

# NEWS



Termly Newsletter: Easter 2007

## From the Editor

Welcome to the Easter term edition of the CUWS newsletter - the last one of this academic year. It must truly be a record-breaking edition at a massive nineteen pages!

With the end of the academic year of course comes a new committee and I would first like to thank the previous committee members who are now stepping down (Tom Heritage MOTJH as ex-Chairman and Stuart Bennett MONKI as ex-Treasurer) for all their hard work and dedication throughout this and previous years. Thank you also to the new Secretary and Treasurer for volunteering to take on these rôles. The 2007-2008 committee members are shown at the bottom of this page. Also given is the new CUWS web address, [www.g6uw.org](http://www.g6uw.org). More information about this can be found in the 'General Matters' section below.

The size of this issue is of course thanks to the efforts of all those who have contributed articles - you may notice that a large proportion of these were written by Martin G3ZAY! I am very grateful for the steady stream of material which flowed into my inbox from him, and particularly for his help in organising all the other contributions and encouraging (i.e. pestering!) everybody to get their articles to me promptly.

Please note the information about the next Full licence exam, for which the deadline for applications is Tuesday 26 June.

Finally, could I ask you once again to get in touch with us if you know of any old members who are no longer in contact with the club, so that we can invite them to the 75th anniversary dinner on Saturday 17 November. I am amassing an impressive collection of CUWS photographs and slides - thank you to all those of you who have sent these to me. We intend to display them all at the dinner, so please keep them coming!

Hugo Scott Whittle MOHSW

## General Matters

### **RSGB Visit and the Camb-Hams**

On Thursday 24 May, Neil Whiteside G4HUN and Gavin Nesbitt M1BXF joined a record turnout of CUWS members at the weekly Maypole meeting. Neil is the new RSGB Deputy Regional Manager for Cambridgeshire, having recently taken over from Peter Frampton MOCNX. He had been taking the trouble to visit several of the local clubs and was keen to introduce himself to as many CUWS members as possible. He spent a few moments addressing the club in his RSGB rôle

*For more information on any events, or to contribute something for the next newsletter, please contact the secretary. Please also see the website for all the latest news and photos: [www.g6uw.org](http://www.g6uw.org)*

*Chairman: Hugo Scott Whittle MOHSW, Corpus Christi College, [hs366 at cam.ac.uk](mailto:hs366@cam.ac.uk)*

*Secretary: Christian Mikkelsen MOTBF, [chr\\_mikkelsen at yahoo.com](mailto:chr_mikkelsen@yahoo.com)*

*Junior Treasurer: Christian Schreiber MOSCH, Trinity College, [cs359 at cam.ac.uk](mailto:cs359@cam.ac.uk)*

*President: Martin Atherton G3ZAY, [g3zay at btinternet.com](mailto:g3zay@btinternet.com)*



UNIVERSITY OF  
CAMBRIDGE

Cambridge University Wireless Society  
24 June 2007





*G4HUN, M1BXXF and CUWS members*

(and highlighted the embarrassingly small number of RSGB members present!) and then, together with Gavin, gave an introduction to the Camb-Hams, of which they are both members. This informal group is open to all amateurs in and around Cambridgeshire and has no membership fees, no committee and no obligations. The group is active on the VHF and UHF repeaters and in occasional contests. It also puts on various special event stations and meets once a month for a 'Pie and Pint' night at the Black Horse in Dry Drayton. Neil and Gavin are very keen for more CUWS members to get involved so if you are free, why not join them in the pub for their next meeting at 7pm on 4 July.

## Website

The new CUWS website has been something of a work in progress for the past few months, but has recently been redesigned to be more in keeping with the new club style. Additionally, various extra features, such as an image gallery, have been added to the site.

The club has also registered the domain name g6uw.org, so the site's main address is now [www.g6uw.org](http://www.g6uw.org) - please do have a look at it and let us know any suggestions or criticisms you have by contacting either Tom Wooten M0FFX (tw296 at [cam.ac.uk](mailto:cam.ac.uk)) or Hugo M0HSW (hs366 at [cam.ac.uk](mailto:cam.ac.uk)). As I mentioned in the last issue, it is possible for members to post their own news items and information on the site. To do so, you just need a username and password, which can be obtained by contacting

either of the people mentioned above. We really are keen for people to use this facility - if there is any information you would like to share with the club or the wider world then please do add it to the site. Also, I know there are a great many members who have lots of interesting stories about their time in CUWS as well as photos of old shack locations, DXpeditions and other club events: if you have already sent these to me then I will make sure that I get them onto the website very soon, but if you do come across any such items that you think would be of interest, why not post them on the website yourself? This is a very simple process and instructions on how to add a news item or an event will appear on the site shortly.

## Societies' Fair

The annual CU Students' Union societies' fair will take place on Tuesday 2 and Wednesday 3 October and we will need as many volunteers as possible to run the CUWS stall. This is the only event in the year where CUWS gets guaranteed publicity and it is here that we recruit most of our new members. It is thus a very important occasion for the Society and we always strive to present it in its best and most exciting light. The best way of doing this is through the enthusiasm of the current members, so if you are free on either of those two days to help out, please let me know on hs366 at [cam.ac.uk](mailto:cam.ac.uk). Ideally we would aim to have two people on the stand at all times.

## Talks and Trips

### CDARC Talks

The Cambridge & District Amateur Radio Club is holding a number of events over the coming months to which, as always, CUWS members are warmly invited. A full programme can be found on the website, [www.cdarc.org.uk](http://www.cdarc.org.uk)

#### Friday 6 July 2007

Get started with FPGA devices and retro-computing - Andrew M0BXT

#### Friday 20 July 2007

SMT Soldering Techniques - David Adshead

**Friday 3 August 2007**

Valve tester evening

**Friday 17 August 2007**

Epiphyte MK IV - David Adshead

**Friday 14 September 2007**

Foxhunt

**Friday 21 September 2007**

Junk sale

**Friday 19 October 2007**

Aerial Extravaganza Part II - Mike G8VCN

## Ireland

Three CUWS members - Martin G3ZAY, Tom M0TJH and Hugo M0HSW - will be activating some of the Irish coastal islands between Monday 25 and Saturday 30 June. The aim is to be on the air from Inishbofin between 2000Z on 25 June and 1000Z on 27 June, from Inishmore between 2000Z on 27 June and 1000Z on 29 June and from the Blaskets for a few hours on 30 June, weather permitting. All three locations count for different IOTA groups (EU-121, EU-006 and EU-007) so if you still need these, this would be an excellent opportunity to get them in your log.

