

## 432 AND ABOVE EME NEWS NOVEMBER 2002 VOL 30 #12

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**CONDITIONS:** Unfortunately the 1<sup>st</sup> leg of the ARRL EME Contest produced some of the lowest activity I have ever observed in an EME contest. I suspect this was due to the bad WX in much of Europe and the conflict with Microwave Update in the USA. WX was not great at some location in NA as well. K2AH reported that he could not QRV because of extremely high at his location. Turnout seemed proportionally better on 1296 than 432, but the QSO counts prove that there are still considerably more stations on 70 cm than on 23 cm – so much for the rumor that “Everyone has moved to the GHz bands”! Conditions were reported to be good on both bands. Low Faraday and clear signals are noted in many report s.

**HIGH SCORES:** Despite the bad WX the scoring leaders are pretty much the same this year as in the past, although the scores are lower. Of the reported scores, on 70 cm OH2PO has the undisputed lead with 62x31=19,220, followed by DL9KR with 40x28=11,200, K1FO with 45x24=10,800 and DJ5NV with 41x26=10,660. On 23 cm HB9BBD leads with 43x21=9,030, F2TU 29x20=5,800, HB9Q had 32x17=5,440 and G4CCH 30x?.

**AL7EB:** Ed [al7eb@ptialaska.net](mailto:al7eb@ptialaska.net) was on 144 in the contest, but is considering activity on 23 cm and up EME -- The big news is my acquisition of a Varian TWTA from Darrel, VE1ALQ. It runs 50 W on 10 GHz and 150 W on 5.7 GHz. This will get me going on 3 cm EME. I will use my 2.4 m Ku-band Andrew dish, which is currently set up. It only needs some work to get the az-el computerized drive going. I hope to have the RX side going in a few months and be fully QRV by the spring. I may also give 23 cm a try on JT-44, if and when I get a 1296 circ pol feed to mount on the 2.4 m dish. I can use a 3 W DEM xvtr to drive a 16 W DEM-brick to drive the 7289 (hopefully to 125 W or so?). I have the brick and K9EK amp, and just need the feed, water-cooler, and 1200 V pwr supply to be QRV. I am using a 2-stage "AGO" preamp for 1420 MHz SETI that gives 0.30 dB NF at 1296. If you think it would be adequate, we could try the "barefoot" 16 W PA (bolted to the feed). [I think QSOs are very possible. In the Echo mode I can see reflections with less than .5 W]. Next summer I may get the energy/money to put up my 16' dish and add the OE9PMJ/TH-328 cavity I bought from VE3KH years ago. With that I would be in position to do SSB and CW pretty well! But I will look into getting a modest station going with the smaller dish, 1st!

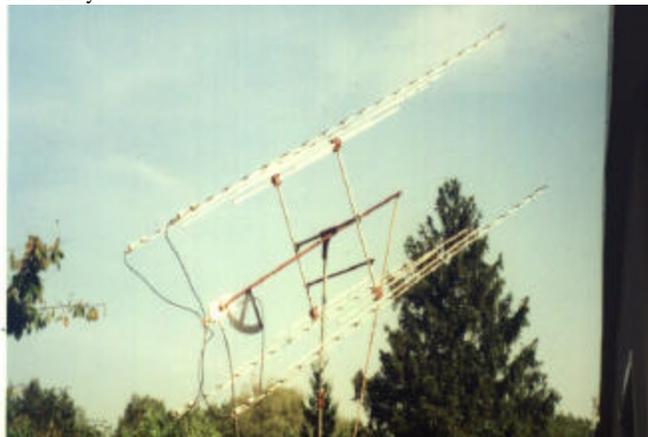
**CT1DMK:** Luiz had nice summertime WX during the contest and spent all of his time on 3 cm. Condx were quite good, but he only made 4 QSO and did not copy anyone from NA – possibly due to his limited western window during high dec. 14TTZ and 15PPE had very good signals. In Nov he will be again exclusively on 10 GHz and notes that skeds for 3 cm are welcome.

**DJ5MN:** Bernhard [dj5mn@web.de](mailto:dj5mn@web.de) and [dj5mn@9a0tcp.ampr.org](mailto:dj5mn@9a0tcp.ampr.org) is now QRV on 10 GHz EME – After several years being active on 2 m, 70 cm and 23 cm EME, I now QRV on 3 cm. When I started 2 years ago, I was an absolute greenhorn, but all equipment is now running ok. I have 1.5 m dish (0.407 F/D) with more than 100 W at the feed (vertical pol) and < 0.6 dB NF on RX. Moon tracking is manual and a visible moon is presently needed. Sun noise is > 14 dB. During the contest I worked WA7CJO and had a partial with W5LUA. I'd like to arrange skeds and can be contacted by e-mail.

**DL4KG:** Gerald [zovnek@t-online.de](mailto:zovnek@t-online.de) could not be QRV in the contest -- I haven't worked any station since beginning of Oct. I wanted to install a new open feeder system but bad weather did not allow this. Happily I had no damage to my array by the big storm here. Because of the storm I made no QSOs in the ARRL contest. I only heard for a few minutes of K1FO, N9AB and HB9Q, but all with weak signals. I have been experimenting with JT44 on 70 cm and am interested in skeds. So far I worked with the JT44 mode DK3BU, KJ7F and K9SLQ. I copied N9AB, SK0CC and G4YTL but no QSO.

**DL5LF:** Frank's [frank.dobert@gmx.de](mailto:frank.dobert@gmx.de) ARRL contest report -- I am back on the moon with a single yagi, just for the ARRL contest. Contest WX conditions were the pits with rain and much wind. Sunday the winds rose up to 120 km/h, and forced me to QRT early. I found the condx only fair with moderate much QSB on signals. I did worked OH2PO, DL9KR, VK3UM, JL1ZCG, K1FO and N9AB. CWNr were HA1YA, HB9JAW, HB9Q, DJ5NV and K2UYH. JL1ZCG had a solid, very strong signal over many hours. Thanks to all being patient with me, some QSOs took 15 min and more.

**DL7APV:** Bernd [DL7APV@t-online.de](mailto:DL7APV@t-online.de) could not operate the 1<sup>st</sup> part of the contest due very bad WX – We had 100 km/h winds and I was forced to leave my 432 array on the ground. This is the 1<sup>st</sup> time I have missed the ARRL Contest due to bad WX. Hopefully in the 2nd part WX will be better. Instead being on the moon, I played around with a new Analog Devices IC (AD8362) true power RMS detector with 60 dB dynamic range and an accuracy of +/- 0.5 dB over 50 dB! With it I can now measure M17, Sagg, sun noise, etc. with much better accuracy.



