

The 144 MHz EME NewsLetter

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Issue 11&12/2007 24 Dec 2007

Seasons Greetings from the Editor

2007 was a very successful year regarding 144 MHz EME: Many rare DXCCs and grids were activated by dxpeditions, for instance 1A0, 1S, 3DA0, 3X, A2, C9, CN, CU, D44, HK, OH0, PJ4,...to name but a few. And it is no question that the introduction of WSJT, particularly the JT65 mode, has had a major impact on this as the technical requirements setting up a 2 m EME capable station somewhere in the world are much lower now: A mere 200 watts out to a single 13-dBd-yagi is good for working most of the 4 yagi stations and not just a handful of well above average equipped stations. So we may expect also some nice surprises in the year 2008 – and that is what makes EME that thrilling...

I wish you and your families a very happy Christmas season and a good new year 2008!

vy 73

Bernd DF2ZC

One personal remark: Due to extensive international business travel I often had problems delivering the newsletter on schedule. My apologies! This should be better for the months to come, maybe except May and September 2008.

3X5A (IJ39DM) in Conakry, Guinea

After a successful EME activity in November 2006 from Mali, Ned (AA7A) and Mike (KC7V) used the CQ WW DX CW Contest operations of the VooDoo Contest Group also this year for bringing a rare DXCC up on EME.

The VooDoo Contest Group had its beginnings in 1986 when three friends from Phoenix –, K5VT, KC7V and N7BG – travelled to St. Thomas, together with other hams to participate in the CQWW CW Contest. Their group name, VooDoo Contest Group, was coined by Rob (GM3YTS) in 1995 as they crossed the border between Benin and Togo in West Africa. It is thought that Rob was inspired by a group of Voodoo Priests that they encountered while on the road. So the team's nickname has become "VooDudes".

This year, the VooDoo Contest Group started its adventure back in Bamako, Mali where they operated in November 2006. The ever-growing pile of contest and EME equipment was stored in Bamako following last year's event and this year it was time to move the contest equipment and

EME stuff a new venue, Conakry, Guinea. That location with view to the Atlantic Ocean has the advantage of low-angle propagation out over the Ocean. At least this time the group members did not have to breathe dust like in the past years. Once the team arrived in Bamako on 15 November, 2007, they gathered their things from storage, added some new hardware, put it all in a bus and took a 900 km trip across the two-lane (sometimes), pot holed roads of West Africa.

After the two-day bus ride to Conakry, the HF contest station was assembled over the next several days. Luckily they were assigned the callsign 3X5A for both HF and VHF operation and not an "odd" callsign such as "3XT1" as they were told earlier. On Monday morning 26 November 2007 following a very successful DX contest, the entire HF station was disassembled and packed up ready to go back into storage until 2008. And then, it was EME time! The EME equipment was quickly assembled for four days of operation by AA7A and KC7V. Around 2100 Z at local moonrise everything was ready and after a first CQ the pile-up was there: After some NC QSOs the first complete contact was established with Joop (PA0JMV) followed by DF2ZC and another 15 QSOs until midnight UTC. During the dedicated CW time slots on 28 and 29 November W5UN (2x), KB8RQ, SV1BTR, RN6BN, RA6AX and OK1MS were worked. All in all Mike and Ned completed 125 EME QSOs combined on both JT65b and CW modes. EME QSLs are all via AA7A.



