



432 AND ABOVE EME NEWS

NOVEMBER 2024 Volume 53 Number 6

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 Web version hosted at: <https://EME.RADIO>

NEWS, CONTESTS and DXpeditions

This month sees a major step forward in the evolution and rejuvenation of this newsletter. Thanks to the dedicated work of Bob W1QA it now has a new home, EME.RADIO. At the end of this issue there is an article by him looking at how it can develop further and how you may be able to help. Fifty years on from the handwritten duplicated letters that Al K2UYH and the sked organisers produced this is truly a wonderful step forward. Take a look around the site at the extensive work Bob has already done especially in the presentation of the old newsletters.

CONTESTS

The 2024 ARRL contest is now over and we all hope that for 2025 the ARRL take a good look at the rules for contacts and at their explanation of them. They ask for soap-box comments, let's hope they read them and take them on board. From my own experience of operating the last leg I found that some were still unclear that a valid contest CW QSO did not require a grid exchange.

From reports it appears that activity was down on 2023 but this won't be clear until the results are analysed. The top result reported on 70cm is from OK1VUM with 112 x 98. On 23cm OK1DFC reports 178 QSOs, K0PRT 163 and IK2DDR 137 x 118. On 23cm CW KL6M reports 76 QSOs and G4CCH 62 x 49. CW activity was definitely lower, probably affected by the uncertainty around the rule changes.

I believe this was the first contest in which 1298MHz was used, by OH2DG, and several stations worked him cross-band to 1296MHz

DXpeditions

The other major event this month was the activation of 9 Caribbean countries on 23cm by Alex EA8DBM. At least one station G4CCH, worked him in all 9 of them. If you've not done so then read the odyssey of his trip in his blog with his dogged determination to overcome every problem from cancelled flights to fraying cables and worse.

<https://ea8dbm.substack.com/>

He deserves our thanks and admiration for his tenacity and skill. He did make one significant change, recovering the surface with aluminium foil and tape which several stations remarked boosted the signal and he reported a 2-3dB sun noise improvement.

Coming up in January 12th – 27th is a 23cm activation of Hiva Oa in the Marquesas Islands CI00LE by F6KJS/p (see details below) (*I need to get busy making a linear feed for the dish. Ed*)

Not quite a Dxpediton but our old friend PI9CAM has now become PI9RD, see the contribution from Dick PA2DW below.



PJ5-EA8DBM-foil-covered-dish



TX7MAS antenna setup during tests

DXPEDITIONS

TX7MAS by F6KJS/p

23cm EME in the Marquesas Islands
Hiva Ora - locator: CI00LE

The F6KJS team will be QRV from the island of Hiva Oa
in EME on 23cm from January 12 to 27, 2025.

Station : 2 X 70 elements PA : 100w - 300w

Support their project by making a donation via PayPal
F1MNQ - tx7mas@tx7n.com

9A5AA Dragan

Dragan reports that in the 23cm ARRL contest he worked under the call sign 9A100Z with a total of 30 QSOs.

QSOs completed on October 19/20 2024: G0LBK 559/559, G4CCH 579/569, DG6CST 559/559, CT1DMK, 559/559. and on October 20.10.2024: SP7EXY 559/559, OK1DFC 579/559, SM2CEW 579/559, KL6M 599/579, OK2DL 599/579, LZ2US, 589/569, IK3MAC 579/559, SP9VFD 579/559, OZ6OL 559/559, DF3RU 559/559, IK2DDR 559/559, SP3YDE 559/449.

9A100Z is a jubilee call sign dedicated to the celebration of one 100 years since the founding of the oldest radio club in Croatia, "Radio Club Zagreb" 9A1ADE. Special diplomas will be sent for each of these contacts.

On November 16: DF3RU 589/579, IK1FJI 569/559, HB9Q 599/539, OH1LRY 569/579, SP6JLW 569/559, SP6ITF 559/559, DF7UDA 559/559, F6ETI 559/559, IK3MAC 579/559, OK2ULQ 569/569, FX1A 559JN75/559JN18 and on November 17 RA4HL 579/569, JJ3JHP 559/439, CT1FGN 579/559, DU3T 559/549, IK3COJ 559/O, G3LTF 589/569, G0LBK 559/559

DK3WG Jurg

DK3WG (JO72GI) worked the following new ones in October and November:

70cm Q65-B - DC1RDB, HA5OLA (2x16el/120W), IZ6MVK, PA6Y, K5N

23cm Q65-C - VP2V/LY3UM (DXCC #92), W3TI, KD5CHG, K1WHS, WA3RGQ (new qth), DK1KW, OK1KKD, VP2MBM (DXCC #93) and V26AM (DXCC #94), PJ5/EA8DBM (DXCC #95), FJ/EA8DBM (DXCC #96), W3IPA, KH6FA, K3SK, K5N, JQ3JWF, PI4Z, BA4NQ, KP4/EA8DBM (DXCC #97)

DL3WDG Charlie

We had some fun on 1296 during the contest. We did not take it seriously as we wanted some sleep. Made over 80 QSOs, 3 on CW. System is relatively small for 1296 - 2.4m with standard IMU which over illuminates the dish so poor on receive. I cannot fit a long IMU, as we use on all other bands up to 24G, as the aperture would foul the feed support arm. Even the standard IMU sits a few cm above the focus. Power is now about 250W, from a Qorvo QPD1006 GaN device. Its capable of more but the heatsink would not support the increased dissipation. Efficiency is over 60% (tuned for that using a double slug tuner left over from 2C39 days. Never throw anything away!)

Next and final band to get going is 13cm. Using the work I did to get the GaN going on 23cm, I can now power the PA (also GaN) I have for 13cm. Everything else for 13cm is ready.

DL0SHF - DF9CY Christoph

Christoph, DF9CY reports on the DL0SHF operation on 23cm.

I had not put DL0SHF on the moon for a while now, but this weekend was almost free and I took the chance. I was on from Thursday to Sunday always part-time and managed to make 81 QSOs/contacts with 51 QSOs in the contest. 41 of the 81 were in CW, rest in Q65.

I found conditions quite good and could work stations with some very small setup. F1RJ was worked with his EME setup and additionally with his tropo setup, which does not have elevation facilities.

I do operate DL0SHF from my home, but there is Per DK7LJ - the owner of DL0SHF - in the background at his home, if problems come up ... and they did come up, but quickly solved. Except the last hour before moonset on Sunday I was off from the HB9Q chat during the contest time.

I went up there because despite "sitting" in the middle of the bunch of Q65 signals I had no single reply to my CQ calls for over 30 minutes. After my message a huge pile-up arose for the last 15 minutes until I lost moon. OK, I have a wideband display and could "see" even weak stations in CW or Q65. That surely helped.

On Sunday afternoon I returned the dish back to the guys doing Pulsar tracking Radioastronomy. 73 de Christoph DF9CY (for DL0SHF) and thanks to Per DK7LJ letting me use the station.

DL1VPL Thomas

I worked on 70cm EME with my 4x13el. array some special stations:

KB7Q/KH6 (BK29), 4Z5CP (KM72, reports -21 /-23), 7P8Z from Lesotho (KG30, reports -26/-23), K0DSP (4x9WL/100W, reports -30/-21), KA6U (EM71AL reports -22/-17) and EM86, the last trip from Peter, (tnx), PJ4MM (FK52, reports -27/-22). Nothing seen from S9Z.

I was qrv during the ARRL EME-contest, about 50% of the time. Over the last two legs I made 61 QSOs from 53 QTH-squares. I found the activity was remarkably better than 2023, also much more EU-activity. The QSO-numbers will also show this. Special QSOs were with OK1TEH (23el./800W) and GM0ICF (4x 9el./400W). I worked no new square in the contest, but 13 new inits. So anyway I was satisfied with the result.

F2CT Guy

After more than 30 years I have the pleasure to be qrv on 70cm with 2 x 4 x 14 cross yagis with H polar V polar and circular.

On Saturday-Sunday I was using only H polarity and 1500W homebrew sspa. Unfortunately az/el was limited to AZ 75 and EL 28 degrees. Despite that limitation, I worked the following using Q65B: DL5FN DL8DAU DL8GP DL5BBH OK1DFC OK1VUM OZ9AAR PA2V RD3HD SM4GGC SP2WRH UA3PTW UT6UG VK2CMP VK4EME and my friend F8DO! I heard ON7EQ ON4AOI HA5OLA SV8CS.

I can be qrv anytime for a test.



F2CT 70cm array

F6ETI Philippe

For the 2nd ARRL EME leg, I was active from my new, now definitive, EME 1296 MHz location in JN05OB, about 20 km west of the location since 2015.

During the validation tests of the installation on November 14 and 15, I was called by DL0SHF, DL1AT (#108), DF3RU and DU3T.

The site is radio electrically perfectly quiet, I am no longer bothered by the disturbances of a mobile phone station as previously.

During this 2nd ARRL EME leg on 1296 MHz CW only, 19 QSO with: SP6JLW, G4CCH, G3LTF, F5JWF, DL0SHF, 9A100Z (#109), FX1A (#110), OH1LRY, F5KUG, SP6ITF, PI9RD (ex PI9CAM, #111), W4OP, UA9FAD (#112), IK3COJ, DF3RU, IK2DDR, IK1FJI, CT1FGW, JH1KRC.

Added to the 14 QSOs of the 1st part, the total is 33 QSOs for this 2024 edition. As usual in CW, no sked, no chat, no cluster, random only, calling and listening; searching, listening and calling.

The moon conditions were very good, the new, definitive installation was thus inaugurated and validated, and I will now have the possibility of being active regularly, outside of contests. Satisfactory result, considering the evolution of the activity and the rules of this contest...

Rig: 3 m dish, SGLab 144/1296 MHz transverter, 300 watts DF9IC SSPA at septum feed, 0,37 dB NF VLNA23, IC-202 TX, AIRSPY HF+ and HSDR or SDR Console RX. EGIS rotor and EME System SK F1EHN. Sun/CS 14,5 dB, with 140 SFI.



F6ETI dish new QTH



F6ETI op at new QTH

F8DO Marius

I am again ready on 432 EME and made some QSO's with OK1VUM OK1DPC OZ9AAR 7K3LGP ON7EQ K1OR K9MRI NC1I S56P SM4GGC GD0TEP DL1VPL DL8GP UA3PTW G4RGK F2CT DL5BBH SM3LBN.

