

Meetings:

Every Wednesday: 8pm

Every Sunday: 11am -1pm

Formal events are on the last Wed of the month, 7-30pm for 8pm.

Please note: some formal events will also be held on a Sunday.

Members / non-members welcome.

CARC Dates:

October 4th (Sat)

Club Dinner – The Crown Pub, Turners Hill

December 5th (Friday)

Fish & Chip Supper (Club Hut)

Also of Interest/Other Clubs:

Crystal Palace REC

All Saints Parish Church, Beulah Hill, London, SE19 3LG. 7-30pm
More Details - Secretary:

alan.odonovan(at)btinternet.com

3rd Oct: Railway Signalling

4th/5th Oct: Crystal Palace

Transmitter Open Day(s)

7th Nov: Guide Dogs for the Blind

Mid Sussex ARS

Millfield Suite, Cyprus Hall, Burgess Hill, RH15 8DX. 7-45pm

Details: G1TDL: 01444 246899

10th Oct – DC to Light, G4ZCS

28th Nov – Surplus Equip Sale

RSGB Convention 10th -12th Oct

www.rsgbevents.org

West London Radio & Electronic Fair - 9th November

Kempton Racecourse, TW16 5AQ

CATS 37th Bazaar - 23rd Nov

Scout Hut rear of Lion Green Road Car Park, Coulsdon. (See next page)

Updates to the CARC program check:

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 / 88.5 **GB7MH:** 439.6375Mhz D-Star

GB3WS: 145.750Mhz / 88.5 **GB3NX:** 430.8500Mhz / 88.5 (Input 438.4500Mhz)

CARC News

Welcome to the **October 2014** edition of the News Bulletin.

Unfortunately not too much news this time round, most likely in some part attributable to the excellent summer weather, where (unfortunately) there was no excuse for not catching up on those 'exciting' non radio related jobs such as painting or clearing the guttering, rather than 'being forced' to take refuge in the shack due to yet another summer rain deluge which never really materialised this year..

For this edition, **Malcolm G3NZP** has provided updated information and photographs relating to **GB3MH**, as well as a further exam success, whilst **Peter G4FYY**, who was officiating at the recent Microwave Roundtable held at CARC HQ, was able to put together some words about the gathering for this newsletter despite understandably feeling rather 'frazzled' post event...! Many thanks to Peter for the article and for overseeing the event, and also to **Dick, MORXZ** for doing his usual sterling job as provider of refreshments, and to **Brian, 2E0MZB** for checking visitors in.

An important reminder regarding the Ofcom consultation document relating to proposed changes to the terms and conditions of the UK amateur licence. Do please take the time to read and respond to the proposals, some of which are 'interesting' to say the least.

The closing date is 5pm on the 20th October, and more information, including a link to the on-line Ofcom response form, plus RSGB commentary on the proposals, can be found here:

<http://rsgb.org/licencereview>

Finally, An update from the Mid Sussex ARS newsletter regarding the status Haywards Heath 70cm repeater, **GB3HY**. Unfortunately, it is continuing bad news, as GB3HY it is still off the air due to aerial, receiver and site issues, with no foreseeable date for reactivation.

Calendar Items

As always, a reminder, if you have any suggestions for future meetings, **Brian, 2E0MZB** will be (very) pleased to hear from you.

Club Dinner – Saturday October 4th, The Crown, East Street, Turners Hill, RH10 4PT.

A reminder that the pub does has a large car park at the rear, and to contact the club secretary **Phil, MOTZZ**, for any last minute queries etc.

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:

Fish & Chip Supper - Friday Evening, December 5th, CARC Hut.

Yes, it's that time again, so here is your advanced notice, (although not quite so bad as seeing Xmas decorations in the shops in August!), of this very popular annual club event.

As always, seating is limited, so please make an early 'reservation,' by contacting **Phil, M0TZZ** (secretary@carc.org.uk), sooner rather than later. There will also be a list on the notice board.

Don't forget it may be possible to arrange an alternative to fish if required.

CATS 37th Bazaar - 23rd November, Coulsdon. *A note of caution if you intend to visit this popular event.*

There are plans to redevelop the site of the car park that is used for the CATS Bazaar. Currently, this work is due to begin in January 2015.

However, it has recently been learnt that there are plans to commence an archaeological dig on the site of the present car park, commencing on November 14th, i.e. 9 days before the proposed CATS Bazaar. CATS are hoping they can find a way of working with other interested parties so that the bazaar can go ahead, more or less as normal, as the building in which the Bazaar is held is not directly affected by the redevelopment proposals. It may however be necessary to make last-minute changes to plans for the 2014 CATS Bazaar, particularly for parking and access.

