# 432 AND ABOVE EME NEWS
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EDITOR: AL KATZ, K2UYH; DEPT. ELECTRICAL/COMPUTER ENGINEERING, THE COLLEGE OF NEW JERSEY, PO BOX 7718 EWING, NJ 08628, TEL (W 609-584-8424) OR (H 609-443-3184), FAX (609-631-0177), E-MAIL a.katz(x)ieee.org
NETNEWS EDITOR (BASED REFLECTOR NEWS) REIN, W6SZ pa0zn@arrl.net WITH HELP OF N4PZ AND WB2BYP
INITIAL LIST G4RGK, DAVID DIBLEY, E-MAIL zen70432(x)zen.co.uk, AT: http://www.zen70432.zen.co.uk/Initials/index.html
EME NETS: 14.345, 1500 SATURDAY AND SUNDAY, NET CONTROL: STEVE GROSS, N4PZ n4pz(x)live.com
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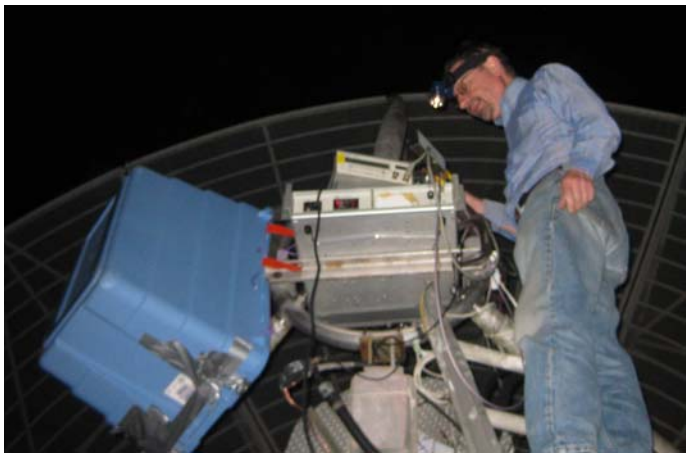
**CONDITIONS:** The ARRL Microwave (MW) EME Contest weekend may not have been optimum, but it yielded excellent activity and many QSOs as documented in the following reports. Everyone seemed to have a wonderful time despite the limitations of a single weekend for so many bands. Now all attention is focused on the first weekend of 50 to 1296 part of the contest coming up on 3/4 Nov.



**Microwave EME contests required switching feeds in the middle of the night – this one shows K2UYH with his 3 cm system from the 2010 ontest**

**EA1RJ:** Ricardo ea1rj@hotmail.com is now fully operational on 23 cm EME -- After one year of work, I´m finally QRV on 23 cm EME as of 21 Oct. Although I still have many things to do to gain more dBs. My setup is 1.8 m solid dish, OK1DFC Septum feed, 150 W SSPA, 0.53 NF LNA and TS2000X. I made my first EME QSO with OK1CS using JT65C (23DB) followed by W6YX (20DB). On 23 Oct I added initials with I1NDP (13DB) and DF3RU (19DB) also using JT65C. Since my first day on the Moon, I have received the ON0EME beacon with (~19DB). It has been very helpful – my thanks to the ON0EME team. I plan to be QRV during the ARRL EME Contest on 3/4 Nov and hope to work many more stations.


