

432 AND ABOVE EME NEWS

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

CONDITIONS: Reports indicate that conditions and activity were good during the ARRL's Microwave EME Contest, but at a level that may have been less than during the last DUBUS European WW EME Contest. The difference may be the result of the EWW Contest's separating the 10 GHz and 13 cm weekends. Activity was down on 70 and 23 cm during the EME activity weekend (AW) as a result of the microwave activity, but will certainly return this month with the ARRL Contest scheduled 22/23 Oct. There was a good turnout on 23 cm during the pre-AW, which included the appearance of several new stations. On 70 cm the VK9XMO dxpedition generated some interest, but was limited to JT operation and not well publicized. Congratulations to Peter, SM2CEW and Alex, RU1AA for completing on 19 Sept what is probably the first 28 MHz EME QSO. I know that 10 m moon echoes have been well documented in the past, but I do not recall any reports of 2-way communications.

3Y0X: Andy (N9AB) Andrew.Bachler@msn.com has sent information on plans for a dxpedition to Peter I Island (Antarctica) www.peterone.com that will include gear for 70 cm EME. The dxpedition is currently planned for February 2006. They were asking for equipment to enhance their 432 EME station, but the deadline for any addition equipment was Oct 15th, which is probably too close for this announcement to be of any value. Their original system was to be 2 x 22 el KLM44 crossed yagis, 100 W brick, Landwehr Elektronik GaAs preamp and an IC451A. Since then K3MF has offered a larger array and DL9KR an improved preamp. Gordon, W0RUN gordon@alpharadioproducts.com is the person responsible for 3Y0X's EME activity. I will keep you informed of dxpedition developments. The dxpedition web site is <http://www.peterone.com>.

DL0EF: Manfred (PA3GLB/DL5FAB) eme@astropeiler.de reports on 10 GHz activity during the Microwave EME Contest -- We were QRV in EME competition during the night from 24 to 25 Sept. Our moon noise was only around 1.5 dB this time with still persistent problems on receiver gain stability. No VK stations were heard when the moon was rising around midnight, so we went for a short sleep and started again around 0600 in the morning. We then worked until noon 17 stations with good signals. Activity in Europe was great. We made initials with F3VSR and F5JWF. Also SP7JSG was contacted until noon, this time with solid signals. W5LUA and WA6PY were the only stations heard from NA. DL0EF celebrates 10 years of activities this year and we had lots of interested public at our location. Please visit www.astropeiler.de for more information.

DL7APV: Bernd dl7apy@t-online.de writes about his experiences with JT65 on 70 cm -- Activity using JT65 is growing on 432. I worked VK9XMO in Oct on random - no Logger no sked just random!! It was a real surprise. This was my first JT QSO where I heard nothing in the headphones and the smallest station worked thus far. I monitored more than one station calling CQ during the Sept AW. I believe that the activity in Europe is higher than state side. I know that tuning the band as we do for CW is not the perfect way for JT, but we need some more CQ QRGs, if RANDOM operation is to have a chance. We should concentrate on a segment where we can listen for several stations. For now I will publish 432.065 in DUBUS as the random activity QRG on 432 and we will see. I do not like what I see happening on the Loggers. My intention is to go away from the Loggers and have fun with JT65 on random as I do on CW. CU in the ARRL EME Contest.

EI/DL1YMK: Michael's DL1YMK@aol.com sends "the rest of the story" of his 1296 dxpedition reported on last month -- We would have loved to get another chance to be on the moon, but the storms were making the rules... So we had only 20 hours of activity, but made QSOs with 13 counties (all firsts) and 23 contacts. This first test showed that the dish has real potential. The signal reports we received and the level of signals we copied (when the dish was not swaying off the moon) were encouraging. I will improve the rotator and the autotrack

