

# RSGB 2018 Committee Reports

## Amateur Radio Direction Finding (ARDF)

The ARDF Committee is a group of committed volunteers who have been driving forward this aspect of UK 'Sport Radio'.

The 19th IARU World Championships were held in Korea in September. Only two RSGB Members were able to travel out to Korea (all RSGB participants are self-funded) but both returned with a podium place and a bronze medal for their category.

A total of UK 17 events were staged in 2018, including three competitions at the British ARDF Championships, held in the Midlands. Competitions have embraced not only the 'Classic' format of five transmitters in a five minute cycle, but also the FoxOring and Sprint formats. Some used other variants, such as 7 transmitters in a 5 minute cycle or five 30 second transmissions in 2.5 minutes.

The RSGB equipment has been loaned to a number of Affiliated Societies, Cadet and Scout groups. The 3.5MHz equipment is configured to provide 5 transmitters in a five minute cycle accompanied by 10 receivers. A map of the area to be used is not essential but the equipment gives a realistic feel for the 'Classic' ARDF format.

The 144MHz equipment comprises a set of 5 transmitters and antennas but there are no receivers. The transmitters contain rechargeable batteries, which do cause issues with Parcel Force and so collection of this loan kit from Leicestershire is recommended.

Participation remains an issue. Our stands at the National Hamfest and the RSGB Convention generate interest and the Committee ran two 'Taster Days' for RSGB Members to sample ARDF with some tuition. The hope is that more RSGB Members will be tempted to try this exciting activity, which has implications for good health as well.

There was a new departure in 2018, a series of introductory events from May to September, one event each month in the East Midlands. This succeeded in attracting over 20 people, mostly with a radio background but also a few from Orienteering. The event format was adjusted to be more suitable for newcomers. Participants were asked to plot bearings on all five 80m transmitters prior to their start. Once these had been confirmed, the competitor was given the 'good to go' and then moved to the start to commence the timed element of the competition. The events offered mentoring. The series was well received and it is hoped to run more in 2019, possibly in other parts of the UK too.

Finally, I wish to acknowledge the enthusiasm and contributions of the Committee members in running events and promoting the sport as well as thank those who ran events without being committee



Jarmila, the youngest competitor at the International British ARDF championships.

members. These were Stuart, G1ZAR, John, MOOJM, Tim, G4ARI and David, G6HGE. The Committee is also grateful for the unfailing support it has received from the RSGB Board member, Stewart Bryant, G3YSX and from the *RadCom* editor, R G Titterington, G3ORY, Chairman

## Amateur Radio Observation Service

Following an extensive review of AROS, the RSGB created a new service to provide guidance to operators who experience misuse of the amateur bands by others. Known as the Operating Advisory Service (OAS), the team is led by OAS Coordinator, Ian Suart, GM4AUP, supported by a group of Regional Operating Advisors. See [www.rsgb.org/oas](http://www.rsgb.org/oas)

## RSGB Awards

I would like to thank Chris Burbanks, G3SJJ for his hard work and dedication to the RSGB Awards scheme. I took over in late December and all claims should now be completed.

Over the year there were 31 successful claims worldwide, covering a range of both HF and VHF Awards. There has been an increase in the uptake of the Foundation and Intermediate awards that I hope will continue to grow.

Chris, G3SJJ had completed the overhaul of the HF awards and its website. He had begun to simplify the VHF awards and I will continue and implement those changes.

In 2018, 50% of applications were for the IARU Region 1 award, making it the most popular award. The IARU Region 2 Award has also been revamped and relaunched.

Of all the VHF applications, 100% of the Countries and Squares applications submitted were on 50MHz.

The Commonwealth Countries Award also proved popular as the second most applied for award, with many reaching silver (70 contacts), no small feat when you consider the remoteness of some locations required and the reliance on DXpeditions for those contacts. A good source of entities for this Award is the RSGB Commonwealth Contest that can provide at least the basic Bronze level of 40 Commonwealth Call Areas together with some of the rarer entities.

The Worked all Continents and Worked All ITU Zones had a quiet year with only one application each. ITU Zones is a challenge and with solar minimum, though with the acceptance of Logbook of The World, confirming QSOs is easier and quicker.

Congratulations to all who successfully claimed their awards in 2018. If you are still ticking off your award check sheets, enjoy the experience. For those new to awards, if you're on air, you're doing everything you need to do to claim an award. Dust off your log, visit [www.rsgb.org/awards](http://www.rsgb.org/awards), fill in a claim form and try another facet of amateur radio.

**Bobby Wadey, MIORYL, RSGB Awards manager**

## Contest Support Committee (CSC)

The CSC is one of the 3 contesting committees that are responsible for the administration of all RSGB contests. The other two are the HF Contest Committee (HFCC) and the VHF Contest Committee (VHFCC).

The CSC is responsible for administration and adjudication of all RSGB contests and, at the end of 2018, had 12 full members. This team adjudicated 200 contests. The CSC also provides support and advice to the HFCC and the VHFCC.

A comprehensive in-house developed website is run by the CSC with links to all RSGB contest rules, results (past and present) and to the log submission robot. A comprehensive list of all contest trophy winners (the Hall of Fame) is available at [www.rsgbcc.org/cgi-bin/trophies.pl](http://www.rsgbcc.org/cgi-bin/trophies.pl).

The adjudication software used by the CSC was upgraded to provide extra facilities. All RSGB contests, including the IOTA Contest, are adjudicated using this software.

The CSC also processes all Special Contest Call (1+1 callsigns eg GOA, M9Z etc) applications and issue all SCC Notice of Variations on behalf of Ofcom.

The free Contesting Committees Newsletter continued and is popular with a circulation of over 920. To subscribe, please visit [www.rsgbcc.org](http://www.rsgbcc.org)

The short duration HF weekday contests continue to popular with Members. In 2018, 360 stations competed in the SSB legs of the 80m Club Championship along with 324 stations in the CW legs & 251 stations in the Data legs. Overall, 85 Affiliated Societies participated in the 18 contests. The 80m Autumn Series (September to November) continues to grow in popularity with 215 stations competing in the SSB legs, 229 in the CW legs and 131 in the Data legs. Overall, 64 Affiliated Societies participated in this series of nine contests.

The all band HF SSB/CW IOTA Contest (July) attracted 1963 entries and 237 check logs. HF National Field Day (all band portable HF CW only contest) attracted entries from 44 portable stations and 51 fixed stations. SSB Field Day (80m to 10m, portable SSB only contest) attracted entries from 42 portable stations and 14 fixed stations.

Turning to VHF, the UK Activity Contests (UKAC) attracted entries from 118 clubs/groups and 732 stations.

VHF National Field Day (NFD) attracted entries from 59 groups and they assembled 174 stations to compete in this multi-band contest. The Sweeper section (fixed station section) attracted entries from 111 stations.

