



# DOVER RADIO CLUB

Affiliated to the Radio Society of Great Britain

**G3YMD**

[www.darc.org.uk](http://www.darc.org.uk)

# The Net

September 2009



**GB100LB 25<sup>th</sup> – 26<sup>th</sup> July 2009**

**See report on pages**

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## Information

Information about club activities, meeting times, contacts, training, local nets and repeaters can be found on the club website [www.darc.org.uk](http://www.darc.org.uk)

Contribution and news items for inclusion in The Net should be sent to the  
**NET Editor: Brian Joyner G8ZYZ**

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### A few words from the editor

You may notice that I have changed the font in this issue in the belief that it will be easier to read. I certainly hope that it is the case and I welcome any comments you may wish to make.

May I thank all those who have contributed to this issue of The Net.

The stock of material for The Net has now all been used so I would appreciate items you feel would be of interest to other members. Short items can be as interesting as a multi-page spread and they are very handy to fill the odd gap.

Brian G8ZYZ

## Chairman's Note

Hi all,

Well, it's certainly been an exciting time with the Special event stations that the club has run over the summer.

There was much preparation for the Bleriot event, and I am happy to report many club members came to support it, with a fair few contacts on the bands.

I would like to thank the team that rigged up before the event, to everyone that came to operate over the weekend, and of course to Peter G0KOK, the club hero, who spent many weeks filling out paperwork, and arranging so many things, which took up so much of his time. On behalf of the club, thank you Peter for taking charge and making things run so smoothly.

It was great to see our local RSGB rep at the special event too and great to see the write up in the September edition of Radcom. It's great publicity for the club. I hope we can look at another special event for next year, maybe at the same time the Dover Regatta takes place.

We also had the lighthouse weekend recently, which unfortunately was not well supported. It's a funny time of year, as most are away on holidays. Thanks to Peter and the team that ran this event, and made many contacts on the air.

Well that's about it for the summer, we are now back at the school for our regular meetings.

73, Matt M1CMN

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## Digital Radio Delivery Group Update

The UK Government plans to end all AM and National FM broadcasting in 2015 with all stations moving to the 200 MHz DAB band.

The Digital Radio Delivery Group (DRDG) is to be the body charged with meeting that target. It has been reported that the UK Digital Radio Development Bureau is to be dismantled and incorporated into a new body charged with meeting the government's 2015 digital radio switchover target. The newly-created Digital Radio Delivery Group will take over DRDB's responsibilities.

When the radio digital switchover happens in 2015 potentially hundreds of millions of AM and FM radios in the UK will be rendered useless.

# GB100LB

## Louis Bleriot special event station report

**Peter G0KOK**

Firstly my sincere thanks to all who assisted me in the preparation and execution of the event, in particular Ian G3ROO for his unwavering efforts in constructing, testing and erecting the aerial systems, all of which worked very well indeed, it was a shame that more was not done in respect of two metres, the failure of the two metre beam to resonate correctly was disappointing, however, we did have a vertical up and our local repeater GB3KS was a good standby, perfect for the Duke Of Yorks with low power operating since no mains power was available at that location.

Many weeks of preparation preceded the event, countless emails and phone calls to all parts of the globe in order to spread the word, it paid off, GB100LB appeared in Practical Wireless, Radcom and QST, it was also to be found in Amateur Radio magazines in Australia and New Zealand, our local RSGB rep' Bill Walker M0WTW threw his weight behind the event securing a give-away prize and literature from the RSGB, and then something I was quite unprepared for, the writing up and submission of a 'Risk Assessment', not something I have ever had to deal with till now, my thanks to Brian G8ZYZ for his "here's one I made earlier" which I was able to modify successfully.



