

Frequency Measuring Test — November 2020

Updates to the popular two-session format.

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This November, a new detail will be added to the venerable Frequency Measuring Test (FMT). In past FMTs, the test transmission was made on the same frequency as the call up transmissions. In this year's FMT, the test transmission will be close to the same frequency as the call up, but not exactly the same frequency. The test signal will be somewhere within ± 10 Hz of the call up. You'll be able to hear the frequency shift a little bit. In addition, the test period is reduced from 2 minutes to 1 minute.

The two-session, early run/late run format remains the same. Geomagnetic conditions and sunspot activity are expected to be similar to last year, so stations on both the east and west coasts will have a

good chance to make a solid measurement.

To keep reporting reasonably fair, the minimum resolution recognized in the result's green bar will be measurements within 1 Hz of the actual test frequency.

Making the Measurement

You don't need special lab equipment to enter the FMT. Modern HF transceivers can make frequency measurements quite accurately, as can SDR transceivers and PC software.

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

FMT Schedule and Format

The FMT "runs" will start with a call up at 0200 and 0500 UTC on November 13 (Thursday evening in North America). FMT Manager Connie Marshall, K5CM, notes the call up will start earlier than the listed times to establish a clear frequency, if necessary, but every effort will be made to start the key down at the

published time in Table 1. A single, unmodulated carrier will be transmitted near (but not exactly on) those FMT frequencies.

Transmissions will be made from K5CM in Oklahoma, giving the entire continent an opportunity to receive and measure a strong signal. It's okay to make measurements during both the early and late runs, but only one frequency for 40 meters and one frequency for 80 meters should be reported.

Be prepared to tune to find the call up transmissions, if necessary. The call up frequencies will be the same for both early and late runs, so be patient and K5CM will start as soon as the frequency is clear enough for measurements.

Submit your measurements using the data entry website at fmt.arrl.org/fmentry.php. Results will be published immediately following the data entry deadline, 0200 UTC on November 16 (Sunday evening, November 15, in North America). Be sure to describe your setup when you submit your measurements online, too.

Table 1
Frequency Measuring Test Schedule

Start: November 13 at 02:00 and 05:00 UTC (Thursday evening in North America)

Results: Submit measurements online until November 16 at 02:00 UTC (Sunday evening in North America)

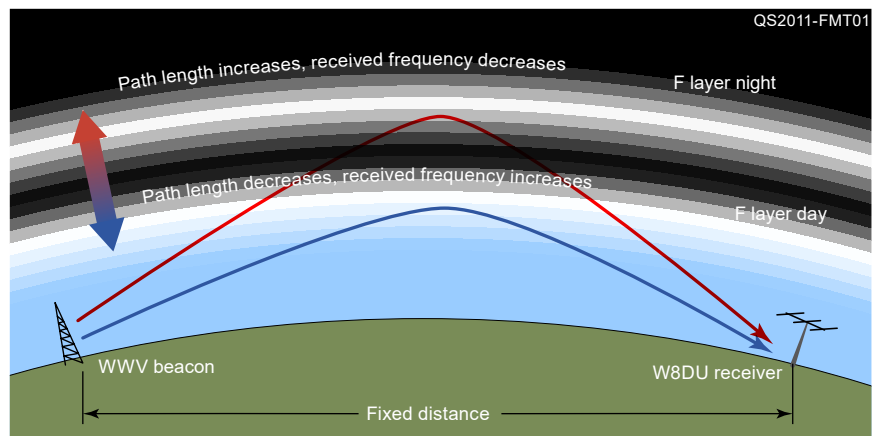
Early Run: 40 meters near 7064 kHz
02:00 Call up
02:03 Key down
02:04 End 40-meter run

Early Run: 80 meters near 3598 kHz
02:20 Call up
02:23 Key down
02:24 End 80-meter run

Late Run: 40 meters near 7064 kHz
05:00 Call up
05:03 Key down
05:04 End 40-meter run

Late Run: 80 meters near 3598 kHz
05:20 Call up
05:23 Key down
05:24 End FMT

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



During an annular solar eclipse in the eastern hemisphere on June 21, 2020, HamSCI volunteers made frequency measurements assessing the Doppler effect due to the motion of the ionosphere's refracting layers. Learn more about the experiment at <https://hamsci.org/june-2020-eclipse-festival-frequency-measurement>.