# 432 AND ABOVE EME NEWS
# JANUARY 2006 VOL 34 #1

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THE NL WEB VERSION IS PRODUCED BY W6/PA0ZN AND AVAILABLE AT http://www.nitehawk.com/rasmit/em70cm.html.

**CONDITIONS:** I don't have "a bumper issue" [ZS6AXT's words] this month. EME activity is always down a bit after the ARRL Contest, and family and social activities of the holiday season took their toll. Those who made it on were rewarded with generally excellent conditions – particularly on 23 cm, and several new stations to keep operation interesting. Jan will probably be another *leisurely* month, but after that the contest season begins! In Feb we have two contests: The 23 cm EME SSB Contest sponsored by this newsletter (NL) on 4/5 Feb. On the follo wing weekend (11 and 12 Feb) the European World Wide EME (EWW) Contest sponsored by DUBUS and the REF begins with a new exclusively Digital (JT65) EME contest on the 50, 144, 432 and 1296 bands. All the remaining contest weekends are exclusively CW/SSB. On 11 and 12 March is the 432 and 5760 and up contest, on 8 and 9 April the 144 and 2300/3400 contest and on 6 and 7 May the 1296 contest. The rules are similar to last year with regard to multipliers and exchange, but there are quite a few changes this year. For example the new digital contest is exclusive from all the others parts (CW/SSB) of the contest. There is no Assisted Class – stations using assistance will be marked, but scored with all entries. The full rules are shown at the end of this NL. Also in Feb will be the 3Y0X dxpedition to Peter I Island, which will include 432 EME.

**EME CALENDAR:** Michael, DL1YMK caught some obvious errors in the proposed date for some of the 2006 activity weekends (AWs). The sun and the moon were obviously too close for good EME operations on several of the weekends. On the basis of Michael's observations, I have moved the AW at the end of May to 3/4 June and the AW at the end of June to 1/2 July. This leaves May with out any AW. It is possible to move the end of April AW to 6/7 May (April presently has 2 AWs), but the April weekend is the better weekend with higher Northern Hemisphere moon and lower path loss. I can make this change as well, if feeling warrant it. In any case there will be moon activity on 6/7 May as the 1296 part of the European Worldwide EME. Please note these changes. They are already in place on W6/PA0ZN's Webpage.

**EME SSB CONTEST RULES:** This contest is intended to be fun event. Bigger stations should help smaller stations get in on the activity. You don't need to transmit on SSB to participate. CW to SSB exchanges are encouraged and count for points. The contest starts on 4 Feb at 0800 and end at 0800 5 Feb. The intention is to give everyone one common moon pass. Operation is on 23 cm only. Scoring is the contact points times number of two letter Grid Sectors (IO, JM, FN, EM ...) worked. SSB to SSB contacts count as 2 points. SSB to CW (or CW to SSB) count as 1 point. The exchange is your Sector (IO, JM, etc.). Only the 2 sector letters need to be sent. Operation may be by single or multiple operators from one location. No distinction for scoring will be made. Assisted operation is not encouraged. All skeds/operational arrangements should be made prior to the start of the contest. Logs should be sent to the "432 and Up EME NL" by email to a.katz@ieee.org ASAP. The top scoring station will receive an attractively framed certificate that will presented at the 2006 EME Conference.

**AA7A:** Ned aa7a@cox.net is a new station on 70 cm EME presently limited to horizon only operation, but with many years of experience on 2 m EME – I got the station going on 432 for the second weekend of the ARRL contest, but was only able to operate on moonrise for the first night. My 70 cm station is working pretty well. It now consists of 450 W from an old FAA amp (2 x 4CX250F) to a single 13 wl $M^2$ yagi fed with LMR-600. I have a mast-mounted DEM preamp. I am plagued with birdies on 432 just like I am on 2 m; so finding a clear frequency can be a challenge. I have around 5,000 2 m EME QSOs under my belt, so I have some appreciation for the mode. I started out on EME back in 1982. I built a 16 yagi 432 array using N6NB's 15 el Quagi design (using ladder line feedline... What a project!). I was just putting the finishing touches on the array when I suffered some extreme antenna damage in a summertime monsoon. I never got it back on the air, since right after this extreme event I got married and then moved to my current QTH. I got on 2m EME years later, but never really made a 432 EME contact until a few months ago when I worked Dan. So, I am just now fulfilling a lifelong objective of getting on 432 EME. Both HB9Q and OH2PO were speaker copy when I worked them and I finished in minimum sequence with both.

**DL1YMK:** Michael DL1YMK@aol.com reports on his summer 2006 1296 EME dxpeditions plans – Monika and myself have started work on a new 23 cm dxpedition. This year it will be to Madeira Island, CT3. Our plans are to be on the island from 1 to 16 June with 23 cm moonbounce activity focused on the weekend 3/4 June. Although the declination was not at its maximum at this time, checking the windows for Europe and NA stations with F1EHN's program revealed a convenient time slot at practical elevations for most parts of the northern hemisphere. As our QTH on Madeira is already set, I want to announce the dxpedition to give people the opportunity to accommodate their own plans to enable them to work CT3.

**DL9KR:** Jan <bruinier@t-online.de> is looking for K5GMX and N5ITO to arrange 70 cm skeds. He reports receiving a QSL from W8TXT for their QSO, but is still looking for QSLs from KE2N for 2 different locations.

