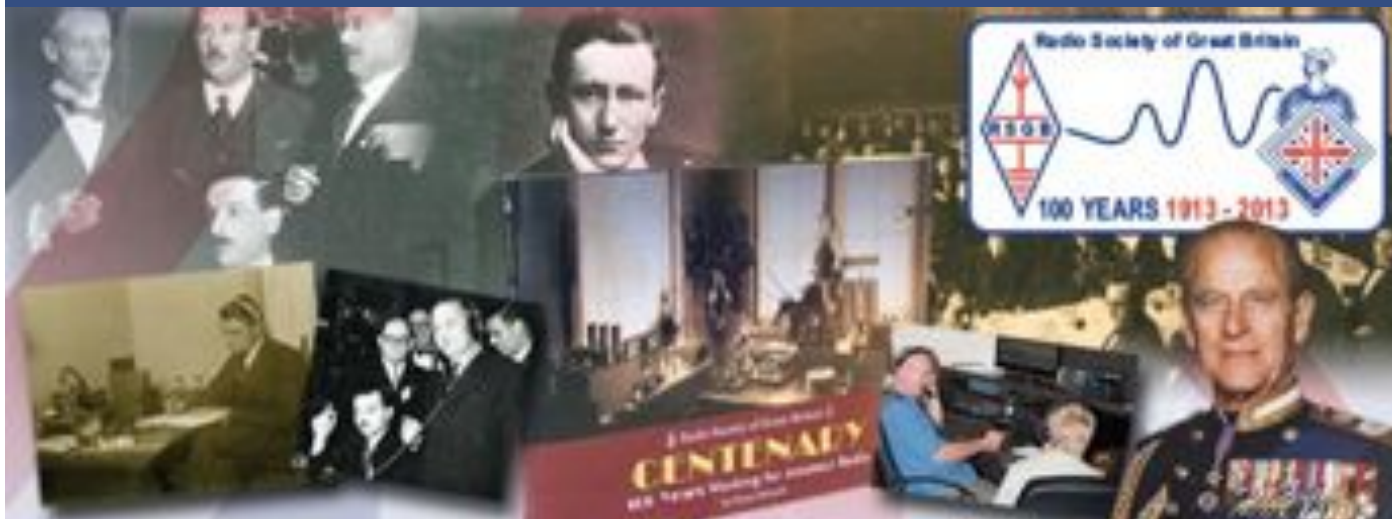


**Wythall Radio Club** meets from 8pm every Tuesday evening at Wythall House, Wythall Park, Silver Street, Wythall, B47 6LZ, near Birmingham. Visitors are very welcome. **Wythall Radio Club** is affiliated to the Radio Society of Great Britain. Contact [g0eyo@blueyonder.co.uk](mailto:g0eyo@blueyonder.co.uk)

## Wythall Radio Club do G100RSGB



Looking back at the committee meeting minutes for December 2012, I can see that the question of the club having a go at operating G100RSGB when it came to region 5 in October/November 2013 was raised under Any Other Business. The following month we tasked Callum to contact the regional manager to get us a slot in the calendar and for us to give some thought as to how we could run such a station from the club shack. Early in 2013 I started looking around the web for the experiences of those clubs who had already had the G100RSGB callsign in their region. I also read the brief from the RSGB for those proposing to operate the callsign and what was expected of them.

The RSGB had initiated various awards for working as many bands/modes/regions as possible. It was therefore very clear that we had to make a serious attempt to put on a good station to satisfy the demand that there would be from UK and overseas operators chasing these awards.

Wythall wanted a weekend spot when the NOV came to Region 5 but all those were taken much earlier so we had to go for the two day Thursday/Friday event. Being Wythall RC we wanted to be the best G100RSGB station in the region. How could we do this? Well we had a number of things going for us.

The enthusiasm of the membership and the "glue" that binds us to achieve big things

Our own shack and equipment  
People with technical and engineering expertise to knit it all together

A desire to publicise our progress via our website and our hobby by inviting some VIP's to come and see what we were about.

