

The newsletter of the  
**Crystal Palace Radio & Electronics Club**

Affiliated to the Radio Society of Great Britain  
*Established January 1956*

Meetings are held on the first Friday of each month.  
The room opens at 7:30pm for an 8pm start at:  
All Saints Parish Church,  
Beulah Hill, London, SE19 3LG  
(opposite the junction with Grange Road).  
Visitors are always welcome.

Web sites: Club Admin: <http://cprec.btck.co.uk/>  
Club Technical: <http://cprec.btck.co.uk/OurTechnicalSite>  
Email: [crystalpalaceradio.club@gmail.com](mailto:crystalpalaceradio.club@gmail.com)  
Club Net: Each Wednesday at 20:00 on FM on 145.525MHz (S21) ± QRM  
Twitter @BobFBurns or [www.twitter.com/bobfburns](http://www.twitter.com/bobfburns)

Club annual subscriptions are now well overdue. If you have not already done so, please send your £12 payment to our Treasurer Ian or bring it to the next meeting.

Next meeting: Friday 4th May 2018

**[How Not to Win National Field Day by Quinn Collier G3WRR](#)**

In this issue: *Future Meetings & Events, Recent Event News, Vertical Challenge by 'Theorist', Technical Snippets, Members News, Miscellaneous, Noticeboard, Diary of External Events, News from other Clubs, Local Training Courses and Club Contact Information.*

## Dear Reader

### Future Club Meetings and Events

- 04 May 18 M How Not to Win National Field Day by Quinn Collier G3WRR
- 01 Jun 18 M Introduction to Electronics - Power Supplies by Bob G3OOU
- 06 Jul 18 M Compact HF and VHF Aerials by Bob G3OOU and Damien 2E0EUI
- 03 Aug 18 M Summer Social
- 07 Sep 18 M Whisper (WSPR) Evening - Damien 2E0EUI
- 05 Oct 18 M Practical Session - Building a compact VHF Aerial

C = Contest, CM = Committee meeting, E = External event, M = club meeting, R = Rally, T = Training course, V = Visit.

### 04 May 2018 - How Not to Win National Field Day by Quinn Collier G3WRR

Quinn writes: *'This talk, unlike my previous one to CPREC on Antenna Modelling, is not particularly technical, and is deliberately light hearted in tone. It anecdotally records some adventures and misadventures in over 50 years of participation in RSGB National Field Day. However to earn its keep, it does bring out a few useful messages, mainly related to safety!'*

### Recent Event News

#### 06 April 2018 - 'The British Vintage Wireless and Television Museum'

Philip and John took turns to describe how the museum came into existence, the background of its recently deceased creator Gerry Wells and its planned future. A short video of Gerry, entitled 'Valveman' was played together with a number of pictures of the museum as it was and as it is now.

The house in which the museum was initially created was purchased by Gerry's parents in 1916 and Gerry was born there in 1929. Gerry grew up with an over-riding passion in radio and electronics and worked as a radio and television repair man for a number of years.

In 1974 he created the museum and filled the house with his very considerable collection of radios, televisions and associated apparatus. He installed a service and spares facility in a large shed at the end of the garden and also managed to purchase some land at the end of the next door property on which another shed (or two) were erected.

#### Old Sheds:



#### New Shed:



Gerry's sheds achieved some notoriety and neighbours asked him to build some in their gardens for their own personal use.

The museum running costs were considerable and following a repair by Gerry of one of his valve radios, John Paul Getty made significant donations to the museum.

Donations of radios and associated equipment were many and the next door 'shed' became a glass laboratory capable of making bright emitter valves. Gerry's bedroom housed a TV standards converter in a large rack and he also designed and manufactured valve amplifiers together with some valve era replica radio receivers.

As he grew older and his health deteriorated he began planning for the museum's future. It became a trust with a managing committee and was awarded charitable status in 2003.

On his death in 2014 his permanent carer Eileen inherited the house and museum having been involved in the museum for a number of years. Unfortunately a serious problem arose with inheritance tax as the value of the house had grown many times over the years and the museum did not have sufficient funds to pay the £200K tax. The solution was to convert the house into three self contained flats with two being sold and one retained by Eileen with sufficient funds left to pay the outstanding tax and contribute to the museum future developments.

