Panel | | 38-6151 |

These changes made to reduce hum.

## MODEL 660

| | | |
|---|---|---|
| 9-1-35 | 8 | Remove rubber bumper, Part No. 31-1706, (to prevent microphonics).<br>B. C. Resistors ⑭, Part No. 33-2020, in Bulletin No. 222, should be 33-3020.<br>Compensating Condenser No. ⑨ in Fig. 2 is labelled "standard." it should be "police"; also Condenser No. ⑰ is labelled "police" and shoud be "standard." |

| Part | Old Part | New Part |
|---|---|---|
| Tone Control (Code 121) | 30-4343 | 30-4378 |
| 2nd I. F. Transformer ㉕ | 32-1734 | 32-1865 |
| Tone Control (Code 122) | 30-4351 | 30-4379 |

| | | |
|---|---|---|
| 11-1-35 | .. | Shadow meter shunt resistor (2000 ohms) Part ㉑, Part No. 6984, removed. Reverse Numbers ㉒ and ㉓ shown in Fig. 2. |

| Part | Schematic No. | | Old Part | New Part |
|---|---|---|---|---|
| Condenser | 5 | ⑰ | 30-4123 (.05 mf.) | 30-4170 (.1 mf.) |
| Tuning Condenser | 3 | ㉒ | 31-1706 | 31-1683 |
| Dial Hub Assembly | | | 31-1575 | 31-1724 |

| | | |
|---|---|---|
| 12-1-35 | .. | September Change Notices indicated a change of the 2nd I. F. Transformer ㉕. The Part Number of the new Transformer is 32-1865 and the corresponding Compensating Condenser Number is 31-6067. |

## MODEL 680 (Code 122)

| Approximate Date of Change | Run No. | CHANGES |
|---|---|---|
| 11-1-35 | 4 | 240,000 ohm resistor, Part No. 33-1097, added, connected from wiper arm (center terminal) to bottom terminal of bass control.<br>The correct Part Number (163) on Parts List is 30-4113.<br>Part No. of Large (H Type) Acoustic Clarifier is 36-1158. |
| 12-1-35 | 5 | Shadow Meter (120), Part No. 45-2088 is replaced with No. 45-2083. Shunt Resistor (121), Part No. 7352 (6,000 ohms) removed. |
| | 6 | Sensitivity Control (85), Part No. 33-5124 is replaced with Part No. 33-5144. The correct number and price for Input Transformer (157) is 32-7447 at $3.00. |

## U-7 SPEAKER

| | | |
|---|---|---|
| 9-1-35 | .. | The correct cone assembly number for the type U-7 speaker is 36-3381. |

## CORRECTIONS IN 1936 PHILCO PARTS CATALOG

Tubular Paper Condenser 30-4346 should be 30-4336, working voltage, 1000.

Tubular Condenser Kit (page 13), Part No. 45-1100 should be 45-1139.

Tuning Condenser 31-1039 should be 31-1106. list $5.30.

Tuning Condenser 31-1006 should be 31-1005. list $4.00.

Potentiometer, Part No. 33-5511 should be 33-5111.

I. F. Amplifier Kit, Part No. 38-6685 should be 38-7453, list $6.15.

I. F. Amplifier Kit complete should be Part No. 40-5814, list $8.81.

Headphones only should be Part No. 45-2098 instead of 8303.

Filter Choke (in short-wave section) should be Part No. 5643 instead of 5463.

Power Amplifier Output Transformer 32-7055 should be 32-7255, list $15.00 instead of $4.50.

Heavy Duty Resistor, Part No. 33-3134 should be 33-3176.

Heavy Duty Resistor, Part No. 33-3135 should be 33-3175.

Knobs, Part No. 24-4051 should be 27-4051.

Cones, replacement for K-13 and K-17 speakers should be 36-3159, list $0.80 instead of 02996 (list $0.90).

Field Coil, S-15 Speaker should be 36-3519 instead of 36-3579.

## PRICE CORRECTIONS IN 1936 CATALOG

| | | Price Listed | Correct Price |
|---|---|---|---|
| 30-2073 | Elec. Cond. | $5.75 | $3.15 |
| 30-2077 | Elec. Cond. | 3.15 | 5.75 |
| 4234 | Power Trans. | 7.50 | 7.00 |
| 3868 | Power Trans. | 7.50 | 9.00 |
| 32-7067 | Amp. Power Trans. | 30.00 | 34.00 |
| 32-7032 | Amp. Power Trans. | 36.00 | 35.00 |
| 38-6057 | Vibrator | 6.00 | 5.00 |
| L-1640 | Wire (per 100 feet) | 2.50 | 2.00 |
| 907-000 | Wire (per 100 feet) | 1.50 | 1.85 |