**DL7UDA 4 yagi array with mechanical manual AZ-EL readouts**

**DL7UDA:** Dietmar's [dl7uda@t-online.de](mailto:dl7uda@t-online.de) report of 1st leg ARRL EME Contest 2002 – Here is my short report. I started Saturday evening with good weather conditions. I heard some stations, but no QSOs. On Sunday morning before the rain and wind began, I QSO'd OH2PO (O/O), HB9Q (O/O) and K1FO (O/O). Heard were DJ5NV, DL9KR, JL1ZCG, K5GW, PA2CHR and N9AB. My rig consists of an IC475H with a GS35B PA at 750 W out to a TX feed loss of 1 dB. On RX I have a 0.5 dB NF MGF 1402 preamp with a 200 Hz DSP audio filter for CW. See [www.qsl.net/dk7zb](http://www.qsl.net/dk7zb) for more details. I am looking forward to making many more QSOs in the 2nd leg. During the post SW, I worked SM2CEW (O/O) and partials with PA4FP (CW) and K2UYH on JT44 (had a bad computer connection).

**ES5PC:** Viljo is QRV AGAIN on 2304 MHz and was active in the contest -- I'm back in Estonia and my station is set up again and I can copy my weak echoes on 13 cm. Thanks to Ants, ES6RQ who built my VE4MA feed, I'm now QRV with circular pol. The dish is 2.6 m, ERP is about 300-400 kW and the RX NF is about 1 dB.

**F2TU:** Philippe's [F2TU@guido.fr](mailto:F2TU@guido.fr) contest results – It was very difficult on microwave with the strong wind, but I still worked on 10 GHz (1) F6KSX and copied 15PPE, 14TTZ, W5LUA, CT1DMK and D5MN – (many contacts were missed because I inverted the Doppler correction!), on 5.7 GHz (4) JA7BMB, IK2RTI, I6PNN and S57RA for initial #17, on 2.3 GHz (3) OZ4MM, OK1CA

and JA7BMB, on 1296 (29) G4CCH, OZ6OL, HB9BBD, OE9ERC, IK2MMB, N2IQ, OK1CA, K0YW, W2UHI, KU4F for initial #186, K9BCT, N7AM #187, K5JL, DL4MUP, HB9Q, OE9XXI, G3LTF, DK0ZAB, DF4PV, JA6CZD, IK3COJ, OH2AXH, HA5SHF, K2UYH, VE6TA, WA6PY, SM3CEW, IOUGB and W7SZ – W9IIT was copied but the moon was to low, and on 432 (16) UA3PTW, RA3LE, OH2PO, DF3RU, HB9Q, HA1YA, K1FO, N9AB, K0RZ, K5GW, K5WXN, F6KHM, PA3CSG, JL1ZCG, DL9KR and UA6LGH. For the 2<sup>nd</sup> contest weekend I propose microwave activity periods for 13 cm on 23 Nov 0500-0630 (+2304.1, RX also on 2320), for 6 cm on 23 Nov 0700-0800 (+5760.1) and for 3 cm on 24 Nov 0500-0800 (+10368.1 MHz). Who will be QRV. Pse let me know.

**F5KDK:** Dave (F5SDD) [david.sanchez@teklogix.fr](mailto:david.sanchez@teklogix.fr) writes that his group is still very interested in EME operation and expects to be QRV on 432 in the 2nd leg of the contest. They have had a problem finding a location for their 70 cm EME station. They are presently looking for a home for their array of 8 x 26 el BV yagis.

**F5SE:** Franck [kozton@easynet.fr](mailto:kozton@easynet.fr) has made great progress on his big dish project -- My sister gave me a piece of ground so that I can build up my dish. I also found a solution for the supporting structure: a discarded high-voltage power line tower! The lower part appears ideal for my project. Due to the robustness of the tower, I decided to go one step forward. The dish will be 12 m instead of 10 m, as projected last year. A lot of things remain to be worked out, among them, the El-Az mounting system. I am presently visiting the EME antenna photo-gallery, but it's difficult to figure out how the different mounts are designed. Stormy conditions prevailed during the Oct weekend in the UK, Northern France, Belgium, The Netherlands, Germany, The Czech Republic, parts of Switzerland and Austria, and likely Poland. 25 people were killed, including 6 in the UK, 4 in France (1 in our area), 7 in Germany (Düsseldorf and Berlin). In Reims, high winds started to blow at around 0000 on Friday night and only stopped on Saturday morning around 0800 UTC. Then it remained relatively quiet until Sunday morning around 0800. Then it kept blowing until sunset. No major damage was reported in Reims. In some other places, it was more dramatic. Most of the reported casualties were due to trees falling.



F5SE's tower to be used with his 12 m dish

**G3LTF:** Peter [100633.1656@compuserve.com](mailto:100633.1656@compuserve.com) reports on his Oct activity – We had a gigantic storm, which really made a mess of the contest, but fortunately, apart from losing electric power for 6 hrs, we were all OK. I managed to get in 2 short spells of operation on 1296 when the winds eased and made 19 QSOs and 14 mults with 2 initials. There wasn't time to use 432 or 2320. Hopefully the 2<sup>nd</sup> leg WX will be better. On 26 Oct the wind was too strong at 0000. I got on at 0730 and worked N7AM, VE6TA, WA6PY, K5GW, K0YW, G4CCH, W5LUA, DL4MUP, KU4F for initial #190 (interesting tone!), K2UYH, HB9Q, OE9XXI on SSB, F2TU and IK2MMB. Heard was IOUGB on SSB. By 0930 the wind was beginning to really batter the dish and I quit. The gale continued for the next 36 hours, but I did get on for the final window on the 27th at 2140 and added IK3COJ, F6ETI, OE9ERC, OZ6OL and JH0YSI #191. There was no other activity as the storm was still over the Eur mainland. Back in on 28/29 Sept I had some interesting 13 cm QSOs with OK1CA, HB9SV, JA4BLC and WA6PY for initial #21. Paul was very weak, but we had a solid QSO. I've now QSO'd him on 3 bands on his 2.4 m dish! On 2 Nov I gave the 13 cm system a test and worked G3LQR (549/539). I then switched to 23 cm and worked G4CCH and K2UYH/K0YW in a 3-way SSB exchange. I was alerted by them to W9IIX's presence and worked W9IIX #192 even though by then the dish was 1/3 obscured by bushes at the low declination. The next day I put the 432 feed in but although echoes were strong (perigee) with no Faraday, I only worked UA3PTW. K9SLQ was heard and called several times. I also heard K2UYH and

K1JT at K2UYH's QTH. I continue to work towards 9 cm EME plus lots of other on going improvements/repairs to the systems!

**G4CCH:** Howard [Howard.ling@g4cch.com](mailto:Howard.ling@g4cch.com) had high winds during the contest, but not enough to force him off the moon. He made 30 QSOs on 1296 on 26 Oct at 0002 HB9BBD, 0016 OE9ERC, 0024 F2TU, 0031 JA6AHB, 0053 OZ6OL, 0100 IK2MMB, 0149 OK1CA, 0209 N2IQ, 0214 OE9XXI, 0320 KAOY, 0339 W2UHI, 0351 KU4F, 0356 K9BCT, 0402 VE6TA, 0420 K0YW, 0510 W7BBM, 0520 K5JL, 0532 HB9Q, 0540 IK3COJ, 0552 DL4MUP, 0605 WA6PY, 0622 W9IIX for initial #173, 0628 K5GW, 0645 K2UYH, 0650 W1ZX, 0706 W4AD, 0746 W5LUA, 0750 N7AM, 0755 G3LTF and 0909 IOUGB on SSB - heard were F6ETI and OH2AXH.