**FR5DN:** Phillpe philippe.mondon5@wanadoo.fr made a great effort to get back on 70 cm EME and is now looking for more action. His system is working excellently but he is finding activity quite low on 70 cm and would like to see more activity.

**G4CCH:** Howard howard@g4cch.com was active on 23 cm CW during Dec -- Conditions seemed very good and I was hearing my echoes with only 20 W. I worked: 9 Dec at 2009 SM3LBN (559/539), 2021 IW2FZR (569/569), 2112 K5SO (579/579), 2126 W9IIX (559/559) and 2209 K5JL (599/579). I also heard W7UPF. I QSO'd on 10 Dec at 2231 VE6TA (579/579), 2241 WW2R (559/579) for initial #219, 2331 W7BBM (55/55) on SSB and 2335 VE6TA (55/55) on SSB.

**G4DDK's 2.3 m TVRO dish with 23 cm feed**

**G4DDK:** Sam jewell@btinternet.com is now QRV on 1296 EME -- On the 18 Dec I successfully worked G4CCH and G3LTF using my 2.3 m TVRO dish, OK1DFC Septum polarizer feed, DB6NT SSPA and 0.3 dB NF WD5AGO

preamp. My output power is 110 W in the shack and probably around 95 W at the feed. The radio is a TS2000X. The very high moon on the 16th and 17th persuaded me to do some echo testing and I was pleased to see my reflections on Spectran about 20% of the time, and I heard them twice. G3LQR located about 25 km away was able to hear both my terrestrial signal and my EME reflections about 1.5 kHz higher. Simon's EME reflections were always visible on Spectran as well as often audible. Unfortunately we were not able to complete a QSO, mainly due to my inexperience with weak, librating signals. I heard many good signals off the moon from other stations. My skeds with Howard and Peter resulted in successful QSOs on the second attempt, when I had become a little better practiced at such signal levels and better coordinated with regard to procedure! I have the DB6NT 200 W amplifier that requires 13 W drive for 200 W out. The TS2000X just doesn't provide enough drive. I will be inserting a 3 dB 'anti-pad' between the rig and the amplifier to achieve the 200 W soon. I've experimented with a choke ring on my Septum feed. They are probably a good idea, but so far I've seen no improvement in sun noise using my 0.4 F/D prime focus dish. Experiments will resume when the sun gets higher in the sky again. I plan to be QRV again for the Jan AW.

**G4RGK:** Dave g4rgk@btinternet.com found some time to get on 70 cm during Dec – During the preAW conditions were pretty good and Dave was ably to copy his own echoes down to 80 W. The first night I worked FR5DN, SM2CEW and F2TU. I came back on Saturday evening during the NA window for about 3 hours. I called CQ around 432.010 and worked K2UYH, K0RZ and N9AB. I also heard K3MF, but never go a chance to call him. During the AW on Dec 16/17th, I worked RW3PX, EA3DXU, DL7UAE, KL6M, I1NDP, K2UYH, KL6M and OH2DG. An attempt with KE7NR failed although signals were detected on both ends. With the success on 2 m of CW activity periods, it would be a good idea to organize something similar for 70 cm CW. I will not be QRV for the Jan AW as I will be away on holiday.

**GM0ONN:** Iain <iain.gm0onn@virgin.net> reports on his Dec AW efforts on 23 cm – My present system consists of a 2.4 m dish with 0.37 f/d, Septum with choke ring, 0.3 dB preamp, 230 W from Y561 a la N6CA design. I listened and called for some time on 17 Dec. Heard were G4CCH - again the most consistent signal, but at 0300 nil from K5JL in sked, and 0330 W5LUA was there but sadly I had the moon going behind my neighbor's tree - Al was about 1 kHz below me. My moon window is extremely complex (and very frustrating) due to houses and tree blockage. It is necessary for me during a moon's pass to physically move the dish and mobile mount to 3 or 4 separate locations in the garden/patio. Although lightweight at around 125 kg or so, this is not very easy, but possible. On each occasion, I must of course recalibrate my azimuth reading. This is invariably done by checking the Septum's (moonlight) shadow on the center of the dish. I am 100% confident that the bore sight is spot on. Of course I need a visible moon for this. Hence my continued operation throughout a pass is clearly dependant upon good WX. I always happy to take sked, but may not be 100% confident because of my window. I only have one clear - no hassle window. And sadly this is not to the west.

**GM4ISM:** Mark's markhughes1@bigfoot.com Dec activity was cut by the failure of his T/R relay. He replaced it with another, but the isolation was not so good and his preamp also failed. Marc notes that he was hearing good echoes before this all occurred. He eventually located the cause of the faults as a bad component in his sequencer, which allowing the relay to go back to receive much too soon. He is re-building the sequencer, as it now needs to be able to cope with 3 different T/R systems: 70 cm has the relays energized on RX, 23 cm has them energized on TX, and 10 GHz that has momentary c/o and back contacts to add to the confusion. He is aiming to be QRV again in Jan, probably on the post AW (14/15 Jan).