during the winter, so the 'mighty ugly dish' will be ready for another event next year. It took us about 4 hours to set up the whole EME station, which is not too bad for 2 persons! The SSPA produces > 500 W and is available from DB6NT -- see end of this NL. It uses 4 PTF devices from Infineon with Anaren-hybrid couplers. I used a surplus Ericsson SPS, which I modified to give 28 V at 50 A to supply the SSPA. The autotrack is the ARS-device from EA4TX (10-bit-version). The rotator controls both were modified with a pulse width converter, so that they turned very slowly without loosing too much torque. The weak point was the backlash in the elevation unit, which is by far too weak mechanically, even for this lightweight dish. I'm not very active on the moon these days, too busy job wise. During the winter I plan to combine two of the 6NT HPA's, so my signal should improve a bit via the moon. At least on 23 cm, the tube area is over for me. I had so much trouble with my YD1336 PA that I'm happy to have a solution to that problem.



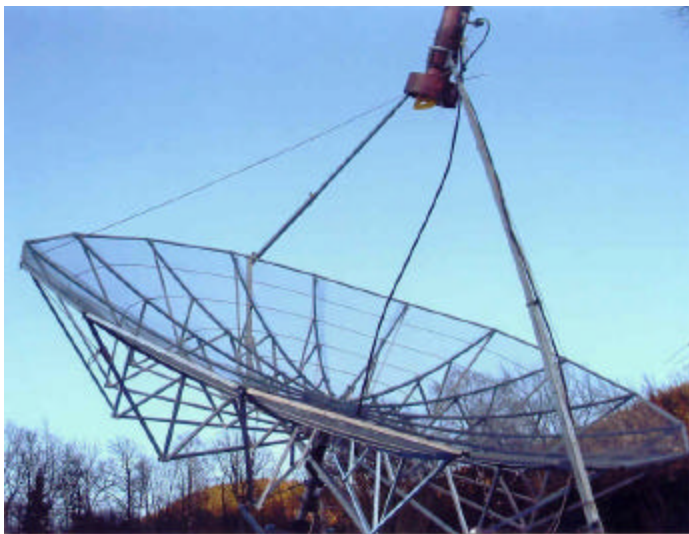
EI/DL1YMK's stress dish

G3LOR: Simon G3LOR@aol.com writes about his 13 cm contest operation -- I have not been as active of late as I would have liked, but I did get on for short while during ARRL Microwave EME Contest on 13 cm. The time was not very good for me as my window was mostly late at night. I tried to listen for Jas, but my tropo tower and a tin roof blocked my moon window. I worked only 4 stations: F2TU, G3LTF, OE9ERC and OH2DG. Crossband operation is still a problem for me. Hopefully I can put this right soon. I hear another 6 stations, but think they went elsewhere when I had a good window. I seemed to have missed all the NA station. I placed a satellite Ku band LNB at feed of my 4.2 m dish (designed for 2 GHz) and was surprised to measure 7/8 dB Sun noise at 77 flux, so maybe it will be of some use on 3 cm. I will next build a 6 cm system to check on this band. If all goes well at 9 cm, I should see about 13 dB of sun noise. I plan to be active next month on 70/23 during the contest.

G3LTF: Peter g3lft@btinternet.com writes -- I missed all the 23 cm fun with C31 and EI as we were on holiday. I was QRV for the 13 cm section of the ARRL EME Contest and worked on 24 Sept JA4BLC, OE9ERC, F2TU, ES5PC, HB9SV, OK1CA, W5LUA, OH2DG, OZ4MM, SM4DHN and WA6PY. CWNR were NA4N, WD5AGO and JA8ERE. WA9FWD was heard. On 25 Sept there was much less activity. I worked OK1KIR, JA6CZD, JA4BLC (dup), RW1AW, G3LQR and SM3AKW. CWNR VE6TA, although Grant did hear me the previous day. Of the 16 QSOs, 9 (more than 50%) were cross band. I was using 55 W from a SSPA at the feed horn. On 1 Oct Graham, F5VHX

visited us. I fired up the 23 cm system. The echoes seemed down and when I worked LA9NEA and N2UO they were not as strong as normal. After Graham had gone, I found the answer. Water in my down lead was putting over 25 dB of attenuation after the 2nd stage preamp! When I fixed this, things returned to normal and I worked VE6TA with a great (569) signal from his new dish. I have built a completely new and much larger enclosure at the dish base to hold PSUs and the 13 cm PA. It has fan cooling and a new heavy duty mains supply. This is a big step towards a bigger signal on 13 cm and a 9 cm capability. I will be QRV on 1296 and 432 MHz in the next leg of the contest, WX permitting.

