

**REPORT OF THE RF SAFETY COMMITTEE
TO THE
ARRL BOARD OF DIRECTORS**

January 2024

The RF Safety Committee participated in the following areas over the past six months:

1. RF Safety Committee Activities.
2. Monitoring current events and scientific studies regarding RF Safety.
3. Participation in the scientific RF Safety community.
4. Administrative issues.

1 RF Safety Committee Activities

- 1.1 Members of the Committee have been regularly meeting online with an international contingent of Amateur Radio RF safety experts, from RSGB (Great Britain), IRTS (Ireland) and SSA (Sweden). This international group crafted a document that aids amateurs with a problem that is similar for all of our constituents: talking with their neighbors about the safety of exposure to their amateur radio transmissions. The document, entitled, **“Helping Amateurs Interact with Neighbors Asking About Radio Transmissions,”** provides amateurs with answers to likely questions from their neighbors about their safety from exposure to the RF energy. The document has been made available on the ARRL website, at [www.arrl.org/files/file/Lab/RF Exposure/Helping Amateurs Interact with Neighbors Asking About Radio Transmissions_revised 11282023.pdf](http://www.arrl.org/files/file/Lab/RF%20Exposure/Helping%20Amateurs%20Interact%20with%20Neighbors%20Asking%20About%20Radio%20Transmissions_revised%2011282023.pdf)
- 1.2 The Committee is still awaiting the release of the FCC publication, OET Bulletin 65 Supplement B, **Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields, Additional Information for Amateur Radio Stations.** The new document is still undergoing the review process by various government entities, as is the publication of the rewritten OET Bulletin 65. This presents a potential problem for exposure advice to amateurs that references these documents, as the outdated versions are still available on the FCC website.

2 Monitoring Current Events and Scientific Studies

- 2.1 An article in *Clinical Endocrinology News* reviewed a study from Switzerland of young men that compares cell phone use to sperm quality. The study reported a statistically significant association between the amount of cell phone use and decreased sperm concentration. The author of this review article concluded that because the study was retrospective (asking subjects how they used their cellphones in the past), its methodology is open to criticism and thus “its results can only fuel hypotheses, nothing more.”
- 2.2 The French telecommunications regulator, ANFR, “ordered Apple to remove the iPhone 12 from the French market from September 12 due to the model exceeding the limit” for electromagnetic absorption by the body. ANFR referenced tests by “accredited labs” that simulated when the phone was being held in the hand or kept in the pocket that indicated absorption levels of 5.74 W/kg (exceeding the regulatory limit of 4.0 W/kg). They also noted that at a distance of 5 cm the phones were in compliance with the regulatory limit of 2.0 W/kg. Apple disputed ANFR’s results and presented multiple independent analyses that showed the devices to be in compliance. Since such measurements cannot be made in a human body, equivalent phantoms must be used. The FCC has found that the use of such phantoms can lead to considerable variation in SAR measurements, so they published specific guidelines for performing those tests (FCC OET KDB 8565664). It is not clear that the tests referenced by ANFR were performed using similar guidelines, or any standardized testing protocols.

3 Participation in the Scientific RF Safety Community

- 3.1 Dr. Lapin continues to serve as co-chair of IEEE ICES TC-95 Subcommittee SC-4: Safety Levels with Respect to Human Exposure to Electromagnetic Fields, 3 kHz to 300 GHz.
- 3.2 Mr. Butcher continues to serve as the co-chair of IEEE ICES TC-95 Subcommittee SC-1: Techniques, Procedures, Instrumentation, and Computation.
- 3.3 Mr. Tell continues to serve as the chairman of the IEEE ICES TC-95 Subcommittee SC-2: Terminology, Units of Measurement, and Hazard Communication.
- 3.4 Dr. Bushberg continues to serve on the IEEE ICES TC-95 RF Safety Standards Committee.
- 3.5 Mr. Tell continues to serve as the chairman of the IEEE EMBS Committee on Man and Radiation, COMAR.
- 3.6 Dr. Bushberg continues to serve as the vice chairman of the IEEE EMBS Committee on Man and Radiation, COMAR.
- 3.7 Mr. Butcher continues to serve as a member of the IEEE EMBS Committee on Man and Radiation, COMAR.
- 3.8 Dr. Lapin continues to serve as a member of the IEEE EMBS Committee on Man and Radiation, COMAR.
- 3.9 Dr. Lapin and Mr. Tell continue to serve on the IEEE P.2725.1 Standard Committee, which sets the exposure limits for Microwave Medical Imaging Devices.
- 3.10 Mr. Butcher continues to serve as a member of the United States National Committee of the International Electrotechnical Commission (USNC/IEC) for TC106: Methods for the assessment of electric, magnetic and electromagnetic fields associated with human exposure.
- 3.11 Dr. Bushberg continues to serve as the chairman of the Congressionally chartered National Council on Radiation Protection, NCRP.

4 Administrative Issues

- 4.1 Dr. Siwiak is a contributing editor for QST and Editor of QEX. He shares submitted RF Safety-related articles with the Committee.
- 4.2 Dr. Lapin has participated in the ARRL Electromagnetic Compatibility Committee meetings. Complaints of interference to medical devices that are reported to the RF Safety Committee, are shared with the EMC Committee, whose expertise includes electromagnetic interactions with all types of instrumentation.

Respectfully submitted,

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Chair, ARRL RF Safety Committee

The ARRL RF Safety Committee

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