

SPECIFICATIONS

TYPE OF CIRCUIT: A. C. operated; superheterodyne circuit with two tuning ranges, covering standard broadcast (540 KC. to 1720 KC.) and short-wave (5.8 MC. to 18.0 MC.) frequencies; Electric Push-Button Tuning; Automatic Volume Control; and Push-Pull pentode output.

The receiver is designed to operate from a "Philco Safety Aerial," part No. 40-6371. This aerial system should be used to obtain maximum performance from the receiver.

POWER SUPPLY: Voltage, 115 volts. Frequency, 50-60 cycles. Power consumption, 80 watts.

INTERMEDIATE FREQUENCY: 470 KC.

TUNING RANGES: 540 KC. to 1720 KC.; 5.8 MC. to 18.0 MC.

PHILCO TUBES USED: 1-78, R. F.; 1-6A7, 1st detector and oscillator; 1-78, I. F.; 1-6Q7G, 2nd detector, 1st audio Automatic Volume Control; 1-6J5G, phase inverter; 2-42, push-pull output; and 1-5Y4G, rectifier.

TUNING MECHANISM: Pulley and cable drive for Manual tuning. Electric Push-Button for Automatic tuning.

CABINETS: Type "XX."

Instructions for setting up and operating the electric push-button tuning will be found on page 3

Alignment of Compensators

EQUIPMENT REQUIRED:

(1) Signal Generator, Philco Model 077 Signal Generator which has a fundamental frequency range from 115 to 36,000 KC. is the correct instrument for this purpose.

(2) Output meter, Philco Model 027 Circuit Tester, incorporates a sensitive output meter and is recommended.

(3) Philco Fiber Handle Screw Driver, part No. 27-7059 and Fiber Wrench, part No. 3164.

OUTPUT METER: The Philco 027 Output Meter is connected to the plate terminals of the type 42 tubes and adjusted for the 0 to 30 scale. After connecting the output meter, adjust the compensators in the order as shown in the tabulation below. Locations of the compensators are shown on page 3. If the output meter pointer goes off scale when adjusting the compensators, reduce the strength of the signal from the generator.

| Operations | SIGNAL GENERATOR | | | RECEIVER | | | Special Instructions |
|------------|--------------------------------|------------------------|--------------|--------------|----------------------------------|-------------------------------------|-----------------------|
| | Output Connections to Receiver | Dummy Antenna (Note A) | Dial Setting | Dial Setting | Control Setting | Adjust Compensators to Max. Reading | |
| 1 | 6A7 | .1 mf | 470 KC. | 580 KC. | Vol. Max. Range Switch Broadcast | 26B, 26A, 23B, 23A | |
| 2 | Ant. Ter. | 150 mmf | 1550 KC. | 1550 KC. | " | 15, 7B, 7A | See Note B and C |
| 3 | Ant. Ter. | 150 mmf | 580 KC. | 580 KC. | " | 17 | Roll Tuning Condenser |
| 4 | Ant. Ter. | 150 mmf | 1550 KC. | 1550 KC. | " | 15 | |
| 5 | Ant. Ter. | 400 ohms | 18.0 MC. | 18.0 MC. | Range Switch S. W. | 15A, 12, 5 | |

NOTE A—The "Dummy Antenna" consists of a condenser connected in series with the signal generator output lead (high side). Use the capacity as specified in each step of the above procedure.

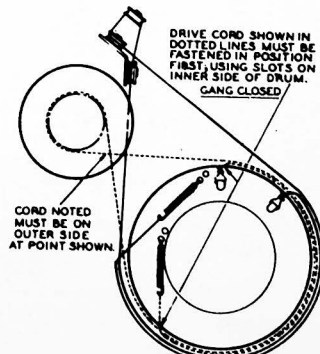
NOTE B—Dial Calibration. In order to adjust the receiver correctly, the dial must be aligned to track properly with the tuning condenser. To adjust

the dial, proceed as follows: With the tuning condenser closed (maximum capacity), set the dial pointer on the extreme left index line at the low frequency end of the broadcast scale. The arrangement of the drive cable is shown on page 3.

NOTE C—Compensators (7A) and (7B) are located on top of the tuning condenser. Compensator (7A) is the first one from the tuning drum side.