Station is a QRP one with only 2x21 el and 400 w but it is able to work all four antennas stations in Q65 mode when Faraday cooperates.

G3LTF Peter

I did not have much of a score from 3 bands I worked on in the first two leg of the ARRL contest and I missed the 3rd leg with a holiday so I wanted to have a good go at the final leg to try and get a decent multiband score.

Last month I was trying to reduce the HA drive backlash on my polar mount and found that the support legs of the cast aluminium holder in the final drive chain had shattered (the HA drive came from an old marine radar). I managed to get it repaired in time by some serious mechanical work with my lathe and angle grinder making a replacement out of steel.

In the event the weather was totally calm and so any residual backlash was not a problem and with perigee and high declination, EME conditions for me were perfect. I started at 00:00 on 16th November and worked the following all on CW: W4OP, OK2PE, PA3FXB, W2ZQ, DF3RU, SM3BYA, CT1DMK, F5KUG, SP6ITF, SP6JLW, OZ6OL, K5DOG, IK2DDR, N8CQ, NQ7B. Re starting at MR with DG5CST, KL6M, PI9D, DL0SHF, F6ETI, IK3MAC, OK2DL, IK3COJ, DU3T, UA9FAD, PA3DZL, LZ2US, SP7EXY, SP9VFD, IZ1BPN, FX1A, SV3AAF, DL3WDG, OH1LRY, G4CCH, F5KDK, continuing on 17th November with VA7MM, SM2CEW, KN0WS, VE6BGT, DL7UDA, KB2SA, W3SZ, and K0PRT. On the final pass I worked OK1DFC, IK1FJI, SP3YDE, G0LBK, SP6GWN, OM4XA, 9A100Z, SP3XBO, JH1KRC, ON5GS and DL1SUZ for a total of 51 CW QSOs. I missed OK2ULQ, F5JWF and G4ALH. I also had two nice SSB QSOs with OK1DFC and CT1DMK.

CW operation in the contest was higher than I anticipated after the mess up of the rule changes but as usual there were many more strong stations on digital that I could have worked.

Thanks to all for the great QSOs. My highlight was being called in the final hours by Mike JH1KRC when I thought the moon had already set in JA. His signal had very long slow QSB, (just like tropo) which I have noticed before on 432 and even 5760MHz with signals from JA at their moon-set.

Final claimed score: 23cm 51x44, 13cm 9x9, 9cm 3x3, 6cm 7x7. Total 70x63 = 441,000

I plan to be on for the 6cm activity on December 14th.



G3LTF Repaired Hour Angle Drive

G4CCH Howard

In October, prior to the contest I worked:
 13/10 W3TI # DIGI 631, K1WHS # DIGI 632
 17/10 RW3OG # DIGI 633
 18/10 UA3MRE # DIGI 635

In the ARRL contest in October I was only active on 19/10/24 and didn't work through the night. I operated mostly CW. WA6PY, NQ7B, VA7MM, WB8HRW, DF3RU, KL6M, PA0PLY DIGI, KB7Q DIGI, KN0WS DIGI, OK1DFC, IK5VLS, JJ3JHP DIGI, LZ2US, SV3AAF, SM3BYA, IK3GHY, OK2ULQ, SP9VFD, SP3XBO, OK2PE, DG5CST, VK3NFI DIGI, HG5BMU DIGI, SP7EXY, OZ9KY # DIGI 636, DJ3JJ, RA4HL, RX3DR, OZ6OL, BA7NQ # DIGI 637, G0LBK, OH1LRY, CT1DMK, 9A100Z, DL1AT, DL3WDG DIGI, PA3FXB DIGI, SP3YDE DIGI and DL7UDA DIGI

After the contest on 23/10 I worked CT1FFU R-06/-08 # DIGI 638, CT1FFU # CW 572

Totals are 62 CW, 14 DIGI and a total of 57 grids.

In November prior to the contest I worked:
 09/11 OK1IPV # DIGI 643
 10/11 G4KLX # DIGI 644, K3SK # DIGI 646
 11/11 M0LNB # DIGI 647, K0DSP # DIGI 648

In the ARRL contest in November I stayed up till 2400 on 16/11, I didn't make any attempt to work through the night. Re started on my Moonrise on 17/10. Operated mostly CW and tried using an SDR (RTL dongle) for the first time to spot CW activity, and to provide input via SDR console to QMAP.

On 16/11 FJ/EA8DBM DIGI, F6ETI, SP6JLW, OK2DL, UA9FAD, SP6ITF, F5JWF, IK3GHY, SP3YDE, DL0SHF, IK1FJI, DU3T, RA4HL, DL3WDG, JQ3JWF # DIGI 650, PI9RD, F5KUG, SV3AAF, OM4XA, IQ2DB, JH1KRC, DL4DTU, FX1A, IK3COJ, SP7EXY, G3LTF, N8CQ

On 17/11 IK3MAC, IK2DDR, PA3FXB, OH2DG cross band 1298/1296, SP6GWN, CT1FGW, PE1LWT, ON5GS, DL1SUZ and CT1DMK SSB

I worked Alex from all 9 locations in his Caribbean operation.

12/10 KP2/EA8DBM # DIGI 630. Not DXCC as already worked KP2/W3XS (AI K2UYH) in April 2015
 17/10 VP2V/LY3UM # DIGI 634 and DXCC
 23/10 VP2MBM # DIGI 639 and DXCC
 29/10 V26AM # DIGI 640 and DXCC
 03/11 PJ7/EA8DBM # DIGI 641 and DXCC
 07/11 PJ5/EA8DBM # DIGI 642 and DXCC
 10/11 FS/EA8DBM #DIGI 645 and DXCC
 14/11 FJ/EA8DBM # DIGI 649 and DXCC
 20/11 KP4/EA8DBM # DIGI 651 and DXCC

Standings at 22/11/24

CW Initials = 572, Grids = 341, DXCC = 87
 DIGI Initials = 651, Grids = 412, DXCC = 129

I plan to be QRV on 6cm in December.

G4KLX Jonathan

I finally got active on 23cms EME on the 10th November. I was using my 2.4m dish, 150W from G4BEL (SK) PA, a noisy preamp also from G4BEL, and a linear dish feed. The driver radio is an IC-905. An immediate problem found was that the automatic transmit control wasn't working so I was doing manual PTT for the first few days. This location is very limited and I require the moon to be quite high to be able to work in many directions, the attached picture of the dish pointing East-South-East.

On my first night I got fourteen initials, the following night, eighteen. After that it all settled down to lower levels of activity. For the second night I changed over to a WD5AGO preamplifier that improved the received S/N ratios by around 3dB. By the time that the EME contest arrived at the weekend I had worked out how to operate on EME reasonably well apart from the sleep deprivation caused by the late nights and ensuing operating mistakes, apologies to W2HRO for that particularly.

By the end of my first week I was up to 66 initials with every continent worked. The stations worked were: CX2SC, DF3RU, DF7KB, DJ2DY, DL1AT, DLOSHF, DL1SUZ, DL4DTU, DL6SH, DL7UDA, DL8FBD, DU3T, EA8DBM, ES3RF, F1RJ, F4KLO, G0LBK, G4CCH, G4YTL, G7TZZ, HB9Q, IO1NAA, IK2DDR, IK3COJ, IQ2DB, IU4MES, JA4LJB, K0PRT, K5DOG, KA1GT, KB2SA, KG0D, LA3EQ, N0AKC, N1AV, N5TM, NC1I, OH1LRY, OK1DFC, OK1KIR, OK1UGA, OK2DL, ON4AOI, ON5GS, PA0BAT, PA0TBR, PA1PS, PA3DZL, PA3EXV, PA3FXB, PE9GHZ, PH0V, PI4Z, PY2BS, RA4HL, SM6CKU, SP3YDE, SP5GDM, UA3PTW, UA9FAD, W2ZQ, W2HRO, YL2GD, YU1SAN, YB2MDU, YU1SAN

My first EME QSO was Dave G0LBK who I've known since the 1980s and has provided invaluable advice on how to construct my station, the second was Howard G4CCH. Many of the European 23cms EME ops are people that I used to work regularly on 23cms tropo in the 1980s. In the contest I worked twenty initials, twelve of which were new to me.

The next stage is to change over to a Septum feed and higher transmit power. This should mean an improvement of my transmit signal by 6dB or so. I also hope we can work on CW.



G4KLX 2.4m dish

GM4PMK Roger

This was my first time on 23cm with the new IC9700 prime mover, still the same setup apart from that - 3.2m, G4DDK, 100W. On the night of 14/15th November I worked 8 stations with Q65, 5 initials, including FJ/EA8DBM -22 out, -24 in

I was only able to be on for a short while on 15/16th November, just before the contest I worked KOPRT (#) then after 00UT I worked SP3YDE(#), OK2DL and OK1UGA, before I had to QRT.

I5WBE Enrico

Shares with us the results of the Autumn Leg and Annual 2024 ARI EME contest:

<http://www.eme2008.org/ari-eme/contest2024.html>

IK1FJI Valter

Valter, IK1FYI is back with his big signal on 1296MHz. His tower was blown over by 110km/hr winds in October 2023 and since then he has repaired the 3.8m dish and put some major strengthening on the tower to support it on the roof base. See the green structure in the picture. If you look at the background you can also see how high up his dish is!

In the contest, with his 1.3kW at the feed, Valter was QRV about 3 hours (only for fun no contest) on both evenings, only CW with a total of 38 QSOs.

He worked on 16th November DF3RU, SP9VFC, KL6M, OK2DL, SP6ITF, SP6JLW, DG5CST, G4CCH, 9A1AA, (9A100Z) #169CW, RA4HL, HB9Q, CT1DMK, OK2PE, IK2DDR, SV3AAF, SP7EXY, F5JWF, DL7UDA, OH1LRY, IK3COJ, LZ2US, DU3T, IK3GHY(#170CW)

Then on 17th November F6ETI, PA3FXB, SP3XBO, OK1DFC, OM4XA, JJ3JHP, CT1FGW, PE1LWT (#171 CW), IONAA (SSB), G3LTF, SP7EXY, G0LBK, JH1KRC, DJ3JJ



IK1FJI tower strengthening

IK2DDR Francesco

The final leg of the ARRL eme contest is gone. I worked on both days, compatibly with my soccer commitments. I found a great participation, like during the 144 MHz golden years. I have been active only on 1296 MHz, with my 3.7 m dish and my new MRF13750H SSPA (tnx Graziano, IK3MAC and Ermanno, IK7EZN). Conditions were extremely good and particularly on 2nd day, close to perigee.

