

## Hallicrafters, Inc.

**Model:** S27

**Chassis:**

**Year:** Pre April 1941

**Power:**

**Circuit:**

**IF:**

**Tubes:**

**Bands:**

### Resources

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**Riders Volume 12 - HALLICRAFTERS 12-5**



THE HALLICRAFTERS INC.

MODEL S-27

Tune the signal generator to 5.25 megacycles and align transformers T<sub>1</sub>, T<sub>2</sub>, T<sub>3</sub> and T<sub>4</sub> for maximum response.  
 A bakelite screw-driver with a metal or insulated tip is necessary for accurate alignment.  
 This alignment process should be repeated at least once to assure greatest possible selectivity.  
 To align the "discriminator" transformer (T<sub>5</sub>) turn the selectivity switch to the broad position and the AM-FM switch to the AM position.

Leave the signal generator set at the frequency originally used for IF alignment with the modulation left on. Rotate the trimmer control across the discriminator (T<sub>5</sub>) secondary (nearest the front of the chassis) until the signal drops to zero. As this point is approached very suddenly, turn the control slightly to the right. Repeat the adjustment until the signal peaks on the output meter. For maximum selectivity, adjust the primary trimmer control of the discriminator transformer for maximum response.

Next detune the signal generator to either side of resonance and note the maximum output in each case as indicated on the output meter. These values should be the same for good balance. If they are not, then tune the signal generator to the lower of the two peaks and adjust the primary until the output rises an amount equal to about half the difference of the two outputs previously noted.  
 Retest for balance as above and readjust the primary until both maximum readings are alike when the signal generator is detuned to either side of resonance.

If a balance cannot be obtained, it is an indication that the discriminator secondary trimmer control has been adjusted off its proper center and will require a very slight readjustment in either direction. The direction of adjustment that will cause the off-tune peaks to assume the same values as the correct one, are marked on the chassis in adjusting discriminator secondary control as even a slight misadjustment will result in the distorted reception of frequency-modulated signals.  
**RF Alignment**

Connect a high frequency signal generator to the antenna terminal (A<sub>1</sub>) through a 75 ohm resistor and the ground of the generator to the ground terminal of the receiver. Leave terminal A<sub>2</sub> connected to the ground terminal.

The Ferris Signal Generator Model 13B is recommended for alignment purposes. If this is not available, harmonics of a standard signal generator may be used.

The controls should be set in the same position as for IF alignment.

Set the AM-FM switch in the AM position.  
 Set the bandswitch on band 1.  
 Tune the generator and receiver to 42 mc.

Adjust oscillator trimmer C<sub>1</sub> until the signal is heard. The frequency of the oscillator is higher than that of the signal. Next adjust trimmer C<sub>2</sub> and the antenna trimmer for maximum response.

Tune both receiver and signal generator to 26 megacycles and adjust padder C<sub>3</sub> for maximum response while rocking the tuning control. Then repeat the alignment at the high frequency end as described.

BAND 2

Tune the receiver and signal generator to 75 megacycles. Adjust trimmer C<sub>4</sub> until the signal is heard. In this band, the frequency of the oscillator is lower than that of the signal. Adjust the antenna trimmer and trimmer C<sub>5</sub> for maximum response while rocking the tuning control. No padder adjustment is provided for the low-frequency end of this band.

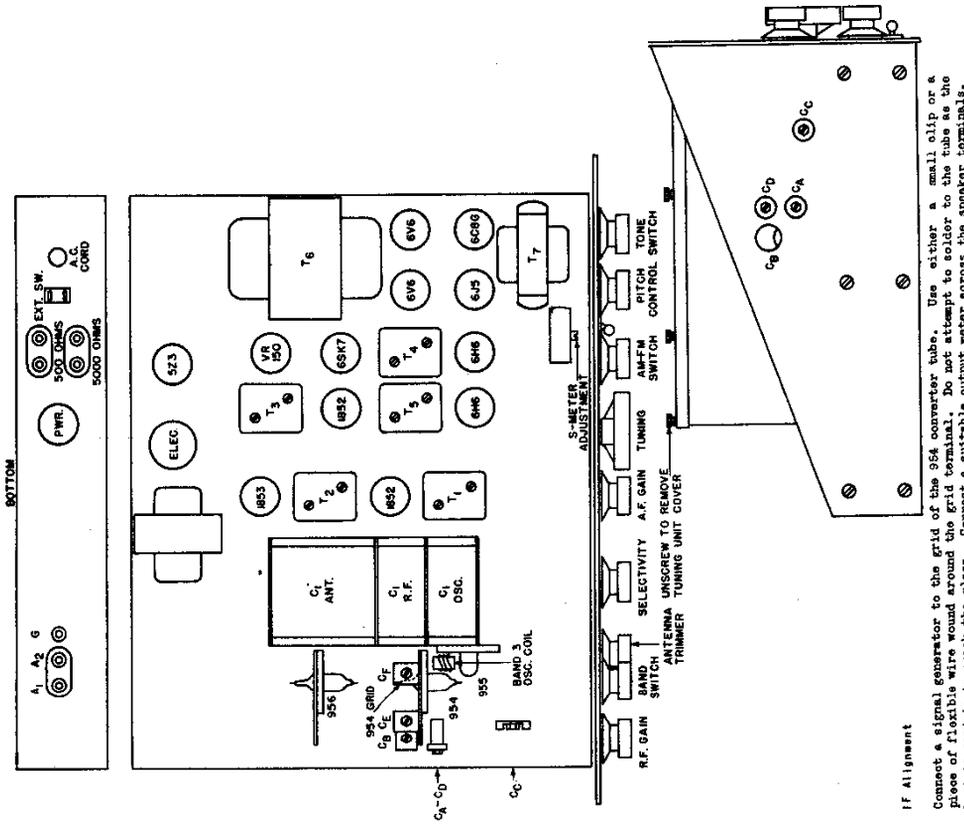
BAND 3

Tune the receiver and signal generator to 120 megacycles. Adjust trimmer C<sub>6</sub> and the antenna trimmer for maximum response while rocking the tuning control. It is not recommended that the frequency of the oscillator in this band be adjusted except at the factory. Should it be impractical to return the receiver to the factory for adjustment, then the following instructions are included.

Remove the top cover and locate the high frequency oscillator coil. The white wire winding, one end of which is connected to a terminal on the form is the primary. By carefully shifting the free end of this winding the frequency can be changed over a sufficient range. This lead should be cemented in place with Q-Max or any other low loss cement when adjustment is completed.

Repeat the adjustment of C<sub>7</sub> as described above after shifting the frequency of the oscillator.

As in band 2, the frequency of the oscillator is higher than that of the signal. No padder adjustment is provided for the low frequency end of this band.



**IF Alignment**  
 Connect a signal generator to the grid of the 954 converter tube. Use either a small clip or a piece of flexible wire wound around the grid terminal. Do not attempt to solder to the tube as the heat is certain to crack the glass. Connect a suitable output meter across the speaker terminals.  
 Controls should be set as follows:  
 RF gain control at maximum sensitivity.  
 Band switch in off position.  
 AFC switch in off position.  
 Selectivity switch in sharp position.  
 AM-FM switch in AM position.  
 Audio gain control in maximum position.  
 ATC switch in off position.  
 AFL switch in off position.  
 BFO switch in off position.