**Ian Pawson, G0FCT, Chair**

## DXpedition Fund

The RSGB assists HF DXpeditions to the rarer countries through a fund that is supported each year from proceeds of the RSGB Convention raffle as well income from legacies and donations.

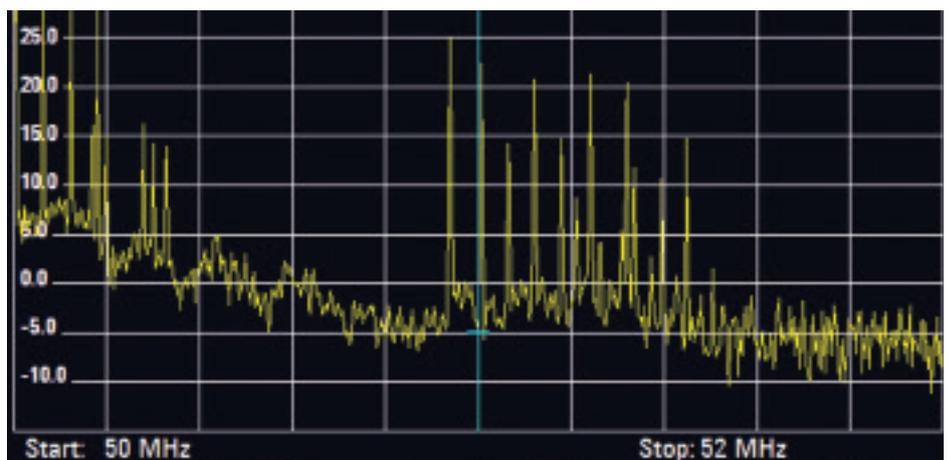
The trustees of the fund would like to acknowledge the generosity of those providing legacy bequests and donations, and also those who provide the prizes and participate in the raffle. The fund is administered by four trustees, comprising RSGB HF Manager (Ian Greenshields, G4FSU), Martin Atherton, G3ZAY, Gordon Rolland, G3USR and Michael Wells, G7VJR.

Contributions have been made to the following DXpeditions: TX0A/TXOM, OC-113 and OC-297; A35EU, Tonga; EP6RRC, Shif Islands; E6ET, Niue; RI0B, Various IOTAs; VK5CE/6, Various IOTAs; KH1/KH7Z, Baker Island; VK5MAV/9, Cato Reef; 3D2EU, Rotuma and VP6D, Ducie Island.

## ECC

The Emergency Communications Committee (ECC) stood down in 2018 following the reunification of RAYNET.

The RSGB continues to support emergency communications under a Memorandum of Understanding with RAYNET-UK and through a dedicated Board Link Member who is tasked to act as a Board liaison.



EMC work: a mystery interference source at 50-52MHz.

## EMC Committee

Our aims are to provide advice and support to those who suffer from RFI problems and to help protect the spectrum from Radio Frequency Interference (RFI).

Our top priorities are:

- Provide advice through the EMC Helpdesk
- Protect the spectrum by tackling regulators, suppliers & service providers to reduce RFI and by influencing standards committees to specify acceptable RFI levels
- Host and moderate the EMC Matters Forum, which encourages Members to share and help each other
- Update the website to provide guidance on resolving RFI problems
- Increase awareness of RFI with an ongoing campaign to inform Members of the growing RFI issues. We use the web, social media, *RadCom* articles, convention papers and society handbooks to highlight the growing threat of RFI to the radio spectrum
- Investigate emerging RFI pollution problems.

### Major Achievements in 2018

**Help and Advice:** The EMC Helpdesk was busy, giving assistance in 80 cases. We gave face to face advice at the National Hamfest. Several articles on EMC/RFI were in *RadCom* in addition to the bimonthly column, EMC Matters. The VDSL2 interference analysis software, *Lelantos*, was developed further and presented at the RSGB Convention.

**Standards:** There are always new threats to the radio spectrum. To be effective one needs to influence matters at the formative stage. Upcoming threats include 11kW wireless charging of electric vehicles (WPT-EV). Existing problems evolve such as MIMO extensions to PLT that propose to inject signals between Live, Neutral & Earth. The RSGB EMCC attended all 2018 BSI EMC Standards Committee meetings (GEL210/11). To strengthen our influence, we are now heavily involved via the IARU.

This allowed us to attend international CISPR meetings in Busan and WPT-EV working groups in Ingolstadt. We work hard to guide committees towards acceptable outcomes at an early stage while collecting evidence at a national level.

We have a good working relationship with the European Broadcasting Union and other national regulators who take a more proactive stance than Ofcom.

One key issue is the new way that interference limits are being set for upcoming standards such as WPT-EV. TR 16-4-4 specifies a statistical method for predicting the likely complaints levels against noise limits. The interpretation of these parameters is highly politically charged as the maths discriminates against minorities such as us in terms of our likelihood of complaining. Our response is to query the derivation of the many parameters from the philosophical viewpoint while also presenting technical papers and arguments about how these calculations are done. The EMCC chairman is now a permanent member of the committees developing the WPT-EV standard and reviewing TR 16-4-4. Your contribution should be to make valid harmful interference (HI) complaints to register in the statistics!

**Increasing awareness:** We still have trouble trying to get Ofcom to respond to cases of HI to the amateur radio service. Having had discussions with other national regulators at international meetings, we are of the view that Ofcom is far worse than average at ignoring HI. Our efforts are therefore directed at raising awareness and empowering our Members to complain convincingly. Ofcom will only respond if they get large numbers of complaints.

**VDSL Broadband RFI:** Following up on our VDSL2 survey of Members last year we have worked with Ofcom to do a joint full survey of 6 Members' sites selected in the vicinity of Ofcom's Baldock listening station. We published results in *RadCom*. That report clearly shows

evidence of HI. We discussed our results with Ofcom, who have not yet responded. Ofcom have yet to publish their measurements, which should be similar to ours.

**WPT-EV & Induction cookers:** Not having access to a WPT vehicle charger we did a study on induction cookers. Though lower power, the relative near field propagation characteristics of the harmonics gave great insight into the issues of WPT-EV and informed our discussions in committee. The report is available on the RSGB website.

**Conclusion:** The workload in this area is increasing. If you can help us in any way to fight this spectrum pollution, please contact [emc.chairman@rsgb.org.uk](mailto:emc.chairman@rsgb.org.uk)

**Dr Martin R Sach, G8KDF, Chairman**

## ETCC

The purpose of the Emerging Technology Coordination Committee (ETCC) is to support UK amateurs in the development of repeater and data communications networks and propagation beacons, and to promote and assist in the introduction and licensing of new technologies. We process all proposals for analogue and digital voice repeaters, gateways, analogue & digital TV repeaters, data communication systems and beacons. We assist the applicants for Notices of Variation to operate these systems, by vetting the technical details, identifying suitable spectrum and completing the required documentation so that the final application to Ofcom is usually a formality. During 2018, over 500 such applications were processed.