Final results in my log are 137 valid QSOs and 118 Multip (not including the dupes). 27 CW QSOs and 110 Q65. My participation was single operator mix mode. Worked some new initial and replayed qso with Alex, EA8DBM on his Carribeans trip. I was really satisfied by my setup performance.

As written in the ARRL "soap-box", I suggest to ARRL to change the rules a little bit, permitting working the same station twice. One time on digital and one time on analogue (CW - SSB). This would give some more fun to those stations that work only analogue and increase the number of final QSOs.

Outside the ARRL contest, let me mention EA8DBM's efforts during his long DX expedition trip, that as well as some rare European dxcc, he gave us the possibility to work lot of Carribean DXCCs. Among the list I was really honored to do a new one for Italy on 1296 MHz with Montserrat Is. and Puerto Rico. Many thanks Alex, that fighting often against Mr. Murphy, you won the battle and warmed up the band in a season where usually it's quiet.

IQ2DB - I2SVA Allesandro

Alessandro I2SVA writes on behalf of the IQ2DB team.

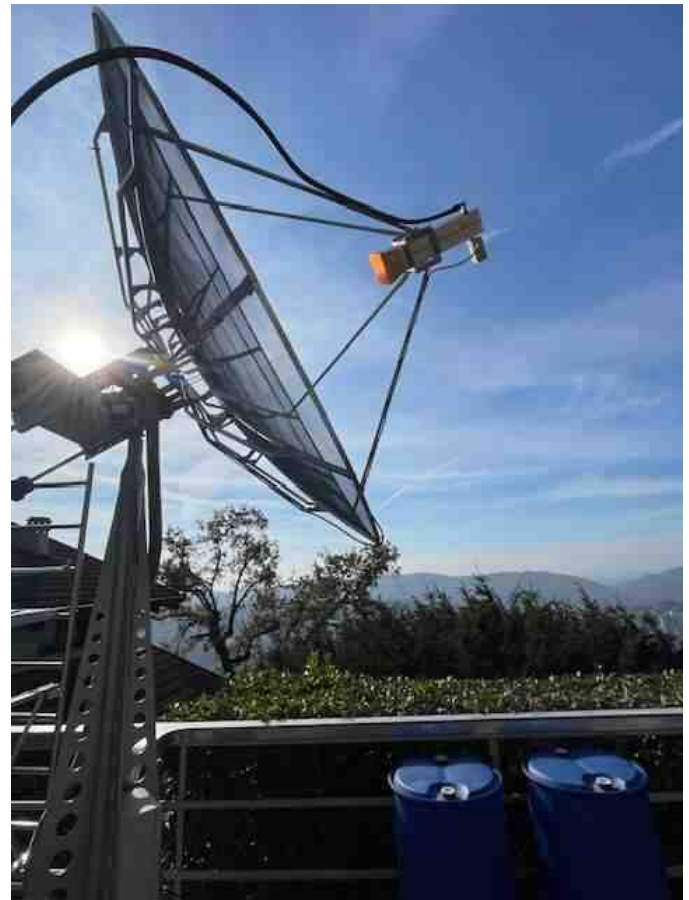
At IQ2DB we have done a quite satisfactory result on the ARRL contest although the operation was really part time and most Digi this year. We ended up with a final result of 117 QSO (128 total less 10 Dupe) x 100 Grid. The split by mode is: CW 9 QSO, Q65-60C 11 QSO, Q65-30B 97 QSO!! It's really nice to see that Mode 30B is definitively growing up making the Digi contest a bit more dynamic. Quite a good number of news Initials (14) worked during the 2 week ends: VP2/LY3UM, W3TI, W2QK, LB6B, K1WHS, K5N, PI4Z, PA1PS, W3IPA, K6FOD, PI9RD, SV3AAF (CW), BA7NQ, JA4UMN.

Interesting to say that we have recently installed a flare (XE1XA design) on the septum of our 3 m dish and things have improved by a bit, as expected (about 0.8 dB).

Overall IQ2DB activity since the first QSO exactly 3 years ago sum up to: 2802 QSO, 377 Digi init, 85 CW init, 14 SSB init, 74 DXCC, 28 Zones, 285 Grid Squares.

More info on A.Volta EME team and IQ2DB at:

<https://www.alessandrovoltaemecomo.com>



IQ2DB 3m dish with septum and new flare

IZ0JNY Ivan

A brief introduction. I started working on my setup to be able to do EME in microwaves at 10GHz and above in March of this year. First I built myself the tracking system, afterwards the transverter box. It took me a few months to complete the construction, but finally I made the first EME QSO at the end of July with Gino IK0HWJ.

My setup consists of a Gibertini 100cm SE dish (F/D 0.67), a linear V-pol feedhorn made by Silvano I0LVA, coax relay, DEMI LNA and an SSPA of 20W. I can report about the months of August - July - September and October. I participated in the ARRL International EME Contest over two rounds, August and September, during which I managed to make 16 QSOs: OZ1LPR, VE4MA, PA0PLY, G4RFR, KM0T, DL3WDG, F2CT, HB9Q, OK1DFC, OZ1FF, IW0HWJ, ON5TA, OK2AQ, SA6BUN, LC4OC, F6BKB.

I am so happy to have finally participated in my first EME microwave contest, it was for me a great personal achievement. On the 13th October, we managed to perform a QSO with Richard VK7ZBX, and it was very exciting for a small pistol like mine. On 27th October at 02:50 UTC, I had a QSO with Mikio San JA8ERE on crossband, with RX at 10.450.200 MHz and TX at 10.368.200 MHz. Now I'm upgrading my 10GHz system to WR switch and WR90-input DU3T LNA.

In the meantime - in parallel with the 10GHz activities - in September I started to assemble my setup for 24GHz, which consists of a 2nd Gibertini SE dish 100cm (F/D 0.67), a Siemens RW1136 TWT modified for 24GHz operation by Hans PE1CKK (19W output) a 24GHz feedhorn again from IOLVA, WR-42 input DU3T LNA and an home-made WG switch motorized with an RC-servo and Arduino. I usually reach 7.5dB of Sun Noise.

On September 21st I did a test with Vlada OK1KIR, who was very patient, but unfortunately due to my mistake on the alignment I was unable to decode it. After having finely tuned the rotor tracking control, the weather conditions allowed us to try again on November 12th at 16:23 UTC, allowing us to carry out the QSO (my 1st ever 24GHz EME QSO) very smoothly at 1st attempt. The conditions on that day were excellent, despite the cloudy sky and the Moon partially shadowed by it, relative humidity 70%, temperature 12°C, Sun Noise 7.7dB and Moon Noise 0.5dB. I thank Vlada and Tonda for their availability.

There is more about my 24 GHz system here:

<https://www.iz0jny.it/24ghz-setup>

JA4BLC Yoshiro

On Nov 10, I changed the feed of 2.4m dish from 6cm to 3cm. The 3cm system (TX 10450MHz) is working successfully. I am hearing good echos and worked some JA stations on CW: Nov 12 JA1WQF 559/559, Nov 14 JA8ERE 579/569, Nov 16 JA6XED 559/559. I will be staying on 3cm till next spring.



IZ0JNY 24 GHz feed



IZ0JNY 24 GHz feed components

KOPRT Deep Space Exploration Society

Alex K6VHF writes:

Hello fellow EME-ers. I am glad to share some good news behalf KOPRT (DM88) station.

ARRL EME contest was a great exercise for Deep Space Exploration Society (DSES) members across the world. We had great success on using "DIANNE" package for 23cm band and participate in the contest. KOPRT made over 163 contacts (134 verified) with more than 30 countries across 5 continents, we just missed AF(ZS5Y).

It's always a pleasure allow new HAMs make their first EME contacts and work stations with minimal capabilities. One of those stations was Martin PJ4MM from Bonaire island (IOTA SA-006). When we decoded PJ4MM on the screen (using Q65-120D at -32dB) everyone at DSES were excited about working new DXCC. First attempt was unsuccessful due to QRM, after we QSY on different QRG we finally were able to finish QSO. Signals were decoded at -28 and -27 with final RR73. Operator working PJ4MM from DSES site was Alex K6VHF. Later we learned that it was the First ever US (W) - Bonaire (PJ4) 23cm EME QSO. Wow, what an accomplishment. For that reason Martin promised to me (K6VHF) to deliver his QSL card to Arizona and meet in person. On November 21st Martin arrived to K6VHF's shack and we exchanged the historical QSL cards.

Deep Space Exploration Society is committed to help amateur radio guys across the globe make their first EME QSO with minimal required equipment. We have in our collection few stations who worked their 23cm EME station ever. As well here at DSES site in Colorado we hold training session and teach young amateur radio enthusiast on Earth-Moon-Earth communication, digital modes for weak signals and antenna/RF design. On photo Alex K6VHF holding training session on 23cm EME system and propagation.

Now we are getting ready for Earth-Venus-Earth experiment that will take a place in March 2025. We will keep EME community informed.



KOPRT (K6VHF) - PJ4MM QSL Exchange



KOPRT K6VHF Training Session

KB2SA Bill

Missed the first two days of the ARRL EME contest. Operated from 6 PM to 3 AM local during the second two days for QSOs with anyone still awake. About 70% of the contacts were obtained calling Q65-30B. The remaining were found by observing the logger and monitoring QMAP. During the two days was able to achieve 85 QSOs with 76 grids. Two CW contacts were with G3LTF and SM2CEW.

Several people (including DUBUS) have asked to convert my "High performance 1.9m station for 23cm EME" PowerPoint presentation into a more detailed technical article. Several new 23cm EME stations are being built to the specifications provided in this presentation. The technical article will include everything presented during the 2024 International EME Conference. Additional technical details will be included to help in future analysis, simulation and implementation.

KL6M Mike

I operated CW only on 23cm for the fourth leg of the contest. I added only an additional 29 for a contest total of 76. I did pick up six new ones in November: N0AKC, DL0SHF, ZS4TX, FX1A (SSB 57/59), IK7UXW, PE1LWT.

After the contest I added two more new ones, K1WHS and CT1FFU. All on CW. Conditions for both Oct and Nov were ideal, high declination and close to perigee. Both weekends were great fun even though numbers are dropping year by year. I think we should advocate for ARRL to allow points for working the same station in both digital and CW. This would incentivize more CW activity, as well as getting some CW folks on digital.

