

# 432 AND ABOVE EME NEWS

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**CONDITONS:** 2004 will be remembered as the year of the first Microwave EME Contest officially sponsored by the ARRL. It will also be sadly remembered for the many EME silent keys lost during the year. As a memorial to OE9XXI, the last EME SSB Contest leader, the 2005 EME SSB Contest will be dedicated to Peter's memory and other past EMEers. The 2005 contest will be on 19/20 Feb – see the following rules. In general almost everyone seemed pleased with the Dec leg of the ARRL EME Contest weekend. WX was cooperative in most places, although reports on conditions were mixed. Faraday rotation on 70 cm caused problems for many fixed polarization stations, while libration fading made copy for some a little more difficult than usual on 1296. Congratulations to DL9KR for receiving the first WAZ Award (28 zones) for 70 cm from CQ magazine!

**HIGH CONTEST SCORES:** On 432 HB9Q appears to have maintained his lead from the first weekend and ended with a score of 95x40. The next closes report is from N2IQ with 87x?. DL9R who was not able to participate fully ended with 71x36. In Asia/Oceania VK3UM scored 48x27. On 1296 HB9BBD has taken the top spot with 75x41. K9SLQ comes from behind to take the second place with 67x36, but could have competition from OZ4MM with 65x?. The first month's lead, W2DRZ dropped to 50x30 – see Tom's report. On 10 GHz there be a new station in second place. DL0EF is reporting 14x?. Second place was F6KXS with 13x11. [It should be noted that all these scores are preliminary and could change when initial results are re-checked].

**EME SSB CONTEST RULES:** This contest is intended to be fun øent. 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 19 Feb at 1200 Z and continues 24 hours to 20 Feb at 1200 Z. The intention is to give everyone one common moon pass. Operation is on 23 cm only. Scoring is the contact points times number of 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. Logs should be sent to the "432 and Up EME NL" by email to [a.katz@ieee.org](mailto:a.katz@ieee.org) ASAP. The top scoring station will receive an attractively framed certificate.

**9H1BN:** Mark [9h1bn@amsat.org](mailto:9h1bn@amsat.org) was listening on 1296 during Dec. He has his preamp at the feed and now is receiving very well. He copied many stations including DL0SHF and HB9BBD, who were moving the S meter. Mark now needs to install the TX feedlines and get his TH308 PA on.

**9H1ES:** Fortunato [fbonnici@hotmail.com](mailto:fbonnici@hotmail.com) had good success on 23 cm during Dec contest weekend. He worked 4 stations including HB9BBD and DL0SHF. He heard and called K2UYH but did not complete a QSO. Fortunato is now receiving echoes with 500 W. He can see them on Spectran, but cannot hear them. He is available for skeds. He is also working on improving 10 GHz EME system and plans to put it on the same dish as he uses on 23 cm.

**A71AW:** Hamad [a71aw@hotmail.com](mailto:a71aw@hotmail.com) reports that he had started to build a small stack of 2 x FO 25 el yagis, but that he couldn't complete the project due to health problems. He hopes to be QRV on 70 cm EME again when his condition improves.

**AD5RY:** Joe [jmartin@direcway.com](mailto:jmartin@direcway.com) is making good progress getting NM back on EME in a big way with a 28' Kennedy dish. Documentation of the installation can be found at <http://www.k2ah.com/ad5ry/ad5ry.html>.

**DL0EF:** Manfred's (PA3GLB/DL5FAB) [Manfred.Lugert@inter.nl.net](mailto:Manfred.Lugert@inter.nl.net) group was QRV on 10 GHz for the microwave part of the EME contest -- Activities

were not as high as expected and we also had some technical problems to resolve. Anyway, we managed to work 14 stations, 3 of them with very good signal on SSB (IQ4DF, PA0EHG and DL0SHF). WA7CJO was the strongest signal as usual, but we were also very much impressed by IQ4DF. We worked WA6PY twice - on Saturday and Sunday. We heard VE4MA with (529) but lost contact. Total points were 12,600. It was great fun. More details can be found on our webpage at [www.astropeiler.de](http://www.astropeiler.de). We plan to be active again in the DUBUS EME Contest.

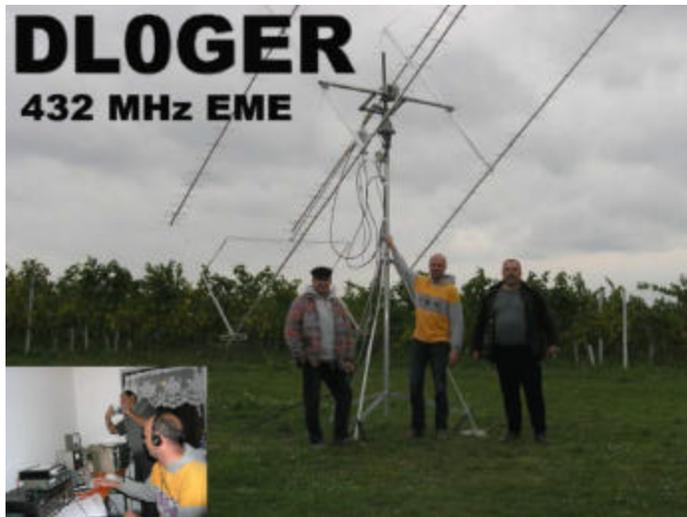


**AD6RY's is putting New Mexico back on 70 cm EME**

**DL7APV:** Bernd [DL7APV@t-online.de](mailto:DL7APV@t-online.de) and Klaus (DL4EBY) write about the 2nd leg of the ARRL Contest on 432 – I was a little disappointed about low activity during the last pass of the contest. I called CQ for >5 hours with only 2 takers. US window was a nightmare with mostly 90 deg Faraday. The good thing is that I ended with a score of 54x32. This was lower than last year (60x32), but not too bad all things considered. I added initials with PY5ZBU (TNX Don), S53RM (100 W) - the smallest station I have ever worked, DL9JY and RW3PX. I need QSL info from RW3PX and a grid square from S53RM. The solution for next year is clear, either change hobbies or double the size of my antenna! [Is this a New Year's resolution?]

**DL9JY:** Ruediger [R.Knorr@t-online.de](mailto:R.Knorr@t-online.de) was active during the EME contest – In Dec I worked HB9Q, OH2PO, DL9KR, OZ4MM, F6KHM, DL7APV, PA3CSG and DJ6MB in the contest. I CWNR K2UYH, N9AB, N2IQ and K1FO. Possibly my small 4 x yagi station is too weak for the pile-up and the increased QRM during the contest. Or possibly I may have something wrong with the way I set my RX clarifier? [You want to set your RIT so that you hear your own echoes on the same frequency as you hear the station you are calling.] I hope conditions in the next contest will be better; I am also interested in a skeds.

