

1936-37

ALIGNING THE I. F. CIRCUIT

1. Connect the output meter in series with a .25 MFD (approx.) condenser from the 1F4 plate to ground on the chassis.
2. Turn the volume control to maximum and leave it at this setting throughout the whole alignment procedure. Ground the antenna lead to the chassis.
3. Adjust the test oscillator to exactly 456 K.C. and connect its output between the 1C6 control grid cap and the chassis. Use an .05 MFD condenser in series with the lead if there is not already one in the oscillator itself.
4. Adjust the four I.F. trimmer condensers on top of the cans beginning with the second stage which feeds the 1B5 for maximum output as indicated on the output meter.
5. Repeat section 4 as the adjustment of any one trimmer will have some effect on the remaining ones.

456 KC. WAVE TRAP ADJUSTMENT

1. Disconnect the antenna lead from ground and connect it to the output of the test oscillator through a dummy antenna. A 200 or 250 MMFD condenser will serve this purpose.
2. Without changing the test oscillator from the frequency used in aligning the I.F. circuits, adjust the wave trap trimmer on the front of the chassis base for minimum output. Increase the test oscillator output as a minimum is approached so that the trimmer can be accurately adjusted. It is very sharp. NOTE: If code interference is troublesome on a frequency in the neighborhood of 456 K.C., adjust the wave trap trimmer until it is a minimum with a signal from the test oscillator of the same frequency as the interfering code signal.

MODEL
R-193
Battery
Operated

R. F. ALIGNMENT

1. Set the test oscillator at 1400 K.C. and apply it to the set as above.
2. Turn the pointer on the scale to 1400 K.C. and adjust the trimmers on the gang for maximum output. Adjust the oscillator trimmer first, the one nearest the front.

BATTERY DRAIN

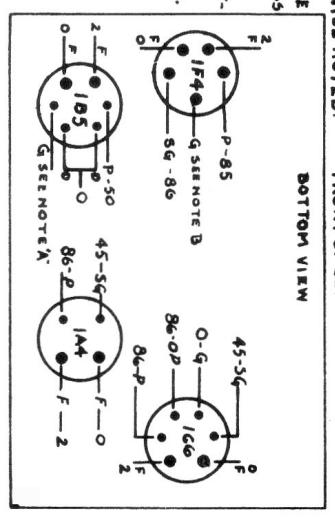
1. The normal "A" battery drain is 360 milliamperes.
2. The normal "B" battery drain is 12 milliamperes from 90 volts of battery.

NOTE: ALL VOLTAGES MEASURED FROM TUBE SOCKET TO CHASSIS WITH METER OF AT LEAST 1000 OHMS PER VOLT, EXCEPT AS OTHERWISE NOTED.

NOTE "A": THIS GRID BIAS VOLTAGE IS (-) AND IS MEASURED ACROSS RESISTOR R12.

NOTE "B": THIS GRID BIAS VOLTAGE IS (-) AND IS MEASURED FROM THE (-) LEAD TO CHASSIS.

F	FILAMENT
P	PLATE
G	GRID
SG	SCREEN GRID
D	DIODE PLATE
OP	OSC. PLATE



I.F.
456 Kc.