



EMCC Annual Report 2021

Help and advice to members is provided through the EMC Helpdesk and via the website. Over 120 cases were handled by the help desk in the year. Topics included TVI, SMPSU's and battery chargers, pacemakers and their safety, solar PV installations including what to expect.

EMF compliance checks RSGB has joined with ARRL to form a team of experts in RF safety who are assessing the way stations can be set up to comply with new licence requirements. We are indebted to these volunteers for their expertise and the time they are devoting to this work.

The RSGB EMF web page now contains the first Pre-Assessed Equipment Configurations (PAECs) one for HF dipoles and another for VHF and up beam antennas. A third PAEC on microwave dishes will be published soon. This year four articles giving advice on how to conduct EMF compliance checks have been published in RadCom. Seven videos have been made to help guide people with these Compliance Checks, these videos have been viewed more than 23,000 times. The calculator which is now available as a web app and a spreadsheet version is being used by thousands to check and record their compliance.

RSGB purchased calibrated isotropic EMF probes which are being used for field strength measurements below 30MHz. These measurements validate the exclusion zones by checking that EMF reference limits are not exceeded outside of these exclusion zones. Later measurements will map the field strengths against position relative to the antenna to confirm that calculator results remain conservative.

Investigations An R&S spectrum analyser was recently delivered to support EMC product testing and enable investigation of installations with high RFI. No on-site measurements have been performed in 2021 due to Covid 19 restrictions; various items of equipment sent in by members have been investigated including some 'smart' car battery chargers that have no RF interference filtering. This work was reported through EMC RadCom column.

Complaints to Ofcom EMCC have continued to support members who are investigating whether the raised noise floors that they are experiencing are due to VDSL interference. Additionally, we have assisted several members in submitting complaints to Ofcom about VDSL interference. We submitted 2 FOI requests to Ofcom seeking information about how they handled the VDSL interference complaints submitted to Ofcom over the last 18 months and why most were rejected without any further investigation. Unfortunately, the FOIs failed to solicit any significant information from Ofcom. We continue to pursue this matter and further escalation strategies are proposed including parliamentary lobbying. We need your help to provide your own experiences to elevate the extent of the problem further. The case for lobbying government for the protection of radio services is growing and is evidenced by the increasing levels and type of radio interference encountered.

Standards development EMCC members has been active in IARU and on British Standards committees representing the Amateur Service. The application of acceptable or product specific limits to EMC Standards remains the primary objective. However commercial pressures from certain represented electrical product groups can make this difficult. This can result in unacceptably high generic limits being applied to the Standards.

TR 16-4-4 is an important specification for the protection of radio services and deals with radio disturbance and immunity measuring apparatus and methods and incorporates statistics and limit modelling. A Monte Carlo analysis has been used to prove that the current probability estimates wrongly relax Standard limits levels. This can result in the CISPR committee members underestimating the extent of real-world problems. These increased limits allow a rise in background levels which impacts all radiocommunication services.

RSGB EMCC members continue to review relevant standards at BSi level and try to influence National Committees prior to voting on selective Key issues. The protection of radio services up to 6 GHz is an emerging area of interest, largely because of radio-based data services. The amateur bands up to 6 GHz need special treatment for incorporation into the Radio Services Database, as unlike broadcast services, amateur stations are difficult to describe using the generally understood parameters of power, antenna, and modulation.

Support to IARU EMC committee CISPR activities focussed on limiting emissions from Wireless Power Transfer WPT(EV) continue, through virtual webinars. We support the Region 1 Noise Measurement Campaign to study the radio noise floor at different geographic locations. This will allow the identification and study of long-term noise and interference changes across LF and HF frequencies. DARC have rolled out 52 ENAMS on-line HF noise monitoring stations which have been installed in Germany and further ENAMS units are being produced for societies in Austria, Switzerland, France, Belgium, New Zealand and we have just received one in the UK.

A diverse workload The EMC Committee members have been very busy. Focussed sub-groups on EMF, lobbying and VDSL have drawn upon the expertise of others to minimise the strain on our resources. More EMCC members are needed if we are to continue this crucial work. Recently a number of people have offered to join us in this work but more people are always needed - Can you help?

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