**HB9JBL:** Reto reto@zisi.ch is a new station on 70 cm that is still working on his system -- I made my first steps on EME during the second leg of the ARRL EME Contest. I'm not very experienced on CW and thus my operating may not be the best. I love to build and most of my EME equipment was self-made. My system isn't finished – not enough time! The readout for azimuth and elevation is broken. During the contest I was turning the antennas to the moon simply with a camera, but this works only if the sky is clear. During the first leg of the contest it was raining, and during the second part we sometimes had fog and clouds. I plan to build a tracking board ASAP, this probably won't be finished until the summer. My 70 cm EME equipment at the moment is 16 x 15 el yagis in 4 groups with open wire feedline (~26 dB Return Loss), an LNA from RFham (36 dB Gain with 0.37 dB NF), a Thomson TH393 PA, and a K2 from Elecraft with a DownEast Microwave transverter (IF 28 MHz). I will only be QRV from time to time because my business takes a great amount of time, but will be occasionally be on looking for random contacts.

**IZ4BEH:** Rob iz4beh@iz4beh.net is another new 70 cm station – I have a small EME rig consisting of 2 x 20 el HB yagis and 600 W from TH338 PA. My antenna elevation is limited to a max of 35 degrs. During the ARRL EME Contest I made several QSOs. In Dec I worked K2UYH despite bad WX. I am interested in skeds on CW.

**K5PJR:** Tony K5PJR@centurytel.net has been QRV on 1296 for several months, making the state of MO available on EME -- I'm about 10 miles Southeast of Springfield, MO in EM37ka. On 23 cm I am running a 13' dish on a polar mount and 200 W. I worked several stations in the ARRL EME Contest, but lost my pre-amp afterwards. It has since been repaired by W7CNK and I was back in operation during the Dec AW.

**K5SO** reports good initial activity on 23 cm EME in Dec -- During the preAW on Friday afternoon local time, I worked IW2FZR (559 to me), G4CCH (579), K5JL (599), W9IIX (569) and VE6TA (589/589) - all with great signals. I also heard SM3LBN (539), but I couldn't seem to attract his attention. On 11 Dec I added WW2R (S4/559), OZ6OL (559/569), K9SLQ (S9/579) - strongest signals on the band. Congratulations Wayne! Also copied were G4CCH and VE6TA on SSB EME.

**K7XQ:** Jeff k7xq@secure.elite.net reports -- I will be receiving my 1.5 kW 432 GS-35B PA and 1296 400 W GS-15B PA back from repair during the week after Christmas. This will now enable me to be heard on 432 with my 4 x 28 el yagi array.

**KL6M:** Mike kl6m@qsl.net was on the moon in Dec on 432 -- I worked during the AW N9AB (569/569), K2UYH (569/569), and G4RGK (549/449). I was looking for PY5ZBU, but heard nil. I saw W0DRL on the logger looking for 432 CW. It was an old message and I was too late. Does anyone have an email address for W0DRL? I hope to be on 222 with WA4NJP.

**M0EME:** Paul <m0eme@qsl.net> was not QRV in Dec on 70 cm as planned -- I got up from bed and looked down at the garden to find a broken EME array. The antennas were pointing straight up and had hit the shed on their way to the vertical. When I got down to investigate, I found the last piece of fibreglass that I was slowly replacing with Aluminium had given up and disintegrated. This allowed the elevation motor to slip and the antennas to swing up. There was no real damage, only a twisted H frame. I should have all fixed in the new year when I can get back to work and can use the workshop.

**N2UO:** Marc lu6dw@yahoo.com completed WAC on 23 cm EME in Dec – I was only able to be QRV for short periods of time due to other commitments, but finally worked my former neighbor Trevor, VK4AFL for initial #71, country 24 and WAC. It was not easy to work him because I have no VK window due to obstructions to the west (aluminum siding house and some trees). Since my 10'dish has casters and can be shifted to different locations, I decided to move it to the front yard for the first time in order to avoid the obstructions. The task was not easy because I had to relocate all the cables (control and coax), and push the dish about 60 feet on ground that was covered with quite a lot of snow. I shoveled as much as I could and at 11 PM local time finally succeeded moving the dish. I chose that night not only for the convenient moon position, but also because I had visible moon in order to easily re-position the dish. At 0930 (4:30 AM local) on 14 Dec I finally worked VK4AFL with good signals. Right after the contact I tried to bring the dish back to where I normally store it, but the snow in the wheels had turned into ice overnight, so I had to drag the dish back about 60'again. I did not like the idea of leaving the dish in the front yard during the day. That night was the coldest of this season at -11 C (12 F). On 17 Dec I also worked on 23 cm VE6TA and OZ6OL, and the next day G4CCH.

**N8CQ:** Gary gabercr@nc.rr.com has been on 70 cm EME for a couple weeks and is quite disappointed with his results. He cannot hear as well as expected. His noise floor is quite high. Reports from N9AB, W7AMI and K1FO are good. Gary is building power supply to power up the 2xGS15 23 cm PA. He also picked up 14' dish. Gary is having another run of Septum feeds made and would like to hear from the 25 folks that already got Septum feeds as to how they worked.

**OZ6OL:** Hans oz6ol@mail.dk was active during the pre AW inf Dec on both 70 and 23 cm EME. Stations worked by Hans on 10-12 Dec on 23 cm were K9SLQ, K2UYH, W9IIX, K5JL, VE6TA, K5SO, ZS6AXT and F2TU, and on 70 cm K3MF, KL7HFQ and KL6M. All QSOs were on CW.

