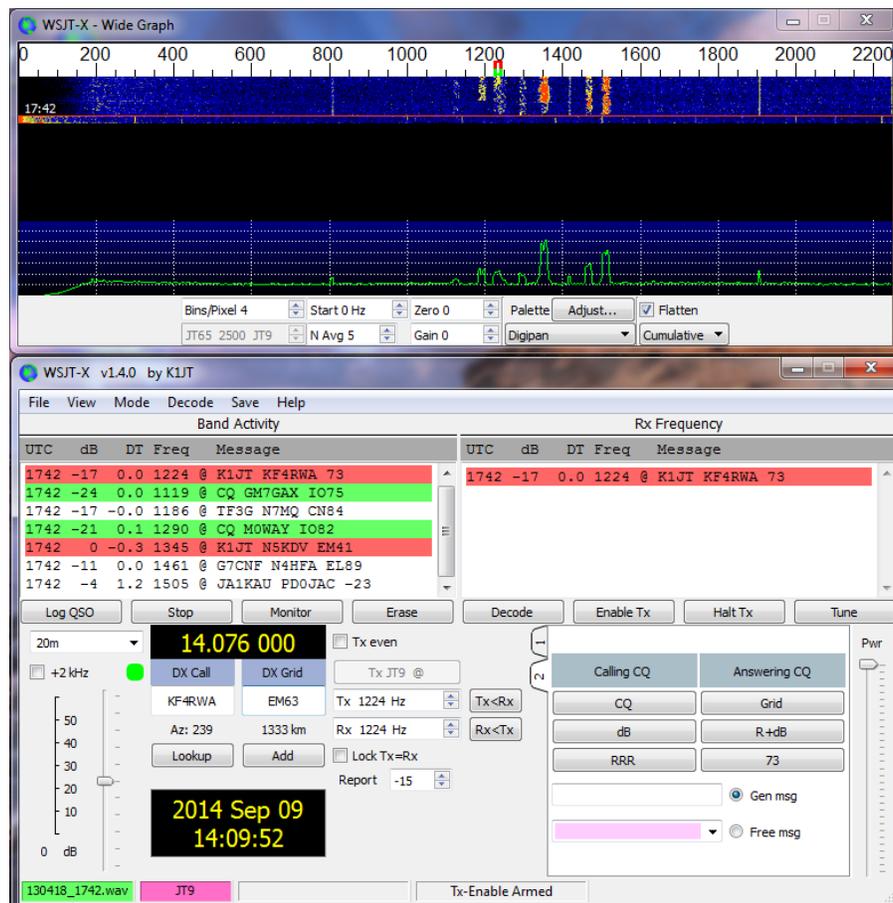


GREETINGS FROM THE NORTHERN ARIZONA MOUNTAINS DE K7UU

☰ MENU

What is FT8 & WSJT-X & how do I get started?

👤 by Kyle K7KE 📅 November 3, 2020



I am guessing that most of you reading this have either heard about FT8 from fellow Hams or heard it on air as that strange repetitive buzzing sound between the CW and SSB portions of the bands. A lack of sunspots has turned HF CW and SSB into a dead zone for many of us who don't operate super stations. As one of the fastest growing modes of Amateur Radio it has been hard to miss, but you may be wondering how to get started and why you would want to.

First, what is it? FT8 is one of the many digital modes often referred to as sound card modes (SCM) because they utilize a computer's sound card to bring in audio from your radio to be processed by software to decode the information embedded in the signal. Conversely, when you want to transmit, the software encodes your message into audio tones that are sent out via your sound card to your radio's audio or Mic input.

For years there have been a variety of these new **software modes** including Phase-shift keying (PSK31 & PSK 65), Hellschreiber, Olivia, Pactor, etc. and even older hardware-based modes such as RTTY that we now use our computers to encode and decode. FT8 is one of a group of Multiple Frequency-Shift Keying (MFSK) modes that include JT9, JT65 and MSK144 created by **Joe Taylor, K1JT** and co-developers.

Why would I want to operate FT8?