Therefore, anyone proposing to attend this year's CATS Bazaar is advised to check the CATS website (www.catsradio.org) before setting out as there may be last-minute changes to access or parking arrangements.

Previous Meetings & Events

HF Antennas - a presentation by Keith, G3VKW

Was an excellent discussion on the various flavours and varieties of mostly wire antennas that can be employed on the HF bands to good effect, for either dx-ing, 'local' contacts or both.

The talk was arranged virtually at the last minute in order to fill the usual monthly slot, so many thanks to Keith for stepping into the breach, for what was a very interesting and informative presentation.

No excuse now for not starting that new aerial project in time for winter, now that HF conditions are picking up following the summer doldrums...



Keith, G3VKW in full flow.
Photo G4PEO

Club News

Microwave Round Table –Sunday 21st September – Report by Peter G4FYY

The Crawley Amateur Radio Club was delighted to host the Microwave Round Table again this year at Hut 18. Visitors from as far afield as Leicester began arriving at around 09:00 hrs and by the 'official' start time of 10:00 hrs, the table sale was in full swing with items ranging from SMT components to large microwave dishes. **Brian, 2E0MZB** who was 'on the door' remarked that at one point, the equipment passing through the hut was about the same in both directions.

The table sale was a great success, with many 'nuggets' being mined from two free lucky-dip boxes, one of which was kindly donated by **Derek, G3GRO**. The other box contained items that have been on the 'Free Stuff' table in the Hut for ages. It was good to see these items go to good homes at last!



The table sale.
Photo GAPEO

Dick, MORXZ did a sterling job as master chef producing a seemingly endless supply of cheeseburgers, sausages, bacon butties, coffee and tea with apple pies and Bakewell tarts to follow.

This year we decided to make a small charge at the door (£1). In return, each visitor was given a 'free drink' voucher and a numbered ticket for a chance in a prize draw. The prize was a manually operated coaxial changeover switch for frequencies up to about 1GHz, at least, that's what the hand-written label suggested. The donor of this item shall remain anonymous in case of repercussions, (however, the handwriting looked suspiciously like Derek's).

At 12:30, the tables were cleared and chairs were arranged for the afternoon talks. Unfortunately, Derek G3GRO was not able to attend this year and it fell to **Peter, G4FYY** to make the opening address. There were three speakers in waiting, all experts in their field.

First on stage was **Mike, G3LYP** whose talk was entitled 'Tools for Microwave Metalworking'. Mike made an excellent presentation of the tools in his extensive workshop and how to use them. His talk was well illustrated and laced with remarks that had a certain familiarity like why he fitted a handle to a drill bit for deburring holes – it cuts your fingers otherwise. And there was I thinking this only happened to me!

Next on centre stage was **Jeff G4HIZ**. His talk, 'Microwave Transverters using Min-YIG local oscillators' left no doubt that Jeff is master of his field and I must confess that some of the material was over my head although from the questions at the end, it seems I was in the minority. In summary, Jeff described a design for a 10GHz rx/tx transverter using a Stellex YIG oscillator available on eBay at surplus prices.



G4HIZ Transverters & Equipment *Photo G4PEO*

Much of the talk focused on phase noise performance. Jeff 's talk included a practical demonstration of the transverter receiving the 10GHz microwave beacon at Reigate using just a small horn antenna. A near noise-free FSK signal was displayed in a clean waterfall display. A second demonstration used an identical transverter to transmit video from Jeff's car parked a few metres away and received by the first transverter with the horn. The transmit power was just 2mW. The receive horn and a small transmit dish were side by side but not aligned. Reception was therefore by signal scattering from nearby objects but sufficient to give a perfect 'Q5' picture.



G4HIZ dish and horn positioned ready for the demonstration. *Photos G4PEO*



After the break, **Roger G8CUB** presented the final talk of the afternoon entitled "Using surplus synthesisers". Again, discussion about the all-important phase noise dominated and the measures taken by Roger to improve performance were described. Roger's expertise was soon apparent. His web site, 'G8CUB's Microwave Page', is a mine of information on microwave projects (search on G8CUB).

The meeting closed at around 4:00pm. The general view was that the day had been a great success although one or two confessed they had spent more money in the sale than intended!

We look forward to hosting the Microwave Round Table Meeting again next year with equal success.

Training - Malcolm G3NZP - Lead Instructor

Meet Maciek Konstantynowicz

I would like to tell you about Maciek. I received an e-mail from him on August 27th enquiring about the possibility of gaining a Foundation licence by September 27th. This deadline was to coincide with the Windsor Half Marathon, a charity event around a course set within the picturesque surroundings of Windsor Great Park with Maciek's particular charity being Cystic Fibrosis. So why the need for an amateur licence?

