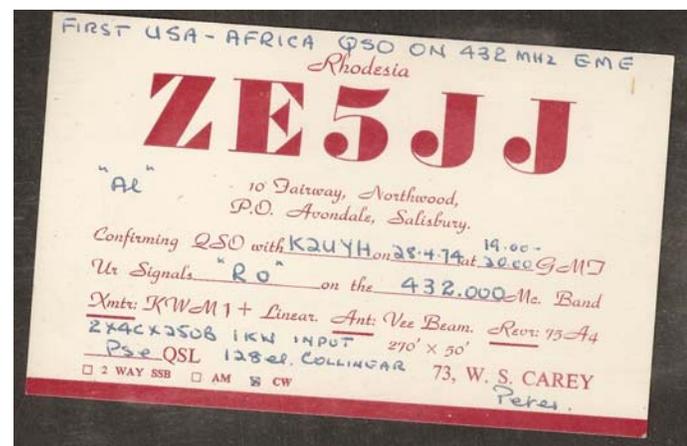


## 432 AND ABOVE EME NEWS AUGUST 2008 VOL 36 #9

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**CONDITIONS:** It had to happen. Activity has slowed down a bit this month. The absence of any official activity weekend (AW) and no 70 cm CW activity time period (ATP) for the end of June/start of July did not help. The next ATP is coming up on 27 July from 0000 to 0200 and 0800 to 1000. The July AW is also this weekend. The Aug AW/ATP will be on the 23<sup>rd</sup> and 24<sup>th</sup>. Attention in July has been on finalizing plans for attending the EME Conference in Florence. It should be one of the bigger conferences. If you have not made your reservations, there is still time. See <http://ari-crt.it/eme2008/index.html>. Most of the activity reports were for 13 and 3 cm. People are getting ready for the ARRL EME Microwave Contest on 20/21 Sept.

**ZE5JJ/Z25JJ/ZS6JT:** More sad new -- I just learned that EME pioneer and long time friend Peter Carey, ZS6JT is now a silent key. Peter died on 11 July and was 87. He put Africa on the EME map as ZE5JJ back in the 70's on both 432 and 1296. His EME activity and life was disrupted with the demise of Rhodesia. He started over in South Africa and was able to return to EME operation as ZS6JT. In recent years Peter's activity was limited by his health. He was a wonderful man, a great EMEer and an award winning radio amateur. We will dearly miss him.



**CORRECTION:** In the July Newsletter (NL) distributed by e-mail, the callsign for Mac in the picture of EMEers at the Microwave Symposium should have read JH3ERQ not JH3EAO. Tnx to JA4BLC for catching this error.

**CTIHZ:** Joe [info@dubus.de](mailto:info@dubus.de) is QRV on 70 cm EME with a temporary system for the next 6 weeks with his last day of operation 15 Aug -- My setup is 4 x 23 el yagis and about 1.2 kW with full elevation although AZ/EL is not yet calibrated. I have made my first QSO with DK3WG and we exchanged (24DB/14DB) on JT65. I am ready for skeds on JT65 and CW, preferably between 0600 and 2300.

**DL7APV:** Bernd [dl7apv@gmx.de](mailto:dl7apv@gmx.de) sends bad news -- On 11 July his QTH was visited by tiny tornado that wiped out trees and electrical power, and sadly his 16 yagi 432 EME array -- see photo of the mess! [Bern does not report on his recovery plans, but should he will be QRV again as soon as possible].

**ES5PC:** Viljo [viljo@comnet.se](mailto:viljo@comnet.se) is now has some power on 3 cm EME -- I finally completed my new TWTA setup for 3 cm EME. Instead of about 6.5 W, which I had with my previous setup, I now estimate about 15 -- 20 W into the feed. Also the Rx seems to be improved slightly. I now get around 1.8 -- 2 dB of moon noise. My echoes are very audible now. I still need to improve the tracking accuracy, but it seems to work fine when there is not too much wind. I'm pleased

