

## **GPDX Culatra expedition 2003**

Everything started after our Corvo CU9D expedition 2002. The team asked the question: What can we improve and how can we be a true IOTA expedition? And of course where do we go next?

At Corvo we suffered from weak conditions to Europe and Japan was blocked by the volcanic mountain 600 meters high to the North of us. Furthermore, islands with a landing strip and commercial flights didn't count for the expedition category that time. This rule has been changed recently and IOTA contest expeditions to islands with an airport / landing strip have been allowed since July 2003.

Furthermore, transportation of our material to Corvo was a challenge due to the fact that the 3 times per week flight was operated with a small Dornier aircraft with 18 seats and almost no freight capacity. So the only way to ship heavy material to Corvo was by ship a long time in advance. You can imagine what that meant because one has to have a reliable person in place accepting the freight at the harbour and providing storage capability. Our decision was clear: 2003 we will participate into the IOTA contest in the expedition category and we should reach the island by boat. The island should be located in Europe preferably in Portugal. So the idea was born to go to Culatra EU 145!

Thanks to SWL Freddy DE0MST we were made aware of and activated a lighthouse at Corvo! It is a small lighthouse with the official number LH0707 which can be seen on the picture 1 in the right lower corner.



So a similar idea came in mind: There is a big lighthouse at the Western end of Culatra, named Cabo de Santa Maria LH0144 which we could activate during our stay on Culatra. This would result in a second activity for us.

### **Material:**

Detailed planning started at the end of December 2002. All material of our CU9D activity, which belongs to the GPDX, was stored in a warehouse at Olhao. Searching for a lightweight beam we decided to buy a spider beam from DF4SA. This is a wire beam with 3 elements on 20 and 15m and 4 elements on 10m. The gain is some 6 dB and the weight of the fully assembled beam is only 5.5 kg. I knew from the CQWW WPX 2003 operation at Madeira where the inventor of this beam, OM Cornelius DF4 SA used this antenna. Using the call sign CT3EE he made a new world record in the low power class: 9.5 million points final score. So this beam must be good and I bought the kit. We first used this beam in Switzerland because the initial erection needs a few days of preparatory work to cut and stick the elements, guying ropes etc. The performance fully convinced me and in the middle of June the parcel with the beam was shipped to Portugal.

In addition I shipped a 2m packet radio station with KAM modem, laptop and ½ lambda vertical antenna.

### **The team:**

Our Corvo team members Vera HE9FBL and Phil HB9FMU got married shortly after the Corvo activity and baby Leana arrived in April. Because they couldn't come with us to Culatra 2003 and we looked for new team members. OM Rejean, VA2AM and OM Jack, F6HMJ, a member of the 3B6RF team joined us. Shortly before our operation started two other GPDX members decided to operate CS5C with us: Gonçalo CT1GPQ and Tozé CT1GFK. The team consisted of: CT1AGF Luis, CT1GPQ, CT1GFK, CT3FN/HB9CRV, CU2HJA (our cook Tony), F6HMJ Jack, G3KHZ Derek, and VA2AM Rejean.



Standing from left:  
CT3FN, CT1GPQ, CU2HJA,  
CT1AGF

Sitting from left:  
CT1GFK, G3KHZ, VA2AM,  
F6HJM

Photo taken at the kindergarten  
Associação de Nossa Senhora  
dos Navegantes in the operating  
room

#### The QTH:

Thanks to the good offices of Antonio CT1EPV we got the permission to install our station and antenna at the kindergarten of Associação de Nossa Senhora dos Navegantes. This was a former boathouse of the ISN (search and rescue) transformed into a kindergarten in 1993. Around the building and on the partial flat roof there was plenty of space to erect antennas and one big room served as the shack.

#### CS5F

This operation was carried out by CT1AGF, CT1EPV and CT3FN. The spider beam was erected on Thursday, 17.8. (see photo 2) and the station tent, sleeping tents and the station were in position on the afternoon of Friday, 18.8.03 (see photo 3).



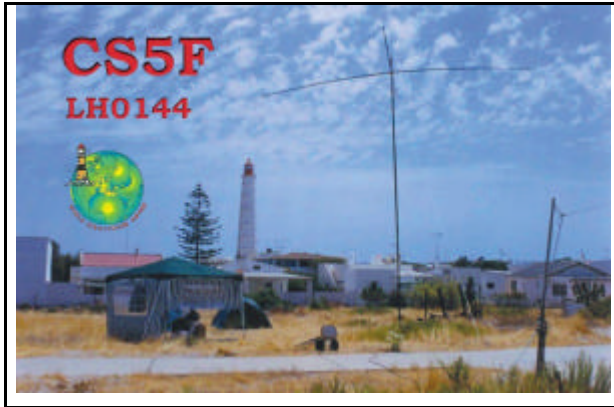
Power came via a long cable from the ISN search and rescue station. There we were able to use the wash rooms and could refresh us from time to time with a cold shower. Thank you very much Mrs. Marílio e Custódio At the station we used an IC736 fitted with a “papageio” [Portuguese for parrot] speech recorder hi, K1EA logging on a laptop and the spider beam antenna. On our way to Farol we received the parcel with a brand new FET linear amplifier which unfortunately failed the first time we used it. It was my fault using the wrong band on the IC736 grrrrm. So we had to operate barefoot which turned out to be very hard work.