#### One gallery:



#### Another gallery:



The very considerable house contents were examined in detail with duplicates and less interesting items being sold off or donated to other museums. The remainder were moved to the garden sheds which by now had been replaced by new, larger, more substantial and secure buildings. The museum is now completely self contained in the two garden plots with its own separate entrance and facilities.

#### Example Radio Shop:



The counter has a valve tester on display.

The collection has now been expanded to include more modern communications equipment including solid state technology and amateur radio units, some of which are shown below.

**Eddystone 770**



**Marconi CR100**



**Army R107**



**Air Force R1155**



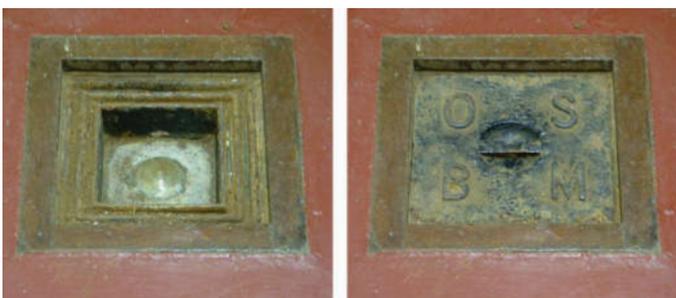
The museum contents includes radios from ECKO, McMichael, Decca, Murphy, Bush, Philco and RGD including a number with Bakelite cases.

The museum website is: <http://bvwm.org.uk/>

### Vertical Challenge by 'Theorist'

Our editor recently said that the newsletter is becoming something like a technical journal, so I feel I am letting the side down a bit by my contribution this month, which has a bit of the 'Observers Book of Street Marks' about it. But don't worry though Bob – I will try and make up for it with a doubly technical article next month!

If you want to put heights on a map you have to have a reference point from which to measure them, and for the Ordnance Survey (OS) this 'vertical datum' is at Newlyn in Cornwall. There is a tide gauge there, in a lighthouse structure at the end of a pier, and over a six year period from 1 May 1915 to 30 April 1921 the height of the tide was measured every hour, giving about 52,500 readings. The average of these readings was then taken and the result declared to be 'mean sea level at Newlyn'. A marker was then placed exactly 4.751 metres above the measured point for convenience, because the real point is under water a great deal of the time. The marker is shown in the photograph below, both with (right) and without (left) its cover. This is the marker from which all height measurements are taken in the UK, and which appear on the OS maps.



Before enhanced GPS techniques were available all heights were measured by surveying. You may well ask how it was possible to avoid always having to start at Newlyn if you wanted to measure the height of, say, Ben Nevis. This used to be done by a system of fundamental and sub-benchmarks. However remember that for much survey work, such as that done on a large building site, it is relative height rather than absolute height that is important, so the question was and is irrelevant.

The OS originally established more than 190 fundamental benchmarks (FBs) around mainland Britain. Almost all still exist, although they are very occasionally lost if an area is subject to development.



The nearest to CPREC, and indeed central London, is on the high ground above Riddlesdown railway station, and as the photos show is protected by an iron fence and has a marker giving a height of 449.24 feet. Interesting that this is still in imperial measure.

There is also a hidden chamber under the visible benchmark which can be used as a backup (or may be the actual marker – I have never been clear about this), and indeed the familiar concrete trig points also have nearby backup markers, which may be difficult to find. Other 'nearby' FBs around London are at Windsor Castle, Hemel Hempstead, Snodland, and there is also one near Chesham – 190 FBs may sound a lot but the distance on the ground between them is not insignificant.



The height of the fundamental benchmarks was declared and taken as exact by the OS, even though they were all originally derived by survey from the Newlyn mark. This was done for practical reasons. Local surveyors could then work from these FBs to determine heights in their own area. As measurements were made sub-benchmarks were put in place. At one time there were about 750,000 of these on mainland UK. They are typically found on more permanent structures such as Churches and civic buildings, bridges and on trig points. However many were also placed on external garden walls and pavements. They are no longer maintained and many have been lost as buildings have been demolished or renovations carried out, so that 'only' about 350,000 to 500,000 still exist. The height of these was re-measured from time to time and the height recorded in a log, as almost all of these markers have no height on the marker itself.