**HB9BBD:** Dominique [dfaessler@bluewin.ch](mailto:dfaessler@bluewin.ch) had good time in the 1<sup>st</sup> part of the contest – I worked on 23 cm 43x21. Conditions seemed to be good and many stations, which usually are not too strong, seemed to have added strengths. I want to especially mention HA5SHF (559/589), W7SZ (579/569), WA6PY (569/569) and IK3COY (559/569). I worked 5 initials: KAOY #180, KU4F #181, W9IIX #182, N7AM #183 and DL1HTT #184. All stations with an initial QSO with HB9BBD on 23 cm may get their online QSL cards at <http://www.hb9bbd.ch/qsldata.php3>. All in all, many regulars seem not to be on the microwave bands this weekend. The first contest weekend usually yields more than 50 contacts. So there is hope to make more QSOs than usually in the second round.

**HB9JAW:** Michel [HB9JAW@Kaktus.ch](mailto:HB9JAW@Kaktus.ch) is QRV and was active on 70 cm in the contest after about 8 years of absence – I am back and hope to enjoy EME for some time. The last 2.5 years I have been working on a new dish. Finally the weekend before the contest, I managed to get it running. Because of its size (11 m) and the very high winds during the weekend, I was unable to work the whole contest. I did managed to be on a few hours and I worked nearly 40 stations. I was running relatively QRP with only 400 to 600 W output and 2 dB of cable loss. But I am very happy with my results. I hope to improve my output on 432 by some dBs, and hopefully if all goes well, I should be on 1296 as well for the 2nd contest weekend. More info on my station can be found at [www.qsl.net/hb9jaw](http://www.qsl.net/hb9jaw).



HB9JAW's new 11 m dish and mount

**HB9Q:** Dan's (HB9CRQ) [hb9crq@hb9q.ch](mailto:hb9crq@hb9q.ch) results for the first leg of the contest -- We have worked on 432 35x23 and on 1296 32x17. We were also active on 144 and made many QSOs there. On 432 we had heavy local QRM, which forced us to follow the rhythm of the other stations. It was difficult to operate under such conditions. On 1296 MHz we must have had an RX problem, since we did not hear several stations that we usually can work with no extra effort. We will check our RX path before Nov and hope to fix it. The storm over big parts of Eur kept the activity low. Why Japan was represented so little we don't know. Unfortunately we did not find any activity from Africa on the 3 bands. We are very much looking forward to the second leg where we will try to work all the stations we missed. We will announce our QRV times and

frequencies before the contest on the reflectors, EME nets and our homepage [www.hb9q.ch](http://www.hb9q.ch).

**ISPE:** Pietro (ISPE) [pipesa@tin.it](mailto:pipesa@tin.it) and Alex (IK5WJD) [ik5wjd@tin.it](mailto:ik5wjd@tin.it) or [ikcsg@tin.it](mailto:ikcsg@tin.it) report on their 10 GHz contest activity – We were QRV in ARRL EME Contest and QSO'd on 26 Oct at 0505 WA7CJO (559/569) on random, 0532 F6KXS (O/O) on random, 0603 W5LUA (549/559) on sked, 0743 CT1DMK (O/O) on random and 0805 OK1UWA (559/559) on random, and on 27 Oct at 0721 I4TTZ (529/549) on random. It seems that there was poor activity from the USA, but increased activity by European stations. We also copied F2TU, DJ5MN and OK1CA but not worked. The station is 3 m dish (0.28 f/d) with Chaparral-like HB feed, 0.7 dB NF LNA giving Moon Noise > 1.2 dB, 40 W TWTA, The entire station (RX-TX) is placed at the feed. Polarization is vertical, but is possible to quickly switch to horizontal.

**IK3COJ:** Aldo [ik3coj@inwind.it](mailto:ik3coj@inwind.it) is back on 1296 EME – After four years I've rejoined the EME world on 1296. During Oct before the contest, I added initials with the following stations: G4CCH #71, K0YW #72, HB9Q #73, W6HD #74, F6KHM, #75, OE5EYM #76, DF4PV #77, DL4MUP #78, IK2MMB #79, OZ6OL #80, JA6AHB #81 and OH2DG #82. During the 1st round I made 17 QSOs and worked HB9BBD, N2IQ, KA0Y #83, HB9Q, K5JL, G4CCH, OE9XXI, OZ6OL, K5GW #84, F2TU, DF4PV, OH2AXH, K0YW, KU4F #85, K2UYH, IK2MMB and G3LTF. Heard were DL4MUP and WA6PY. The WX in Italy during the Contest was very good with no wind or rain at all. At the moment I am using a 3 m dish (0.33 F/D), VE4MA feed, a NE 325 preamp - SM0PYP-DD1XF design, and a home brewed PA with a G17B water-cooled tube with about 200 W at the feed. You can have a look on my website at <<http://www.qsl.net/ik3coj>> Skeds via e-mail are welcome. My new address (since 1997) is (Aldo Pico, Via Berna 2/11, 30030 MARTELLAGO, ITALY).

**JH1EFA:** Shigeru [BZZ24342@nifty.ne.jp](mailto:BZZ24342@nifty.ne.jp) located 40 km north of Tokyo was active 23 cm in the contest. Using a 3 m dish with 100 W at the feed he copied HB9BBD, HB9Q, OE9ERC and OE9XXI in JA-EU window.

**K0RZ:** Bill <WMccaa@aol.com> was QRV in Oct on 70 cm for the ARRL contest and plans to be so again in Nov. He QSO'd DF3RU, DJ3FI, DJ5NV, DJ6MB, DL9KR, EA3DXU, F2TU, F6KHM, G4RGK, HA1YA, HB9JAW, HB9Q, JH4JLV, JH6AHB, JLIZCG, JR9NWC, K1FO, K2UYH, K4EME, K5GW, K5WXN, K9SLQ, LU7DZ, N9AB, OE5EYM, VK3UM, VK4AFL and YU1EV. He found good conditions, but with lower than normal activity in both EU and the US. Initials were: HB9JAW #306 and LU7DZ #307 and country 46, and YU1EV #308 country 47. Bill thanks YU1EV for staying with him to complete the QSO. His contest score is 34x20.

**K0YW:** Bruce was QRV on 23 cm in Oct with only his driver, as his PA is apart and awaiting parts. He still had a big signal and worked many stations in the contest on 1296 including 2 JAs. After the contest, he QSO'd W9IIX for initial #125.

**K1FO:** Steve [steve@lunarlink.com](mailto:steve@lunarlink.com) has had very limited time in 2002 to operate and the 1<sup>st</sup> weekend of the ARRL contest was no exception. He had 3 other activities during the weekend in addition to the EME contest. One of which was the annual Eastern VHF/UHF Conference which also hosted Microwave Update this year in Enfield, CT, about an hour from Steve's QTH. During the weekend he spend the days at the conference and then came home to get a few hours of EME operating at moonrise. He was also on for moonset on Saturday. On Sunday moonrise activity was very low so after an hour, a decision was made to get some sleep and get back on for European moonset. Initially this plan worked well as a few more stations were QSO'd. The plan went awry when ac power was lost for several hours. Just as Murphy would have it, ac power came back on 5 minutes before moonset. His 1<sup>st</sup> weekend contest totals were 45x24 with only about 10 hours of operating time. 3 initials were QSO'd with OK1DIG, HB9JAW and DL7UDA. This brings his 70 cm total up to #606. Steve hopes to be able to put in more hours in Nov, but is keeping his fingers crossed that WX will be good as the northeast US had a very cold Oct this year.