G4CCH: Howard's howard@g4cch.com activity Report for as of 26 Sept – During the last month I was QRV for the ARI XII Italian EME Contest on 17/18 Sept on 23 cm. Conditions were very good with the Moon at near Perigee, but unfortunately declination was low and a large part of the operating window was during night time hours. Consequently activity was relatively low with a marked absence of most of the "regulars" and "big guns". I made 18 QSOs for a contest total of $15 \times 10 + 3 \times 31 = 243$ points. I also added 2 initials. QSO'd were on 17 Sept IK2MMB, IW2FZR, IW2FZR on SSB, IK2MMB on SSB, W2UHI, UR5LX, RW1AW, DKØZAB, FIANH, IK3COJ, ES5PC and UT3LL, and on 18 Sept K5PJR for Initial #209, KØYW, K5SO, W7UPF, VA7MM, WA5WCP #210, ON7UN, OK1DFC, IW2FZR (dupe) and IK2MMB (dupe). Gotaway's were DF9QX, K5GW and K5JL. Like all of us I'm getting older too, and I'm not as keen to stay up all night for EME as I used to be. Many thanks to all who made the effort to get on. During the AW, I worked on 25 Sept at 0915 K7XQ (O/O) - Jeff was S3, but had a chirp on his signal, which made copy too difficult for RST reports, and on 24 Sept at 0813 LA9NEA (549/549), 0825 RW1AW (569/579) and 0834 OK1DFC (569/579).



LA9NEA's dish

G4RGK: Dave g4rgk@btinternet.com was active on 70 cm during the AW. On 24 Oct he called SP6JLW on CW with no response. He also tried CQs on CW and on JT with nil replies. He did copy DL7APV on JT65 and QSO'd him, but notes that he could also copy the Bernd's CW ID. On 25 Oct he ran a JT sked with SV1AWE and received full calls from SV1AWE, but Bob did not copy Dave.

HB9JAW: Michel's hb9jaw@bluewin.ch Microwave Contest report, but bad news that it appears that he will have to go QRT-- I tried to participate in the microwave EME contest and copied on Saturday morning on 2304 the following stations all calling CQ: OZ4MM 2304.084 (559), ES5PC 2304.092 (559), WA6PY 2304.080 (539) and SM4DHN 2304.099 (579) - extremely strong. I was unable to answer the callers as there was something wrong with my PA. Later I found that the 28V PSU would not work. I did connect the Transverter's TX output to the horn with 1.4 W and found my echoes rather weak, but all my calling was unanswered... A few dB's too weak I guess. I thus again missed my first initials on 13 cm. I will try again, but there is bad news out off Switzerland. I have lost a 5 year long battle with the local authorities over my antennas. I have been given an order to dismantle my 40' dish by the end of Nov. This could be fought in higher courts, but I haven't got the time or the money to continue fighting. It's rather frustrating. It has become very difficult to continue our hobby in HB9. In 1985 I built a 20 m high tower with 8x17 F9FT for 2 m on top and inside 8x21 F9FT for 70 cm. These arrays were extended to 8x17 m2 and 8x39 m2. This was a very large array and permission not difficult, but it was granted only for 10 years. In 1996 the permit was extended. In 1999 I got another 5 year permit for the 11 m dish with the possibility to extend it again for

5 years. Now they don't want to extend the permits anymore. However, I will talk to the authorities again to see if there is a possibility for a smaller dish. If not I am thinking about making a mobile setup with 6 m dish. By it is very likely that by the end of Nov or shortly afterwards JAW will be off the moon. Is there anyone in Europe interested to continue using my 11 m dish? I would be willing to sell the dish to anyone interested in using it on EME. Please let me know by mail. I hope I will find time to make lots of QSOs before the end off Nov.