I'm still debugging my new 10 GHz system, and hope to be QRV in the near future. I also hope to fix my 6cm system and operate in December.

KN0WS Carl

My big contest weekend of the year is the October ARRL weekend. Typically, I will go to my northern property to set up my tent and gear to do one 70 cm moon pass on my 20 foot dish, then I tear things down and move 50 yards to set up at my 16 foot dish for a 23 cm moon-pass, then I set up 10 foot scaffolding to remove the mesh from my 20 foot dish before winter snows fall.

This October I was hospitalized with an unexpected illness and was still recuperating during the ARRL contest. I was still able to manage operating out of my garage on 23 cm using my 8 foot dish with a 4-5 hour moon window to the east. That resulted in 46 digital QSO's, which salvaged the weekend. My plan was then to do the "big production" on 2 bands during the November ARRL weekend. Well, when I arrived on site, I discovered that my 20 foot dish erected in 2013 was broken. There had been a 4.5 inch snowfall about 10 days earlier, and it proved that my 12 year proactive of mesh removal had been a good idea. Basically, the support rod used to stow it in vertical position broke, the dish swung down and snapped my "bicycle cable lock" used to hold the counterweight arm against the tower and it continued to swing down past horizontal until the lower dish was sliced by the tower.

It might be possible to re-build the dish, but then I would still have to do the annual mesh ritual on scaffolding, would still need to get up onto an 8 foot ladder every 15-20 minutes to crank the dish elevation during contests and would need to use my 10 foot scaffolding for any feed work. I have metal and some design plans to make a large offset dish, but the mount would have to be reinforced considerably and I am NOT able to get any cement trucks back to that location. Creating a 6 foot cement cube in the ground would require me to haul over 400 bags of cement back to the dish, plus the water to mix it up and then I would mix it myself... very daunting! As an interim solution, I may have to modify my feed mount on the 16 foot dish. It goes to show that you can never have too many dishes (at least that is what I am telling my wife). Right now there are permanently-mounted feeds for 13 and 23 cm. I may need to modify it to allow a 70 cm feed.

So I just set up at my 16 foot dish and operated on 23 cm for the contest. Clear sky and big moon the first night and cloudy the second with not-so-good tracking. I was able to work KL6M and G3LTF using CW, otherwise all contacts were using Q65. I had 29 QSO's the first moonpass and 10 the second. These included initials with NOACK (16), W4ATC (14), W3SZ (21), K3SK (15), DL3WDG (18), JJ3JHP (10), VK3NFI (14), VK3WRE (15), BA7NQ (13), JQ3JWF (7), PA3EXV (16), M0FFX (17), PA0TBR (16), AE5MB (18), NY1V (19), OE3JPC (20) and W3TI (21). That brought my ARRL contest totals up to 13 cm: 4 x 4, 3 cm: 20 x 17 and 23 cm: 85 x 76 for a total of 109 x 97.

(I missed out Carl's September report from last month, many apologies, but here is what he worked in the ARRL second leg on 10GHz from his home location... Ed)

For the 2nd ARRL weekend, I did 3 cm from my backyard dish, having only about a 4 hour east-facing window. Using Q65 on 9/21 I worked: PA0PLY (17), OZ1LPR (7), DL3WDG (14), HB9Q (12), IW2FZR (16), OK2AQ (18), IK0HWJ (11) and had initials with G4RFR (10), OZ1FF (15), PE1CKK (19), PA7JB (14) and IK6CAK (20). On 9/22 I worked OK1DFC (14), KM0T (17), F6BKB (15), DG5CST (13) and had initials with ON5TA (16), LZ4AC (19), F2CT (14) and ON4CDU (19). Although my dish performance is sub-optimal, I was happy to have 20 QSO's and 9 initials for the weekend.

My entire 2024 EME season went from August 24 through November 17. During that time I had five 13 cm QSO's (2 initials), 26 QSO's on 3 cm (14 initials), 10 QSO's on 70 cm (5 initials) and 119 QSO's on 23 cm (33 initials). Thank you all for EME fun and I hope to see you in 2025.

N1AV Jay

Having returned home from Hawaii in March I immediately started working on the different EME stations in prep for this contest. Getting gear on the bands I had updated, and getting new gear up and running on new bands, namely 2304/2320 and 10GHz. I was able to use the gear I had brought to Hawaii for 2304, and used my 4.2m dish (1296 dish) I have in the backyard over the 2.4m folder. The new 10G station was Kuhne gear and a19w (PA3DZL PA) on a 1.8m dish.

One thing of note, working in the summer heat in Arizona is difficult. In May - September if you leave tools out on the ground for a few hours you will burn your hands when you go to pick them up. 46 degrees C is hot no matter where you are. So, outside projects were mostly done at 11 PM to 2 AM with a headlamp when the temps were down to 36 degrees C. The sleep 4-5 hours and go to work. Then do it all over again the next night. Yes, I was that crazy guy walking around his backyard at midnight with a headlamp and going up and down ladders in the dark.

Regardless, after several months of work, I had a working system on 13cm and a barely working system on 10G (with severe tracking issues). I was able to work several stations on 13cm the first weekend and a handful on 10G due to tracking issues. I should have had both running the first weekend by the activity I was seeing on the HB9Q logger on 10G. But, I was back and forth between the shack and the 10G dish several times each QSO dealing with issues - so running two bands at the same time would not have been possible. 13cm activity was super fun! 10G was super frustrating ... but I did manage to squeak out a few QSOs, which hey is cool! New band on the moon, that is always neat.

For the 50-1296 weekends, 23cm worked well. 33cm Qs were quick. 432 MHz with the new 8x21XP antennas played very well, and for the most part, polarity changes were not an issue. Not having moon for the first three hours of the contest hurts the score for sure, even with the solid window to JA/VK - it doesn't make up for the lost QSO count to EU stations.

I worked each contest weekend from MR +4 degrees to 20-10 degrees on MS. Noise on my west (looking at Phoenix) adds about 5db - which makes 432 Q's much more difficult on my MS.

Score entry for SOAB - totals:

Band Q's Grids

144: 70 x 65

222: 7 X 7

432: 61 x 57

902: 9 x 9

23cm 103 / 2cw / x 90

13cm 16 x 15

3cm 4 x 4

Total 270 x 247 = 6,669,000

The most by far I have ever scored, even if we were using the old rules as states vs grids as multipliers, I still did double the QSOs of last year, so I am happy with the result. Now currently working on the list of changes, additions, and fixes for the contest next year. Thanks to all that got on the air, and especially those that got on for multiple bands, NOAKC gets the award this year, as we worked each other on 5 bands, even with all the fixes he had to do this year. Thanks Charlie!

N5BF Courtney

N5BF is back on the 23 cm EME with a 2.4 meter Sub-Lunar folding dish that I acquired this summer before the EME conference in Trenton. This was my first EME conference to attend and it was a delight to meet in person so many of the people I know off the moon.

As soon as portable setup alignment was finished early in the week, I got on the moon and quickly worked four stations on Q65, verifying basic performance. Pointing was not an issue. The Green Heron RT-21 AzEl driving the Sub-Lunar SL-1 was very precise. Once I worked out the setup issues and got it aligned properly, I had no positioning issues for the remainder of the week. Every time I went out to check the feed shadow on the center of the dish (moon or sun) it was dead on.

During the contest weekend itself I worked 33 stations in 32 grids. One on CW and the rest on Q65. This included three new initials K1WHS, KG0D, and K5N (although I previously had an initial with Marshall K5QE and suspect K5N was the same station).

(We believe it is - ED)

One of the attached pictures shows the setup in the back yard during a sun noise measurement. The other shows the Friday evening contest moonrise over the house through the dish. (This was at 0223 on 11/16/24 UTC.) Working the regular large stations in digital modes was straightforward, but this is a smaller station than the one it replaced and isn't powerful enough for meaningful echoes, CW, or digging out other small stations. I did complete a CW contact with KL6M but it was very tough on my end. With 200 Watts at the feed currently, I'm planning more QRO soon. And learning some other tricks and techniques.



N5BF moonrise over house



N5BF sun noise measurements

OK1DFC Zdenek

Some observations from EME activity in November 2024.

Since the last ARRL 50-1296 MHz EME contest in October, a number of things have happened and a second round of ARRL EME in the 50-1296 MHz bands has taken place. After a decent result in the 23cm band, I'm gearing up for November to tackle the 432 MHz band. Unfortunately, I was only able to establish 47 contacts there by 22 UTC on Saturday, as there was a monstrous interference in my QTH that I have not been able to locate yet. The moment I had the fourth message from the counter stations that they were decoding me perfectly and I didn't know about them I decided to quit 70cm. So on the night of Saturday to Sunday I decided to change to the 23cm band and finish the contest there. On 1296 MHz I made another 55 QSOs by CW and Q65 operation. The activity was decent, but it was lower compared to 2023 when I made 204 contacts.

So I finished the contest with a score in the Multi Band - Single operator category:

432 MHz - 48 QSOs

1296 MHz - 178 QSOs

2320 MHz - 25 QSOs

3400 MHz - 4 QSOs

5760 MHz - 6 QSOs

10368 MHz - 42 QSOs

Total 303 QSOs

During the period from 1.11 to 24.11.2024 I made 211 QSOs on all bands where I was QRV. Thanks to the activity of Alex EA8DBM I made a total of 5 new DXCCs and by connecting with PJ4MM another DXCC and got to #136 DXCC on 1296 MHz. Of these, there were new initials on 23cm band: VP2MBM #623 - #DXCC 130, V26AM #624 - #DXCC 131, PJ7/EA8DBM #625 - #DXCC 132 - first OK, PJ5/EA8DBM #626 - #DXCC 133 first OK, FS/EA8DBM #627, G4KLX #628, FJ/EA8DBM #629 - #DXCC 134 - first OK, F5JWF #630, PJ4MM #631 - #DXCC 135 - first OK, W2MMD #632, AE5MB #633, KP4/EA8DBM #634 - #DXCC 136 first OK

Martin PJ4MM operated 10W RF !!!! and 67el.Yagi.
We used Q65-120D and decoded PJ4 on my side was -25/-26DB, Martin decoded my signal -18DB

I made these new init on the 70cm band in November:
IZ3ATX #559, LY1G #560, S9Z #561, PA6Y #562, PJ4MM #563, KF2T #564, NY1V #565, WB1BQE #566, W6TCP #567, K5N #568, DL5DAW #569, DM9EE #570, SM4GGC #571, SM6CEN #572, JROWFY #573, F2CT #574, DL5BBH #575, GM0ICF #576,



OK1DFC dishes

OK1IL Ivan

This October and November have been one of the most exciting periods of my ham life. 9 Caribbean islands activated by Alex EA8DBM each of them brought new challenges on both sides. The lost reflection of Alex's dish due to sulphuric volcanic emissions, different kinds of QRM or tropical downpour on Alex's side or the newly discovered elevation failure on my dish. My 7m high Aluminium mast, necessary to overlook nearby obstacles, probably bends under different loads in elevation angles with 13kg heavy PA box and dish itself or simply it is not precisely vertical.