**DL9KR:** Jan [Bruinier@t-online.de](mailto:Bruinier@t-online.de) sends Hi 432ers and notes the show is over - While my activity in first part of the contest was reduced by family affairs, my hopes for the second part were damaged by adverse weather. During both nights the wind was calm, but freezing fog on elements and open wire feeder impaired my RX capabilities quite a bit. Sun noise was down by about 5 dB and ground noise by 3 dB. My apologies to weak callers, especially the one on 5 Dec at 0940. The following were worked: on 9 Oct JL1ZCG, VK4AFL, VK3UM, OH2PO, UA3DJG for initial #809, UT3LL, ~~9~~6JLW, SV1BTR, KL6M, S52CW, SK0UX, YU1EV, F6KHM, JJ1NNJ, YO4FRJ, JA9BOH, OZ4MM, G4ALH, JA6DZI, DL1YMK, YO2IS, G3LTF, HB9Q, G4ERG, JA6AHB, OH2DG, DL7APV, JS3SIM, LA9DL #810, KE2N, ZS6JON, N2IQ, K4EME, WA6PY, VE6TA, N9AB, K0RZ, DF3RU, DL7UDA, K1FO, SK0CC, K6JEY, KL7HFQ and DL0GER, and on 4 Dec RW3PX, OK2BDQ, EA3DXU, SM3BYA, RA3LE, JH4JLV, I5CTE, OE3JPC, JA2TY, S53J, JA6DZI dupe, LA9DL dupe, SM3AKW, S53RM #812, DL9JY, G4RKG, SM3JQU, PA0PLY, ZS6JON dupe, K5JL, KJ7F, K2UYH, WA6PY dupe, PY5ZBU and HA1YA, and on 5 Dec S51ZO, G3LQR, DL3EAG, DJ6MB, DK3FB and F2TU. All QSOs were on random CW for a total of 71x36 or 255,600 points.



**DL0GER will be back on for the EWW EME Contest**

**EA3BB:** Josep (EA3DXU) [ea3dxu@urcat.org](mailto:ea3dxu@urcat.org) reports that he and EA3BB are thinking of conducting a 1296 EME Dxpediton to C31 in the summer. It will depend on whether they can get a license for operation. Josep says that it is very difficult to get license from this country. In preparation they will be testing their portable station on 2 Jan between 0500 and 1100. They plan to operate under the call of EA3BB on 1296.025 with 8 x 35 el M2 yagis (near 28.5 dBi linear polarized) and 90 W PA. They will set up on Saturday and operate on Sunday. They are interested evaluating the system to see the possibilities for a portable activity. They will TX on CW, but will be equipped for JT65B. They will be running with a generator and have no access to the Internet.

**G3LQR:** Simon [g3lqr@aol.com](mailto:g3lqr@aol.com) reports on his Dec contest activity - I spent only a little time on in the contest, because the low declination shortened my window. I worked on 432 HB9Q, KL6M, K1FO, OZ4MM, DL9KR, F6KHM, OH2PO, G3LTF, N2IQ and K2UYH. I hear a few others including SV1BTR, but not able to raise them due to Faraday. Faraday seemed out as usual as I heard no echoes! My FT847 runs better now that I have split the RX/TX lines up and does not damage so many preamps by Rf going up the back end due to a slow relay. My 8 yagis are better too, but still need some work to get my sun noise up. On 1296 the low declination made my window very short. I added only G3LTF, OZ6OL, DF3RU, F6CGJ and LA8LF. Still no progress on the YD1336 PA for 1296. I used my 4 tube PA at about 250 W in shack.

**G3LTF:** Peter [g3lft@btinternet.com](mailto:g3lft@btinternet.com) starts in Nov - At the end of Nov I QSO'd on 13 cm VE6TA (O/O) for initial #31 crossband 2320/2304. The signals were really (549/339). Grant has a good signal and his 2320 RX is working fine. The tricky thing is to get the frequency right on the band you don't normally use. He has solved that problem and I am sure will be making more X band QSO's. The next two guys I want to work on 13 cm are K9KFR and WA9FWD! I am making progress on a new 200W PA for that band. In the contest I operated on 3 bands. I found conditions good, but with strong libration at times on 1296 and Faraday on 432 - during the day it was either 90 degrees or spread (indistinct peak at any angle). The big problem was the US activity. Where was it, especially on 432? I worked more DLs and the same number of SMs on 432 as I did US stations in Dec. I did miss Jay, I must admit! Was it WX, migration to 2

m JT modes, or the increasing QRM level on 432 from what I will call "radio junk" and computer birdies? [I don't know, WX was ok, but I can tell you that the noise and QRM on 70 cm at my QTH gets worse every year. There are no frequencies that I do not see some spurs with Spectrian at all times.] On 1296 there used to be 3 or 4 W7s on the band in the contest. This year I didn't work one. This is not in any way a complaint, just an observation. On 432, on 4 Dec I worked RA3LE, OE3JPC, JH4JLV, RW3PX for initial #386, G4ALH, SM3BYA, S53J #387 and KL6M, and on 5 Dec OK2BDQ, S51ZO, HA1YA, G3LQR and K2UYH. I heard DL3EAG in QSO, and called JA6DZI several times both weekends! On 1296, on 4 Dec I worked DL1YMK, I5MPK, F2TU, N2IQ, DK0ZAB, KA0Y, OZ4MM, OE5EYM, VE6TA, VE9DW, NA4N, W6YX for initial #209, and on 5 Dec LA8LF, G3LQR, ON7UN #210, LA9NEA #211 and F6KHM - loud on SSB! I CWNR JH1KRC. I also had an exchange with IW2FZR, a new station with a 4 m dish and 100 W. Dario is still learning the procedures and developing his CW and so I cannot count it as a contest QSO, but it is really good to have him on EME as a new station. I recall that several of our now long established EME ops started with little or no CW. Welcome Dario! The stations I worked on 3 bands were VE6TA, SK0UX, K2UYH, G3LQR and OZ4MM. My final scores are still being checked, but it looks like on 432 49x27, 1296 54x27, 2320 12x11 and 144 6x5 for a grand total of 847,000 points.

**G4ERG:** Peter [peter@g4erg.demon.co.uk](mailto:peter@g4erg.demon.co.uk) finished contest with a score of 31 x 24. He worked on 9 Oct OH2PO, OZ4MM, OH2DG, SV1BTR, DL9KR, HB9Q, JL1ZCG, F6FHM, G3LTF, DL7APV, I5CTE, SK0UX for initial #181, PA3CSG, SM2CEW, N2IQ, N9AB, K4EME, K1FO, K0RZ, VE6TA, DF3RU and SP6JLW #182, on 10 Oct JA6AHB, SM3AKW and EA3DXU, on 4 Dec VK3UM and S52CW, and on 5 Dec SM3BYA, HA1YA, OE5EYM and K2UYH. Heard but not worked were KE2N, JH4JLV, ZS6JON, G4RKG, F2TU and RW3PX.

