

# Preliminary Results: 2003 W1AW FMT – November 19, 2003

[This information gives a snapshot of the 2003 W1AW FMT. Additional information, such as call area breakdown, list of closest measurements (in ppm) etc., will soon appear in the upcoming days ahead.]

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On November 19, 2003 at 9:45 PM EST, W1AW sent a series of tones (and Morse Code) on four (4) amateur bands. The event did not give out the exact frequencies on which W1AW was transmitting; rather close approximations. The purpose of this “test” was for amateurs to measure as close as possible the transmitted frequencies. One of the goals was not only to exercise the capabilities of amateurs to properly measure frequency, but also to measure (if you will) their understanding of the characteristics of a signal. (For more information on this, please see *The 2003 ARRL Frequency Measuring Test*, November 2003 *QST*, page 65, or the ARRL web page at, <http://www.arrl.org/w1aw/fmt/2003/Silver-FMT.pdf> . Additional information can also be found at <http://www.arrl.org/w1aw/fmt> .

## How were the transmissions performed?

For the test, W1AW used four (4) Harris RF-3200 exciters and Harris RF-3230 power amplifiers. Each amplifier was running approximately 1kW. The exciters were keyed simultaneously using the standard W1AW bulletin/code practice program and keyer matrixes. The frequencies were measured using an Hewlett Packard 5345A Frequency Counter, with a 10 MHz signal reference supplied by a Hewlett Packard Z3801 GPS/Frequency Standard. The test consisted of 60-second key-down transmissions, followed by a series of dits, followed by station identification.

The frequencies on which W1AW was transmitting were as follows:

80 meters:	3585383.7 Hz
40 meters:	7050409.9 Hz
20 meters:	14050075.7 Hz
15 meters:	21053399.1 Hz

There were 214 submissions. This is up approximately 57% from 2002 (with 137). The entries came from 41 states, as well as some Canadian provinces, one amateur from the Ukraine and one SWL.

Given the band conditions at the time, 40 and 80 meters, respectively, had the most entries, with 187 on 40 meters; 179 entries on 80 meters; 73 on 20 meters; and 39 entries on 15 meters. Obviously, a number of amateurs were able to measure W1AW’s transmissions on more than one band.

In terms of closest measurements (+/- 1 ppm) the submissions are as follows:

80 meters	79 entries
40 meters	89 “
20 meters	29 “
15 meters	12 “

For all those who copied W1AW on all four (4) bands, only seven (7) amateurs came within +/- 1 ppm (or less) of our transmitted frequencies. They are **K3YZ**, **KG4TWQ**, **KR4M**, **N9AB**, **VE2IQ**, **VE3OAT** and **WA2IKL**.

Thanks to those who participated in the *2003 ARRL Frequency Measuring Test*!