The 2 x 2M28XPOL for EME used by 3X5A (AA7A)

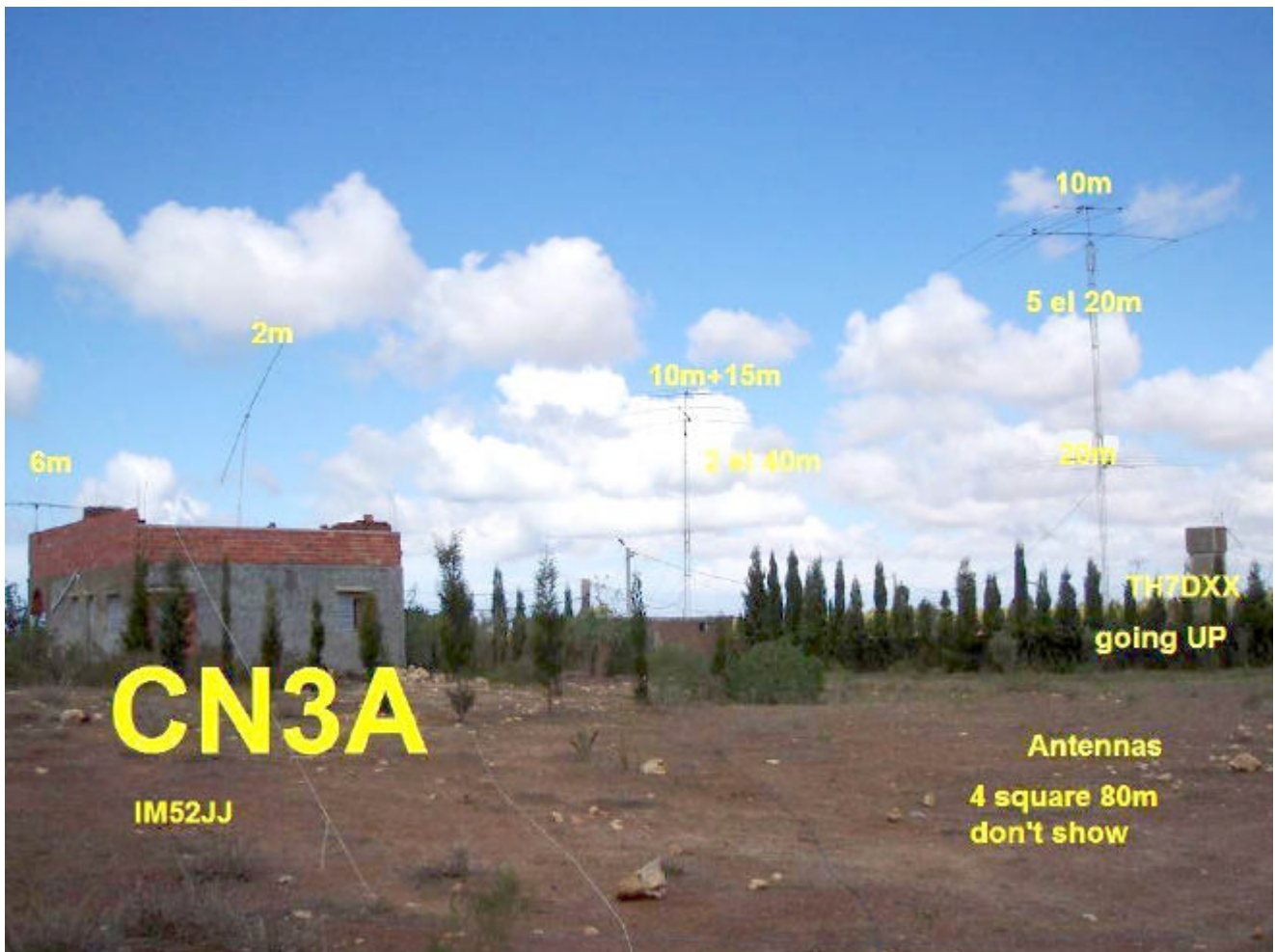
As an experience from 2006 a second 2M28XPOL was added to the EME array. AA7A designed a AZ/EL system that used some new and some existing hardware in the VooDoo Contest Group's hardware pile. The system performed flawlessly during the entire four-day EME operation. Working the ropes easily oriented the array at the moon. There were some challenges when the

yagis got caught in the guy ropes for the mast, but that only occurred for the short duration when the moon was near zenith. The station operator would need to climb three flights of stairs to the roof to orient the antenna every 30 minutes or so. This aerobic exercise certainly helped to make the operator tired after 12 or so trips to the roof during an operating shift.

