

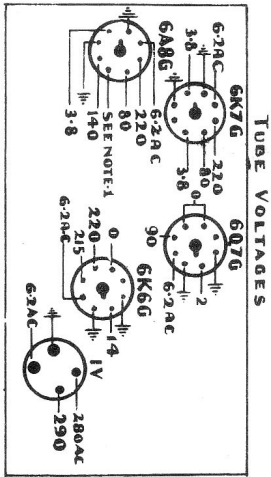
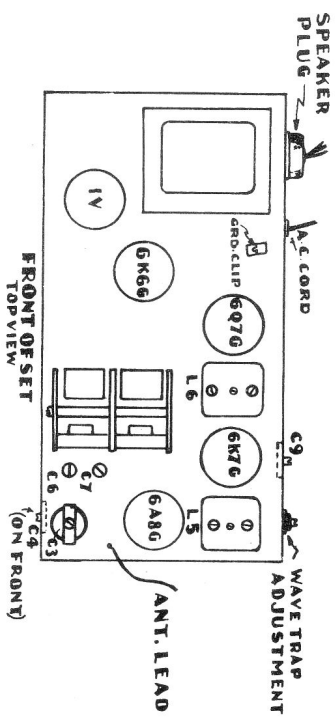
RANGE SWITCH SHOWN IN
SHORT WAVE POSITION.

Model R-403 (Grenadier)

1.F. = 456Kc.

1937-38

Alignment Data on Data Sheet-52



NOTE-1: THE OSCILLATOR BIAS DEVELOPED ON THIS TERMINAL IS NOT READILY MEASURABLE.
NOTE-2: ALL VOLTAGES GIVEN ARE FOR 115 VOLTS ON LINE.

ALIGNMENT DATA - MODEL R 403

The bottom cover must be on the chassis.

Circuit on Sheet - 45

1. Intermediate Frequency Alignment.

Turn range switch to left to broadcast position and see that volume control and tone are both full on to right. Turn gang condenser to high frequency end, with plates all out of mesh. Connect an output meter to voice coil terminals of speaker; an A.C. voltmeter with one volt full scale is very satisfactory for this purpose.

Apply a 456 KC signal from a test oscillator to grid cap of the 6AG6 tube and adjust trimmers on I.F. transformers L6 and L5 in that order for maximum deflection on the output meter. Use as weak a signal as possible to give a readable deflection and do not turn down the volume control.

If the I.F. transformers were much out of adjustment repeat this last operation.

2. WAVE TRAP ADJUSTMENT

Remove the test oscillator lead from the 6AG6 grid cap and connect it to the blue antenna wire of the chassis through a standard dummy antenna, or alternatively a 200 mmfd. mica condenser. The ground lead of the oscillator should be grounded to the chassis as before. The range switch and gang condenser should be left as they were set for #1 above.

With a strong 456 Kc. signal input adjust the slotted screw of the wave trap coil at the end of the rear of the chassis with a small screw-driver, for minimum output. A very strong input signal is necessary for the final adjustment. On some sets there will be a lock out on this screw instead of a tension spring in which case the nut should be tightened again after the adjustment is made.

3. BROADCAST BAND ALIGNMENT

First make sure that the dial pointer coincides exactly with the last scale calibration mark when the condenser is turned in to full mesh at the 530 Kc. end.

Then turn the pointer to 1400 Kc. on the yellow scale and with a 1400 Kc. signal on the antenna adjust C6 and C4 in that order for maximum output on the meter. Make sure that the input signal is exactly 1400 Kc. by checking against a master oscillator or a broadcasting station, or else the dial scale will not calibrate properly.

These remarks also apply to the other frequencies used in aligning the set.

Then apply a 600 Kc. signal to the antenna and while rocking the gang slowly about the 600 Kc. position adjust the series pad C9 for maximum output.

If C9 was very much out of adjustment repeat the 1400 Kc. alignment.

4. SHORT WAVE ALIGNMENT

Turn the range switch to the right to the short wave position and leave the volume control still on full. Change the dummy antenna to a 400 ohm carbon resistor and apply a 15000 Kc signal to the set from the oscillator. Turn the pointer to 15 on the red scale and adjust C7 and C3 in that order for maximum output. Rock the gang back and forth slightly while adjusting C3.

The usual precaution must be observed in adjusting C7. Two peaks will be found and the proper one is that with the condenser screwed furthest out to the left.

Now turn the gang out to the 18 megacycle end. If the set goes dead and no tube noise whatever can be heard with the ear up close to the speaker, increase the capacity of condenser C26 on top of the gang, slightly by pushing the two wires further in together.

If, on the other hand, a squawk is heard while turning the gang out it is indicative that this small condenser is too large and the wires must be moved apart a little.

DATA SHEET STEWART-WARNER-52