

2016 ARRL EME Contest Results

Last year's contest brought in more logs and more 432 MHz activity.

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Following the delightful August 2016 International EME (Earth-Moon-Earth) Conference in Italy, hams from around the world aimed their antennas at the Moon. They were waiting for the first weekend of the ARRL EME Contest, dedicated to the bands at and above 2.3 GHz. Stations were active using all modes on bands through 10 GHz. Some simply started calling CQ or responding to other's calls. Other operators took advantage of the ability to self-spot their signals using various online chat rooms or other means.

Logs and Reports

The number of log entries has continued to climb over the past few years, with 163 submissions in 2016 — an increase of 25% from 2015. Twenty percent of the entries were CW/SSB only, while the rest were all-mode or digital only. Although the majority of EME contest participation is by DX stations, 45 of the 163 submitted logs (28%) were from US call signs.

The most significant component in making EME QSOs is the antenna, optimized for gain and Moon-tracking. Next is a high-gain, low-noise preamp, preferably mounted as close to the antenna as possible and protected from transmitted power with relays. With the ease of adding an inexpensive USB dongle or a software-defined radio (SDR), the



A forest fire erupted in Gary's, N8CQ, neighborhood, sparked by an electrical fire in a nearby house. The county firefighters and their trucks arrived to put it out and prevent any damage to his station. [Gary Abercrombie, N8CQ, photo]

excitement of moonbounce communication is within reach of every VHF-equipped ham. Doug McArthur's VK3UM (SK) EME calculator (www.vk3um.com/eme%20calculator.html) is a most useful tool for planning the antenna and power needs for making moonbounce contacts.

More and more VHF operators are finding that they can make EME contacts with modest modifications to their existing stations. Several stations were able to make contacts with single Yagis and modest power in the 200 – 400 W range. Using a bit more power, Matej, OK1TEH, managed to make 30 contacts on CW and digital modes with a single 23-element Yagi and 800 W. Victor, UA1OEU, used a single 18-element Yagi and 1 kW of power to make 39 contacts on 144 MHz.

The "hottest" station on the air was Gary's, N8CQ, due to a fire in his neighborhood. His 9.2-meter dish on 1296 MHz helped him make 37 contacts. A rare DX entity was activated on

144 MHz and 432 MHz as Chris, PA2CHR, and Jos, PA3FYC, put together a portable operation, E44CM, in Jericho, licensed by the Palestinian National Authority. Together, they managed to make 95 contacts using digital and CW for a score of 551,000 points, creating quite a pileup while active.

Future EME Activity

As more hams discover the excitement of EME, sending and receiving signals that have travelled almost 500,000 miles in space, we are seeing increased moonbounce activity with each passing year. Continued improvements in technology for higher transmit power and receiving weaker signals have improved the opportunity for various achievements, such as WAS and DXCC on the VHF, UHF, and microwave bands. The recent release of Joe Taylor's, K1JT, WSJT-X suite of digital communications programs, including QRA64, will also enable smaller stations to get into the action and make contacts.

The 2017 EME weekends are September 9 – 10 for 2.3 GHz and up, and October 7 – 8 and November 4 – 5 for 50 – 1296 MHz. Although there are other on-the-air activities those weekends, these are ideal Moon position weekends, enhancing EME signals. Please participate, and remember to submit a log of your activity. The full EME contest results are available online at www.arrl.org/contest-results-articles.

Thanks to my spouse, Jani, for editing assistance and to all the EME Elmers who have helped me get my signals on the Moon. Thanks also to everyone who sent me reports and photos of their activity.

Total Reported EME QSOs by Mode

Digital	6,048
CW/Phone	2,616
Total	8,664

Total Reported EME QSOs by Band

144 MHz	4,080
432 MHz	1,332
1296 MHz	2,707
2.4 GHz	285
3.4 GHz	27
5.7 GHz	72
10 GHz	161
Total	8,664