

# PHILCO SERVICE



RADIO MODEL 60

## PHILCO RADIO



Model 60

### Circuit Description

The Philco Model 60 is a 5-tube, table-model superheterodyne radio, providing reception in the standard broadcast band. This model 60 is similar, except for cabinet and dial parts, with the model 57.

The high-impedance loop aerial normally provides adequate signal pickup. An external aerial may be connected, if desired, by detaching the aerial lead from the chassis, and connecting this lead to an external aerial lead-in. Do not use a ground.

The loop is coupled to the 7A8 converter tube. Variable-condenser tuning is employed, the oscillator rotor-section plates being shaped to obtain tracking, thus eliminating the necessity for a series padding condenser.

The 7A8 is transformer coupled to the 7B7 i-f amplifier, which is also transformer coupled to the diodes of the 7C6 second detector-first audio-frequency amplifier. A-v-c voltage is applied to the control grids of both the i-f and converter tubes.

The triode section of the 7C6 is the first audio stage, and is resistance coupled to the 50L6GT output tube. The output tube is transformer coupled to an electro-dynamic speaker.

D-c operating voltages are obtained from a 35Z5 half-wave rectifier, the output of which is filtered by the speaker field and condenser filter.

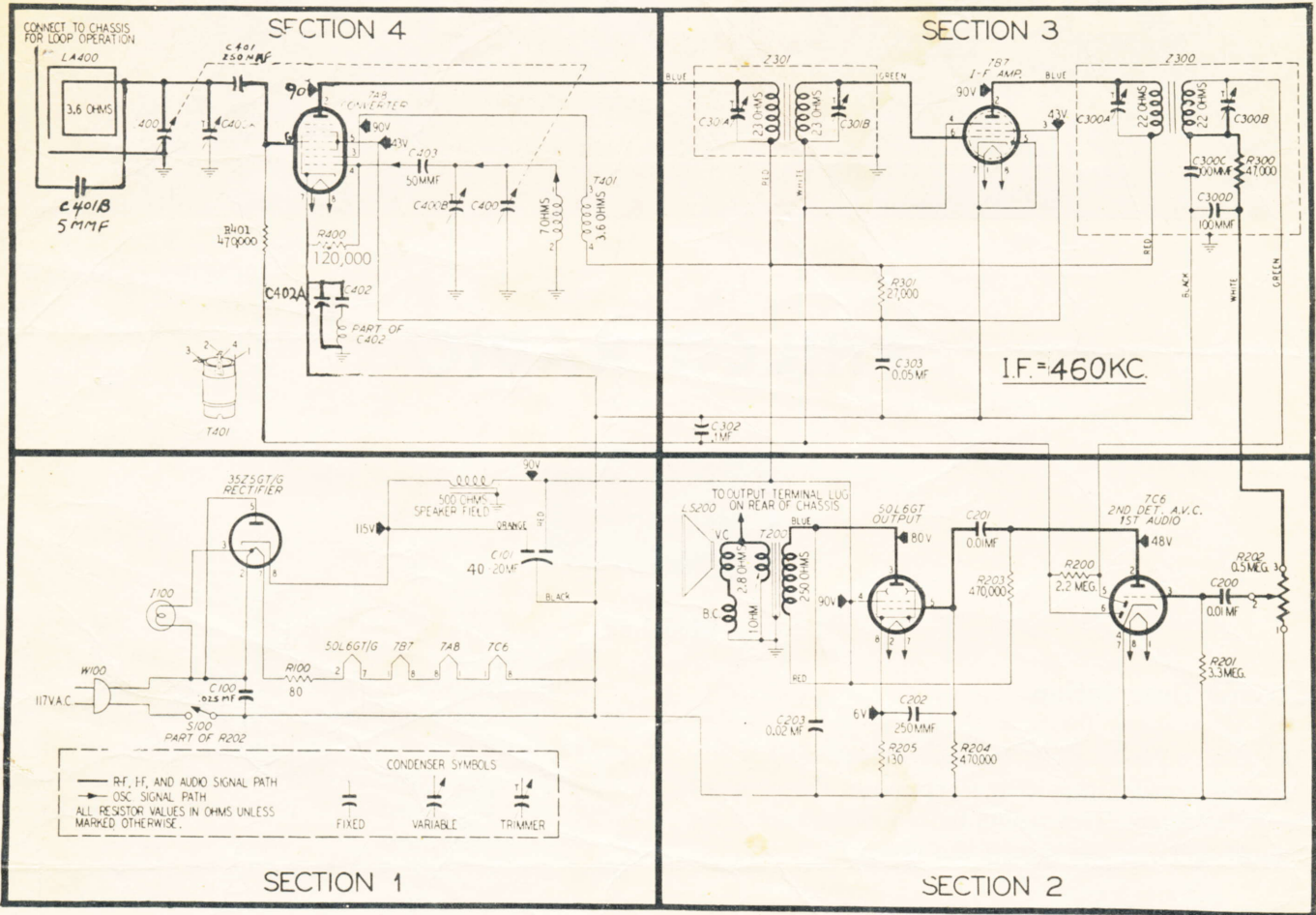
Condenser C402 is a special condenser, inductively wound to form a series-tuned circuit, resonant at the intermediate frequency. This special condenser offers less impedance at this frequency than a conventional condenser, thus permitting higher i-f gain, with no tendency toward instability. Since the tuning gang is connected to the chassis by-passing at broadcast and short-wave frequencies is adequate. The inductive effect is negligible at audio frequencies.