## Svalbard

Martin G3ZAY and Michael G7VJR are visiting Svalbard over the summer and will be QRV from the club station at Longyearbyen from 16 to 21 July inclusive. They will be operating as JW/G3ZAY and JW/G7VJR.

## Les Minquiers

Between 2 and 9 September, four Society members will be in Jersey in order to activate the reefs of Les Minquiers (The Minkies) for 24 hours during this period. The reefs are situated around nine miles to the south of Jersey and make up the rare IOTA group EU-099. The operators are provisionally Michael G7VJR, Martin G3ZAY, Dominic M0BLF and Tim M0TDG. When not on the reefs the team will be operating from Jersey; they will be using the callsign GH6UW/P on Les Minquiers and GJ and MJ prefixes with their own calls on Jersey.

## RSGB HF Convention

The RSGB HF Convention takes place on Saturday 13 and Sunday 14 October at a conference centre near St Neots - about a 20 minute drive west of Cambridge. Lifts should be available.

Programme information will be online soon at <http://www.rsgb.org/hfc>. There are normally two or three parallel lecture streams covering technical aspects as well as operating and expeditions. On the Saturday night there is a convention dinner and it would be nice to have a good CUWS turnout; we had a full table last year. Anyone wanting to take the Full exam on 14 October will probably have to do so at the convention as we are unlikely to have enough people left behind in Cambridge to organise the usual venue at Caius. If you are interested, please contact Martin G3ZAY as soon as possible. He will try to co-ordinate tickets and lifts and take advantage of any group discounts (which need early booking).

## Operating

### Morse Classes

The Morse classes run by Michael Wells G7VJR have been progressing at pace over the past few months. The initial system of communicating over the University network with CW paddles connected to computers was abandoned because of the poor quality of the software available (this is currently being rectified by



*WOOF is keen to join the CUWS CW classes*

Hugo MOHSW). The alternative arrangement using transceivers as keyers and Skype as the means of sending and receiving audio also proved to be unacceptable because of the distortion introduced by the audio compression. In the end, therefore, we adopted the more traditional approach of sitting round a table with a key, radio and pieces of paper. This tried and tested method seems to have been very successful. All members of the class (Christian MOSCH, Christian MOTBF and Hugo MOHSW) are now able to send and receive comfortably at 15wpm and two of the three have already had their first CW QSOs on the air (I will not divulge the identity of the member who has yet to reach this milestone!).

## New York University W2DSC

In May 2007, Michael G7VJR made contact with W2DSC, the ham radio station at New York University, using the club call G6UW. The NYU club was founded in the same year as CUWS was licensed, 1932. For more details, see <http://nyuarc.home.att.net>. Although not able to hold a permanent station down any longer, all of the members of the club are able to use its callsign. The QSO between CUWS and NYU was made by Gerry Skloot K1NY, who is the president of the radio club. A full set of QSL cards for the 59+ QSO on 20m SSB has been exchanged, should any members be interested in making contact with NYU in the future.

All CUWS members are encouraged to operate from the shack as G6UW from time to time. Expect an enthusiastic response, particularly from our friends in America, for whom the callsign has enduring appeal! Remember to mention that Dominic MOBLF is our QSL manager, as demand for cards is consistently high when a pileup has been created. Operating G6UW is a rewarding experience and helps maintain the profile of the club.

## Free to a Good Home

As part of the programme to reduce clutter in the shack, there is an old Pye 'Westminster'

PMR transceiver looking for a home. The radio was converted many years ago to transmit on a single frequency somewhere in the 432MHz band. If you would like to revive this classic rig, please contact Martin G3ZAY on g3zay at btinternet.com; if unclaimed it is sadly destined for the bin.

Additionally, Martin has an old generator which he would like to give away. It is around twenty years old and last ran about five years ago, so will need some care and attention. It has (or had) a maximum output of around 500W. It is a small machine and has been used for many IOTA trips to the Outer Hebrides. If you would like to claim it then you will have to collect it from Cambridge. Again, please contact Martin on g3zay at btinternet.com if you are interested.



## Swains Island

Christian MOSCH has pointed out a recent *New Scientist* article which may be of interest to members. It is titled 'The last place on earth to make radio contact with the rest of the world' and describes the July 2006 expedition (KH8SI) to Swains Island, made a few days after it was confirmed as a DXCC entity. The article appears in issue 2608 of the magazine and is also available on the internet from [www.newscientist.com](http://www.newscientist.com), although you need a subscription to read the full text.

## G6UW 75th Anniversary

### CUWS Mugs

Members are reminded that the new CUWS mugs advertised in the last newsletter are still

available for sale, priced at £6 each. They are white with the new CUWS logo printed twice around the outside. If you would like to order any, please contact Martin on g3zay at btinternet.com

## Contests

### **AFS SSB 2007**

The CUWS 'A' team (G3ZAY, M0BBB as G6UW and M0TDG) came in 3rd out of 102 in the team listings for the January AFS SSB contest. This was a great improvement on last year when we were 6th. The official scores were:

|                    |       |
|--------------------|-------|
| Cray Valley A      | 10740 |
| Sutton and Cheam A | 9350  |
| CUWS A             | 9180  |

Thus CUWS was only 17 QSOs away from 2nd place; but Cray Valley had a commanding lead and will be difficult to beat next year if they keep the same line-up.

Our 'B' team (M0HSW, G7VJR and M0TJH) came in 16th and was the 2nd highest-placed B team - again just behind Cray Valley B.

Individual scores placed G3ZAY 8th (out of 243), G6UW/M0BBB 12th, M0TDG 37th, G7VJR 40th, M0HSW/P 59th, and M0TJH/P 89th. G3ZAY and M0BBB probably had the best antennas on the day with dipoles at around 50 feet. The others used dipoles at 20-30 feet. M0HSW/P also suffered from a raised local noise level and M0TJH/P was the demonstration station at Jesus College, which various other club members used to make a handful of contacts in the contest.