MODEL 39-40 CODE 121 PRODUCTION CHANGES

In some early receivers, electrolytic condenser (63) was a 25 mfd. condenser part no. 30-2219 instead of the 18 mfd. part no. 30-2335 as shown in the parts list above. When replacing the condenser 30-2335 can be used.



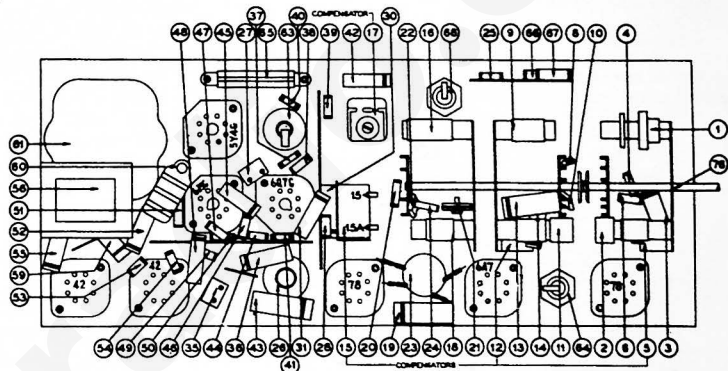
CORRECT METHOD OF INSTALLING DRIVE CORDS ON TUNING CONDENSER DRUM

Replacement Parts Model 39-40, Code 121

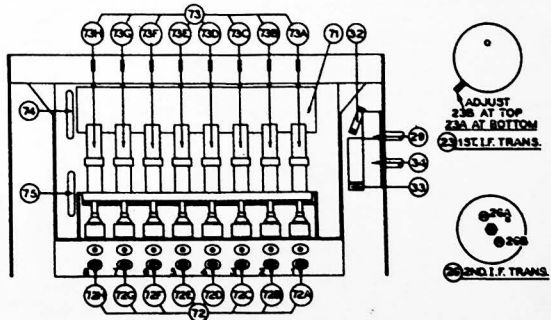
| Schem. No. | Description | Part No. | Schem. No. | Description | Part No. | Schem. No. | Description | Part No. |
|------------|---|-----------|------------|---|----------|------------|----------------------------|----------|
| 1 | Antenna Transformer (Range 1, Brdct.) | 32-3056 | | Cable (Power) | L-2778 | | Socket (6-prong), 78-tube | 27-6036 |
| 2 | Antenna Transformer (Range 2) | 32-3055 | | Cable (Speaker) | 41-3430 | | Socket (6-prong), Octal | 27-6086 |
| 3 | Condenser (.05 mf tubular) | 30-4519 | | Coupling (Tuning Condenser) | 31-2291 | | Socket (7-prong), 6A7-tube | 27-6053 |
| 4 | Resistor (51,000 ohms, 1/2 watt) | 33-351339 | | Dial (Scale) | 27-5421 | | Socket (7-prong), 6A7-tube | 27-6107 |
| 5 | Compensator (Range 2, S. W.) | 31-6212 | | Dial Clamp | 56-1034 | | Speaker | 36-1450 |
| 6 | Resistor (2.0 megohms, 1/2 watt) | 33-520339 | | Dial Gasket | 27-9224 | | Tab Kit | 40-6392 |
| 7 | Tuning Condenser | 31-2296 | | Dial Gasket | 27-9225 | | | |
| 8 | Resistor (10,000 ohms, 1/2 watt) | 33-310339 | | Dial Pointer | 56-1033 | | | |
| 9 | R. F. Transformer (Range 1, Brdct.) | 32-2379 | | Dial Drive Cord (Tuning) | 31-2315 | | | |
| 10 | Condenser (5 mmf mica) | 30-1083 | | Dial Drive Cord, Pointer | 31-2291 | | | |
| 11 | R. F. Transformer (Range 2, S. W.) | 32-3046 | | Dial Drive Cord Spring | 28-8913 | | | |
| 12 | Compensator (Range 2, S. W.) | 31-6212 | | Disc Control (Tuning) | 27-4766 | | | |
| 13 | Condenser (.1 mf tubular) | 30-4455 | | Disc Control (Range Switch) | 38-9702 | | | |
| 14 | Condenser (.05 mf tubular) | 30-4519 | | Disc (Tone Control) | 27-4764 | | | |
| 15 | Compensator (two sections) | 31-6093 | | Disc (Volume Control) | 27-4765 | | | |
| 16 | Oscillator Transformer (Range 1, Brdct.) | 32-2120 | | Drum Assembly (Tuning Condenser) | 38-9661 | | | |
| 17 | Compensator | 31-6230 | | Drum Bracket and Bearing (Tuning Condenser) | 38-9662 | | | |
| 18 | Oscillator Transformer (Range 2, S. W.) | 32-3051 | | Shaft (Control Drums) | 28-6924 | | | |
| 19 | Condenser (.1 mf tubular) | 30-4455 | | Socket Assembly Dial Lamp | 38-9695 | | | |