**Peter G0KOK operating with  
David G8GJQ logging**



Photos by Marion 2E1BTG  
**Pat M0EEH on the key in Mick's  
Landrover mobile shack**

It was great that we were able to use the Dover Sea Cadets HQ as our main operating station, the facilities were all there with a few car parking spaces, my thanks to John G7SXJ and David G8GJQ for staying on-site overnight for added security, John G7SXJ has sent a letter and personal donation to the Sea Cadets thanking them for their hospitality and the use of their facilities, I will be doing the same with a donation from DARC, I have already delivered to them a bag of toilet rolls, toilet cleaner and soap etc to more than cover anything we may have used while there, we made sure the site was cleared and put back to the state in which we found it on our exit, I am sure we would be able to use the site should we need to at a future date.

Ian G3ROO was keen to get going as early as possible at the start of the week preceding the GB100LB weekend, it was a good move, lots to do hauling all the equipment about, pulling cables into trees and setting up, by Thursday the main station was near enough set up leaving just the Duke Of Yorks site to do on the Friday, disaster!!!!!!!, it poured down, and our

efforts to set up the Duke Of Yorks station were abandoned leaving no alternative but to return on Saturday and complete the station set-up, this unfortunately delayed my being at the main station to set things going, a minor hiccup, soon we were underway and the station was buzzing with many contacts logged and members of the public visiting the station, often en route to the Bleriot memorial, RSGB rep' Bill Walker M0WTW also put in an appearance and took photo's, one of which and a report appeared in the September RADCOM.



**Tony G4IMP operating the Pro 3 while Anne G4RJZ logged**



Photos by Marion 2E1BTG

**Tony 2E0VYW operating the FT- 897**

To conclude, from the comments, feedback and encouragement I have received I think the event can be judged a success, and a very good opportunity taken up to shine a spotlight on the Dover Amateur Radio Club, it was a lot of work, however, now recently retired it made the organizing a lot easier, I was unable to get back to the Duke Of Yorks site during the event, however, members manning the site report that contact with the public was good for us but a shame there was not more for the public to see on the site other than the aircraft, the total QSO's logged were 661, I have had some direct QSL cards all of which have been replied to, the initial print was 200 QSL cards, clearly we will require another 500 to cover the log entries I will get these out as soon as possible, I would like to thank members for their presentation to me of a framed photo of the QSL card, signed by the pilot of the Bleriot replica plane, a very nice thought.

73, Peter G0KOK



Photo by Brian G8ZYZ

**Peter G0KOK looking very pleased with his lunch, freshly cooked by John G7SXJ**

As mentioned in the report above, the club also had a stand at the Duke of York's school where the static and flying displays took place. This was manned by Catherine M1CVF, Marion 2E1BTG, Matt M1CMN, Ben M0TUX and Brian G8ZYZ. Rather an overkill in hindsight but when the wind got up they were all required to prevent the gazebo from taking off and doing its own flying display !



Photo by Ben M0TUX

**The G3ROO mobile shack with Marion 2E1BTG sitting at the information table**

## **Dover 2009 event - Duke of York's School**

### **Matt M1CMN**

We are lucky to have several members of the Dover Radio club interested in DSTAR, experimenting with new technologies, and some experts on 23cms. We brought all of this together during the Bleriot event to have a live webcam link to the Dover Radio Club website running, which proved very successful.

At the start of the project, I asked Brian G8ZYZ for assistance with the 23cms antennas and he agreed, and I installed a 36 element beam on my tower at the GB7FK DSTAR repeater site in Capel. The other antenna was a 20ele antenna which we installed on the ROO's mobile shack at the Duke of York's School.

The radios we used were the Icom ID1 radios, designed for high speed data. The radio at the repeater site end was connected to the home computer network, which had internet access. The radio at the Duke of York's end was connected to a laptop, which in turn was connected to the webcam.



Photo by Ben M0TUX

**The Icom ID-1 transceiver and the laptop conveniently housed in Ian's mobile shack**

The fun started trying to line up the beams, as on 23cms with the size of beams we were using had a very narrow beam width so it was quite hard, probably made harder by trying to line up the 20ele to the 36ele by guessing! Ben M0TUX took charge on the computer side, and in the end we had a very fast link on 23cms back to Capel.