HB9Q: Dan (HB9CRQ) dan@hb9q.ch had another good month on 70 and 23 cm EME. On 432 using JT65B he worked the VK9XMO dxpedition on random under the call HB9CRQ with only 100 W! Their signal was -21 dB. Later he added XE2AT. He also reports that 5B8AD (after talking to him many times on the Logger) is now QRV on 70 cm with an 18 el yagi and 75 W. Dan has not QSO'd him as yet because 5B8AD's TX was badly drifting, but says a fix is in the works. On 1296 he added CU8AO with an excellent signal. As reported last month [in FINAL], Dan is putting together a list of stations active on 432 EME with the JT -mode. The list can be found on Dan's homepage at www.hb9q.ch on the 432 page – also see the end of this NL. Stations capable of JT operation on 432 should send their information to Dan

JH1KRC: Mike jh1krc@syd.odn.ne.jp was not QRV on 23 cm during Sept because of his EME efforts on 6 cm. He presently has his 6 cm feed mounted in front of his 23 cm feed. Mike does write that there is a new 23 cm station on from JA-land: JA1BGU, Tadashi Kounosu with 190 W at the feed of a 4.8 m mesh dish. Tadashi has already heard his echo.

KOYW: Bruce koyw@frontier.net was on Moon during pre AW and reports the signals, as was the full moon, were very clear. He Worked K9SLQ, K5JL, K5SO, RW1AW, IW2FZR for initial #158, G4CCH, K5PJR #159 and VA7MM, plus a nice 3 way SSB QSO with K5JL and K5SO. Heard were K5GW and WA5WCP also with good signals. K5PJR is now in Missouri and Bruce WAS 28.

K5JL: Jay k5jl@direcway.com is still not fully recovered from his lightning strike, but was on the moon during the pre-AW and worked K5PJR for initial #338 and WA5WCP for #339. On 1 Oct he QSO'd WA1JOF (559) and WA5WCP.

K7XQ: Jeff k7xq@elite.net notes that he was QRV on 1296 during the AW with only his 150 W PA as his 400 W GS-15b 400 PA is still being repaired. He heard G4CCH and OK1DFC on CW. Earlier in Sept he had a successful JT65B QSO with HB9Q using only 20 W and his 4 X 9 WL array.

UX1DB: Willie wbauer@pt.lu has not been very active the last few months. He did some tests with CT1DMK on 10 GHz with a circular pol feedhorn. He will send the full report later, but found copy is much cleaner and more stable with the circular pol. They used a new design for the circular pol feed by CT1DMK. The circularity was within 1 dB. During the microwave EME contest Willie on 3 cm made 10 QSOs and 13 cm added ES5PC and was called by a K5? at 1430 on 25 Sept.

MOEME: Paul m0eme@qsl.net writes – I have stripped the feeds from my yagis and am going to make a better job of assembling them. I am getting the baluns made more accurately on an analyzer and waterproofing the N types with half a plastic bottle. I am also using less coax and attaching the relays straight to the combiner so there is only 0.9 dB of loss before the preamp instead of 1.4 dB. I am also rebuilding the H frame to make it easier to get all 4 yagis lined up first time. All this should take me to the end of the Oct. I am changing to separate coax for TX and RX, and hopefully a transverter or Linrad later.

N2UO: Marc's lu6dw@yahoo.com Sept report -- I was not very active on the moon this past month due to the ARRL 10 GHz contest and the Mt. Airy VHF Club conference, which happened to be exactly the same days the microwave EME contest took place. In any case, I worked on 23 cm K9SLQ and G4CCH on 4 Sept and G3LTF on 1 Oct. I also conducted run a test on 23 cm with Sergei, RW3BP using his millimeter wave CW software. Sergei has only an 8' dish and linear polarization. I run only 200 W at the feed of my 10' dish with circular polarization. By using his software and 5 minute periods, he got complete calls. He sent me back the recording, and I could not believe it. He not only received the calls, but they were armchair copy! We will run more tests to try a QSO in spite of the very low power Sergei can run. The software can be downloaded from Darrel's web site at www.ve1alq.com and it is very, very easy to use. The screen is self-explanatory. Anyone can "master" the program in a few minutes. You get continuous audio feed from the receiver, but every time the message is repeated, you get the average of all previous messages, not just the current message. The signal builds up, and in a few minutes you start copying what seemed to be impossible. It uses regular Morse code and is compatible with other stations not running the software. Someone with a larger