So what did we achieve? A six station, multi-band, multi-mode operation, with N1MM logging, networked together so that operator's could see who our other stations were working. The N1MM data was collated and together with shack webcam shots, streamed via a Raspberry Pi to our website so that the world could see what we were doing. Two days of 8am – 11pm operation, gave us over 2230 QSO's which fell nicely into our target of 2000-2500 Q's for the event.

We had visit's from our local MP, Sajid Javid and his daughters plus a couple of local councillors, together with Graham Coomber, G0NBI, the RSGB's General Manager. We even had a visit from Betsy Johnson the WCA Treasurer from Wythall House.

We had a great deal of fun and showed once again what a great radio club Wythall RC is.

As project manager, I would like to thank all who participated; the operators, the helpers, the coffee makers, the food and drink providers; the lifters and carriers; the technical genius's who inspired us with their vision and skills, and whom I may add, put service to the club before their own priorities and comfort; the publicity manager for inviting the VIP's, and those members on the portable station in the car park, who worked so hard setting up and operating the station in such appalling weather and who had a run rate that enabled us to reach our goal.

Read on for more about the various experiences, technology and planning that went into the event and the memorable pictures we took at the time. And if you get time look out for the video of the event which you will be able to access via our website.

Chris G0EYO



# G100RSGB— Callum's perspective

I think quite a few people probably thought I was slightly crackers to suggest that I run the a high-powered 40m station in the car park as a "field-day" enterprise for the Friday (1st Nov) G100RSGB event.

Actually, there was method in my madness; firstly, I particularly enjoy running very high numbers and 40m is ideal for this and in any case, we didn't have a dedicated 40m antenna in the shack. We only had the doublet which needs sharing between 160, 80 and 40. We would have had to chose which one to run with. Secondly, I actually thought I might be able to skive off from some of the "near-field" action since I had an excuse in that I had enough to do myself... how wrong I was..

Even when it was explained to me that I needed to find a solution to staying on the local LAN, for the sake of logging with an IT solution, I doggedly maintained my resolution that I'd still do the easy job in the car park, thinking that creating a perfect wireless link over 75m that would stay up for 12 hours or more without fail would be easy (not thinking I might have to deal with torrential rain and other unknowns).

Of course, it gradually dawned on me that the rest of the club really were taking this extremely seriously and I needed to buckle down and make sure that everything worked. Behind the scenes, I can now divulge to you some of the project management that I was subjected to.

Primary on this list was Chris G0EYO's management system. Chris and I joked in the end that he was creating boxes just so we could put a ticks in them but the more he tightened the noose



with the ticks, the more boxes we seemed to need to create them to make sure that we put ticks in them!

The work began. We all trundled up one Saturday morning at the beginning of October for the testing and elimination of RF interference between stations in a full RF dress-rehearsal. That meant we built the whole station, including the Comms tent, generator, amp and antenna (in the car park) then transmitted and / or listened as instructed by Chris, calling the shots on 2m FM as we systematically went through all the band permutations checking that each station could TX and RX as required freely. It turned out that apart from exact harmonics, everything was good to go. Another tick in the box.

So I needed WiFi in the tent. Well, not quite. I needed WiFi from the shack LAN because from a technical standpoint,



every station was required to be on exactly the same LAN IP address (technical jargon, sorry), just as if I was sitting next to them. This is because in parallel to the logging, Lee's development of some geeky technology with a Raspberry PI, meant he was going to "sniff" the LAN packets and grab the QSOs off the network and display them on a monitor. Further, Lee's technology would put everything in a database that acted as a Server to the rest of the world to display such things as last 10 QSOs, DXCC totals, Web

Cams and even a message facility to allow members of the public to talk back to the operators.

Lee's system relied on us building the equivalent of a Multi-Multi contest station and the perfect system for this was N1MM Logger, a contest logger that already has the functionality for every station to see exactly where each other is, what mode, frequency we're on. As an operator, when you work a QSO in this system, you can see if we'd already had a QSO with that station; it would show you on which band, when and even their name would be pulled into the entry field in the logger. This is why my 40m station needed to be on the exact same LAN and totally reliable. I achieved this by running a separate access point up to the window ledge by the back door and feeding a 7 foot long 2.4GHz vertical antenna on

the flat roof above the shack. I only just managed to pick this up in the tent, 74m away and achieved an always-on connection, as long as someone didn't stand in front on my directional wifi yagi in the tent!