The local noise situation was very much different from last year: There was some elevated noise at moonrise while looking into the city but at moonset, the antenna was pointed out over the Atlantic Ocean with very low noise. Moreover there was no obstruction in any direction from this location on the hotel roof. The equipment of the VooDoo Contest group is now in storage again. Let's see if and from where there will be an EME activity in November 2008...

CN3A (IM52JJ)

CN3A was another station set up for the CQ WW DX contest. As Spiros (SV8CS) was a member of that contest group he became QRV on 6 m and 2 m, the latter via EME in JT65 with a 16 elements I0JXX and 350 watts out.



The contest site in IM52JJ (2 m antenna left on roof top) (SV8CS)

Bad conditions made only 30 QSOs possible in the three days (*which is not at all a bad result/ZC*) from 22 to 25 November 2007. It was very hard this time to work because at the QTH in IM52JJ there was very bad weather (cold, a lot of rain, strong wind and no electricity for long periods) all

those days. Every 30 min also Spiros had to go to the roof to adjust the antennas for 2 m and 6 m to follow the moon (azimuth and elevation). Spiros hopes to be more successful next time with better conditions and better installations.

SV1BTR's (KM18NO) Report on the ARRL EME Contest

Jimmy – as we know working CW only – reports 100 different stations worked in this year's ARRL EME Contest with 104 QSOs, so four dupes. He writes: "I would like to take the opportunity and thank all the 2 m & 70 cm dedicated and occasional EME OPs, regardless of mode. Those I worked and those not completed due to partial copy or merely QRZ. Please know that I tried hard and hope next time I will not miss you. Especially I would like to thank those new to 2 m EME, newcomers to CW and QRP mixed operators. It has been a real pleasure to me to work again down to single yagi and 250 W stations on random, as well as being the 1st or 2nd ever CW QSO to previously only digital OPs. The EME oldtimers always wisely said for CW: "if you can't hear them you can't work them". Therefore copying and working QRP stations in CW EME has been once more a real pleasure to me, since my 2 m array has similar gain to 4 x 11 m long yagis.

WX during the contest was perfect at my EME QTH, I was very lucky in this respect. In second leg, propagation conditions on 2 m featured deep QSB in all three passes for both polarities.

Below are the stations worked in each band, per leg:

2 m - 1st leg:

RN6BN IK2DDR K9DX DL8UCC SV3AAF RA3EC RX1AS IK1UWL I3EVK LZ2US WA8CLT
9A9B YO9FRJ UA4AQL DK5YA PA3CWN OK1MS OK1KKD IK3MAC W0PT OK1VVP
SP7DCS W5UN 4X1IF RW1AW K9JI YO2AMU OZ4MM K6PF F9HS SM7GVF K1CA
SM2CKR F3VS DK3BU IV3GBO JN1CSO F1FLA HA6NQ RZ3BA/1 F0CXO VE2JWH
ON4DPX SK0UX RA6DA LZ1DP AA1YN K1JT N5KDA WA6PY DL5MAE W7MEM WQ5S
JH0MHE YU7AA PA2DW UT2XQ DG5CST CT1HZE OK1TEH JH2COZ EI4DQ DF2ZC
DL7FF

2 m - 2nd leg:

ON4DPX (dup) WA4NJP F8DO OK1VVP (dup) WW8M DL2FCN W3SZ OZ1HNE K9MRI
LA8YB AD4TJ K6AAW N6CW SM3AKW OK1KKD (dup) VA3TO YU7AA (dup) SM5TSP
ON7EH RU1AA I5WBE G4PCS PA3CEE DF0BV G3LTF W8PAT DK3T HB9Q DK5WL
YU7XL RN6MT JH0WJF OK2POI JH5FOQ EA2AGZ F5KCH YU1IO DF9YF SM5CUI
OZ1LPR"

Activity Updates

UN6PD (MN69JM)

Nikolai brings Kazakhstan back on EME after decades that this DXCC was not QRV on 2 m via moon. He works JT65B with about 700 watts out to a 14 element yagi and can be found on the N0UK logger every now and then agreeing schedules or announcing CQs. Best signal with DF2ZC was about -23 dB so far.