to report that during my first activity with my new 10 GHz setup that I have worked 6 stations including 5 initials. Contacted were RW1AW (579/559) - several times on random, G4NNS (O/O), DF9QX (589/529), F2TU (O/O), WA6PY (549/O) and F5VKQ (559/539). On 10 GHz I am using a 4.5 m prime focus dish, the same as I use on other bands (23, 3 and 6 cm), a Chapparral type feed, Vertical pol with a WG to SMA transition and NEC LD4389A TWTA with PSU, mounted close to the feed. The TX cable between the TWT and coax switch at the feed is about 50 cm of 1/4-inch Heliax. On RX I use a DB6NT preamp with 20 dB gain and 0.6 dB NF mounted directly on a K&L coax transfer switch. The feed is also attached directly to the RF switch connector. I use a DB6NT MK2 transverter with 106.5 MHz Siemens PMB2306 PLL controlled LO locked to 10 MHz from a HP8644A signal generator.



ES5PC dish with the 10 GHz feed box shown on the left

**F5SE:** Franck [kozton@free.fr](mailto:kozton@free.fr) is making excellent progress on his BIG dish project -- The dish is almost completed. We started laying the mesh in late May, but the job is not yet finished. We hope to be able to rise up the dish on top of the rotating tower during Sept. As soon as the dish is mounted, I will put a 1296 MHz W2IMU feed (one I bought from F5AQC together with his dish) at the focus and will be 23 cm receive only for a while. Later, I will install the PA just behind the horn. The PA consists in two DB6NT 550 W solid state amplifiers with hybrid coupling. So, if everything goes right, some 1000 to 1100 W RF power should be available at feed point. I am helped by hams living roughly 100 km from Reims. I will be attending the EME Conference in Florence and look forward to meeting with everyone there.



DL7APV's 432 array after the storm!

**G3LTF:** Peter [g3ltf@btinternet.com](mailto:g3ltf@btinternet.com) reports on his June/July EME activity -- Not a lot to report this month as the WX has been really lousy with many days of strong winds. The winds and the constant movement with the 3.4 GHz tests broke a weld on the declination control and while mending this I was also able to improve the counter weighting. On 2320 on 28 June I worked G4CCH, W5LUA and ES5PC and then next day, 29 June, SM2CEW for initial #60 with a good signal. I have been experimenting with feed position on 9 cm and found I was picking up LO noise from the transverter behind the feed. I improved the screening and grounding and cured the problem and was then able to locate the best feed positioning. I tried a Chapperal feed but the super VE4MA seems to be about 0.5 dB better on my 0.375 f/d dish. I'm looking forward to meeting all in Florence.

**G4CCH:** Howard [howard@g4cch.com](mailto:howard@g4cch.com) was QRV on 13 cm at the end June/beginning July -- I had a great time, and managed to complete 5 out of 7 of my skeds. I did have a couple of problems. At the start there appeared to be no output from my LNA. I replaced it with my spare, but that didn't improve things. It turned out that I had water in a short SMA to SMA patch lead that connected the LNA output to the RX feedline. All was normal again after it was replaced. The other problem was the wind. Every so often a big gust would come along and confuse my tracking system sending the azimuth off in the wrong direction. QSO'd were at 0100 VK4AFL (559/569) for Initial #10, new grid and DXCC, 0934 ES5PC (569/559) #11, new grid and DXCC, 1004 G3LTF (579/569) with QSB due to the wind, 1020 W5LUA (579/569) #12, new grid and DXCC, 1100 SM2CEW nil - Peter had problems with his SSPA but heard me (549), 1150 WD5AGO (539/539) #13 and new grid, 1200 partial VE6TA (O/O) but Grant never received my report due to sat interference on 2320 and 1230 WW2R (O/O) #14 and new grid, and the following day at 0904 SM2CEW (559/559) - I tail ended his 1st QSO with G3LTF, 1002 VE6TA (569/559) in our resked - very nice signals but Grant had some trouble again with QRM on 2320.