Of course, all this needed testing over a number of evenings, almost never with exactly the same gear as we'd be using on the day since the PCs were scattered between Lee's house and mine and the radios we'd be using were in some cases club members. In reality, all of the gear had

# Callum's perspective ... cont'd

never been plugged together in an end-to-end fashion before the Wednesday night before kick-off. I'm still amazed that with only a couple of glitches, it all worked out - not only for SSB but PSK and CW too.

I'm just giving you my own perspective of the situation, of course other people's reality is different. You have to think about the 200 or so emails, phone calls, discussions, shack development time, blind alleys, concerns, checking (and cross checking) and the endless pushing hands into temples during thought to appreciate each individual and the thinking that we all had to go through to ensure we put a fantastic show on.

Looking back, I seem to have spent the last three weeks of my spare evenings lugging different Tesco boxes back and forth to the club shack, testing, retesting and checking that the solution that we'd designed actually worked. Some stuff never worked and we started again, some broke for no apparent reason and the stuff that did work sometimes refused to plug together in the jigsaw puzzle another night. Hours were lost as we made do with old machines, old operating systems and slow everything. Ah, the blessings of having a hobby on a budget! And we also needed the help of the House to unlock one of the ports on the House router so that Lee's "server" could be seen by the rest of the internet. We reckon, we had about 18,000 hits on the server these two days, all down the wrong side of an ADSL line!

The last 10 days seemed to pick up pace. The weekend before the event, I ripped my station out at home and rebuilt it on another table, meticulous in making sure that my QRO Tesco boxes had exactly what I needed, right down to the 13mm spanner I'd need for the ground lug on the generator on the day.

Club night, Tuesday 29th, Chris G0EYO, Lee G0MTN and myself M0MCX went through an education program to pour the glue into the club members, and we also ran an interactive session on exactly how to log in N1MM.

Wednesday afternoon, I built up the IT and LAN in the shack and managed to get all 6 machines all talking to each other. Again, in the evening, others turned up and we plugged each radio into it's respective PC and had a couple of hours of CAT cable bingo,

On Thursday, I have two client meeting but I was keen to get to the club to see how things were progressing. It turns out the Lee was moving house the next day so I prayed his bit of the jigsaw puzzle stayed up. In the afternoon, I retrieved my generator / tower from the office and filled her up with diesel and towed her home.

That night, I went back to the shack to see that we'd already made 750 or so QSOs, I also installed the real WiFi link that had now morphed into something slightly bigger that I'd originally budgeted for. I couldn't just drag cables everywhere. I needed mains and Ethernet right up to the window ledge and Howard assisted me in dragging these back across the ceiling and into place. In testing, Howards iPhone 4 picked up the WiFi point at the 75m point where the tent was going to be and he surfed eBay to demonstrate to me!

Back at home, I couldn't find was the 40m wire elements that track down the fibreglass poles for the "seagull" antenna. I looked high and low. In the end, I made some more and got to bed late, worried that it would all work. Up at 8:00 and I packed the car. Luckily the rain was holding off and I reached the Wythall car park by about 10:00 or so. I had the station built and assembled by around 11:00. Several people helped including "Big" John and Walter. Unfortunately, something had happened to my initialisation file inside my N1MM installation and my packets were not been seen by Lee's fancy box and not being transmitted to the web server. Luckily, he popped in and fixed a rogue line of code that probably had slipped in because I'd been testing this very machine to record every QSO (which I thought was neat). At the time of writing, I have no idea if this worked. I have a sneaky suspicion, it failed.

Finally, we were off.

Slowly at first but gradually building in the afternoon to a peak of nearly 170 QSOs per hour. A relentless barrage of calls, although with breaks as the band seemed to go quiet for about 10 minutes every hour. It could be that I'd just worked everyone and needed some fresh meat?