**A lovely photo by Ben M0TUX of the Lancaster bomber passing above the 23cm beam**

Once working, we located the webcam on a pole pointing at the planes. The image was sent at regular intervals back to Capel, via the ID1 radios, and then onto the Dover Club website, where many members and visitors looked at the site.

The data transfer was very fast, and was a great experiment.

I would like to thank Ben M0TUX and Catherine M1CVF for their hard work getting things running, to Brian G8ZYZ for the loan of the 23cms antennas, to Don G4TKR and John G3YCV for the loan of the Icom radios and their technical support in getting it working.

73 Matt M1CMN

*We believe that it is the first time this method has been used to send live video images from one location to another and then display them display on a website in this country. If not, it is certainly the first time in this area.*

*I must have been a unique for any stations who worked GB100LB to be able to see what was happening in the display area within seconds. Ed.*



# Getting the most out of your wireless Pt 2

## Width and Shift

Ian Keyser, G3ROO

Noticed those two knobs and know what they do.... really know?

Well, I know some do not because the club 737 was returned to me with distorted audio... yes, it was horrible! The reason was that the width control was at narrow and the shift control off to one side! Under NORMAL operating conditions these should both be set at their centre position, that is maximum width and no shift.

Firstly the width control. This controls the width of the passband of the Intermediate amplifier stages of the receiver. You can buy a narrow SSB and Narrow CW filter but the manufacturers realised that these filters were expensive so they provide them as an option.

However in the set there are already filters that can be used to make a lower quality narrow filter that is adjustable in width for very little extra cost. When Yaesu did this back in the seventies it was immediately popular and other companies had to follow suite. (Yaesu had not lost the way then... in fact they produced the best gear, especially for the engineer to repair)

This means that if you have an interfering station alongside the station you are trying to copy you are able to reduce the bandwidth so cutting out some of the unwanted signal without reducing the readability of the wanted signal too much. This can increase the readability of the wanted signal

Kenwood, not to be outdone, introduced the shift control. This was possible due to the introduction of the digital synth into transceivers which enabled several oscillators within the set to be shifted simultaneously by exactly the same amount. To describe the action is excessively complicated to explain here, but sufficient to say it was useful, but little more than a gimmick.

The reason for this is it appears that the whole filter can be shifted sideways away from the unwanted signal.... however you may well just shift it into another signal on the other side that is equally unwanted. A slight advantage can be gained by using both width and shift together. Soon after introduction Yaesu included it and came up with a nice knob arrangement that allowed the operator to see what was happening at a glance.

If the IC-737 had similar knobs I think the finger trouble fault would have been spotted on the day!

# Home brewing large variable capacitors - Johns way

Brian G8ZYZ tells the story supplemented by photos provided by John



**John Morrison G0ICT with one of his homebrew variable caps**

Those of us who have known John for some time will be aware of his exceptional skills designing and building almost anything out of metal. Unfortunately illness has slowed John down and now prevents him from machining absolutely everything from scratch to the exacting standards he has always set himself.

Not to be beaten John has designed a method of building variable capacitors for high power ATUs using materials readily available from local outlets. His design and methods were well documented in an excellent article published in the August 2008 edition of Practical Wireless (PW) and I do not intend to infringe their <sup>1</sup>copyright so I cannot use the drawings nor photos supplied to them but I do want to draw you attention to John's talent.

The full method of construction can be found in the PW article and I am sure that John will be pleased to advise anyone wishing to construct their own v'caps so it is my intention to provide a very simple overview in this article.

Aluminium sheet is marked for cutting and drilling against pre-made templates for the stator plates and rotor vanes and then cut using a hacksaw and coping saw. A pillar drill is used for drilling the fixing holes and finishing is carried out using a selection of files. Minor blemishes are removed with emery paper. The two end checks are marked then cut to shape from thick Perspex and drilled according to the template.