**JH1KRC:** Mike [jh1krc@syd.odn.ne.jp](mailto:jh1krc@syd.odn.ne.jp) reports that the KDES (Katsura Dish Experimental Station) project is coming along. We have been given approval to use JAXA's 18 m dish (originally used on 136 MHz and 2.1 GHz. The call sign will be 8J1AXA, issued to us as a JARL special station. Already HF and local VHF/UHF operation has begun. On 6 July we confirmed that this old Mitsubishi antenna can be controlled by a PC board and program created by Yasushi, JA1DYB. Yasushi still needs the exact moon data for the tracking program. JAXA plans to destroy this antenna in 2010, but still restricts in request in many ways our moonbounce construction! I plan to present details of the 8NIEME BIG-DISH Project at the Florence EME Conference.

**K5PJR:** Tony [k5spir@centurytel.net](mailto:k5spir@centurytel.net) sends another correction of the July NL. His name was incorrectly listed as Paul. He notes that he is now active on 23 cm with a 5 m dish, 300 W at feed, and a 0.2 dB NF LNA from EM37ka near Springfield, MO. Toney is interested in more 1296 QSOs and skeds.

**K9SLO:** Wayne [k9slq@sbcglobal.net](mailto:k9slq@sbcglobal.net) announces that he has sold his 10 m dish to N8CQ -- I wish Gary great success on EME and want to thank all of you for a great 5 years. I want to thank K9KFR who helped me greatly in the beginning stages of dish construction and design; K1RQG who we are all indebted for his countless services; K5JL for my first EME QSO and for getting me out of more trouble than I can describe; K5SO, who went out of his way to save my YL-1050; and many others who unselfishly helped me during my EME activity.



**LY2BAW's new 1.8 m dish for 1296**

**LY2BAW:** Tadas [LY2BAW@takas.lt](mailto:LY2BAW@takas.lt) has improved his 1296 system since making the first 1296 EME QSO from Lithuania last month [with K2UYH on JT65C]. He now has a put up a 1.8 m dish on his tower. Tests indicate an almost 2 S-units improvement with the dish, however sun noise is only 1.5 dB. Tadas is also still using linear, horizontal pol, but has increased his power to 100 W for

CW operation with a 2 x BLV958 PA. He added a QSO with HB9Q on both JT and CW.

**LZ1DX:** Ned [lz1dx@lz1dx.org](mailto:lz1dx@lz1dx.org) is now QRV on 70 cm EME -- My QTH is 200 km from Sofia, between Sofia and Burgas. My station is 6 x 15 el yagis, 1.5 kW PA and a 0.35 dB preamp. I can operate either CW or JT, but prefer CW. In the near future I plan also to be QRV on 23 and 13 cm EME.



**LZ1DX's 6 x 15 el yagis for 70 cm**

**N4GJV:** Ron [qstdemb@yahoo.com](mailto:qstdemb@yahoo.com) is now active again on 432 EME after a long absence -- I retired last year, and now that I no longer have to deal with "call ins" at all hours of the night, I have some time and energy to devote to ham radio. It's great to be able to be QRV on 70 cm EME again! My old wood boom yagi array was beyond reasonable repair, but I was able to salvage enough parts and pieces from it to construct a QRP system consisting of 4 x 21 element 9KR wood boom yagis, modified to use 4 mm aluminum directors, in lieu of the old 2.5 mm copper elements. The remainder of the station is the same homebrewed lash-up used years ago. It includes my 2 x 4CX250 PA. The first signals heard with the new array were my own echoes, just one day after the new moon, which was a reassuring and a pleasant surprise! Later that day, 4 June, SP6JLW, K2UYH and OE9ERC were heard, all calling 4O/OK1DFC. On 7 June my first QSOs were made with the new array during the DUBUS ATP with WA4NJP, DF3RU, UA3PTW and K2UYH. Several other stations were heard including FR5DN, and bits and pieces from WA6PY's single yagi system. I'd like to extend my hearty thanks to DL7APV and DUBUS Magazine for sponsoring the ATPs and to the 70 cm and above EME newsletter! I hope to be QRV during the July ATP and will be looking forward to becoming reacquainted with old EME friends, and, hopefully, become acquainted with some new ones, as well.