The log shows I worked 500 QSOs - although Stan G4JGV, Chris G7DDN and Simon G4TVR also worked the station, giving me some rest periodically. The heavens opened a couple of times. At one point it was so heavy, I needed to keep the headphones on just to hear. The inside of the tent started to swim. My feet were waterlogged, I was freezing. Mains cables covered in water, the 4-way block was saturated. Nothing shorted and it all held up. I've no idea how,

I tripped the generator and lost power twice because I switched the 3kw heater on to warm up and forgot to switch it off again before transmitting, sucking too much out the 4kw trip. Thump. Everything crashed.

AT about 9:30, I was called by Indonesia and East Coast USA before the band seem to die. At 10:00pm, I made the decision to tear the station down. Thanks to Mark and Rob for assisting.

The adrenaline rush has been intense this weekend and I'm still short of sleep, 48 hours after the event. I'm still hooked though and it hasn't put me off having even more fun with RF.

## Callum M0MCX



# G100RSGB—A Technical Perspective

Whilst discussing plans for the Wythall G100RSGB operation much earlier in the year, initially there were some thoughts of “some evening time LF operation.” This was quickly revised after reviewing the efforts made by other clubs around the country. A much larger, multi-mode multi-station affair was then planned. We were fortunate that we have a variety of permanent antennas installed at the club, and with a little bit of ingenuity we could expand the number of simultaneous operating positions with relatively little effort and disruption.

Whilst the different stations could all have operated independently, it seemed beneficial to have them networked together so that the logs could be centralised, also removing the risk of losing logs in the event of a PC failure. Local networking would also allow the different stations to communicate with each other and send messages. As well as a prominent number of stations on-air, having a strong Internet presence appeared to be a key requirement for a successful operation. We wanted to put the contact log on-line immediately, have a webcam showing the station in action, and perhaps also a message board for interacting with other club members at home, and the amateur public in the UK and around the world chasing the station.

Callum M0MCCX decided that N1MM software would be ideal to use as logging software. There were several benefits in this choice. It has good networking support, many club members have used it previously at Field Days and the IOTA contest, and perhaps best of all, it is free. Time was spent installing identical N1MM software and configuration files on each of the PCs to be used, and configuring the Windows networking so that all of the PCs would see each other.

One additional important benefit that was only discovered during the summertime is that N1MM has a function to broadcast logged QSOs using the UDP protocol around a network. Lee found that a US ham had been using these UDP “packets” to display them on a webpage for the ARRL Field Day event.

Some of this code was used, and more was written so that the same function could be used to capture data from our N1MM PCs, and store them in an SQL database created running on a tiny Raspberry Pi computer.

The Pi is a cheap (£30), tiny computer running the Linux platform, and was well suited to the task. Lee wrote some more code so that we would have a webpage showing the frequencies each of our stations were operating on, the QSO totals by band and by mode, and also had two webcams taking pictures on alternate minutes. It took quite a bit of work to get it working correctly. Then there was just the nervous waiting to see if everything would work “on the day” and would stand up to any load if there was much interest in the web-

pages. We also had to liaise with the WCA to reconfigure their router so that the Pi’s webpages could be seen on the Internet.

Callum also wanted to run a “remote station” on 40m in the car park, and we needed to extend our local network to reach his tent. This was done by using an access point 20m away and connected via a long ethernet cable. This fed a small pre-amp from our club router to a 15db, 6 foot 2.4GHz vertical on the roof via a 4m long coax patch lead. A small wifi yagi antenna in the tent then pointed back at the vertical and connected to the access point 75m away.

Lee G0MTN

Station	Bands	Last QSO time
1	10m / 15m / 20m	14.188
2	40m / 80m / 160m (+ WARC)	1.842
3	6m	50.760
4	2m / 30m / CW	144.000
5	30m / 700m FM	148.480
6	40m remoteband	7.188