### **80m Club Championships**

There are three events remaining in the 80m Club Championships over the next few weeks - one SSB, one CW and one Data (RTTY, PSK31 and PSK63). The 80m Club Championships consists of a series of 'mini contests' which take place on weekday evenings, lasting 90 minutes each (from 2000-2130 local time); the remaining dates are given below. CUWS has not been making any serious entry but a number of

members have enjoyed the opportunity to try out contesting in a slightly more relaxed atmosphere than usual as well as the chance to get to grips with some of the data modes. If you would like to take part in one of the forthcoming events, please contact Martin on g3zay at btinternet.com

### **July**

Mon 2 - CW; Weds 11 - SSB; Thurs 19 - Data

### **CQ World Wide SSB 2007**

The 48-hour CQ World Wide SSB Contest takes place on 27 and 28 October. CUWS hopes to make a major effort this year and will be seeking permission to erect various 40- and 80-metre phased vertical arrays in the fields around the shack. Martin will also dig his 20m 4-element monobander out of the attic and erect it on the trailer tower. The scoring in this contest is based on 3 points for every non-European contact (1 point for Europe) multiplied by the number of countries and 'zones' contacted on each band. This makes it important to go for both quantity and quality of radio contacts on as many of the allowed six bands as possible (160/80/40/20/15/10). We also need to have two operating positions - one for making as many contacts as possible ('running') and the other for hunting the different countries and zones. If you'd like to operate or just come and watch please contact Martin G3ZAY on g3zay at btinternet.com. It is likely that some helpers will be needed at the shack on the preceding weekend, the preceding day and the following Monday, to set up and take down antennas and other equipment.

## Licensing

### **Full Licence Exam**

The next date for the Full licence exam is Friday 20 July, at 1830; we will organise a venue at Caius if there is demand. The closing date for entries to be received by the RSGB is Friday 29 June. Please contact Christian M0SCH on cs359 at cam.ac.uk as soon as possible if you want to take the exam on 20 July.

## AOR Digital Voice Modems

*Martin Atherton G3ZAY reports on the recent CUWS investigation into this new mode*

Over the last few years a number of amateurs have been investigating the use of digital voice transmission techniques. Having seen SSB completely replace AM back in the very early '70s, I was curious to know whether digital might be the new SSB.

This is not a technical report - but, briefly, amateur digital voice works by taking a vocoder approach to encoding the 2.7kHz analogue audio at around 3kbit/s and then spreading this bit-stream over a number of closely spaced carriers within the audio passband. This baseband audio is then used to modulate a normal SSB or FM transmitter. This is similar to the DAB and DRM systems in use commercially.

There are two main routes to practical implementation on the bands: a Windows application (WinDRM/DRMDV) which uses the PC soundcard, or a proprietary voice modem from AOR. For speed of testing I decided to start with the AOR solution and ordered a couple of the ARD9000s from Martin Lynch.

The first test was between Hugo M0HSW, at his parents' house in Portugal, and G6UW. Signals were quite weak on 14MHz but Hugo managed to decode a few seconds of audio from me before his ARD9000 locked up and refused to respond to any of its switches (including the 'off' switch).

AOR UK quickly repaired the unit under warranty but their accompanying note left us in no doubt that they thought the PSU had been connected with the wrong polarity or had been set to too high a supply voltage!

The second test was between G6UW and Michael G7VJR across the fields in Cottenham - this time the shack unit immediately locked up with the same fault as Hugo's had shown in Portugal. AOR UK contacted their Head Office in Japan and were notified of a modification to deal with what appeared to be a known problem, arising if there are different ground potentials on the modem and the radio. Amusingly the AOR note said the modification was to deal with a situation where 'two items are connected to the unit of slightly different potential' - which Hugo pointed out would include all power supplies! Both units received this modification and seemed to be functioning.

The third test was again with G7VJR and was distinctly disappointing. Getting the digital audio to decode seemed to be something of a black art involving correct receiver and transmitter settings, and the quality from the vocoder model when it did decode was unimpressive.

This is now a project for the summer to see what can be done with the AOR units, initially on a short-range link in the shack, and to test the competing WinDRM method. Please contact Martin G3ZAY on g3zay at btinternet.com if you'd like to help. More information will be included in the next newsletter.



## **6m this Summer**

*Martin Atherton G3ZAY explains why the 50MHz band is likely to offer good possibilities for DXers over the coming months*

The 2007 summer sporadic-E season has started on 50MHz and several club members have made DX contacts on the band. Good days should see propagation into North America and the Caribbean. The June 2007 issue of CQ magazine carries an interesting article on this type of DX propagation, which cannot be by multi-hop ionosphere to ground reflections as the E layer height would make about 11 hops necessary to reach the USA (in which case signal levels would be far lower than observed). Instead, some form of 'chordal hop' or 'whispering gallery' effect seems likely to be the answer, with signals effectively trapped in the Es layer. The article also notes that sporadic-E is essentially unrelated to the solar cycle - though F layer propagation kicks in at sunspot maximum of course. The origins of sporadic-E are somewhat obscure but it is thought to be caused by wind-shear effects in the upper atmosphere, coupled with the effect of the geo-magnetic field on drifting electrons, causing the electrons to be concentrated in thin layers. Our physics PhD students may care to explore the maths of all this and perhaps give us a talk some-time in the future. The June issue of CQ magazine will be left at the shack for people to consult.

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## **Visalia DX Convention 2007**

*Martin Atherton G3ZAY summarises his recent visit to this popular event*

Late April is the time for the annual Visalia DX Convention held on the edge of the Sierra Nevada mountains in central California. Martin G3ZAY is a regular attendee and this year was accompanied by Dom MOBLF, who was scheduled to demonstrate the new IOTA software.

They arrived a few days early and headed off across the California and Arizona deserts, via Palm Springs, to the Grand Canyon, Monument Valley, Las Vegas and Death Valley, before finally reaching Visalia on the Friday afternoon before the convention.

The IOTA dinner was well supported, despite a clash with the Contesting dinner, and had about 100 attendees. It was once again compered by Jim Zimmerman, N6KZ, whose family entertained the CUWS group in 2006.

The theme of the event this year was 'Elmering new DXers is Job #1' - which translates roughly as 'It is important to encourage people to take up DXing'. Unfortunately, there wasn't the same emphasis on encouraging *young* people and Dom, at 25, won the prize for youngest attendee on the Sunday morning - though W6JAY, a student at the University of California, had been around the previous day. This perhaps understates the involvement of young people generally in amateur radio in the USA as it is quite difficult for teenagers to travel several hundred miles to a weekend event, though one would have expected to see a few more university students.

The BS7H DXpedition to Scarborough Reef was due to start during the convention weekend and

there were several occasions when large numbers of mobile phones went off as new bulletins were released by the pilots. The organisers also took to making frequent announcements over the PA system.

