

QEX (ISSN: 0886-8093) is published bimonthly in January, March, May, July, September, and November by the American Radio Relay League, 225 Main St., Newington, CT 06111-1494. Periodicals postage paid at Hartford, CT and at additional mailing offices.

POSTMASTER: Send address changes to: QEX, 225 Main St., Newington, CT 06111-1494 Issue No 317

Publisher
American Radio Relay League

Kazimierz "Kai" Siwiak, KE4PT
Editor

Lori Weinberg, KB1EIB
Assistant Editor

Zack Lau, W1VT
Ray Mack, W5IFS
Contributing Editors

Production Department

Steve Ford, WB8IMY
Publications Manager

Michelle Bloom, WB1ENT
Production Supervisor

Sue Fagan, KB1OKW
Graphic Design Supervisor

David Pingree, N1NAS
Senior Technical Illustrator

Brian Washing
Technical Illustrator

Advertising Information Contact:

Janet L. Rocco, W1JLR
Business Services
860-594-0203 – Direct
800-243-7768 – ARRL
860-594-4285 – Fax

Circulation Department

Cathy Stepina, QEX Circulation

Offices

225 Main St., Newington, CT 06111-1494 USA
Telephone: 860-594-0200
Fax: 860-594-0259 (24 hour direct line)
e-mail: qex@arrl.org

Subscription rate for 6 issues:

In the US: \$29;

US by First Class Mail: \$40;

International and Canada by Airmail: \$35

Members are asked to include their membership control number or a label from their QST when applying.

In order to ensure prompt delivery, we ask that you periodically check the address information on your mailing label. If you find any inaccuracies, please contact the Circulation Department immediately. Thank you for your assistance.



Copyright © 2019 by the American Radio Relay League Inc. For permission to quote or reprint material from QEX or any ARRL publication, send a written request including the issue date (or book title), article, page numbers and a description of where you intend to use the reprinted material. Send the request to the office of the Publications Manager (permission@arrl.org).

About the Cover

Michael L. Foerster, W0IH, presents his concepts for building a Laterally Diffused Metal Oxide Semiconductor (LDMOS) 160 m – 6 m amplifier that uses an Arduino controller to orchestrate between the amplifier and two radios. This article is not the “end all” to building amplifiers, but rather just gives a few ideas to build from, or perhaps get the reader to contemplate other solutions for problems that the author faced. The among other features, the Arduino interface powers up the amplifier and monitors many amplifier functions including managing the operating band of the radio to switch the amplifier low pass filter (LPF) band switch.



In This Issue

Features

2 Perspectives
Kazimierz “Kai” Siwiak, KE4PT

3 Building an LDMOS Amplifier with an Arduino Interface
Michael L. Foerster, W0IH

12 Tree Branch Gadget
Robert Andre, KE0EXE

15 RF Work Bench
Allen Ripingill

27 An Engineering Tool for Simulating Receiver Performance
Gary A. Appel, WA0TFB

33 A Holistic Approach to Receiver Performance Characterization
Michael Tortorella, W2IY

Index of Advertisers

DX Engineering:Cover III
Kenwood Communications:Cover II

StepIR Communication Systems.....Cover IV
Tucson Amateur Packet Radio: 11