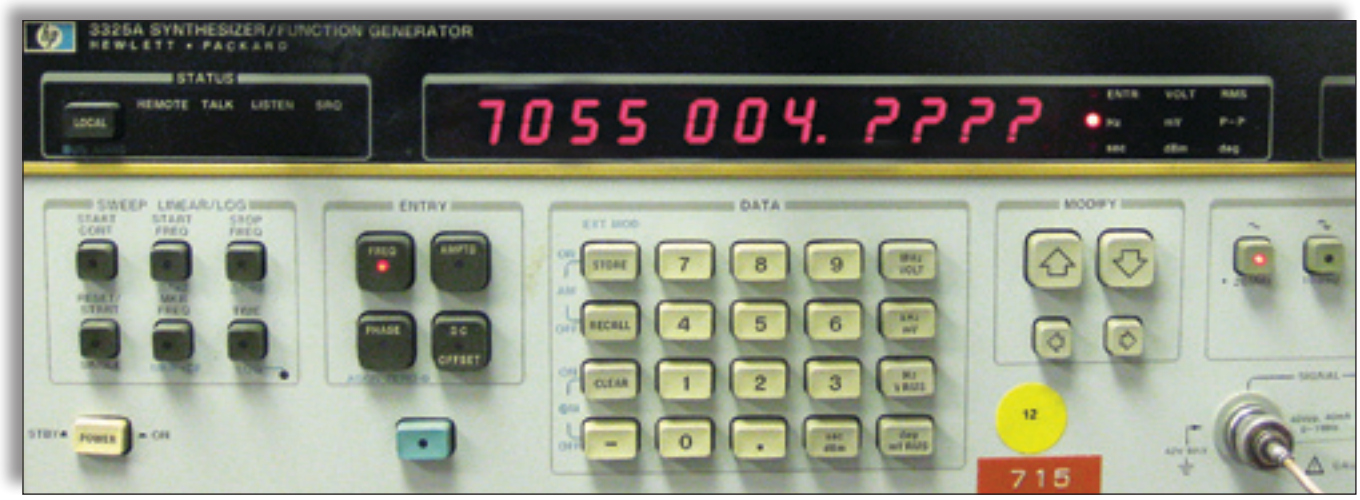
Frequency Measuring Test 2010



Are you the most precise ham in America? Only the FMT can tell.

H. Ward Silver, NØAX

The ARRL Frequency Measuring Test (FMT) returns to the airwaves on the evening of Wednesday, April 21 (April 22 UTC) but without W1AW. Volunteer stations whose specialties lie in frequency stability and timing accuracy have stepped up to coordinate the FMT program. Led by Connie Marshall, K5CM, the group includes the stations of the Midwest VHF/UHF Society, W8KSE; FMT veteran Mike Fahmie, WA6ZTY, and Marvin Charles Collins, W6OQI. Thanks to these experts for taking the initiative to raise the bar for the venerable FMT.

Schedule

All times are in UTC on April 22. For example, 0215 UTC is 10:15 PM Eastern Daylight Saving Time on the evening of April 21.

Station	*Test Begins*	*Frequency*
W8KSE	02:15 UTC	7055 kHz
	02:30 UTC	3575 kHz
K5CM	02:45 UTC	7078 kHz
	03:00 UTC	3578 kHz
WA6ZTY	03:15 UTC	7097 kHz
W6OQI	03:30 UTC	7067 kHz
	03:45 UTC	3567 kHz

Test Format

The test will begin at 10:15 PM EDT — a compromise time that is comfortably after dark on the East Coast but still an hour before sunset on the West Coast. The test begins with transmissions from W8KSE (Ohio), then from K5CM (Oklahoma), followed by WA6ZTY (northern California) and W6OQI (southern California) to give everyone at least two measurement periods during hours of darkness.

The Frequency Measuring Test will be conducted in the "classic" format — measuring the frequency of an unmodulated carrier. Accurate frequency measurement is required of all hams for both regulatory compliance ("stay in the band") and operating convenience, particularly on the new digital modes.

The basic techniques for making carrier frequency measurements are the same as described in the FMT announcement for 2002.[1] (All previous "how-to" FMT announcements, results and an FAQ list are available for download from **www.arrl.org/frequency-measuring-test**.)

You don't need a basement full of sophisticated lab equipment to make a surprisingly accurate measurement. The frequency accuracy of most radios sold in the past decade is specified as ±10 ppm or better. By calibrating your radio to a known frequency reference such as WWV (**www.boulder.nist.gov/timefreq/stations/wwv.html**) or CHU (**www.nrc-cnrc.gc.ca/eng/services/inms/time-services/short-wave.html**) and letting the radio reach an even, stable temperature, your measurements can be within 1 ppm or even better. (The 2006 FMT announcement includes a sidebar on calibrating your receiver to an over-the-air frequency reference.)[2]

Transmission Format

There will be a 4 minute general call up made by each station beginning at the time shown in the Schedule table. Following the call, there will be a 3 minute "key-down" transmission after which the station will identify and then change bands. There will be several minutes between each set of transmissions.

Results Submission

Following the test, browse to the FMT Results Web page maintained by Bruce, WA7BNM, at **www.b4h.net/fmt/index.php**. Your measurements must be posted by 10 PM EDT on April 25. The results will be automatically calculated and posted on that Web page. Be sure to include Soapbox comments and a description of your equipment and technique. Good luck! QST

[1] **www.arrl.org/files/file/0210051.pdf**
[2] **www.arrl.org/files/file/2006fmt.pdf**