**Spectrum Issues:** In 2018, there has been some easing of pressure on 70cm by the careful use of channels released from former packet radio use, for digital voice repeaters, the demand for which has steadily increased. The 2m band remains a problem in some parts of the country where accommodating digital voice expansion has been difficult or impossible. On 4m, we are told that MOD, as Primary User, will not allow any new developments. The 6m band offers more possibilities but there are few applications. The 23cm band has seen an easier year, with several TV and voice repeaters cleared. Higher band possibilities are unclear with the imminent international agreements for commercial systems. One of the main problems has been that even though 12.5kHz channelling was adopted over 20 years ago on 2m, many receivers, even relatively modern ones, do not comply with the 12.5kHz specification. Because of the demand on channels, we frequently have to allocate closely spaced channels. We are now also starting to allocate 7.6MHz split 70cm channels as 12.5kHz where practical.

**Emerging Technology:** The three main competing digital voice modes continue to



Legacy Funds in action at CQ Scotland's Buildathon with Mid-Lanarkshire ARS.

demand more channels, although multi-mode repeaters and gateways are being licensed. Single mode repeaters remain in demand.

**Repeater Abuse:** Repeater abuse is still a problem in some areas, although the number of reports does seem to have fallen a little in 2018. We hope that is, in part, the result of Keepers following the guidelines, and users heeding the advice not to engage with abusers. Instances of abuse and strategies to reduce its impact are closely monitored by ETCC and the RSGB through the OAS.

**Primary Users:** There were significant improvements in PU clearances in 2018. Ofcom has adopted a more straightforward approach with the view that no PU response within three months of the formal request is implicit approval and amateur NoVs can be issued on the basis of causing no interference and not being protected from interference by the PU.

**Data Communications:** This encompasses Packet Radio, APRS and Internet Gateways of all kinds and remains extremely busy. The growth in the use of personal digital voice 'hotspots' continues and users should use only frequencies that comply with the current 70cm band plan for digital voice and reprogram off-the-shelf units accordingly. Hotspots are for personal use only and must be secured so they cannot be used by others, for 3<sup>rd</sup> party use you require a NoV.

**Licensing:** Licence renewals are now operating on a three-year cycle for all Repeater NoVs. The huge amount of work done by ETCC for the deadline went more smoothly than expected. The renewals are being spread out to reduce the peak loading.

**Committee membership:** At the start of the year, John McCullagh, G14BWM stepped down from his role as Chairman. He continues to do sterling work as regional representative for his home area of Northern Ireland. Andrew Barrett, G8DOR took over as Chairman and Noel Matthews, G8GTZ

as Vice Chairman. All other members of the Committee remain in post and I thank them unreservedly for their dedication and hard work in keeping the wheels turning.

**Andrew Barrett, G8DOR, Chairman**

## Examination Standards Committee

The ESC has overseen the running of the UK amateur radio exams since responsibility for them was transferred 3 years ago under a Schedule of Terms agreed with Ofcom. The main role is to ensure the standards of the exams are set so the aspiring radio amateur has an adequate understanding of contemporary radio technology and is able to operate safely and without causing interference to other services, and that the UK licence is broadly in line with HAREC and CEPT TR 61-02 so that UK amateurs can benefit from reciprocal licensing. The committee also considers appeals against exam outcomes and reports of exam irregularities. The detailed business of reviewing the syllabus and exam questions etc is delegated to the Examinations Group.

The ESC works at arm's length from the RSGB Board, so that its decisions are not seen to be unduly influenced by factors like the desire to drive up the number of licensed amateurs and hence RSGB Membership. ESG work is supported by a Board Liaison Member and, for 2018, we would like to thank: Ian Shepherd, G4EVK; Simone Wilson, MOBOX and Mike Bruce, MOITI.

We welcomed a new Committee member: Nigel Barker, MOHZR took the role of Examination Standards Manager. The full membership of the committee can be found at [www.rsgb.org/esc](http://www.rsgb.org/esc).

During 2018, the ESC's main work has been getting the new amateur radio examinations syllabus ready for September 2019. At its meeting in April, the Committee unanimously approved the new syllabus that had been revised following a consultation process involving the entire amateur radio community. This also included approval by Ofcom, which has voting representation on the Committee. The syllabus was formally accepted by the RSGB Board in July, following the development of a communication and implementation plan. It was published in August along with a summary of changes at each level. Since then, more supporting documents (full exam specifications) have been released at [www.rsgb.org/syllabus](http://www.rsgb.org/syllabus), and members of the Committee have been busy engaging with the community at the National Hamfest, RSGB Convention, in the social media and private email.

The Committee has also been working towards increasing the uptake of the online examinations. In 2018, more clubs have discovered the benefits to the candidates



Kieran and Phil operating M3W in the HF National Field Day.

of the online exams, especially the instant indicative result. However, there have been some issues in locations where internet connectivity is poor or unreliable. Solutions to this are being worked on.

Thanks to the efforts of an army of tutors, invigilators and exam secretaries in clubs up and down the country, the exams have been continuing and candidates have gained their transmitting licence to enjoy the full benefits of the hobby. The data for 2018 (2017) are: at Foundation 585 (558) exams, 1588 (1607) candidates and 1366 (1310) passes; at Intermediate 279 (250) exams, 746 (646) candidates and 696 (592) passes; and at Full 210 (170) exams, 474 (385) candidates and 292 (250) passes. Again, the pass rate at Intermediate is quite high (96%, not counting absentees) and relatively few candidates are going on to Advanced, which confirms the previous conclusion that, under the current syllabus, the step from Foundation to Intermediate is too small and the step from Intermediate to Full too large, something that should be addressed when Syllabus 2019 comes into effect. Data and charts for the period up to 2017 can be found in the last ESC annual report [www.rsgb.org/esc](http://www.rsgb.org/esc).

I would like to thank all involved in the examinations process: the staff at HQ, members of ESC and EG and, most importantly, the tutors and exams secretaries in the clubs that make the system work.

**Tony Kent, G8PBH, Chairman**

### GB2RS News Service

The past year has been challenging. We are gaining new readers, at the same time we are inevitably losing readers, silent keys and readers retiring from news reading. On the question of retirement, I, on behalf of the

RSGB would pay tribute to Victor (Ivan) Gracey, G13WEM for his selfless contribution to GB2RS news over a period of fifty years. I'm sure the listeners are going to miss him, enjoy your retirement. To all our readers and our loyal band of listeners thank you. At the end of the news bulletin when we revert to our own callsigns we open up the frequency to listeners to give us a report etc. We really appreciate the feedback. We would like even more listeners to call in and get involved. 88 newsreaders (sometimes in a rota) read 92 scripts on-air and GB2RS is also published on the RSGB website, emailed to subscribers, podcasted and shared on social media to highlight news and events from the amateur radio world. The scripts are produced and edited by the RSGB *RadCom* team each week. I'd like to recognise the time and effort dedicated to the news service by all the staff and volunteers involved each week.