**PI4Z:** Coen (PA5KM) coenv@zeelandnet.nl writes that his radio club (PI4Z) is working toward 23 cm EME but not yet QRV. They are still working on azimuth and elevation control of their dish. Unfortunately their effort was recently set back by burglars that broke into their clubhouse and took quite a lot of their equipment.

**SM3JQU:** Per perolof.sjlander@telia.com is another new 70 cm EME station. He is running 4 x 32 el yagis and a 1 kW PA with a 0.4 dB NF LNA. He made several contacts during the ARRL Contest and worked K2UYH in Dec. He is interested in skeds – primarily on CW, but can also operate JT65.

**VE6TA:** Grant <ve6ta@telusplanet.net> QSO'd during Dec preAW K5SO - great conditions, but 45 mph winds and temp –31 degs C. The next night he worked WW2R and G4CCH on SSB. During the AW he did not find activity as good. On Saturday he QSO'd W5LUA and N2UO, and heard OZ6OL. Grant is working on OZ9CR amp.

**VK2SN:** Sean sean@vk2sn.com is ready to go on 70 cm EME – I finally finished my array and hope to be providing 70 cm EME initials from QF56oc in Sydney during the new year (starting > 15 Jan). He has 4 x 28 el $M^2$ yagis on EL-AZ mount with 185 W TE SSPA and 0.38 dB NF LNA. He is interested in skeds and can operate both CW and JT65.

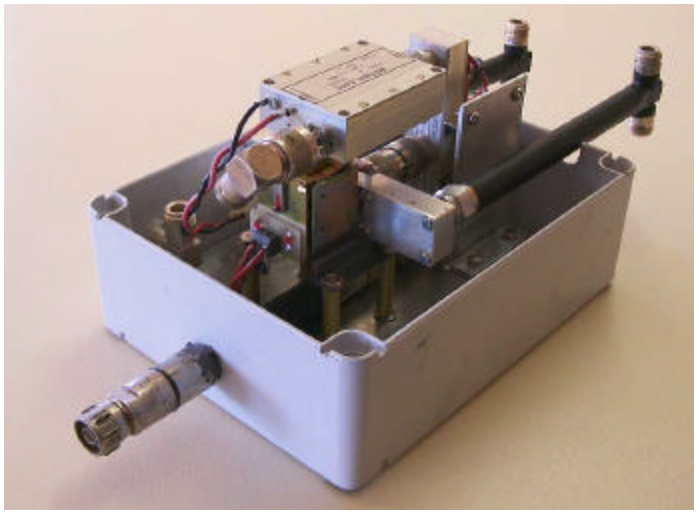
**VK2SN's 4 x 28 el $M^2$ yagi array**

**VK3UM:** Doug tikaluna@ycs.com.au is working on a new 70 cm feed that he will eventually use with his 23 cm feed -- I have attempted to reduce the losses and get around the 75 ohm *matching folklore*, which has been the pain for most who have tried and accepted less than stellar results after hours of fruitless tweaking. The object is to achieve as close to a real (non inductive) 50 ohms at each dipole (of the popular 70 cm dual dipole feed) and thus use 50 ohm power combiners. PA3CSG has already done this and I would like to convert his Dutch magic into a real duplicable design. You will see from my photo how I have turned the two HF 400 relays around and used male ends to the combiners. I will use a wrapping of what we call 'Denso Tape' (wax impregnated) that lasts well and our cockatoos do not find palatable, where the dividers come through the box as a WX seal. I am pleased with the way it has turned out. The half wave cables to the dipoles will be LDF5/50 as arranged around the IMU 23 cm feed. Doing it this way, I got rid of 12 N right angle adaptors, 5 N male couplers, 2 N T's, 1 N male coupler, 3 N bulk head female couplers and 1 N Male - male connector cable. The mind boggles at the loss all of this may have contributed. One does not realize what one is doing when putting something together in haste. *In JT terms this must be a reduction of > 35* - Hi. I am still playing with the Z of the dipoles and the further I go, the more it seems the actual dipole Z is close to 100 ohms, as Graham had predicted from simulation. Interaction is still profound and it appears the *goo* used to seal the ends of the dipoles can have a marked effect. I'm determined to *crack it* and come up with a totally predictable and *duplicable* system. It may not work any better, but the satisfaction of theory and practice is appealing. It will be interesting to see if this turns out!

**W5LUA:** Al al_ward@agilent.com reports – During the Dec AW I was able to work on 1296 W7UPF, VE6TA, WW2R and K2UYH on CW and later VK7MO via JT-65C. Rex is running a 2.3 m prime focus dish with a OK1DFC septum feed and 100 W at the feed. I was using my 5 m dish and about 450 W at the feed. We then had a repeat QSO with Rex running only 20 W at the feed and I was running about 40 W at the feed. On 13 cm I worked WD5AGO. I hope to be on 47 GHz with AD6FP, if all goes as planned.

