

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:

ARRL
225 Main St.
Newington, CT 06111 USA
Telephone: 860-594-0200
FAX: 860-594-0259 (24-hour direct line)

Officers

President: Rick Roderick, K5UR
P.O. Box 1463, Little Rock, AR 72203

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

Like a Science Fiction Movie

Everything is going virtual. A peek at *Upcoming Conferences* reveals that conferences are now going to be either virtual events or they are postponed. Major DXpeditions are also being cancelled or postponed. DXing has come to a near standstill. Our new lexicon features *social distancing*, *masks*, *lock-down* and *stay-at-home* — phrases with new meanings. Elbow bumps replace handshakes. Ham club meetings are increasingly held online or over ham FM repeaters. Even ARRL Field Day recognized the reality of stay-at-home mandates by introducing a few new temporary rules. The FCC recently affirmed and made it clear that nothing in the FCC's rules prohibits remote amateur radio license testing, and prior FCC approval is not required. So amateur radio exams are also being held remotely.

The camaraderie of face-to-face interaction in the workplace is giving way to just doing a job in isolation. How are you handling things as shut-ins? How is your amateur radio experience different under current conditions? What fun new things are you building or experimenting with?

These days we waken to an eerily different world, one where things are in a fog, unsettled and unnatural. "*Kind of like a science fiction movie, but it's real.*" — Robert De Niro, actor. Remember that this is also a good time for our members to catch up on and to enjoy the mental stimulation of *QEX*, *QST*, *On the Air* and *NCJ* online editions.

In This Issue

André Champel, F5SQ, alerts us in his Technical Note of a fire hazard in using window transmission line.

Gwyn Griffiths, G3ZIL; Rob Robinett, AI6VN, and Glenn Elmore, N6GN, estimate LF and HF Band noise while acquiring WSPR spots.

Carl Luetzelschwab, K9LA, comments in a Technical Note on extending the matching range of an 80 m antenna.

John Post, KA5GSQ, generates and receives SSB signals using GNU radio companion.

Grant Saviers, KZ1W, and Rob Fanfant, N7QT, report on their vertical antenna for the H4ØTT "suitcase" DXpedition to Pigeon Island.

Writing for *QEX*

Please keep the full-length *QEX* articles flowing in, 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 ARRL members can enjoy the *QEX* Online edition as a member benefit. The *printed edition* annual subscription rate (6 issues per year) for members and non-members is \$29 in the United States. First Class mail delivery in the US is available at an annual rate of \$40. For international subscribers, including those in Canada and Mexico, *QEX* printed edition can be delivered by airmail for \$35 annually, see www.arrl.org/qex.

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