My help was offset table in PsT rotator filled with different offset values for elevation in the whole Moonpass range tested gradually in Echo mode. In spite of all these troubles I worked Alex in my 8 new DXCC entities. In this time period I also worked in the ARRL EME contest and submitted log to ARRL with 82 QSO's and claimed score of 474.500.

All DIGI this time, I am still not comfortable to work CW remote with my new IC-9700 and its software for remote operation allowing audio transfer and keying with PC keyboard. Without a trusted hardware sequencer I was very anxious not to kill the preamp.

OK1KIR Vlada

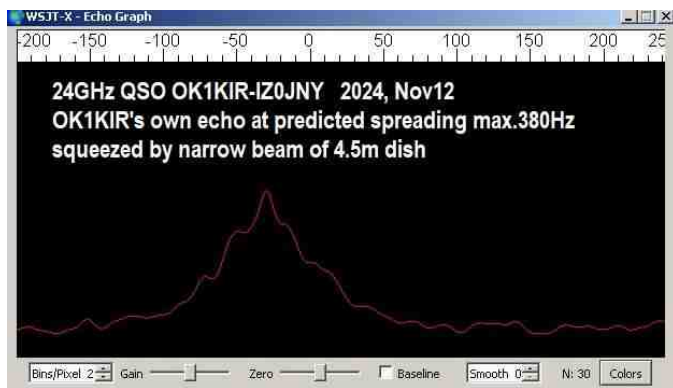
EA8DBM DXpedition: on Nov3 we worked him with Q65-60C as PJ7/EA8DBM -23/-22 #593. Later on Alex repaired the surface of his 2.4m dish, reports jumped up and he changed mode of operation with "big guns" to Q65-30B to save time for smaller stations. We worked him on Nov7 as PJ5/EA8DBM -17/-13, #594; on Nov10 as FS/EA8DBM -15/-14, #596 and new DXCC; on Nov14 as FJ/EA8DBM -18/-18, #598 and new DXCC and last on Nov20 as KP4/EA8DBM 19/-18, #607 and new DXCC #136.

On Nov10 we further worked on 23cm using Q65-60C with G0HIK, ON5DG, G4KLX #595, K3SK #597.

On Nov12 we installed 24GHz for Ivan, IZ0JNY and worked him immediately -16/-18 (B-15) as digi #58 (total #74) with Q65-60E at 700Hz on agreed QRG w/o any tuning! Surprisingly, when switching mode to Q65-60D at 1000Hz Ivan continued decoding us -19 while we got no decodes more (predicted spreading max. 330Hz). We measured MN just 2dB and both sides elevation was only 23deg. Returning 20 minutes later to Q65-60E we repeated with -15/-19, but only one decode on our side! It indicates that we were just at the edge of current conditions. Ivan used 1m OF dish, 19W from TWT and it was his 1st QSO ever on 24GHz. Really well aligned equipment! About 1.5 hour later we worked easy IZ2DJP (1.8m/10W) at -14/-10 (B-13) with Q65-60E (predicted spreading max. 450Hz). The picture shows our echo with the reduced spread from using a 4.5m dish.

On Nov13 we installed 70cm linear rotating feed for expedition S9Z and worked them on V pol. with -21/-17 using Q65-60B as #355.

In ARRL EME contest we operated only in Nov16/17 weekend orbit looking for new initials. Mainly using Q65-30B we worked with 22 stns: UA1ALD, YB2MDU, RA4HL, YU1SAN, DF3RU, OK2DL, VK4CDI, CT1FFU #599, RW9OG #600, BG7XWF, JQ3JWF #601 BA7NQ #602, OK1IPV #603, PI9RD, OK1DFC, DL1AT #604, FJ/EA8DBM, W2ZQ, M0FXX, W4ATC #605, K5N #606 a LU8ENU. In CW we worked with DG5CST, OK2PE, SP6ITF, IZ1BPN and F5KUG.



OK1KIR 24 GHz 12-11-2024 own echo

OK1VUM Milo

This was the first time I had ever participated in an ARRL EME contest, so it was an uncertain undertaking for me and I didn't know what to expect. I also needed to coordinate operation with Zdenek OK1DFC as our antennas are only 5km apart.

Before the start of the October leg I made a QSO with the 7P8Z expedition, but then I was tired, didn't want to wait for the contest to start at 00:00 UTC and I went to sleep. I started the contest at about 6:00 am and it turned out to be going pretty well, with several stations calling me occasionally at the same time, EU and US.

I had a family event scheduled during the day so I couldn't make up the sleep supply for the second night, which I also slept through.

I made a total of 81 contacts in October, one CW, one JT65 and the rest Q65 in 18hrs of operation out of about 29 possible, when the moon was above the horizon, the rest I slept. After the contest, I was wondering if my result was good, or if it was not worth much, I just lacked experience.

Total for the first part 32 inits: KD2LGX, K5N, K7ATN, W7TZ, W4NH, N5UC, UB4UAA, YL2GD, JR0WFF, OH4LA, DL5BBH, S56P, PA6Y, SM6CEN, JQ3JWF, JE2UFF, RJ3DC, DM9EE, S51LF, JG2XWH, KBOZ, WA3RGQ, GM8JBJ, N9LHS, PA3CMC, SM7SJR, IZ3ATX, IZ4FUA, F1RJ, IZ6MVK, S51WX, G6HKS.

Later I realized that the result was not bad and that it would be worth trying the second part. I agreed with Zdeněk OK1DFC that I will stay on 70cm and we will keep the same period. In the meantime, since I had forgotten who I already had and who I didn't, for the second part I prepared a list of stations I already had worked.

Clearly other stations probably didn't do that, because my CQ in the second part attracted a lot of stations I already had from the first round, but it didn't matter. In the second part I managed to make contact with 31 new stations, 15 of them were initials PE1ITR, DL5DAW, K3SK, VE4MA, K1OR, OK6TW, OZ1SKY, GM0ICF, SQ9MYQ, G0JDL, DL1SUZ, DL6KAI, VE6TA, N7GP, F2CT. The total score is 112 different stations, 98 multipliers, for a total of 1,097,600 points.

Thank you all for the QSOs and I look forward to hearing from you next time. The antenna is 32 x9 elements with H/V beamwidths of 7.4 x 3.5 degrees.

ED - Take a look at the web site showing this amazing antenna:

<https://www.ok1kze.com/radioklub/klubove-akce/stavba-velke-anteny-pro-432-mhz>



OK1VUM 70cm antenna



OK1VUM 70cm antenna

PAOPLY Jan

I changed my set-up to 70cm just before the ARRL contest weekend. I am using my 3m dish with some 300W and rotary feed (OK1DFC model).

During the contest I worked in digital mode:

PJ4MM #, NC1I, KD2LGX #, PA6Y #, DL1VPL #, S56P #, AG7CM #, YL2GD, OZ9AAR #, W6TCP #, ON7EQ, N1AV #, OK1VUM, DL5BBH #.

I called K3MF many times but seems they could not hear me. Also other stations I could decode but received no response.

After the contest I rechecked my noise floor and saw differences up to 10dB from MR to MS. Funnily I found that I could reduce a significant amount of noise by changing the polarity. This might be a way to go.

On Nov 22nd I ran a test with Ian, W6TCP as we could both change polarity:

In Hor - Hor the reports were: -23dB and -25dB

In Ver - Ver the reports were: -32dB and -25dB

while I have 3dB more noise floor compared to H. That was an interesting detail which I will check out more often.

Later I wrkd: GW3ZHI (-26/-27), SP2WRH (-28/-28), G4YTL (-27/-24) and DL8DAU (-25/-28).

Reminder: Dec 14th for the 6cm EVENT!!

For 24GHz, DU3T and I are progressing in the production of the WR42 Waveguide switch. The prototype is ready and production will be starting soon. Initial specifications:

4 ports - WR42

Insertion loss: < 0.3dB

Port Isolation: > 50dB

Actuators: 24Vdc

Optional WG controller with sequencer and supply voltage for preamp

The controller runs from 12-15Vdc.

PA2CHR Chris

Chris reports: after many years of silence, I was active on 1296 MHz with new 70el. yagi and about 100 Watt at the feed. Made 13 QSO's with the big guns and 3 of them were new DXCC! So I reached the amazing amount of 27 EME initials and 31 DXCC's, hi.

Station is IC9700 with Beko HLV800 but I am not sure yet about possible output. It seems a bit low, but have not enough drive power on the moment. Also TX cable losses are too big and I hope to improve RX losses by about 1 dB. soon. But, nice contest and good to see so many 'old friends' on the higher bands (above 144).

On 432 MHz I made 34 QSO's with the 9700 and R&S PA, about 400 Watts in 4 x 38el. DJ9BV homemade yagi's. Highlight was working S9Z on Nov 13 with his 16el. for DXCC 72.



PAOPLY Rotatable Feed



PAOPLY WR42 WG switch

PAOPLY-WR42-WG-switch



PA2CHR 23cm yagi on moon

PA2V Peter

Peter reports on the new 70cm station PA6Y:

In October our plans to activate PA6Y in the contest failed because of preamp and rotor issues. In the last weeks we fixed those issues and we were able to activate the club station this weekend. We run 4x 13 el YU1CF Yagi's and have around 800 Watt at the antenna.

The first test just before the contest showed everything is okay and performed quite well. We are situated at the harbour of IJmuiden which is often called Amsterdam harbour. In fact, we operate in between the ships on the wharfs. We did not really expect a very quiet performance on this industrial location, but we are amazed about how well it is. It is really better than my home location. No households, PV installation etc. makes quite a difference.