**EA1RJ 1.8 m for 23 cm EME**

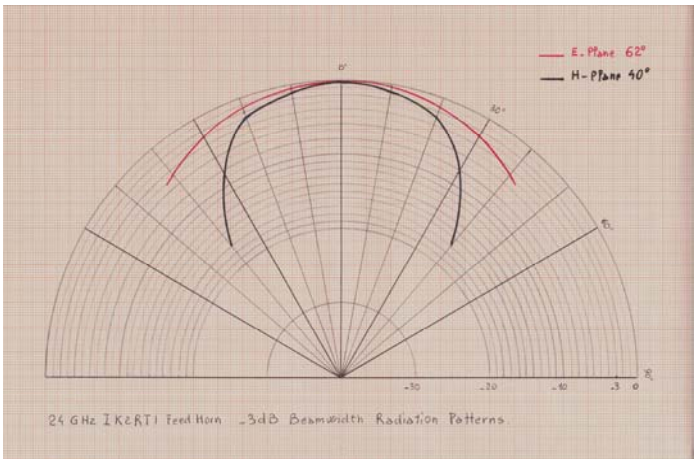
**G3LTF:** Peter's g3ltf@btinternet.com Oct Moon report -- I was on 1296 and 432 for the Italian CW contest. On 29 Sept on 1296, I worked SD3F, G4RGK, LZ2US, OZ4MM, I1NDP, SM7FWZ, IK5VLS, SP7LHV for initial #361, IK5QLO, ES5PC, OK2ULQ, IZ1BPN, F2TU, G4CCH, SV3AAF, IK3COJ and IW2FZR. On 30 Sept on 432, I worked SP7DCS and LZ1DW. The first leg of the ARRL contest provided an excellent weekend of MW EME. The WX was very kind with no wind and dry, so the backlash in my dish mount (0.85 deg beamwidth at 6 cm) was not a problem. Activity was higher than last year, certainly on 6 and 13 cm. XB indicates a cross-band QSO. I worked on 13 cm on 6 Oct JA4BLC XB, PA3FXB, S59DCD, SM4IVE, Y02BCT, OH2DG, OH1LRY, ON5TA, R3YA (same station as RK3WWF), SP6OPN, SV1BTR, LZ1DX, SD3F, OK1KIR, DF3RU, OZ4MM, SM3BYA, IK3COJ, K5GW, DL9NEA for initial #109, NA4N XB, K1JT XB, WD5AGO XB, PA3DZL, HB9Q, DL1YMK, WA6PY XB, ES5PC and VE6TA, and on 7 Oct CT1DMK, PA7JB, G4RGK, 9A5AA and SM2CEW. CWNR were OK1CA, SM6CKU, WB5AFY XB, and WA8RJF XB. Heard on 2304 only were PA0BAT, SV3AAF and F5JWF. Heard on 2424 was JA8ERE. I worked on 9 cm on 6 Oct K5GW and on 7 October PY1KK and G4CCH. I worked on 6 cm on 6 Oct SV1BTR, OK1KIR, ES5PC, OK1CA and SQ6OPG, and on 7 Oct OH2DG, K1JT for initial #37, DL7YC and VK3NX. CWNR were JA1WQF and JA8ERE, and heard was SG6W. After the end of the contest I heard and called JA6CZD and also worked OK1KIR. It is always a thrill to work VK, especially on 6 cm random! The weekend involved 6 feed changes as my 6 m dish is too light to support multiple feeds. On 13 cm, I used 250 W, on 9 cm 25 W and 6 cm 22 W. I am starting work on improving the profile and the mesh size of the outer edge sections of the dish, which should make an improvement on 9 and 6 cm. Finally it is really sad that the SMs have now lost 13 cm completely. However this is just the tip of the iceberg; the whole of this part of the spectrum, 2.1 to 2.6 GHz is being reorganized in EU over the next few years to allow use of 4G mobile and similar services. I fear we shall be very lucky if we retain even a small segment as an amateur allocation.

**HB9BBD:** Dominique dfaessler@bluewin.ch ran an EME test with HB9ZZ (Swiss Technical Institute in Zurich in Oct –- HB9ZZ set up for 1296 EME on the roof of the university using a single 30 el yagi, 130 W SSPA and HB9BBD LNA. I received their signal about 3 dB above noise, but QSB limited readability to about 60%. HB9ZZ received my signal (539). However, since no one at HB9ZZ had copy CW, no QSO was completed.

**IK2RTI:** Gianfranco ik2rti@gmail.com has joined that elite group of EMEers who have completed QSOs on 24 GHz -- I have completed my first EME QSO on 24 GHz, and in the process had some interesting results in finding how to better illuminate my offset dish. On Saturday, 13 Oct I completed my first EME QSO on 24 GHz with DF1OI (M/M). This QSO was also the first between DL and I on 1.25 cm. Weather was not good with a completely overcast sky and a relative humidity 92%. We did benefit from the low sky noise at 42° elevation. My Moon noise was fluctuating, but at the time of the QSO, it was 1.2 dB (far from the 2 dB measured in good conditions). I used an offset 2.7 m satellite dish, DB6NT LNA, RW1127 TWT modified for 35 W at the feed. The feed was a IK2RTI design set for vertical polarization. In making the system, the greatest difficulty encountered was illuminating the dish. I used software for offset dishes that indicated a feedhorn with a 3 dB beamwidth of 52 degrees was needed, which equivalent to the feed for a conventional dish with an f/D = 0.61 dB. Unfortunately the gain with such a feed was low. I thought the dish was not suitable for 24 GHz, but I obtained the same poor gain values also at 10 GHz. Something was not right! I concluded that if I wanted to do EME, I would have to find a better solution! I decided to experiment with various feed prototypes that I built. I gradually achieved increased gain, until I had an increase of 3.5 dB compared to the gain of a W2IMU horn modified for my offset dish. I reproduced the new feed model also for 10 GHz, and obtaining similar results, and good reports in several QSOs. With the new 24 GHz feed, I made measurements to be able to draw the radiation pattern, and I was right in my guess that I had to generate a beam with different illumination angles between the E plane and H planes.

**IK2RTI's 24 GHz 2.7 m offset dish**

**IK2RTI's experimental feeds – see his report**




**IK2RTI's 24 GHz feed pattern**

**JA1WQF:** Mitsuo has passed the final inspection by the JA Radio Authorities in mid Sept, and now has a high power license for operation on 5.76, 10.45 and 24 GHz. Mitsuo worked on 10 Oct, on 5760, JA8ERE, JA4BLC and JA6CZD, and on 14 Oct on 10450 JA4BLC and JA6CZD. [TNX JA4BLC for this report.]