One of the lowlights of the weekend was the presentation by K6MD entitled 'Operating in Iraq', which included a number of gory slides of battlefield surgery as well as some equally disturbing political messages.

Elsewhere, in the exhibition area, Elecraft was unveiling its K3 'kit' which is now a simple 'no-solder' assembly operation rather than a true construction task.

The Sunday morning breakfast session saw the usual fun and games, with a CW competition involving a 4-foot-long giant paddle at waist height, operated by being leant on for the appropriate time. This required teams of two: one person to do the dots and one to do the dashes. Dom and Martin won first prize, an antenna preamplifier, which has been donated to the shack.

Bizarrely, the park opposite the convention hotel was taken over by an Elizabethan fair and, despite the 32° heat, people were wandering around in heavy mediaeval English costumes! The village stocks would have come in handy if IT9RYH or any of his friends had turned up.

Martin will probably be travelling over for the 2008 event so if any club members are interested in attending - and seeing something of the south-western USA beforehand - they should contact him on g3zay at btinternet.com



*The Sunday morning fun and games*

## Dayton Hamvention 2007

*Martin Atherton G3ZAY continued his annual tradition of visiting this well-known US convention, this year with Dominic M0BLF*

Our intrepid travellers Martin G3ZAY and Dominic M0BLF had barely had time to recover from the jet-lag of their Visalia trip when they were off to the Dayton Hamvention for four days in mid-May to represent the Islands on the Air awards programme on the RSGB and ICOM stands.

Dom's new online IOTA software was just about ready for some full-scale public demonstrations and ICOM was keen to have a daily presentation on its exhibition stand. Unfortunately this venue was less than ideal as most of the punters were more interested in playing with the ICOM radios than in listening to a talk, so the format may need rethinking next year. Also, the promised WiFi service in the hall failed to materialise so Dom's laptop had to double as a rather slow server.

When not with the ICOM people, Martin and Dom were selling IOTA Directories and answering IOTA questions on the RSGB stand. The RSGB was flying the flag for Britain, selling books and signing up new and renewed memberships.

A massive ARRL area included a 'Youth Lounge' and a number of special activities for young people, co-ordinated by 18 year-old Andrea Hartlage KG4IUM and other young ARRL members. One such activity was the indoor foxhunt - though Dom's laptop seemed to be emitting quite a lot of noise on the fox's frequency and sending several hunters off in the wrong direction.

As always at Dayton there was a hectic social programme in the evenings - for HF DXers and contesters this was centred on the Crowne Plaza hotel in the downtown area. Many of the larger DX clubs offered 'hospitality suites' with their own bars (alcohol was given away but a donation to club funds was expected) and the Kansas City DXers were running their famous CW pileup competition with an HF transceiver as first prize. Martin's entry (22 out of 100 calls copied) failed to show on the leader board as the winning scores were in the upper 50s. He clearly has more work to do.

While the CW pileup was underway, Dominic was entertaining the crowds outside the main contesting suite with a vocal rendition of 'Piano Man', accompanied by Ashton Snelgrove KI4NYS from the Virginia Tech Amateur Radio Association on the piano. This was perhaps a little less polished a performance than it might have been, as Dom only knows the words in Spanish and the crowd wanted the song in English (not to mention that members of the Virginia Tech club had been plying him with strange cocktails immediately beforehand); but maybe he'll give another performance at the CUWS dinner if we can find a pianist.

As well as the Virginia Tech guys, there was a reasonable World Wide Young Contester turnout, including Richard Di Donna NN3W and Jon Kimball KL2A (with whom we had dinner one night) and, from Europe, Stefan Giehle DK1MM and Philippe Luty LX2A.

The highlight of the event for the Brits was the election of G3SXW and G3TXF to the CQ DX Hall of Fame, in recognition of their numerous DXpeditions. But I was equally pleased to learn that Mauro I1JQJ and Valeria IK1ADH were similarly elected in recognition of their long-standing (and free) weekly DX bulletin, the 425 DX News.

## The Scarborough Sensation

*Martin Atherton G3ZAY introduces the experiences of some CUWS members who were lucky enough to work BS7H*

At the end of May the bands lit up with activity to/from the world's 'most-wanted' DXCC entity, Scarborough Reef. This is no more than a collection of rocks a few feet above sea level but back in the 1990s it met the criteria for separate status and was added to the ARRL DXCC list. The ARRL effectively recognises the claim of the People's Republic of China (based on historical mapping expeditions centuries ago); but the reef is considerably nearer the Philippines, which maintains a naval presence in the area. Although the government of the Philippines doesn't claim the reef, it does claim the surrounding seas. The last DXpedition, back in 1997, had to leave early (after just three days) following a visit from the Philippine navy which objected to Chinese ships remaining in the area.

The 2007 expedition was active for a week from tiny wooden platforms only a couple of feet above the sea. So how did CUWS members get on with working it?

### Christian Schreiber M0SCH

I worked BS7H on 14MHz SSB. I tried twice: once the day before and then on the day I got them. I don't think I had much of a strategy: I searched the OH2AQ-cluster to find out at what time of the day they were working Europe on SSB and then tried it out. Also, I did not try working them the first day they were on the air - I didn't think I would stand a chance of getting through. Finally working them was quite a nice feeling (in particular after I heard the operator calling 'the M0 station only' so I knew that I had at last found their split frequency).

### Tim Grant M0TDG

Not having been on the air much recently and having missed both the Swains Island and Spratly Islands expeditions this year, I was determined to try to work BS7H. As I am located in London now, the only chance I would have to catch them would be at a weekend. After the fate of the previous expedition, it was touch-and-go whether they would still be on the air after they started operations on the Monday. Checking their website and the cluster on Saturday morning, I discovered that they were still on the air but would be closing down that evening. This was going to be my only chance so it was straight into the car and up the A1 to the shack.

Switching on the rig on arrival at about 1030Z, I found BS7H to be weak (beaming away from Europe) and working US on 20m CW, but strong and working EU on 17m SSB. However, they were working numbers and resolutely stuck to number 5 for the first 2 hours I was at the shack. A lot of waiting and a trip into town to get a coffee later, they were on number 9 and listening over 20kHz. I was doing my best to keep track of where the operator was listening so I could be quick off the mark when it was my turn. At around 1425Z, he finally asked for either number 9 or number 0 and I could call him. To my shock and delight he came back first time and that was it, an all-time new one in the bag.

