

PROPER ADJUSTMENT OF CARRIER AND MIC GAIN

First let's define the functions of the CARRIER and the MIC GAIN controls.

The CARRIER control sets the level of forward bias of the "unbalanced, balanced modulator" in the CW/TUNE mode. This in turn controls the amount of carrier osc signal delivered to the xtal filter and on to the transmitter mixer.

When you switch to SSB mode the CARRIER control is switched out of the circuit. The "balanced modulator" circuit is returned to normal operation and the amount of sideband signal that is delivered to the transmitter mixer is controlled by the drive from the microphone amplifier circuits, or the MIC GAIN control.

The CW/TUNE system was designed to operate with the CARRIER control set at max drive. That is, adjust up to the point of saturation then back off just a bit. The CARRIER control was not designed as a vernier power control. At or near saturation is the most efficient window of operation for the PA tubes.

The same can be said for the setting of the MIC GAIN control in SSB mode. It should be adjusted at or near saturation. Repeat the words 3-4, 3-4, several times while advancing the MIC GAIN and monitoring the rf power out. Advance the MIC GAIN to the point where there is no longer an increase in power out, then back off just a bit.

If you are driving an amplifier with any of the SR or HT series rigs you still must tune for max power out. If that is too much drive for the amp you must construct a “PAD” to reduce the power to the level required for the amp. Hallicrafters produced a guide booklet for accomplishing this task, it can be found at:

<https://wd0gof.files.wordpress.com/2019/09/matching-ts.pdf>

This configuration is standard for the SR-150, 160, 400's and the 500.

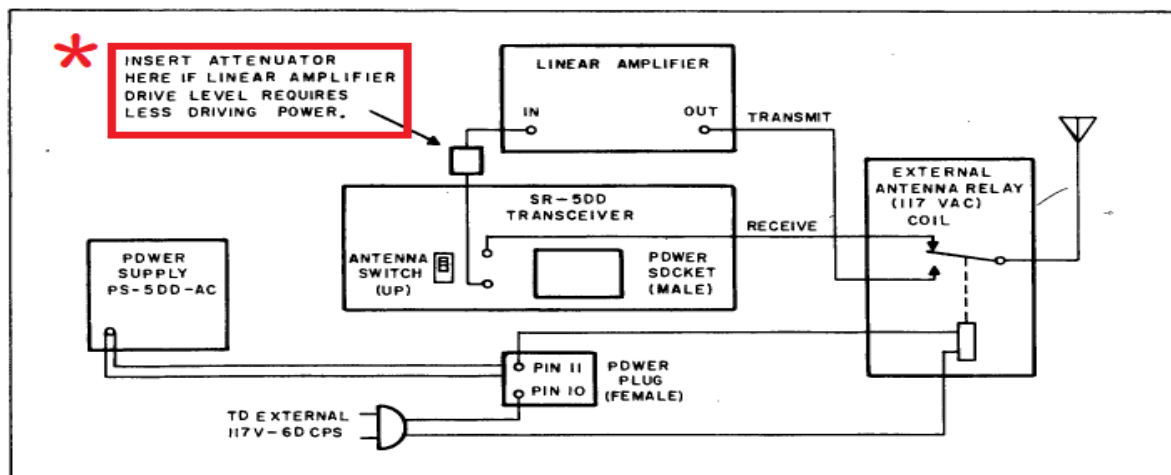


Figure 3. Base Installation, Using a Linear Amplifier.

* NOTE: It is possible to turn down the drive on the SR series transmitters. **THIS SHOULD NOT BE DONE.** The PA's in the SR series transmitters were designed to be driven right at saturation. Running at lower drive levels will effect neutralization, plate dissipation and harmonic generation.