**P43L:** Lisandro [p43l@arubanet.com](mailto:p43l@arubanet.com) reports that he is making good progress on setting up permanently for 70 cm and 23 cm EME -- The station is getting in working order. The cable from dish to the shack is now under ground and the 100 W 70 cm amp is installed at the base of the dish with a 20 A power supply. I hope to have the system completed soon. [I have taken over managing QSLs for Lisandro. QSLs have been prepared for all QSOs made during the expedition last Nov. I have sent QSLs to all those who mailed cards directly to me. I plan to distribute the cards at the EME Conference in Florence. If you have sent a card to Lisandro and are not going to Florence, please e-mail [a.katz@ieec.org](mailto:a.katz@ieec.org) and I will send a card to you].

**PA0PLY:** Jan [jan.kappert@comtestnl.com](mailto:jan.kappert@comtestnl.com) wants to invite you to try the P19CAM web SDR at <http://www.camras.nl:8901/>. Open the link and scroll a little bit down, you will see a SDR application connected to our 25 m dish currently on 23 cm. Yes, it is a recording, wideband and tunable by yourself! It is a multi-user WEBSDR. This is an example of how we want to go with this dish in the near future. It will have 3 WebSDR's; 2 for 432, horizontal and vertical pol, as well as 23 cm circular pol -- see the feed picture in the last NL. Currently we are investigating the hardware set-up for optimum alignment. Unfortunately the original documentation is poor and a lot of experts are retired

or not alive anymore. Some displacement in the mechanical alignment of the focus box towards the Apex was found, but we are still waiting to have the RF preamps repaired in order to proceed with the calibration and optimization of the dish. The replacement of the driver motors is complete allowing us to track any object with the help of the computer system. Shown are pictures of 1) the focus motor after a complete overhaul (it had not been operated in more than 20 years!); 2) electronics for control of the drive motors; and 3) detail of the feeds for 23 & 70 cm.



PI9CAM's feed box with PA0PLY (?)

**RW1AW:** Alex was active on 10 GHz at the end of June/July – I QSO'd on random on 29 June at 0706 G4NNS (569/579), 0710 G4NNS (569/55) on CW/SSB, 0725 F2TU (569/559), 0746 DK7LJ (55/56) on SSB and 1115 DF9QX (579/549). On 2 July I heard a very beautiful signal on frequency 10368.112. It turned out to be ES5PC. We QSO'd (539/579) for an initial. Later at 0750 I worked G4NNS on CW and SSB. I am running a 6 m dish and a 50 W SSPA.

**SM2CEW:** Peter [sm2cew@telia.com](mailto:sm2cew@telia.com) concentrated on his new band, 2300, in June/July and writes – I now have CW EME QSOs on 5 bands, 28 to 2320 MHz. The 5th EME band is indeed a milestone for me and not something I thought I would achieve when I started my EME career in Sept 1985. On G3LTF's suggestion, I replaced my output circulator/adaptor combo with a straight cable from my SSPA to the TX-port on my Septum feedhorn. Immediately I started hearing good and consistent echoes, indicating a serious problem with my (surplus) circulator. I completed QSOs with G3LTF (569/569), G4CCH (559/559), VE6TA (559/559), WD5AGO (539/339), W5LUA (559/559) and WW2R (549/O). All of course was on CW. I did not use any preamp as my DB6NT transverter has a very good NF, and the RX port is directly connected to the feedhorn via an SMA isolation relay. I still must weatherproof the 13 cm transverter/SSPA, which is bolted to the feedhorn. Thus at the moment, my 13 cm EME activities can only be conducted in fair weather - not known to last very long in SM2.

