

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

January 2011

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

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

1 RF Safety Committee Activities

- 1.1 The Committee has been reviewing pertinent articles submitted to QST for RF Safety issues prior to acceptance for publication.
- 1.2 The Committee reviewed the RF safety questions proposed for the 2011 General License Question Pool. With a few minor modifications we agreed that these questions were appropriate.
- 1.3 The Committee commented on the email of a Radio Amateur who was concerned about the potential exposure to people in a house that sat in the middle of a full wave 75M loop antenna. Several erudite comments concluded that the full wave loop has an advantage over other antennas in that it does not have any extremes in voltage or current. The distance between people and the antenna wires ultimately determine the level of exposure and at 75M the MPE thresholds are fairly high compared to most other ham bands.
- 1.4 The Committee commented on a “Doctor Is In” column from QST that discussed pacemaker safety in the presence of an amateur radio transmitter. The column stated that there is very little information online to guide pacemaker wearers. The Committee disagreed, although this pointed out to us the need to make our information more readily accessible. We have at our disposal documentation that does not appear to be available to the public from Medtronics (the largest pacemaker manufacturer). We are attempting to get permission from the company to display this document on the ARRL website.
- 1.5 At about the same time the committee received an email from a zoning attorney whose client’s Amateur Radio antenna building permit was being opposed by a neighbor with a pacemaker. The increase in the amount of pacemaker correspondence makes it all the more important that we make reliable information on the subject easy to find on our website.

2 Monitoring Scientific Studies

- 2.1 Representative Dennis Kucinich (D-OH) is the main voice in Congress warning of the dangers of RF. Previously Rep. Kucinich held hearings that were slanted by the specific experts that were invited to testify; those that had gone public with warnings about dangers from cell phones far outnumbered those who were more balanced. The main witness at those hearings was Dr. Ronald Herberman, whose very public warnings about cell phones were previously discussed by the RFSC and who has virtually no expertise in this subject. Rep. Kucinich has now announced that he will introduce a bill requiring health warning labels on cell phones and that he intends to launch a bill to fund a new national research program to study cell phones and health. Rep. Kucinich feels that

the many studies showing no effects from cell phone use are tainted because he believes that most of them were funded by the telecommunications industry. It is unclear whether or not Rep. Kucinich is aware of the thousands of research studies that have been performed on this subject over the past 50 years.

- 2.2 A court-ordered study in Rome, Italy purported to have found a significant increase of leukemia and lymphoma in the 5 mile radius around the antennas of Vatican Radio. The Vatican disputed the results, promising to publish the results of their own study. There was also dispute about the level of exposure in the neighborhoods surrounding the antennas. The Vatican stated that their exposure levels were within international safety limits while the Italian Environment Ministry claimed that the exposure levels were six times higher than the safety limits.
- 2.3 The World Health Organization released a new proposal for studying electromagnetic health effects. Their new “*Research Agenda for Radiofrequency Fields*” is designed to foster the study of all forms of electromagnetic energy as it affects human health, which by their definition, is a “*state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.*”
- 2.4 Director Frenaye, K1KI, brought to the attention of the Committee a Scientific American article arguing the absurdity of the notion that RF energy could cause cancer. On purely physical principles this article discussed the distinction between ionizing and nonionizing radiation, RF being a form of the latter. Although this is an old argument, and one that the RFSC is quick to point out, the Committee felt that the science of RF bioeffects has progressed beyond this purely physics-based definition of what can cause cancer and has identified related mechanisms. Thus the arguments made in this article were not terribly helpful.

3 Participation in the Scientific RF Safety Community

- 3.1 Mr. Hare continues to serve on the ICES (IEEE) SCC-28 RF Safety Standards Committee. He generally shares the voting ballots for changes to the standards with the Committee prior to voting on them.
- 3.2 Dr. Lapin continues to testify about RF safety at zoning board hearings when cellular tower placement is being considered.
- 3.3 Dr. Lapin continues to serve as a member of the IEEE Committee on Man and Radiation, COMAR.

4 Administrative Issues

- 4.1 The RF Safety Committee welcomes Bud Tribble, M.D., Ph.D., AF6ZE, as a new committee member. Dr. Tribble is currently the Vice President of Software for Apple Computers. He was trained in medicine at the University of Washington and specialized in Neurology, with a subspecialty in Epilepsy. His particular expertise will fill an expertise gap in the Committee regarding analysis of some of the research that purports to show that brain function is altered in the presence of RF fields.

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Chair, ARRL RF Safety Committee

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