From Saturday 00.00 UT until Sunday 12.00 we made 1353 QSOs.

20 CW	424	18	51
20 SSB	356	11	44
15 CW	384	11	37
15 SSB	181	6	30
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Total CW	810	31	90
Total SSB	543	20	79
Total QSO	1353	51	169

Propagation was bad, 10m was closed all the time and even 20m closed around 3.00 UTC. Bad propagation is also reflected in the operating mode: 60 % of QSOs were made in CW.

On Sunday afternoon we got help of Antonio's daughter Bé, her husband Vitor and 2 grand children who helped to dismantle everything. A fishing boat brought us back to Culatra village around 17.00 UTC. Thanks to everybody who called us. QSL goes via HB9CRV (see photo 4 QSL layout).



#### CS5C operation

The antenna work started on Monday after our LH activity. We assembled the spider beam, and the Force 12 C3S. Next we erected a 15m high glass fiber tower which supported a 40m horizontally polarized delta loop. .

On Tuesday, Rejean, Derek + XYL Joyce arrived and provided more effort for the antenna work. On Wednesday, the spider beam went up on the roof of the kindergarten.



In parallel we worked on the base of a new small 15m tower. Here our bad luck started: One 2.5 m long section was defective and had to be taken out. On the remaining 12 m of the tower the C3S beam plus rotor were installed. On Friday morning we tried to raise the tower but soon realized it would become bent due to the weight of the antenna and rotator if we continued with the erection. The C3S was transferred to the building and installed 7m above the roof – far from being ideal. The new tower only carried an inverted V dipole for 80m – also far from being ideal. But there was no better solution available in the remaining time.

Saturday morning came and the packet radio station refused to work properly. In addition we had to solve many problems to get the computer network running. Band pass filters were controlled automatically by the 2 radios, which doubled our problems. Next the FT1000MP failed before the contest started but was back to life 1 hour later!?

Sure Murphy must be resident on Culatra! Finally 10 minutes before the contest started everything was ready and working properly: FT1000MP with SB200 PA, C3S beam as multiplier station and IC736 with challenger PA, papageio and spider beam as antenna + 40m delta loop and 80m dipole (see picture 5 kindergarten with all antennas up).



**The contest**

We operated in 2 hour shifts and tried to balance SSB and CW modes on both the running and multiplier station. Conditions at the beginning were very bad and we had to concentrate on 20m. Mostly European stations came through but with weak signals. At 15.00 UTC Murphy showed up again and the FT1000MP went QRT. Lengthy investigation revealed that the antenna relay and / or related circuit around it must be broken. We replaced the FT1000MP with an FT847. A problem later on in the evening with the SB200 was resolved by using the foot switch as PTT for both the transceiver and the PA. . -The computer network failed twice which forced us to stop both stations and to resynchronize the computer logs. Sorry if you looked out for us during that time and couldn't find us.

So here comes the final result:

band	CW QSOs	CW pts	CW mults	SSB QSOs	SSB pts	SSB mults
80	131	717	15	25	327	14
40	245	1599	36	42	414	19
20	463	2385	37	617	3483	62
15	128	900	34	369	2031	40
10	0	0	0	0	0	0
<b>TOTAL</b>	<b>967</b>	<b>5601</b>	<b>122</b>	<b>1053</b>	<b>6255</b>	<b>135</b>

Final score: 3'061'170 points

The statistics per band and hour reflects the bad propagation. The majority of the QSOs were made on 20m followed by 15m. No QSOs were possible on 10m. And it was hard to break through the summer QRN on 80m to DX and European stations.

Due to the numerous problems we had and due to the bad propagation our 2003 result is equal to the 2002 result. As we are in the declining period of sunspot numbers we have to invest in better antennas and amplifiers for the 2004 IOTA contest. Where do we go next? We are thinking about CU2/3 or CT3, always in the expedition class.

We would like to thank, Antonio CT1EPV. Although he was not involved with the IOTA contest, we were grateful for his generous hospitality and the wonderful party he and his xyl, Maria prepared for us. It was a welcome relief to be able to socialise and relax after toiling in the intense heat of the Culatra Summer. See you all soon in the pile ups.



**CS5C QSL via CT1AHU**  
(as usual).

73 CT3FN / HB9CRV