

The American Radio Relay League

The American Radio Relay League, Inc., is a noncommercial association of radio amateurs, organized for the promotion of interest in Amateur Radio communication and experimentation, for the establishment of networks to provide communications in the event of disasters or other emergencies, for the advancement of the radio art and of the public welfare, for the representation of the radio amateur in legislative matters, and for the maintenance of fraternalism and a high standard of conduct.



ARRL is an incorporated association without capital stock chartered under the laws of the state of Connecticut, and is an exempt organization under Section 501(c)(3) of the Internal Revenue Code of 1986. Its affairs are governed by a Board of Directors, whose voting members are elected every three years by the general membership. The officers are elected or appointed by the Directors. The League is noncommercial, and no one who could gain financially from the shaping of its affairs is eligible for membership on its Board.

"Of, by, and for the radio amateur," ARRL numbers within its ranks the vast majority of active amateurs in the nation and has a proud history of achievement as the standard-bearer in amateur affairs.

A *bona fide* interest in Amateur Radio is the only essential qualification of membership; an Amateur Radio license is not a prerequisite, although full voting membership is granted only to licensed amateurs in the US.

Membership inquiries and general correspondence should be addressed to the administrative headquarters:

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The purpose of *QEX* is to:

- 1) provide a medium for the exchange of ideas and information among Amateur Radio experimenters,
- 2) document advanced technical work in the Amateur Radio field, and
- 3) support efforts to advance the state of the Amateur Radio art.

All correspondence concerning *QEX* should be addressed to the American Radio Relay League, 225 Main St., Newington, CT 06111 USA. Envelopes containing manuscripts and letters for publication in *QEX* should be marked Editor, *QEX*.

Both theoretical and practical technical articles are welcomed. Manuscripts should be submitted in word-processor format, if possible. We can redraw any figures as long as their content is clear. Photos should be glossy, color or black-and-white prints of at least the size they are to appear in *QEX* or high-resolution digital images (300 dots per inch or higher at the printed size). Further information for authors can be found on the Web at www.arrl.org/qex/ or by e-mail to qex@arrl.org.

Any opinions expressed in *QEX* are those of the authors, not necessarily those of the Editor or the League. While we strive to ensure all material is technically correct, authors are expected to defend their own assertions. Products mentioned are included for your information only; no endorsement is implied. Readers are cautioned to verify the availability of products before sending money to vendors.

Kazimierz "Kai" Siwiak, KE4PT

Perspectives

Amateur Radio Innovations

Using the above title as a seed text for a popular AI essay site, we obtained six credible paragraphs. Three of the paragraphs are quoted here:

"Amateur radio is a fascinating and complex field that has been the subject of much innovation and experimentation over the years. In this essay, we will explore some of the most important innovations in amateur radio, and look at the ways in which these innovations have influenced and shaped the field as a whole."

"One of the most significant innovations in amateur radio has been the development of digital modes. Digital modes are essentially a way of transmitting data over radio waves, using complex encoding and decoding algorithms to ensure that the data is transmitted accurately and efficiently. This innovation has allowed amateur radio operators to exchange a wide range of information, from simple text messages to high-quality images and even video..."

"...In conclusion, amateur radio innovations have been essential in shaping the field and making it what it is today. From the development of digital modes and software-defined radios to contesting and the internet, there have been a wide range of innovations that have helped to move the field forward and keep it relevant in an increasingly digital and connected world. As technology continues to progress and new innovations emerge, it is clear that the future of amateur radio is bright and promising indeed."

AI (artificial intelligence) is here to stay and will grow in relevance, but beyond generating copy editing, what role will it play in Amateur Radio Innovation?

In This Issue:

- Tatsuya Hirahara, JQ3ALW/JH1TXG, measures latency in a transmitter-receiver system.
- Al Christman, K3LC, designs a 4-square phased-vertical array that can fire as omnidirectional or in 8 different directions.
- Jed Marti, KI7NNP, combines up to four capacitors for increased accuracy.
- Don Rolph, AB1PH, provides an application note for an APRS™ Appliance.
- Dr. Ulrich L. Rohde, N1UL, provides a history of non-linear CAD tools that predict large-signal noise in amplifiers.

Writing for *QEX*

Please continue to send in full-length *QEX* articles, or share a **Technical Note** of several hundred words in length plus a figure or two. *QEX* is edited by Kazimierz "Kai" Siwiak, KE4PT, (kswiak@arrl.org) and is published bimonthly. *QEX* is a forum for the free exchange of ideas among communications experimenters. All members can access digital editions of all four ARRL magazines: *QST*, *OTA*, *QEX*, and *NCJ* as a member benefit. The *QEX printed edition* is available at an annual subscription rate (6 issues per year) for members and non-members, see www.arrl.org/qex.

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Very kindest regards,
Kazimierz "Kai" Siwiak, KE4PT
QEX Editor