VR2KW (OL72II)

Wong has worked quite a number of stations since his start of activity was quoted here in October. However, you need to have a look at his neighbourhood to get a proper impression of his azimuth and elevation restrictions.

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Just the moonset view, the moonrise view very much looks the same with VR2KW. (VR2KW)

Once looking at Wong's local situation it is amazing how relatively successful he is with his two 9-element-yagis and 200 watts out. Congrats!

Upcoming DXpeditions

OA/DL3OCH (FH17 & EI93)

Bodo (DL3OCH), Daniel (DL5YWM), René (DL2JRM) and Jorge (OA4BHY) are currently on route for a dxpedition to Peru from 27 December 2007 to 11 January 2008. The current schedule announces EME activity on:

27 December	0600-0800Z (QTH FH17XX)
04 January	0800-1300Z (QTH EI93NN)
05 January	0900-1300Z (QTH EI93NN)
10 January	1400-1800Z (QTH FH17XX)
11 January	1500-1800Z (QTH FH17XX)

Equipment consists of a 6 wl yagi (H/V) and about 400 watts out, tx on 144,101 MHz and rx from 144,099 to 144,101 MHz, running JT65B and OA/DL3OCH always first. Bodo will also answer to CW stations in case somebody should call him.

Latest news are on www.gslnet.de/member/oc1i/

Software

MoonSked 1.5.0 available

David (GM4JJJ) reports that he has finished works on an upgraded version of his famous MoonSked software. It is available for both Macintosh and Windows PCs and runs on Windows 2000, XP or Vista, on Macintosh Intel or PPC OS X 10.2 or greater. MoonSked supports Antenna Rotators (Macintosh and Windows) and can automatically control antenna tracking. These additional rotator drivers are available (free) by request - to MoonSked Registered Users only.

Rotator Systems supported are: W2DRZ controller, W0LMD Sat Tracker (Easycomm 1), Hy-gain DCU-1, Green Heron RT-20, Yaesu GS-232, G6LVB, SPID, M2, DL7AOT (EasyComm1) and BigBoy ProSisTel. More systems will be added as necessary.

MoonSked 1.5.0 also supports the G6LVB tracker which uses the GS-232 protocol 9600 baud. The LVB tracker box is available from <http://wa4sxm.googlepages.com/home> Contact by electronic mail for details. And there are also SPID Az/EI RS-232 Rotator versions for the ROT2PROG and ROT1PROG available. Download at www.gm4jjj.co.uk/MoonSked/moonsked.htm