**Front end stock and fixings**



**Rear end stock and fixings**

All the rods are cut from threaded studding which is bolted onto the front Perspex end stock before the vanes are secured in place with nuts, the bottom studs are sleeved using aluminium tube. The rotor end bushings are cut and adapted radiator valves.



**One of the capacitors built by John**

John purchased his materials from B&Q, Homebase, and Screw Fix, the only exception being scrap perspex from a local signmaker. The cost of making a 500pf variable capacitor using this method is approximately £25, a saving of about £65 - £70 against purchasing new.

If you are tempted to have a go at building one I am sure John will be delighted to advise. Club members can find the e-mail address for John in the members section of the G3YMD Yahoo group.

<sup>1</sup>*It should be noted that although John provided all the design drawings and photos the publishers hold the copyright to the complete article.*

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## **A Christmas gift for the person who has everything**

Planet Earth has entered the age of the Personal Satellite with the introduction of Interorbital's TubeSat Personal Satellite (PS) Kit. The new IOS TubeSat PS Kit is the low-cost alternative to the CubeSat. It has three-quarters of the mass (0.75-kg or 1.65-lb) and volume of a CubeSat, but still offers plenty of room for most experiments or applications. And, best of all, the price of the TubeSat kit actually includes the price of a launch into Low-Earth-Orbit on an IOS NEPTUNE 30 launch vehicle. Since the TubeSats are placed into self-decaying orbits 310 kilometers (192 miles) above the Earth's surface, they do not contribute to the long-term build-up of orbital debris. After operating for a few months (the exact length of time on orbit is dependent on solar activity), they will safely re-enter the atmosphere and burn-up. TubeSats are designed to be orbit-friendly. Launches are expected to begin in the fourth quarter of 2010.

Total Price of the TubeSat Kit including a Launch to Orbit: \$8,000!



## National Hamfest 2-3<sup>rd</sup> October 2009

The National Hamfest that is being organised by the Radio Society of Great Britain and the Lincoln shortwave club has announced some new features for the event taking place at the Newark & Notts Showground in Nottinghamshire on 2 and 3 October.

### PRIZES GALORE

One of the highlights for visitors to the Hamfest will be the free prize draw held over the weekend. One lucky visitor will collect the star prize a Icom IC-7200, kindly donated by Icom UK. More prizes are promised with the prize fund already containing, the Super Antenna YP3 3-element 6-band portable beam (better known as a Beam in a Bag) that has been donated by Martin Lynch & Sons and the Heil Quiet Phone Pro headset that was launched at Dayton Hamvention earlier this year from Waters and Stanton. There is also the Yaesu VX-8 free prize draw that will operate daily during the show. That's over £2,000 of prizes and there's still time to go!

### TICKETS OFFERS

The Norwich Amateur Radio Club, is organising a coach trip to the National Hamfest on the 2-3<sup>rd</sup> October. They are taking advantage of the very special offers on group tickets purchased prior to the event. For every ten tickets purchased, you receive three more tickets free. There is also an offer for the car full of friends planning a trip, where you buy four tickets and receive a fifth ticket free.

These special offers are in addition to the £1.00 saving made on the 'on the day' when bought online in advance. For younger visitors the Hamfest admits those under the age of 16 free when accompanied by a paying adult.

All the major UK amateur radio manufacturers and traders are now confirmed as attending the event but for the latest information and online booking for the National Hamfest, check out [www.nationalhamfest.co.uk](http://www.nationalhamfest.co.uk).



**There is plenty of parking and space at the Newark and Notts showground**

# Training

## Foundation Course - David G0DQI

We completed our 27th Foundation Course on Saturday 12<sup>th</sup> September. I am thrilled to be able to report that all candidates were successful, and I'd like to offer them the warmest congratulations of the team. This means that we have managed to maintain our success rate of 92%, which compares with the national average of 75%. In all, our foundation courses have seen the birth of 169 new amateurs, many of which have joined Dover Radio Club.