**K4EME:** Cowles <candrus@rica.net> is back in operation on 432 – I had to rebuild most of the electronics in my station due to a lightning hit last April. The station now consists of a FT-847 exciter, TE Systems amp driving a Lunar Link LA-70B PA ~ 1.5 KW into 8 x 33 el FO yagis. The preamp is a Cavity Type using a HEMT. Recently picked up an old Scientific-Atlanta dish positioner (turn-table type). I think this should make a fine azimuth control for my 20' dish. It will handle a Maximum axial load of 10,000 Lbs! I have a computer on order, XP-2000 type that should be fast enough to run the EME version of JT-44 software. I should have it on a couple of weeks.

**K5JL:** Jay [cliebman@ionet.net](mailto:cliebman@ionet.net) was very busy in Oct. He hosted VK3UM in a post Prague visit to the USA on his way home. Jay was QRV on 23 cm just about every weekend and QSO'd SM2CEW and G4CCH, W9IIX (529) for Doug's 1st 23 cm EME QSO. Jay had excellent results in the contest, but will not release his score except to report he had 26 multipliers on 1296.

**K5WXN:** Dan found conditions very good on 70 cm during the contest weekend. He worked 22x? with several got a ways. SP??LW called for about 30 minutes. [Probably SP6JLW]. Dan says it seems as though the EU stations got on later.

**K9BCT:** Randy [k9bct@aol.com](mailto:k9bct@aol.com) ended the 1<sup>st</sup> contest weekend with a score 16x12. He was a bit under the WX health wise but still had lots of fun and received many FB reports.

**KH6RH:** Gareth [gman003@hawaii.rr.com](mailto:gman003@hawaii.rr.com) in Hawaii is an EME newbie -- EME has always interested me, but living in a townhouse puts limits on what antennas I can erect. Anyway, during the first weekend of the EME contest, I borrowed my boss' 19 el 432 Cushcraft yagi in hopes of hearing just 1 big gun during the contest. I didn't hear anything that night, but learned a lot in the process. Right now, all I want to do is LISTEN. Transmitting can come later. My present setup (for satellite) is an 11' mast with a 9 el 435 quagi and a 4 el 2 m yagi. I took down the 2 m yagi and put the 19 el yagi up in its place. My rig is a Yaesu FT-736. I now understand that I should have a preamp at the antenna with at least a 0.5 dB NF. I am using Ultralink feedline from antenna to rig, about 40'. I was told this should be changed to LDF4-50 at the least. I was also told that the preamp should be very close to the antenna - [At the antenna feed]. Any advice would greatly be appreciated. FYI I chose 432 EME because it's easier to manage a 70 cm long yagi at the townhouse as opposed to a 144 boomer.

**KM5A:** Steve [smw@rapidnet.com](mailto:smw@rapidnet.com) is just about ready to go on 432 EME. He has completed his second EME array (4 x 21 el yagis) for 432 MHz and have some new electronics purchased from K2DH. Steve reports his sun noise measurements seem acceptable [? dB], but that his moon noise test failed. [Moon noise is very small (tenths) on 70 cm with even big arrays and requires special equipment to detect.] During the Oct contest weekend he heard his 1<sup>st</sup> moon signals including N9AB, F6KHM, K5GW and DL9KR – very loud.

**KU4F:** Thorton appears to have cured his difficulties on 1296 although he did report some noise problems from his PA tube during receive. He ended the 1<sup>st</sup> part of the contest with 28x?. He says he did not much luck during his western window. Thorton's tel is (352-625-8744).

**LA8LF:** Anders [MILCOM@tiscali.no](mailto:MILCOM@tiscali.no) tried to be QRV on 23 cm from LA for the 1<sup>st</sup> part of the ARRL EME Contest, but had problems with his VK3UM tracking system – see the For Sale section. He now is trying to be operational during the 2nd leg from EA8.

**N2UO:** Marc ([lu6dw@yahoo.com](mailto:lu6dw@yahoo.com)) writes – I was not active during the first leg of the contest because I decided to attend the Microwave Update Conference in CT. The conference was great, very well organized by the NE News Group, with good presentations and an excellent flea market. I didn't meet too many moonbouncers as most of them were operating the contest, though K1FO, VE4MA, W7CS and some others showed up. I also met Matt, KB2VC, who has almost finished a 10' dish for portable EME. The dish is ingeniously mounted on a trailer. He has equipment for 3.4 GHz EME, but I suggested he also put some effort towards 10 GHz EME as his dish surface is for Ku band TVRO. Right now I am working on a 2 x G17B amplifier for 23 cm. The power supply is done, and right know I am busy with the cavities and couplers. So for the time being I am back to QRP operation using my driver (2 x 2C39), which puts out about 90 W at the feed of my 10' dish. In any case, I hope to work a bunch of stations during the contest in Nov.

**OH2PO:** Jukka (OH6DD) [oh6dd@sral.fi](mailto:oh6dd@sral.fi) reports on his contest results – The contest weekend was very windy in Finland, but we could operate without problems. Activity was low due to the big storm in south/central Eur. We scored 62x31, which is much below normal. Unfortunately EME contest coincides again this year with CQWW. Instead of a 2nd leg of the EME-contest, I will join our HF-contest team OH2U for an effort from EA8. I hope Matti's station will be activated by someone else during the 2nd leg. We QSO'd on Saturday 26 Oct UA3PTW (559/579), YO2IS (559/569), DL9KR (599/589), S52CW (559/559), DF3RU (579/579), OK1DIG (569/569), JH4JLV (569/559), DK3FB (559/559), RA3LE (559/569), DL5LF (559/O), HB9Q (579/529), F2TU (569/559), K9SLQ (569/O), HA1YA (559/569), YU1EV (559/559), UT3LL (549/559), OE5EYM (579/579), N9AB (569/559), UA6LGH (O/O), K0RZ (569/569), K1FO (579/579), K2UYH (569/579), ON5OF (579/579), LU7DZ (O/O), KL7HFQ (O/529), DJ3FI (559/569), K5WXN (559/559), HB9JAW (569/569), K5GW

(569/559), DJ5NV (559/569), K6JEY (559/559), EA3DXU (O/O), G4RGK (559/559), K4EME (559/559), W7MEM (O/O), G3HUL (O/449), I5CTE (O/O), F6KHM (569/579), PA4FP (559/559), PA0PLY (O/529), JL1ZCG (579/579), SP6JLW (O/549), VK3UM (569/559), DJ6MB (559/559), PA3CSG (569/559), JR1RCH (O/O), JA8IAD (559/569), JR9NWC (559/559), JH0WJF (O/569), SM2CEW (569/589), partial JA6DZI (549/-), SM3BYA (549/559) and JA4BLC (569/579), and on Sunday 27 Oct SM5IOT (559/559), JA6AHB (559/579), DL7UDA (O/O), KL7HFQ (559/559) dup, OH4LA (O/O), IN3KLQ (559/559), PA0AVS (O/O), K7XQ (O/O), VK4AFL (559/569), G4ALH (449/449) and JA9BOH (O/O).