Miscellaneous

144 MHz QSO via the ISS as Reflector

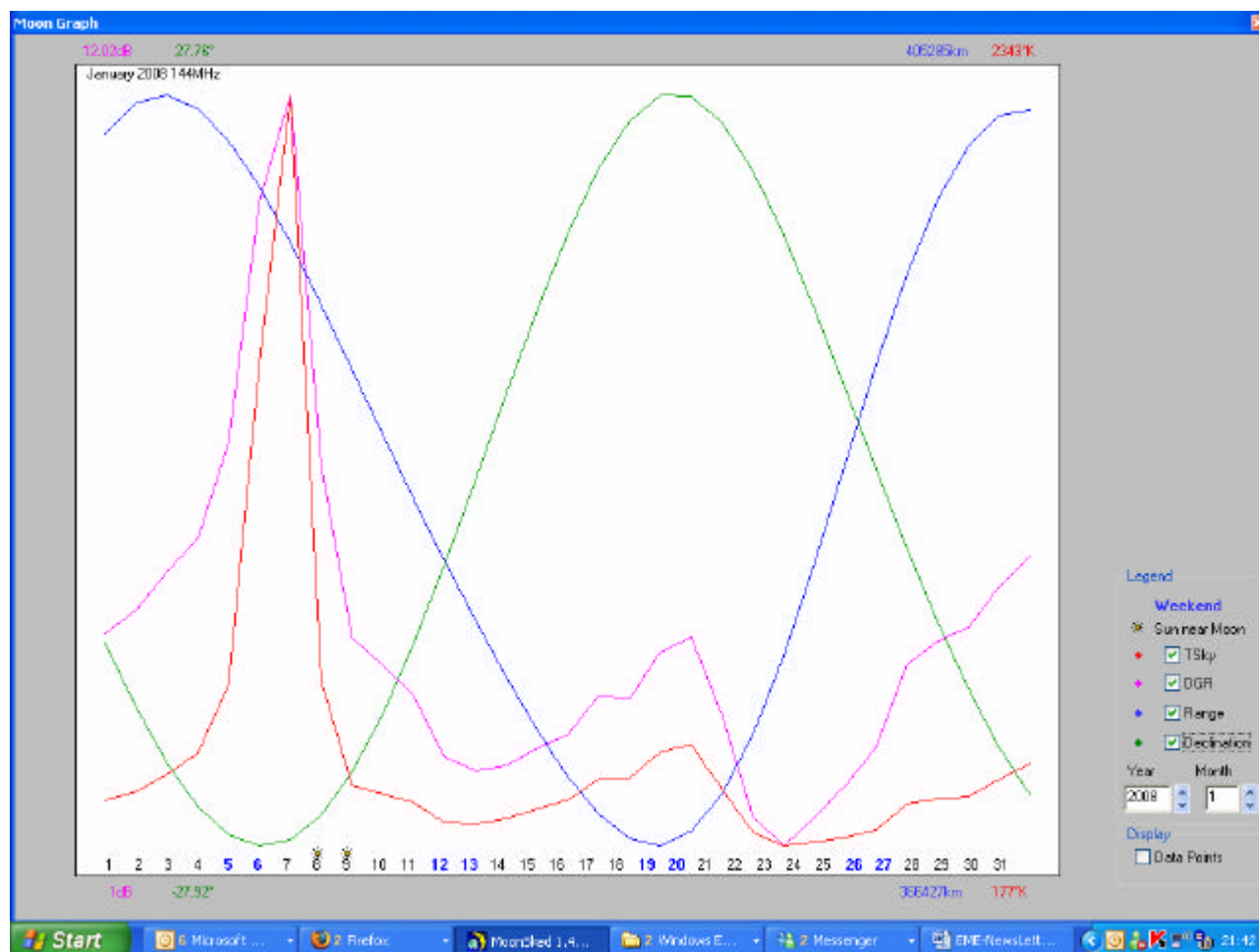
EME in fast motion – this is using the International Space Station ISS as a passive reflector for 2 m DX since a single pass – a common window – doesn't last for more than just a few minutes.

Inspired by Peter's (SM2CEW) tries Frank (DH7FB) and Bernd (DF2ZC) completed the first 2 m QSO using the ISS as a passive reflector on 9 December 2007. In the meantime they have completed a handful more contacts, always not easy as one needs four hands: one for the az rotor, one for the el rotor, one for the vfo knob correcting for huge and fast doppler and one for the keyer. Though stressful, it is great fun. A more detailed report will be published in the next issue.

Time Table

18 January 2008	DUBUS CW EME Activity Night 2100 - 0000Z
19 January 2008	DUBUS CW EME Activity Night 1300 - 1600Z <i>(Rules see www.sm2cew.com/aw_rules.html)</i>
21 January 2008	January Issue of the 144 MHz EME NewsLetter ready for download at www.df2zc.de/newsletter

Moon Graph January 2008



Courtesy of David GM4JJJ (www.gm4jjj.co.uk/MoonSked/moonsked.htm)