The 144 MHz EME NewsLetter

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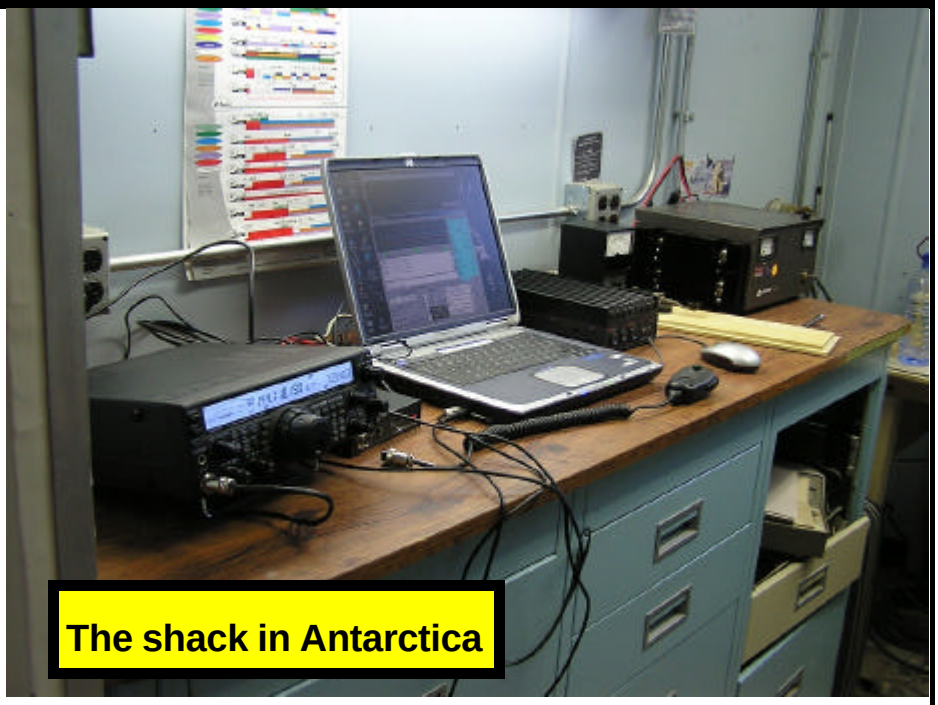
KC4/W1MRQ Activity from Antarctica

Ernie, W1MRQ, sent a final report from Antarctica: "The Austral winter 2005 EME operation by KC4/W1MRQ is over with the setting of the August moon. This was a substantial undertaking by a first time moonbouncer who has somehow managed to avoid the world of EME even though my pursuits in Ham radio had long ago turned to VHF/UHF/ microwave weak signal operation. The technological advancements especially in Joe Taylor's software has made this a viable mode to take just about anywhere, and if I can take it the South Polar continent, then where can we not take it?



The shack in Antarctica

The learning curve was steep but once I figured it all out, then the contacts became easier. The failure rate was excessive I thought, but under these harsh circumstances, i feel gratified to have done it at all. K1CA and PA0JMV was a huge help getting me going, and I made some mistakes. But I always tried to improve and in the end, only made skeds I had a chance of working.

The limitations were incredible. I had an array mounted on one leg of a Rohn 55G tower, which also held the stations tri-band yagi. I also had to aim this antenna by hand as antenna rotors were not available and if they were, not readily usable in this environment. That meant the antenna was only a few feet off the ground and being so close to the ground, was only efficient between 7 and 13 degrees of elevation. I only had azimuth from about 210 degrees to 65 degrees without swapping tower legs, and I had mechanical obstructions from the tower's guy wires.

I did for one month move the antenna to another mount which gave me 360 degree unobstructed movement, but did not take into account a metal building directly beneath the antenna which may or may not have affected the antenna. It may have been very bad conditions on June and July, which hampered my system. At any rate, my much-touted move was a failure.