**JA4BLC:** Yoshiro ja4blc@web-sanin.co.jp was QRV on 3 bands in the ARRL Microwave (MW) EME Contest -- On 13 cm I worked SM4IVE for initial #56, G3LTF, SP6OPN, OH2DG, PA0BAT, SV1BTR, WD5AGO, VE6TA, K1JT, ON5TA, OK1KIR(569/569) and CT1DMK. During my EU window, I TXed on 2424.050 and listened on 2320.XXX as announced in the net and thanks to the Europeans for their cooperation. On 5760 I worked OK1KIR (559/559) and SV1BTR (569/539). I heard DL0EF on 10450.1 (559) and CWNR'd many times. When I was called by OK1KIR on 2320, I was very much surprised because I know they have been suffering from serious QRM from Wifi for years. Vlada commented that the situation has not changed, but the QSO was done near midnight in Prague and the QRM was very luckily gone at that time. I worked on 1 Oct, on 1296, OK1CS and SM7FWZ (#),on 12 Oct, on 5760, JA6CZD (559/539), and on 14 Oct, on 10450, JA6CZD (559/559) and JA1WQF (M/O) for initial #8.

**K1JT:** Joe (K1JT), Russ (K2TXB), Rick (K1DS) and I (K2UYH) a.katz@ieee.org operated the ARRL MW EME Contest -- Overall I thought we did pretty well and had personally had a great time despite the loss of two nights sleep. I went the full time plus. This year we were ready for operation on 13, 9, 6 and 3 cm, but because of WX concerns we never put the 3 cm system at the dish feed. As it turned out, the rain held off long enough for us to switch bands up to near the end. It was raining hard when we made our JA and VK 6 cm QSOs. We had an improved system for reception on 2320 with a Fun Dongle for spectral display on at all time we were on 13 cm. However, 2320 results were disappointing. We called many 2320 stations, but received few replies. Overall we QSO'd on 13 cm 24x20, on 9 cm 4x4 and 6 cm 11x9. On Saturday we started on 13 cm, went to 6 cm near the end of the EU window, but worked nil – we probably waited too long to switch; next year we will have to plan better… We then went to 9 cm with similar nil heard, and back to 13 cm for the JA window. Very near moonset, we switched back to 9 cm. On Sunday, we started on 6 cm, switched to 9 cm, then 13 cm and back to 6 cm. Our preliminary log shows contacts on 6 Oct on 2304 with SV3AAF (559/559), OH2DG (559/559), SV1BTR (579/569), R3YA (559/559), G3LTF (569/569)XB, LZ1DX (559/559), PA3DZL (559/559) XB, K5GW (579/579), WD5AGO (559/559), ON5TA (559/559), SP6OPM (579/579), OZ4MM (559/569), ES5PC (569/559), HB9Q (579/539), OK1CA (559/569), WA6PY (569/569), NA4N (559/559), VE6TA (559/559) and JA4BLC (559/559) XB, and on 3400 with VK3NX (O/O), and on 7 Oct on 5760 with SV1BTR (569/559), OH2DG (559/559), ES5PC (559/559), OK1KIR (559/559), OK1CA (559/559), DL7YC (559/559), 0712 SQ6OPG (559/O) and G3LTF (559/559), on 3400 G4CCH (559/569), PY1KK (559/559) and ES5PC (559/549), on 2304 with PA7JB (O/O) XB, CT1DMK (559/559), SM4IVE (559/569), PA3FXB (559/559) XB and SM2CEW (559/579) XB, and on 5760 with JA8ERE (O/O), JA1WQF (O/O) and VK3NX (559/539).

**K4EME:** Cowles candrus@mgwnet.com should be QRV during ARRL EME Contest in Nov -- A storm back in July really did a number my EME station. So far, I have repaired the LNA, (a voltage regulator not the PHEMT was defective), and the array (several broken U-bolts and the rotor had slipped about 50 degs is back in operation. The diodes across the antenna relays were also shorted. I am now working on my Lunar Link PA. I have replaced two blown transistors in the LA-70 and have two more to go. I just got the replacement transistors today, so hopefully that is all that is wrong! A bearing (part of the worm screw) in the winch also needs to be replaced, but the antennas are up and this can wait until after the contest just as long as the WX is not too bad! I have a new Winch, WG-1500, on order. I had the system unplugged and most of the cables disconnected, so I was a little surprised by all the electrical damage. Hopefully by 27 Oct, I will be QRV and will hear echoes from my system again! [Another storm may hit us on the US east coast before the contest. We are all hoping it will miss us and not cause any damage.]

