Tuner's Topics

Single-Sideband Radio

by
SP4 Tuner Tropo

As promised in my last column, I have returned to discuss a real nitty-gritty topic. . .Single-Sideband (SSB) Radio.

SSB is not as scary as it might seem. In fact, it's been around (would you believe?) since 1915.

Figure 1 shows that a typical AM radio signal contains two sidebands (upper & lower) and a carrier. Figure 2 demonstrates an SSB signal which, for all intents and purposes, eliminates the carrier and the lower sideband.

Since SSB uses only one sideband, it needs eight times *less* power than an AM radio set in order to get the same results. This permits SSB equipment to be smaller and lighter than the older AM models. It is also more reliable, takes up less room in the frequency spectrum, and can transmit over great distances.

SSB can be used to send voice, teletype, and continuous wave (morse code) messages. Again, because of its size, SSB equipment is very portable and can be mounted in anything from a jeep to an airplane. New improvements can even permit it to be used as a manpack radio.

Some SSB sets can be used to work with older AM models, a capability called "compatible AM," but I don't want to bore you with any facts.

Just remember that, in general, SSB eliminates one of the sidebands and the carrier. That little trick allows us to use simpler equipment more effectively. . .and that's basically what SSB is all about.

See you next issue when I'll tackle. . .RADIO-WIRE INTEGRATION (RWI)!

Tuner

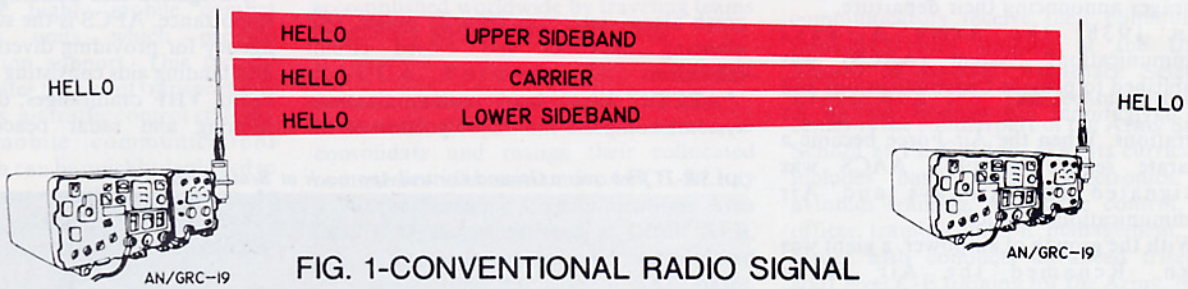

FIG. 1-CONVENTIONAL RADIO SIGNAL

FIG. 2-SINGLE-SIDEBAND SIGNAL