Then I had the polar weather. Winters cold falling to –30 to –40F (-34° - -40° C))typical, easily snapped feedlines and ruined N connectors. I changed 3 jumpers during the winter. The aluminum tubing of the H-frame and antennas became so cold; it would penetrate the heavy gloves I had to wear. Wind chills falling below –75F (-59° C) were typical.

I did not have the great luxury of falling out of bed and walking into another room in my slippers for a late night sked. I had to get dressed in 20 pounds of extreme cold weather clothing for a 500-meter walk uphill into an ever-present wind to unlock a frozen lock to the McMurdo Ham Radio facility. Also I had to carry my laptop in an insulated backpack and hope it didn't get to cold.

Once I got the equipment fired up, I had to check the aiming of the antenna and prayed I could actually see the moon. Aiming was difficult in the total darkness from the sky. The profiles of hills and other landmarks were invisible, and I never really got orientated to the nearby-lighted landmarks. I made some contacts in bad conditions like high winds and blowing snow, But sometimes, just going out to fight the elements was hard to do, thinking that this is after all, a hobby. Skeds got cancelled by me is the weather was too crappy. As things were warming up I would place my water bottle on top of the heater to thaw the layer of frozen water inside.

I had the bugs worked out at home in New Hampshire, but I still had to learn the software, and after a couple of contacts with some coaching had things worked out pretty well. Here is a rundown of the station:

- Yaesu FT-847 transceiver
- RF Concepts 2-170 solid state linear amplifier w/10w in and 170w out
- 4 x 5 element yagis on a 6 x 6 foot H-frame
- Directive Systems power divider
- Drake WV-4 wattmeter (not the best but small and dependable)
- Hewlett-Packard 2.4 ghz laptop w/ WSJT ver. 4.9.7
- West Mountain Radio RIGBlaster

Following is a list of completed QSOs:

DF2ZC	PA0JMV
W5UN	N5BLZ
RA3AQ	RN6BN
DK3W	KJ9I
KB8R	K1CA
S54T	PA2CHR
RK3FG	DL8YHR
ON4IQ	ON4GG
DF7KF	AA7A
HB9Q	I2RV
DJ7OF	ES6RQ
IK1UWL	S52LM
DL9MS	SV8CS
RW1AY	

Twenty-seven QSOs in total. I had hoped for more, maybe 50 would have been nice and I know there were many more stations wishing to be in my log as well.

September will find me preparing to return to the states, and Moonsked says conditions for me is not that great for some reason anyways. So I figured to forget September and concentrate on going home. Much work to do there.

All I can say is congrats to those I completed with. Regrets to those I missed, failed with, cancelled and could not reschedule, or whatever reason we couldn't work. Just rest assured KC4/W1MRQ will be reactivated in January or February 2006 with bigger antennas, rotors and much more power from an amplifier. I have great memories of this operation and can only look forward to many more contacts next year.

73's from Antarctica...

Ernie KC4/W1MRQ

P.S. Please don't ask about 6 meters. I hate to say no!"

QSO Reports

IK4PMB (JN54)...

...has modified his FT225RD installing a crystal heater. Therefore now Anto can decode EME JT65 signals much better as his initials list shows:

1 25/11/2004 16.00 RN6BN KN95LC
2 12/06/2005 09.18 RA3AQ KO85SP
3 12/06/2005 09.48 RU1AA KO48VR
4 20/06/2005 20.06 RK3FG KO86HP
5 20/06/2005 20.43 S52LM JN65TX
6 20/06/2005 22.20 UA4AQL LO2ØQB
7 26/06/2005 05.10 EA6VQ JM19MP
8 26/06/2005 07.03 AA7A DM43BO
9 26/06/2005 07.33 K7XQ CM97QI
10 16/07/2005 15.58 ZL3TY RE57OM
11 16/07/2005 16.02 HB9Q JN47CG
12 16/07/2005 16.20 I2RV JN45PL
13 09/08/2005 19.09 KB8RQ EM79SV
14 10/08/2005 19.26 W5UN EM23MG

IK4PMB works with a 17el F9FT at 10° fixed elevation, FT225RD+Mutek+mods and a 8877 PA at about 1KW out.