**K5GW:** Gerald TexasRF@aol.com gives us news on his MW Contest operation -- Murphy struck Saturday causing the 3 cm transverter to die due to a failed MOSFET transmit 8 V switch. I was looking forward to operating a new band in the contest so that was a big disappointment. My total was 38x33 with on 13 cm 25x23, 9 cm 3x2 and 6 cm 10x8, which is about 25% better than last year. I used my same 6.9 m homebrew (0.42 f/d) dish on all bands 23 cm and up. The surface errors reduce the efficiency to about 25%, but that leaves enough gain to still work reasonably well. The feeds are horizontally polarized W2IMU style, chosen to purposely under illuminate the reflector. This was done to improve the spillover noise and somewhat mitigate the surface errors. Many stations not worked were heard on 2320. I did check from time to time for cross band activity, but there was not much. Murphy arrived again on Sunday morning after the EU moonset with a short circuit on the 6 cm 12 Vdc line. The major impact was missing VK3NX and any 6 cm JA stations that might have been on. Over the next 12 months I plan to implement a multiple feed and band switching arrangement for 13, 9 and 6 cm to eliminate the middle of the night feed/equipment swaps. A separate antenna for 3 cm will complete the quick band changing goal. I hope to CU all on 23, 70 and 2 m next month!

**LU1C:** Adrian adrian.sinclair@multiradio.com.ar writes about his ARRL Contest plans -- We have been working to have a 3 band operation in the contest. For 70 cm, we finished a GS-35 PA and 4 x 7 wl yagi antenna with pointing system. We should now be able to find the Moon without a visible Moon. On 23 cm we have improved our RX a bit by increasing preamp gain, but the good news is that with the help of mother nature, a blocking tree has fell this week, and improved our western window greatly. We hope for many QSOs – look for us.

**OK1CA:** Franta strihavka@upcmail.cz was QRV in the MW part of ARRL EME Contest on 13, 6 and 3 cm -- I installed feeds for 13 and 6 cm (with rigs) on my 10 m dish. The switch time between 13 and 6 cm is now less than 2 mins. The result was on 13 cm a score of 35x25 - I worked initials with R3YA #114 and WB5AFY #115. My result on 6 cm was 14x12. There I worked initials JA1WQF #36, DF1SR #37 and K1JT #38. My score on 3 cm was only 2x2. The total score was 51x39. I could not be QRV for the last part on Sunday, and missed the JA stations. The weather during Saturday night and Sunday was bad with heavy rain and wind. Another problem was that the ARRL EME Contest collided with EU UHF/SHF Contest. I heard several tropo stations. I plan to by QRV on 23 cm in the Nov part of ARRL EME Contest.

**OK1CA's 13 and 6 cm multiband feed arrangement**

**OK1DFC:** Zdenek ok1dfc@seznam.cz reports that the Azores are QRV on 70 cm EME again -- I worked on 20 Oct CU3EQ for my 70 cm DXCC* 91. We worked on JT65B (28DB/22DB). Jose was running a single yagi and 50 W. I am now looking for my last 9 DXCCs.

**OK1KIR:** Tonda and Vlada vladimir.masek@volny.cz note that their group was only active during the ARRL MW Contest in a limited way because of 1) the conflict with EU's UHF/SHF Contest - we CANNOT have two signals on the band at the same time; 2)safety concerns over the need to quickly and repeatedly switch feeds (often in darkness) – there is just not enough time for so many bands; and 3) dissatisfaction over the way the ARRL scores and reports the contest. Nevertheless, their very impressive EME activity summary for Sept/Oct follows – We QSO'd on 1296 CW on 29 Sept at 2215 IK5VLS (549/559) for initial #338, 2220 G4RGK (559/559) and 2224 IK5QLO (549/559), on 30 Sept at 0010 I2MBC (O/O) #339, and on 3 Oct at 0430 N4PZ (579/589). We QSO'd on 1296 JT65C on 29 Sept at 2021 IK3COJ (7DB/6DB) for digital initial {#120}, 2119 I2MBC (12DB/15DB) {#121}, 2131 RW3TY (14DB/12DB) {#122}, 2232 SQ7DQX (13DB/10DB) {#123} and 2246 PY2BS (5DB/9DB), on 2 Oct at 1958 SV9/DF8DX (22DB/25DB) {#124} and 1st SV9-OK 23 cm QSO, 2032 MJ/DL2NUD (24DB/20DB) {#125} and 2248 OZ6OL (9DB/O) {#126}, on 3 Oct at 0323 K2UYH (5DB/O), and on 8 Oct at 1042 MU/DL2NUD (22DB/20DB) {#127} and 1st GU-OK 23 cm QSO - both with new linear loop feed (design OM6AA for 0.31 f/d ) giving symmetrical 3 dB beamwidth of 2.7 degs. In the MW part of ARRL EME Contest we worked on 13 cm on 6 Oct at 0205 DF3RU (559/559), 0210 S59DCD (549/559), 0216 ON5TA (549/559), 0224 OH1RLY (O/O) for initial #119, 0239 G3LTF (569/569), 0246 R3YA (559/559), 0254 PA3FXB (559/559) #120, 0301 LZ1DX (549/549), 0934 IK3COJ (549/559) #121, 0955 OK1CA (569/569), and on 7 Oct at 0002 JA4BLC (569/569), on 9 cm on 6 Oct at 0415 PY1KK (569/569) and 0427 DF1SR (549/549) for initial #46, on 6 cm on 6 Oct at 2115 SV1BTR (569/569), 2137 OK1CA (559/559), SQ6OPG (559/549), 2156 ES5PC (559/569) 2208 JA1WQF (559/549) for initial #61 and 2223 G3LTF (559/549), and on 7 Oct at 0532 DF1SR (549/559) #62, 0547 DL7YC (559/569), 0617 SV3AAF (549/559), 0644 K1JT (559/559), 0658 OH2DG (559/549), 0706 VE4MA (559/559), 0846 K5GW (579/579), 2144 JA4BLC (559/559), 2216 VK3NX (569/569), 2245 JA8ERE (569/569) and 2306 JA6CZD (569/559). We assumed SG prefix must be a fading mistake and assumed it was SP6W, but later learned it was SG. After contest we worked on 8 Oct at 0016 G3LTF (559/559). Unfortunately, there was no other station on 24 GHz during ARRL contest to work. On 3 cm a sked with VK7MO at minimum mutual libration (~27 Hz) was successful. On 13 Oct at 0356 we easy completed a JT65C QSO with VK7MO (18DB/19DB) for digital initial {#2}, QE field and a new OK 3 cm ODX 16385 km. Rex employed a small dish of only 0.8 m, but similar equipment as OK1KIR (WG LNA DB6NT and 45 W SSPA at the feed). The core of our success was maintaining precise frequency stability and the automatic control of RX/TX frequency in IC910-H using the Doppler data from WSJT, implemented at VK7MO. Moon noise at VK7MO was only 0.15 dB, while at OK1KIR Moon was 3.15 dB, which precisely relates to the size of dishes. Zo/CS=6.5 dB and G/CS = 6 dB? (QRM on horizon). There was intermittent rain at VK7MO. Fortunately on 10 GHz relative humidity or the rain does not dramatically impact the path loss as on 24 GHz. We were delighted by the relatively strong signal from VK7MO, and forgot to move the feed polarization to maximize the signal. Without this loss, we think an edge CW QSO would be possible!

