Contest Soapbox

2005 ARRL International EME Competition

14 Soapbox entries available

WA6PY -- Mar 2, 2006 10:43 ET

WA6PY 10 GHz dish

Paul WA6PY made an outstanding score with this very simple antenna system: 12' dish on 1296 MHz, 2 x 19 element yagis on 144 MHz (partially seen), 10' dish on 10 GHz and a dish feed with a bunch of directors on 432 MHz. He only operated CW, unassisted.

I always have a lot of fun operating the EME contest. So far, my antennas are manually tracked; this makes operation even more exciting. On 2.3 and 10 GHz I am tracking for maximum moon noise. My window to Europe is much shorter than for East Coast stations and I have to run QSO's as quick as I can. I hope to be able to solve the problems with the CC&R antenna restrictions in the near future. This will enable me to get my big dish back in operation.

The crossed yagi for 70 cm was made using DJ9BV directors based on a 8.5 WL prototype with modifications of the first 9 directors to match to the dual dipole feed excitation section. This is not perfect, but it was the easiest way to use my old existing dual dipole feed with all switching controls, coax cables and relays.

The 144 MHz yagis are old 19 el Cushcrafts from 1981, modified per VE7BQH design. This makes basically an entire new antenna design. All the elements have different length and positions. I also used a different balun than the original made of 7/8: 72 ohm heliax cable. This helped me to lower the side lobes and noise plus interference when I elevate this antenna. Unfortunately, due to my local limitations, vertical stacking is only 3 meters and I am losing about 0.8 dB of gain.

I rebuilt first one yagi in 1996 when I came to San Diego, and I was QRV with single yagi from a rented house. At that time, I worked single yagi to single yagi stations on 144 MHz CW and if I remember right two QSO's with two yagi stations. -- *WA6PY*

VA3TO -- Mar 2, 2006 10:41 ET

After some careful research and planning, I finally finished assembling my very modest EME station at the end of August 2005. Using a pair of vertically polarized home-brew K1FO-12 yagis with a total gain of about

Hugh VA3TO array pointing to the moon

15dBd (roughly equal to one long boom yagi) and a 160 watt brick amplifier, I was able to make quite a few WSJT contacts. That was exciting in itself but the real thrill came during the fall ARRL EME Contest.

I figured that the Contest would be a good opportunity for me to check if my small station could at least hear some CW EME activity so I tuned up and down the band and to my amazement heard W5UN calling CQ on 144.041 MHz. Without any great expectations I decided to reply to Dave's CQ and lo and behold got "QRZ" back from him. I sent our callsigns again and the next reply from Dave was "VA3TO W5UN OOO". I couldn't believe that he was hearing me with my 15dBd and 160 watts! We completed the contact and I was so blown away that I e-mailed Dave to confirm that I wasn't hearing things and sure enough, he confirmed it. It was so unexpected that I never bothered to set up the computer to record our QSO. (I do have recordings of Dave calling CQ just after our QSO.) During the second leg of the contest I heard IK3MAC calling CQ around 144.045 MHz. I replied to his call and he came right back to me and we completed the contact quickly. Wow...my second CW EME contact! I was on top of things this time around and managed to get a WAV file recording of our QSO. I later heard F3VS and tried replying to him but heard nothing but "QRZ" back. I also heard IK2DDR and SV1BTR in QSOs near the end of their visible moon but quickly lost them before I could try to work them.

Well, I had proven that my small station could not only hear CW stations off the moon but I managed to complete a couple of contacts using my QRP setup. This is the coolest! I am very much aware that the 2 stations I did work are among the largest operating 2m off the moon and completing more contacts will be increasingly difficult. I've since attempted skeds with IK2DDR and SV1BTR where they heard me but I could not hear them so I am realizing the challenges of one-way conditions and other degradation factors that can make or break a successful contact, especially for a small station like mine. Nonetheless, the thrill is still with me. By no means am I a contest contender this time around but I submitted my results to confirm the contacts and had fun in the meantime. -- *VA3TO*

SV1BTR -- Mar 2, 2006 10:39 ET

Jimmy SV1BTR uses this array for an outstanding signal on 2 m EME

I am pleased with my 2005 score in the contest as it has further improved from last year and got really close to a million points. All QSO's were made on CW random and unassisted.

I hope that the ARRL will introduce and enforce strict rules for Assisted operation as there are a lot of solicited QSO's and exchange of QSO progress information during the course of the contacts. This takes place in loggers and clusters for digital EME. This, while totally unacceptable, is unfortunately true for many participants as well as third parties relaying such information on reports, etc.

I also believe that the full list of results for a major EME Contest should be published in the QST magazine. The results, both in QST as well as the ARRL web site, should

SV1BTR 70 cm EME antenna

contain mode used and number of QSO's per mode for all entries and classes.