K6PF (DM13)...

...added another state to his WAS list: "I completed a QSO on my first sked with Russ, K4QI, on 26 July at 1526Z for state #46 (all on CW & SSB so far). Still trying to earn WAS on 2m without using the digital modes. Tx & Rx was V polarity & condx were gud with minimal solar disturbances. Measured 6.5 dB of sun noise in both H & V polarity on 25 July at 1830Z which is normal for a relatively quiet sun.

Many tnx to Russ for taking the time to re-work his 2m feed for his 24 ft dish so that he could run this sked with me. The gain of his dish at 2m is comparable to a small 4 yagi station but he has variable polarity. Due to using a polar mount, Russ needs positive declination.

If anyone is looking for North Carolina on CW for 2m WAS, you might want to contact Russ to arrange a sked while he still has the 2m feed installed. He's in FM06jb & you can email Russ at K4QI@aol.com."

W5UWB (EL17)...

...is very happy having swapped his 2M5WL for a 2M8WL. He reports the following QSOs:
11 July 2005 DK4TG (2 x 11 ele)


W1PWW in his shack

12 July 2005 F6HVK
13 July 2005 DH7FB/P
13 July 2005 I6BQI (4 x 16 ele)
14 July 2005 DH3YAK (4 x 12 ele)
23 July 2005 DL8EBW (1 x 12 ele, my 6th single yagi station)

John doesn't use a tower mounted preamp but one in shack (measured 0.12 dB nf). The 100' of LMR-900 and 25' of RG-17 to the antenna feedpoint results in 1 dB loss before preamp.

Activity Updates

W1PWW (FN53DT)

Pete only recently started EME in JT65B. He lives at the Atlantic coast and benefits from good ground gain at moonrise. Even without ground gain he should be easy to work since he's running 1.5 kW out to two 2M18s.

DG0OPK (JO50GQ)

Michael reports that he is now QRV with a new antenna – a 3 wl DJ9BV - and has also elevation. He has all his eme info and particularly his initial list on his website www.qslnet.de/dg0opk or www.qslnet.de/dg0opk/eme.html and welcomes sked proposals. 4-yagis-stations should easily work him.

OK1RK (JO70KD)

David (ex OK1AUT 5N0AUT) is a new OK-Station QRV on EME. David works with FT847, 200 W PA and 10 ele DK7ZB (no elevation). The weekend 20/21 August OK1RK completed his first QSOs with RU1AA, W5UN, KB8RQ and RN6BN. NC or only heard were ZL3TY, RK3FG and S52LM.

DXPedition News

VK9CMO Cocos Keeling Islands

Rex, VK7MO, will be QRV until the August 26th from Cocos Keeling Island (NH87KT). The equipment consists of some 200 watts output and a single 5-wl-yagi with elevation. With that Rex generally produces a good signal via moon. He can be copied up to –20 dB with 4 yagi stations. This a pure random operation, VK9CMO calls CQ regularly on 144,146 MHz (1st).

VK9XMO Christmas Islands

After the activation of the Cocos Keeling Islands Rex travels to VK9X (OH29TN) and will be also QRV on EME from there. Equipment is the same as in VK9C. The activity is scheduled from September 3rd until about September 20th

A6/RV6LNA Arab Emirates

It is not quite a dxpedition but yet the character of the operations is still similar: Alexander is resident in the United Arab Emirates (LL75) and often searches the band for CQ calling stations. His equipment is 200 watts and a single yagi. Alexander is currently constructing a second yagi so his signals and the probability of working A6 will increase later this year.