**ON5TA:** Eric eric.vanoffelen@skynet.be found very nice activity on 13 cm during the ARRL MW Contest – I made a total of 33 random QSOs, 32 on CW and 1 mixed SSB/CW with CT1DMK. Initials were IK3COJ, PA3FXB, R3YA and SM2CEW to bring me to #65. The QSO with R3YA is a first between ON and Russia on 13 cm. I also had a nice QSO with PA7JB, who was surprisingly good copy with his 2.4 m dish and 100 W. Interference levels were as usual very high on 2424 GHz, but JA4BLC had a strong signal and could be contacted after I found the right combination between noise blanker and filtering. I was running a 3.6 m mesh dish with about 150 W at the feed.

**PA3FXB's 13 cm feed**

**PA2V:** Peter peter@pa2v.com is setting up an EME station for 432 -- Over the past year, I have had much trouble getting my LFA Yagis working right. I now have 1 on the mast and I think working well. My elevation system is also ready, and I am working on the readout and H-frame. I plan to use 4 x 24 el yagis, but that is several month away depending on WX. I now have 800 W into a single 24 el yagi with less than 1 dB loss between the station and the yagi. I am interested in trying EME skeds with this single yagi while I work on the 4 yagi system. Currently I can only work near moonrise and moonset with very limited elevation. Please email for sked.

**PA3DZL:** Jac PA3DZL@planet.nl sends his 13 cm EME activity report – I worked on 27 Sept YO2BCT (O/O) for mixed initial #61* and DXCC 34, on 30 Sept DF3RU (559/ 559), ON5TA (559/ 559), ES5PC (569/ 559), SV3AAF (559/559), IK3COJ (559/559) #62* and S59DCD (559/559), and during the ARRL MW Contest on 6 Oct SV1BTR (579/559), SP6OPN (559/559), ON5TA

(559/559), OZ4MM (569/569), IK3COJ (449/549), R3YA (O/O), DF3RU (559/559), K5GW (579/579), K1JT (559/559), G3LTF (559/569),
ES5PC (569/559), VE6TA (559/559), SV3AAF (449/559), S59DCD (O/539), SM4IVE (O/O), #63*, LZ1DX (449/549), DL1YMK (569/559), WD5AGO (559/439), HB9Q (559/539) and 9A5AA (559/559), and on 7 Oct PA3FXB (O/O), F5JWF (559/569), SD3F (549/559), CT1DMK (559/559), OK1CA (569/569) and LA8LF (559/559). After the contest, I added on 8 Oct SM3BYA (O/O) on CW #64* and G4BAO (23DB/O) on JT65C #65. The rig consists of a 3.7 m dish, VE4MA feed, G4DDK <0.4 dB NF LNA and SSPA with 2x3 water cooled MRF21120s.