The sub-FBs exist in various types or series which can be used to identify the approximate date they were put up. There are collectors of these who like to go around taking photos of those still extant, and report back to the website that deals with this sort of thing. The photos show examples of the main types of sub-FBs. The first shows a cut mark. Actually this is a 'cut mark with bolt'. Cut marks are common but those with a bolt are old and rare and thus collectable by the cognoscenti. The bolt in this photo is offset from the cut mark, but is often found at the centre of the T. The second example is a cut mark with rivet. These are almost only ever used on horizontal surfaces.



The final example is a flush bracket. It is a G series which means post 1936; G series are found only on walls, never on triangulation pillars. The Bench Mark Database <http://www.bench-marks.org.uk> lists 54 sub-FBs within 2 km of our meeting place at All Saints', including one on the church itself. I challenge you to find it and identify the type on your next visit.



As a keen walker I have a lot of Ordnance Survey maps and, more to the point, know how to use them, with a compass of course. A proper compass too, not an app, although they are perfectly good provided of course that your phone battery is charged. The latest series of the familiar and popular 1:50,000 maps dated February 2016 are identifiable by the blue splash on the front cover with the words 'Now Includes MOBILE Download'. I have a couple of these and have indeed downloaded the digital maps to a tablet device (Nexus 7) which also has GPS inbuilt. As expected provided you are in the area covered by the map it will show you where you are. Somewhat disconcertingly if you are not in the area covered by the map you end up with a completely black display. There is also a facility to plot routes but this looks rather clunky and I have not tried it.

### Technical Snippets

**a) Crystals:** A quartz crystal resonator exhibits a mechanical resonance at a certain frequency and is made from a piece of quartz that has been cut and ground to a precise set of dimensions. Quartz exhibits the piezo-electric effect where a mechanical movement of the material causes minute voltages to

appear across the faces and in reverse, the application of a voltage will cause a minute movement in the quartz material.

Crystals exhibit resonances at their fundamental frequency and approximately odd multiples of that frequency called overtone resonances. The overtones are close but not exact multiples of the fundamental. They can also exhibit spurious resonances close to their fundamental or overtones and the manufacturing process seeks to minimise these as much as is possible.

These components come in a very wide variety of enclosures ranging from evacuated glass envelopes to sub-miniature plastic or metal types including surface mount types. In the early days of valve equipments there was much less pressure on size compared to today and the 10AX and 10XJ were common types of larger enclosure followed by the considerably smaller FT241 and FT243 types during WWII reflecting the decreasing size of valves. 10XJ crystals were hermetically sealed, the other types mentioned here were not.

I recently received a small donation of crystals, mostly old 10AX and 10XJ packages but one very unusual crystal stood out by a mile. It is a 12.6KHz crystal with a very long piece of plated quartz. Shown on the right, it is mounted inside an octal based enclosure about the size of an EL34 and manufactured many years ago by STC. This is the first time that I have seen such a large type of crystal. It will be a challenge to test as my crystal tester does not function below about 300KHz.



Shown below are three examples of older style crystal enclosures:

FT241

FT243

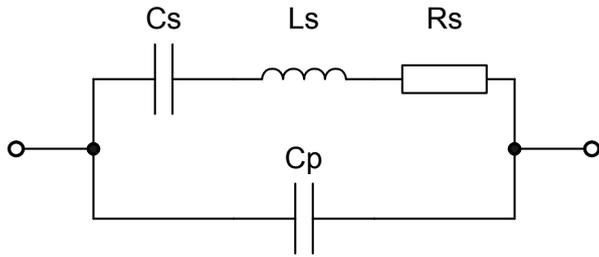
10XJ



Two FT241 or FT243 crystals will fit into an Octal valve socket.

It was interesting to note that all of the sealed metal can crystals, probably dating back to the 40s and 50s, tested with medium to high activity and frequencies within a few hundred hertz of their marked values after all these years.

