

Club Calendar

Meetings:

Every Wednesday: 8pm
Every Sunday: 10:30am

More formal events are on the last Wednesday of the month, 7-30pm for 8pm.

Please note - as an ongoing experiment, some formal events will also be held on a Sunday. Members and non-members welcome.

Dates:

April 13th 2014

West London Radio & Electronics Show - Kempton Park Rally

April 23rd 2014 (Wed)

Used Equipment Sale

May 18th 2014 (Sunday)

The Introduction of FM for Sound Broadcasting in Britain.
Professor Tony Davies

June 14/15th 2014

June 21/22nd 2014

International Museums W/Ends
CARC Special Event Station
Gatwick Aviation Museum

June 25th 2014 (Wed)

The Role of Wireless Amateurs in WW1.
Dr Elizabeth Bruton

July 5th/6th 2014

VHF National Field Day

To be scheduled:

Visit to GB3MH/GB7MH
Malcolm G3NZP

Please check the CARC blog for any changes to the program:
www.carconline.blogspot.co.uk
or contact Brian, 2E0MZB:
briangstrada@gmail.com

News Bulletin items contact
G4PEO: john@g4peo.net

Associated Repeaters: **GB3MH** 145.625Mhz CTCSS 88.5 **GB7MH** 439.6375Mhz D-Star
GB3WS 145.750Mhz CTCSS 88.5

CARC News

Welcome to the **April 2014** edition of the News Bulletin. Commencing with this edition, it is hoped to settle into a two monthly publication cycle. There is a lot of news and information to squeeze in hence this bumper issue!

Calendar Items

Although currently a 50/50 split within the club as a preference for Wednesday or Sunday formal meetings, Sundays are proving successful. With that in mind, please don't forget to take note of the forthcoming formal meeting dates/actual days. Also a reminder that the two speakers for May and June will have travelled considerable distances for our benefit, so please make every effort to attend for what will be very interesting presentations. If you have any suggestions for future meetings, **Brian, 2E0MZB** will be pleased to hear from you.

The earlier (March 9th) two part Sunday talk by **John, G3VLH**, (Elecraft K3), and **Peter, G4FYY** (Coaxial Loop antennas), was, at the last minute split into two consecutive Sundays as John's talk proved so interesting regarding his K3 building experiences that the audience wanted more..!

This also gave more time for Peter on the following Sunday to demonstrate his loop antennas, and the very interesting results he has obtained, especially when used with the U2/WSPR.

Peter has kindly made available for downloading the plans for his loops (via his Dropbox account – see Peter), and also the 75 ohm coax required for the antennas, (donation to the tea club funds please!). No excuses now for not having the space for an antenna, as I'm sure, (in the eyes of the beholder), one will look very nice on the dining room table, or on top of the (non plasma) TV....

Thanks go to John and Peter for their very interesting presentations.



Peter, G4FYY Coaxial Loops Presentation.

Club Dignitaries (Committee Members & Others)

President: Derek Atter (G3GRO)
Hon Treasurer: Howard Palmer (G4PFW)
Hon Secretary: Phil Moore (2E0TZZ)
Programme Secretary: Brian Gutteridge (2E0MZB)
Committee Member: Alex Sheppard (M1YAP)
Shack Managers: Mike Davies (G0KAD), Rob Barter (M0ZAF)

Chairman: Keith Evans (G3VKW)
Vice Chairman: John Longhurst (G3VLH)
Training Secretary: Malcolm Harman (G3NZP)
QSL Manager/News Editor: John Pitty (G4PEO)
Committee Member: Richard Hadfield (G4ANN)

Calendar cont: Two items of specific note:

International Museums Weekends: 14/15th & 21/22nd June

<http://www.radio-amateur-events.org/IMW/>

CARC is hoping to put on a special event station over both weekends at the Gatwick Aviation Museum, Charlwood:

<http://gatwick-aviation-museum.co.uk/>

Final details still to be confirmed, but this is a good opportunity to raise the profile of both club and museum. We will be applying for a special event call, plus placing an entry on QRZ.COM, and also designing/printing QSL cards for the occasion. Operators will be required for what should be two enjoyable weekends, (relaxed operating style!). Please contact **John G4PEO** or **Howard G4PFW**.