By now, BS7H was also working EU on 20m CW and after about an hour of calling, I had them on CW too; this was quickly followed by 20m SSB. This was great but I was also determined to get them on a lower band as this is where my totals need the most work. I was side-tracked for a while hunting other DX but I soon returned to BS7H as they were strong on 30m CW and grow-

ing steadily. Just after 1700Z I worked them for my fourth band/mode combination and then decided to pack up as they didn't seem to be on any other bands at that point. It was great to take advantage of the shack to work such a rare country and take another small step towards the goal of Number One Honor [sic] Roll.

#### Michael Wells G7VJR

I worked BS7H for an all-time new one after a 90-minute queue on 14MHz CW on 1 May 2007. Conveniently, I was able to make a visit to the shack after work and found the band wide open. After I had found their listening frequency in the wide split ('up 15'), conditions favoured the contact. QRM posed the biggest challenge as it is not easy to establish the operating pattern when stronger callers do not stop sending their callsigns or when the DX station is being jammed.

On 3 May I went to the shack with Christian M0TBF after the weekly CUWS pub meeting, at around 2100Z. We were determined to get Christian in the log. After a long and fruitless fight on 30m, spoilt badly by deliberate QRM, it was a surprise to hear the 20m station at BS7H kick in with excellent signals. We turned the beam and tried with renewed confidence. After only a very short wait, both Christian and I worked BS7H on 20m SSB and then a few minutes later on 20m CW.

BS7H from Europe proved to be an excellent and reliable circuit for HF, but deliberate interference reached a new low, with intense and persistent jamming on all bands coinciding with DX Cluster spots for BS7H.

#### Christian Mikkelsen M0TBF

Working BS7H turned out to be a bit of a headache. I went to the shack on Saturday morning, hoping to catch them early on - possibly before they were spotted on the cluster. I listened carefully on their announced frequency but gave up after a couple of hours. On Sunday afternoon I got closer: at least I could hear them, but 20m phone was as bad as one could fear. I tried calling on a fixed frequency but without any success, and when BS7H started going by numbers beginning at 1, I gave up. Instead I took time off work on Monday afternoon and brought Thoa M3TNM with me to introduce her to DXing: a mistake. Maybe I should collect stamps rather than DXCC entities; Thoa probably will now. On Tuesday I decided to give 20m CW a try, knowing full well that it might be beyond my skills. Christian M0SCH showed up and as I was not having any luck, I let him have a go and went home; I am not really trying to join the 'Century Club' anyway.

At the Maypole on Thursday however, Michael G7VJR convinced me otherwise. We tried 30m CW, 20m CW and 20m SSB: the usual crowd and the usual behaviour. The 'BS7H' on 30m was probably a pirate and finding the listening frequency of BS7H on 20m was a nightmare. I worked a few other stations and then, just after 11 pm, 20m quietened down and within ten minutes I had them on both SSB and CW - sort of (that story is best left untold).

#### Stavros Tsiakkouris M0BBB

First things first - as you probably know I am not an active



OH2BH and BA4RF

DXer and have not yet got my act together to apply for DXCC (or even IOTA for that matter). Nevertheless, every now and then when a rare DXCC comes up, I find myself heading to the nearest shack to try to work them! This urge is almost always spontaneous which explains why I am always unprepared. Trying to reason this urge fully is impossible but partly it stems from the notion of working places few of us will ever have the fortune (or is it misfortune?) to visit and partly is a minimum token of appreciation to DXpeditioners who go out of their way to promote amateur radio, experience the ultimate pileup and help the Deserving.

My QSO with BS7H was on 20m SSB from the Martlesham Radio Society station - G4MRS - which is currently going through a major revamp: a rather polite way of saying that most of the antennas are currently non-operational. With no packet cluster access at the station, this had to be done the old-fashioned way. The choice of mode had more to do with available equipment at the shack than operator preference. Even though I desperately tried to find a Morse key of any shape or form I was unsuccessful and rather reluctantly ended up reverting to the more painful mode. The intentional QRM on the TX frequency of BS7H never made things easier and added even more dimensions to the challenge of working them!

It took me around 30 minutes in total: I started listening for them around 1800 local time and had them in the log at 1830. Given the 40kHz spread used by BS7H at the time I was listening, the pattern followed by the operator was not obvious. I spent about ten minutes trying to observe some sort of pattern but quickly realised that my strategy required further refinement. Heavy pileups and the fact that I could not hear many of the stations working BS7H as they were in my skip zone made things very difficult. One option I had was to find a 'clear' frequency and call endlessly, hoping that the BS7H operator would pick me up as he scanned the band. However, this tactic was not very appealing to me! Instead, I decided to 'exploit' other operators using this approach to help me nail the DX! With this in mind, I created a bandmap, noting down all the loud stations calling BS7H. After I had picked out around twenty calls between 14.200 and 14.240 and written down their frequencies, I next shifted all my attention to the TX frequency of BS7H. The plan was simple: listen to all the stations BS7H came back to; as soon as one matched a call on my bandmap, set the VFO to the correct TX frequency +/- a few kHz and call several times.

It took about 15 minutes before BS7H called a Russian station I had on my bandmap. It was a real satisfaction when this happened - almost as satisfying as working BS7H! I then swiftly set my TX frequency a few kHz above and called several times. BS7H worked two more stations before coming back to my call! As I completed the QSO, I tried to visualise the working conditions of the operator at BS7H I had just contacted.

### *Martin Atherton G3ZAY*

Luckily I didn't need this one as I'd worked a previous Scarborough Reef expedition. Indeed Scarborough is not on the rare list at all for IOTA chasers, who must be among the world's top DXers. But Dominic MOBLF and I were passing the shack around 1800 on Monday 30 April on the way back from the Visalia DX Convention so we had to stop to see if Dom could get a QSO. Sadly it was not to be - this was their first day of activity and though we could hear them on several bands they weren't working western Europe at that time, so we headed back into town to recover from the jet lag.

If you want to hear more about this amazing DXpedition then you may wish to come along to the RSGB HF Convention in October as at least one of the operators plans to attend.

## A Ringgold Obsession

*Martin Atherton G3ZAY recounts the great lengths to which he had to go to get this new one in the log*

A very rare Islands on the Air group, the Ringgold Isles in the Fijian Archipelago, was activated recently by a Ukrainian team using the call 3D2RI. They promised about four days of activity with up to four stations 'from 3-7 May'. This was one that I still needed with my G callsign, having worked the only previous expedition in the '90s while I was sitting on an island in the Canadian Arctic.