**OK1CA:** Franta [ok1ca@ees.cz](mailto:ok1ca@ees.cz) sends his results for the first leg of the ARRL EME Contest – I had bad WX with strong winds on Saturday and rain on Sunday. On 1296 I worked 16 stations with initials from KU4F, N7AM, K5GW, K9BCT and W7BBM to bring to #100. Signals from NA were very good and provided many new stations. 2.3 GHz had very poor activity and I worked only OZ4MM (559/549) and F2TU (549/549). I missed the window for ES5PC. I have improved my rig on 3 cm EME. I have a waveguide TR switch and a new 0.6 dB NF preamp that gives 2.1 dB of moon noise, but I still have only 12 W on TX. I couldn't operate 10 GHz on Saturday because of very strong winds. I was QRV on Sunday from 0600 to 0800, but worked only OK1UWA (559/O). I CWN'R'd I4TTZ and I5PPE and heard F6KSX and F2TU. I stopped operation after rain began and the signal levels went down.

**ON4ANT:** Johan [on4ant@pandora.be](mailto:on4ant@pandora.be) is planning to put 3B8 on 432 EME during a dxpedition in March. It will be 2 weeks stay booked from the end of Feb thru the beginning of March. Johan has ordered 4 x 25 el 25JXX70 yagis for 70 cm, has an LNA coming and is getting a GS35 cavity. He will use TS2000X and will have a laptop with JT44 as well. Any help will be appreciated.

**OZ4MM:** Stig [vestergaard@os.dk](mailto:vestergaard@os.dk) had a conflict with family activities, and thus very little time for the contest in Oct – I decided to use my limited time on 13 cm. I found only 3 stations around in the few hours I was on. I hope for better activity on 13 cm in next run. I have increased my power at 13 cm to around 60 ~ 75 W at the feed of my 10 m dish.

**OZ6OL:** Hans' report for the first leg of the contest – The storm was not so strong here in Copenhagen, so I was able to operate from Saturday morning to moonset, although at about 3 in the morning the dish's dancing in the moonlight had me very worried! I QRT'd but was back on only a short time later. I worked HB9BBD, JA6AHB, IK2MBB, F2TU, OE9ERC, G4CCH, OK1CA, N2IQ, OE9XXI, K9BCT, K5JL, W2UHI, K0YW, KA0Y, KU4F, W7BBM, HB9Q, VE6TA, N7AM, W1ZX, DL4MUP, IK3COJ, JA8ERE, DK0ZAB, JA6CZD, WA6PY, OH2AXH, K2UYH, W5LUA, SM2CEW, IOUGB, K5GW, W7SZ, G3LTF and F6ETI for 35 QSOs.

**OZ9AAR:** Carsten [chg@logicio.com](mailto:chg@logicio.com) reports that his project to get back on EME in "big way" is progressing very well. The elevation system for the new 8 m dish is now complete (hydraulic). The next task is the AZ drive, which is being welded. It will consist of a large gearbox and a 1:4 chain drive to the center of the rotating tower. He has 2 absolute digital encoders for the position readout. The box for the feed horn is ready as are the feed tubes. Carsten only needs to build a suitable feedhorn and hopes to be ready some time during winter.

**S57RA:** Paul [pavel.reberc@guest.arnes.si](mailto:pavel.reberc@guest.arnes.si) was QRV in the contest on 6 cm EME. He used on 5.7 GHz a 20 W PA and a 3 m dish with a linear vertical pol feed. Paul is receiving about 0.5 dB of moon noise. He is interested in skeds and can be reached by e-mail or GSM at +386 41 751 297.

**SM2CEW:** Peter has a new 1296 [?] PA and a much improved tracking system. These efforts apparently paid off in Oct. On 432 he added initials with OK1DIG (his initial EME QSO), SP6OPN and DL5LF with a single yagi. He also worked DK3BU on a small 4 yagi tropo array. Peter could not operate much of the contest due to high winds, but after the contest he added more initials on 70 cm with SM5IOT and DL7UDA. He was also active on 23 cm through much of Oct and QSO'd W2UHI, K5JL and others.

**VE6TA:** Grant [ve6ta@telusplanet.net](mailto:ve6ta@telusplanet.net) sent the following note on his activity during the contest – I tried to get on 222 for WA4NJP and WD5AGO, but the high power relay I use on that band was stranded on the roof after an earlier 6 m EME effort. Unfortunately 2" to 3" of ice and snow on a steeply pitched roof made it a bit hazardous to retrieve. I ended up spending the weekend on 23 cm where conditions seemed good despite the lack of many EME regulars from Eur. Murphy struck by causing my auto-track system to malfunction on rising moon, and my 4 tube amp decided that it wasn't going to perform. I switched relays on the tracking board to enable the system to would work with a rising moon, and

put off work on the resulting decreasing elevation problem until later. The amp was a little bit harder to track down. I discovered that the tuning capacitor for the anode section of the cavity had a poor solder connection and was creating a lot of heat, and as a result the amp had poor efficiency. I re-soldered the connection and reassembled the cavity to bring it back to 450 W output. This was just in time for the second pass. I worked 27 x 21. Initials on 23 cm were N7AM, W1ZX, KU4F, K9BCT, W7BBM, and IOUGB. Kudo's go to WA6PY for having an outstanding signal with his small dish, as well as all the outstanding regulars for giving us signals so loud that my ears hurt - OE9XXI, HB9Q, K5JL, KA0Y, OE9ERC, K5GW, and of course HB9BBD. I would hate to have these fellows power bill after the contest. I am not sure what band I will be on next month, as it will depend on getting the high power relay down from the roof. If the weather gods cooperate I will try and be on 432 next month for at least one pass.

**VK3UM:** Doug reports tough WX conditions in VK3. During the 1<sup>st</sup> weekend he QSO'd 27 stations on 432. He only heard 3 JAs and reports that VK5MC was going to try to be on. Doug says it is great to be home, but that he had a great time when on holiday in Eur and the USA. Doug will be QRV on 23 cm soon – possibly Nov.

**W1ZX:** Willie reports the W4TJ operated his station during the EME contest on 1296. They worked 19 stations the 1<sup>st</sup> night, but had computer problems the 2<sup>nd</sup> night. Signals were quite good, but their moon window limited to elevations >40 and <69 degs.

