

## 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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### Officers

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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/](http://www.arrl.org/qex/) or by e-mail to [qex@arrl.org](mailto:qex@arrl.org).

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Kazimierz "Kai" Siwiak, KE4PT

## Perspectives

### A Mentoring Experience

My introduction to Earth-Moon-Earth (EME) communications is an example of being on the receiving end of a mentoring exercise. At a ham meeting sponsored by the late Pete Rimmel, N8PR, at his home station, I remarked that my bucket list included working a station off the Moon. That was "a" station, as in one QSO would do it. Pete immediately consulted the moonrise tables and invited me back at a Moon-friendly time. So it began. Pete mentored me, then set me loose on his EME station. He did not warn me that I was an "initial," that is, a new call sign on 2 m EME. Pete grinned as multiple stations called me. With his guidance, my strategy was to start with the ones farthest east. Ukraine was first, then Poland, then more stations to the west before they lost the Moon on their western horizon. During that first session I worked 34 of them in less than three hours, exceeding my goal of "a" station!

In total I've worked over 100 EME stations, and even earned Worked All Continents on EME 2 m digital. With a top notch station like Pete's, and with his guidance, EME contacts with even rare ones like Mongolia are not out of reach. They are just a matter of patience and careful operating technique, based on a lot of planning, and skillful guidance by my mentor. Pete, N8PR, is now a silent key, but his mentorship did teach this old dog some new tricks.

### In This Issue:

- Meredith Hillier, KG7EUM, and David Hillier, AA7XX, report the effects of metal obstructions on radio wave propagation.
- Mark Noe, KE1IU, accesses radio functions without the need for a PC.
- Jean-Claude Hénaux and Franck Daout describe the 'Gun' (Disk Yagi) antenna.
- Eric Nichols, KL7AJ, in his Essay Series, investigates reactance.
- Dr Sam Green, W0PCE, describes a versatile sweep generator measurement system.
- Hans Hartfuss, DL2MDQ, and Klaus Lohmann, DK7XL, estimate ionospheric drift velocity.
- Richard Grote, K6PBF, displays internet data in his Arduino based project.

### 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, ([ksiwiak@arrl.org](mailto:ksiwiak@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*, *On the Air*, *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](http://www.arrl.org/qex).

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