dish may not need the averaging and can copy by ear. The software is also very tolerant of the spreading that occurs when a signal bounces off the moon, particularly at microwave frequencies. Sergei used this same software for the very first 47 GHz EME QSO, but there is no reason why we cannot use it on the lower bands. If anyone would like to try it out, just send me an email and we can set up a sked. It is just plain old Morse code with a twist!

OA4O: Pablo (OA4DJW) oa4djw@terra.com.pe sends information on OA 70 cm activity on 24 Sept– We had poor results during our Sept 432 skeds. Nil was copied from S54T. We assume that they were calling us, but we have a lot of birdies from a cellular phone tower near us. K3MF was also nil and informed us after the sked that he was QRV but he copied nil. SM2ILF signal was visible in Spectran, but very hard to copy because of his low level, and a QSO was not completed. We continue to work on improving the station. The antenna controller build by OE5JFL is not yet installed. We are working on the encoders, but is very difficult to get some of the components we need here in Peru. We hope to have the dish's movement automated in Oct. The power amplifier is the second step to upgrade the station. It should be in operation before the end of the year. Dan, HB9CRQ is the skeds coordinator. HB9DRI/OA4CRK is the QSL manager for OA4O EME operations. We will again be QRV at the end of Oct and hope to have better luck!

OH2DG: Eino eme.oh2dg@dnainternet.net 13 cm EME contest report – The contest was interesting and enjoyable. Conditions were excellent and weather was warm and sunny. I started the contest quite early hoping for contacts with JA stations on 2424 MHz, but I must apologize as my RX did not operate correctly and I heard nothing. (I now have a new 2424 MHz converter that appears to be working well). During the contest I worked OZ4MM, HB9SV, ES5PC, OK1CA for initial #19, F2TU, RW1AW #20, OE9ERC, VE6TA, W5LUA, G3LTF, SM4DHN #21, WA6PY, WD5AGO #22, SM3AKW and G3LQR. I worked all stations heard except for OK1KIR. At one point during the contest the signal quality (tone) went crazy. I heated up the soldering iron and changed a voltage regulator for local oscillator and all returned to normal!

OK1DFC: Zdenek ok1dfc@seznam.cz (JN79gw) was active on 1296 during the Sept AW and made many nice QSOs -- I have worked on 21 Sept LA9NEA (539/549) for initial #108, on 24 Sept CU8AO (M/O) #109, DXCC 41 and 1st CU-OK - very good copy (539), LA9NEA (539/559), RW1AW (559/579), ON7UN (55/54) on SSB, ON7UN (589/579), G4CCH (579/569), IK3COJ (539/539) UR5LX (539/539) #110 and DXCC 42, and 25 Sept OH3MCK (O/O) on CW #111 - Petri was very good copy peeking (539) with 4x67 el yagis (~27 dB) and LDMOS PA with about 200 W at the antenna and RX NF is around 0.6 dB, DF3RU (549/569), W7UPF (539/449) #112, IK3COJ (559/559) - very strong with new QRO PA.

RW1AW: Alex rw1aw@skylink.spb.ru in Sept worked on 23 cm UR5LX, W7BBM and LA9NEA for initial #60. On 13 cm in the microwave EME contest he QSO'd VE6TA, OH2DG, HB9SV, ES5PC, OK1CA, W5LUA and SM4DHN for initial #14.

