

ALIGNMENT PROCEDURE

TURN ON THE RADIO, AND SET THE VOLUME CONTROL TO MAXIMUM.

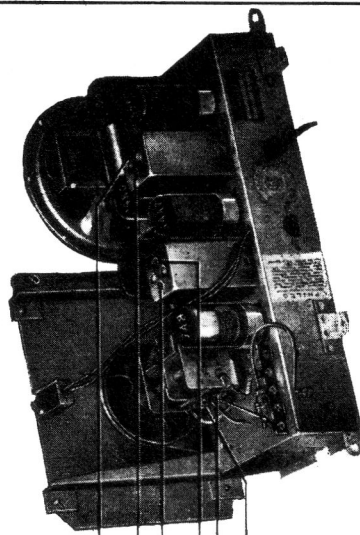
DIAL POINTER—Turn tuning condensers to full-mesh position. Set dial pointer to index dot, located to the left of "55."

OUTPUT METER—Connect to left (output) lug and center (chassis) lug of terminal panel, shown in figure 6.

SIGNAL GENERATOR — Connect ground lead to B; connect output lead as indicated in the chart.

OUTPUT LEVEL—During alignment, adjust signal-generator output to maintain output-meter indication below 1.25 volts.

Step	SIGNAL GENERATOR		RADIO		ADJUST
	Connections to Radio	Dial Setting	Dial Setting	Special Instructions	
1				Turn C301B (copper screw) down tight	
2	Through .1-mf. condenser to pin 6 of 7A8 converter.	460 kc.	540 kc.	Adjust trimmers, in order given, for maximum output. C300A, C300B, C301A, C301B.	C300B C300A C301A C301B C400B C400A
3	Through 100-mmf. condenser to external aerial connector.	1600 kc.	1600 kc.	Disconnect external aerial lug from chassis. Adjust trimmer for maximum output. C400B.	
4	Same as step 3.	1500 kc.	1500 kc.	Adjust for maximum output. C400A.	



Circuit Description

The Philco Models 82 and 82-1 are 5-tube, table-model superheterodyne radios, providing reception in the standard broadcast band.

The high-impedance loop aerial normally provides adequate signal pick-up. An external aerial may be connected, if desired, by detaching the aerial lead from the chassis, and connecting the 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 14A7 i-f amplifier, which is also transformer coupled to the

diodes of the 14B6 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 14B6 is the first audio stage, and is resistance coupled to the 50A5 output tube. The output tube is transformer coupled to a permanent-magnet dynamic speaker.

D-c operating voltages are obtained from a 35Y4G half-wave rectifier, the output of which is filtered by a three-section resistor-condenser filter.

Philco TROUBLE-SHOOTING Procedure

In this manual, the schematic diagram is divided into four sections, showing component and test points for each section.

Preliminary Checks

To avoid possible damage to the radio, the following preliminary checks should be made before turning on the power:

1. Carefully inspect both top and bottom of chassis. Make sure that all tubes are secure in the proper sockets (see figure 6), and look for bad connections, burned resistors, or other obvious sources of trouble.
2. Measure the resistance between B+ and B- (test points C and B), using the ohmmeter polarity giving the highest resistance reading; if the reading is lower than 50,000 ohms, check C101A, C101B, and C101C, for leakage or shorts. This resistance value, which is much lower than normal, does not represent a quality check of these condensers; it is the lowest value which will permit the rectifier to operate safely while the voltage tests of the power supply are performed.