The problem was that my work schedule called for me to fly to Seville on the evening of Thursday 3 May for an all-day meeting on the Friday, and I had rashly decided to stay on until Sunday morning to look round Seville, flying back into Stansted at 1300. I was then due to leave for Brussels around 1800 on the same day.

So the question was would this give me any real shot at working 3D2RI? The best chance would be on 14MHz around 0800-1000, with propagation just possible for much of the day and with a second peak in the evening. 18MHz might also open up in the morning but 21MHz would almost certainly be a band too far with sunspot numbers in the doldrums. I thought 10MHz would also work but was pessimistic about 7MHz with the North Pole in daylight around the clock.

Fiji lies west of the dateline so is ahead of GMT - thus the Thursday morning opening on 20m would be Thursday evening in Fiji and the team should have had time to get on the air. I was quietly confident and waiting on the bands at 0700. The A and K numbers were all good and the Hawaiian stations were loud. The minutes ticked by but there was no sign of them; eventually a cluster message appeared to the effect that they had just got their antennas up when a huge storm had blown them all down, but they hoped to be back on soon. I left the shack mid-morning to pack my bags and kept an eye on the cluster but when they were finally spotted, by a ZL station, it was on 7MHz: useless for the UK at lunchtime.

There was nothing for it but to check the ZL's QTH on QRZ.com, call directory enquiries and phone him. It was almost midnight there but he was obviously up as he had just posted a spot! That all worked well and he agreed to call the 3D2 and ask about their 20m plans. Five minutes later an email came back which basically said 'Don't hold your breath - they have a huge pile-up on 40'. By departure time for Seville they were still on 40m so I was going to have to do something on Sunday.



*The members of the 3D2RI team*

I wasn't prepared to give up my day's sightseeing in Seville on Saturday but it seemed that there was a Ryanair flight back to Stansted late on Saturday night. If I changed my ticket I could be QRV for the Sunday 20m opening and have another go. Sunday afternoon would be a long shot so I definitely needed the morning session.

Ryanair did their stuff and by 0030 on Sunday morning I was back in the shack. The 3D2 had been spotted recently on several 20m frequencies but I could only hear some fairly weak west-coast US stations on the band so it was time for a little sleep.

I was back at the shack at 0700Z: they were being spotted on 14265 but I could hear nothing at all. Then they QSYed to CW but still nothing heard. A Belgian station reported working them at around 0755Z - always a good sign because we normally get the propagation a few minutes later on this path. Sure enough by 0810Z I could hear them and by 0812 they were in the log. There was no sign of them during the afternoon so I'd needed that flight change.

Now, what to do about the DXpedition to East Pen Island that's due to come up in July while Michael G7VJR and I are in Svalbard? They may have to change the IOTA rules if I'm going to count that one: it's a pity I'm not the IOTA Committee Chairman any longer...

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## **WPX CW 2007**

*Three members of the Society sum up their efforts in this recent contest*

### Christian Mikkelsen MOTBF

Over the past year or so, I have been trying to improve my CW skills. Sixteen years ago I passed my Morse code test and worked a little on the air, but had not done much since. When I got back to the hobby, it was with the expectation that most of the skill would have left me; but not so.

At any speed I was making many mistakes but I was clearly copying what my computer was sending to me. At the shack, it was a joy finally to tune over a CW signal being sent and have letters pop into my mind: 'Q T H I S ... = M Y A N T I S D I P O L E ... '. The practice had paid off. Over a few weekends in May I had a handful of QSOs and the level of ambition rose - I wanted to try my fist in the CW section of the CQ WPX contest, with the ultimate goal of assembling a M4A team for this autumn's CQWW CW. Could I do it? Michael G7VJR was sure: 'You will get fifty new countries at least'.

As it turned out, I could do it, casting all shame aside, asking 'AGN?' after every other serial number and only replying to those who were slow enough to copy. Even in the midst of a serious contest hams are willing and able to take the extra thirty seconds to repeat a call or a serial number for a CW rookie: what a nice hobby! In the end, only one (VP8DIZ) jumped off the hook when asked for a repeat, but I am sure that he had a competitive score to keep up so I don't mind.

Did I make fifty new countries? No, but I did make fifty new SPs, OKs and UAs, and I had a lot of fun.

### Dominic Smith MOBLE

After travelling to both Visalia and Dayton over the past few weekends I felt too tired to return home to Devon to take part in WPX this year, so I decided to see what I could do from my term-time QTH in Birmingham. The fact that I only have a 20m mobile whip here obviously limited my possibilities and category, so I decided to take part as SOSB(A)/20 LP (single operator, single band, assisted by DX cluster, 20 metres, low power). The low-power category permits up to 100W to be used, but since I only have a 10A PSU here and was wary of causing QRM to the neighbours, I generally limited myself to between 40 and 50W, occasionally using 60. The first problem was that the 20m whip on my balcony had a very high SWR throughout the 20m band, which I decided was due to the lack of a ground plane. Adding a biscuit-tin lid and a couple of sheets of aluminium foil to the base was sufficient to bring the SWR down to a more acceptable 1.2:1.

Because I didn't think that I would make that many QSOs (I aimed to make just 50 in the weekend), at first I didn't even bother to log serial numbers that I received, on the grounds that I would never do anything remotely worth submitting a log for. The large number of very-high-power stations with large antennas meant that I actually did a lot better than I expected (though obviously the exchanges often took several overs to complete, much to the annoyance of the other stations) and I had passed the 50 QSO mark by Saturday afternoon.



*Dominic's unusual antenna setup*

Sunday also saw a slow but steady number of QSOs coming, until it started to rain in the evening. The rain caused the cardboard which was supporting the aluminium foil ground plane to become soggy, thereby buckling it and making the SWR slowly rise to 2.5:1. I was amazed that it had such an effect! Nevertheless I decided to carry on, using 35W, as there was only an hour to go anyway. During this time I managed my best DX of the contest: Colombia. My total was just 151 QSOs, although I think this is quite impressive for the circumstances. The main lesson learnt was that you don't need big equipment to be able to contest, as long as you are patient (possibly my height, on the eleventh floor of a tower block, also helped).

#### Equipment:

TX/RX: IC-706Mk2G, 35-60W, interfaced to Win-Test on my laptop. Antenna: Hustler 20m mobile whip with improvised ground plane! Key: Bencher, with the keyer generally set to 23-26wpm, depending on how tired I was feeling.