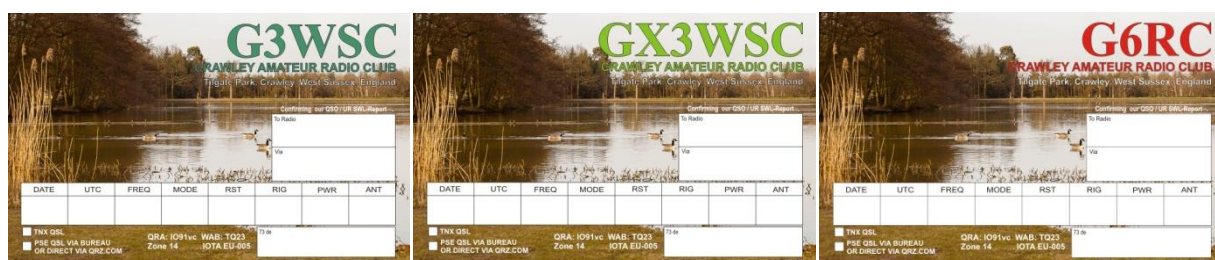
VHF NFD, July 5/6th

This year, **Mike, G0KAD** has handed over the organizational reigns to **Alex, M1YAP**. Many thanks go to Mike for all his sterling efforts over the previous years. Alex of course needs your support, so please let him know if you are available, sooner rather than later..

Club News

CARC Yahoo Group - A reminder that if we missed you, or you missed the original invite/your invite lapsed, and you would like to join in, please contact **John, G4PEO** or **Keith, G3VKW**.

We now have new QSL cards for the three club calls, **G3WSC**, **GX3WSC** and **G6RC**. Photo; (Tilgate Lake, Crawley), and artwork by **John, G4PEO**; printing and 'chopping' courtesy **Phil, 2E0TZZ**.



However, in order to be in a position to actually have contacts and send cards out there was a small matter of repairing the 2m and HF beams, plus replacement of the tower winch cables. This was successfully achieved over two Sundays during February and March, by **Mike, G0KAD**, and **Rob, M0ZAF**, ably assisted by **Adrian, 2E0FAV**, plus various club members.



1st Sunday: Mike, G0KAD winching over the tower.



1st Sunday: The Chairman, G3VKW (left of picture) checking on progress.



2nd Sunday: Rob, M0ZAF, threading the new winch cable.

RSGB AFS Contest

This year, the Chairman decided CARC should have an entry in the AFS (80m) CW and Phone contests, plus the 80m Club Championships, which are a series of short (1.5hr) weekday evening contests, held once a month, February to July, on 80m (phone, CW and data), aimed promoting competition between Affiliated Societies. The 80m AFS CW event took place on the 12th January, and phone on the 18th January; both events were 1400-1800hrs. All operating except the Crawley 'B' AFS Phone station (club house), took place from members homes, using in some instances, what can only be described as extremely less than ideal antennas for 80m, especially when compared to the 'big boys' who take these events extremely seriously. But we gave it a very credible go with the results as follows:

CW

G3YSX, G3VKW, G0KCH, 1870pts, Position 62 (87 entries)

Phone

CARC 'A' - G3VKW, G4PEO, 2E0TZZ, G3YSX, 3280pts, Position 32 (91 entries)

CARC 'B' - G6RC (Rob M0ZAF), 520pts, Position 84

Stewart, G3YSX, and **Rob, G6RC/M0ZAF**, were only able to operate for about an hour each in the phone section.

Still ongoing is the 80m Club Championship, with **John G4PEO**, (phone), and **Phil, 2E0TZZ**, (phone & data), taking part on behalf of CARC. If you would like to take part, see **G3VKW**; it's good fun, although a good test for receiver front-end resilience!

Club Project

Peter, G4FYY, has kindly provided the analysis he conducted relating to the U2 WSPR reports received by **Barry, M0HBM**, and **Richard, G4ANN**, where they were both 'spotted' by the same stations.

In addition, Peter contacted **Hans, G0UPL**, (U2/U3 designer), to discover what new kits may be in the pipeline that could also be considered for the next club project. Hans has already moved onto the new and improved U3 which I believe some members have constructed – feedback on building/using the U3; signal reports obtained, welcomed..!

G4FYY WSPR Reports Analysis:

Barry, M0HBM started an interesting discussion on the Yahoo CARC-members forum on why he is not getting a similar quantity and 'quality' of spots being seen by **Richard, G4ANN**, given that both are working in the same band and same power. Barry is using a G5RV while Richard has a Vertical at roof height, and while antenna differences are obviously a factor, I didn't believe they were the *only* factor, given the significant differences in the reports. I have examined the WSPR database for the three days 10, 11 and 12 March, (3 days taken at random) and extracted the WSPR reports from one station (W4AC). Results are summarised below, from which the following becomes apparent ...