**G4RKG:** Dave [g4rkg@btinternet.com](mailto:g4rkg@btinternet.com) was only able to be on for the 2<sup>nd</sup> part of the contest for a couple of hours due to his 26<sup>th</sup> wedding anniversary - When I was able to get on, I found what sounded like milcomms on 432.015 NBFM. It must be very local to me as the signal was end stop on the S-meter. This development doesn't look good for future 432 EME activity!

**HB9BBD:** Dominique [d.faessler@bluewin.ch](mailto:d.faessler@bluewin.ch) ended the ARRL EME Contest with a score on 23 cm of 75x41 - My initial count jumped to #213 by 8 new ones. Initials were K9SLQ for #206, WB5AFY #207, NA4N #208, HB9FX #209, DL1HYZ #210, LA9NEA #211, ON7UN #212# and W6YX #213. I have never before in contests spent so much on electrical power - 339 kW-hours. Even though my echoes are constantly in the order of >36 dB over noise, the efficiency of EME as such is horrible! If it would not be fun, we should immediately stop it - hi! As usual the second weekend was by far more tiring than the first. The second moon pass in the second weekend just yields a handful QSOs. The contest was fine and all systems worked without complaints. The new feedhorn see - <http://www.hb9bbd.ch/article.php3?key=25>, seems to do the job fairly well. Activity by the regulars is still down. Many well equipped stations did not show up. However, the country number available was a surprise. I got many unexpected multipliers in Europe, but also in W land. Very few French, German, Swedish - but almost everybody from JA was there! It seems to be true that the music plays in Asia and not in the US and Europe.

**HB9Q:** Dan (HB9CRQ) [dan@hb9q.ch](mailto:dan@hb9q.ch) results update - Here our final result for the ARRL EME Contest: on 432 95x40, 1296 41x28 and 144 103x43 for a total of 239x 111 in the multiband, multi-operator assisted class. It was great fun to work many old friends and of course to add more initials on all 3 bands!

**JA6AHB:** Toshio [ja6ahb@plala.to](mailto:ja6ahb@plala.to) sends his 2004 EME Contest log -- I was QRV on both 432 and 1296 in the contest, but the weather was not good. High wind and rains limited my contest activity. I QSO'd on 432, on 9 Oct at 0315 OH2DG, 0328 G3LTF, 0334 HB9Q, 0341 DL9KR, 0349 OZ4MM, 0407 SK0UX, 0428 DL7APV, 0450 F6KHM, 0514 OH2PO, 1746 N9AB, 1757 N2IQ, 1805 K1FO, 1822 K2UYH, 1838 VK3UM, 1845 K0RZ, 1907 VE6TA, 1929 VK4AFL, 1957 JJ1NNJ, 2008 KL6M, 2032 K4EME and 2053 JA9BOH, on 10 Oct at 0302 DL0GER, 0315 SM3AKW, 0325 SV1BTR, 0347 EA3DXU, 0428 SM2CEW, 0434 DJ6MB, 0455 DF3RU, 0529 PA3CSG and 0544 G4ERG, on 4 Dec at 1825 JL1ZCG and 1838 KL6M, and on 5 Dec at 0247 JA6DZI and 0325 F2TU for a total of 33x20. I QSO'd on 1296, on 10 Oct at 2100 W2DRZ and 2111 WA6PY, on 4 Dec at 0009 HB9BBD, 0022 OZ4MM, 0031 SK0UX, 0048 G4CCCH, 0100 F6CGJ, 0110 JH1KRC, 0127 JA4BLC, 0138 IK2MMB, 0152 OZ6OL, 1646 VE6TA, 1659 K9SLQ and 1706 KOYW, and on 5 Dec at 0015 OK1CA, 0100 LA8LF, 0137 DF3RU, 1657 JR4ZZS and 1709 N7AM for a total of 19x16. All my contacts were on random CW. Please note my new e-mail address and webpage at <http://www15.plala.or.jp/ja6ahb/>.

**JA9BOH:** Kimeo [kmaegawa@fukui-nct.ac.jp](mailto:kmaegawa@fukui-nct.ac.jp) was QRV during the ARRL competition – I thought the activity was low. I managed to QSO on 9 Oct DL9KR, HB9Q, N9AB, VK3UM, K1FO and K0RZ and on 10 Oct KL6M, JA6AHB, VK4AFL, DF3RU, OH2PO, F6KHM for initial #305, DL7APV, SM2CEW, G3LTF, J11NNJ and N2IQ. Heard and CWNR were DJ6MB, SP6JLW, OH2DG and VE6TA. In Dec I added no stations on the 4<sup>th</sup> and only OZ4MM on 5<sup>th</sup>. CWNRs were JL1ZCG, KE2N, SP6JLW and JH4JLV. I used 4 short boom (2.8 m) 13 el yagis and 800 W.

**K0YW:** Bruce [k0yw@frontier.net](mailto:k0yw@frontier.net) reports that he added on 23 cm 17 more QSOs during the last leg of the EME contest. Initial were made with ON7UN, W6YX and I5MPK. Heard 9H1ES and CWNR UR5LX and LA9NEA (539). Bruce is on KD5FZX's list for a GS15 PA.

**K4EME:** Cowles [candrus@rica.net](mailto:candrus@rica.net) did not have a good weekend on 70 cm in the Dec part of the contest – The first night I heard a lot of stations, but only worked two, K2UYH and SV1BTR. On the second night I did not work even one new station. I heard almost all the stations I had already worked. However, I had a very close miss with a station with a 4 and J in his call, but just could not pull him out of the noise - sorry!! I heard F6KHM, N2IQ, N9AB, SM2CEW, OZ4MM, K1FO, OH2PO and HB9Q very loud most of the time. I also heard KL6M about the loudest I have ever copied him on Saturday morning. 60 MPH plus winds on Thursday may have misaligned my array and maybe this is why I did so poorly in this leg of the contest. It seem like we always get a big wind storm right before the contest and just after I have made my final alignment. [Better than during the contest!]

**K5JL:** Jay [cliebman@ionet.net](mailto:cliebman@ionet.net) says this year's EME contest was a utter disaster -- I had problems on 1296 during the first go round... So I switched to 432 for the end weekend and all was working quite well... I made about 30 contacts in a hour and a half and then the AZ motor on the dish shoot craps! Sorry to have missed so much of ole gang on 432. I will leave the 432 feed in the dish for a few weeks for anyone who wants Oklahoma. Contact me via e-mail or the 20 m net for skeds.

**K6JEY:** Doug [doughhelen@moonlink.net](mailto:doughhelen@moonlink.net) writes that he was on the moon with the assistance of KJ6HZ during the final round of the ARRL EME Contest. We heard using a 7' dish about 6 stations, but none well enough to make a QSO. We worked on the dish feed and got better signals. I hope to have my power up to 300 W by the Jan AW and will be open to schedules. I look forward to making my first 23 cm EME QSO! My window is about 40 deg el from my QTH at this point.



