

MODEL AR-50 (CONTINUED)

MODEL AR-50 — ADJUSTMENTS

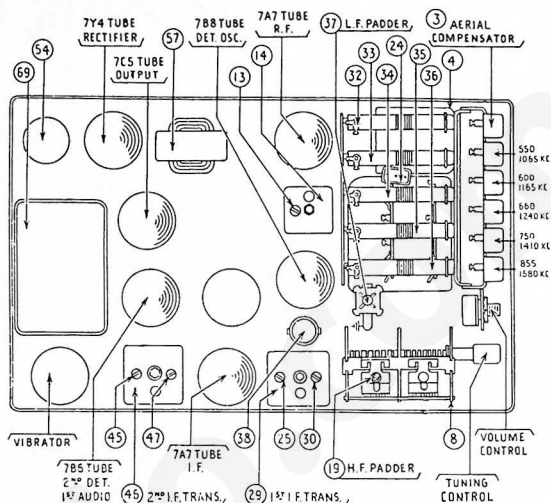
All padding adjustments are carefully made at the factory and ordinarily no readjustments are necessary. However, when readjustments are required, the procedure given below must be followed in detail.

EQUIPMENT — Fully charged heavy duty storage battery or 6 volt power pack, 077 or 177 Philco signal generator, 027 Philco Vacuum tube voltmeter and set tester or audio output meter, 45-2610 Padding screw driver.

GENERAL — VACUUM TUBE VOLTMETER. The model 027 Vacuum tube voltmeter is an extremely sensitive and accurate test instrument and is recommended for use when aligning and adjusting auto radios. Connect the negative (—) terminal of the Vacuum Tube Voltmeter to the high side (ungrounded side) of the volume control. Connect the positive (+) terminal to the radio housing. Connect the "AC" cord to a 110 volt AC socket. Press the VTVM button and the 10 volt button. Turn the "Set Zero Ohms — VTVM" control clockwise until a click is heard. Allow the tubes to heat up for a few minutes. Short the 150 meg. VTVM terminals and adjust the "Set Zero ohms VTVM" control until the meter reads zero on the 0-10 range scale (green scale). The needle will deflect from right to left.

AUDIO OUTPUT METER. If an audio output meter is used, connect the leads across the voice coil of the speaker. Use the 0-30 volt scale.

With the Radio and signal generator set up for operation at the prescribed frequency, turn the Radio volume control on full and set the signal generator attenuator so that a half scale reading is obtained on the meter. The signal in the speaker should be audible but not loud.



OPERATION	SIGNAL GENERATOR		DUMMY CAPACITY	SPECIAL INSTRUCTIONS	ADJUST PADDER
	FREQUENCY	CONNECTION			
	PUSH IN THE RIGHT KNOB ON THE CONTROL UNTIL "D" APPEARS IN THE STATION INDICATOR WINDOW AND STATIONS CAN BE TUNED IN BY MANUAL TUNING. ADJUST THE AERIAL COMPENSATOR ③ TWO TURNS FROM TIGHT.				
1					⑦ ⑬ ⑮ ⑲ ⑳
2	455 K.C.	To Aerial Receptacle on Radio	.1 Mfd.	Note 2	⑦ ⑬ ⑮ ⑲ ⑳
3	455 K.C.	To Aerial Receptacle on Radio	.1 Mfd.	Note 2	③ For Minimum Signal
4	1580 K.C.	To Aerial Receptacle on Radio	See Note 1	Note 2	⑲
5	1400 K.C.	To Aerial Receptacle on Radio	See Note 1	Set Tuning Condenser at 1400 K.C.	Note 4
6	580 K.C.	To Aerial Receptacle on Radio	See Note 1	Set Tuning Condenser at 580 K.C.	Note 3
7	1580 K.C.	To Aerial Receptacle on Radio	See Note 1	Note 2	⑲
8	1400 K.C.	To Aerial Receptacle on Radio	See Note 1	Set Tuning Condenser at 1400 K.C.	Note 4
9	580 K.C.	To Aerial Receptacle on Radio	See Note 1	Set Tuning Condenser at 580 K.C.	Note 3
10	1200 to 1400 K.C.	Note 5	Note 5	Note 5	③

Make all adjustments for maximum reading on the output meter.

NOTE 1 — Connect the aerial lead, Part No. 95-0185, to the aerial receptacle in the radio. Connect a 10 Mmfd. Condenser in series between the signal generator and the aerial lead.

NOTE 2 — Turn the condenser rotor plates completely out of mesh as far as they will go.

NOTE 3 — Rock the tuning condenser while adjusting the low frequency padder. Tune the condenser to the signal and adjust the padder for maximum output. Rotate the tuning condenser back and forth slightly for maximum

output. Then readjust the padder for maximum output. Repeat this procedure until no further improvement is noticed.

NOTE 4 — When the aerial stage adjustment is made with the Radio installed in the car, the Radio aerial lead must be connected to the car aerial in the usual manner. Connect the signal generator output lead to a wire placed near the car aerial but not connected to it.

NOTE 5 — When installing the radio in the car, follow the installation instructions carefully. Tune in a weak broadcast signal between 1200 and 1400 Kilocycles on the control scale. Remove the plug button on the end of the radio and adjust the aerial compensator ③ (See Figure 3) for maximum signal.

INSTRUCTIONS FOR SETTING UP THE AUTOMATIC PUSH BUTTON TUNING

Turn on the radio and allow it to operate for twenty minutes or longer if possible. During this time, proceed as follows:

1. Remove the plate on the end of the radio which covers the adjusting screws. This is held by two screws.

2. Select five popular local stations whose frequencies come within the ranges of the five automatic tuning circuits, and list them on the Owner's Reference Label. List the highest frequency station as 1, and so on down to the lowest frequency station, which should be 5. The range of each automatic tuning circuit is given below:

855 KC to 1580 KC	750 KC to 1410 KC	660 KC to 1240 KC	660 KC to 1165 KC	550 KC to 1065 KC
1	2	3	4	5

3. Push in the right knob until "D" appears in the station indicator window. This adjusts the Radio so that it can be tuned with the tuning control knob in the conventional manner.

4. Tune in with the dial tuning control knob, the station having the highest

frequency, and note the program. Now push in the right hand knob until No. 1 appears in the station indicator window.

With a small screw driver, turn the bottom adjusting screw (number one) in the left column to the right or left until the same station is tuned in. Then adjust the corresponding screw in the right column, turning right or left until maximum volume is obtained. If in doubt as to the station, push the right hand knob until "D" appears and recheck. The adjustment on strong signals can be made best inside a shielded area such as in a reinforced steel building, or under a viaduct.

Continue the above procedure for the stations selected for Nos. 2, 3, 4 and 5 position in the given order, working from left to right, and adjusting each pair of corresponding adjusting screws from bottom to top until all five stations are set up. It is advisable to repeat the entire adjustment procedure to be sure the settings are correct.

The automatic tuning adjustments may be made before installing the radio in the car, but FINAL adjustments must be made with the radio installed and operating on the aerial in the car.