### Michael Wells G7VJR

In the past 12 to 18 months, interest in CW has been on the increase at CUWS, perhaps encouraged by the ripe pickings for DX chasing at the bottom of the solar cycle and not least for the enjoyment of the mode itself. Honing CW skills takes a lot of practice, so Christian MOTBF and I decided to take on the CQ WPX contest this year to see how we would hold up against the faster and more demanding environment of a contest. WPX is the CQ Magazine 'work all prefixes' contest, which means that every unique prefix is a multiplier. We both felt that there was plenty of fun to be had and for my part I suspected I would be the only G7 prefix in the contest, which would add to the excitement!

We set up on the Friday night before the contest with the usual station layout: FT-1000MP,

SteppIR, 40m dipole, 80m vertical and Win-Test 3 software. We were assisted by contesting veteran Stavros MOBBB who kindly came along to help us sort out a combined 80m/160m dipole, complete with wooden separator braces. Although low, especially for top band, the dipoles were resonant and gave us improved access to these difficult frequencies. Stavros also finally diagnosed that the PTT cable for the Quadra was faulty, which had been plaguing me for some time - thanks!

I had hoped that I would find 160m open when I arrived at the shack on Saturday at 0400Z. However, conditions were only favouring stations within the EU and I was struggling to be heard. After an hour and only a handful of QSOs, I moved up to 80m where conditions were much more favourable. With daylight arriving swiftly I tried to catch some of the short openings to more interesting and distant locations, with some limited success (JA and 9M6). Many workable DX stations were doubling with nearby EU stations, putting them effectively beyond reach. So, despite the assistance of the cluster, only a very few such contacts were made. Later in the morning, once full daylight had arrived, I began CQing on 15m; it was calmer than 20m, which had gone off like a firework. I warmed up by working mainly EU stations and, keen to make the most of each band, I moved onto 20m and 10m at times.

Later on in the day I was called by VK6 (Western Zone, Australia), 7Q (Malawi, Africa) and VQ9 (Chagos, Indian Ocean), all within a short space of time, having been spotted on the cluster. It was interesting to be on the receiving end of these QSOs; normally I would be chasing these prefixes for my log. This highlights the imbalances caused by the cluster. Except when I was spotted, most of the contest was slow, steady and one-by-one, which was just as well since the average speed of the exchanges was higher than my comfortable operating speed! For example, I muddled terribly with VQ97JC, a special variation of the more familiar VQ9JC (Jim in Diego Garcia); he patiently persisted.

I returned home at 0900Z for some sleep and went back to the shack at 1630Z to continue until dusk. My total operating time was 11 hours, with approximately 400 QSOs and a claimed score of 210,000. However, I am expecting to lose a lot of points for miscopying serial numbers and call-signs; I hope these faults will reduce with practice. The experience of contesting (and CQing with reasonable results) was very enjoyable - it would be good to see a full CUWS entry using M4A in a CW contest this year or next.

As an extra interest I took my Ten Tec Orion II to the shack to see whether I could extract some benefit from the narrow roofing filters. To summarise briefly, until quite recently it was normal for HF radios to feature crystal filters, with audio DSP. At the very earliest stages of the input RX a 15kHz-wide RF filter is generally used. Imaging from nearby signals can cause strong 'ghost' signals within this relatively wide passband. The resulting intermodulation and AGC pumping can make contesting much more challenging since the receiver is desensed. By comparison, newer HF radios use 1st IF DSP systems which employ 32bit processors to filter the RF before it is converted to audio. This means that the operator can control the filter shape and width using the DSP, without adding crystal losses. An additional measure is to add roofing filters, which allow the front end to be protected by filters as narrow as 300Hz in the case of the Orion. If the roofing filters are sufficiently narrow, which is possible with CW signals, then imaging effects can be all but eliminated. The result is that, overall, the radio is far more resilient and sensitive on busy bands with large contest stations nearby. While perhaps more complex for the operator, the extra flexibility seems worth it!

## SOTA in the Peak District

*Dominic Smith MOBLF describes a weekend operation by several CUWS members from some of the mountains in this National Park*

During the weekend of 2-3 June, Michael G7VJR, Martin G3ZAY and Dominic MOBLF went to the Peak District to activate a couple of peaks for Summits on the Air ([www.sota.org.uk](http://www.sota.org.uk)).

We arrived in Edale on the Friday evening, quickly set up the camp and sat down to a few sips of the various whiskies which Martin had brought along for the occasion. The 'campsite' was an odd location, but the only one locally which was not fully booked. It was really just a field on a working farm, with a hot shower as the only major feature. Because it was a working farm, we were aware of a constant noise from various animals: horses, cows, cockerels and what sounded like a whole pack of hunting dogs shut in one barn. To make it even less enticing, the main Manchester-Sheffield railway line was just at the bottom of the field; though fortunately there were very few trains at night. All the same, one wonders how we ever got any sleep there!

On Saturday, after a fairly lazy morning, we started the ascent of Kinder Scout (636m ASL), the highest point in the Peak District. Michael carried the rig - an FT-857D - on his back, together with a dipole for 40m and the telescopic fibreglass pole for supporting the aerial, whilst Dominic took two 12V 7Ah 'gel cells' and the 6m dipole. The path is easy and paved at first; however, it quickly turns into a scramble over boulders in a river bed. Martin quickly dropped behind us and we very soon had a call from him on 2m saying that he was turning back. Once you are past the scramble, it is again a very easy hike along the plateau. Fortunately the peat wasn't too wet, despite the recent rain, and so we didn't get too stuck or muddy.

Once we had reached the summit, we went off to one side, where there were fewer people, and set up the equipment. For SOTA you have to make at least four contacts for the operation to be valid. Michael sat down first on 6m, since there had been a few good sporadic-E openings lately, whilst Dom started to call on 2m, before the batteries in his handheld failed. Six metres wasn't as open as we had hoped, but there were a few strong stations taking part in the UKSMG's 25th anniversary contest, and we both managed a CW contact with Gibraltar. It was slow going, however, so once we each had the qualifying four contacts on 6m we decided to take down the dipole and move to 20m, where we should have had more luck.

Unfortunately, it was at this moment that a park ranger appeared and started going through a long list of arguments for why we shouldn't have been there. Not only were we accused of operating illegally but apparently if she had let us



*Michael operating from the campsite*



*Richard, Michael and Dominic in the village of Hope*

continue, it would have encouraged other people to fly kites there! In any case, she claimed that we should have had written permission from the National Trust to operate (also incorrect, as they have agreed nationally that SOTA is 'low-impact', so local permission is not necessary). When she eventually suggested that we were also disturbing nesting birds, we agreed to leave, though it is hard to see how

standing still operating a radio is more disruptive to wildlife than the several hundred hikers who were walking around up there! We headed back to the village, where we met Martin, and had a pint in a local pub.

