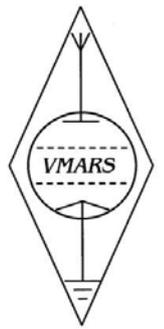


VINTAGE AND MILITARY AMATEUR RADIO SOCIETY



Report to the RSGB Spectrum Forum Meeting 27 October 2018

Activities

VMARS has a number of regular activities, which include AM nets, attendance at various events, the publication of a monthly news sheet, a technical magazine - 'Signal' - and two members only reflector lists. Additionally, a very popular service is the disposal of silent key member's equipment at internal auctions. Some of this material is of historic interest, and the auctions ensure that such equipment is not dumped – which could well be done illegally, as very few members of the public are aware of the legal requirements of the WEEE Directive. It also provides a needed financial benefit to the family.

VMARS is international in scope, having members on three continents. Additionally, it has proved possible to assist various museum groups with obtaining information and parts for restoration of exhibits.

Spectrum Matters

Interference

VMARS members, in common with many other operators, are increasingly troubled by electrical noise, especially in urban areas. Some alleviation can be sometimes be achieved by using one of the remote SDR receivers available by web access. This is palliative action but not a particularly desirable situation, in that especially in the case of country wide net, it could become necessary to switch between the remote SDRs depending on which station is to be received. However, where problems exist because of radiation from wired telecommunications, it has been noted that the telecommunications suppliers are very loathe in recognising their responsibilities in this regard. As has been noted in various papers from the EMCC, the ability of Ofcom to actually measure noise at the levels necessary appears somewhat limited, and it appears, this also applies to a number of other organisations. However, VMARS appreciates that the EMCC is working on these matters.

Should Wireless Power Transfer for Electric Vehicles (WPT-EV) become as common as has been suggested, the situation is likely to become worse: it is however, likely to be held back because of a lack of the necessary infrastructure, including the production of the equivalent of three more Hinckley Point C power stations to meet the suggested projected UK demand alone. Note that the IARU R1 are leading the work in this area at both CEPT and ITU.

Band Plans

Since the last century, 3615 kHz in the 'All Mode' part of 80m has been a 'centre of activity' for AM users. Occasionally, QRM from a Winlink station operating automatically on 3614.5 kHz has been reported: whether or not this is because the Winlink does not receive the AM station or is truly automatic is unknown. Although it would be desirable in some respects to move above 3620kHz, a surprising number of the transmitters in use are crystal controlled, and the price and lack of availability of custom crystals is a limiting factor.

A number of members in regard to Band Plans have asked 'What is necessary bandwidth and how do I measure it?' – a question to which there is no answer. Neither the ITU-R Radio Regulation 1.152 or ITU-R Recommendations SM328, SM329 or SM1138 adequately define in useable numeric terms

'necessary bandwidth'; additionally, the necessary bandwidths listed in SM1138 are very different to those used in ERC/REC74-01 for the Amateur Service, although the ERC Recommendation predated the ITU-R one by 10 years. In point of fact, the only real use for 'necessary bandwidth' is to define the boundaries between the wanted emissions and the Out-of-Band (OoB) and Spurious frequency domains. At UHF and above, it can be impossible, because of transmitter phase and wideband noise when using narrow band emissions, to meet the regulatory requirements of ITU-R Rec SM.329, which is why the ERC/REC74-01 has minimum necessary bandwidths for the Amateur Service which increase with the operating frequency. Unsatisfactory as the current situation is, 'well defined areas of doubt and uncertainty' have some advantages in providing 'wriggle room' in the event of a dispute.

Unwanted Emissions in the Spurious Domain

As many vintage transmitters do not meet current requirements in terms of harmonic and other unwanted emissions, VMARS members are encouraged to use filters and antenna coupling units to ensure that the CEPT requirements in this respect are met.

Inter alia, it should be noted that a number of power amplifiers covering HF and 6m meet the FCC requirements on unwanted emissions but not those of the CEPT or Radio Regulations. The FCC requirement of $43 + 10\log P$ not needing to exceed 60dB is 10dB less stringent than the ITU-R and CEPT limits, which are 'not needing to exceed 70dB'. Thus any amplifier or transmitter over 50 watts only meeting the FCC requirements will not meet the ITU-R and CEPT requirements, and so should not be placed on the market in the UK, regardless of whether or not it carries (illegally) the CE mark.

On behalf of VMARS

Peter E. Chadwick G3RZP, Hon. Sec. VMARS.