**SM3BYA:** Gudmund's sm2bya@telia.com Oct activity report -- I have long suspected that the illumination of my 13 cm septum feed changes a lot going from 2304 to 2320, resulting in increased spillover and reduced RX performance on 2320. So the week before the ARRL MW Contest, I put a 40 cm wide, chicken wire ground screen around the edge of my 3.0 m dish. It was a quick job and no attempt was made to make the ground screen surface accurately parabolic. But on receive the screen does a good job nevertheless; I now measure 14 dB of Sun noise at SFU=130, both on 2304 and 2320. This is within a dB of what the VK3UM planner gives, assuming a perfect solid surface 3.0 m dish, and represents a 1.5 dB improvement in my 2320 RX performance. I thus had high hopes for the contest. But I had great trouble getting through to the weaker stations and got poor signal reports from G3LTF and SV1BTR. It was only then that I noticed that for no apparent reason my TX power was down by about half, from 210 W at the feed to just 100-110 W, and was also fluctuating badly. I still managed to work DF3RU for an initial (#), but then went QRT. Sunday morning was the same story. I worked LA8LF (#), OK1CA and HB9Q. All the above QSOs were on 2320. Monday morning after the contest, I ran a sked with PA3DZL (FB signal) and completed in about 15 minutes for another initial. (He must have very good ears - thanks!) I have now investigated the power problem. It turns out that for some reason one of the 3 MRF21120 push-pull FETs in my Ericsson SSPA has failed. The drain tabs were black from overheating and one of them has heated up to the point where it had melted the solder and come off the PCB trace. It is a miracle that the other two transistors and/or the output combiner did not fail too. I have now replaced the failed SSPA with an identical Ericsson unit and see close to 250 W output power again. I plan to be QRV on 13 cm again from 7 to 11 Nov. Sked proposals are always welcome!

**SM3BYA's 3 m dsih with 40' shroud added**

**SV1BTR:** Jimmy found contest conditions poor and ran into a serious problem that is worth noting, but over all had a great time operating the MW contest –- The weekend choice was really bad. In south EU terrible libration caused severe signal spreading, which coupled with the high path loss, attenuated signal peak strength at least 3~4 dB on 6 cm. Signals were badly distorted. I had never come across such adverse conditions that were present not only near Moon zenith, but throughout its travel, when above 20 degrees elevation. Moon noise was 1.2 dB. Therefore even though I fully understand the need for high declination, libration and path loss should be taken into account as they heavily affect the 6 cm and above bands. Those who choose contest weekends should carefully consider these critical elements. On 13 cm libration was not a problem, only the apogee path loss (affecting especially small stations). The gear here worked flawlessly throughout the contest. For AZ-EL pointing, using Moon noise worked well. Due to tree blockage I lost about 7 hours Moon time. I also took a break during a few good lunar hours. While I was QRV, I missed a number of stations on 13 cm who work a caller and then disappear. Despite the unfortunate choice of weekend, I ended with a total of 39 QSOs on 13 cm and 19 on 6 cm. (Last year I had only 37 and 14 respectively.) All QSOs were on random CW - no loggers. Stations worked on 13 cm were SM4IVE, ON5TA, OH2DG, S59DCD, SP6OPN, PA3FXB, PA0BAT, R3YA, JA4BLC, DF3RU, LZ1DX, YO2BCT, SD3F, G4RGK, G3LTF, F5JWF, SV3AAF, K5GW, PA3DZL, SM3BYA, IK3COJ, HB9Q, NA4N, K1JT, ES5PC, VE6TA, DL1YMK, LA9NEA, WA6PY, OZ4MM, OK1CA, WD5AGO, PA7JB, LA8LF, CT1DMK, 9A5AA, SM2CEW, WA9FWD and IK6EIW, and on 6 cm were OK1KIR, OK1CA, SQ6OPG, ES5PC, G3LTF, DL7YC, SV3AAF, SP6GWN, DF1SR, OH2DG, K1JT, VE4MA, K5GW, SG6W, JA8ERE, JA4BLC, VK3NX, JA6CZD and JA1WQF. At the end of the contest, on Sunday at moonset, I had an accident. While on 6 cm TX, I twice went behind the dish to visually check for Moon blockage from the house located 3 m away. There was apparently some RF reflection that caused some damage to my left eye. My eyesight in this eye became blurred. My doctor found a burn on left eye's cornea. The good news was that the cells behind the eye (retina) were damaged. If these are burned there is nothing that can be done. The doctor said that in time the cornea damage should heal and eyesight restored. The inflammation/edema has now gone away as predicted, and the doctor says it is now fine. My hearing, which is the absolute tool for my beloved mode of EME operation is also good. I therefore look forward to working everyone on CW on 2 m, 70 cm and 23 cm in the ARRL Nov and Dec contest weekends!