**K6JEY with 7' dish during contest on 23 cm**

**KJ7F:** Terry [kj7f@cableone.net](mailto:kj7f@cableone.net) in ID is one of the few stations that is concentrating on the digital modes on 70 cm. In Dec he added initials on JT65 with AE6EQ, S53RM, PA3DZL and KE7NR. Terry also worked K5JL on CW.

**K9SLQ:** Wayne [k9slq@parlorcity.com](mailto:k9slq@parlorcity.com) had a great time operating the contest. This was the first time in 3 years that something did not blow up. He operated exclusively 1296 and ended with a score of 67x36 and increasing his initial count by 42. Wayne is fully recovered from the contest and on 19 Dec found 4 fine signals lurking on 23 cm to work, G4CCH, NA4N (his best signal ever), N2UO and W4SM with a power house sig. He is available for skeds just about any time.

**KL6M:** Mike [kl6m@qsl.net](mailto:kl6m@qsl.net) had Murphy visit just before the contest. Due to a glitch in his dish control system, he went beyond the end stops and had to replace two runs of 7/8" Heliac! Then he was hit by very high winds delayed his repairs to just before the contest. The wind was so strong that it actually destroyed his wind speed indicator! Mike was only able to be QRV on 70 cm and managed a score of 41x24 despite his extremely narrow window to Europe. He also increased his initials count by 4 to bring him to #141. Mike to be QRV on 1296 by the end of Dec or very beginning of Jan.

**LA8LF:** Anders [LA8LF@tiscali.no](mailto:LA8LF@tiscali.no) was not QRV for the first part of the contest on 23 cm (was in Toscana, Italy), nor was he on 13 cm in part 2 (ill and in bed for 10 days) – I was QRV only Sunday morning for the last part and worked 5 new stations on 23 cm: ON7UN, LA9NEA, K9SLQ, WB5AFY and DK0ZAB for a total initial count of #157. Also worked were G4CCH, HB9BBD, SK0UX, JA6AHB, IK2MMB, OK1CA, DF3RU, HA5SHF, G3LTF, I5MPK, OZ6OL, G3LQR, F6CGJ, DL1YMK, IK3COJ, K9BCT, N2UO, VE9DW, W2DRZ, OH2AXH, K9SLQ, K2UYH, OZ4MM, GW3XYW, S59DCD, PA3CSG, W5LUA, SM2CEW, HB9SV and N2IQ for a total of 34x22. The Norwegian PTT has extended my 1500 W license for 23 cm EME until the end 2007. I have moved my 3.8 m solid dish to a lower stand for easier access to the feed. The AZ control is similar to the system I developed for my EA8/LA8LF dish, but is using a 36" jackscrew instead of 18". I now have all the equipment available for 13, 9, 6 and 3 cm EME. On 3 cm I have only 9 W from the TWTA, but have a new 70 W TW. I am looking for PSU for this tube (6.5-7.0 kV helix and 3.5-5.0 kV collector).

**LA9NEA:** Viggo [la9nea@online.no](mailto:la9nea@online.no) in JO59dx sends his first EME report for 1296 EME during the contest -- I was very glad that after a lot of work I was finally able to be on 1296 EME for the last part of the contest. I worked HB9BBD, DL0SHF, F6CGJ, SK0UX, G4CCH, LA8LF, HB9Q, OK1CA, OZ4MM, SM2CEW, K9SLQ, K2UYH and G3LTF. My station consists of 4.3 m dish with VE4MA feed, G17B PA with 200 W in the shack and ATF54143 (1st stage)/MGF1302 (2nd stage) LNAs to IC 1271. I plan to do some improvements on the RX side and should be regularly QRV off the moon.

**LX1DB:** Willie [WILLI.BAUER@airport.etat.lu](mailto:WILLI.BAUER@airport.etat.lu) was active on 23 cm during the Dec contest weekend on 1296.035. He worked K0YW on SSB and more than 19 other QSOs on CW. F6CGJ as well as F6KHM were very loud. Willie notes that when he sends QRZ, he goes to very narrow filter and high speed CW is not detectable. When Willie QRZs two times, the other station needs to slow down. He had problems on 70 cm with interference. Willie also reports he has built a new feed for 5.6 GHz and that it is working well, and that he is setting up to listen on 47 GHz and wants to be included in future test.

**MOEME:** Paul [m0eme@qsl.net](mailto:m0eme@qsl.net) was looking for contacts on 4 Dec from 0100 to 0530. With a clear sky, the system worked fine thanks to a new preamp from GW4DGU. I tuned round and straight away I heard HB9Q, DL9KR and about 5 others in the noise. I tried to call but received no replies. I called CQ for 1 min intervals around 432.031, but again no takers. I had lots of fun in any case. When I have used a single yagi before to listen, HB9Q was a lot louder, giving a big trace in Spectran. This weekend he was very weak and I struggled to hear some of his CW.

**N2IQ:** Mark [Mark@nationalaudio.us](mailto:Mark@nationalaudio.us) planned to concentrate on 23 cm for the final contest weekend using his 28' Kennedy dish. He worked about 23 stations on 1296. Even though activity was good, there were many stations missing. Mark then warmed up his 48 footer and switched back to 70 cm to find activity quite strong, and added nearly 30 more contacts. There were several weak stations that got away, as always. Mark's unofficial count is 87 on 70 and 30 on 23. He is not sure if he will report only his 70 cm score to be in the single band class.

**N2UO:** Marc's [lu6dw@yahoo.com](mailto:lu6dw@yahoo.com) Dec report -- My EME contest score on 23 cm was 39x24, slightly improved from last year (34x19). The new multipliers are of course due to the new rules. Initials worked were DL0SHF (with a WOW signal!), OE5JFL, SM6CKU, K4QI, LA9NEA, IK3COJ, HA5SHF and VE9DW. My 100% homebrew equipment worked very well; it seems that the infant mortality period has ended and it is now more reliable. Unfortunately, some of the easy stations did not show up for more than a few hours and only worked other strong stations, not calling CQ. This year's moon passes did not favor my narrow window to the west, so I could not work any Japanese stations. I was also active on 23 cm on 19 Dec, and worked G4CCH, ON7UN for initial #56 (great signal from Eddy using only the exciter) and K9SLQ.

**N3FTI:** Steven [n3fti@yahoo.com](mailto:n3fti@yahoo.com) is just about ready to go on 3 cm EME – I want to update my progress toward 3 cm EME. The modified 3 m Birdview TVRO dish has been up for a few months and both drives (AZ & EL) are working fine. I just received US Digital encoders for use with the W2DRZ

antenna controller. I hope to have the dish tracking the moon via computer before Jan! All the RF electronics are up and working. The only thing left to do is complete the VE4MA feed. The RF enclosure that houses the transverter, sequencer and TWTA will be mounted behind the dish and a 12' long piece of WR90 will link the RF equipment to the LNA, waveguide switch and feed located at the focal of the dish. The measured system NF is 1.25 dB and TX power is 54 W. I plan to measure sun and moon noise very soon.