**Ken Hatton, G3VBA, GB2RS News Manager**

### HF Contest Committee (HFCC)

2018 was the 3rd year of the HFCC, working in conjunction with the VHFCC and CSC.

Despite the relatively poor HF band conditions, participation in RSGB HF Contests remained strong. 373 UK & CD callsigns appeared in the ten contests that contribute to the HF Championship. Other data is in the CSC report.

Some of the significant events in 2018: The SSB and CW AFS 80m-40m Contests were supplemented with a Datamodes event that had 145 entrants.

The HFCC continued with responsibility for the organisation of the UK's GR2HQ Headquarters station in the annual IARU HF Championship with the team achieving 7<sup>th</sup> place in a field of 25 national teams. The 2018 Commonwealth Contest was the first

time that the UK & CD had all seven regions represented by an HQ station, with G6XX, GD6XX, GI6XX, GJ6XX, GM6XX, GU6XX and GW6XX activated.

The RSGB Contest Club took part in the Russian-organised Football World Cup radio marathon with 48 RSGB Member stations, mostly single operators but some multi-operators, making a combined total in excess of 50,000 QSOs during the period.

Some improvements are now incorporated into the 2019 HF rules. Overseas entrants are encouraged to participate with separate results tables in most cases. Sections for Assisted and Unassisted entrants have been added to the 80m CCs and Autumn Series to promote training in Unassisted contest operation. A separate section for remote activation of a call area has been added to the Commonwealth Contest. Due to the length of the exchange for many island stations, the sending of a signal report has been made optional in the IOTA contest.

HFCC added new contesting material to the RSGB website with a *Beginners Guide to HF Contesting* and a more in-depth *Getting Started in HF Contesting* section. Thanks to Roger, G3LDI for detailed instructions on Datamodes and to Martin, G3ZAY for adding a section on HF DXpeditions that accompanies the new Contesting material.

RSGB HF Contest Results were published efficiently thanks to the CSC HF adjudication team and the resources that are continuing to be developed by Mike, G0GJV and Pete, G4CLA. Ian, G0FCT and Andy, G4PIQ have contributed to HFCC discussions to ensure appropriate coordination within RSGB contest provision. We are grateful to Jacqui, G6XSY for taking on the Trophy Management role for our contests and for the support of the RSGB Board and Stewart, G3YSX for acting as our liaison with them.

The 'core' HFCC for 2019 comprises Nick, G4FAL, Graham, G0NBI, Mike, G7TWC, Stewart, GWOETF, Clive, GM3POI and Paul, G4PVM. Chris, GM3WOJ is continuing to help as a corresponding member. Our thanks go to Iain, M0PCB for his period on the committee, completed at the end of 2018.

**Nick Totterdell, G4FAL, Chairman**

### HF Manager

The main work in 2018 has been the implementation of the band plan agreements made in Landshut 2017 and ongoing work to further harmonise the HF band plans across all Regions. The emergence of Wireless Power Transmission (WPT) and its potential threat to the noise levels, especially on the LF bands, has also been covered.

**IARU Region 1 Interim Meeting, 2019:** Papers and topics for discussion have been completed for this meeting in April. It is

expected that band planning harmonisation will continue and the emergence of new operating practices and digital modes will be on the agenda. The working group to discuss HF band planning in Regions 1, 2 & 3 with the long term goal of aligning band plans as much as possible will report for the first time.

**3.5MHz & 10MHz:** In accordance with the agreements in Landshut 2017, the digital segments of the 3.5 & 10MHz band plans are now aligned with Region 2. The expansion of the digital segment has been at the cost of the CW exclusive segment but CW is allowed over the whole of the band.

**5MHz:** The WRC-15 allocation continues to be authorised by more countries and a simple but non-binding usage plan seems to be working across both Regions 1 & 2. The WRC-15 allocation is starting to replace RR article 4.4 permissions in a number of countries. Access to the full 15kHz segment in the UK is still not expected any time soon. One consequence of this is that UK FT8 activity, 5357kHz nominal frequency worldwide, can fall outside the band if transmitted above 5358kHz. Frequent occurrences have been observed and the RSGB website has been updated with help to avoid transmitting out of band.

**Wireless Power Transmission (WPT):** High power WPT charging systems are being developed for the electric vehicle industry as well as existing low power wireless charging technologies used in portable electronic devices. These are inductive systems that do not operate in amateur bands but there is concern that harmonics and other out-of-band signals could cause interference to the amateur LF bands given the power levels and proliferation of these devices (see the EMC Committee report). The RSGB, in conjunction with the IARU and other services, is actively involved in representing the amateur service interests at the ITU and CEPT.

**Other Issues:** Harmonisation of 1.8MHz still remains a desirable objective, not only to increase the allocation in some countries to the full 1.810-2.0MHz band, but also to resolve the power limitation above 1850kHz. Some early discussions have taken place, but it is unlikely to be addressed at the ITU for the next few years at least.

**Awards:** The two main awards for HF are presented at the RSGB Convention. In 2018, the ROTAB Trophy went to Paul Simons, G4CCZ and G5RP Trophy 2018 went to William Eustace, MOWJE.

**Ian Greenshields, G4FSU**

## Intruder Watch (IW)

The IW collects reports from UK licensed amateurs about HF intruders. An intruder is a non-amateur transmission in an amateur band that is not entitled to be there, eg HF



**G7VJR operating G6XX in the Commonwealth Contest.**

broadcasting station or military data link. Data about observed intruders is shared in near real-time between IW and its counterparts in other IARU member societies. When an intruder is regular and persistent and has been observed by UK amateurs on three or more occasions, IW may report it to Ofcom's Spectrum Management Centre at Baldock, which has engineering staff on duty 24/365.

During the year, IW made 93 reports about intruders heard on 41 different frequencies, 34 of which were in the 7MHz band. Up to six of these reports related to a single intruder heard at different times. In most cases Ofcom also heard the station and was able to get a 'fix' on the transmitter location with direction finders. In six cases the intrusion lasted long enough for a formal complaint to be made by Ofcom to the administration concerned. Some of these transmissions subsequently ceased. Others persist. In another case, a direct approach by IW to an HF broadcaster resulted in a rapid change to a new frequency outside the amateur band.