We were active during the first night and partly during the second moon pass. During the second moon pass we experienced lower activities and after 2 hours CQ in the night with no more response we gave up and go home for a decent sleep. We closed the station as the weather got terrible too.

This first serious test of the new station was better than expected. We worked: 50 QSO from 23 DXCC, 47 grid locators. We even worked OK1TEH with his single Yagi.

The station will be activated by more club members in the coming months. The current team made it all available and happen: PA9R, PA2V, PA5X, PB5DX, PB2DX

More info at <https://www.pi4rck.net>



PA2V PA6Y 432MHz EME

PA3DZL Jac

I was not very active in the 4th part of the ARRL contest, was suffering from flu symptoms.

BIG compliments to all the DX-peditions, Great activity.

On 70cm:

from Peter, KA6U wkd from 7 different States (2 new ones)

from Bernie and John activating DXCC Lesotho 7P8Z (new one)

from Max activating DXCC Sao Tome S9Z (new one)

On 23cm:

from Alex EA8DBM worked from 9 DXCC's (6 new ones)

An amazing one man show.

36 Digi mode QSOs were made on 432MHz, initials worked were: 7P8Z + DXCC #80, KA6U State #47 MS, W5LUA, PA6Y, PA3CMC, DL5BBH, F4VTP, KA6U State KS, K1OR, KA6U State OK, KA6U State MO, N9LHS, KA6U State #48 TN, KA6U State KY, KA6U State NC, GØJDL, IZ6MVK, S9Z + DXCC #81

24 Digi Mode and 5 CW QSOs were made on 1296MHz initials worked were KP2/EA8DBM, RW9OG, VP2V/LY3UM DXCC #103, VP2MBM DXCC #104, KC2HFQ, V26AM DXCC #105, PJ7/EA8DBM, PJ5/EA8DBM DXCC #106, DM2CFH, G4KLX, FS/EA8DBM, K3SK, FJ/EA8DBM DXCC #107, PA2CHR, JQ3JWF, BA7NQ, F5KDK and KP4/EA8DBM DXCC #108

I changed my preamp to a Cavity WD5AGO preamp and on the 4th of Oct I measured 19.8dB Sun noise and 6.2dB CS/GND noise. This gave me a 0.2dB SN and 0.1dB CS/GND noise improvement.

9 Digi Mode QSOs were made on 10GHz with my new rig, this is my 2nd backup and portable rig used in my 3.7m Solid Andrew dish. A Kuhne transverter with GPSDO lock, DU3T Preamp, WR90 waveguide switch and HM 25W SSPA. It is a small light weight rig. I worked PAØJOZ as an initial.

With this new rig I measured on the 23rd of Oct 17.1dB Sun noise, without optimizing so I hope for more.

PI9CAM → PI9RD

Dick PA2W notes some changes at PI9CAM:

After some complicated administrative procedures, we can now announce that PI9CAM has changed its callsign effective 16th November 2024. So if you hear PI9RD and think “that’s as strong as PI9CAM”, you are totally right 😊

We also will change the name of our Foundation to Radiotelescope Dwingeloo Foundation. The name CAMRAS will from now on only be used as “nickname” and for the time being as webaddress.

The reason for these changes is that CAMRAS, although meanwhile familiar for intimi, is not that well known to the public. For our outreach a name that refers directly to the functional description of the instrument seems preferable.

PJ4MM Martin

Martin reports on his activities from PJ4 during the contest:

In the October leg I was only active for a few hours on 70cm with my temporary setup of 2x13w/I M2 on a speaker tripod. This gave me the possibility to elevate up to 25 degrees, with possibilities to make QSOs up to ~32 degrees moon elevation. In the October weekend I worked ON7EQ, YL2GD, OM4EX, 7P8Z, UB4UAA. S56P, W4ZST, K4EME, UA3PTW and W5LUA all on 432MHz, and KJ9I on 50MHz.

In the November leg I started with OK1DFC, K5N and PA6Y on 432 on the first moonpass. I started a bit late so my already small moonwindow was even smaller. On Saturday morning I thought that it might be fun to try something on 23cm as well, so I mounted a 67el yagi and my IC905 (10W out, no preamp!) in the mast and decided to try to make a few QSO's. To my big surprise I immediately heard a lot of stations.

After that I thought, well, let's see if a 25M dish would be able to receive my mini signal. A few minutes later PI9RD was in the log! Earlier a try with ON4AOI failed, although he had a nice signal here. After PI9RD completed OK1DFC, HB9Q and DG5CST wanted to try with me. All 3 succeeded as well. After that I tried with both K0PRT and NC1I. These QSO's were very difficult, only the patience of Alex and Frank made it work.

As far as I know this was the first ever 23cm activity from PJ4 with a total of 11 QSOs on 70cm both weekends, 22 in total, and 6 on 23cm. I hope to have (much) better stations in the next edition of this contest, but it was fun to work with real QRP on 1296MHz the 2nd weekend.



PJ4MM 23cm antenna



PJ4MM 70cm antenna

SM3BYA Gudmund

Gudmund reports on his 23cm operations:

A busy summer left me with no time to go over the old 1296 gear in time for the ARRL contest, but I put in some time both sessions anyway. Interesting to see just how far the old gear could reach...

Well, in October I managed 15 QSOs, now another 14 and 3+3 new initials: CT1DMK, F5KUG, G0LBK, SM2CEW, SP6ITF and W4OP, but I also kept a list of stations heard and CWNR. Over the two sessions that list grew to 20 stations...

Considering the gear I am running right now that is no surprise - 3.8 m dish, 0.35 dB NF seems to be doing as expected RX-wise, but with that antenna my QRP is clearly not enough to draw attention. As I see from Valter's, IK1FJI report, he also uses a 3.8 m dish - but his 1300 W at the feed is 8.5 dB up from the 180 W that I can muster (250 W in shack through 20m 7/8" coax and various patches). Case in point - I called Valter Sunday night and we fought at it for some 20 minutes; he eventually got my callsign OK but not his report, so gave up...

When putting in the circa-2008 1296 gear last summer, I only planned to run it for a while to get the feel of the band, then to concentrate on getting my 5.7 and 10 GHz gear into workable condition. But now seeing that 1296 CW is still alive and well, I am tempted to put in some time over the winter to put my TH327 cavity in working order and get those missing 8 dB. There will soon be plenty of time for that, the weather forecast for this week promises at least 40 cm of wet snow, so digging the hole for the foundation for my 2.4 m offset dish will probably have to wait until spring...

73 to all and thanks for the enjoyment!

SP9VFD Raf

This year I was active in ARRL EME Contest on 23cm only. Due to business obligations, I couldn't stay full time in my shack during all moon passes. Conditions were very good, but CW activity seems bit less than one or two years ago. As usual I didn't use internet chat and worked at full time random CW only.

These 46 callsigns went to my log during ARRL EME contest: CT1DMK, DF3RU, DG5CST, DJ3JJ, DL0SHF, DL7UDA, DU3T, F5JWF, F6ETI, G3LTF, G4CCH, JH1KRC, JJ3JHP, IK1FJI, IK2DDR, IK3COJ, IK3MAC, IK5VLS, IZ1BPN, K5DOG, KL6M, LZ2US, N8CQ, NQ7B, OH1LRY, OK1DFC, OK2DL, OK2PE, OK2ULQ, OZ6OL, 9A100Z, PA3FXB, PI9RD, RA4HL, SM3BYA, SP3XBO, SP3YDE, SP6GWN, SP6ITF, SP6JLW, SP7EXY, UA9FAD, VE6BGT, W4OP, WA6PY, YL2GD

Heard few others during their QSOs but couldn't find them later on CQ.

Thanks to the contest, I had the opportunity to make real time tests with my new 23cm LNA. I have brought WD5AGO cavity 23cm LNA from Trenton EME Conference. It looks and works perfectly (attached picture). Measured on November 17th SUN/CS = 21,3 dB (6,4m homebrew dish f/d-0.4, RA3AQ septum feed, WD5AGO cavity LNA 0.27dB NF, 35dB gain).

I spent 3 lovely weeks in the US and due to this I wasn't able to participate in both 13cm & up ARRL legs. After EME conference we were visiting K2UYH (SK) QTH together with Paul WA6PY. It was just awesome feeling to stand up at place where Allen kept maintenance on his dish, (attached picture).

I'm going to be active 6cm on December 14th both CW and Q65.



SP9VFD feed configuration

(This is exactly how your preamp should be connected to the feed point Ed)



SP9VFD at K2UYH dish

VK2CMP Mick

I operated both nights of the 2nd weekend of the ARRL contest on 432Mhz. Conditions were very good with high activity and I managed to work one new DXCC (4Z5CP) and 19 Initials (SV3AAF, DL9LBH, DL7URH, F2CT, GM0ICF, G4RGK, PA3CMC (single 42el yagi), KODSP, K3MF, OK1JG, SM6CEN, OT7K, DM9EE, OK6TW, JR0WFF, KBOZ, K5N) which is always fun. I also managed to work several stations at my 3 and 4 degrees of elevation at MS which has been problematic due to QRM in this direction.

At Trenton, Mario IONAA spoke about TotalPower which is known to many hams and astronomers about his plans to add additional features. One feature was the ability to easily measure the Noise Horizon. I emailed Mario asking how this was progressing and he offered to make me one of his BETA testers for Version 8.0. With the V8 BETA I was able to measure my MR and MS horizons for noise. I picked 70 degree azimuth by 10 degree elevation plots at 1 degree measurement intervals for my MR and MS.

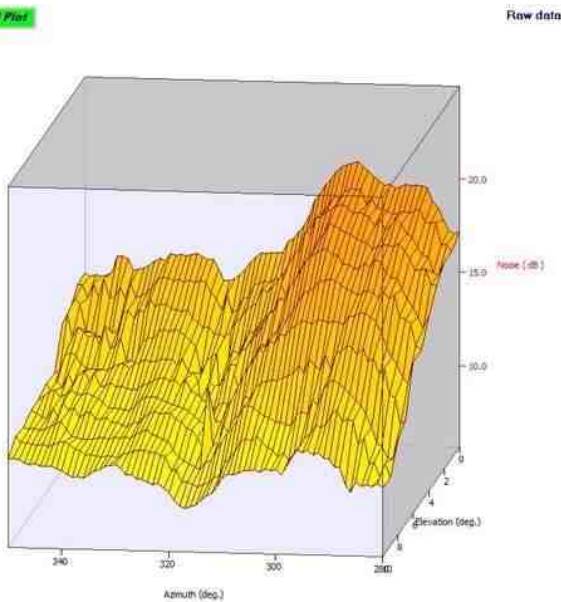
I made two sets of measurements with and without SAW filters in the RX path.