My EME station consists of 16 x 6 element cross-polarized yagis (21.5 dBd) on 2 meters and 8 x 26 element yagis (25.8 dBd) on 70 cm. I am located in KM18NO. -- *SV1BTR*

RA3AQ -- Mar 2, 2006 10:38 ET

RA3AQ crossed yagi array for 144 MHz EME

It was my second ARRL contest since I'm SERIOUSLY active on EME. The contest was really fun. During the first leg quite high degradation made working QRP stations more difficult, but during the second leg was really fun. QSOs with QRP stations were really easy. I was not focused on CW because I'm using "only" a GS-35B amplifier and it's not enough to be a big gun on this mode.

My antenna is a 6x6.3WL crossed yagi array (26dBi) designed and built by myself. I use 1/2" cable phasing lines and 20 meters of 7/8" feeder cable. The preamps are located in shack.

Pictures of my antenna can be found at http://www.vhfdx.ru/component/option,com_zoom/Itemid,99/c -- *RA3AQ*

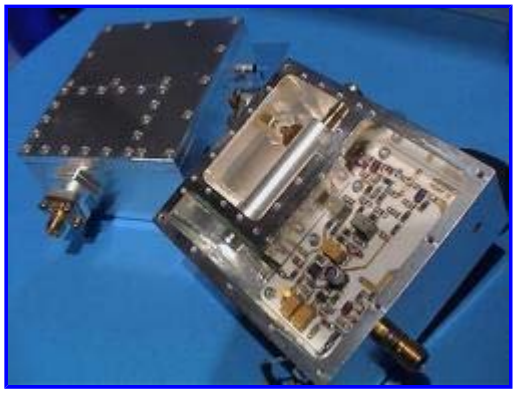
HB9Q -- Mar 2, 2006 10:29 ET

The impressive antennas at HB9Q club station: 50 foot dish for 432 and 1296 MHz plus 8 x 19 elements for 144 MHz

We had a great time working QRP and QRPP stations. We did use our 15m dish on 432 with a KW and on 1296 with 200W at the feed. On 144 we used the 8x19 yagis and a KW. Visit our home page at www.hb9q.ch for detailed log and information about QRP-EME! -- *HB9Q*

Closer view of HB9Q's dish

HB9BBD -- Mar 2, 2006 10:26 ET



Dominique HB9BBD homebrew low noise amplifier for 1296 MHz

HB9BBD dual-mode 1296 MHZ feed ready to go after careful testing in his lab (note the heavy-duty amplifiers in the background)

Dominique had one of the strongest signals on 1296 MHz, and won the single operator 1296 MHz band operating unassisted. He came close to a record number of QSOs with 97 contacts (the record is 98). -- *HB9BBD*

HB9BBD feed mounted at the focal point of his 33' dish

G3LTF -- Mar 2, 2006 10:24 ET

Peter, G3LTF, changing feeds on his 6m polar-mounted dish. He can change bands in about 15 minutes

My main comment on the contest is that we should in future separate out the digital modes; it will be interesting to see how the Dubus experiment at this goes. -- *G3LTF*

K1SG -- Jan 26, 2006 13:51 ET

My first EME contest (and my first season on the moon)...2 weekends of operation on 6 meter EME, and only 7 contacts to show for it, but it was fun and educational for me. As with almost everyone else, my conclusion is, I need more aluminum! Steve K1SG -- *K1SG*

KD3UY -- Dec 29, 2005 15:13 ET

I would like to thank the ARRL for the fine contest. I had a lot of fun! In particular, the addition of the Assisted Category was a good rule change for me, I would not have participated otherwise. There has been much discussion regarding separate categories for CW, Digital and mixed. My vote would also be for separate categories, whether on the same day or different days. However, if the rules stay the same, that is also fine with me, I will certainly enter next year.

My station is small, just two 4 wavelength yagis. My biggest handicap is trees. I do not clear the trees until about 15 degrees of elevation so I never get ground gain. On the plus side I do have polarity rotation, which certainly resulted in more successful qsos. Although I had no smoke producing Murphy attacks during the contest, I did get a TVI phone call from my neighbors on the second weekend, necessitating a strategy change. Instead of much CQing, I spent my time hunting new multipliers and calling them with as little power as possible. This probably hurt my score some but not too bad. Now my neighbors have a nice filter which completely stops the TVI, so more

CQing next year.

My efforts this year were single Op, all 2M, all digital - 62 qsos, 39 multipliers, for 241,800 points. In the coming year I hope to improve my ability to scan for digital EME signals and hopefully run unassisted next year. Since this was my first contest in a decade (my first and only previous contest was an AMSAT contest in the days of Oscar 13), my primary goal was to not humiliate myself. For a puny 2 yagi station I think I did OK, and I had fun! -- *KD3UY*

I1NDP -- Dec 16, 2005 11:58 ET

I1NDP antenna/QSL card

First real participation to the contest and therefore a modest result and unable to give a comment on conditions but for sure very heavy fight against Faraday rotation with quite a few of useless answers, especially to JA & US, CQ calls.

My power was about 1kw and 8 * 39 antenna.

Still a lot of work to do in the antenna system which is not too convincing but very exciting experience. -- *I1NDP*

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Page author: n1nd@arrl.org