

## ZEN and the Art of Amateur Radio Tuning.

From time to time you will hear “tuner-uppers” during the OMISS nets and when it occurs, it’s a real nuisance. It has long been my suspicion that OMISS participants themselves comprise the bulk of this tuning activity, although some might argue that it is deliberate interference from some of our “friends” up and down the band. We can never know the answer to that question. What we can do, however, is to promote proper tuning etiquette, especially among those new to OMISS or HF.

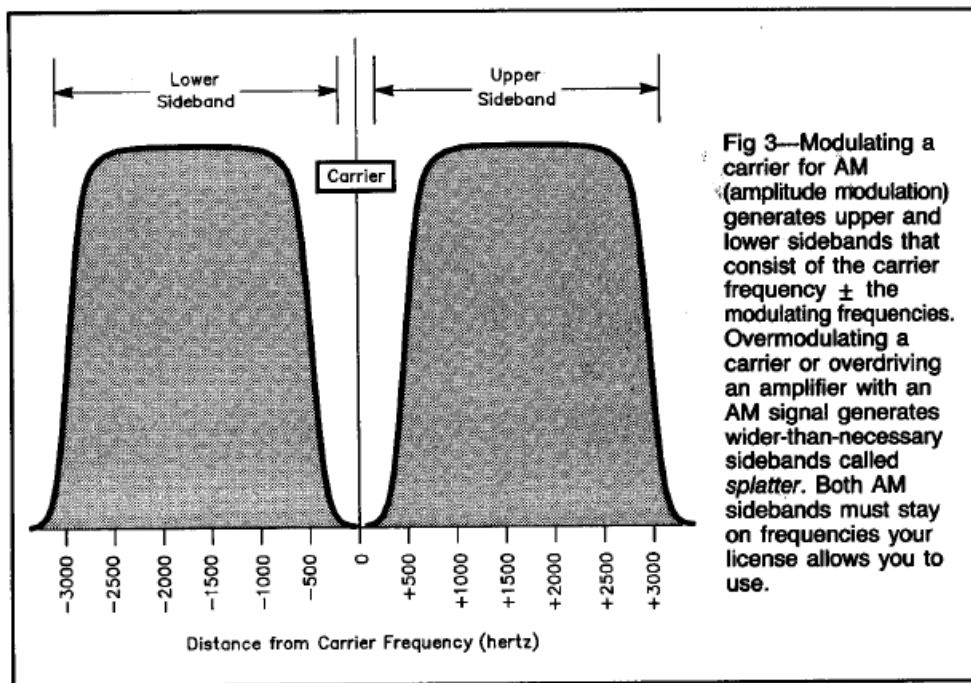
On a hunch, I tried to GOOGLE up articles/information about amateur radio tuning etiquette, where to tune radios and amps, how to tune radios and amps, and so forth. What I came up with, almost universally, is “**Be sure to pick a vacant frequency to tune.**”

While that is correct advice, it is severely lacking in detail, especially for the new HAM .

**Question:** I want to join a net on 7.185 LSB. Where should I set my VFO to first **listen** for a vacant frequency and then **tune up**? Pick the best choice of these three.

- A. 7.188
- B. 7.182
- C. 7.185

The best answer is A. If you know the reason *why*, you can stop reading now and I thank you for your patience. For all others, class is now in session.



Look at the figure above. It should look familiar even if you are newly licensed for HF. The figure shows an AM signal including the two sidebands and the carrier. For the purposes of our question, we are interested in the Carrier and the Lower Sideband.

When tuning, the radio is set to CW mode, either automatically or manually. In this mode my signal is centered on the frequency displayed on the VFO. This is represented by the Carrier in the figure. When I switch to Lower Sideband, the signal occupies 3KHz of bandwidth starting at the frequency displayed on the VFO and **extending down** in frequency. So, when the VFO reads 7.185, my LSB signal is present from about 7.182-7.185.

- If I tune right on 7.185, I am too close to the lower sideband and I will interfere with the net.
- If I tune anywhere between 7.182 and 7.185, I will be in the middle of the lower sideband and right on top of the net. OUCH!
- If I tune at 7.188, I will be 3KHz above the net, and provided that I listen first to make sure there is not someone else up there, I should not cause a problem.

For Upper Sideband the logic is reversed. The signal occupies 3KHz of bandwidth starting at the frequency displayed on the VFO and **extending up**. So, when the VFO reads 14.290, my USB signal is present from about 14.290-14.293.

- If I tune right on 14.290, I am too close to the upper sideband and I will interfere with the net.
- If I tune anywhere between 14.290 and 14.293, I will in the middle of the upper sideband and right on top of the net. OUCH AGAIN!
- If I tune at 14.287, I will be 3KHz below the net, and provided that I **listen first** to make sure there is not someone else down there I should not cause a problem.

In short, where you tune does matter.

Here is a little memory trick.

- **Upper sideband, tune lower.**
- **Lower sideband, tune upper (i.e. tune higher).**