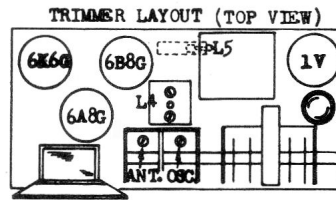


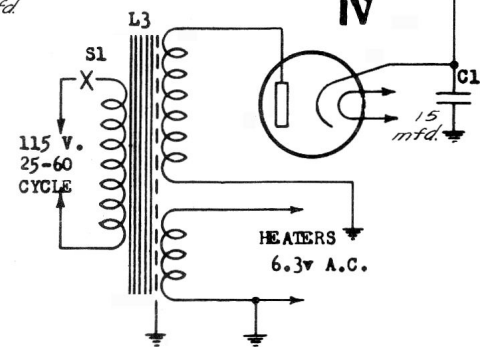
**MODEL-R-420**

**I.F. = 465 Kc.**

**1938-39**



NOTE: ALL VOLTAGES MEASURED FROM TUBE SOCKET TO GROUND (CHASSIS), WITH METER OF 1000 OHMS PER VOLT, ON HIGHEST READABLE RANGE.



The R420 chassis is a four tube superheterodyne with seven tube functions. High sensitivity is obtained by using the 6B8G in a reflex circuit as both an I.F. and A.F. amplifier. This tube also supplies AVC which prevents the receiver overloading on strong signals, even though the manual volume control is connected in the antenna and first detector circuits.

The simple cam and lever automatic tuning system makes any four preselected stations available. The setup and operation of this mechanism is fully explained in the instruction card accompanying each set.

**ALIGNMENT**

**Intermediate Frequency:** Turn the tuning control knob to rotate the gang condenser to the extreme high frequency end and turn the volume control on full. Connect the ground lead of a test oscillator to the black ground wire at the back of the set and connect the high oscillator lead through a .05 mfd condenser (approx.) to the control grid of the 6A8G tube. An output meter may be connected to the voice coil terminals of the speaker, or across the output transformer primary by plugging in an adapter under the 6K6G tube.

Apply a 465 KC signal and adjust the iron core in L5 underneath the chassis for maximum output. This may

be done with a long screw driver so that the handle of the tool extends past the bottom of the power transformer. Next adjust the two trimmers on the top of the first I.F. transformer L4 for maximum output. The input signal used for all aligning adjustments should be the lowest that will give a readable indication on the output meter.

**R.F. Alignment:** Put the metal base on the chassis. Transfer the high test oscillator lead to the blue antenna lead wire through a standard broadcast dummy antenna (or 200 mmf—250 mmf mica condenser) and rotate the gang condenser to the extreme low frequency end. Apply a 535 KC signal and adjust the oscillator trimmer on the gang condenser to peak. Then increase the input oscillator signal to 1500 KC, tune it on the chassis and adjust the R.F. trimmer on the gang condenser for maximum output rocking the condenser slightly meanwhile. Do not readjust the oscillator trimmer at 1500 KC.

If the dial scale does not log properly the drum on which it is fastened may be moved slightly on the shaft, being held there in an oversize keyway by spring pressure.

NOTE: A ground wire will be found coiled around the first I.F. plate lead. If this is removed or not properly placed the circuit will be inclined to oscillate or become unstable.

**DATA SHEET**

**STEWART-WARNER-61**