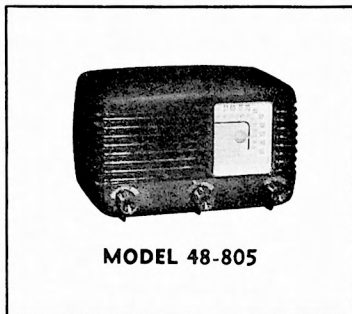


# PHILCO-TROPIC RADIO MODEL 48-805



## SPECIFICATIONS

CABINET	Bakelite, brown
CIRCUIT	Five-tube superheterodyne
FREQUENCY RANGES	
Broadcast	540—1620 kc.
Short wave	4.75—18.0 mc.
AUDIO OUTPUT	1.4 watts
OPERATING VOLTAGE	105—125 volts, a.c. or d.c.
POWER CONSUMPTION	25 watts
AERIAL	Philco Outdoor Aerial, Part No. 45-1494
INTERMEDIATE FREQUENCY	455 kc.
PHILCO TUBES (5)	14Q7, 7B7, 14B6, 50A5, 35Y4

## SYMBOLIZATION

The components in the radio circuit are symbolized according to the types of parts and the sections of the radio in which the parts are located. The prefix letter of the symbol designates the type of part, as follows:

C—condenser	R—resistor
I—pilot lamp	S—switch
L—choke or coil	T—transformer
LS—loud speaker	WS—wafer switch
	Z—electrical assembly

The number of the symbol designates the section in which the part is located, as follows:

- 100-series components are in Section 1—the power supply.
- 200-series components are in Section 2—the audio circuits.
- 300-series components are in Section 3—the i-f amplifier, detector, and a-v-c circuits.
- 400-series components are in Section 4—the aerial and oscillator circuits.

NOTE: The wafer switch is not given a section-designation number since, in some radios, it performs functions in several sections.

A suffix letter identifies the part as a component of the assembly which bears an identical number without a suffix letter, and with perhaps a different prefix letter.

## ALIGNMENT PROCEDURE

**SIGNAL GENERATOR:** Connect ground lead to chassis; connect output lead as indicated in chart.

**VOLUME CONTROL:** Set to maximum.

**DIAL POINTER:** With tuning-condenser plates fully meshed, adjust pointer to coincide with index mark at low-frequency end of scale.

**OUTPUT LEVEL:** During alignment, input signal must be attenuated to hold output-meter reading below 1.5 volts.

**OUTPUT METER:** Connect between speaker voice-coil terminal and chassis.



# ALIGNMENT PROCEDURE

STEP	SIGNAL GENERATOR		RADIO			ADJUST
	CONNECTIONS TO RADIO	DIAL	WAFER SWITCH	DIAL	SPECIAL INSTRUCTIONS	
1	Through .05-mf. condenser to stator of aerial tuning condenser C402A.	455 kc.	B'DC'ST	Gang fully meshed.	Adjust trimmers, in order given, for maximum output.	C301B C301A C300B C300A
2	Through 400-ohm resistor to aerial lead.	17.8 mc.	SW	17.8 mc.	Adjust for maximum. Image should be heard with radio tuned to 16.9 mc.	C402D
3	Same as step 2.	17.0 mc.	SW	Tune to signal.	Adjust for maximum while rocking tuning control.	C402B
4					Preset C403A to 1/2 turn from tight position.	C403A
5	Through 200-mmf. condenser to aerial lead.	1520 kc.	B'DC'ST	1520 kc.	Adjust for maximum while rocking tuning control.	C403B
6	Same as step 5.	580 kc.	B'DC'ST	580 kc.	Adjust for maximum while rocking tuning control.	C403A
7	Repeat steps 5, 6, and 5 until no further increase is obtained.					