The equivalent circuit of a quartz crystal is shown below.



$C_p$  is the total parallel capacitance, formed by the plates or metalisation on each side of the crystal and the holder stray capacitance and is typically around 5pF for modern crystals.

$C_s$  is the series or motional capacitance and is typically in the fF or femtofarad range.

$L_s$  is the series or motional inductance and is typically in the mH or millihenry range.

$R_s$  is the series loss resistance which is inversely proportional to the crystal activity and is dependant on the cut and frequency of the crystal. A 100KHz crystal could be in the hundreds of ohms region whereas a 9MHz crystal could be in the 10-50 ohm range.

The series resonant frequency is a function of  $C_s$  and  $L_s$  using the usual resonant frequency formula and the series impedance at resonance is  $R_s$  ohms.

The parallel resonance requires a more complex formula involving  $C_s$ ,  $L_s$  and  $C_p$  and the parallel resonant impedance is very high - typically many thousands of ohms. The parallel resonant frequency is always higher than the series resonant frequency. The gap between the series and parallel resonant frequencies is called the pole-zero spacing and is a critical parameter in the performance of both ladder and lattice filters.

Overtone modes exhibit both series and parallel resonance and require the oscillator circuit to use a tuned circuit to provide gain only at the desired frequency otherwise the frequency of oscillation would default to the fundamental frequency. To show overtone operation in the equivalent circuit the leg containing  $C_s$ ,  $L_s$  and  $R_s$  would be repeated for each overtone with different values.

Crystals can be pulled a small amount in frequency using an external variable capacitor or inductor and the amount depends on the ratio of  $L_s$  to  $C_s$ . The higher the ratio, the less the crystal can be pulled.

## Miscellaneous

### a) Data Protection Legislation:

The General Data Protection Regulation (GDPR) which will take effect in the UK on 25th May 2018, replaces the existing law on data protection (the Data Protection Act 1998) and gives individuals more rights and protection in how their personal data is used by organisations. Our membership application form already asks for members permission to store their data on a computer in order to manage club affairs and release very limited contact information to other members. However, your committee feels that the new act requires us to contact all members to explain what

data is held, what it is used for and ask them to positively re-confirm those permissions which we will do shortly. If any member does not to reply, it will be assumed that they are withdrawing their previously given permissions.

### b) Kempton Park Rally

I attended this rally and was able to purchase a small number of components and two small digital voltmeter modules for a new low voltage high current DC power supply.

The following photos show some of the products that were on display:

**PVXshop:** Transmitting valves and high voltage capacitors. The GU50B on the right can produce up to 650W at 500MHz with a 2500v anode supply. See 'PVXshop' on eBay for more information.



### Yaesu FTDX-5000MP HF Transceiver:



### Kenwood TS-990 HF Transceiver:



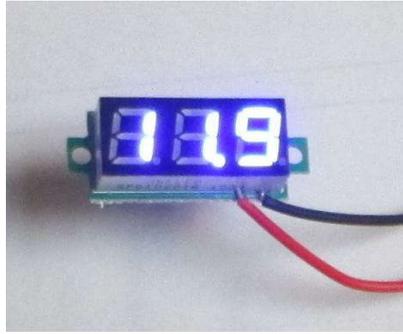
### Icom IC-7600 HF Transceiver:



### Micsig portable scope on the Rigol stand:



**The Digital Voltmeter** module on the right measures and displays 3 - 30v to one decimal point and was available in red and blue at £4 each.



**c) CATS Bazaar:**

We have booked two tables at this event on 18th November and will require some assistance on the day. Please let the committee know if you can provide some time.

**d) Foundation Course:** Mike G8AXA from the Darenth Valley Radio Club writes: *'I still have 4 places left for the Foundation Course, starting on the 9th June. Cut off for this course is the 26th May and the cost is £55 including the exam fee.'*

For information see <http://www.darenthvalley.org>'

**Members News**

We welcome new member Peter Collier 2E0DYV who joined at the March meeting.