**SV9/DF8DX:** Bodo's (DF8DX) df8dx@gmx.de follow-up report on his 1296 dxpedition to Crete -- The activity on 23 cm is now really nice. On my first day, I worked 10 stations within 90 min. [See the Oct newsletter (NL) for the list of stations worked.] The second time on, it was only you [K2UYH] and third day I worked two more stations. That makes a total of 13 QSOs on 23 cm EME. I could have easily worked, 13 more if they would have been QRV during my trip. I don't really have a secret why it works so well. I always tell beginners to keep the system as simple as possible. One yagi and 100 W is a super basic setup. If I want to gain 3 dB more in RX and TX, that's very difficult task already. Some newcomers would start with 200 W, which gives them around 3 dB more TX power. But they don't hear more. If I look at the signal levels of the stations that I have worked, there is maybe a difference of 1 dB between received and the given (TX) report. Why should I now do 3 dB more power? It only increases the difference between received and TX report. To get 3 dB more RX is even more difficult. Stocking 2 yagis makes it much more complicated to handle and doesn't really give 3 dB more. In best case it gives 2.5 dB more on TX, but maybe only 1.5 dB more RX due to higher noise from side lobes (noise temp of antenna increases). I believe it is now possible to work around 30 different stations with one yagi and 100 W. If I remember the times where I was happy to make two or three QSOs; this is a big step forward. Small dxpeditions become very interesting, but of course cannot compete with a setup like what DL1YMK carries around the world. Besides EME, I enjoyed the vacation with my wife, CW pile ups on HF and also activity from the small EU-187 islands. See you all next time.

**SV9/DF8DX operating position – yagi in upped right corner**

**VE4MA:** Barry ve4ma@shaw.ca reports on the MW Contest -- I came back from Nigeria late and so missed the first night of the contest. I got on the second night, but my 13 cm signal was weaker than expected for still unknown reasons. I did hear lots of signals, but few replies. I worked only HB9Q, and then switched to 5.7, where I only worked SV1BTR, OK1KIR, OK1CA and K5GW. I will be travelling to Arizona during the 3/4 Nov contest weekend, so I will not QRV. I am still sorting out plans for operation from Arizona, and I expect to be on 23 cm with at least a single 55 el loop yagi in Dec, but I also have a circular dual dipole feed, so I may try a small offset dish. I will also be taking 3.4 and 5.7 feeds for my offset dish and should have good power on 5.7 (min 50 W, but possibly >200 W), and the 200 W TWT should be OK for 3.4 as well. I will use my small offset dish there as well.

**VE6TA:** Grant's ve6ta@clearwave.ca Oct report – I just returned from a great time at MUD 2012. Lots of surplus goodies and found a nice twin to my 5760 SSPA. If all works out, I should be 3 dB stronger on this band next time. I was on for the ARRL MW segment of the ARRL EME Contest, but due to poor WX, I decided to stay on 13 cm for the weekend. I worked the following stations: SV1BTR, SP6OPN, WD5AGO, DL1YMK, HB9Q, PA3DZL, LZ1DX, ON5TA, WA6PY, ES5PC, OZ4MM, OK1CA, G3LTF, K1JT, JA4BLC, K5GW, DF3RU, SV3AAF, IW2FZR, F5JWF, R3YA, CT1DMK, SM4IVE, S59DCD, SD3F, SM2CEW, NA4N and WB5AFY for initial #77. My equipment worked well and had only a few problems with the Sirius satellite interference on 2320. I had planned to work most of the 2320 stations early on and this strategy seemed to help. WD5AGO was a loud as I have ever heard him, so kudos to his efforts there. SV1BTR, SP6OPN, and K5GW were super loud and great operators during the contest. I ran my 5.5 m dish and 350 W on 13 cm. I plan to be on 432 and 1296 for the following legs of the ARRL contest.

**VK4CDI:** Phil vk4cdi@gmail.com installed my 9 cm feed in his dish for the weekend of the ARRL MW EME contest -- I completed a sked with K5GW for my first 9 cm EME QSO. I also heard G4CCH, but no QSO. The following week, I worked W5LUA for #2. I plan to increase my power to 60 or 70 W. I also worked on 432 PY2BS and PA0PLY for 2 initials using JT65B, and on 1296 QSO'd IK5VLS on JT65C. I will be QRV on 2, 70 and 23 cm for the next leg of the ARRL EME Contest.

**W6YX:** John (K2YY) johnhill5000@gmail.com writes on his group's EME contest plans -- Team W6YX has been hard at work getting ready for the ARRL contest. We used the ARI contest as a dry run and worked I1NDP, F2TU, IK1MTZ, N2UO, W4AF, N4PZ, SD3F, PY2BS, WB2BYP, AL7RT, VK4CDI and JA6AHB on 1296 CW. For the ARRL contest we will be QRV on 144 and 1296 with a 6 m dish and 500 W as a multi-band, multi-mode, multi-op entry. We will do not go to sleep when EU leaves the footprint, and run software defined radios on all bands, so please call CQ and call it often so we can find you on our waterfall.