| 20 | Resistor (32,000 ohms, 1/2 watt) | 33-323239 | | | | | | |
| 21 | Condenser (3425 mmf mica) | 31-6263 | | | | | | |
| 22 | Condenser (250 mmf mica) | 30-1032 | | | | | | |
| 23 | 1st I. F. Transformer Assembly | 32-3079 | | | | | | |
| 24 | Resistor (10,000 ohms, 1/2 watt) | 33-310339 | | | | | | |
| 25 | Resistor (1000 ohms, 1/2 watt) | 33-210339 | | | | | | |
| 26 | 2nd I. F. Transformer | 32-2582 | | | | | | |
| 27 | Condenser (110 mmf mica) | 30-1031 | | | | | | |
| 28 | Resistor (330,000 ohms, 1/2 watt) | 33-433339 | | | | | | |
| 29 | Volume Control (2.0 megohms) | 33-5286 | | | | | | |
| 30 | Condenser (.003 mf tubular) | 30-4580 | | | | | | |
| 31 | Condenser (.01 mf tubular) | 30-4581 | | | | | | |
| 32 | Resistor (70,000 ohms, 1/2 watt) | 33-370339 | | | | | | |
| 33 | Condenser (.004 mf tubular) | 30-4578 | | | | | | |
| 34 | Tone Control (3.0 megohms) | 33-5287 | | | | | | |
| 35 | Condenser (110 mmf mica) | 30-1031 | | | | | | |
| 36 | Condenser (.02 mf tubular) | 30-4481 | | | | | | |
| 37 | Resistor (330,000 ohms, 1/2 watt) | 33-433339 | | | | | | |
| 38 | Resistor (30,000 ohms, 1/2 watt) | 33-333339 | | | | | | |
| 39 | Resistor (1.0 megohm, 1/2 watt) | 33-510339 | | | | | | |
| 40 | Resistor (330,000 ohms, 1/2 watt) | 33-433339 | | | | | | |
| 41 | Resistor (1.0 megohm, 1/2 watt) | 33-510339 | | | | | | |
| 42 | Condenser (.01 mf tubular) | 30-4581 | | | | | | |
| 43 | Condenser (.1 mf tubular) | 30-4455 | | | | | | |
| 44 | Resistor (490,000 ohms, 1/2 watt) | 33-449339 | | | | | | |
| 45 | Condenser (.002 mf tubular) | 30-4579 | | | | | | |
| 46 | Resistor (490,000 ohms, 1/2 watt) | 33-449339 | | | | | | |
| 47 | Resistor (5000 ohms, 1/2 watt) | 33-250339 | | | | | | |
| 48 | Condenser (.004 mf tubular) | 30-4578 | | | | | | |
| 49 | Resistor (99,000 ohms, 1/2 watt) | 33-399339 | | | | | | |
| 50 | Resistor (45,000 ohms, 1/2 watt) | 33-345339 | | | | | | |
| 51 | Resistor (51,000 ohms, 1/2 watt) | 33-351339 | | | | | | |
| 52 | Condenser (.004 mf tubular) | 30-4578 | | | | | | |
| 53 | Resistor (490,000 ohms, 1/2 watt) | 33-449339 | | | | | | |
| 54 | Resistor (490,000 ohms, 1/2 watt) | 33-449339 | | | | | | |
| 55 | Condenser (.003 mf tubular) | 30-4469 | | | | | | |
| 56 | Output Transformer | 32-7981 | | | | | | |
| 57 | Cone and Voice Coil Assembly for Speaker (Part No. 36-1450) | 36-4089 | | | | | | |
| 58 | Condenser (.003 mf tubular) | 30-4469 | | | | | | |
| 59 | A. C. Switch | 42-1467 | | | | | | |