**W2ETI:** Richard, WA2IKL [rcf@eventide.com](mailto:rcf@eventide.com) reports on the SETI EME beacon -- As promised, the W2ETI beacon is back on. One reason for the shut down in August was that the power amp was slowly losing output. It was my intention to do some troubleshooting. I never got a chance, but I figured better a little low rather than none. Surprisingly, when the beacon came back up the power had returned to normal. Now I have to figure out whether something just needed a "rest" or what. It's certainly possible that the actual problem was in the measurement, since I have three different ways of measuring power and they disagree with each other by a couple of dB. This is not the case with frequency. The beacon should be spot on 1296 +/- 2 Hz at the most, and more likely -1/+0. I've verified this with two Rb standards, two GPS standards, and a completely separate quartz oven oscillator, which is about 6 Hz off at 1296.

**W2UHI:** Frank worked on 23 cm 24x19 in the 1<sup>st</sup> leg of the contest. Activity was slower on the 2<sup>nd</sup> night and he only added DF4PV and HA5SHF – both for new multipliers. He missed W5LUA on Saturday and never heard him on Sunday. After the contest Frank did a bit of experimenting with his Scaler ring and moved it forward about an inch. He feels that he has increased his signal to noise, and was able to work K5JL at the S-3 level with Jay running only 2 W!

**W4JBB:** Joel [w4jbb@amsat.org](mailto:w4jbb@amsat.org) writes -- I have recently relocated and am interested in moving from satellites to EME - specifically, 432 EME and eventually 1296 EME. I currently have the Yaesu FT-847 and G-5400B rotor and controller. At this time, I have no PA or preamp and want to just experiment with JT44. I'm also planning on building the K1FO 432 antennas described in the ARRL Antenna Handbook. I am interested in locating web sites with basic information on EME. [Try <<http://www.nitehawk.com/rasmit/em70cm.html>>].

**W7SZ:** Larry was unable to be QRV the 1<sup>st</sup> night, but was active on Sunday. With his 12' dish and 450 W on 1296 worked 14 stations.

**W9IIX:** Doug [iix1@attbi.com](mailto:iix1@attbi.com) (EN61dr) is now QRV on 1296 EME with a 10' dish, VE4MA feed (W5LBT tracking) and 100 W from water-cooled 2 x 2C39 PA. He made his initial contact with K5JL in Sept. In Oct Doug worked during the contest HB9BBD, G4CCH, K5JL, KA0Y, W1ZX, OE9ERC, OE9XXI, K5GW and N2IQ for a total of 9. He CWN'R HB9Q and OH2AXH many times. On the post contest weekend he added K2UYH, K0YW and G3LTF to bring him to initial #12. Doug has not yet heard his own echoes, but will eventually solve this problem with a larger PA. His address is (Douglas Johnson, 4421 W. 87th St, Hometown, IL 60456). Tel is 708-423-0605.

**WA6PY:** Paul [pchominski@mobilian.com](mailto:pchominski@mobilian.com) reports on the first part of the contest – I QSO'd in the first part of the contest on 1296 HB9BBD, HB9Q, N2IQ, W2UHI, G4CCH, W1ZX, K5JL, K5GW, K0YW, W5LUA, KA0Y, N7AM, K2UYH, G3LTF, OE9XXI, KU4F, VE6TA, OH2AXH, OZ6OL, SM2CEW, OE9ERC, IK2MMB, F2TU, W7SZ and IOUGB for 25 stations. F6ETI and DL4MUP were got away. A few station called on my CQs, but I need a longer time to recognize call letters with my 8' dish. Please do not give up as long as I respond with QRZ? This means that I can copy, but I need more time. For many hours I heard a modulated signal at about 1296.006-7. I wonder if anybody else heard that? I heard two marginal signals with my dual dipole feed on 432, but I

did not concentrate on recognizing the callsigns. I plan to be on 13 cm the first night in Nov and on 23 cm on the second night. I will still monitor 432, and if I will hear any stations I will try to QSO.

**WD5AGO:** Tommy [THenders@tulsacc.edu](mailto:THenders@tulsacc.edu) writes – I finally got settled in the new location about 7 mi SE of the old house, same grid EM26. I am not supposed to have up any antennas in the air, which is not that big a problem. I'll just put down the EME array when not operating – Hi, Hi. I was on 222 MHz in Oct and worked WA4NJP. I want to have a system going on 5.7 GHz in Nov, and am not sure what other bands I will be on - possibly 222 MHz again and/or 432 MHz. 1296 is not out of the question either. [Congrats to Tommy for receiving the Teacher of the year award from the ARRL – see Oct QST!]

**YO2IS:** Szigy [yo2is@yo2kjo.ampr.org](mailto:yo2is@yo2kjo.ampr.org) was QRV on 70 cm during the contest-- During the 1st leg of the ARRL EME Contest I found conditions variable and not too many stations QRV. I made 9 QSOs including K1FO and JL1ZCG, who had the loudest signal I have ever heard on 70 cm EME and that for several hours. I CWNRR N9AB and K5GW after his QSO with KL7HFQ. No other stateside stations were heard. This was my 13th participation in row in the annual ARRL EME Contest using the same old fashion but still in good shape rig and antenna. If all goes okay I will be on 70 cm again in the second leg.

**ZL1KA:** Brent [addis.zl1ka@xtra.co.nz](mailto:addis.zl1ka@xtra.co.nz) is working on 1296 EME -- I am only RX at the moment and having some problems with only weak signals being heard so far. The system is a 6 m dish with an IMU feed on a modified Seacat missile launcher for rotation with an DB6NT 0.4 dB NF preamp. I am seeing 15 dB of sun noise and 0.75 dB from Sag A, but has only heard 2 unidentified weak signals off the moon so far. [Are you sure you are using the correct circular polarization?] I need to do some more work by Nov. I will be listening again.