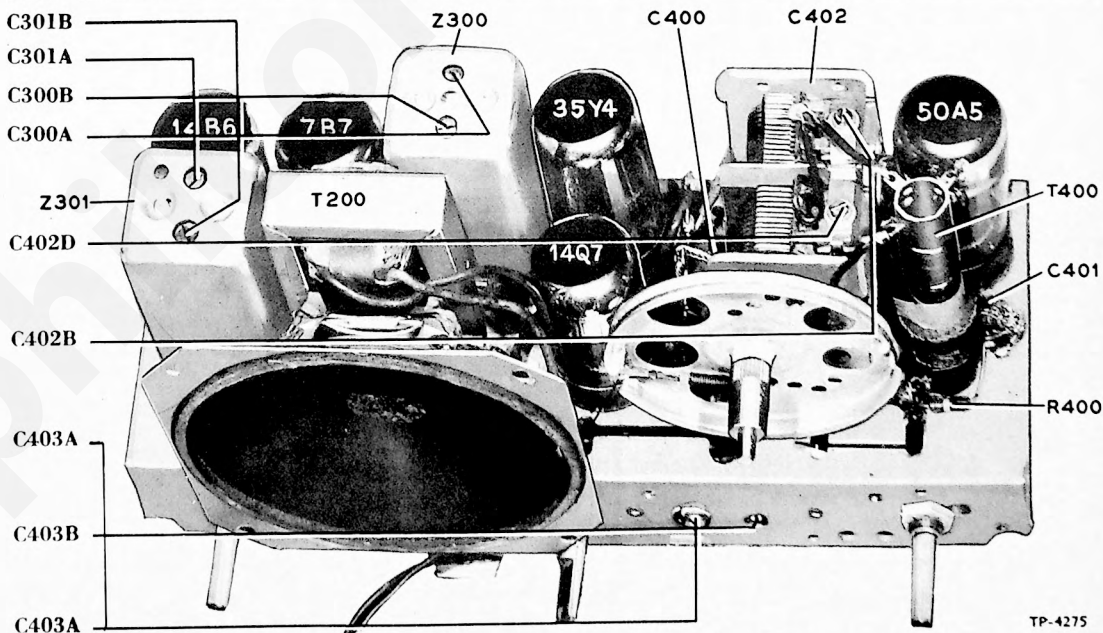


Figure 2. Top View, Showing Trimmer Locations

TP-4275

# REPLACEMENT PARTS LIST

NOTE: Part numbers marked with an asterisk (\*) are general replacement items. These numbers may not be identical with those on factory assemblies; also, the electrical values of some replacement items may differ from the values indicated in the schematic diagram and parts list. The values substituted in any case are so chosen that the operation of the radio will be either unchanged or improved. When ordering replacements, use only the "Service Part No."

## SECTION 1

Reference Symbol	Description	Service Part No.
C100	Condenser, line filter, .05 mf.	61-0122*
C101	Condenser, electrolytic, 3-section	30-2570-14
C101A	Condenser, input filter, 30 mf., 150v	Part of C101
C101B	Condenser, filter, 25 mf., 150v	Part of C101
C101C	Condenser, filter, 20 mf., 150v	Part of C101
I100	Pilot lamp	34-2068
PL100	Plug, a-c	
PL101	Plug, female connector, part of back-and-plug assembly (see MISCELLANEOUS)	27-6217
PL102	Plug, adapter (American to Continental)	L3275
R100	Resistor, filter, 100 ohms	66-1105340*
R101	Resistor, filter, 1000 ohms	66-2103340*
S100	Switch, on-off	Part of R200
W100	Power cord and plug	L2183

## SECTION 2

C200	Condenser, d-c blocking, .006 mf.	30-1226-2
C201	Condenser, d-c blocking, .006 mf.	30-1226-2
C202	Condenser, r-f by-pass, 220 mmf.	
C203	Condenser, electrolytic, cathode by-pass, 25 mf.	
C204	Condenser, tone compensation, .03 mf.	45-3500-1*
LS200	Speaker	
R200	Volume control (with on-off switch) 500,000 ohms	33-5538-13
R201	Resistor, grid return, 10 megohms	
R202	Resistor, plate load, 470,000 ohms	66-4473340*
R203	Resistor, grid return, 470,000 ohms	66-4473340*
R204	Resistor, cathode bias, 150 ohms	66-1154340*
T200	Transformer, output	Part of LS200