In some cases, direction finding showed the intruder to be ship-borne in international waters. The identity and therefore nationality of the vessel was unknown so no further action could be taken. Several of these were operating in the Mediterranean. In another case, intruders were NATO warships taking part in an exercise in the Norwegian Sea - the frequency had been used in error.

The most common types of intruding signal were: CIS-12, a Russian type of data link (31 reports); FSK, various types (26 reports); AM broadcasting (14 reports); Link 11, a NATO type of data link (11 reports).

IW forms part of the IARU Region 1 Monitoring System, and information about intruders is exchanged via a real-time web logger, a mailing list and a monthly newsletter. There is a comprehensive website with links to these resources at [www.iarums-r1.org/](http://www.iarums-r1.org/)

While input from other countries provides a useful stream of tip-offs about intruder activity, IW can only make reports to Ofcom on the basis of intruders heard by UK

amateurs. To ensure that only regular and persistent intruders are reported, IW only reports intruders to Ofcom when they have been heard by UK amateurs on at least 3 occasions (eg one amateur on 3 occasions or 3 amateurs once each). Amateurs in other countries should report intruders via their own monitoring systems.

**Richard Lamont, G4DYA, IW Coordinator**

## Legacy Committee

The Legacy Committee considers applications for funding from the Legacy Fund. It makes recommendations to the Board that makes the final decision on whether the application is approved, or not. Approved applications are administered through RSGB HQ; the Committee does not hold or handle money.

The Board is looking for exciting ideas to take amateur radio forward and enhance the service for the enthusiasts of today and tomorrow. Proposals that show innovation and development are particularly welcome – together with evidence of the ability to complete projects successfully. In general, the fund is not available for routine equipment or premises acquisition/improvement, nor is it for annual subscriptions, or on-going costs.

The Committee comprises of a Chairman and four committee members. Steve Hartley, GOFUW, took over from Nick Henwood, G3RWF in April 2018.

The Committee received 8 applications in 2018, of which, 4 were approved. More applications are welcome and Members are encouraged to put on their thinking caps. To help that process, here is an outline of the successful bids from 2018;

A wired internet router was funded to allow a Club to host online exams. The Club has successfully run 9 online exam sittings since the router was installed with 28 online candidates.

A GNU radio workshop was subsidised to learn more about this exciting new development. Feedback was extremely positive.

Two applications were to support Buildathons. The first, at the National Hamfest, was aimed at first time builders and used a simple receiver kit. This proved very popular with youngsters. The second was at the RSGB Convention and used a kit with surface mount devices to give experience with that construction technique. The Convention Build was filmed because Legacy funding also supported the making of a video about SMD construction that will be available to Clubs.

It would be unfair to provide details of the failed bids as they were not seen to meet the aims of the Legacy Fund. Those submitting an application should make it clear how it links to one or more of the aims and the Society's Strategy 2020.

Details of the committee, its membership and guidance on applying for funds are on the Committee page of the RSGB website.

**Steve Hartley, GOFUW, Chairman**

## Microwave Manager

The Microwave Manager is a member of the RSGB Spectrum Forum and is responsible for all bands above 1GHz. These are home to a wide variety of activity, innovation and modes including narrowband, beacons, contest activity, ATV and EME. Digital mode activity is also increasing. Active UK groups include data and repeater users, the UK Microwave Group (UKuG), BATC and AMSAT-UK.

Contests continue to attract activity in all bands up to 76GHz. In the lower bands over 60 stations sent in UK Activity Contest (UKAC) entries on 2.3GHz this year, with over 40 on 10GHz. The middle bands were less well supported and could benefit from more activity. Digital ATV systems have been demonstrated up to 76GHz. Narrowband systems have been demonstrated using frequencies as high as 288GHz.

Microwave band experimentation with machine generated modes (MGM) for both terrestrial and EME is increasing. Microwave enthusiasts have been promoting specific activity periods for experimentation with these modes. For EME, digital modulation using JT65, JT4 or QRA64 has enabled operation with smaller dish reflectors. Multimode and multi-band/crossband experimentation is increasing as the performance of SDR techniques increases in frequency.

In 2018, the preparatory activities for WRC-19 have continued with the 5.7GHz and 47GHz bands being within the scope of specific agenda items and the 24GHz band is likely to be adjacent to future mobile broadband operations above 24.25GHz. The likelihood for this adjacency has increased as European regulators have published a regulatory framework to harmonise and prioritise this band for future 5G comms.

Ofcom auctioned off 40MHz from the 2.3GHz band and most of the 3.4GHz band above 3410MHz with licences awarded to mobile phone operators. Wider access to the remainder of the 2.3GHz band below 2350MHz continues to be under active discussion for increased commercial and civil use. Although recently retained, the status of the amateur allocation in 3400-3410MHz band remains weak in Europe. Ofcom is currently consulting on proposals to enable more spectrum sharing between primary users in the 2390-2400MHz band and Ofcom notes this band is already supported by 4G mobile networks and handsets. This is an important band for the HamTV transmissions enabling successful interaction between schools and the ISS.



Listening to the ISS contact at the NRC.

The RSGB, and the Spectrum Forum, responded to the Ofcom WRC consultation and the related documents can be found on the Society website. Society volunteer expertise supports the work of the IARU and participates in the international committees dealing with topics where the amateur allocations are within the scope. It remains vitally important to demonstrate and publicise the interest and use of the microwave and millimetre wave bands to ensure their amateur retention.

Thank you to the RSGB and the Spectrum Forum members for their collaboration and support throughout the year.

**Barry Lewis, G4SJJ**

## National Radio Centre (NRC)

The RSGB National Radio Centre at Bletchley Park provides an ideal facility to interact with and demonstrate amateur radio to the visiting public. It also enables volunteers to engage with both active radio amateurs from around the world and lapsed amateurs. Now open 7 days a week, in 2018 the NRC welcomed over 55,000 visitors (more than double the previous year).

To cope with the visitor numbers the volunteer team was increased to 35. We hold evening volunteer meetings, training sessions, invited guest speakers, have a Volunteer Handbook and issued RSGB fleeces and shirts to maintain appearances.

Significant maintenance was done in 2018. The NRC was externally repainted and work was undertaken on the aerial systems, rotators and tower supporting the SteppIR aerial. The tower was repainted, new supporting guys fitted and a lightning discharge earthing strap installed. The LF aerial was replaced with an Alpha Delta dipole and a remote tuner installed giving capability on 80/40/30m. The 2m & 70cm satellite aerials were overhauled along with the polarisation switching units, and a new elevation rotator fitted. Internally, an extractor fan was installed, lighting circuits were rewired and the mains circuitry to

the radio room improved, including the introduction of emergency cut-out switches. In the GB3RS radio room, two PCs linked to the radio displays were installed and two large screens. The PCs and screens enable demonstration of the new FT8 (digital mode) as well as software decoding of CW and showing SSTV signals. Also installed were two receivers, specifically for visitors to use.