**N3FIT's 3 m dish just about ready to go on 3 cm EME**

**N8CQ:** Gary [gabercr@nc.rr.com](mailto:gabercr@nc.rr.com) was QRV on 432 during the contest and the weekend 10/11 Dec. He has now worked K1FO and K2UYH using a temporarily setup for the contest of 16 x 15 FO 4 wl yagis with polarity rotation in his driveway and 1 KW GS35B PA. He plans to be permanently on 70 cm from his Raleigh, NC QTH in FM05ot. He had some problems with water in his feedline. When I worked him on 10 Dec he was running only 500 W because of problems with his RS-50M driver, but had a reasonable signal considering my tree blockage.



**N8CQ's 16 x 15 FO Array**

**ON7UN:** Eddy [ejespers@on7un.net](mailto:ejespers@on7un.net) reports on his first steps on 1296 EME -- All calls are new initials of course. I was using my solid state driver amplifier only - details are on [http://www.on7un.net/mosfet\\_driver.htm](http://www.on7un.net/mosfet_driver.htm). The TH327

cavity PA is ready to be mounted in the equipment shelter, but my remote control and the 3 x 400 VAC power supply cable have to be implemented. I did not have the time for this before the ARRL contest. Nevertheless, I had great fun during the Dec contest weekend. I worked HB9BBD (on SSB), DL0SHF, G4CCH (On SSB), N2IQ, SK0UX, OZ4MM, K2UYH, K0YW, OH2AXH, K9SLQ, LX1DB (on SSB), G3LTF, F6CGJ, LA8LF, OZ6OL, OK1CA, DL1YMK, HB9Q, DF3RU, VE9DW, PA3CSG and HB9SV for a total of 22x17 or 37,400 points



**ON7UN will be putting a big signal on 1296**

**OZ4MM:** Stig [vestergaard@os.dk](mailto:vestergaard@os.dk) writes -- Well the contest is history, and as usual it was a joy to make so many contacts off the moon. In Dec I found better signals on Saturday than Sunday, but more or less OK during the weekend. I had a disaster with the water supply for my water-cooled TH308 1296 PA. Suddenly after a QSO with I5MPK, I found my output dropped from 500 W to 100 W in few seconds. I returned the PA only to get the bad smell of melted plastic. Too late I discovered the water pump was dead! I used the hours during the night to make repair with another pump and waterlines; only to find out that the TH308 water-cooling head leaked water. After more work, I was lucky to get the water supply working again. To my great surprise the tube survived more or less. My first test showed less output, but after few hours operating the output was slowly rising. I was QRV on 2 m, 70 and 23 cm this weekend. I found less activity this year on 70 cm than previous years. I hope its not because people are staying on the digital mode (like I find many are doing on 144) and don't think they are able to work CW with their setup... Look at OE3JPC and EA3DXU, who are doing a great job only using 2 yagis! Stations worked this weekend on 432 were JA2TY, SM3BYA, DL9JY for initial #263, RA3LE, RW3PX, OK2BDQ, UT3LL, K5JL, HA1YA, KL6M, JA9BOH, S51ZO, S53RM #264, G3LQR, JA6DZI, SM3JQU #265, OM1TL, DJ7GK #266, PA3CSG, F2TU, OE5EYM, OE3JPC and K2UYH giving a total of 65 this year. On 1296 I added JA8IAD, JR4ZZS, JA6AHB, JH1KRC, OH2AXH, OE5EYM, N2IQ, SM2CEW, F2TU, ON7UN for initial #226, G3LTF, DK0ZAB, GW3XYW, LX1DB, VE6TA, UR5LX, 9H1ES, I5MPK, HB9Q, LA8LF, LA9NEA #227, W5LUA, F6KHM and OE9ERC for a total of 64. I still need to check the log, but I seem to have 172 contacts in the log on a 4 bands.

**PA0PLY:** Jan [jan.kappert@comtestnl.com](mailto:jan.kappert@comtestnl.com) sends an update on his station -- During the Dec part of the ARRL EME Contest I found that my 70 cm antenna system has problems. Actually the VSWR of my 8 x yagis became better, but the signals were not there. This might indicate water flowing into the coax. I thus decided to concentrate on the indoor work, finishing my GS35b PA and proceeding with completing my 23 and 3 cm systems for use with my 3 m dish. Springtime will be a better time to be up on the roof for 432 antenna maintenance. John, ZS6JON visited Holland and passed by. While here he collected some GS35b (big mamma's). We should expect some great 432 signals form ZS soon! I would like to suggest that we plan activity during moon positions that produce the best signals irrespective of the time of day. Doing this would result in a better chance for QRP stations to be worked. [This was the policy for years. Unfortunately when moon times are in the middle of the night, the turnout is low and everyone complains about the activity level.]

**PE1TR:** Rob [rob@itr-datanet.com](mailto:rob@itr-datanet.com) reports on his contest activity during the Dec contest weekend on 432 -- My station is 2 x 28 el 8.5 wl yagis in a kind of semi-permanent setup with a 0.35 db NF preamp and GS35b PA. I QSO'd HB9Q on JT44 random, N9AB on JT65B random for an initial (#) and K2UYH on JT65C sked (#). I also had a near QSO on JT65B with EA3DXU. The sked

started with good signals, but for an unknown reason, we got no good decodes. Later in day we tried again, but signals were 3 dB weaker. It was an interesting sked because Josep also has only a two yagi station on 70 cm. It was fun last weekend, but it would be nice to see some more activity on 432 with the digital modes. Some agreement on a standard digital mode like JT65B is on the 2 m band would help. I prefer JT65B. Next time I will improve my system with AZ/EL readout. Now it's done visually or with a compass when its cloudy as it was during the contest weekend.

**S53RM:** Sine [s53rm@hamradio.si](mailto:s53rm@hamradio.si) is now QRV on 432 EME with 8 x 8.5 wl BV opt cross yagis, open wire feed, LT-70s, FT-1000MP, but only 100 W for now. On RX he is using 2 x ATF54143 LNAs with a 0.4 dB NF. He made his first EME contacts in Dec during the contest - 5 CW QSOs in all. Sine can run on both CW and JT65B, and will take skeds by e-mail. Pictures of his station can be found at <http://lea.hamradio.si/~s53rm/>.

**RN6MT:** Sergej [m6mt@mail.ru](mailto:m6mt@mail.ru) is a new station on 70 cm EME (in KN97kg). He had 8 x 1.5 wl yagis and an GS35B PA. In Jan he plans to switch to an array of 4 x 26 el BV yagis. He is interested in CW (only) skeds.

