



# GETTING STARTED ON FT8

BY STEVE FORD, WB8IMY

QST EDITOR

# WHAT IS FT8?

- FT8 is a digital communications mode with very good weak-signal performance.
- FT8 is NOT a conversational mode; you exchange only call signs, signal reports (in decibels) and grid square designations.
- Each transmission is only 13 seconds long.

## BUT DOESN'T JT65 COMMUNICATE THE SAME INFORMATION? WHAT IS THE DIFFERENCE?

- Yes, FT8 and JT65 are the same when it comes to the information exchange.
- However, FT8 is *much* faster with almost the same sensitivity.
- A complete JT65 contact takes almost 6 minutes.
- A complete FT8 contact takes just 90 seconds.
- Unlike JT65, FT8 is semiautomatic. Once an FT8 exchange begins, no operator intervention is necessary.

# FT8 IS INTENDED FOR AWARD CHASING AND PROPAGATION RESEARCH

- FT8 appeared in 2017 and it quickly became the #1 digital mode for pursuing DXCC, Worked All States, and other awards.
- Thanks to PSKReporter and other online signal-aggregation services, amateurs can easily see who is receiving their FT8 transmissions, and at what signal strengths.

On      using  over the last

Monitoring WB8IMY (last heard 7 mins ago). Automatic refresh in 1 minute. 189 reception reports for WB8IMY are shown as times ([show logbook](#)). There are **584** active FT8 monitors on 40m. [Show all FT8 on all bands](#) [Show all on all bands](#) [Legend](#)

**Rx at Tue, 17 Apr 2018 02:01:29 GMT**  
From **WB8IMY** by **WIKE** Loc EL09p122  
Frequency: 7.076 302 MHz (40m). FT8. -16dB  
Distance: 1655 miles bearing 245°  
Using: WSJT-X v1.9.0-rc3 r8576  
Antenna: FPA-20F-OCF Vertical

Map data ©2018 Google, INEGI 1:200 km

# WHAT DO YOU NEED TO GET STARTED?

- A computer
- An SSB transceiver
- A computer/transceiver interface (if your radio requires one)
- WSJT-X software

# ANY MODERN COMPUTER IS ADEQUATE FOR FT8

- However, the faster the better since a fast machine can decode much more quickly.

The screenshot displays the WSJT-X v1.8.0 software interface, a digital mode transceiver for FT8. The main window is divided into several sections:

- Band Activity:** A table on the left showing received signals. It includes columns for UTC, dB, DT, Freq, and Message. Several signals are highlighted in green, including CQ A92AA LL56 (Bahrain), KD4FW VE2MP 73, CQ N1FCC FN42 (U.S.A.), N7DPX W1KE 73, K0ZZ CM2LQV -15, CQ KC9LFD EN35 (U.S.A.), CQ PD8DX JO32 (Netherlands), and CQ CM2CD EL83 (Cuba).
- Rx Frequency:** A table on the right showing received signals. It includes columns for UTC, dB, DT, Freq, and Message. Several signals are highlighted in yellow, including CQ A92AA LL56, A92AA WB8IMY FN31, A92AA WB8IMY FN31, CQ A92AA LL56, A92AA WB8IMY FN31, CQ EU WOQL DM79, WOQL WB8IMY FN31, WB8IMY WOQL -07, and WOQL WB8IMY FN31.
- Controls:** A central area with buttons for Log QSO, Stop, Monitor, Erase, Decode, Enable Tx, Halt Tx, and Tune. There are also checkboxes for Tx even/ist, Hold Tx Freq, Auto Seq, and Call 1st.
- Frequency and Power:** A section on the left shows the current frequency (7.074 000) and a power meter (40m). A date and time display shows 2018 Apr 17 02:01:33.
- Generate Std Msgs:** A section on the right with a list of standard messages and a 'Next' button. The messages include WOQL WB8IMY FN31, WOQL WB8IMY -11, WOQL WB8IMY R-11, WOQL WB8IMY RRR, WOQL WB8IMY 73, and CQ WB8IMY FN31.

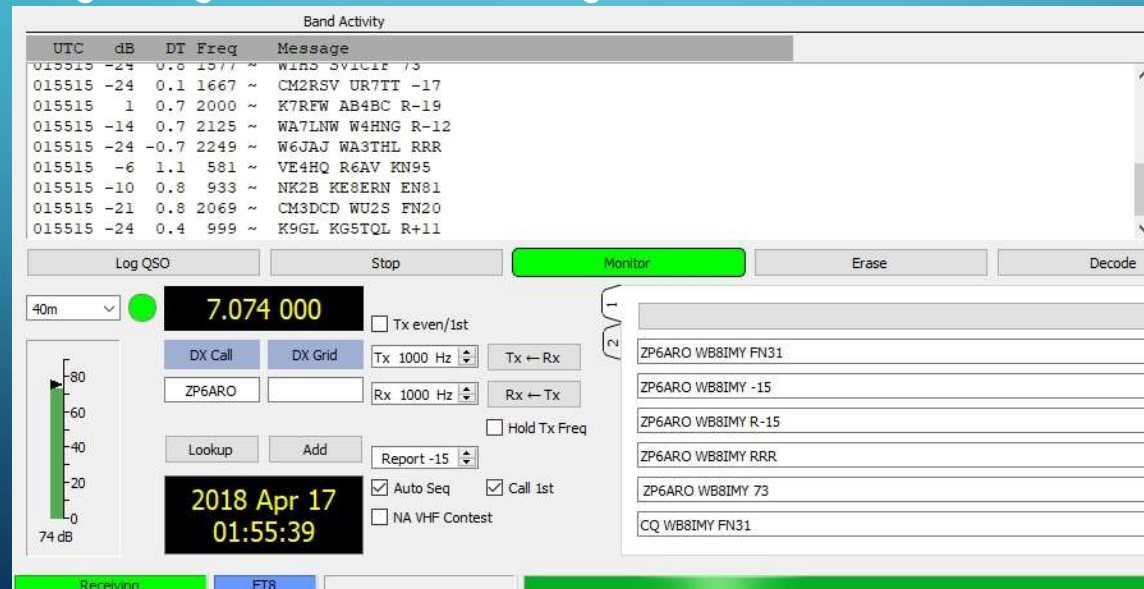
The status bar at the bottom indicates 'Receiving' and 'FT8' mode, with the last transmission being 'Last Tx: WOQL WB8IMY FN31'.