The idea was for his family in Poland to track his progress throughout the race and what better way than for Maciek to carry a suitable mobile radio equipped for Automatic Packet Reporting System (APRS). I checked for the nearest packet node on 144.800 MHz, which happen to be MB7USM in Staines, so good coverage expected.

Fine I thought plenty of time, then I learnt that due to his overseas business travels Maciek was only available for the practical assessments just five days after his initial inquiry and for the exam on September 22nd. With exceptional help from the RSGB Examinations Department and for Dick Lupton's (M0RXZ) availability to invigilate all went according to plan. A pass certificate was duly issued with 48 hours to spare; M6ERI was official and able to operate APRS on the day. No doubt we will also speak on the bands in the days to come.



The Next Foundation Course

Subject to sufficient interest we plan to run the next Foundation course over the weekend 8th and 9th of November. The Saturday would be spent receiving short tutorials in accordance with the RFC syllabus and also completing all the required practical assessments. Then on Sunday afternoon an opportunity to sit the 26 question multiple choice examination. If you would like to participate or know of anyone else who might like to apply, please e-mail training@carc.org.uk to obtain full details and timetable.

The Next Intermediate Course

While on the subject of training, various intelligence received leads me to think there may be a need for recently passed Foundation students to upgrade to an Intermediate licence. To make the process worthwhile we generally run such courses for a minimum of six people. For self-study candidates the practicals, radio related project assessment and exam are held over a single weekend. We can also run a series of two hour evening classes for those who would like tuition. Again, please e-mail training@carc.org.uk to register interest.

For Sale (Both items on behalf of the club)

KENWOOD TS-870S ALL-MODE HF TRANSCEIVER

With external PS-52 AC PSU and SP-31 Speaker

The Kenwood TS-870S is an all-mode HF transceiver with 160 to 10m Amateur Band coverage on transmit with 100kHz to 30MHz general coverage receiver. It provides IF-stage digital signal processing (DSP) on transmit and receive. The TS-870 features 100W output, automatic ATU, inter-active menu system, and built-in electronic keyer.

Serial No. 41100003

- *1.8 -30MHz (160m-10m ham Bands) Tx
- * 100kHz - 30MHz Gen Coverage Rx
- * SSB, CW, AM, FM, FSK
- * 100W SSB, CW, FM, FSK
- * 25W AM
- * Auto ATU
- * Dual Receive
- * Variable IF slope & bandwidth
- * Interactive Menu System
- *Twin DSP (digital signal processors)
- * 100 memories
- * High speed computer control interface
- * K1 Logikey Electronic Keyer
- *1.5W audio (8 Ohms)
- *13.8V DC
- *Current Drain: Rx: 2A. Tx 20.5A
- * Dims: 330 x 120 x 334mm
- * Weight: 11.5kg



This TS-870 is offered complete with matching Kenwood PS-52 heavy duty external 230 VAC to 13.8VDC power supply and SP-31 external speaker with internal high and low pass filtering audio filtering. It is supplied with a Kenwood MC-43S fist microphone and user manual.

All items are in nice clean cosmetic condition. The PSU has a small scratch on the front panel.

This is your chance to snatch a bargain! Being sold on behalf of the club.



Special offer to CARC club members £749.00.

If not sold within 10 days of this Newsletter publication we will list on Ebay.

If you are interested please contact john.longhurst@hfcom.net

ELECRAFT K1 HF CW QRP TRANCEIVER

This ultra-compact Elecraft K1 HF transceiver (Ser. No. 01532) is equipped for 2-band operation on the CW segments of 40m and 20m. It has built in ATU and keyer and is powered from a 230/12VDC external supply.

The K1 is small - only 2.2"H x 5.2"W x 5.6"D, and weighs 1.4 pounds. It includes many features found in a desk-top HF transceiver, including RIT and XIT, full break-in CW, three crystal filter bandwidths, configuration menu, speaker, and 3-digit display. This provides a built-in digital voltmeter, wattmeter, and frequency counter.

This K1 is in good working order; the case has a few marks and superficial scratches. Sorry there is no manual, however schematics are available from the Elecraft site and other different online sites.

Other features:

- 10-turn VFO potentiometer for smooth tuning
- BNC antenna connector - a QRP/portable standard
- Built in memory keyer with iambic modes A and B
- 9 - 50 wpm with int. keyer
- Switchable attenuator with LED status indicator

Price: £220.00 (Discount for CARC members - please ask)

Payment: Cheque made payable to John Longhurst, or cash. Not Paypal.