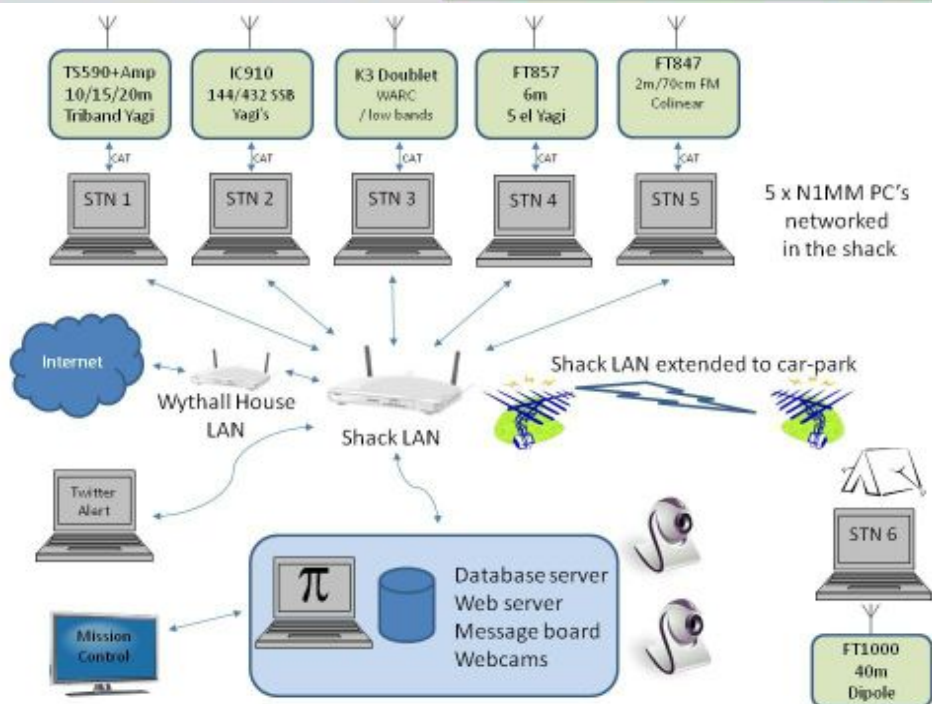
Page views on main page:

Date / Time	Callsgn	Country	Frequency	Mode	Operator
2013-11-01 23:01:45	KAAT	United States	14.188	USB	G4DVC
2013-11-01 23:02:25	GEVBE	England	145.450	FM	MIDUO
2013-11-01 23:04:01					
2013-11-01 22:58:35	G1TUK	England	145.450	FM	MIDUO
2013-11-01 22:57:17	M0WYP	England	145.450	FM	MIDUO
2013-11-01 22:57:07	ZWOPWR/M	Wales	145.450	FM	MIDUO
2013-11-01 22:56:53	G4TJU	England	1.842	LSB	G7ODN
2013-11-01 22:54:55	G4URH	England	145.450	FM	MIDUO
2013-11-01 22:52:56	G1R3B	England	1.842	LSB	G7ODN
2013-11-01 22:50:47	M0BRV	England	1.842	LSB	G7ODN

QSO Total	DXCC Total	CW	SSB	FM	PSK	RTTY
2228	66	349	1682	242	3	8

1.8	3.5	7.	10	14	18	21	24	28	30	60	144	430
128	233	623	75	136	17	116	68	406	18	264	54	

Message	Time	Callsgn
Well done all. Supreme memorable activation. really enjoyable to follow you & the site. 73. Mike	23:01:44	G4DVC
Thank you all a great job done by all enjoy party	22:54:43	G6NHY
giv us 2m 145.450 calling me	22:43:00	G6NHY
Thanks, and thanks for putting on the station a great job done	22:39:35	G4DVC
G4DVC/N no worries you are logged on Top Band here	22:37:40	G100RSGB



# G100RSGB - A Publicity Perspective

When, as project manager for G100RSGB, Chris G0EYO insisted that we needed someone to co-ordinate the Public Relations side of the operation, I guessed that it was only a matter of time before the job landed in my lap! Despite the good intentions of my friend Colin M0GJM to take some of it on board, it quickly became obvious that my background as a radio journalist for some years would be of real use in the role and so indeed it was that the job landed on my lap!

Those who know me well know I like to do a job efficiently and see it through to completion, but I knew from past experience that this aspect of G100RSGB would not be plain sailing. Trying to get any kind of publicity for what is essentially a hobby activity can easily become a thankless task.