**WA6PY:** Paul pchominski@maxlinear.com sends news on his recent operation -- During 9 cm AW on 15 July, I QSO'd DL1YMK, ES5PC, OK1KIR, K5GW, W5LUA, G4CCH, G3LTF and VE6TA, and the following weekend (21 July) QSO'd G3WDG, G4KGC and WA9FWD. During the 3 cm AW on 8 Sept, I worked K5GW, OK1KIR, OK1CA and PA0BAT. In the ARRL MW EME Contest on 13 cm, I QSO'd CT1DMK, DL1YMK, G3LTF, HB9Q, K1JT, K5GW, LA9NEA, LZ1DX, NA4N, OH2DG, OK1CA, ON5TA, OZ4MM, R3YA, SD3F, SM2CEW, SM4IVE, SP6OPN, SV1BTR, SV3AAF, VE6TA and WD5AGO. I heard many other stations on 2320, but could not get their attention in the cross band mode. On 3 cm, I QSO'd F5JWF and OK1CA, and found low activity. A few hours prior to the contest, I setup the 6 cm system, but found the QRM this time was too heavy. Due to the near apogee degradation and this QRM, I decided to come on with the 13 cm setup. (With my huge QRM problem, I still have been able to make 18 initials on 6 cm!) Changing feed, LNA, PA from band to band takes me at least 1 hour, and compare to my 3 to 4 hours window it doesn't make sense to switch between 13, 9 or 6 cm during the window time. I have been very busy the last few months, and did not have much time for EME equipment and operation. I'm trying to be on the bands much as I can.

**WD5AGO:** Tommy wd5ago@hotmail.com reports on his MW contest effort – I decided to stay on 13 cm as light rain and lack of time prevented us from moving feeds around. Hats off to those that can manage the feat of operating on 3 or 4 bands with one dish in one weekend. It has been since May that I was last on 13 cm. It really helped to have setup on 13 cm for the ARI EME Contest the previous weekend. Although I only worked ON5TA, it was good to have checked out and fixed things. In the ARRL contest, I ended with 26 QSOs and a couple of initials. Echoes were +6 to +8 dB all weekend. I had many CWNRs crossband, so the problems goes both way. Maybe EU also have added noise on 2304? The most improved award goes to JA4BLC, as his start window was 6 degrees earlier, and Yoshiro had fantastic signal! I hope the JAs will forgive us in NA as the QRM has increased several dB in the last year on 2424, making it very hard to pick signals out. I will be on 23 cm with an improved station in Nov/Dec contest weekends.

**ZS6CCY:** Bill bill@zambezi.ws is coming on 1296 EME – My EME experience goes back to ZE5JJ. I worked with Peter, then ZE5JJ, on his EME projects in the late 70s. I was ZE1DX, first Africa/USA on 144 EME. I am working on getting back into it on 1296 with a 5 m TVRO dish.

**K2UYH:** I a.katz@ieee.org have little to report besides the joint MW contest effort reported under K1JT. I will active again as part of the K1JT team in Nov on 70 and 23 cm. Joe will provide the 2 m station. I am also working on putting KD7YZ in KY on 432 and possibly also 1296 EME. Work on this project has slowed because of the EME Contest, but after the contest is over, I hope to set a date.

**FOR SALE: HB9DRI:** Alex hb9dri@emeham.com announces the availability of his IQ+ SDR for adaptive polarization. This new radio, presented during the EME Conference in Cambridge is now available for delivery. It is an improved version (RevB) for 50, 144 or 432 and includes a dual channel receiver that when run with appropriate software effectively eliminates Faraday rotation problems for CW or digital modes. If you have already cross yagis or a dual polarization feed in your dish, the integration is easy. During the last month demand has increase a lot for the 432. An IQ+ SC (single channel) version is also available, mainly to "see" the entire band pass to locate QSO partners on the higher bands where Doppler is big. See www.linkrf.ch for details or email direct to me.

**FINAL:** I am very sad to report that VK3ATN passed away on 15 Sept at age 83 after a number of mini strokes. Ray was a true EME pioneer. He made possible the first ***regular*** EME activity by using four huge (50 wavelength/leg) stacked Rhombics on 2 m. Everyone interested in moonbounce in 1966 was on 2 m looking for his moon signals during his fixed Rhombic's limited window. Later ***regular*** activity migrated to 1296 and 432, and finally back to 2 m and above. Ray was among those who got EME started! See this year's April NL, and for more on VK3ATN and the history of EME see OK1TEH's excellent web site http://www.ok2kkw.com/eme1960/eme1965eng.htm.

We are all involved in a dangerous game, whether it is tower climbing in the night or placing ourselves near a high intensity RF field. We often make assumption that we should not. Please see SV1BTR's report and let it be a reminder that you cannot be too careful.

WA4NJP has raised an alert regarding a 70 cm tropo beacon in Ohio that has recently come on the air on 432.079. This frequency is out of NA beacon band plan. Ray and others are working to get this beacon moved and not have it set precedence for future EME QRM. We certainly do not need more interference on 70 cm!

After every contest almost all reports containing thanks for the great QSOs. I usually do not include these in the NL as they are repetitious, but the sentiment is there. The QSOs and activity are appreciated – THANK YOU from ALL to ALL!

That covers the news. There is a little less than normal because of the quick turnaround. Please keep the info coming, especially the tech notes. The very best of luck to everyone in the contest. I will be looking for all of you off the Moon. 73, Al – K2UYH

**Look for TI2BAE off the Moon soon on 1296 – maybe during the contest?**