Despatch: Within 24hrs of cheque clearance.



This is your chance to snatch a bargain! Being sold on behalf of the club.

If you are interested please contact john.longhurst@hfcom.net.

Member News

From **Bob, M0HQM**:

Please listen out for the Clansman 4m net Thursdays from 1900 – 2000hrs (local), using 70.400Mhz as the calling frequency. Bob is experiencing local QRM on the normal calling frequency of 70.450Mhz, hence the alternative QRG.

If any member / non member would like to join in it is completely free!

It's worth noting that more 4m radios are now coming onto the market. For instance, a new (affordable?) FM mobile is being released this month by Wouxun, covering 4m / 6m /2m /70cm; so potentially an excuse to explore 70Mhz, with the other bands as a bonus! There is also a rumour that the recently announced Yaesu FT-991 HF – 70cm transceiver 'may' be revised to include 4m....

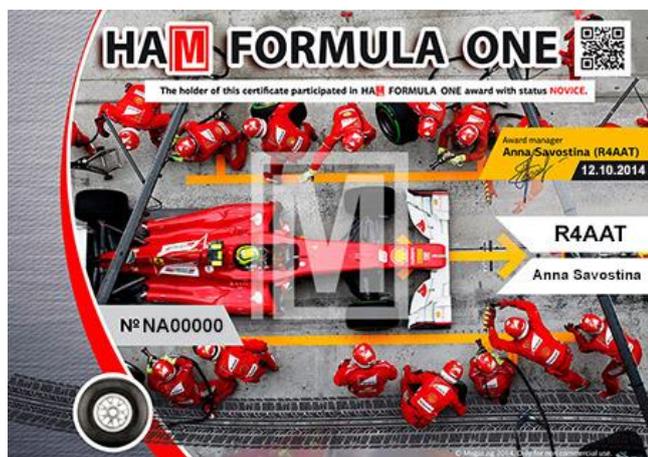
HF Activity – If you fancy having some fun whilst flexing your HF radio, and also enjoy Formula One racing, why not join your fellow members **G4PEO, M0TZZ & M0HQM**, in working the Russian special event F1 stations that are now active, and possibly earn a certificate or two in the process...

The stations are operating in relation to the Russian F1 GP to be held later this month and are/have been extremely active over three distinct date ranges/phases – practice, qualifying and race, (not the actual race stages), 15th Sept – 15th Oct.

The practice session ended on the 30th September, but there is still time, and stations are now worth more points during the qualifying and race activation periods.

The 11 stations, (all prefixed UE16 followed by two letters to represent F1 teams) and one HQ station UE11HQ, are quite easy to work, (dependant on propagation!), and can be contacted on all bands/all modes in order to earn points/certificates depending on number of teams worked /different bands/modes etc.

The rules are a little ambiguous, but you can enter your callsign on their web page to instantly see how well you are doing and if you qualify for any certificates. Further details: <http://f1award.ru/en/>



Sample Novice Certificate



Sample Grade 3 Certificate (There are 3 Grades)

GB3MH – Report by Malcolm G3NZP

In the last News Bulletin it was mentioned that there were some long term issues affecting the purity of the transmitted Continuous Tone Coded Squelch System.

Malcolm, G3NZP is pleased to report this has been cleaned up and the spurious 88.5 Hz "pass-through" tone from users' radios is now suppressed after fitting a dedicated in-line high pass filter to the modulator feed, kindly constructed by **Adrian, G3VJM**. Furthermore, speech quality improvements have also ensued as a result.



GB3MH & GB7MH Cabinet (Rear)



To comply with the RSGB "Guide to Repeater and Internet Gateway Licensing" the repeater output is set for narrow band operation using 12.5 kHz filtering, thus limiting any over deviation which may cause adjacent channel interference to other repeaters in times of tropo. However such bandwidth constraints on the input are not as severe, so most users set their radios to the FM mode intended for 25 kHz frequency spacing.

Thus depending on how loud we talk can run the repeater into clipping and output distortion, sounding similar to speech compression. So as a matter of interest Malcolm is asking for comparison reports on both audio quality and distance worked when operating in first FM mode then switching to Narrow FM, from mobiles and fixed stations.

Please address your reports to Malcolm and send to keeper@ashdownforestrg.org. Of course this is all very subjective, but findings will be analysed and published and those who operate via GB3MH will see what's best for various manufacturers' radios and particular models.

Lastly thanks to **Richard, G3ZIY** for his spectral measurements, confirming deviation levels for all transmitted components, are now "nicely set up".



The Flagtenna Base