



Frequency Measuring Test — November 2021

Due to a high solar flux, two stations will cover North America.

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Solar Cycle 25 is causing an increased number of sunspots, but a higher solar flux makes propagation a little more difficult on the lower bands. Because of this, the Frequency Measuring Test (FMT) will use a dual-station format this November. This should give stations throughout North America an opportunity to receive and measure a strong signal.

If you've never entered an FMT before, information on how to measure the frequency of a carrier is available at www.k5cm.com.

Measurement Software

The free software tools available are quite advanced. If you're already using the *WSJT-X* suite on FT8 or WSPR, you can use its frequency calibration mode as a sophisticated frequency measuring tool. George Allison, K1IG, discusses how to use *Spectrum Lab*, *fldigi*, and WSPR

for FMT measurements at www.ve2azx.net/technical/FreqCal.pdf.

Additionally, Joe Taylor, K1JT, explains how to use *WSJT-X* for frequency measurement in *Accurate Frequency Measurements with your WSPR Setup* (physics.princeton.edu/pulsar/k1jt/FMT_User.pdf).

FMT Schedule and Format

The FMT "runs" will start with a call up at 0230 UTC on November 12 (Thursday evening in North America). FMT Manager Connie Marshall, K5CM, notes that the call up may start earlier than the listed times to establish a clear frequency, if necessary, but every effort will be made to start the key down transmissions at the published time in Table 1. A single, unmodulated carrier will be transmitted near those FMT frequencies.

K5CM will transmit from Oklahoma, and Michael Suhar, W8RKO, will transmit from Ohio. Be prepared to

tune to find the call up transmissions, if necessary.

Similar to last year, there will be a slight shift in the frequency to be measured. You'll hear the frequency shift shortly after the call up. The test transmission will be near (but not exactly on) the call up frequency. One measurement for 40 meters and one reading for 80 meters should be submitted.

Submit your measurements using the data entry website at fmt.arrl.org/fmtenry.php. Results will be published immediately following the data entry deadline, 0200 UTC on November 15 (Sunday evening, November 14, in North America).

Table 1
Frequency Measuring Test Schedule

*Start: November 12 at 02:30 UTC
(Thursday evening in North America)*

*Results: Submit measurements online
until November 15 at 02:30 UTC
(Sunday evening in North America)*

40 Meters: K5CM near 7064 kHz
02:30 Call up
02:33 Key down
02:34 End 40-meter run

40 Meters: W8RKO near 7064 kHz
02:45 Call up
02:48 Key down
02:49 End 40-meter run

80 Meters: K5CM near 3598 kHz
03:00 Call up
03:03 Key down
03:04 End 80-meter run

80 Meters: W8RKO near 3598 kHz
03:15 Call up
03:18 Key down
03:19 End 80-meter run

If there's interference on the published frequency, tune around to find the FMT transmissions.

The screenshot shows the ARRL FMT Data Entry website. The form includes fields for Name, Call Sign, QTH, Grid Square, and E-mail Address. It also has a section for Measured Frequencies (Hz) with columns for 30m, 40m, and 80m bands. There are checkboxes for K5CM and W8RKO. A section for FMT Equipment/Method is present, along with a Soapbox section. The form has Submit and Clear buttons.

The online data entry form is available at fmt.arrl.org/fmtenry.php. Please include notes and observations about making your measurement, including the equipment used and any special techniques. Results are published immediately following the submission deadline.