

The ARRL Lab

Harold Kramer, WJ1B

Amateur Radio is a technical avocation. The ARRL Laboratory, in one form or another, has been a component of the ARRL and integral to its mission since the 1920s. The Lab provides technical services that are essential to the ARRL and its members.

The heart of the ARRL Lab is its staff of five. Overseeing the Lab's operations is Lab Manager Ed Hare, W1RFI. Senior Lab Engineer Zack Lau, W1VT, specializes in supporting members through the Technical Information Service (TIS); Lab Engineer Mike Gruber, W1MG, specializes in RFI issues; Lab Engineer Bob Allison, WB1GCM, is in charge of conducting Product Reviews and testing, and Lab Assistant Tony Nesta, AA1RZ, supports all Lab functions.

Serving the Members

First and foremost, the Lab provides the TIS service for our members. Large portions of the Lab's resources are devoted to answering member questions submitted through the TIS, which receives about 500 inquiries per month. TIS activities include: answering member technical questions, fulfilling requests for article reprints, soliciting and training outside volunteers to maintain specific TIS Web pages, supporting ARRL software products, helping members use ARRL's online resources and being the ARRL's technical presence at various Amateur Radio events.

QST's Product Reviews are one of its most read columns and the Lab does all of the *QST* Product Review testing. In 2009, they reviewed 23 Amateur Radio products for publication. To assure both the accuracy and integrity of the testing process, the Lab maintains long term records of equipment tested and keeps the test equipment and facilities in proper repair and calibration. They also document the test methods used in the ARRL testing program and update the Test Procedures Manual to reflect any new or revised test procedures. As a natural extension of product testing the Lab serves as a technical interface between the ARRL and equipment manufacturers.

Along with Product Reviews, the Lab

staff performs product testing and compliance evaluation for Amateur Radio equipment prior to accepting manufacturer advertising and they provide technical support to the ARRL Business Services (advertising) department. They also provide valuable input to *QST* and ARRL book authors and editors on technical matters.

Another of the Lab's responsibilities is handling RFI issues. In 2009, Lab Engineer

and regulatory agencies on Amateur Radio technical compliance issues. Members of the Lab staff also serve on industry committees such as the IEEE Standards Coordinating Committee 28 (RF safety); IEEE P1775 BPL EMC Standards Working Group; IEEE EMC Society Standards Development Committee and others. Lab staff also represents Amateur Radio at the industry standards committees of organizations such as the IEEE, ANSI and The International Special Committee on Radio Interference (CISPR).

Within the electronics/RF industry the Lab has worked with the IEEE on the creation of an IEEE Recommended Practice for the resolution of power line noise and they participate in the IEEE Working Group in developing the standard. The Lab also acts as a liaison to the FCC enforcement division on power line noise complaints.

The Lab supplies essential support to the ARRL's advocacy objectives related to EMC issues. They conduct electronic design, research and development in support of ARRL objectives related

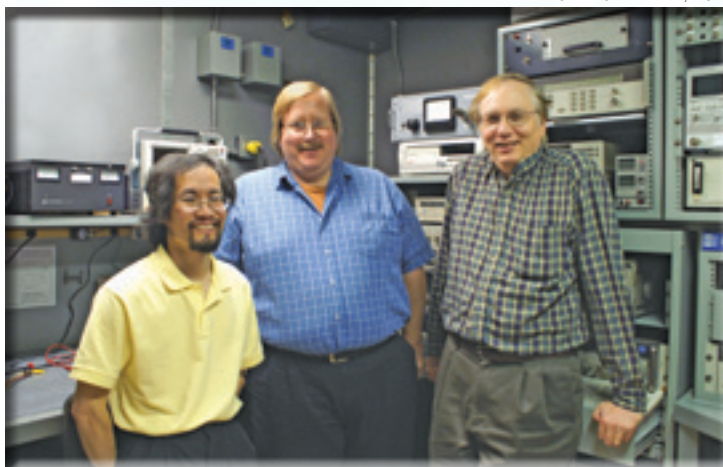
to EMC; perform electronic testing primarily focused on EMC measurements; perform technical reviews of ARRL EMC material for ARRL publications, and maintain records of Amateur Radio EMC cases.

Serving the League

The Lab Manager is the Trustee for W1HQ, the ARRL Headquarters club station. W1HQ serves as the Lab's test station for equipment evaluations and the Lab staff is responsible for maintaining W1HQ in good working order. They provide technical services such as evaluating and refurbishing equipment for the annual ARRL online auction, acting as a liaison to ARRL Board committees on technical matters and maintaining the ARRL's in-house library.

The ARRL's Lab provides a multifaceted range of technical support services for the ARRL, its members and for Amateur Radio overall.

Harold Kramer, WJ1B, is ARRL Chief Operating Officer. He can be reached at wj1b@arrl.org.



Zack Lau, W1VT, Bob Allison, WB1GCM, and Mike Gruber, W1MG, in the "cage," an RF shielded area where products can be tested without interference from outside signals.

Mike Gruber dealt with over 1000 RFI related e-mails. For our members, the Lab provides ongoing support in resolving interference problems, conducts field investigations of RFI occurrences and maintains technical membership contacts to help resolve Electromagnetic Compatibility (EMC) issues.

Serving Ham Radio

Beyond direct member services, the Lab is deeply involved in many legal and regulatory issues affecting ham radio as a whole. It provides extensive support for the ARRL Technical Relations Office, General Counsel and internal ARRL departments in the form of technical research, technical analysis, reports and electronic testing. In recent years, the Lab has provided technical support for BPL issues, maintained contact with hams in local BPL trial areas and participated in industry and professional society discussions about BPL interference and standards.

Industry and Regulatory Agency liaison is another of the Lab's responsibilities. The Lab works with the FCC and other governmental