For example, press releases have to be written in a certain style and manner if they are to tempt pressurised news editors to take them on board and then there is never any guarantee that they will feature you in their publication. Put simply, you can end up doing a lot of work and see little, if no, reward!

When it comes to inviting VIP guests, as Bromsgrove club and many others found out, this can be tantamount to a waste of time! The fact that our local MP, Sajid Javid had just been promoted to a senior governmental role just under the Chancellor George Osborne meant the demands on his time would be all the more great and would weaken any chance we had of getting such a high profile visitor to our event.

But luckily, I teach Mr Javid's niece piano on a private basis and am also on very friendly terms with her father Basit Javid, who happens to be one notch down from Chief Constable of West Midlands Police!! (He was also on my hit list of VIP guests as a reserve, though he doesn't know it!) His daughter having just scored 98% in her Grade 3 piano meant that when it came to asking a favour from the family, I was likely to be in a strong position. It's not what you know, as the saying goes...

There was still a lot to do to make sure we had such a high profile VIP guest but, thanks to the family link and a stroke of luck in that the RSGB Regional Manager had offered us a Friday (when



MPs tend to be in their constituencies) rather than a weekend which we had originally gone for, and we eventually got our man! By virtue of getting the high profile guest, it was no surprise that a subsequent phone call to the RSGB meant that the General Manager Graham Coomber G0NBI was also interested in visiting us. Add in a few local councillors, who are usually around when the MP is in town and we had ourselves a real treat in store!

I lost count of the number of emails, press releases and press packs that were sent out. Yes the BBC, ITV, Local radio and press were all invited with before and after packs compiled and sent out. However in these days of fast internet, it is simply cheaper if someone who knows what to do writes the story for them and they just publish it!

It was this approach that got us some great publicity in the Red-ditch Advertiser just prior to the event. They effectively printed my press release verbatim, (including the bit about Ed-dystone Radio, Mr President!) There is much I could tell about the ups and downs of the job, especially when it came to the late time change of the MP's visit from morning to afternoon, which necessitated complete re-writes of press packs and more sending out of alterations. Apparently we have Mr Osborne to blame for that!

However I am so very pleased and satisfied that the visit of Sajid Javid made such a splash.

We got internet publicity all over the world on Ham Radio sites and in many languages too. The fact that Mr Javid elected to put a very positive tweet on Twitter only helped! At the time of writing we are also expecting some very positive coverage in both RadCom and Practical Wireless in their January issues due out in December.

The net effect of all of this is that more people now know the name of Wythall Radio Club and let's hope this is a trend that continues.

Our best advert is our website – keeping it up to date and fresh & appealing. It was no surprise that on the first morning of operation for example, there were messages coming in from the West Coast of the US praising our operation almost before we had started. These were people who found us through the website and we cannot underestimate its importance in the role of the Club. We are in 2013 and we have to use 2013 technology to give ourselves the public profile our great club deserves.

Many years ago the IRA were denied the "Oxygen of Publicity" as it was named – well as of just now, Wythall Radio Club is breathing very deeply in that O2 rich atmosphere!

**Chris G7DDN**



# G100RSGB—The Operator's Perspective

## The Secretary's Tale

At one committee meeting the mad secretary jokingly said "we could have ladies operating each station " and the idea of having as many licensed ladies as possible on air began.

I was worried about logging and talking to so many amateurs and controlling a pile up, my fears were all put to one side as members volunteered to look after us and make sure we gained confidence.

Dawn M6UDY, Marie, G7OKF, Juliet, M6RSC, Lynne M6FAB and myself arrived on Friday evening all eager to make contact with as many stations as possible .

Dawn ,Marie, Lynne and Juliet made contact with America, Falkland isles, Canada, Europe. I managed Solihull. I'm proud of my contact as are all the other ladies of theirs. It was a marvellous experience being part of G100RSGB, looking at the webcam pictures and following the log as contacts were made became better than daytime tv.