- i) **G4ANN** logged 59 spots by W4AC compared to **M0HBM**'s 7 spots over the same period.
- ii) The 7 highlighted rows indicate when W4AC spotted both **G4ANN** and **M0HBM** at the same time, (within 4 minutes). Interestingly, the average of the SNR's over these 7 spots shows that **M0HBM** reports are about -3dB compared to **G4ANN**. This would seem to be a more credible difference due to the antennas.
- iii) In one case, the SNR report for **M0HBM** was actually 7dB *greater* than for **G4ANN**.

While this is only a small data sample, it does suggest a couple of possibilities that would be easy to eliminate. I have emailed Barry that he might change his WSPR frequency to *exactly* the same frequency as Richard and also to change the START time to 2, say.

Date	Call	Freq	SNR	Drift	Grid	dBm	Watts	By	Loc	km	miles
2014-03-11 4:30	G4ANN	14.097121	-17	0	IO91wd	+23	0.200	W4AC	EL86	7271	4518
2014-03-12 9:44	M0HBM	14.097126	-18	-2	JO01ac	+23	0.200	W4AC	EL86	7283	4525
2014-03-11 4:30	G4ANN	14.097098	-17	1	IO91wd	+23	0.200	K5XL	EM12kp	7691	4779
2014-03-21 8:44	M0HBM	14.097099	-29	0	JO01ac	+23	0.200	K5XL	EM12kp	7703	4786
2014-03-11 4:40	G4ANN	14.097112	-22	0	IO91wd	+23	0.200	KE7A	EM12kx	7663	4762
2014-03-11 8:44	M0HBM	14.097117	-24	-2	JO01ac	+23	0.200	KE7A	EM12kx	7675	4769
2014-03-14 2:30	G4ANN	14.097137	-11	0	IO91wd	+23	0.200	W4MO	EL87	7190	4468
2014-03-11 7:26	M0HBM	10.140179	-26	-1	JO01ac	+23	0.200	W4MO	EL87	7202	4475

Peter's, G4FYY, reply from **Hans, G0UPL**, regarding future kit ideas. *(Reproduced with Hans's permission).*
Timescales of course are yet to be determined, based on free time available to Hans, who also has a full time job and young family to consider.. However, please let Peter know if you have a particular preference in terms of a club project..

From **G0UPL**:

I have plans for several new kits that are in various stages of development, but it is impossible to make any promises regarding dates!

1. Receiver. This will be an 80 x 37mm PCB, same size as the U3, that will bolt on the back of the U3. The U3 will provide the oscillator signal from the DDS, and RX/TX switching etc. Just as the U3 is multi-band-able by addition of the relay-switched LPF kit, the receiver will also operate on multiple bands. Any up to 10MHz. So this receiver kit will be a U3 extension. But it won't go on a U2 I think.

2. Signal generator and GPS-disciplined 10MHz reference: GPS is optional. Without GPS it is just a 0-40MHz signal generator. With GPS, you also get a 10MHz reference signal. Both the fixed 10MHz output and the variable signal generator output are GPS locked to better than +/-0.1Hz. The signal generator can also be used with the receiver module, to make a standalone receiver without U3.

3. Relay-switched attenuator board kit, to follow the signal generator and provide precisely stepped signal levels.

4. CW transmitters, 5W output, any single band. This can be combined with the existing relay-switched LPF kit to make it a 6-band CW transmitter. One could also add the receiver module, to make it a single or 6-band CW transceiver.

So overall the kits range:

- U3 QRSS/WSPR transmitter
- Range of 12 plug-in Low Pass Filters
- Range of 12 plug-in Band Pass Filters
- Relay-switched LPF board
- Relay-switched attenuator board
- Signal generator / GPS disciplined reference
- Receiver
- CW transmitter

So the concept is a range of modules which can be connected together to make anything from the basic U3, to transceivers, test equipment, etc. Everything can operate from 2200m to 10m bands (12 bands total).

I am also working on manufacturing a range of aluminium cases to house these kits.

I'm not sure what will come first or when, though.

73 Hans G0UPL

Member News

From **Bob, 2E0CXF**: For a few weeks now I have been trying to organise a local net for those who use Clansman equipment. The Clansman VHF PRC 349, 350, 351/352, 353 radios use 25Khz channels FM, which limits what frequencies can be used. I will be on air on Tuesdays from 2000 – 2100hrs (local), using 70.400Mhz for the calling frequency, If any member would like to join in it is completely free:-)