**W6IFE:** Doug K6JEY dougnhelen@moonlink.net reports on the OVRO EME Project – We are in the process of making QSL cards and hope to send some out by the end of the month. We are going to be operating on the 28/29 Dec. We will be having an educational outreach on 23 cm at about 1700 and would like only ***arranged for stations*** to be involved. We will continue working on the 10 GHz system until we consider it fully functional and have mapped the moon. After that we hope to work stations on 10 GHz. We also hope to work some JA's at the end of the pass on 23 cm, if there is time left. We will be using direct email to me and the EME logger for real time updates at http://www.dxworld.com/emelog.html. We have been asked to do an article for CQ Japan and that is mostly done. We are also writing other articles. If stations would like to send in their anecdotes about working us or pictures, we would like to include them if we can. We are not sure of next year's schedule at this point. However, as soon as we know, we will publish it. We are hoping to be on for the DUBUS and ARRL Contests, an outreach and one operations weekend for 10 GHz and 23 cm QRP. Thanks for all the help that people have been giving to the project; most notably for the loan of a 10 GHz PA and the donation of a 100 W 23 cm PA.

**W8TXT:** Mike has no Internet access at this time. The address show in last months NL from QRZ is not in operation. He has QSO'd on 70 cm thus far G3LTF, KL6M, HB9Q, DL9KR, OH2PO and VK3UM. He also heard SV1BTR in Nov. Mike does not want any skeds, but is looking for random QSOs. He is also working on 3-4 dB more power over the 250 W he is currently running.



**VK3UM's New feed box**

**VK3UM's old feed box arrangement**

**WD5AGO:** Tommy THenders@tulsacc.edu was on 13 cm the 1st night of the Dec AW and heard his own echoes FB, but no one else on. Activity was a little better the 2nd night and he QSO'd G3LTF and WA6PY. Peter was good copy and Paul's echoes were louder than his own. Tommy has made comparisons of the Septum feed to 3 variations of the VE4MA feed. The Septum feed had 2 scalar rings and was compared to VE4MA feeds with standard scalar, and 2 ring

scalar and 3 ring scalar. He reports not seeing a great deal of difference between the feeds.

**WW2R's 10' dish with 1296 feed**

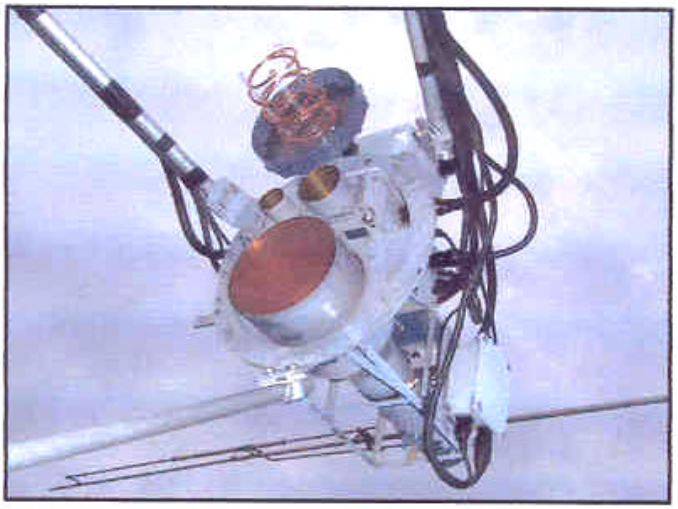
**WW2R:** Dave robinda@nortel.com writes – Its a long time since I was last on the moon - the last century, K0RZ on 432 on 28 Nov in 1999 to be exact, Hi! I got given a 10' C band 0.4 f/d dish last Dec, but it wasn't until the Thanksgiving holiday this year that I got some time to do something with it. Enthused by meeting and talking with WD5AGO, K5GW and W5LUA in person in early Dec, I made the final push to be QRV on 1296. I now have the dish with a VE4MA feed, WD5AGO style preamp (0.33 dB NF) and EME Electronics 2 x 2C39 air cooled amp producing 200 W (150 W at the feed). Before any comments on water cooling, the amp has been running at this power for the last 15 years and I have only had to change the tubes once!). The IF is the W7PUA DSP10 144 MHz transceiver. Sun noise was 11.2 dB sky to 50 ohm was 6.6 dB. [My experience is that sky noise measured to a 50 ohm load is meaningless no matter how good the load]. On 10 Dec I heard nothing, but the feed was flopping around in dish, so I spent 3 hours making the mount more rigid after suggestions from K5GW. I then worked on 11 Dec G4CCH (569/549), K5SO (559/549) on random, VE6TA (559/0), K9SLQ (589/549) and heard OZ6OL and IW2FZR. The first signal I heard was G4CCH telling VE6TA that WW2R would be QRV that afternoon! I added on 12 Dec G3LTF (539/429), K5JL (559/529), F2TU (559/O) - called me, K2UYH (559/549) and heard G3LQR, and on 18 Dec W5LUA, K2UYH, CWNR SM3AKW and heard K5JL. All QSOs were on CW. In the new year I will work on getting the TH328 fully operational and making the mount a TRUE polar mount before progressing to the higher microwave bands. The dish is good through 5760. I will be next QRV for 7/8 Jan AW.