**Notice Board – Wanted and For Sale**

The Notice Board is for all club members to use so if you have one or more items that you wish to buy or sell then please send in the details. Some of the current list of items may be viewed at:

<http://cprec.btck.co.uk/SaleofClubEquipment>

All excl P&P.

**For Sale**

This month we have a bumper bundle of items for sale.

**a) From the shack of Victor G1PKS:**

- RF dummy load and watt meter
- SEM Z match £60
- Yaesu FT-101ZD HF transceiver £150
- SWR meter
- Trio R2000 receiver with HF & VHF £250
- Alinco 6m DR-M06 20W FM transceiver £75 (one offer received)
- Heathkit Oscilloscope
- PSU with variable output
- Advanced Morse Trainer MM2 by Microwave Modules Ltd plus power supply £60
- 2 Morse keys with sounders for training Cubs and Brownies £25
- A few variable capacitors left

Offers to Bob G3OOU on 01737 552170 or email [g3oou\(at\)aol.com](mailto:g3oou(at)aol.com)

**b) Donated for club use or club funds by two Norbury residents:**

- Box containing a Dataman S3 EPROM programmer with mains power supply, two external EPROM

adaptors, some spare EPROMs and a printed manual.

- Olson mains powered UV EPROM eraser with timer
- Assorted project boxes
- Assorted die cast boxes
- Box of ICs, stepper motors and assorted interface PC boards
- New and unused RSGB amateur radio logbook

These items will be on a table sale at the next club meeting.

**c) From the shack of Bob G3OOU:**

- Commercially designed and made precision permeability tuned solid state VFO with built-in reduction drive, 7.6 - 8.8MHz, £75 ono. A photo may be seen at <http://www.qsl.net/g3oou/pto.html>
- 1.4MHz crystal filters for USB & LSB, all tested, £15 each
- Pye 455KHz LC filter, 15KHz wide, £3

Offers to Bob G3OOU on 01737 552170 or email [g3oou\(at\)aol.com](mailto:g3oou(at)aol.com)

**CPREC** has a large bank of fundamental and overtone quartz crystals, from 1.0 – 99.91MHz. The list has now been completely updated with case classifications, sorted in frequency order and placed on the club web site as a downloadable PDF file. Prices are £1 each to club members and £2 each to non members, both exclude P&P.

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G3OOU

**Diary of External Events**

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**6 May - Southern Electronics & Radio Fair-Eastbourne Rally (SERF)**

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~~This rally has been cancelled.~~ Details from <http://www.serf.org.uk>

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**17-20 May - Dayton Hamvention®**

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Greene County Fair & Exposition Center, Xenia, Dayton, Ohio, USA. Details by email from [international@hamvention.org](mailto:international@hamvention.org).

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**1-3 June - Ham Radio Show, FRIEDRICHSHAFEN**

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Messe, Friedrichshafen, Germany. Trade stands, SIGs, IARU Member Societies have stands in the main hall. Large flea market. Lectures each day, some in English. Large RSGB book stall. More information from [www.hamradio-friedrichshafen.de](http://www.hamradio-friedrichshafen.de).

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**10 June East Suffolk Wireless Revival (Ipswich Radio Rally)**

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Kirton Recreation Ground, Back Road, Kirton IP10 0PW just off the A14. Opens 9.30am, free car parking, entry £2. Trade stands, car boot sale, Bring and Buy, SIGs, GB4SWR HF station and an RSGB bookstall. Catering on site. Contact Kevin, G8MXV, 07710 046 846, Web: [www.eswr.org.uk](http://www.eswr.org.uk).

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**24 Jun (new date) - 31st Newbury Radio Rally**

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Newbury Showground, next to Jcn 13 of M4, Berkshire. Amateur radio station, exhibits, SIGs, clubs and societies. Opens to sellers at 8am, visitors 9am. Free parking, entry £2.50 visitor, £12.50 CBS sellers pitch. Advance bookings (with discount) via [www.nadars.org.uk/rally.asp](http://www.nadars.org.uk/rally.asp) On-site catering, disabled facilities. Contact: email: [NewburyRally@nadars.org.uk](mailto:NewburyRally@nadars.org.uk), Web: [www.nadars.org.uk](http://www.nadars.org.uk)

