



# FT8 VARIANTS

John Pinnell, VE2YNI

# Introduction

- FT8 is well known by many here. It is probably the most popular digital mode used today, Its creators; Joe Taylor, K1JT and Steve Franke, K9AN devised this digital mode to work with weak signals under difficult propagation. Their software package WSJT and later WSJT-X became the gold standard for using this mode.
- Like many good things there appeared many clones which use the FT8 principles with improvements. While I only use WSJT-X this presentation tries to portray these clones without prejudice

# FT4

- Ft4 is part of the WSJT suite, it started off as an experimental mode in 2019 similar to FT8 but has a faster T/R sequence, accomplished by increasing the bandwidth to 90 Hz and using Gaussian FSK.
- While it is twice as fast as FT8, it comes with a reduced sensitivity and as such, not as popular with DXers. Where it shines is during contests where the low hanging fruit can be gathered twice as fast.
- FT4 does not support Fox and Hound, probably because it was faster than FT8, and as such is rarely used by DXpeditions.

# JS8Call de KN4CRD (PC/Mac/linux)

- Originally called FT8Call it was renamed JS8Call (creator is Jordan Sherer).
- It is a derivative of FT8, which restructured the message passing by using a FSK modulation scheme called JS8. It allows for weak signal communications with a keyboard to keyboard interface, arguably a better choice to RTTY.
- The app is free to install, binary file are available at:
  - : <http://files.js8call.com/latest.html>
- The default frequencies are different from FT8 and can be heard on;
- 1.842 MHz, 3.578MHz, 7.078MHz, 10.130MHz, 14.078 MHz, 18.104. MHz, 21.078 MHz, 24.922 MHz, 28.078 MHz, and 50.318 MHz

# WSTJ-Z (PC only) de SQ9FVE

- This is a clone of WSTJ-X. It features
  - Modified user interface, including a larger Band Activity pane
  - Extended filtering features
  - Auto CQ and auto responding
  - QRZ.COM integration
  - Audio alerts
  - DXCC / Continent Filtering
  - US state filtering
  - Additional views of the decoded messages and additional callsign information
- The “auto CQ” means that after executing a QSO’s it continues to call CQ. This can be additionally defined where every station that is not in the logbook is called automatically. Not sure it is legal, I leave it to everyone whether he wants to use this feature or not. You can download at: <https://sourceforge.net/projects/wsjt-z/>

# WSJT-X improved de DG2YCB (PC/Mac/linux)

- DG2YCB is a member of the WSJT-X team and this appears to be his customized version basically has three different GUIs: WSJT-X's standard GUI, an alternative layout (AL) optimized for small screen sizes, and a widescreen version. The latter two provide a larger Band Activity window.
- It also has Wait & reply (will ensure second RR73 sent when not received by other station)
- Wait & call (the other station will be called up to three times as soon as they reappear on the band with their message containing "CQ", "73" or "RRR") great under severe fading
- Wait & pounce (Wait and Pounce lets you respond to incoming CQ messages from other stations can be filtered by prefix grid or call)
- the download and the notes to the revisions can be found at: <https://sourceforge.net/projects/wsjt-x-improved/files/>

# JTDX (PC and linex)

- Another WSJT-X derivative some of the features include
  - Additional FT8 and JT65 decoder options which can provide improved sensitivity
  - Advanced automatic sequencing and QSO selection features
  - Decoded messaging filtering features
- One claim is that on a crowded band JTDX seems to decode more signals than WSJT-X (doesn't mean you will be heard though..)
- Additional Information: <https://stationproject.blog/2019/03/01/jtdx-feature-rich-software-for-ft8-and-other-jt-modes/>
- Download at <https://sourceforge.net/projects/jtdx/>

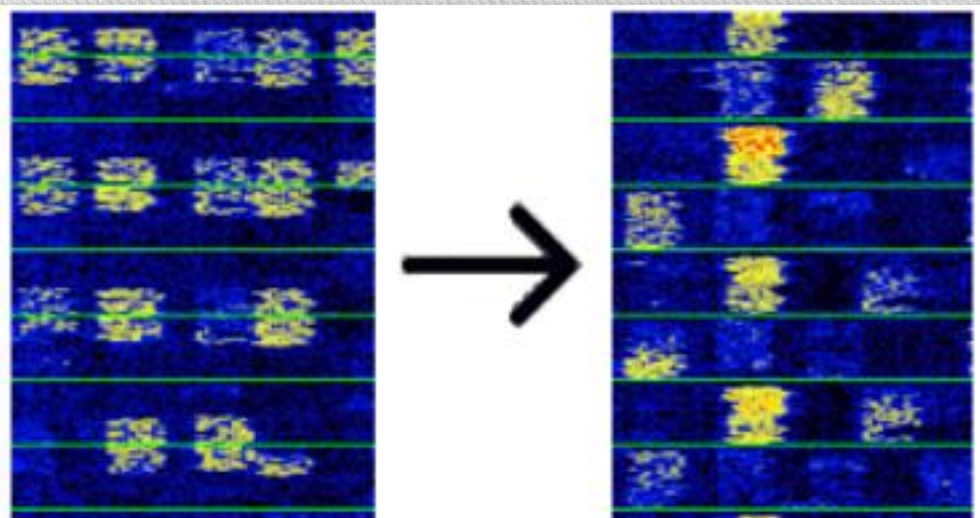
# JTDX improved de DG2YCB (PC/Mac/Linux)

- This is what happens when a WSJT-X gets his hands on JTDX, improvements include:
  - The GUI of the main window has been optimized. It is now similar to that of `wsjt-x_improved`
  - “FT8”, “FT4”, and “JT” buttons make it easy to switch between the frequently used modes
  - In the Wide Graph window, text of “Control” checkbox has been removed to prevent accidental ticking when setting lower audio frequencies.
  - Some bug fixes to the GA release. (Latest Hamlib files, etc.)
  - Band Hopping for FT8, FT4 and JT65! A new Tab 3 has checkboxes for the most important FT8, FT4 and JT65 frequencies. Just select the bands/modes you want and push the “Band Hopping” button. Automatic band hopping takes place every other full minute
  - Play individual alert sounds as notifications (“New DXCC”, “New Grid”, “Calling You” and so on). Note: This feature requires that your rig is connected via USB audio, and that this audio sink is NOT named ‘Default’.
  - Download at: <https://sourceforge.net/projects/jtdx-improved/files/>



# JTSync (PC only)

- Not a clone but nice to have if you can run it.
- JTSync is a simple utility that provides the ability to synchronize your computer clock over a network with world-wide NTP servers.
- But, when the Internet connection is not available, JTSync allows you to make time adjustments based on decoded QSOs within the WSJT-X application. This can help if you are on a DX Expedition.
- Software is freeware and can be found here as well more information: <http://www.dxshell.com/jtsync.html>



Pic courtesy of dxshell

# My take on the variants

- All the variants of WSJT-X seem to be window dressing, with the possible exception of JTDX / JTDX improved which might offer improved sensitivity.
- Personally I have spent enough time getting WSJT-X to play with JTBridge , my logging software, and getting it stable, that I don't have a burning desire to try the newer versions.
- The other factor is that I use a MAC computer for amateur radio, and this often limits the software available, Should JTSync (or an improved version) become available for a MAC, I will be first in line. Too many times I've seen a rare DX station several seconds off NTP servers and wished I could easily fudge my time to correspond with his...