**K2UYH:** I operated on both nights of the contest, 1<sup>st</sup> on 432 for several hours and then switched to 1296. Activity on 70 cm seemed much lower than in past contests. Activity on 1296 was better than on 432, but not up to par. Signals were much stronger there too, but this may be the result of my increasing noise problems on 70 cm. There was some sort of wideband pulsed noise that came on periodically, and of course usually at just the right (wrong!) time to mess up copy of someone's call. I don't think I had difficulty copying calls of any 1296 signal until my VK/JA window. There I had about 3/4 tree blockage of the dish and had to QRZ everyone. I worked two JAs on 1296, then switched to 432 and worked VK3UM - TNX Doug. I also heard several JAs there, but could not get their attention. I kept calling CQ down to about 10 degrees where my echoes disappeared, but not one reply. WA2ILK President of the SETI League visited on Saturday night to help with operation and to get a better feel for EME operation. I think Richard was impressed by the EME signals. We QSO'd on 26 Oct on 432 at 0348 DF3RU (559/569), 0355 ON5OF (559/O), 0406 OH2PO (579/569), 0411 N9AB (569/559), 0424 K1FO (579/569), 0449 K5GW (579/569), 0458 K0RZ (559/559), 0515 HA1YA (O/O), 0539 UA3PTW (O/O) and 0556 DJ3FI (559/559), then switched to 1296 at 0627 K5JL (579/579), 0632 W2UHI (569/579), 0645 G4CCH (569/579), 0656 KA0Y (559/559), 0658 VE6TA (559/569), 0704 KU4F (559/559) and initial #206, 0711 W1ZX (569/559), 0739 WA6PY (559/559), 0801 K5GW (55/55) on SSB, 0809 N7AM (559/559), 0822 G3LTF (569/569), 0825 W5LUA (569/579), 0834 IK2MMB (559/559), 0844 HB9Q (579/559), 0856 OE9XXI (589/569), 0917 I0UBG (55/55) on SSB and 0921 KU4F (55/55) on SSB – dup. I over slept a bit and found the moon was too far into the trees to allow any QSOs on setting moon. I added on 27 Oct on 432 at 0507 K5WXN (559/549), 0517 HB9JAB (559/559), 0625 UA6LGH (449/559), 0635 DJ5NV (559/569), 0700 PA4FP (O/O), 0707 S52CEW (559/559) and 0730 SP6JLW (O/O), switched to 1296 at 0819 OZ6OL (569/569), 0824 SM2CEW (569/569), 0829 OH2AXH (569/579), 0835 DL4MUP (569/539) #207, 0839 HB9BBD (579/589), 0904 OE9ERC (579/569), 0914 F2TU (569/569), 0934 IK3COJ (559/559), 0945 I0UBG (559/559) dup, 0957 W7SZ (559/569), 1458 JH0YSI (O/O) and 1438 JA6AHB (O/O), switched to 432 at 1507 VK3UM (449/559). The overall scores for the weekend were 18x15 on 432 and 28x17 on 1296. I now have the newest version of JT44 installed. The Doppler frequencies of the new JT44 (V3.0) are quite close. I tried the echo mode again. Using the TS2000X barefoot, I clearly observed echoes with .5 W into the feedline! I also tried the echo mode on 70 cm with my tropo antenna (modest preamp in the shack). I was able to see my echoes, but needed at least 500 W. This is probably an indicator of my noise problems. The weekend after the contest, K1JT visited to see JT44 in operation. I had a JT44 sked arranged for 2 Nov with DL7UDA on 70 cm. Unfortunately Dietmar had equipment problems and was unable to TX on JT44, although he copied my signals. I was able to demonstrate the echo mode on 432 and 1296. The day before on 1 Nov, I worked on 23 cm at 1300 W9IIX (5549/549) #208 and had a 3-way SSB QSO at 1329 K0YW (57/57) and G3LTF (56/55).



**K2UYH's JA/VK moon window**

**NETNEWS (BY G4RGK):** **K2DH** has sold his house and is moving to a new QTH. **N4PU** has completed his new feed mount and fixed his AZ gear ratio. Jim is now awaiting the arrival of a repaired tracking backing board and should be able to list on 1296 EME. **W5LUA** has a 24 GHz TWTA for G3WDG but is having trouble getting in touch with Charlie. During the contest Al worked 14 on 23 cm including 2 initials with N7AM and KU4F. On 3 cm he QSO'd DJ5MN for an initial, I5PTE, F6KSX and WA7CJO. **VE4MA** is making sun noise with his new offset dish on 24 and 47 GHz. He was not active in Oct because of attendance at Microwave Update, but plans to be on in Nov. **K7XQ** was active on 1296 in Oct, but did not report any QSOs. **SV1BTR** is thinking of getting on 23 cm and is looking for 12-16' dish. **DL1YMK** is QRV on 23 cm and looking for skeds. He has a 3.8 m dish and 500 W from a YD-1336 with help of DK1BU. He was not able to operate the contest in Oct, but plans to active in Nov. **WA7CJO** reports that with the help of W7GNP he has taken down 10 m Scientific Atlanta dish and moved it to a location to put it up for use on 70 cm and up. It will be operated under the call W7GNP. **W4AD's** dish now tracks well (within 0.5 degs) and he was active in the contest on 23 cm. **W0LD** (x-KX00) in Colorado Springs, CO has 4x40' yagis for 70 cm and is working on a PA. Lauren can be reached by e-mail at [w0ld@pcisys.net](mailto:w0ld@pcisys.net). **RA3LE** was QRV on 70 cm in the contest and worked 14 stations including an initial with OK1DIG. **UA3PTW** was also active on 70 cm. **RW3PF** has a new e-mail address [rw3pf@efremov.tula.net](mailto:rw3pf@efremov.tula.net). **N2IQ** is getting 21 dB of sun noise on 1296 with his new 28' dish. Mark was active on only 23 cm in Oct and worked 24. He expects to be QRV for only the 1st contest weekend. **WA9FWD** was not on for the Oct contest weekend as at Microwave Update. **G3IRO** hopes be QRV on 23 cm EME in the near future. Peter has solid state 150 W PA and TVRO. He needs to build a feed. **9H1BN** has a 3 m dish for use on 1296 assembled and on a mount. He still needs a feed and will try to be QRV for Nov, but makes no promise. He reports that 9H1ES and has problems with equipment. **K5GW** now QRV on 1296 with a new 22'dish and 1.5 kW. **VE3AX** is making progress on mounting his 28' dish. **AASC** was active on 3 cm in the contest, but had nil results with DJ5MN. He is working on new preamp. His e-mail address is [aa5c@flash.net](mailto:aa5c@flash.net). **F6KHM** is now getting their best echoes ever on 70 cm with their 34' dish and new TH293 cool 2.5 kW PA. They are using a dual dipole feed wired for circular pol on TX but V or H for RX. WX limited contest operating time to only 2 hours on Saturday and 15 QSOs. **W7MEM** was active on 70 cm during the contest, but had to cut operation short when his 432 module died. **WB0GGM** was QRV on 70 cm in Oct and hopes to add 23 cm by next spring. **G4RGK** had very high winds during the contest weekend. Dave was forced to go QRT only 20 minutes into contest. He got back on for a couple hours on Saturday morning and worked a few stations on 70 cm. Dave was able to QRV for a couple more hours on Sunday and ended with 8 contacts. He also notes a problem with green Algae on his antenna elements. Dave's moon window is limited to >30 deg elevations. **F5VHX** did not get on due to the high winds. **NA4N** will not be for the contest this year. Family issues kept Greg from EME projects. Both parents passed away. [Our sympathies to Greg and family.] **DK3WG** because of the high winds and bad WX was only active on 70 cm for short time during the contest and made no contacts. **DL9KR** was able to operate a total of 4.5 hours during the contest. He was on only 55 minutes before 70 mph gusts forced him to tie down his antenna. Fortunately there was no damage. He made only 9 contacts the 1<sup>st</sup> night and end with a score of 40x28. This is 40% of Jan's usual total. **PA3CSG** reports only moderate winds at his QTH on Saturday, but still too windy for 3 cm operation. Geert was on 70 cm for a bit of time. WX was much worse the 2<sup>nd</sup> night and he was glad to just have his dish

survive. After the contest he worked PA4FP on 70 cm for a new one. **W2DRZ** did not make it on 23 cm in Oct, but hopes to on in Nov. **F6CGJ** was not on due to the bad WX. **F5PAU** was not either. **GM00NN** has been traveling a lot this year, but hopes to be back on 1296 in Nov. **DJ5NV** was on during storm, but could not be QRV the last 5 hours and ended with a score of 41x26. He called K1FO with 10 W and Steve sent QRZ. He will be QRV again in Nov. **W1JOF's** new address information is (Don Stradley, 144 Knowlton Corner Rd [do not use this for US mail], PO Box 124 [use this for US mail], Farmington, ME 04938). **F5HRY** has a new email address [f5hry@wanadoo.fr](mailto:f5hry@wanadoo.fr). **SP5CJT's** e-mail address is [sp5cjt@poczta.onet.pl](mailto:sp5cjt@poczta.onet.pl) **LU7DZ's** e-mail address is [LU7DZ@yahoo.com.ar](mailto:LU7DZ@yahoo.com.ar).