## SECTION 3

C300A	Condenser, trimmer	Part of Z300
C300B	Condenser, trimmer	Part of Z300
C301A	Condenser, trimmer	Part of Z301
C301B	Condenser, trimmer	Part of Z301
C301C	Condenser, i-f filter (part of Z301)	60-10105407*
C301D	Condenser, i-f filter (part of Z301)	60-10105407*
C302	Condenser, a-v-c filter, .05 mf.	30-1226
L300A	1st i-f transformer winding, primary	Part of Z300
L300B	1st i-f transformer winding, secondary	Part of Z300
L301A	2nd i-f transformer winding, primary	Part of Z301
L301B	2nd i-f transformer winding, secondary	Part of Z301
L301C	2nd i-f transformer winding, neutralizing	Part of Z301
R300	Resistor, screen dropping, 1000 ohms	66-2103340*

## SECTION 3 (Continued)

Reference Symbol	Description	Service Part No.
R301	Resistor, i-f filter, 47,000 ohms (part of Z301)	66-3473340*
R302	Resistor, a-v-c filter, 2.2 megohms	66-5223340*
Z300	Transformer, 1st i-f	32-3968-3
Z301	Transformer, 2nd i-f	

## SECTION 4

C400	Condenser, blocking, .002 mf.	61-0062*
C401	Condenser, shunt, 10 mmf.	60-00105407*
C402	Condenser, tuning gang, 2-section	31-2722
C402A	Condenser aerial tuning	Part of C402
C402B	Condenser, s-w aerial trimmer	Part of C402
C402C	Condenser, oscillator tuning	Part of C402
C402D	Condenser, s-w oscillator trimmer	Part of C402
C403	Condenser assembly, trimmer, 2-section	31-6476-7
C403A	Condenser, bc. series oscillator padder	Part of C403
C403B	Condenser, bc. oscillator trimmer	Part of C403
C404	Condenser, d-c blocking, 100 mmf.	60-10105407*
C405	Condenser, d-c blocking, 56 mmf.	
C406	Condenser, screen by-pass, .05 mf.	30-1226
L400A	S-w aerial winding, primary	Part of T400
L400B	S-w aerial winding, secondary	Part of T400
L400C	Bc. aerial winding, primary	Part of T400
L400D	Bc. aerial winding, secondary	Part of T400
L401A	Bc. oscillator winding	Part of T401
L401B	S-w oscillator winding	Part of T401
R400	Resistor, loading, 22,000 ohms	66-3223340*
R401	Resistor, grid return, 1 megohm	66-5103340*
T400	Transformer, aerial	32-4191
T401	Transformer, oscillator	32-4192
WS1(R)	Water switch, band switching	42-1806

## MISCELLANEOUS

Description	Service Part No.
Cabinet and Cabinet Parts	
Back-and-plug assembly	
Cabinet	
Window	54-4088
Window fastener	28-4279
Drive Cord	
Knob	54-4227-2
Pointer	27-4891
Scale, dial	27-5964
Shaft, tuning	76-1299-1
Socket assembly, pilot lamp	76-1280
Socket, octal	27-6138*
Spring, gang drive	56-2617
Plug, 2-prong, male connector	54-4426

**REVISIONS AND ADDITIONS TO 48-805  
SERVICE MANUAL**

<b>Reference Symbol</b>	<b>Description</b>	<b>Service Part No.</b>
<b>Parts List Additions</b>		
	Back-and-Plug Assembly	
	A-c cord .....	L-2183
	A-c plug .....	27-6217
	Cardboard back .....	54-7397
	Shell .....	56-4346
<b>Parts List Corrections</b>		
PL100	Plug, a-c .....	Part of W100
C202	Condenser, r-f by-pass, 220 mmf. ....	60-10205307
C203	Condenser, electrolytic, cathode by-pass, 25 mf. ....	45-3001
LS200	Speaker .....	36-1614
R201	Resistor, grid return, 10 megohms .....	66-6103340*
Z301	Transformer, 2nd i-f .....	32-3948-5
C405	Condenser, d-c blocking, 56 mmf. ....	60-00515307*
	Cabinet .....	10542G
	Drive cord (25-ft. spool) .....	45-8750*

**PRODUCTION CHANGES**

No production changes were made in this model.