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**29 Jul, Chippenham & DARC Rally, Electronics Fair & Car Boot Sale**

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Kington Langley Village Hall & fields, Church Road, Kington Langley SN15 5NJ. Opens 10am (disabled 9am), entry £2, car boot sale, catering, flea market, SIGs, talk-in, trade stands. Contact Brian Tanner, G6HUI on 0772 224 2741 or [rally@g3vre.org.uk](mailto:rally@g3vre.org.uk)

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**The RATS (Rugby Amateur Radio Society) Rally**

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Princethorpe College, Princethorpe, Rugby CV23 9PY. Open 10am to 4pm (8.30am for vendors). Entry £3, car boot sale and catering on site. Tony, G0OLS, 0775 968 4411, [rally@rugbyats.co.uk](mailto:rally@rugbyats.co.uk) or [www.rugbyats.co.uk](http://www.rugbyats.co.uk)

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**28 - 29 Sep - National Hamfest**

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Newark & Nottinghamshire Showground, Lincoln Road, Winthorpe, Newark, Nottinghamshire NG24 2NY. Brought to you by the RSGB in association with the Lincoln Short Wave Club. Free car parking, disabled facilities, trade stands, Bring & Buy, car boot area, flea market, SIGs and RSGB bookstall. Representatives from the RSGB Services and committees. Morse proficiency tests, on-site catering outlets and a seating area. Information from [www.nationalhamfest.org.uk](http://www.nationalhamfest.org.uk)

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**12-14 Oct - RSGB Convention**

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Kent's Hill Park Training and Conference Centre, Swallow House, Timbold Drive, Kent's Hill Park, Milton Keynes, Buckinghamshire MK7 6BZ. The Convention programme of lectures for all interests will be available on the website. Principal sponsor Martin Lynch & Sons. [www.rsgbevents.org](http://www.rsgbevents.org).

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**18 Nov - 41st CATS Bazaar**

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Oasis Academy Coulsdon, Homefield Rd, CR5 1ES Coulsdon. £1.50 entry and plenty of free parking! Applications from traders, clubs and private sellers most welcome. Contact [bazaar@catsradio.org](mailto:bazaar@catsradio.org) or ring Andy G0KZT on 07729 866600.

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**News from other Clubs**

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**Club Secretaries** – please ensure that your future meeting details are present in your newsletters, on your websites or sent to our newsletter editor Bob G30OU. Palace Pulse is published about ten days before our club meeting which is on the first Friday of each month and closes for editorial contributions a few days before publication. Due to differing publication dates and short lead times it is getting increasingly difficult to include other clubs' events although we will endeavor to do so if advised in time. We do not have time to go chasing each club for the information.

**Readers** - If you plan to visit one of these club meetings please check with the club concerned in case of any last minute changes.

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**Bredhurst Receiving and Transmitting society**

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Meet on Thursday night from 8:30pm at the Parkwood Community Centre, Long Catlis Road, Rainham, Kent, ME8 9PN. Contact [secretary@brats-qth.org](mailto:secretary@brats-qth.org) or

<http://www.brats-qth.org/brats/>

10 May AGM  
24 May Practical Radio Astronomy for Amateurs by Paul Hyde G4IOG

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**Bromley & District Amateur Radio Society**

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Meets at 19:30 on the third Tuesday of each month at the Victory Social Club, Kechill Gardens, Hayes, Bromley, BR2 7NH. Contact Andy G4WGZ on 01689 878089 or [enquiries@bdars.co.uk](mailto:enquiries@bdars.co.uk). Web: [www.bdars.co.uk](http://www.bdars.co.uk)

15 May FT8 by Alan G0TLK  
19 Jun Direction Finding by Steve 2E0DIZ  
17 July A Technical "Show and Tell"

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**Chelmsford Amateur Radio Society (CARS)**

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19:30 on the first Tuesday of each month at Oaklands Museum, Moulsham Street, Chelmsford, Essex, CM2 9AQ. Contact: [secretary@g0mwt.org.uk](mailto:secretary@g0mwt.org.uk) Web:

[www.g0mwt.org.uk](http://www.g0mwt.org.uk)

01 May Unusual Antennas  
05 Jun Table top sale

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**Coulsdon Amateur Transmitting Society (CATS)**

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8:15pm on 2nd Monday each month. Contact: Andy Briers G0KZT on 07729 866600 or [secretary@catsradio.org](mailto:secretary@catsradio.org). Web site:

<http://www.catsradio.org/>

14 May DF Receiver Construction Evening by Terry G4CDY  
11 Jun DF Hunt using the equipment made at the May meeting. Venue to be confirmed.