A big thank you to all of the gentlemen of WRC for their invaluable assistance

## Anita Richards M6DUO Secretary

### The Newbie's Tale

Deep breath and down the steps to the cellar early on Thursday November 30<sup>th</sup>. Maybe not such a good idea to volunteer for the early shift but too late now ..

Delighted to see Lee who patiently sets me up on the Kenwood in the corner, identifies the right socket for the straight key (didn't we cover that on the Foundation course?) and even fires the thing up so no excuses from here on in...the call sign I have been practising but it still seems to take an age to get out and the occasional M6 creeps in from force of habit.

I don't remember the early QSO's .. the Eastern Bloc were obviously waiting although I don't think the word pile-up applies and I was dying to start messing with the beam (can't do that with a G5RV). Following Callum's mind-blowing demo the previous Tuesday night logging was a cinch with one finger and. at one point I must have been hitting 5 QSO's per hour: I sensed the need to move aside and Chairman Mike moved in.

Later I sat watching slack-jawed as Lee

with twinkling fingers (they were a blur) worked on CW at least 60 stations an hour.. fiddled with the computer-log-

ging...made a cup of coffee and delivered a tutorial to the operator next to us - and all without leaving his seat or



# G100RSGB—The Operator's Perspective

drawing breath.....

The whole thing was a great experience, whether deciphering (unsuccessfully) a vodka-fuelled call sign with John G4OJL, having my very first phone QSO with Bournville on 6 metres or just sitting round watching some pretty deft operating going on.

I even went home later and got a first CW QSO on 80 metres with G100RSGB (Thanks Stan!)

I suppose the challenge now is to find another event that brings the club together in the same way because the support, enthusiasm and encouragement made this a really memorable occasion for this novice...can we do it again sometime?

**John M6KET**

## The Old Man's Tale

I am the old man of radio but that was mostly on CB. I found that to sit with the lads of the Wythall Radio Club calling CQ G100RSGB and getting replies was really great. I am glad to me a member of the best Radio club in the Midlands. My grateful thanks.

**Jim 2E0BLP (the Voice of the Midlands)**

## The Motorist's Tale

I cant think of a better place and time to have a break down with my vehicle than Wythall Park on a G100RSGB day.

**Jon M0JMM**



# Putting the YL in Wythall Radio Club

One of the more unusual highlights of Wythall Radio Club's November activation of the G100RSGB callsign was the number of YL operators they managed to get on the air, something that was noticed by several stations they worked!

At various points throughout the operation, they had up to 5 YL operators on the microphones. Marie G7OKF, Dawn M6UDY, Juliet M6RSC, Anita M6DUO and Lynne M6FAB all worked the world as G100RSGB.

Dawn M6UDY held pile-ups on 80m and 160m like a veteran – ably assisted by husband John M1JSS who looked after the computer logging for her. She only gave up when the band noise became too much for her ears! Anita M6DUO was the most miffed of all as she didn't get to work any of the really long- distance contacts.

Wythall Radio Club is fortunate in having a lot of YL operators. Club media officer Chris G7DDN said "We wanted to make a special effort to get our ladies on the air for this unique event. It took a little planning to get them all there at the same time, but we managed it and looking back on the DX cluster entries, it was exciting to see the spots saying 'YL op' or some-

thing such like."

Club training co-ordinator, Chris G0EYO continued, "It is even more satisfying for us that 3 of our 5 YLs came into the club via our Foundation Course. It was just a shame that we couldn't get the few others we have in the club to come on air as well!"

Mike Pugh, Wythall Radio Club Chairman commented, "We made sure all the ladies felt comfortable operating by ensuring they had another operator with them who could take the strain by being there and doing the logging. Then if they felt hesitant or needed a prompt or some encouragement, we could give it."

Dawn M6UDY said, "It was nerve-racking at first and I was glad to have someone with me while I got my 'radio ears' so to speak. By the end though, I was happy to operate solo and do my own logging as well. It was a real learning experience!"

Clearly a good time was had by all, as can be seen from the photos! And the



next Wythall Foundation Course starts in January, just in case any YLs are reading!

Chris G7DDN

## Of course not all pictures were flattering!



The next issue of the Wythall Radio Club Newsletter will be published at the beginning of Jan 2014

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