**K2UYH:** I had a good month EME wise in Dec although all the season's social activities limited my operating time. On 10 Dec I finally worked on 1296 at 2130 IK2RTI (559/559) for initial #254*. I kept missing him in the contest, so I arranged a sked via e-mail. Ganfanco had a good signal, but was almost 2 kHz high in frequency. I then switched to 432 at 2200 to work S54T on sked. He suggested we try JT65B first. Hans had a great signal on JT, but I could not decode it! Finally after 15 minutes of trying JT, I switched to CW and we worked (559/O) for initial #705*. I also had quick contacts between skeds on 23 cm with at 2143 OZ6OL on 1296 and on 432 G4RGK (559/559). The next day on 11 Dec I worked on 432 at 0330 ZL2DX (O-26dB/O)on JT65C #706*. I do not think we have QSO'd on CW, but in this case the JT software came through. Later on 432 I had nil results in a sked with at 2145 AA7A (Ned was on CW and I was on JT65C) and QSO'd at 2230 SM3JQU (449/559)#707*, then switched to 23 cm to work at 2320 K9SLQ (59/59) on SSB, 2345 WW2R (549/569) #255*, 2354 W7BBM (59/59) on SSB, and on 12 Dec at 0019 G4CCH (53/52) on SSB, 0038 WA5WCP (559/579) and 0049 W7UPF (549/559). During the AW I worked on 17 Dec on 70 cm at 0448 KL6M (569/569), 0455 N9AB (569/569) - an F6? also called at this time, 0500 IZ4BEH (O/O) #707* on sked – Rob due to icing of his yagis was weak but we were able to complete on CW, on 18 Dec on 23 cm at 0431 SM3AKW (559/559), 0442 K5PJR (449/559) for initial #256 and state of MO, 0447 WW2R (449/559) and 0508 W5LUA (559/569), then switched to 70 cm but only found at 0558 G4RGK (559/569), and on 21 Dec 0530 AA7A (O-14/O) on JT65C and (O/O) CW #708*. JA4BLC and I were planning to try 13 cm. I thought the WX was going to be a problem at this end, but it cleared up here. Unfortunately just the reverse happened in JA - heavy snows and Yoshiro could not be QRV. I plan be active during the next AW on 7/8 Jan, but will be traveling the following weekend.

**ARRL EME CONTEST PROPOSAL BY SV1BTR:** There has been a great deal of discussion on the impact of the wide spread use of the JT65 Digital Mode during the ARRL EME Contest. The greatest affect of JT65 has been on 144, but even on 70 cm its affect has been significant - (more than a quarter of the top 70 cm station's QSOs were on JT). [I personally feel the addition of Assisted Operation is a major change to the contest – see my comments in the FINAL section]. The following is long time EMEer, SV1BTR's thoughts on this controversial topic: I would like to come back to my proposal to ARRL for the necessity and scope of displaying MODE used, and NUMBER OF QSO'S PER MODE (next to score of each participant) for all bands, all classes and all entries. My suggestion is to include this additional information in the display of 2005 ARRL EME Contest Results. By displaying these elements, useful information will be provided to all participating stations, as well as stations interested in EME in the future to evaluate: 1. Popularity of modes during contest time, 2. Appropriately chose contest strategy for maximization of QSO numbers in any mode, or a combination of both, 3. Reflect numbers of newcomer EME stations in a worldwide EME competition versus mode used, 4. Reflect the effort behind the score of each participating station and enable future contest station upgrades, accordingly. It is to the benefit of the EME community to have this information displayed in the 2005 ARRL EME Contest results as well as thereafter, and for all subsequent forthcoming EME Contest events. Extracts of such information can easily be obtained from the submitted logbooks. Furthermore, any help as to how to acquire and present this information (as this proposal comes only 4 months before the Contest results are to be published in QST) can be obtained by EME stations would assist with this effort. In fact, 6 well respected EME operators are available to extract and provide this information, if given access from ARRL Contest committee, as soon as the ARRL evaluates all logs and claimed scores. This proposal is made in the spirit of providing service to the ARRL and the EME community with the intention of providing useful information at no extra budget cost or overtime.