<https://abracon.com/Filters/SAW%20FILTERS/AFS434S3.pdf>

What I was able to ascertain was that the SAW filters lowered my overall noise floor and did not inhibit the RX operations (see pics for and screen shot of a 3D noise plot). These filters have about 2.1dB IL and are after the 2nd LNA. This gave me the confidence to run the contest with the filters in place. The result was more decodes at lower elevations. I live in the city with 12 solar installations <120 meters to my QTH and multiple Telco installations nearby as I am near the top of a ridge.

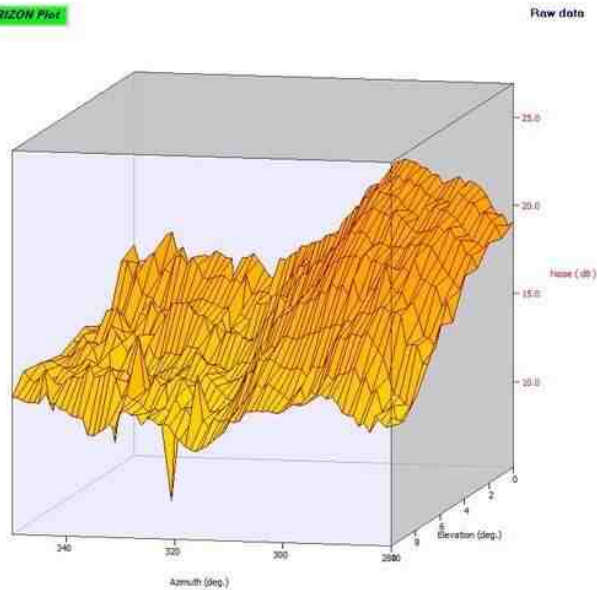
Using the 3D plots you can spin them around and better understand the world outside the shack. You can baseline your noise horizon and then make changes and compare. Thanks must go to Mario for the V8 BETA TotalPower software. Mario plans to release V8 soon with even more additional features for the Noise Horizon Plot that he is currently finalising.

NOISE HORIZON Plot



VK2CMP TotalPower plot 1

NOISE HORIZON Plot



VK2CMP TotalPower plot 2

W2ZQ Delaware Valley Radio Association

Thanks to all for the good fun in the contest from our club station, W2ZQ!

We operated as Multi-Op All Mode this year, on 23 cm. We finished with 135 valid QSOs and 112 locators.

Equipment: 3m dish, 400 W at feed

Software: QMAP, WSJT-X

Modes: Q65-30B, Q65-60C, CW

Operators: K1JT K2AOA K3DFD KB2MT N2VY W2HRO W2LPL

WA6PY Paul

21-September I concentrated on 24 GHz - QSO'd OK1KIR – very good signals. Heard OZ1LPR stronger than OK1KIR, on 22 Sept DLOSHF beacon was very strong. It looks like they use F1 modulation for CW. I also heard SP6JLW, SP3XBO. On my side I had about 360 Hz spreading and relatively high air humidity. Moon Noise was about 2dB with DU3T KLNA. But I did not hear my echoes. SP6JLW, SP3XBO did not heard me. I connected SDR-Duo to monitor IF 432 MHz signals. See the attached picture.

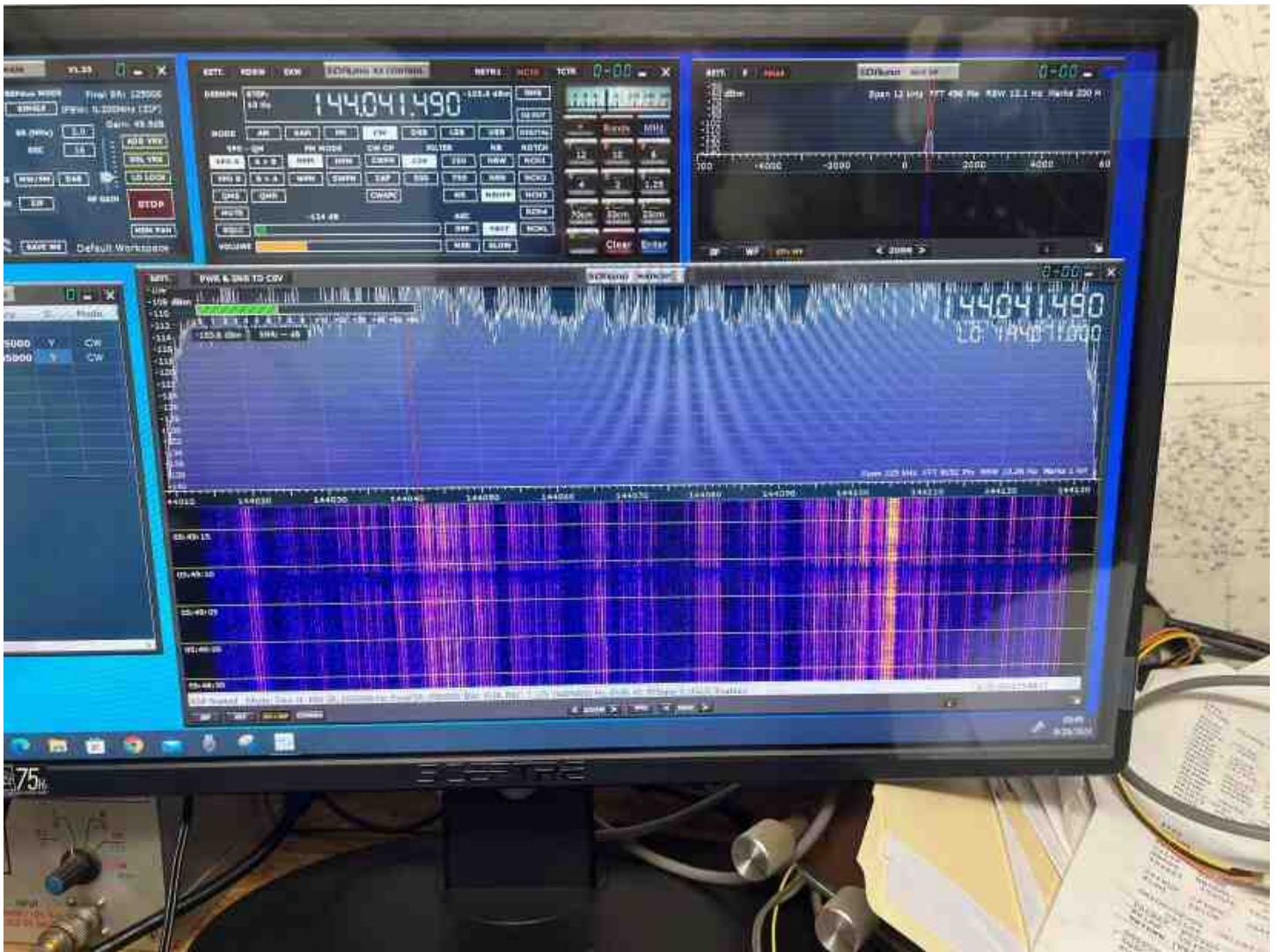
According to VK3UM libration Calculator spreading in SP was about 20 Hz, mine 350 Hz and common 175 Hz. If I heard SP6JLW and SP3XBO, they should hear me, even if I had 2 dB lower power. After the contest I started to suspect that maybe I had water condensation in the flex waveguide between TWT and WR42 switch.

Power measured from directional coupler at the output of TWT was 19W and helix currents 2.7 mA, which is same as few years ago when I was active. I am planning to place power detector on the dish to monitor power radiated from the feed instead. I hope during the winter humidity will be lower I will try again.

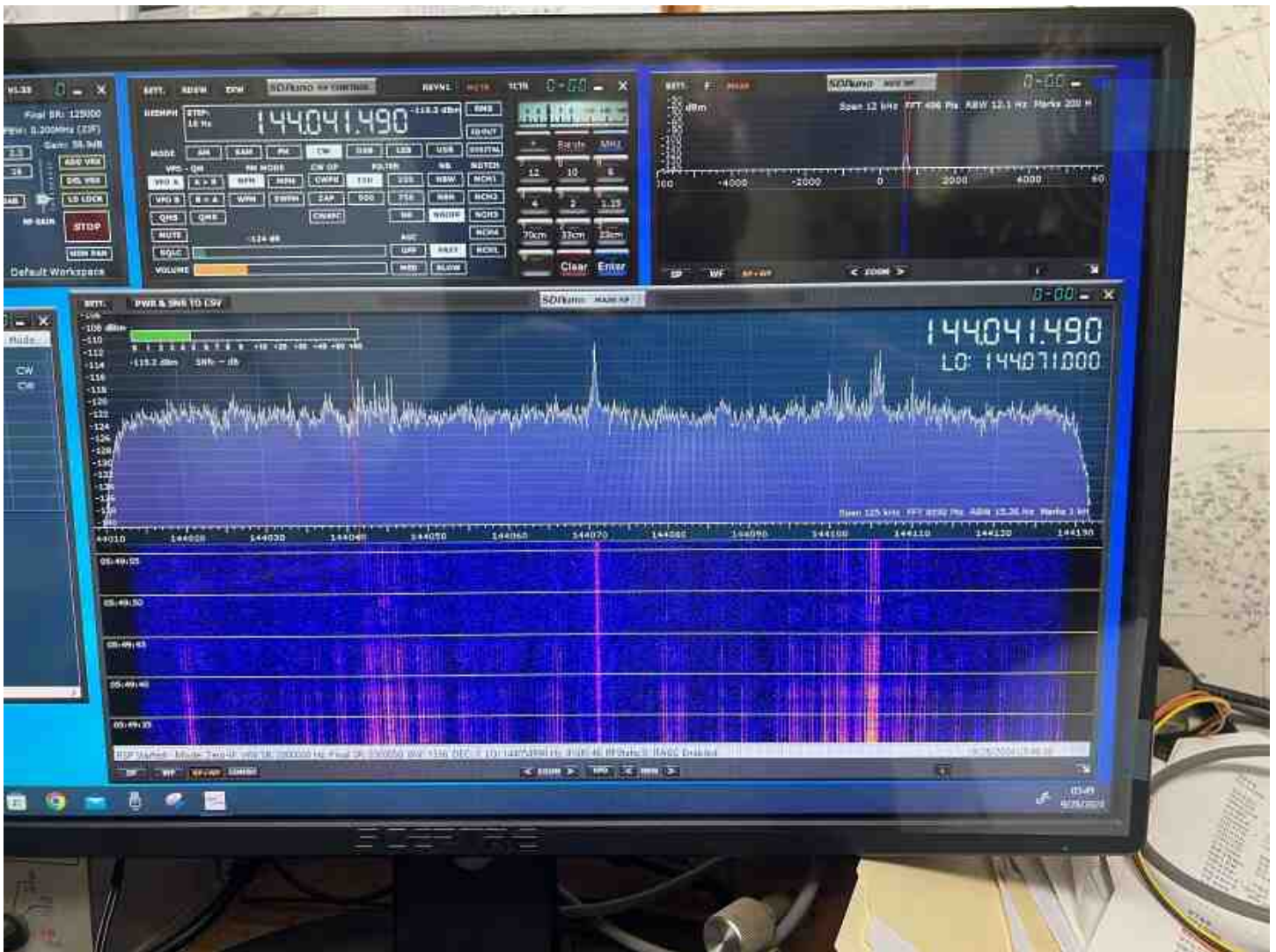
On 22-September I on 5760 QSO'd OH1LRY. I called CQ, but did not find other stations. I am still suffering from QRM bursts which sometimes increases dramatically my noise floor depending on the antenna position. See the two spectrum pictures.