Donations/sponsorship for the NRC is always much appreciated and has come from Yaesu (satellite rotator), Martin Lynch & Sons (Alpha Delta aerial & RC600 remote tuner), The DX Shop (Gemini HF linear), Icom (support to improve the D-Star repeater functionality), Site One Solutions (tower maintenance) and RedSky Graphics (WWII radio display).

The reception area has been enhanced to illustrate the importance of wireless during WWII (specifically to the work of Bletchley Park). In particular, displays explaining the role of the Voluntary Interceptors along with several WWII receivers.

A number of events took place including Arkwright Academy licence training; GB1NHS launch; a GB18YOTA weekend; ISS School link-up demo day; Enigma Reloaded event; Introduction to Amateur Radio workshop and opening to visiting radio amateurs as part of the RSGB Convention.

Increased staffing helps to ensure that volunteers have sufficient time to engage in discussions with the visiting public. We are now able to show the importance of computers and the internet to supporting a modern amateur radio station including a range of websites, satellite tracking and live TV feed from the ISS, as well as RSGB and ICQ videos. Supporting this, factsheets have been introduced helping to promote an interest in the hobby.

**Martyn Baker, GOGMB, NRC Coordinator**

## Planning Advisory Committee (PAC)

The PAC consists of five panel members all of whom have detailed knowledge of the planning system in the UK. Committee members provide initial advice to amateurs who are applying to their local council for planning permission, usually for support masts and antenna systems. We also provide guidance on submitting appeals against planning refusals. Unfortunately, we do not have the resources to prepare applications or to submit appeals on the behalf of Members.

The main activity of 2018 was the production of a updated *Planning Guidance* booklet. It is now available for free download by Members from the RSGB website. Members are asked to read the booklet before asking for further advice or guidance.

Requests for assistance by Members continued at a steady rate of around one per

month during 2018 and 8 letters of support were sent on behalf of Members applying for planning permission. The letters are sent under my name giving my professional qualifications as a Chartered Town Planner.

Obtaining planning permission for masts or larger beams within residential areas is becoming increasingly difficult, especially in England. That is due largely to the absence of any reference to amateur radio in Government policy guidance to local planning authorities, except in Wales. Early in 2018 a response was sent to a consultation on revisions to the English national policy guidance seeking the re-introduction of text deleted in 2012 but to no avail. Policy and practice appears to vary considerably between each local authority.

Committee members staffed a stand at the National Hamfest and dealt with a wide range of queries from Members.

**John Mattocks, G4TEQ, Chairman**

## Propagation Studies Committee (PSC)

The PSC aims to promote interest in radio propagation amongst amateurs and short wave listeners, enabling them to make better use of the bands and encourage research. A new addition was the online propagation tool at [www.voacap.com/radcom/](http://www.voacap.com/radcom/) by Jari, OH6BG allowing you to tailor your predictions in terms of antenna, power and mode.

Gwyn, G4FKH continued to produce the predictions for *RadCom* and also added new functionality to his online HF prediction tool ([www.predtest.uk](http://www.predtest.uk)), including animation.

Three PSC members delivered talks at the RSGB Convention and many more were delivered to clubs, some via two video presentations and optional Skype Q&As. More than 120 clubs have used these and clubs wanting a video presentation should contact [psc.chairman@rsgb.org.uk](mailto:psc.chairman@rsgb.org.uk)

As well as writing the monthly GHz bands column for *RadCom* and helping produce the GB2RS propagation news, John, G4BAO's activities centred around GHz beacons and small-dish GHz bands EME. He continued in his role as UK Microwave Group (UKuG) treasurer and technical support person for Eastern England, providing advice and access to his RF test lab for UKuG members. Beacon work included modifying the drive source of the 24GHz beacon system at GB3PKT to overcome interference from the on-site 10MHz WSPR beacon. He continued to maintain the GB3CAM 24GHz beacon, replacing a failed GPS receiver, and prepared the new digimodes driver for the replacement Martlesham beacon GB3MHZ. He presented a paper on this work "Five band GHz EME from a European Suburban Garden" at the 2018 EME conference in the Netherlands, see [www.vhf.cz/dokumenty/388/](http://www.vhf.cz/dokumenty/388/)

Ron, G3SVW ran stands at two rallies



Ron, G3SVW with a PSC stand at a rally.

in the North-West; West Manchester and NARSA; including displays of propagation-related material. He showed the PSC slides at a one-day SES for the Sale Festival.

Jim, G3YLA continued his website ([www.propquest.co.uk](http://www.propquest.co.uk)) that displays foF2 propagation to show real time foF2, foEs and F2 maximum useable frequencies (MUFs), plus jet stream weather charts for Sporadic-E triggers.

Graham, G3TCT worked on improvements to the efficiency of the GB3USK solar-powered 23cm beacon and installed a new PA. Best DX was DL at 809km.

Peter, G3XJE looked at the possibility of setting up one or two web-based SDR receivers for use by the amateur community. He approached Professor Graham Woan, MMOWOA, director of the Glasgow University Astronomy Observatories, about the possibility of hosting one at either of the University's two sites. The quieter of the two does not yet have internet, but Professor Woan was enthusiastic about a test at the other. A test with a Miniwhip multi-band antenna and a Raspberry Pi 3 running OpenWebRX with an SDRplay RSP2 may be set up at the observatory. G3XJE is also looking at how WSPR might be used for radio propagation studies. He is also developing a tool for handling very large monthly WSPR files and other suggestions are welcome ([pjds@mrao.cam.ac.uk](mailto:pjds@mrao.cam.ac.uk)).

Chris, G4IFX was awarded the 1962 VHF Committee Cup for his research into the polarisation of 50MHz signals. His work has now developed into a collaboration with the University of Bath and he started a part-time PhD there with Prof Cathryn Mitchell, with the working title: "Radio propagation through ionospheric Sporadic-E".

Much of Barry, G8AGN's interest was been taken up with propagation at 5.6GHz (ATV) over line of sight and obstructed paths, including over the sea. As well as club presentations, Barry spoke on 5.6GHz at the Fittingly Microwave Round Table.

**Steve Nichols, GOKYA, Chair**

## Regional Forum

The 13 Regional Representatives meet in person with other volunteer leaders and senior HQ staff as the Volunteer Leadership Team (VLT) three times a year. We also meet regularly via Skype as the Regional Forum (RF). Meeting as the RF and VLT gives us the opportunity to have the views of the amateur community heard and lets us help develop the future of amateur radio in the UK and deliver on the Society's strategic goals.