SM3BYA: Gudmund (SM2BYA) gudmund.wannberg@telia.com did not have a good day – I happened to be at my SM3BYA QTH during the AW (24 Sept) and got on 70 cm. At about 0730 a station came back to my CQ about 1-2 dB weaker than my echoes, but still strong enough to work. No matter how hard I concentrated I could not figure out his call! In more than 20 years of sporadic EME operation, this is the first time ever that something like this has happened to me. After about three or four overs I eventually got my own call complete, but the only thing I could make out of the other guy's call was the letter O and the figure 1. I tried sending "YYY"s to get him to repeat his call, but the only effect was that he stopped transmitting! To end a bad day, as I parked the antenna, I ran it down past the elevation end stop (the breaker is faulty) and the gearbox jammed in the horizon position! This was one of those days when I should never have turned on the rig... At least I made some noise.

VE3/NP4B: Bob np4b@arrl.net was active on 1296 EME back in 1997 from Puerto Rico. He is now QRV again on 1296 from Hamilton, Ontario. His tel is (905) 525-3189. Bob has a 5 m dish and 120 W from a solid state PA. He plans to be active during the ARRL EME Contest and is interested in skeds.

VE6TA: Grant ve6ta@telusplanet.net reports lots of 13 cm activity and good weather during the Microwave part of the ARRL EME Contest -- The new larger dish with its smaller beamwidth made moon tracking a bit more of a challenge and I spent most of the pass fine tuning the tracking controls. I managed to work 14 stations, 12 multipliers and 2 initials. QSO were with F2TU, HB9SV, OH2DG, ES5PC, OK1CA for initial #19, OZ4MM, WA6PY, W5LUA, SM4DHN #20 with a huge signal, RW1AW, SM3AKW, and OE9ERC as well as 2424 crossband contacts with JA4BLC and JA6CZD. Heard were NA4N, G3LTF and JA8ERE. This was my best contest ever on 13 cm, but

I still am frustrated by my lack of receive sensitivity on 2320. I am contemplating a second LO for this band to simplify the issue. Dish tracking is still an issue with the larger dish, but I will continue to work on it. I plan to switch feeds to 23 after I finish my deck project. I'm looking for skeds on 13 and 23 cm.



VE6TA's new dish on mount

W2UHI: Frank fblumn@pathwaynet.com was active during the Sept pre-AW and found conditions great. He worked IK2MMB (569/569), IW2FZR (549/559), G4CCH (569/569), K5GW (589/579), QRZ - could not pull out the call, K5SO (579/579) and partial W7UPF. The situation was very different during the AW. He called CQ for more than an hour with no replies. Frank's latter month was activity was cut short due to power supply problems.

W5LUA: Al al_ward@agilent.com was active during the ARRL Microwave EME contest. He worked on 13 cm 16 stations including initials with NA4N for #60 and WD5AGO #61, on 5760 4 stations, and on 3 cm 11 stations.

WA5WCP: Paul wa5wcp@hotmail.com is a new station QRV on 1296 from EM12jo. He has QSO'd K5GW, K0YW, K5JL on random and G4CCH. During the pre-AW he had some nice QSOs including OE9ERC on SSB. Recently he adding a new preamp and gained nearly 1 dB of sun noise.

WD5AGO: Tommy Thenders@tulsacc.edu had mixed results on 13 cm EME during the contest. He heard lots of folks, but worked only 4 stations the first night. After realignment of his feed produced worst results, he pulled the screws out of the polarizer (giving linear at 45 deg for RX and TX). In 10 minutes he had worked the fellows that had worked the hardest to work him. Tommy added OE9ERC followed by W5LUA and heard LX1DB. All this time it looks like the horn has been the problem with one-ways. He will make changes for next month before he takes down the dish to play with a new antenna for 13 cm (a 40' x 10' horn).

WA6PY: Paul pchomins@san.rr.com microwave EME report – On 30 Sept I QSO'd on 13 cm NA4N. On 1 Oct I was on 10 GHz and QSO'd HB9SV, F2TU and CT1DMK. I did not hear PA3CSG. My Doppler shift was 27 kHz. This is about twice as much as I had back in Sweden. Probably we could not find each other on the band. My 10 GHz setup is ready to go.