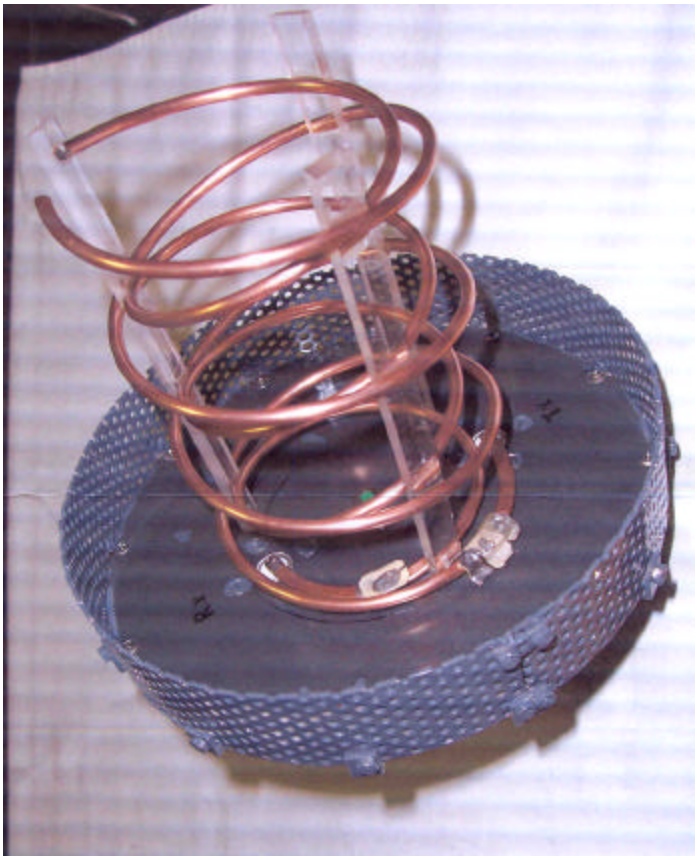
**NETNEWS BY G4RGK: W7AMI** (x-KJ7F) reminds us of his new call. Terry is active on 70 cm EME on both JT65 and CW. **AF6O** is reported to be QRV on 432 for JT operation. **WA7MIC** wa7mic@earthlink. net oldtime 70 cm EMEer is in OR. Larry sends his greetings to the gang. **K6DV** is close to coming active on 23 cm EME after a long absence from EME. **RW3PX** is QRV on 70 cm with 8 x 16 el yagis and a GS35B PA. His QSLs are now available through DK3WG's QSL service. **DK3WG** worked DL0GER and I1NDP for initial #416 on 70 cm in Nov. **K8WW** has been QRT on EME since 1994, but is now looking to return, this time on 10 GHz EME. **UA3PTW** is very busy with QRL and will not be QRV again until the middle of 2006. **PY5ZBU** planned to be QRV during the Dec AW, but there was no report of his results. **VK4AFL** was on 1296 both days of the Dec AW calling CQ during his NA and EU windows, but nobody heard. **G3LTF** during the Dec AW worked WD5AGO on 13 cm with good signals and heard WA6PY work WD5AGO. **NA4N** is still working on his 13 cm system and is not on 23 cm at this time. He can work crossband on 2424 and 2320. **WA5WCP** was on during the Dec preAW on 23 cm and had some fun, but during the AW had tracking troubles and did not make it with VK4AFL on sked. **K9KFR** is trying to get stuff back on on EME. Bob plans to try his 13 cm feed and checked out as well the 222 feed. **K9BCT** is repairing hurricane damage to his dish. He still has a bit more to do, but got on during the Dec AW and CWNR W5LUA and K5JL.

**FOR SALE: A9XW** reports that WYIN TV (Henry at 219-756-5656, atv@www.kd4moj.org has a 10 m C band dish left over from the old PBS sat days available to anyone wants it. **WA3DJG** is looking for someone in the US that makes Septum feeds for 23 cm – [see N8CQ below]. **WB7QBS** is listening on 70 cm EME. **VE3KRP** is working on the 70 cm PA and a 1296 transverter in good working condition. Contact Eddie at <eddie@tbaytel.net> or 807-622-7651.for EME. **K7LNP** is making progress again on his EME systems for 70 and 23 cm EME. **N7AM** has installed 1 5/8" feedline to his dish. **WA1JOF** is working on a power supply for new 23 cm PA. **K2DH** is working on getting a dish from N2IQ. F5VHX has been very busy, but and hopes to be back on 23 cm in future. **N8CQ** is having another run of 1296 Septum feeds made. Contact Gary at gabercr@nc.rr.com is you would like one. He is also Looking for power supply schematics for Siemens RWN-320 and RWNH-120 TWTAs. **VE1ALQ** is in desperate need of at least 1 or 2 if available MGF0905A OR MGF0905 GaAs FETs – contact Darrell at ve1alq@nbnet.nb.ca. **WA0WPJ** is looking for 23 cm dish and PA.



**IK2 RTI's dish feeds: 3 horms are IMU circular polarized feeds for 2.3, 5.7 and 10 GHz for 4.8 m dish**

**TECHNICAL:** A solution to problem of a light-weight circular polarized feed for 23 cm EME without the loss of a separate hybrid is presented here. It comes from IK2RTI. Such a feed is particularly desirable for use with light-weight portable dishes. Ganfanco's feed has the added advantages of easy construction and alignment. He uses this feed for 1296 EME from his hope station, with good results. It consists of two concentric left and right-hand helixes. The winding diameter is TX = 3.5 cm, RX =2.5 cm, number of turns is TX = 3.5, RX = 4, and axial length of one turn is TX = 4.5 cm, RX = 4 cm.



**IK2RTI's Dual Circular Polarized Helix Feed for 23 cm**

. The measured return loss on TX is 24 dB and on RX is 30 dB. Circularity for both TX and RX is about 1.5 dB, RX = 1.5 dB, and most importantly the isolation is 23 dB! I experimented with offset helixes some years ago, but was not able to achieve satisfactory isolation. More recently I evaluated a circular patch feed designed by W0LMD for 1296 EME. I had only 5 dB of isolation. Of course the proof of any feed is its successful application. Ganfanco uses his slightly offset with other feeds in a 4.8 m o.52 f/d dish.

**IK2RTI's 4.8 m dish made from 1.5 mm laminated Aluminum with 3 mm holes and 10 mm steps**

**FINAL:** Regarding the rules for the ARRL EME Contest, OH6DD of the OH2PO group points out that for Multi-Operator Stations there is no distinction made between the assisted and non-assisted classes. The assisted and non-assisted classes only exist for single operators. I was not aware of this change and am afraid this will certainly change the character of the contest. With many of the biggest stations forced to use the assisted mode to be competitive, it is hard to see how the policy of no skeds during the contest can prevail.

- Last month under the high contest scores I missed G4CCH's 1296 effort of 84x41, which puts Howard in second place! This is quite an accomplishment for a moderate sized dish station.

- In last month's NL I listed Franck, F5SE's report under his father's call, F9FT. This was not meant in any disrespect for Franck, but is an indication of my memories and very high regard for his father Marc, F9FT.