On our return to the campsite we again erected the fibreglass pole, this time with the 40m dipole, so Martin could make some contacts in the CW part of National Field Day (although this contest requires pre-registration, so it was not an official entry). Michael also decided to take on the campsite dog, which had a fake limp, in a play-fight. Michael came out somewhat the worse with a few scratches!

That evening we met Richard G3CWI (a former Cambridge student and CUWS member), one of the management team of SOTA, in a pub in the nearby village of Hope. He suggested that, the next day, it would be best to head slightly south and try going up Shining Tor. Not only is it a very easy walk (you can drive most of the way up), but it is also less frequented and so less likely to have rangers on it!

Sunday again got off to a slowish start as we packed up the camp and then drove to Shining Tor, near Buxton. Sure enough it was an easy climb and we were quickly at the top. Once there, Michael set up the 40m dipole again and managed to work about thirty stations in a mini pileup. Dom worked five stations on 2m FM from Michael's handheld. Martin just fell asleep in the sun and started snoring! At the bottom of the footpath up Shining Tor is a pub called the 'Cat and Fiddle', where we went for lunch, before heading back down the motorway.

Dominic's photographs from the weekend can be seen at [www.flickr.com/photos/dnas2/sets/72157600307638121](http://www.flickr.com/photos/dnas2/sets/72157600307638121) and a short video, including Michael's dog fight, is at [www.youtube.com/watch?v=OIHbByeeJ9k](http://www.youtube.com/watch?v=OIHbByeeJ9k)

## G6UW Reminiscences

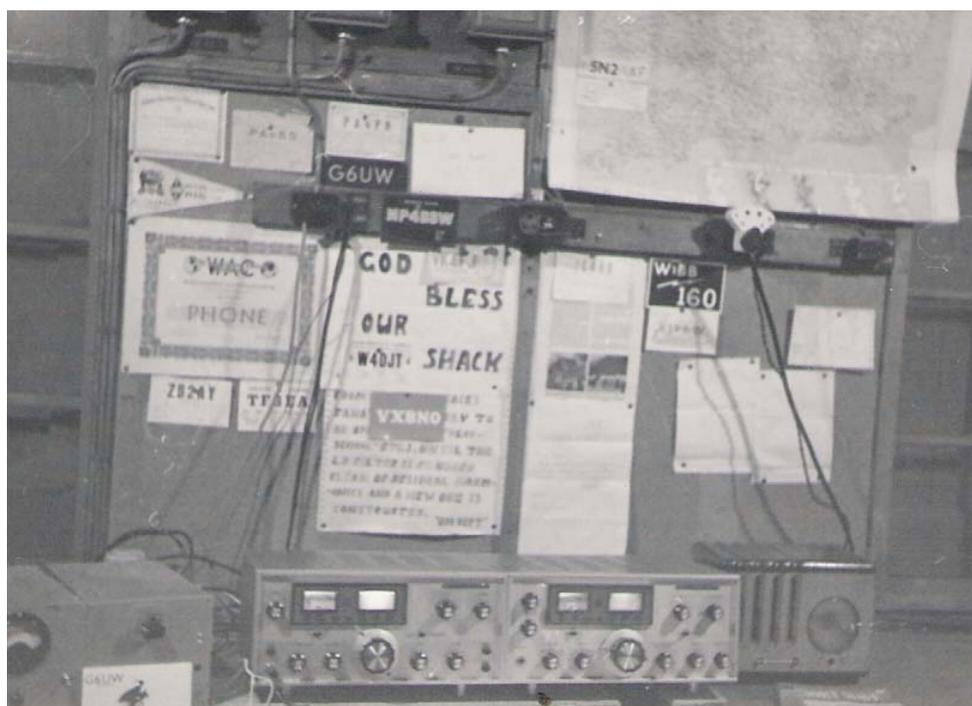
*Malcolm Pritchard G3VNO, currently NM9J, was reminded by Don Field G3XTT's article in the last newsletter of some details of his time in CUWS*

I was at Caius from 1966-1969, so failed to overlap with Don - but I was at Cambridge at the same time as Dave Topham G3WKB and Steve Cripps G3TPF. Steve Cripps was a year behind me, while his brother Peter G3SKT was a year ahead of me. Both G3WKB and G3TPF took part in the CUWS DXpedition to the Isle of Man in March 1969, as documented in Short Wave Magazine (available as a PDF scan here: <http://home.computer.net/~pritch/docs/swmmay69.pdf>). Steven and Peter Cripps hailed from Bidston on the Wirral (Merseyside) and I believe they spent (and may still be spending) time on the same side of the pond as I am now.

Coming to the Sommerkamp FR-500 receiver / FL-500 transmitter which Don mentioned, I remember this equipment was obtained just in time for the 1969 expedition to the Isle of Man. I had to go in front of a high-powered committee and explain why CUWS needed money for new equipment, and that radio amateurs did not build their own short-wave transmitters any more. We had our arms twisted to raise the CUWS membership rate so that money would be available for future equipment purchases from the Society's own funds. I had visions of a bankrupt Society in future years, but evidently G6UW kept going for several decades after this particular deed was done...and I'm glad that the FL-500 survived its trip to GD.

Regarding Don's description of the original Woop-Woop: 'The building was of concrete construction, about the size of a large garage, and at one stage had housed some sort of physics experiments'. The tale I was told about Woop-Woop was that it was part of the Cavendish Lab, originally used for investigations of 'whistlers' - those VLF, varying frequency signals caused by lightning strikes half a world away. The name of the 'shack' was supposedly derived from the sweeping sound of those atmospheric phenomena. I remember that during my time at Woop-Woop there were still some physics experiments going on in the surrounding fields, with 240V, 13A plugs and sockets lying in the wet grass.

Another memory I recall of Woop-Woop was a note in the log or 'Scandal Book' to stay off the HF bands whenever 'The Forsyte Saga' was being transmitted on BBC2. The reason for this was the extreme proximity of Woop-Woop to the home of the Professor of Radio Astronomy in Herschel Road: Sir Martin Ryle G3CY was scraping a weak UHF signal from Crystal Palace and it would not do to disturb his TV viewing - again.



*The original Woop-Woop in Grange Road*