As Regional Representatives, along with the District Representatives, we are the main RSGB contact at the grassroots level and provide immediate advice on a wide range of matters – if we don't know the answer we know someone who does. We run the Regional Club of the Year competition and attend many events and rallies in the Regions supporting the amateur community.

We are always looking for volunteers to join 86 strong Regional team and fill vacancies [www.rsgb.org/volunteers](http://www.rsgb.org/volunteers).

I would like to thank all the Regional volunteers for their work throughout the year.

**Philip Hosey, M10MSO, Chairman**

## Special Interest Groups

Honorary Officer for Affiliated National Societies & Special Interest Groups is a new position created as part of Strategy 2022.

The RSGB currently has over 400 local affiliated clubs and societies, who are actively supported by the RSGB Regional Teams. This new role is to support around 100 other affiliated national clubs, societies and special interest groups, which encourage a diverse range of amateur radio interests.

Initial work has been to make contact with as many groups as possible to canvas opinion on how the RSGB can better support and represent their interests. This is ongoing.

**Simon Taylor, MWONWM**

## Spectrum Forum

The Forum brings together the Spectrum Managers with an extensive range of participants from both inside the Society and external specialist groups. This brings a wide range of experience. The Forum is a key focus with respect to spectrum, licensing and related matters. One theme that featured strongly was supporting innovation and this featured in the August 2018 *RadCom* strategy feature. This followed the success in liberalising access to the experimental 71MHz band, complementing 147MHz & 275GHz. These bands continue to support remarkable innovation by BATC and UKuG.

There were no major IARU meetings in 2018. External focus was concentrated on ongoing support for WRC-19 (50MHz, Wireless Power, microwave and millimetre

bands etc) with RSGB representatives at key Ofcom and CEPT meetings, supported by other UK/IARU volunteers and expertise.

The Forum conducts most of its work via email and meets annually. The October 2018 annual meeting moved to a more accessible London location, which proved to be successful. It considered the status of WRC-19 preparations, initial proposals for the April-2019 Vienna IARU meeting and a potential initiative that may see a Request to Developers for more optimal and innovative digital modes. Reports and minutes are available on the Forum webpages.

The Forum led a number of consultation replies – to the Isle of Man on 3.4GHz, a major one to Ofcom on WRC-19 and to CEPT regarding Wireless Power (ECC Report 289).  
**Murray Niman, G6JYB, Chair**

## Technical Forum

The Technical Forum is responsible for the technical side of RSGB's activities and is a Reflector and email based group allowing rapid response and discussion with all the forum's members having access, and being able to contribute immediately. There was no annual meeting.

Technical review of articles for *RadCom* and other RSGB published electronic magazines forms the bulk of the activity. Any technical article being considered for publication is sent to the Forum for review. We look at its suitability, technical merit and for any safety implications. Articles are taken by members on a first-come-first-served basis with just a few having to be 'pushed' in the direction of those with particular areas of expertise. Absolute technical correctness in certain areas is not always necessarily challenged, especially for *RadCom Plus* where it is realised that experts and beginners will approach some areas in a different light. Certain articles have been 'allowed though' in spite of a few concerns and in such cases it is left to readers and the correspondence columns to discuss them.

The members of the Forum have a breadth of specialist knowledge to cover many areas needed for detailed review and we have 3 new members to expand areas of expertise relating to modern SDR techniques and antennas.

Software Radio, the new data modes and 21<sup>st</sup> century techniques are rapidly moving into the hobby so it may be necessary to use external experts, particularly if there could be safety and legal implications involved; advice on earthing is one particular point that has caused some problems that still raises its head from time to time

Another task we perform is the selection of award winners for the five RSGB technical awards. The winners are selected through a voting system by forum members after a list



Maker Faire UK 2018.

of all suitable publications and candidates is first drawn up and circulated. They are then sent to the Board for approval.

Increasingly, comments (and complaints and criticism) on *RadCom* articles are appearing first on the independently-run *RSGBTechnical* internet group <https://groups.io/g/RSGBTechnical>. This is open to all and continues to gain popularity, with the current membership now at 1664. The breadth of subjects covered is too large to even begin to list here, going from basic construction right through to advanced and specialist techniques. Antennas, EMC matters and licensing issues continue to dominate and are easily the most popular subjects. As is often the case, some seemingly quite trivial subjects often generate a huge discussion thread. Some *RadCom* articles generate a huge response and discussion, so although the group is independent some members of the Technical Forum keep an overview of the threads and can respond with an official view if needed. With the wide range of expertise and experience amongst the subscribers, most questions soon get answered to the satisfaction of their originator. A big thank you to the moderators of *RSGBTechnical*.

If you have any ideas on areas you would like the Society's publications to cover, or direction we should take, please let us know.

Finally I would like to thank all the members of the Technical Forum for their time and the support provided.

**Andy Talbot, G4JNT, Chair**

## Training & Education Committee (TEC)

The TEC is made up of several working groups that undertake a number of projects, supporting the RSGB's Strategy 2022 (particularly Growth, Participation & Membership).

2018 saw Chairman, Paul Whatton, G4DCV resign due to new work commitments. Derek Hughes, G7LFC is filling Paul's role.

The **Syllabus Review Working Group** has advised the Exam Group on various matters concerning the new syllabus proposals

including HAREC compliance and critiquing proposal from the perspective of trainers. This project came to an end during 2018.

Following the success of the Bath Buildathons, the TEC made an application to the Legacy Fund to purchase a **Loan Tool Kit**. The idea is that it can be borrowed by RSGB Affiliated Clubs and Groups to enable them to run their own practical workshops and Buildathons. It has been used at YOTA, the National Hamfest, the RSGB Convention, the GQRP Convention and at the Scottish Amateur Radio Convention. For details see the October 2019 *RadCom* or visit [www.rsgb.org/TEC-tools](http://www.rsgb.org/TEC-tools). The **Schools Link** team was established to help bring radio communications in to the classroom. Delivered through the use of innovative projects that teachers can incorporate in to their lessons and through practical activities students can take part in to see the benefits of radio in everyday life.

During the year the team attended The Newcastle Maker Faire (billed as the largest exhibition of makers and maker projects in the UK) with the Youth Committee where they helped young visitors build a Morse key and sounder; ran workshops and demonstrations about radio communications at MakerNoise, a major new technical conference for teachers at Edge Hill University; developed a pilot scheme for British Science Week 2019.

**Train the Trainers (TtT)** is charged with helping amateur radio trainers deliver engaging courses at all levels for candidates of all ages. The team consists of professionally qualified and practising teachers from all age groups and abilities, enabling them to provide a perspective on most situations encountered. They ran courses that included St Helens, Barry and Dorset. If you feel you could attract minimum of 20 candidates to a course at your venue please do get in touch.