### SPECIFICATIONS

CABINET .....	Model 60, Wood
CIRCUIT .....	Five-tube superheterodyne
FREQUENCY RANGE .....	540 to 1620 kc.
POWER INPUT VOLTAGE .....	105 to 120 volts A.C. or D.C.
POWER CONSUMPTION .....	30 watts at 117 volts
AERIAL .....	Loop fastened to cabinet; terminal also provided for outside aerial
INTERMEDIATE FREQUENCY .....	460 kc.
PHILCO TUBES USED .....	7A8, 7B7, 7C6, 50L6GT, 35Z5GT/G
PILOT LAMP .....	6-8 volt bayonet base, Part No. 4-2068

For aligning circuit, layout and Philco trouble shooting procedure, please refer to Philco Manual PR 1135C for Model 57.





NOTE: All voltage and capacity and resistance values shown are average. The voltages between test point B— and other points indicated were measured with a 20,000-ohm-per-volt meter; volume control at minimum and tuning condenser plates fully meshed.

SECTION 1

Reference Number	Description	Service Part No.
C-100	Condenser, .025 mf., 600V	30-4599*
C-101	Condenser, 40-20 mf., 200V	30-2510*
I-100	Pilot lamp, 6.8V., 150 ma.	34-2068
R-100	Resistor, 80 ohms	33-3425
S-100	Switch, Power	Part of R202
W-100	Power cord and plug	L-3199

SECTION 2

C-200	Condenser, .01 mf., 600V	61-0120*
C-201	Condenser, .01 mf., 600V	61-0120*
C-202	Condenser, 250 mmf., mica	66-10245307*
C-203	Condenser, .02 mf., 600V.	30-4599*
LS-200	Speaker (with output transformer)	26-1542
R-200	Resistor, 2.2 meg.	66-5223340*
R-201	Resistor, 3.3 meg.	66-5333340*
R-202	Volume Control, .5 meg.	45-5007
R-203	Resistor, 470,000 ohms	66-4473340*
R-204	Resistor, 470,000 ohms	66-4473340*
R-205	Resistor, 130 ohms	66-1123340*
T-200	Transformer, Output	Part of LS200

SECTION 3

Z-300	Transformer, 2nd I-F	32-3952
C-300A	Condenser, Trimmer	Part of Z-300
C-300B	Condenser, Trimmer	Part of Z-300
C-300C	Condenser, Trimmer	Part of Z-300
C-300D	Condenser	Part of Z-300
Z-301	Transformer, 1st I-F	32-3967
C-301A	Condenser, Trimmer	Part of Z-301
C-301B	Condenser, Trimmer	Part of Z-301
C-302	Condenser, .1 mf., 600V	30-4289*
C-303	Condenser, .05 mf.	30-4518*
R-300	Resistor, 47,000 ohms	Part of Z-300
R-301	Resistor, 27,000 ohms	66-3273340*

SECTION 4

Reference Number	Description	Service Part No.
C-400	Condenser, 2-Section Tuning	31-2658
C-400A	Condenser, Trimmer	Part of C-400
C-400B	Condenser, Trimmer	Part of C-400
C-401	Condenser, 250 mmf., 600V.	60-10245307
C-401B	Condenser, 5 mmf., coupling	60-90505061
C-402	Condenser, .006 mf. and choke	38-9957
C-402A	Condenser, .02 mf.	61-1084
C-403	Condenser, 50 mmf.	60-00515307*
LA-400	Loop—Model 60	32-4056-6
R-400	Resistor, 120,000 ohms	66-4123340*
R-401	Resistor, 470,000 ohms	66-4473340*
T-401	Transformer, Oscillator	32-3880

MISCELLANEOUS

Cabinet—Model 60	10621
Clamp, electrolytic condenser mounting	56-1346FA5
Dial scale, Model 60	27-5839
Pointer, Model 60	54-4148-2
Acetate Window—Model 60	54-4412
Knobs, Model 60	54-4154
Terminal panel	76-2148
Spring—Tuning condenser drive cord	56-2617
Drive cord, kit	45-2840
Shaft, assembly	31-2626
Grommet, tuning condenser mounting	27-4610
Socket assembly, pilot light	76-1280
Socket, Loktal	27-6138*
Socket, octal	27-6199*