**RW3BP:** Sergej [rw3bp@co.ru](mailto:rw3bp@co.ru) writes - It was lot of work, but now I am ready to try for an EME QSO on 47 GHz. My station consists of 2.4 m offset dish (illuminated as if it was 1.8 m), 120 W TWTA on TX with an accuracy of the LO of about 50 Hz on 47 GHz, and on RX a 3.6 dB NF LNA. My Moon noise is up to 1.2 dB. I could not find an EME detection program that would function for millimeter wave EME signals, so I decided to write one myself. It was hard work for me and my good friend Vladimir. He is much more friendly with the PC. An early version of the program allowed me to copy both calls signs transmitted by AD6FP on 27 Nov. I called this program Millimeter Wave CW or MWCW - hi. I hope the weather will be good enough for QSO soon. AD6FP, W5LUA and VE4MA are completing their preparations.

**SM2CEW:** Peter [sm2cew@telia.com](mailto:sm2cew@telia.com) picked up some new ones in Dec. He added RW3PX and S53RM on 70 cm and is looking for UA4AQL. On 23 cm, Peter also hooked up with LA9NEA and W6YX, who was running a 6 m dish and 5 W out at the time. This QSO was not complete, but they did connect later. [W6YX is now running higher power.] Peter says to look for OE3JPC who is running 2 x 55 el yagis and 180 w on 23 cm. He ended the contest with 26 QSOs on 23 cm and 56 on 70 cm. Peter will be on for the next AW.

**SM3BYA:** Gudmund's [gudmund.wannberg@telia.com](mailto:gudmund.wannberg@telia.com) 70 cm activity this year was an unexpected bonus -- I convinced myself last spring that my 8 x 21 el FT yagi array had a short somewhere in the feed harness, so haven't bothered to even try it since. But when I finally unpacked the K2RIW amplifier a month ago (it still in shipping crate since coming back from Spitzbergen) I decided to hook it up anyway. Surprise - 800 W fwd and 5 W reflected. Whatever the problem was a year ago, it had gone away. So decided to get to the farm (JP81nx) for the Dec contest weekend. I gave the preamps a good once-over. The cascaded amps measured 30 K (0.41 dB). This paid off as the band is super quiet down at the farm. I had consistent echoes the whole weekend in spite of some Faraday. I worked 19 stations (all on CW). They were HB9Q, DL9KR, VK3UM, DL7APV, RA3LE, OH2PO, OZ4MM, G3LTF, SM3AKW, OE5EYM, F6KHM, K5JL, N2IQ, SV1BTR, OK2BDQ (but replied to SM3BYR), SM2CEW, G4ERG, F2TU and K1FO. I copied another 20 or so stations that I didn't manage to QSO. It surprised me that I was unable to get through to many Europeans who were putting in extremely strong signals. The best I got was strings of QRZs - and all the while my own echoes were strong and stable! To name a few: EA3DXU, SP6JLW, DJ7GK, DJ6MB, RW3PX..I guess the explanation is that the benchmark rig nowadays seems to be running a GS35 or similar flat out at 1.5+ kW, while the antenna gain is probably a bit less than it used to be a decade ago. For detecting your own echoes, and for working similarly equipped stations, the SNR budget comes out the same as mine, but when I call them there is a dB or two less gain at the RX end. I have to finally get that 8938 powered up. The US appeared to be a case of solid Faraday lockout both days. KORZ, KJ7F, K4EME were all putting in nice sigs. N9AB was loudspeaker copy for hours, but couldn't get any reaction from any of them. K2UYH called me once, but disappeared after the first over. Overall it was a great weekend.

**SV1BTR:** Jimmy <jimmyv@hol.gr> comments on his 432 availability -- My EME QTH is located at my weekend House, which is 130 miles from home. I go there mainly for contests and activity weekends with high declination. If of course, I am away on travel, which is quite frequent, I will not be QRV. I presently plan to be active for 22/23 Jan AW, but it is possibly that my travel schedule could change. Assuming I am on, I plan to some spend time on random CW at my moonrise/moonset. By the way, I recently changed my 70 cm array from 8 x 39 el 13 wl yagis to 8 x 26 el 8.5 wl BV optimized yagis. I seem to hear about the same as I have in the past. I had a great time in in both legs of the

contest. It seems that 11 years of EME hardship and lessons learned from it, especially with QRM has paid off. I managed my highest ever score on 144 and 432. A total of 22 on 70 cm for a total of 87 overall and all on CW. Who said CW EME is going down? I hardly see that initials wise. On 432 I added OE5EYM, KORZ, K4EME, OK2BDQ, SM3BYA, RA3LE, S52CW, S51ZO, S53J and HA1YA.

**VA7MM:** Mark (VE7CMK) [va7mm@rac.ca](mailto:va7mm@rac.ca) and Toby (VE7CNF) were active on 1296 MHz in the second leg of the ARRL EME Contest using their EME group call from CN89og - During the weekend 9 stations were contacted on CW: OH2AXH, N2IQ, DL0SHF, LX1DB, F2TU, SM2CEW, OE5EYM, F6KHM and N7AM. Recent station improvements include a new LNA with 0.3 dB NF and RF Power Amp upgrade to yield about 250 W at the 3 m dish antenna. The station is featured on the web at [www3.telus.net/public/va7mm/eme/](http://www3.telus.net/public/va7mm/eme/). VA7MM is open for CW or JT mode skeds by e-mail.