K2UYH: I missed the AW and the microwave EME contest due to travel, but we did have some success during the pre-AW. I QSO'd on 19 Sept on 1296 at 0230 ES5PC (559/559) for initial #244*, 0242 RW1AW (569/579), 0250 WA5WCP (549/559) #245*, 0320 K5SO (579/589) and on SSB (55/45). We were joined at 0330 by W7BBM (55/55) for 3-way. I worked on 20 Sept on 1296 at 0220 CU8AO (O-19/O-26) on JT65C for initial #246* and DXCC 50*. Fred had a good signal and should be easily workable on CW. I was interested in trying with the VK9XMO expedition, but because of their location and moon declination we never had a common window.

NETNEWS BY G4RGK: K7LNP now has a 12' dish at home and is looking for a feedhorn for 23 cm. He still wants to get 70 cm system running first... his new yagis booms should have arrived. **KOYW** has finished a Septum feedhorn for 23 cm. **WB7QBS** is having trouble getting his az el rotator working with his 432 EME array. **WA9FWD** gained 3 db of sun noise by repositioning the feed of his 9 cm system. **VE1HD** will be putting Nova Scotia back on 23 cm EME (and possibly 70 cm) with a 15' Andrews dish hopefully by spring. **DL9KR** was around during the AW. He copied SM3BYA, SP6JLW, OA4O with a nice signal and DL9JY. On Sunday he worked I5CTE. He has been trying to contact OK1TEH, but without success thus far. **NU7Z** has decided to leave EME and has his station up for sale. **G4ALH** is working on his preamps and will be QRV on 70 cm during the EME contest. **GMOONN** is up and running on 1296 with video tracking. He has heard G4CCH and has since made improvements that increased his sun noise. He plans to be active in the contest in Oct/Nov. **DJ5MN** has not been active on EME due to a family addition, which makes lots of QRM named Julia. **K5SO** during pre-AW QSO'd W2UHI, but missed W7UPF. **W9IIX** was on the moon and worked on 1 Oct K9SLQ and 2 Oct VE6TA (439) for initial #25. **N8CQ** has a PSU for his GS-35B 70 cm PA completed and is rebuilding his 70 cm EME array. He plans to have 16 x 2.5 WL yagis.

FOR SALE: HB9JAW's 11 m dish is available – see his report. If you are interested contact Michel at hb9jaw@bluewin.ch. **VE1ALQ** announces that his new Versatile PLL Synthesizer is now available This new PLL is being used now from 144 MHz to 80 GHz with excellent results. Phase noise is essentially none existent. This new version will accommodate all of the previous POF files produced by CT1DMK including the 1 pps and 10 kHz Ref. Freq. Bare Boards are available from Downeast Microwave and myself as well as completed and tested boards from myself. If anyone has any Question, Please contact me directly, or through the Web at <http://www.ve1alq.com/cpldpll/cpldpll.htm>. I am still receiving requests for VE4MA/IMU feeds. I am willing to accommodate these requests, but only in orders of 3 or more with production during our winter months. Anyone that wants one, let me know and I will let you know when I have requests for 3. **VE1HD** can provide 1 & 2 tube 7289 23 cm PAs. Contact Clarence for details. **K5JL** reports that US Digital inclinometers has a new one version [incremental] model T6-S 1800-IDD that is about \$US5 less, and appears to be much better. It can be used off axis for instance for Polar mounts. It is more stable, has better bearings and a wider axis for response. It also uses a different connector, part number CONFC 5-22. **NU7Z** is leaving EME and would prefer to sell the whole system as a lot. He has a complete system for 2304 EME consisting of a 4 m with fully hydraulically controlled Az-EL tripod mount, readouts, power supplies, metering, etc. The TX is an FL101 Yeasu with a DEM 2 meter low power transverter, to a DEM 2304 transverter with PPL oscillator, 10 W driver and 120 W output PA. All power supplies are included. The RX is a 0.55 dB NF 36077 preamp and post amp, DEM 2304 transverter to DEM 2 m transverter to a Yaesu FR101D receiver. A GR 1236 tracking meter is included. There is also a RX converter for 2424. Contact Rick at nu7z@aol.com or phone at 206-778-9196. He will consider trades for Collins equipment. Price is closest, OBO, \$2500. **K5SO** is looking for TH-328 or TH-338 tubes.