FT8 is designed to maximize communication ***even when signals are very weak (as low as -24dB)***. This means that even low-powered stations and stations with sub-optimal antennas can make contacts worldwide. **THIS IS MAGICAL**. A well equipped FT8 station only requires 25-50 watts and a modest antenna. Power amps are unnecessary and unwanted on the FT8 band segments. With its popularity quickly working **DXCC** or **WAS** with FT8 is easily within reach of almost any station. With FT8, activity is limited to a narrow band of frequencies, so it is ideal for use with loop antennas that

require retuning when changing frequency, such as CHAMELEON ANTENNA F-Loop 2.0 Portable HF Antenna ([CHA-F-LOOP-2-0](#)). FT8 is also extremely popular on the 6 meter band, so there are many opportunities for long-distance communication even with a Technician Class License.

Getting started with FT8

To use FT8 you need four things:

1. An **HF transceiver** with data or SSB capability
2. An **audio interface**, a way to get receive audio from the radio into a computer and audio output of the computer into the radio, typically a sound card interface
3. A **computer capable of running the FT8 software** and time synchronization
4. FT8 **software**

Radios

Although you can operate FT8 with older transceivers, the best experience will come by using a transceiver capable of both computer control and dedicated data mode. Fortunately, most modern radios have both of these. The extra feature that many of today's radios have is a built-in sound card, eliminating the need for the extra sound card interface. Many reasonably priced popular radios have this feature, including the ICOM 7300 ([ICO-IC-7300](#)), Yaesu Ft-991A ([YSU-FT-991A](#)) and Kenwood TS-590SG ([KWD-TS-590SG](#)). If you are looking for a mobile/base radio, the ICOM IC-7100 HF/VHF/UHF ([ICO-7100](#)) also has these features at a bargain price.

Audio Interface

If your current radio does not have a built-in sound card

interface, there are a few easy to use commercial devices available. West Mountain Radio's RIGblaster Blue is very popular.

Tigertronics line of [SignalLink digital interface devices](#) are popular as well. Personally I prefer West Mountain Radio's devices because of its superior tech support if you ever need help.

Another option is the [MFJ 1204 Series USB Digital Mode Interfaces](#). Again, choose one of five part numbers for interface and cable combos from DX Engineering to match your rig, connect to the radio, connect a single USB cable to your computer, and you are ready to go. Personal note: I have NOT had good luck with MFJ gear in the past. Your mileage may vary.

Computer and Software

[WSJT-X](#) is the most popular software for FT8. This great program is not only free but versions are available for Windows-based PCs and Macintosh OS, Linux (with pre-compiled Debian, Fedora and Raspbian distros). For details on installing and configuring the software, follow the online [WSJT-X User Guide](#). Do not ignore the information on making sure your computer's time is synchronized as this is vital to making contacts! After you install the software, you may also need to configure your radio's settings.

There are a number of great guides available for most models of radios. Examples include:

- [Ham Radio with KOPIR – Icom 7300 and 7610 SDR Transceivers](#)
- [Operating in the FT8 mode with the IC-7300 from FB News](#)
- [W6AWD- WSJT-X WITH THE IC-7100, 7200, 7300, AND 7410](#)

- [N1RWY- FT-991 SETUP FOR DIGITAL MODES](#)
- [W6PQL- FT991 and WSJT-X setup](#)
- [LAMCO Tech Video – TS-590SG WSJT-X](#)
- [Elecraft K3S on JT65/JT9/FT8/MSK144- Setting Up & Using](#)

Operating

An excellent guide on operating is “[FT8 Operating Guide Weak Signal HF DXing ... Enhanced](#)” by Gary Hinson ZL2IFB. Free helper software programs [JTAlert](#) (or for Linux [AlarmeJT](#)) provide many additional features for FT8 operations. Many consider [GridTracker](#) (not just for tracking grids) to be a superior program to JTAlert.

To FT8 or not is up to you. Wait about 10 years for CW and SSB propagation to come back on the HF bands, or do as I have for the last three years and have fun on FT8 now.

Just my 2 cents...

You can also find me on social media here:



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