**VK3UM:** Doug's [tikaluna@ycs.com.au](mailto:tikaluna@ycs.com.au) contest report - Stations worked during the contest on 432 were all on random CW and in accordance with my licensing conditions. They were SK0UX, JJ1NNJ, KL6M, OH2DG, JL1ZCG, OH2PO, DL7APV, DL9KR, DLOGER, OZ4MM, EA3DXU, F6KHM, VK4AFL, S52CW, SM3AKW, HB9Q, N9AB, VE6TA, JA6AHB, K1FO, KORZ, K4EME, JA9BOH, SP6JLW, PA3CSG, DJ6MB, SV1BTR, DF3RU, DL7UDA, 15CTE, 3LTF, JA6DZI, DL1YMK, K2UYH, N2IQ, KL7HFQ, RA3LE, G4ERG, SM3BYA, KE2N, JH4JLV, JA2TY, OK2BDQ, SM2CEW, S53RM, S53J, RW3PX, G3LQR and YO4FRJ for a total of 48x27 or 129,600 points (same as 2003). There several very small stations in the above list that I managed to work even without YYYs, which pleased me greatly. Conditions were stable for the most part. Faraday was 45 degs mostly, 90 degs for short periods and quite sharp as best I could judge with very little libration. I found myself transmitting and receiving vertical for most QSOs, which is not normal for me into Europe. Activity in the NA window was poor. VK's + JA's exceeded USA. Europe was good, but there was not enough time to work everybody. I note that the windows during "convenient operating hours" where Europe and my NA windows were "most inconvenient". Surely that says something. Some final reflections on the contest: 1) As I have said before for anyone in the Southern hemisphere, it is never a Contest but a battle against time to work as many guys in the very limited windows we have available. Mention has been made on this before. If some of you thought this weekend was low, then I remind you in the North that we normally operate at your times when the moon is lowest in the sky. As a consequence, ground noise is present for considerably longer periods and becomes a limiting factor at these latitudes. Please choose a weekend for EME contests where perigee and low sky temperatures prevail regardless of clashes with other long established contests. We cannot change our parameters! 2) I was disgusted with the opening soliciting and down right badgering that took place under the guise of assisted QSOs and "enhanced activities" - (VK-ZL VHF logger). 3) The moonrise into Europe is a fascinating time for me. May I mention (politely) that some of the operating practices that could be improved to assist others. Please understand that your system noise temperature is compromised with ground noise initially and you may not hear others operating on the frequency. A long 10 minute CQ as your moon rises (as happened on both my windows), whilst I was trying to work another station exactly on that frequency did not help. It is good operating practice to be a hunter rather than the hunted for the period of your ground noise. You will then be able to gage Faraday/libration as well as finding out who is where and what is in fact a clear frequency. 4) The practice of calling QRZ repeatedly when you can hear someone, but can't get their callsign is infuriating when you are trying to work someone else. Sure some stations have a noisy QTH and are deaf (or both). Several guys do it and when, I for one are battling against time, then it is understandable that I don't go looking for you when I know you can't hear me! (I missed 3 multipliers because of this). 5) Dupes - fine if the other guy has been calling CQ for ages with no response, but please not during a pile up. I love to talk to you but not then, please! 6) The long report - I send a station a (55N) report and receive 2 minutes of (56N) in response! 7) The use of YYY was better this year, which helps significantly.

**W2DRZ:** Tom [w2drz@starband.net](mailto:w2drz@starband.net) was active on 1296 during the Dec contest weekend, but notes that CW is a problem for him and no one was available to assist him. He tries to do his best and much appreciated those who slowed down for him. Tom ended he final EME score of 50x30 for 150,000 points.

**W2UHI:** Frank [fblumn@pathwaynet.com](mailto:fblumn@pathwaynet.com) was not on the first night in Dec because of very high winds. He had changed his moon tracking system to new W2DRZ controller with F1EHN tracking software, but was not able to complete the calibration because of the wind. Frank was able to get things working well on Sunday.

**W7BBM:** John had problem prior to the contest. He blew up a DB6NT preamp. He was also working to increase his power from 65 W to 200 W with a new PA by Dec contest time.

**W9IIX:** Doug [ix@interaccess.com](mailto:ix@interaccess.com) now has power out of his 1296 GI7B driver amp, but has oscillations when driving his big PA. [Get an isolator.] He ended up running the GI7B barefoot for the Dec contest weekend. Doug worked 3 stations including an initial with DL0SHF on Saturday and more on Sunday to add 7 initials total.

**WB5AFY:** Dan [wb5afy@wb5afy.net](mailto:wb5afy@wb5afy.net) in EM04id was QRV on 23 cm during the Dec contest weekend. He has a W9ZIH ring PA, but is disappointed with his results. Dan is working on adding 13 cm EME and hopes to be on by the first of next year with a 4K3SL klystron.

**WD5AGO:** Tommy [wd5ago@hotmail.com](mailto:wd5ago@hotmail.com) is working on 13 cm EME. He expects to be QRV sometime in Jan and is interested in skeds. He plans to use a cooled HB LNA. By cooling he is able to bring the NF from 0.39 dB down to 0.28 dB.

**ZS6JT:** Peter (ex ZE5JJ) [zs6jt@absamail.co.za](mailto:zs6jt@absamail.co.za) writes that he is planning to get back on the moon again -- I had to close down the big dish in 1987 because of ill health. After a heart by-pass, I am now quite OK just getting older (now 83). I am getting interested again in EME, especially on 432 MHz because I have a suitable antenna for this frequency and probably sufficient power to use the new Computer Programs. Life for us ex Rhodesians has become very difficult since Mugabe cut off all pensions, however I probably have sufficient gear to get back on EME. I have been making antennae of all kinds for the satellites and have been using the Gunter, DL6WU's Computer program with very good results. I still make dishes, but only small ones (1.5 m). Early next year I intend to start preparing for EME on 432 MHz and would like to get back on to regular monthly skeds again. I would appreciate hearing from my old friends and advice on the best way to go.

**K2UYH:** I was pretty much on my own in the contest this time except a bit of assistance the first night from my neighbor KC2TA. I switched between 70 and 23 cm. Stations QSO'd were 4 Dec on 432 at 0621 K5JL (569/559), 0631 K4EME (559/559), 0715 RW3PX (59/349) for initial 681, 0735 DL9KR (579/589) and 0741 S52CEW (559/559), then switched to 1296 at 0810 F6CGJ (569/569), 0818 SM2CEW (569/559), 0822 OE5EYM (569/569), 0828 IK2MMB (559/559), 0905 N2IQ (569/569), 0915 ON7UN (559/549) for initial #229, 0931 KA0Y (579/579), 0951 DF3RU (559/549), 0959 K0YW (579/569) dup, 1113 VE6TA (559/559), 1125 W6YX (449/O) #230 and 1555 JH1KRC (O/O), and on 5 Dec on 1296 at 0730 IK3COJ (449/339), 0755 HB9BBD (589/579) dup and 0757 LA8LF (569/569), switched to 432 at 0903 DJ6MB (559/539), 0915 G4RGK (559/459), 0922 G4ERG (559/569), 0945 PE1ITR (O/O) on JT65C sked for initial #682 (mixed), 1030 S51ZO (559/-) lost, 1035 G3LTF (559/559), 1040 OZ4MM (569/569), 1045 G4LQR (559/559) and 1101 SP6JLW (449/559), and then back to 1296 at 1121 LA9NA (559/539) #231, 1156 NA4N (559/559), 1208 W9IIX (559/559) dup and 1630 JR4ZZ (O/O) for a contest total on 432 of 33x25 and on 1296 of 45x29. I was also QRV on 70 cm on 8 Dec and had nil results in a JT44 sked at 1100 with ON4DPX, but easily worked on CW at 1145 DL9JY (559/559) #683. At the end of Nov, N2UN and myself were in CO on business, and found time to visit with KORZ. Bill has a most impressive shack. I don't think I have ever seen a station that is quite so neat and well maintained.