**VE6TA:** Grant [ve6ta@clearwave.ca](mailto:ve6ta@clearwave.ca) also spent his end of June/July moon time on 13 cm -- Activity was good during the 28/29 June weekend on 13 cm. On 28 June my 2320 sked with G4CCH failed due to massive S-9 QRM from the Sirius radio satellite. I notice that they use a Molnaya-like orbit, so perhaps there are ways to predictor when the QRM will be present. I managed to work WW2R and heard WD5AGO with good signals on 2304. I thought that my echoes were poorer than normal, so I checked my dish surface accuracy out and tried to make some adjustments. Sun noise came up a bit, so this effort appears to have been successful. I also changed my feed from my round aluminum septum to an older copper septum. Again echoes seemed better, but my sun noise was the same. On

29 June, I arranged a resked with G4CCH and with no QRM we easily QSO'd despite tripping a breaker in the shack. Howard was (559) for initial #49 on 13 cm. After our sked I called CQ and worked SM2CEW on random twice. Peter had a great (559) signal for #50. We have now worked on 4 EME bands. All in all it was a fun weekend. I am looking forward to more activity on 2.3 and 3.4 GHz.

**W8TXT:** Mike (still no e-mail) had problems on 432 during the ATP – I fired upon 70 cm with 8 x FO-24 yagi array and 800 W for the 7 June ATP with expectations of many QSOs. Unfortunately midway through my first QSO with DF3RU, I lost RX. After troubleshooting I found and replaced a bad FET in the second stage of my preamp. The actual cause turned out to be a failed relay power supply that directed 5 W into the backend of my preamp. I have since rewired my transceiver to prevent any repeats. I should have made this change a long time ago. By the time my repairs were completed there was little time left in the ATP; only enough to copy K2UYH and UA3PTW both calling CQ and (579). On 31 May just before sunrise I was coping my echoes with only 75 W, but found no one else around. I plan to be QRV for the July ATP and hope to connect with more stations then.

**WA6PY:** Paul [pchomins@san.rr.com](mailto:pchomins@san.rr.com) sends his "PY" report of his latest activity -- I tried a sked on 432 with Phil, FR5DN on 7 June. We had a very short and limited window, but we heard each other. On our next try on 28 June, we had longer window. I cut few eucalyptus bushes in order to decrease noise pickup. I also covered the ground in front of the antenna with mesh from my old dish. I started to hear FR5DN at EL 4 deg, a few minutes before sked time. His signals peaked up to a good (439) report in the middle of a very easy QSO. It took just in 10 minutes. Phil's EL at the beginning of this sked was about 4 to 5 degs. We used 1 min sequencing. I used only a single cross yagi - the picture below shows the 432 antenna with the 10 GHz dish and ribs for my old 7.6 m dish in the background. I also added new DXCC on 10 GHz by working ES5PC. I fired up my 10 GHz system for the first time after the 2007 ARRL EME Contest. I have 0.2 dB degradation of the Moon noise, but had no time to debug. Signals on this band are still very good.



WA6PY's feed yagi in the center with his 10 GHz in above

**WD5AGO:** Tommy, [wd5ago@hotmail.com](mailto:wd5ago@hotmail.com) reports some really strong signals on 13 cm -- G3LTF was a good (559) on 2320. W5LUA and VE6TA were also above normal. My echoes here were +6 dB. I worked G4CCH with a good signal, but by the end of that our QSO one of the Satellites had covered up the 2320 portion. I was around for about an hour (S8).

**WW2R:** Dave [ww2r\\_eme@g4fre.com](mailto:ww2r_eme@g4fre.com) reports on his June/July EME results -- On 7 June I worked SM3BSA on a 432 CW sked with a long period of polarization lockout. On 28 June, I switched to 13 cm for a sked with G4CCH only to find a S1 noise level on 2304 and an S9 noise level on 2320 (peaked s9+20 on 2324) with an S2 noise level on both bands when the preamp is terminated. I turned off every wireless device in the house, but this was no help. One hour later the same S1 noise was present on both bands. I was educated by W5LUA that it was a "North American" Sirius Satellite Radio Transmissions. Luckily the noise reducer on my newly acquired SDR1000 RX dug the signals out of the QRM (I knew I bought it 4 days earlier for some good reason!). I worked G4CCH on CW sked for initial #27 and VE6TA on QRM free 2304 no problems. On 29 Jun with no 2320 QRM, I QSO'd SM2CEW #28 on sked and G4CCH again much easier. I also worked G4CCH (19dB) on JT65C for digital