The role of the **Disabilities Working Group** is to help improve the accessibility and inclusivity of both the Society and the hobby in a number of ways that include:

- Recruitment & training of local champions and mentors.
- Raising awareness with clubs about practical implementation of RSGB equality & diversity policy to ensure an inclusive environment.
- Advisory input into Train the Trainers
- Creation of appropriate materials, in alternative formats, for the RSGB where there is a lack of information for disabled persons.

They worked with the ESC to find ways to make the online examinations system more user friendly for candidates with a visual impairment or who use a reader.

The team behind the **Morse Competency Scheme** introduced the option of online Morse tests ([www.rsgb.org/morse](http://www.rsgb.org/morse)) and they are

running very successfully. Wherever a reliable internet connection can be found, candidates can be tested at various speeds from 10 words per minute (wpm) to 30wpm. The application process has been simplified and a competency test, either face to face or online, can be requested from the RSGB website. Successful candidates receive a certificate.

TEC also provides advice and input to the RSGB as required through an IT Working Group and a Promotional Video Working Group. Members of TEC also include Dave Wilson, M0OBW in the Quality Liaison Role and Rebecca Hughes, M6BUB as the liaison between the TEC and the Youth Team.

Thank you to all members of the TEC for their ongoing hard work, it is appreciated. Enquiries from any RSGB Member who has skills that they would like to share are welcome, email [tec.chair@rsgb.org.uk](mailto:tec.chair@rsgb.org.uk)  
**Derek Hughes, G7LFC, Chair**

## Trophy Manager

In August, all RSGB trophies were collected and taken to the new secure storage facility.

Over the years the RSGB has amassed over 100 trophies of various shapes, sizes and ages. Some of these trophies are 90 years old and need a bit of care, whilst others are very ornate and need stable storage.

Prior to the RSGB Convention in October, the contest trophies were audited as to their condition and future usage capability; taken for engraving with the winners details; cleaned and their boxes refurbished.

There are currently 124 trophies: 65 HF contest trophies, 43 VHF contest trophies, 13 AGM trophies, 2 Scottish trophies and 1 construction competition trophy. Of these, 72 were presented at the RSGB Convention.  
**Jacqui Goodey, G6XSY, RSGB Trophy Manager**

## VHF Contest Committee (VHFCC)

The VHFCC is responsible for setting the strategy and rules for the RSGB's Contest programme on 50MHz and above.

2018 has seen continuing high levels of participation in most RSGB VHF / UHF / SHF contests with total like-for-like entries broadly flat. The stabilisation in UK Activity Contest (UKAC) rules helped maintain activity at historically high levels, with 661 stations entering the 2m events. Activity levels in the UKACs on the other bands were also high, with over 400 stations on 70cm and 6m, 300 on 4m and over 200 on 23cm. The UKACs are also helping turn activity on the mid microwave bands from a narrow specialism to a broader club focussed activity, with nearly 90 stations in these contests on 2.3, 3.4, 5.7 & 10GHz. Encouraging activity on these bands is important as they are at high



Newton le Willows ARC hosts Train the Trainers.

risk of being lost to commercial interests.

Our drive to take that enthusiasm for short weekday contests and transfer it to weekend events is making progress, but not as quickly as we would like. We introduced a club-based championship to weekend events and recommended times for activity in the 6 hour section to make it more interesting. Work will continue on increasing weekend activity.

With the huge increase in interest in digital modes, we also introduced VHF MGM (machine generated mode) contests on 6m and 2m, with simple flexible rules allowing the use of multiple MGM modes. These proved popular and fun for those taking part. We have allowed the use of slow MGM modes within mainstream contests for some years. These are really designed to enable meteor scatter contacts to take place – and have been particularly valuable for stations located away from the main centres of activity. These modes help widen the appeal of VHF contests, without significantly changing their character.

The fast-digital modes such as FT8 are quite different in nature, and would in theory be capable of supporting similar QSO rates to traditional modes. However, they are very much 'Marmite' modes at present, with some strong supporters, and others vehemently against. We think that allowing fast digital modes in mainstream contests could fundamentally change them and, given the range of opinions, believe it best to arrange separate events, but keep it under review.

We couldn't operate without the hard work by the CSC in adjudicating contests so efficiently, thank you, also Jacqui Goodey, G6XSY & Mike Goodey, G0GJV and Ian Pawson, G0FCT for sorting the trophies.

**Andy Cook, G4PIQ, Chair**

## VHF Manager

The VHF Manager is responsible for RSGB spectrum matters for the 50-432MHz amateur bands. A key part of the role is to liaise with Ofcom concerning the amateur VHF/UHF bands and IARU Region 1 dealing with band plans.

Working with Ofcom, the RSGB has developed a much-improved process for Special Research Permits (SRP). SRPs are individual licence variations that are mostly granted, although not exclusively, for higher permitted power for moonbounce (EME) experiments. Collaboration with Ofcom has also resulted in a simplified process for granting NoVs for 70.5–71.5MHz for experimental operation. The VHF Manager is looking for results, both positive and negative, of any experiments on these bands.

The RSGB has spent considerable time assisting IARU R1 in the case for a harmonised allocation for the amateur service at 50MHz at WRC-19. Currently the spectrum 47-68MHz is allocated to broadcasting at ITU Region 1 level (Region 2 and Region 3 do have formal ITU amateur primary allocations). A number of administrations have been somewhat hostile to the amateur case requiring significant effort to enable push-back. Some preparatory work was done in defining and preparing the RSGB position in Committee C5 (VHF/UHF) for the IARU R1 interim meeting in 2019. The RSGB is looking to simplify the VHF/UHF band plans by removing most of the particular mode spots in favour of wider tranches of spectrum allocated to modes.

A question that is regularly being asked is; 'what is the frequency for XXX digital mode?' The RSGB does not allocate frequencies in the VHF/UHF band plans for every single mode, particularly as some come into and go out of fashion in a matter of months. Rather RSGB and IARU R1 strategy is to allocate a slice of the band for bandwidth compatible modes including all forms of Machine Generated Modes (MGM). Amateurs are expected to understand the bandwidth of any mode they chose and select an appropriate part of the band, avoiding frequencies already in use.

The general level of traditional VHF/UHF activity; CW, SSB, FM & DV continues to cause concern. VHF and UHF activity days run by a number of clubs seem to be bring many very rarely heard call signs back onto the bands. These activity days also provide newcomers with a great opportunity to make contacts in an easy-going environment. Perhaps all clubs should consider 432 and 144MHz 'activity fun days'.

**John Regnault, G4SWX**

## Youth Team

The Youth Team sent representatives to South Africa, see *RadCom* November 2018 and also managed YOTA month in December, see *RadCom* March 2019. Team members also assisted at The Newcastle Maker Faire. The RSGB is planning to send a team to YOTA in Bulgaria in 2019, details of how to apply will be available on the RSGB website soon.