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**Crawley Amateur Radio Club (CARC)**

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Every Wednesday 20:00 – 22:00, every Sunday 11:00 – 13:00. Formal events are on the fourth Wednesday of the month, 7-30pm for 8pm. Phil M0TZZ on 07557 735265 or [secretary@carc.org.uk](mailto:secretary@carc.org.uk) or Web: <http://www.carc.org.uk/>

25 Apr Police Communications by Steve Shorey G3ZPS  
23 May QE2 Communications by Duncan Brooker

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**Cray Valley Radio Society (CVRS)**

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Meets at 8pm on the 1st and 3rd Thursday of each month at 1st Royal Eltham Scouts HQ, Rear of 61 - 71 Southend Crescent, Eltham, London, SE9 2SD. Contact: Richard on [secretary\[at\]cvrs.org](mailto:secretary[at]cvrs.org). Web [www.cvrs.org](http://www.cvrs.org)

03 May Mini Talk and Natter Nite  
17 May How Not To Win NFD by Quinn Collier G3WRR  
07 Jun Antenna Clinic 2018

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**Dorking & District Radio Society**

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Meetings at 7.45pm. Contact: David Browning (M6DJB) at [djb.abraxas@btinternet.com](mailto:djb.abraxas@btinternet.com). Web site:

<http://www.ddrs.org.uk>

24 Apr The future of amateur radio by Nick Henwood G3RWF  
22 May Meteor scatter by Nick Read M5DND  
26 Jun Back to basics: an exploration of an engineer's distrust by Philip Gray G0LFE

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**Echelford Amateur Radio Society**

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Meetings on 2nd and 4th Thursdays of each month at the Weybridge Vandals Rugby Football Club. Enquiries to John at [jho\\_g4gsc@btinternet.com](mailto:jho_g4gsc@btinternet.com) or 01784 451898. Web site: <http://www.qsl.net/g3ues/index.htm>

24 May "Does Mars have to be the Death Star?" by Prof. David Southwood  
On-Air / CW Practice / Bring & Buy / Natter Night

### Hastings Electronics & Radio Club

Meetings held at the Taplin Centre, Upper Maze Hill, St Leonards on sea, TN38 0LQ, 7pm for 7:30 on the fourth Wednesday of each month. Information from Gordon Sweet M3YXH on 01424 431909, email: sionet3344(at)hotmail.co.uk

Web: <http://herc-hastings.org.uk/>

- 23 May Talk and demo by Tony Lunn on SOTABEAM's Portable Antenna System  
27 Jun My Lifelong Electronics Hobby by Rodney  
22 Aug Construction Contest

### Hereford Amateur Radio Society

Meets on the first Friday of each month at Hill House, Newton, Nr Leominster, HR6 0PF. Contact: [enquiries@herefordradioclub.uk](mailto:enquiries@herefordradioclub.uk) or <http://herefordradioclub.uk/>

### Horsham Amateur Radio Club

meets on the first Thursday of each month at the Guide Hall, 20 Denne Road, Horsham, West Sussex, RH12 1JF. NRQ TQ172304 at 20.00hrs local time. Contact Alister Watt G3ZBU at [g3zbu\(at\)hotmail.com](mailto:g3zbu(at)hotmail.com) or <http://www.harc.org.uk/>

- 03 May High Power Small Transmitting Loops – the secret is two parallel turns! - Mike Underhill G3LHZ  
10 May Thursday Evening Fox Hunt  
17 May Social - The Fountain - Ashurst