On 19/20 October on 1296 QSO'd CT1DMK DF3RU G0LBK G4CCH KL6M NQ7B OK1DFC OK2DL ON5GS PA3FXB SM2CEW SM3BYA SP3XBO VA7MM. I was shortly calling few times CQ around 432.032, but had no luck. Echoes were coming with 90 deg rotation. Heard quite few stations on JT.

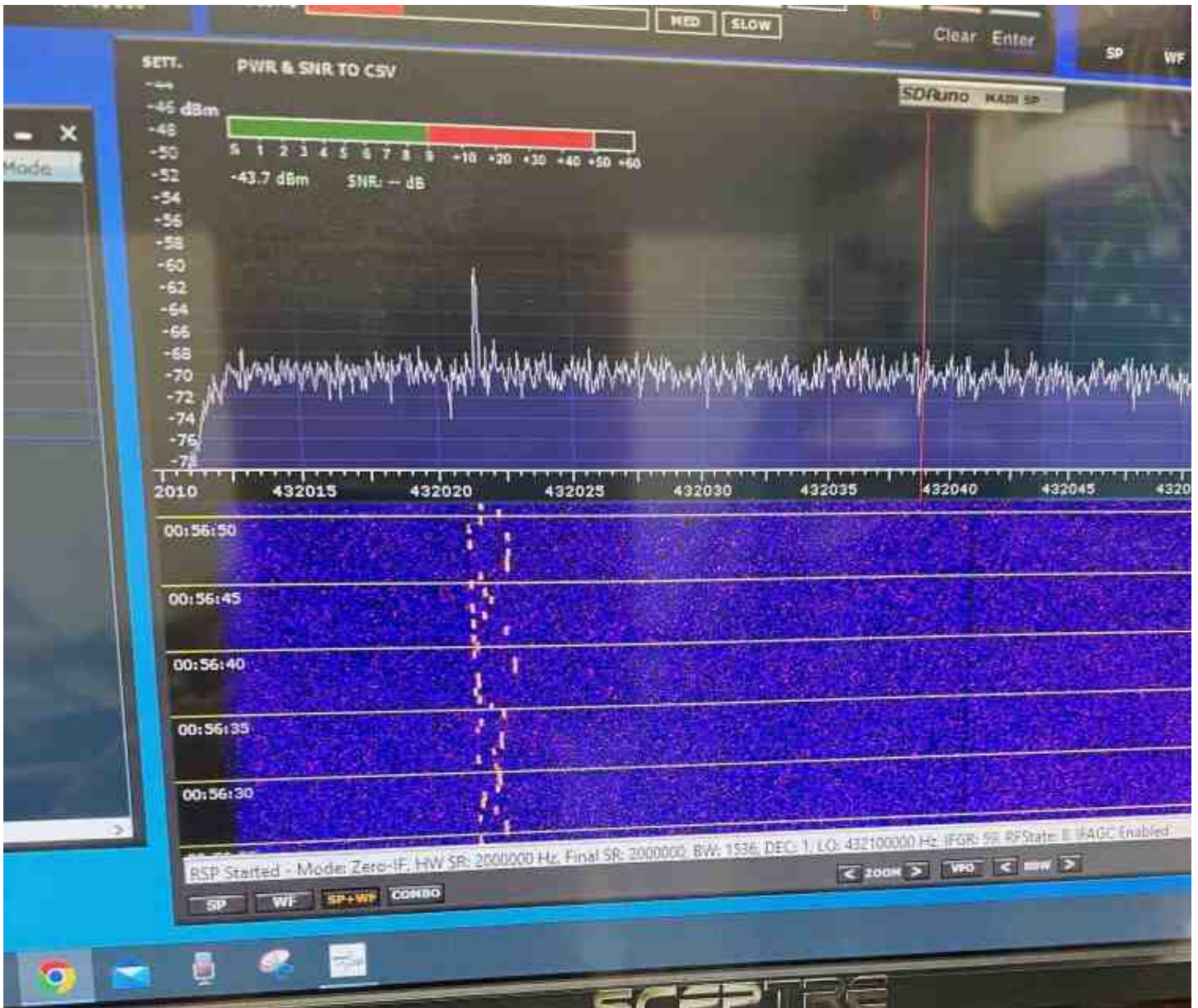
During ARRL EME Contest on 16-17 Nov-24 on 1296 QSO'd: SP9VFD SP6JLW F5KUG SP3YDE VE6BGT SP6ITF K5DOG W2ZQ N7QB VE6TA OZ6OL FX1A LZ2US XE1XA UA9FAD SM2CEW DL7UDA. On 432 I was calling CQ three times 30 minute periods, but had no luck to hear other CW signals except of my echoes. Echoes were coming with the same polarization as transmitted



WA6PY 5760 spectra 1



WA6PY 5760 spectra 2



WA6PY DLOSHF 240922

EME.RADIO

Bob W1QA

As discussed at the 2024 EME conference in Trenton, your newsletter team has started to move forward with some enhancements for the EME community.

The first was the selection of a domain for use with website hosting, etc. We reviewed a lot of possibilities, focusing on things like EME and moonbounce, with a variety of top-level domains (TLD). Many names were in use and other names cyber squatters are sitting on, typically looking for \$\$\$ to sell to someone interested enough.

In the end we selected EME.RADIO. The .RADIO TLD is managed by the European Broadcasting Union in Genève CH and luckily their policies has resulted in the lack of cyber-squatting.

One of the .RADIO eligibility requirements includes licensed radio amateurs. In our registration application we described what EME is and how we would utilise the EME.RADIO domain to be the repository of amateur radio newsletters, articles and tributes. The EBU accepted our application and granted us the discounted registration rate of €25.00, which applies typically for individuals and non-profits. (The normal annual cost is €220.00)

The beginnings of our web site has been setup by W1QA. The site is built using the Joomla! CMS (content management system). A CMS will allow us to build a web site without having to code it. Using Joomla!, we will be able to easily support viewing content on a variety of devices, including computers, tablets and mobile phones. Joomla! also has native multi-lingual support.

The web site is hosted on Amazon's AWS in Ireland. AWS was chosen due to W1QA's familiarity with it, and Ireland in support of the Eu's GDPR (General Data Protection Regulation), which may be the best at protecting privacy and personal data. The site currently has no third-party tracking, advertising, etc.

The first phase of EME.RADIO development will be for the publication of future and past 432 and Above EME newsletters. The goal will be to have each newsletter available as a downloadable PDF and browser readable web page article. Additionally, for those years where colour highlighting was in use, we'll have a second PDF free of the highlighting. The goal is to also make sure that all PDFs are searchable.

Additional content we envision providing on the EME.RADIO site:

- tribute pages for our friends who are no longer with us (SK)
- presentations from EME conferences
- articles for EMEers and lunatics

At the 2024 EME conference there were questions and concerns about costs associated with embracing these technologies. Rest assured there is no plan to ever charge for the newsletter. While there are costs involved, through the generous support from some of our fellow EMEers we'll be able to provide this and possibly other future services.

Our goal is not only to support the interests of our fellow EMEers, but also help others join the ranks. Hopefully having a repository of the wealth of knowledge and experiences from today's EMEers will help build the ranks of those who will follow us.

How Can You Help?

- if there is anyone amongst us who has Joomla! experience we would appreciate your skills
- likewise, if anyone would like to offer some creative graphics to augment the newsletter and web site we'd appreciate that as well
- old newsletters - through assistance from Rein PA0ZN / W6SZ family we have been able to obtain PDF of the newsletters from 2002-2024 and HTML versions from 1996-2001. While Peter G3LTF has a paper archive of all the newsletters, if there is someone in the US that has copies we could scan that would be desirable. (If you have already scanned them we could use those, as long as the resolution is somewhere around 300 dpi and good quality.)
- EME conferences - while we don't need it immediately, information from past EME conferences would be nice, including attendee lists, pictures and presentations
- we also don't have a monopoly on ideas - if you have some thoughts about how we could utilize the EME.RADIO web site we'd be glad to hear them!

See you on the bands!

DUBUS-REF CW/SSB Contest 2025

70 cm SAT Feb 8 (24h).....DL7APV Memorial
 13 cm SAT March 8 (24h)
 23 cm SAT+SUN Apr 5+6 (48h).... VK3UM Memorial
 9 cm SAT May 3 (24h)
 1.2 cm SAT June 21 (24h)
 3 cm SUN Jun 22 (24h)..... K2UYH Memorial
 6 cm SAT Jul 19 (24h)

CW Initial List

<https://www.g4rgk.co.uk/Initials>

Sun & Extraterrestrial Noise List

http://www.ok2kkw.com/next/nl_k2uyh/sun_table.xls

DL0SHF Beacons –

DK7LJ per@per-dudek.de
 3cm 10368.025 MHz
 1.2cm 24048.025 MHz

EME Directory by Jan PA0PLY

<https://www.pa0ply.nl/directory.htm>

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