I should like to thank Brian G4SAU and Ben M0TUX for their invaluable help, and their considerable resourcefulness at overcoming a few difficulties in getting the HF rigs up and running. I'd also like to thank Graham 2E1ITE, our exam invigilator, whose geniality and calm efficiency does much to calm the fluttering heart of many a candidate before the great ordeal!

But special thanks should go to Brian G8ZYZ. He had not been at all well during the past two weeks, but he soldiered bravely on and delivered his usual high standard of performance.



Photo by Graham Cahill 2E1ITE

Pictured left to right:-

Ben Sutton M0TUX(Assistant Instructor), Jessica Welsh, Susan Willsher, Theresa Small, Peter Sands, Robert Hillier, hidden behind him Brian Joyner G8ZYZ (Instructor), Robin Jobber, Lee Hillier, Brian Cuff G4SAU (Assistant Instructor), Kurt Nunn and David Harding G0DQI (Lead Instructor).

## **Intermediate Course – Brian G8ZYZ**

There will not be an Intermediate course this October due to the exceptionally low number of people currently showing interest in progressing to this level. This is hard on the two who are keen to progress but the fact is that it doesn't make sense to have a teaching staff of four, plus an exam team of two for a few students.

## **Advanced Course – Brian G8ZYZ (Lead instructor, Tony G4IMP is on holiday)**

News of Advanced training is much brighter. There has been a good response from members of the last Intermediate course who wish to progress so Tony will be commencing the another Advanced course next week, after his well earned rest.

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## **Club Christmas Social**

**Please make a note in your diary that the Christmas social will take place at the St. Margaret's Resort Hotel on Wednesday 18<sup>th</sup> December**

The Christmas social is open to members, partners, family and friends.

Noting the excellent reports received from those who attended the event last year the very substantial seasonal buffet will be similar this year.

At the time of writing the menu and price were not available. I should have it within a week so please see the club website, Yahoo group notification and further details at club meetings. I will be taking bookings from 21st October. The closing date for bookings and your payment will be 14<sup>th</sup> November as we have to notify final numbers and pay the full amount one clear month prior to the event.

Brian G8ZYZ



# Dover Radio Club Programme September 2009 to January 2010

## Sep

- 16<sup>th</sup> Natter and Operating Evening Plus Committee Meeting
- 23<sup>rd</sup> Discussion evening
- 30<sup>th</sup> My Shack – Three 10 minute talks by members

## Oct

- 7<sup>th</sup> Natter and Operating Evening
- 14<sup>th</sup> Radio Scanning – A presentation by Matt M1CMN
- 21<sup>st</sup> Introduction to the club winter project – A Portable H.F. vertical – Ian G3ROO
- 28<sup>th</sup> School Holiday (*Half Term*)

## Nov

- 3<sup>rd</sup> Natter and Operating Evening plus committee meeting
- 11<sup>th</sup> An overview of Amateur Television – Brian G8ZYZ
- 18<sup>th</sup> Natter and Operating Evening
- 25<sup>th</sup> A practical demonstration of PSK plus discussion

## Dec

- 2<sup>nd</sup> Natter and Operating Evening
- 9<sup>th</sup> Club winter project – A Portable H.F. vertical Session 1 – Ian G3ROO
- 16<sup>th</sup> Club Christmas Social at the St. Margarets Resort – Book with G8ZYZ
- 23<sup>rd</sup> School Christmas Holiday
- 30<sup>th</sup> School Christmas Holiday

## 2010

- Jan 6<sup>th</sup> Return to the club for a Natter and Operating Evening

### PLEASE NOTE

On the odd occasion the committee may be forced to change the programme at short notice due to circumstances beyond their control. Please check for updates on the club website regularly.