FS/ON4QX

From September 25th on Herman plans to be QRV for one or more days from the house of FS5PL. Moreover a one-day trip to PJ7 is planned. Equipment will be a FT857d , a 375 watts TE systems amplifier and a single Cushcraft 17B2. This combined with short coax run will give him similar ERP as the recent J3/K5AND expedition. There will be no skeds in advance, and internet connection is unsure at the moment, though ON4QX might have a dial up link available. QSLs via ON4IQ.

Contests

Italian EME Contest now comes twice

Following the recent discussions regarding use of digital modes and plain old CW in the same contest the Italian contest committee decided to organise two Italian EME contests per year. Starting with the year 2006 there will one contest for CW only and one contest for digital modes or "new modes" as they are called by the organisers. With this expression not only the WSJT supported coding/decodings are meant but more generally "those modes in which message decoding is charged to a computer, whilst validation and QSO management are effected by the human operator.". So this wording is open for future developments.

Another topic of discussion within the EME enthusiasts is the differentiation between

"Random" and "Assisted". The applied rule is: If during the contest no information has been received, specifically regarding frequency and calls, the QSO is considered "Random", otherwise "Assisted".

Why did the Italian EME Contest organisers decide so? Giorgio, IK1UWL, explains: "In our EME meeting in May 2005 the possibility of coexistence of CW and JT65 in the same contest was analyzed, but the general feeling was that a CW contest is carried on differently from a JT65 contest. So it was decided to keep our traditional autumn contest dedicated only to "Old Modes" and institute a new contest for "New Modes". We say "New Modes" instead of WSJT because hams are very resourceful and we want to leave it open to the digital revolution. In the meantime we confide in a new version from K1JT with the improvements which will make contesting easier (Thanks Joe, you opened up a new world!).

The other point discussed regarded "Random" versus "Assisted". It was felt that in skeds assistance is proper, but that random QSOs have more merit in a contest. This is reflected in the points assigned for each condition." The first "New Modes Contest" is scheduled for the weekend 1/2 April 2006. The next "Old Modes Contest" is on 17/18 September 2005. (Source: Giorgio Marchi, IK1UWL)

Change in the Rules for the ARRL International EME Competition

At its July 2005 meeting, the Program and Services Committee of the ARRL Board of Directors approved a change in the rules for the ARRL International EME Competition. This new rule separates Single Operator entries into Unassisted or Assisted entries and applies to all of the former Single Operator categories:
Multiband entries on bands 50 MHz through 1296 MHz;
Multiband entries on bands 2304 MHz and Up;
Multiband 50 MHz and up..
Single Band: Single-band entries on each band.

These additional categories are in play for 2005 running of the ARRL International EME Competition - starting with the 2304 MHz and Up weekend September 24-25, 2005 and will be eligible for their own awards in the revised contest rules. This change supersedes the categories published in the August issue of QST. The full rules on the ARRL Contest Branch website reflect these changes.

The ARRL International EME Competition is not supported by the Cabrillo file format, so entries need to be submitted using one of the newly revised EME summary sheet forms which will be posted on the ARRL Contest Branch web site at www.arrl.org/contests/forms (Source: Dan Henderson, N1ND, ARRL Contest Branch Manager)

Miscellaneous

ON4IQ has EME DXpedition Package for Loan

Johan, ON4IQ (www.on4iq.com), has put together a package for a portable 144 MHz EME station. It consists of a FT857D, TE systems 375 watts amplifier, power supply (switched) and a 17B2. Included are also audio and ptt line to hook up to a pc running JT65 software. Johan offers to loan this package to everyone willing to undertake a 2 m EME expedition on a small scale. The only things the prospective DXpeditioner needs to add are the mast (tube 15ft/4.5m long) for the antenna, the guy wires, the coax run and a 1GHZ laptop.

Those interested taking up this offer are asked to e-mail direct to ON4IQ (johan.van.de.velde5@pandora.be) for terms and conditions. The use of the package is for free provided it is returned in good working shape. The equipment is already spoken for: last week of September 2005 by ON4QX for his FS/PJ7 trip and last week of June 2006. (Source: Johan van de Velde, ON4IQ)