### Mid-Sussex Amateur Radio Society (MSARS)

Meet most Fridays in the Millfield Suite, Cyprus Hall, Burgess Hill, RH15 8DX from 7.30pm till 10.00. Contact Stella on 01273 844511, [M6ZRJ\(at\)msars.org.uk](mailto:M6ZRJ(at)msars.org.uk) or [www.msars.org.uk](http://www.msars.org.uk)

- 11 May Prep for Mills on the Air  
25 May Construction Contest  
08 Jun Open Evening for Burgess Hill Town Festival

### South East Essex Amateur Radio Society (SEARS)

Contact Mark Callow 2E0RMT on 07842 336444 or [secretary\(at\)southessex-ars.co.uk](mailto:secretary(at)southessex-ars.co.uk) or <http://www.southessex-ars.co.uk/>  
Meetings: 7pm 2nd Tuesday each month at The White House, Kiln Road, Benfleet, Essex, SS7 1BU.  
08 May "Public Safety Comms" by Steve Shorey G3ZPS  
12 Jun "The Birth of Broadcasting" by Tim Wander

### Surrey Radio Contact Club (SRCC)

7.30 for 7.45pm on 1st. and 3rd. Mondays every Month. Contact John Kennedy G3MCX on 020 8688 3322 or [secretary\(at\)g3src.org.uk](mailto:secretary(at)g3src.org.uk). Web: <http://g3src.org.uk/>  
14 May The Role of an RSGB Regional Manager by Mick Senior G4EFO

### Sutton & Cheam Radio Society

8pm on 3rd Thursday every month. Contact John Puttock G0BWV on 020 8644 9945 or email [info\(at\)scrs.org.uk](mailto:info(at)scrs.org.uk)  
Web: <http://scrs.org.uk/>. SCRS run a practical group most Monday evenings at the Bandstead Scout Hut.  
17 May AGM & Constructional Contest

### Wimbledon & District Amateur Radio Society

Meets on the 2nd and last Friday in the month at Matin Way Methodist Church Hall, Martin Way Merton Park, London, SW19 9JZ at 19:30hrs for 20:00hrs. Contact: Andrew G4ADM on 020 8335 3434 or [andrew.maish\(at\)ntlworld.com](mailto:andrew.maish(at)ntlworld.com)

Crystal Palace Radio & Electronics Club is a member of the South East Tutors training group.

Local Training Courses					
Licence Level	Dates	Location	Club Provider	Format	Further details
Advanced - Exam only	19 May 2018	Eltham SE9 2EX	Cray Valley RS	10:00:00	<a href="http://www.cvrs.org">www.cvrs.org</a>
Foundation	9 & 16 June	Crockenhill Kent BR8 8LT	Darent Valley RS	2 days (Sat)	<a href="http://www.darentvalleyrs.org">www.darentvalleyrs.org</a>
Foundation	07 & 21 Oct	Bromley	Bromley & District ARS	2 days (Sun)	<a href="http://www.bdars.org">www.bdars.org</a>
Intermediate	03, 10 & 17 Nov	Eltham, SE9 2SD	Cray Valley RS	3 days (Sat)	<a href="http://www.cvrs.org">www.cvrs.org</a>
Intermediate	17 Feb, 03 & 17 Mar 2019	Bromley	Bromley & District ARS	3 days (Sun)	<a href="http://www.bdars.org">www.bdars.org</a>
	= course commenced				

### CPREC Committee Contact Information

#### Officers:

<b>Chairman:</b> Damien Nolan 2E0EUI T: 07900 242541 <a href="mailto:Gorby928(at)gmail.com">E: Gorby928(at)gmail.com</a>	<b>Secretary:</b> Alan O'Donovan G8NKM T: 020 8778 9660 E: <a href="mailto:Alan.odonovan(at)btinternet.com">Alan.odonovan(at)btinternet.com</a>	<b>Treasurer:</b> Ian Skeggs M6FZC <a href="mailto:ian.skeggs(at)btinternet.com">ian.skeggs(at)btinternet.com</a>
<b>Committee Members:</b> Bob Burns G30OU Nick Stapley	Newsletter Editor	T: 01737 552170 E: <a href="mailto:g30ou(at)aol.com">g30ou(at)aol.com</a>