**FOR SALE:** **LA8LF** [MILCOM@tiscali.no](mailto:MILCOM@tiscali.no) needs 2 ICs (an ADC 0809 CCN and a AY 31015D/P) for his malfunctioning VK3UM tracking modem. Can anyone help? **PA7TA** (x-PE1GBT) has for sale a 70 cm Cavity with GS31B or GS35B tube. See his web page at <http://www.qsl.net/pa7ta> or e-mail Thijs at [pa7ta@amsat.org](mailto:pa7ta@amsat.org) for more info. **DJ5RE/DL0AO** [Thomas.Hoepppe@asamnet.de](mailto:Thomas.Hoepppe@asamnet.de) is selling a 23 cm cavity for 2x 2C39 tubes. The unit is a complete RF module made by EME Karl Müller (The producer of the HF400 relay). With 6 W input you get 150 W out. The unit has very effective cooling of the whole tube, and runs a silent EBM radial blower. It can be easily modified for water-cooling, if you need more power. It comes complete with a new matched pair of 2C39BA from Siemens, original bias-circuit board (1 spare), all silver-plated and in excellent condition. I also have the original power supply from EME Müller, including the transformer with 3 taps on the HV-secondary, heating, small-voltages, ceramic-switch to change the anode voltage, and dc circuit board with current and voltage metering. He is asking 300 Euros for the RF unit, and 150 Euros for the power supply. Selling all together is preferred, so contact Tom for a combined price. He is looking for an ICOM IC 475E/H for the DL0AO 70 cm EME station. **OZ9AAR** [chg@logicio.com](mailto:chg@logicio.com) has for sale 6 brand new Mitsubishi M57762 power modules, and a NEC TWT complete with 24 Vdc power supply (in a compact unit) with 18 W on 10 GHz and 22 W on 6 GHz. For pictures see [www.moonbounce.dk/Forsale.htm](http://www.moonbounce.dk/Forsale.htm). Contact by Carsten by email. **KM5A** is looking for a 432 PA in the 700 W class. Contact Steve at [smw@rapidnet.com](mailto:smw@rapidnet.com). **N4PU** is looking for a 250 W dummy load for 23 cm and a directional coupler to measure 250 W at 23 cm. **OZ4MM** [vestergaard@os.dk](mailto:vestergaard@os.dk) has for sale all machined parts for YL1050 23 cm cavity as described by DL9EBL in DUBUS 3/1993 plus 1 new YL1050 tube and 2 used but tested YL1052 tubes. E-mail Stig, if interested. **K7XQ** [k7xq@elite.net](mailto:k7xq@elite.net) is looking for a fully functional 200 to 300 W 1296 PA with power supply. **W1ZX** has for sale a trailer mounted 12' dish for free - pick-up only. **K9ZZH** is getting out of EME due to health problems. He has a 15' dish for free. His preamp, feed, and PA with P/S are available. He will also sell his IC-1275A. Call Dick at 708-748-9414. **WD5AGO** [THenders@tulsacc.edu](mailto:THenders@tulsacc.edu) is looking for an offset dish between 6' and 10' within 500 miles. **SV1BTR** is looking for > 12' dish for 23 cm. **N2IQ** has for sale PS 70 Lunar-Link power supply with Lunar Link connectors.

**TECHNICAL:** K1JT has released a new version of JT44 with an echo mode that should be of interest to EMEers whether you intend to use JT44 for EME contacts or not. The echo mode allows you to evaluate the EME capabilities of your system, even when you have too small a station to hear your own echoes. For larger stations, it allows you to investigate the limits of your system. I was able to easily detect echoes with less than 0.5 W on 1296 and observe echoes with my tropo system. Joe, K1JT has sent in the following information on this mode -- The preferred procedure at high frequencies in EME Echo mode is to set your receiver's RIT to something close to the computed Doppler shift and enter that offset into the on-screen RIT box. A new (as yet unreleased) version of WSJT makes this process somewhat smoother and introduces other significant improvements as well. This version is not yet ready for open release, but will be available soon. In the EME mode the Doppler value listed on the JT44 screen is now the two-way Doppler from your own grid to the location displayed in the Grid box next to the "To Radio" entry. The Doppler value listed on the Echo mode screen is the number for your own echo. The WSJT Doppler values differ from those of GM4JJJ's MoonSked (for example) by around 10 Hz at 144 MHz. I have not yet had the time to track down which software is more nearly correct, and I don't have a reliable figure for the accuracy of the WSJT calculation. [I have found the new version is in close agreement with echoes observed on 1296 (< 50 Hz difference).] When observing my own echoes on 2 m, I get values of DF ranging from about -16 Hz at moonrise to +4 Hz at moonset. These numbers are stable and reproducible (at least over several weeks). Surprisingly, though, I've discovered that running the program on a different computer can change the observed DF for echoes by nearly 10 Hz, even though the number is stable on both machines. I don't know what this could be other than some inaccuracies in the A/D and/or D/A sampling rates of the respective soundcards.



1296 JT44 echo test at F5SE using 4 Tonna yagis

#### FINAL:

- ◆ The SETI Moon Beacon on 1296.000 is back in operation – see the W2ETI report.
- ◆ W2WD has updated the EME e-mail address list as of 11 Oct.
- ◆ F2TU has again proposed times for microwave activity in the 2 contest leg – see his report.
- ◆ G3SEK has sent in the 2003 Lunar Calendar. Ian notes that the choices for the early months are easy. The dates for the DUBUS/REF Contest are already fixed (15/16 March for 432 & 2.3-5.7 GHz and 12/13 April for 144, 1296 and 10 GHz). Through the summer we are forced to use low declination. In the fall it gets better again, so the decisions for the ARRL contest should be easy. Proposed dates are 18/19 Oct and 15/16 Nov. We will print the full 2003 Lunar Calendar in the next NL.
- ◆ Please see the Sept and Oct issues of QST for the very fine article by W5LUA and VE4MA on 24 GHz EME. Congrats to Al and Barry on great job.
- ◆ There are no skeds this month because of the contest. There is now a direct link to the latest skeds <http://www.dl4eby.de/ltskd.htm> that will be updated all.
- ◆ W6/PA0ZN has revised the web page and now has a connection to the latest NL when you sign in. If you have not visited lately, take a look.
- ◆ I am pleased to report that we have a backlog of technical material that will be appearing shortly in the NL. TNX, please keep up the support! I hope to hear you during the Nov contest weekend. 73 & GL in the contest, Al– K2UYH



HB9JAW inside his 11 m dish