# MOST MODERN SSB TRANSCEIVERS ARE GOOD FOR FT8 AS WELL.

- For FT8 the key is frequency stability. If your transceiver drifts too much, you won't be able to decode signals – and others won't be able to decode *you*!

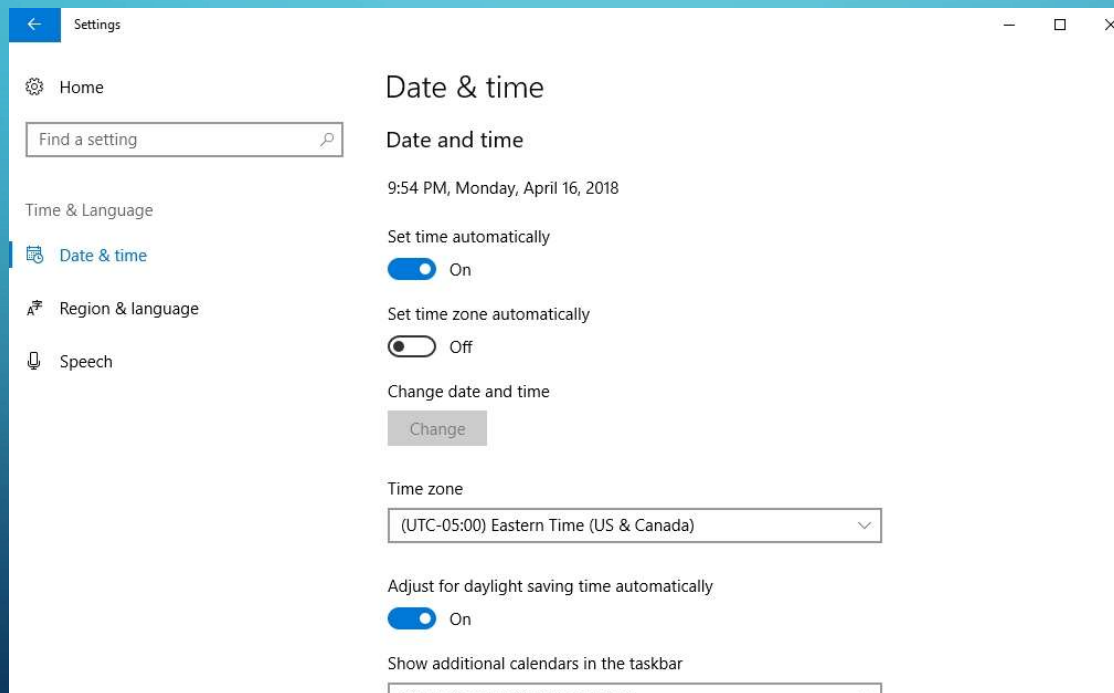
# TIME IS CRITICAL AS WELL

- Your computer clock must be accurate to within about 2 seconds or you won't be able to decode FT8 signals, or vice versa. Notice the “DT” column below, which indicates the time disparity between stations. R6AV is 1.1 seconds out of sync, which is getting close to becoming excessive.



# MOST COMPUTER CLOCKS “DRIFT”

- Force Windows to recalibrate its time
- Or use software such as Dimension4 to keep your computer time in sync.



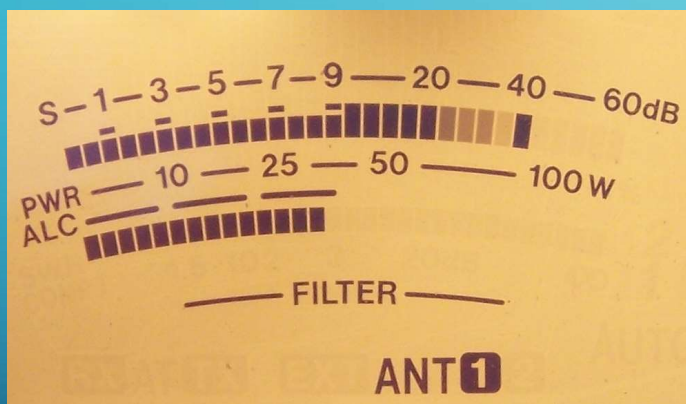
# INTERFACES

- Almost any interface will do. Also, several transceiver models will now interface directly to your computer without the need for another device.



BE CAREFUL NOT TO OVERDRIVE YOUR RADIO

REDUCE TRANSMIT AUDIO IF YOU SEE TOO MUCH ALC  
ACTIVITY



# WSJT-X SOFTWARE

- FT8 is part of K1JT's WSJT-X software suite.
- It is free and available for Windows, Mac OS, and Linux
- <https://physics.princeton.edu/pulsar/k1jt/wsidx.html>

FOR MORE INFORMATION, PICK UP THE SECOND EDITION  
OF ARRL'S *GET ON THE AIR WITH HF DIGITAL*