| 60 | Condenser (.01 mf to .01 mf bakelite) | 3903DG | | | | | | |
| 61 | Pwr. Trnsfrmr., 115 v., 60 cycle | 32-7998 | | | | | | |
| 62 | Field Coil, Replace Speaker | 36-1450 | | | | | | |
| 63 | Elect. Condenser (18 mf) | 30-2335 | | | | | | |
| 64 | Elect. Condenser (25 mf), 250. | 30-2333 | | | | | | |
| 65 | B. C. Resistor | 33-3358 | | | | | | |
| 66 | Resistor (4000 ohms, 1/2 watt) | 33-240339 | | | | | | |
| 67 | Resistor (13,000 ohms, 1/2 watt) | 33-313339 | | | | | | |
| 68 | Elect. Condenser (4 mf), 250. | 30-2334 | | | | | | |
| 69 | Pilot Lamp | 34-2064 | | | | | | |
| 70 | Pilot Lamp | 34-2064 | | | | | | |
| 71 | Push-Button Switch | 42-1462 | | | | | | |
| 72 | Padder Strip Assem., Complete | 31-6259 | | | | | | |
| 72A | Compensator No. 1 (540-1030 KC.) | | | | | | | |
| 72B | Compensator No. 2 (540-1030 KC.) | | | | | | | |
| 72C | Compensator No. 3 (670-1160 KC.) | | | | | | | |
| 72D | Compensator No. 4 (670-1160 KC.) | | | | | | | |
| 72E | Compensator No. 5 (900-1470 KC.) | | | | | | | |
| 72F | Compensator No. 6 (900-1470 KC.) | | | | | | | |
| 72G | Compensator No. 7 (1100-1600 KC.) | | | | | | | |
| 72H | Compensator No. 8 (1100-1600 KC.) | | | | | | | |
| 73 | Coil Strip Assembly (8 coils) | 32-3031 | | | | | | |
| 73A | Coil No. 1 (540-1030 KC.) | 32-3042 | | | | | | |
| 73B | Coil No. 2 (540-1030 KC.) | 32-3042 | | | | | | |
| 73C | Coil No. 3 (670-1160 KC.) | 32-3042 | | | | | | |
| 73D | Coil No. 4 (670-1160 KC.) | 32-3042 | | | | | | |
| 73E | Coil No. 5 (900-1470 KC.) | 32-3041 | | | | | | |
| 73F | Coil No. 6 (900-1470 KC.) | 32-3041 | | | | | | |
| 73G | Coil No. 7 (1100-1600 KC.) | 32-3041 | | | | | | |
| 73H | Coil No. 8 (1100-1600 KC.) | 32-3041 | | | | | | |
| 74 | Condenser (370 mmf silver mica) | 30-1110 | | | | | | |
| 75 | Condenser (370 mmf silver mica) | 30-1110 | | | | | | |
| 76 | Wave Switch | 42-1461 | | | | | | |
| | Bezel | 56-1104 | | | | | | |
| | Bezel Gasket | 27-9245 | | | | | | |
| | Bearing (Drum Shaft) | 56-1036 | | | | | | |

Miscellaneous Parts

| | |
|-----------------------------------|---------|
| Grommet (Mtg. Push-Button Switch) | 27-4610 |
| Grommet (Mtg. Tuning Unit Assy.) | 3914 |
| Grommet (Mtg. Tuning Unit Assy.) | 3915 |
| Nut (A. C. Switch) | W-1757 |
| Nut (Speaker Mtg.) | W-124 |
| Screw (Mtg. Chassis) | W-1345 |
| Screw (Bezel) | W-1834 |
| Washer (Speaker Mtg.) | 27-7467 |
| Washer Rubber (Mtg. Chassis) | 27-4571 |
| Washer (A. C. Switch) | W-894 |



PART LOCATIONS UNDERSIDE OF CHASSIS MODEL 39-40



ELECTRIC AUTOMATIC PUSH BUTTON UNIT