TECHNICAL: W2DRZ suggests the following procedure for turning on large tube that have not been used for a while – It is normal for tubes that have not been used for more than 6 months to become gassy. The vacuum tube that become available for ham use are often gassy. Such tubes and all big tubes in general can be damaged if powered up before conditioning. The normal recover attempt is to apply only filament voltage for 24 to 72 hours. This procedure will absorb or burn the gas and many times recover a stored tube. If this is not done and tube has not been conditioned before all voltages and power is applied to the tube, it can be turned into junk shortly after power is applied. Some old timer hams suggest after conditioning the tube to apply 100 to 200 volts + plate to cathode for several hours as additional conditioning for the cathode coating before powering the tube. For tube condition set up procedures see <http://www.cpii.com/eimac/index.html>

FINAL: There was considerable discussion about the validity of JT65 contacts and whether the use of Loggers during JT QSOs invalidate a contact. Much of what was said has been said before, and I do not see the value of repeating it again. We are in a period of change. We must all work together to control and direct this change, but we also must accept and adapt too. I still long for the days

when I could call CQ on 432 or 1296 to make tropo contacts. In NA today almost all tropo contacts begin with a contact on 144 MHz. The stations then arrange to move to the higher band to make QSOs. To make QSOs on the higher/microwave bands, you must operate on 2 m. The single band operator are no more!

With regard to the digital modes, N2UO has been experimenting on 23 cm with the digital mode developed by RW3BP for 47 GHz. It can provide significant improvement, but is still received as CW and is not degraded on the higher bands – see Marc's report.

Please keep the reports and technical material coming. I hope all of you can be on and have good luck operating the EME Contest. I shall be looking for you on 70 and 23 cm. 73, Al - K2UYH



EI/DL1YMK operating position – SSPA is in upper right

Skeds for 16 Oct

Time	2304.050	
0230z	WD5AGO-G3LTF	WINDOW STARTS
0530z	WD5AGO-NA4N	
0600z	WD5AGO-WA9FWD	
0630z	WD5AGO-VE6TA	
0700z	WD5AGO-WA6PY	WINDOW ENDS

HB9CRO's 70 cm JT List (as of end Sept):

Call, Grid, Antenna, QRV ?, Power, number of JT QSOs

AE6EQ	CM95oh, 16x14el, 700W, yes, 6
HB9Q	JN47cg, 15m dish, 2KW, yes, 106
JA6AHB	PM53, 7m dish, 1KW, yes, 20
KE2N	Fm18ew, 16x9wl, 800W, yes, 9
K2UYH	FN20qg, 28' dish, 1KW, yes, ~30
K3MF	FM19xp, 8 x 25el, 800W, yes, 5
KL7FH	BP41bb, 16x12el, 100W, yes, 4
KL7UW	BP40iq, 1x16.5dBD, 50W, yes, 0
M0EME	IO93gf, 4x19el, 100W, yes, 2
OE3FVU	JN78ve, 1x13wl, 35W, yes, 1
OK1TEH	JO70FD, 1x23el, 500W, yes, 3
PE1ITR	JO21qk, 2x28el, GS35b, yes, 9
SM3JQU	JP82qm, 4x32el, 750W, yes, 2
SV1AWE	KM17vu, 4x21el, yes, 3
W7AMI	DN13vo, 4x10.6wl, 800W, yes, 26
W7IUV	DN07dg, 1x33el, 50W, yes, 2
VK2SN	QF56oc, 4x28el, Legal Power, yes
VK4AFL	QG62OM, 16x15el, 100w, yes, 4
VK4CDI	QG52xh, 1x22el, 100W, yes, 1
ZL2DX	RE87tr, 1x18el, 100W, yes, 1
ZS6NK	KG46rc, 2x13wl, 120W, yes, 3