- Reminder that there is a new EME reflector oriented to EME operation primarily on CW at http://web.telia.com/~u37029479/.

- Dave, G4RGK suggests that with the drop in 70 cm activity that possibly we should consider activity nights as is being done on 2 m. Rather than have a full AW, a night and times would be designed for 70 cm CW activity each month. This seems a step back in time as many years ago we had times set specifically for CQs. I am for trying things. The problem is to get someone to select the times in advance, so that we can try to plan are schedules around them.

- It is 2006 and time to start finalizing your plans for EME 2006 in Germany on 24/27 Aug. The web page and registration is at http://www.eme2006.com/index1024.html. To register to submit a paper, e-mail to eme@eme2006.de.

- Dan, HB9CRQ/HB9Q had a major problem in his computer system and lost many of his top list files. Dan asks that you check into his webpage at www.hb9q.ch to check that your listings are correct and update them.

- That's that news for this month. Please keep the reports and technical submissions coming. 73 and Happy New Year, Al – K2UYH

# EUROPEAN WORLD-WIDE EME CONTEST 2006

## sponsored by DUBUS and REF

The EU WW EME Contest is intended to encourage world-wide activity on moonbounce. Multipliers are DXCC countries plus all W/VK/VE states.

### 1. Contest Dates & Bands:

**First weekend: February 11/12, 00 - - 24 UTC 50, 144, 432 & 1296 MHz- Digital only!**
**Second weekend: March 11/12, 00 - - 24 UTC 432 MHz and 5.7 GHz and up CW/SSB**
**Third weekend: April 8/9, 00 - - 24 UTC 144 MHz and 2.3 / 3.4 GHz CW/SSB**
**Fourth weekend: May 6/7, 00 - - 24 UTC 1296 MHz CW/SSB**

### 2. Sections and Awards:

**QRP** 144MHz <100kW EIRP 432MHz <400kW EIRP 1296MHz <600kW EIRP, but no separate QRP/QRO categories
**QRO** On 144, 432 and 1296MHz, stations with EIRP equal to or greater than stated above.
**PRO** Non-amateur equipment or antenna. PRO stations will have scores listed separately.
**CW/SSB** All QSOs in CW and/or SSB mode – no other modes used
**DIG** All QSOs in digital mode (e.g. all the "JT" modes) – no other modes used
**MULTI** Multi-OP is >1 OP – but no separate category
**ASS** Assisted: Stations using liaison by any other means (eg DXcluster, logger, internet, telephone) must indicate this and will be marked with an asterisk after their callsign in the result tables. ASS is not a separate section. Multi-operator and QRO stations will be highlighted in the general classifications. All QRP/QRO band winners and QRP/QRO multiband winners will receive a year's free subscription to DUBUS magazine. The multiband section contains weekend 2, 3 and 4 only. In each band/section, certificates will be sent to the top five entries and to the highest-scoring station in the southern hemisphere.

### 3. Contest Exchange:

For a valid QSO, both stations must transmit and receive both callsigns+TMO/RST/xxdB + R.

### 4. Logs:

Logs must be separate for each band, and should be in normal "logbook" format. Top line: Your callsign, Band, Each QSO: Date/time, Callsign, Report sent, Report received, Points, Multiplier Bottom line: Total points, Total multipliers, Total claimed score.

### 5. QSO Points:

100 points for each random QSO completed 10 (ten) points for each sked QSO completed on 144/432/1296MHz.100 points for each random or sked QSO completed on 2.3GHz or higher bands.

### 6. Multipliers:

Each DXCC country (except W/VE/VK), or each individual STATE worked in W/VE/VK. States and provinces can be determined after the contest using newsletters, web or callbooks.

### 7. Total Scores:

Single band score = [Total of QSO points] * [Total of multipliers]. There will be one QRP winner and one QRO winner on each band. Multiband score = [(Total sum of points on 144-1296MHz) + (2 * total sum of points on 2.3GHz or above)] * [Total sum of multipliers on all bands] There will be one QRP multiband winner and one QRO multiband winner. Multiband stations will also be listed as an entry on each separate band worked, and can also win single-band awards.

### 8. Contest Entries:

Copy of the log for each band with details of points, multipliers and total points. The following information **MUST** also be included for each band: 1. Output power, transmit cable loss, antenna type and gain. 2. Categories: QRO/QRP - single/multi operator - ASSisted – CW/SSB –DIG 3. Name(s) of all operators 4. Locator/State. Other info is welcome: Comments, conditions, locator, station details, photographs, etc.

### 9. Sending Your Entry:

Contest entries **MUST** be sent no later than 28 days after the end of the last contest weekend (i.e. in the mail or e-mail by 7 JUNE **2006**). Entries for the **FIRST weekend (Digital)** must be send no later than 28 days after February 12, (i.e. in the mail by 12 March **2006**). Mail address: Patrick Magnin, F6HYE, Marcorens, F-74140 BALLAISON, France. You can also e-mail your contest entry in ASCII format to: **f6hye@ref-union.org.** All email entries will be acknowledged within one week. For further questions contact: info@dubus.de.

Good Luck in the Contest! For REF: Patrick Magnin, F6HYE For DUBUS: Joachim Kraft, DL8HCZ/CT1HZE