**NETNEWS BY G4RGK (BASED on K1ROG's Netnotes):** **W6YX** is the call sign of the Stanford University Radio Club. They now have W6HD station running on 23 cm, but still need to get his PA on line. **F6KHM** ended the ARRL EME Contest with a score of 81x37 on 70 cm. In Dec it was very boring and they switched to 23 cm on last day, but still had no pile-ups. **N7KA** working towards 23 cm EME. **WA9FWD** plans to be QRV on 13 cm for Jan AW. **DL3OCH** has a new e-mail address [dl3och@gmx.de](mailto:dl3och@gmx.de). His webpage address is the same [www.qsl.net/dl3och](http://www.qsl.net/dl3och). **RK6MC** (ex UA9XEA) is in a new grid, KN97lc and QRV on 432 with 8 x 26 el BV yagis and 200 W. By the end of Jan he should have a GS35B PA QRV. He is interested in skeds for the end of Jan. **DK3WG** has a new email address at [dk3wg@darq.de](mailto:dk3wg@darq.de). **WB7OBS** is nearing operation on 70 cm EME. He has mast mounted his preamp and the relays are ready for a final test. **ISCTE** was QRV for the contest in Dec and worked on 432 DL9KR. Piero CWRN many times S52CW and JL1ZCG. **WAIJOF** is still working on his dish and should be back on 1296 soon. **W4SC** did not make it on 23 cm for the contest. **N4PU** is working on a 12' dish. **VE4MA** making progress on his 47 GHz TWTA, but is still having some problems. **K7LNP** in UT is working on a 432 EME system. He now has LA-70 PA and hopes to be QRV off the moon for the 22/23 Jan AW. He has also located a 13' dish for use on 23 cm EME. **G4ALH** was QRV in Dec on 70 cm for the contest. **KA0Y** was on 1296 briefly during the Dec contest weekend. **KSASU** is still QRV on 23 cm EME

and is making progress toward higher power. He will be much more active in the future. **W7UPF** is a new station coming on 1296 with 10' dish and 200 W from Tuscon, AZ. **W5LUA** was having some TWTA arcing problems, but is now ready to go on 47 GHz EME. He was active on 23 cm during the contest in Dec. **NA4N** worked a couple new ones on 23 cm during the Dec contest weekend, but missed LX1DB, OE9ERC and F6KHM. One of Greg's problems is his TX feedline loss. His PA has 400 W out but only 160 W at the feed. **K9BCT/4** reports his AZ rotator went bad during the contest. **KORZ** only picked up a couple new ones the last weekend of the contest. Bill ended with 39 QSOs on 70 cm. **F5VHX** was QRV on 23 cm during Dec, but not on during contest. **DK3SE** is a new 432 station with 4x21 el yagis and 200 W. **AD6FP** ran 40 minute sked with RW3BP on 47 GHz. He did not copy Sergi, but was copied by RW3BP during post processing.

**FORSALE: LA8LF** is looking for a PSU for a 70 W TWT (6.5-7.0 kV helix and 3.5-5.0 kV collector). Contact Anders at [LA8LF@tiscali.no](mailto:LA8LF@tiscali.no). **K2AH** has a 6 tube 1296 K2AH ring PA for sale. Unit is on 19" rack mount chassis with right angle drives for input and output tuning, and includes filament and bias supplies. Price is \$US1500 plus shipping. Contact Tom at [Tomd@brielle-nj.com](mailto:Tomd@brielle-nj.com). **DL8YHR** is looking for a 70 cm PA with 500 W or more output power. **N8CQ** still has some Septum Feed kits available. Contact Gary at [gabercr@nc.rr.com](mailto:gabercr@nc.rr.com) for details. **K5JL** has a 30' dish and also 90' HD tower available, free for the haul. Contact Jay at [cliebman@ionet.net](mailto:cliebman@ionet.net) to see if still available. [**KBOHH** is going to pick up the dish]. **W9IIX** is looking for info on the HP-141T network analyzer to cover 23 cm and above.

**TECHNICAL: G3LTF Tells How He Cured a Chirp on 13 cm--** For a long time I have had a problem with a persistent chirp or "whoop" on 13 cm, which I can hear on echoes; a two second dash would come back with anything up to a 1 KHz frequency change. I have a pretty old system on 13 cm, which uses a varactor upconverter as the TX mixer and for a long time I believed it was caused by pulling due to VSWR change as the tubes warmed up. I put in circulators before the BA and PA and added some really stiff regulation on the LO and multiplier supplies, but with only a small improvement. The chirp got really bad recently and so I returned to the fight and replaced all the standard feedthrough capacitors in the LO unit with filtercons thinking the problem might be caused by RF pick up, or feedback, into the DC feeds. There was still no improvement. Finally I took the LO unit out of the chassis and let it hang in the air nearby. This gave perfect results, but was not pretty! I then found the problem, The LO unit was built in a die cast box and the lid was very slightly bowed, so there was effectively a "slot antenna" L/2, 6.5 cm long on the oscillator side, which happily picked up the small residue RF on the nearby PA HT lead (although it was additionally decoupled). This RF then slightly affected the operation of the LO and its multipliers causing a frequency change. A piece of spring stock to short out the center of the slot completely cured the problem. I measured 30 dB attenuation from the output socket to the PA anode bypass plate and another 20 dB to the HT socket, so the power level being picked up was very small, about 1 mW. I relate this only to illustrate how a chirp problem can occur from very non-obvious causes.

**FINAL:** This has been a year of loss to the EME community. I am sad to report another silent key; OH1NL has died. Lenna was on the European end of the first 144 MHz EME QSO on 11 April 1964 (OH1NL - W6DNG). At that time not many even believed that EME contacts were possible on 2 m. OH1NL was very much respected by radio amateurs in Finland because of his pioneering work at VHF.

There are several events to announce this month: 1) The Southeastern VHF Conference is planned for Charlotte, NC on 29/30 April and is looking for speakers on EME and related advanced VHF/UHF/microwave topics. If you would like to attend or just send a paper contact Ray, WA4NJP at [wa4njp@bellsouth.net](mailto:wa4njp@bellsouth.net). Conference details can be found at <http://www.svhfs.org>. 2) The 50th Weinheim VHF Convention will occur in 2005. It will be held on 10/11 Sept. 3) It is not too early to start planning for the 12 EME Conference, which will be held Wuerzburg, Germany on 25-27 Aug 2006. Information can be found at <http://www.emc2006.com>. Here is a question: Where and when were the first two International EME EME Conferences held? [If I don't receive the answer, I will let you know next month.]

Although there was considerable random activity around the end of Dec/beginning of Jan, **the next official AW is 22/23 Jan**. I plan to be QRV then as much as possible during the holidays. Please note that this AW corresponds to the ARRL's Jan VHF Contest. EME contacts count in this contest, so you may find some NA station's looking for contacts off the moon. The exchange is simply calls and the short (4 character) grid square (FN20, et c.). I hope everyone has had a wonderful Christmas season and will have a terrific New Year with big echoes from the moon. Please keep the news and technical reports coming. 73, Al - K2UYH