



The Amateur in You, Part 1

What have you been pondering?



The disruptive mode of FT8

In case you haven't heard of FT8, it's a digital data ham radio mode of communication, designed for *weak signal decoding*. Instead of using your voice to contact another ham, you use your computer or other digital communication device to make the contact with another FT8 station. FT8 can be used on any legal amateur data frequency, but is most often used on HF bands. It requires software that can control (and record) the exchange, and must be synchronized to an internet clock.

This weak signal decoding is one of the greatest strengths of FT8. Making a contact by SSB (single sideband) can be difficult if the signal is weak or accompanied by a relatively large amount of noise. Even DSP (digital signal processing) filtering can only help so much, before the signal strength is overpowered by the noise. FT8 uses FEC (forward error correction) and special DSP algorithms to distinguish a true signal from surrounding noise, and can therefore decipher signals far below the noise threshold of SSB.

Weak signal decoding has the advantage of allowing ham radio communication when conditions, such as sunspot numbers, are not favorable enough to support SSB. You might recall that [higher numbers of sunspots](#) will result in a greater amount of solar radiation, which promotes SSB propagation in the HF range. But even when sunspot numbers are low, FT8 can filter out the noise that hides the very weak signals, and make the contact.

Recently, FT8 has come under some criticism, due to the way it makes its contacts. It's possible, for example, that a station sending CQs on FT8 will get contacted and confirmed by a distant station running FT8, all without any user intervention from one or either end. The contention is that this method of making contacts doesn't seem like the ham radio that

we're used to. There's a feeling by some who have worked hard to obtain some award, such as DXCC, that this new method somehow cheapens their awards, thereby devaluing amateur radio as a result.

In my youth, I remember mowing many lawns so I could purchase the local ice cream fad : a Triple-decker Hecker. When I was finally able to pay for one, I saw another kid simply get handed one by his dad. Suddenly, I felt cheated, like all the work I had put into that cone was somehow devalued, cheapened. It wasn't until years later that my more mature self realized another person's experience doesn't need to define my own. For all I know, that kid completely deserved that cone, but I'm not his judge. I knew I had earned my Triple-decker Hecker, and once I realized nothing was going to change that, it was a lot easier to feel happy for somebody else's successes, because I stopped comparing them to mine.

Bottom line is that FT8 doesn't devalue amateur radio, but enhances it. I have a friend who has found **traditional** amateur radio very difficult, due to his speech impediment. When I introduced him to FT8, he thought he had finally found ham heaven, and really took off with it, because he could still enjoy one aspect of ham radio, without having to stumble over his words. Now, instead of enduring the embarrassment of having to repeat nearly everything he says, he sends his information, then reads the reply on the screen, and logs the contact.

So, FT8 might not be for *all*, but it's yet another way for *some* to do ham radio, especially if that's their only mode, and it's gaining popularity daily.

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