

David A. Minster, NA2AA
Publisher

Becky R. Schoenfeld, W1BXY
Editorial Director

Dana Kasowitz, KC1SEB
Managing Editor

Leanna Figlewski, KC1RMP
Sam Shaner, KE1SAM
Editors

Amanda Fahy
Assistant Editor

Paul Bourque, N1SFE
Contest Program Manager

Phil Salas, AD5X
John Stanley, K4ERO
Technical Editors

Dave Casler, KEØOG
Steve Ford, WB8IMY
Steve Goodgame, K5ATA
Sierra Harrop, W5DX
Jon Jones, NØJK
Bernie McClenny, W3UR
Rick Palm, K1CE
Pascal Villeneuve, VA2PV
Paul Wade, W1GHZ
Contributing Editors

Terese Newman
Assistant Production Supervisor

Matt Ali
Layout & Production Specialist

Maty Weinberg, KB1EIB
Production Coordinator

David Pingree, N1NAS
Senior Technical Illustrator

Janet Rocco, W1JLR
Advertising Relationship Manager

Bob Inderbitzen, NQ1R
Director of Marketing & Innovation

Steve Ewald, WV1X
Field Organization Supervisor

9 Second Century

The Case for Remote

30 Evaluate Portable QRP AC Power Supplies Before Use

Phil Salas, AD5X

33 XRAI-1 External Receive Antenna Interface

Ray Kauffman, AJ4YN

36 Product Review

Pascal Villeneuve, VA2PV
Icom IC-R15 Communication Receiver;
InnovAntennas 1712DUO HF Antenna;
Banggood SDR TX/RX Switch

50 Take Field Day on Vacation

Jim DeLoach, WUØI

52 Maximize Your ARRL Field Day Performance

Frank Donovan, W3LPL, and Rol Anders, K3RA

55 Announcing the Winners of the 2024 QST Antenna Design Competition

★ 57 2025 ARRL Field Day Guide



76 2024 ARRL November Sweepstakes – Phone

Scott Davis, K5TA

80 2024 ARRL 160-Meter Contest Results

Mark Beckwith, N5OT

82 The 2025 IARU HF World Championship



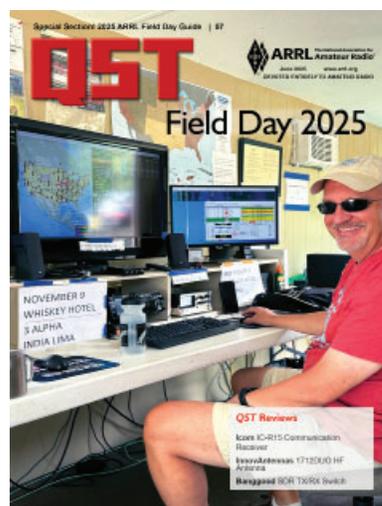
An icon next to an article means there's bonus content in the digital edition at www.arrl.org/qst.

Columns

Amateur Radio World.....	72
Ask Dave.....	48
Celebrating Our Legacy.....	97
Classic Radio.....	98
Club Station.....	84
Contest Corral.....	83
Correspondence.....	24
Ham Media Playlist.....	86
Happenings.....	69
How's DX?.....	88
Member Spotlight.....	13
Public Service.....	74
The World Above 50 MHz.....	90
Up Front.....	20
100, 50, and 25 Years Ago.....	100

Departments

ARRL Section Managers.....	16
ARRL Special Service Clubs.....	85
ARRL VEC Volunteer Examiner Honor Roll.....	95
Certificate of Code Proficiency Recipients.....	56
Convention and Hamfest Calendar.....	92
Field Organization Reports.....	96
Guide to ARRL Member Benefits.....	14
Ham Ads.....	124
Index of Advertisers.....	126, 127
Officers, Division Directors, and Staff.....	15
QST Cover Plaque Award.....	96
Silent Keys.....	101
Special Event Stations.....	93
Strays.....	99
This Month in QEX.....	94
Volunteer Monitor Program Report.....	82
W1AW Qualifying Runs.....	56
W1AW Schedule.....	28



Our Cover

The excitement is mounting for ARRL Field Day 2025! The most popular ham radio operating event is back again on June 28 – 29, 2025, and this issue is full of advice and resources to help you have the best Field Day ever, whether you're operating on your own, or with a club or group like The 415 Amateur Radio Club, N9WH, in Crystal Lake, Illinois. [Photo courtesy of The 415 Amateur Radio Club]

Digital and Mobile Editions

ARRL members can access the digital edition via a link at www.arrl.org/qst, download our iOS app from the iTunes Store, and download our Android app from the Google Play Store.

Write for QST

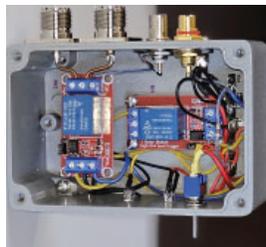
www.arrl.org/qst-author-guide
email: qst@arrl.org



57



30



33



50

QST (ISSN:0033-4812) is published monthly as its official journal by the American Radio Relay League, Inc., 225 Main St., Newington, CT 06111-1400, USA. Canada Post: Periodicals postage paid at Hartford, CT, USA and at additional mailing offices.

POSTMASTER: Send address changes to: QST, 225 Main St., Newington, CT 06111-1400, USA. Canada Post: Publications Mail Agreement #90-0901437. Canada returns to be sent to The Mail Group, 1501 Morse Ave., Elk Grove Village, IL 60007.

ARRL Membership and QST cannot be separated. All ARRL members have digital, online access to QST. Print subscriptions are available and sold separately. For ARRL members in the US, a subscription to QST via mail is

\$25 per year. For libraries and institutions, a subscription to QST is available for \$84 per year; single copies \$7.

ARRL Membership is available to individuals at \$59 per year. A reduced rate is available for licensed radio amateurs under 26 years old, for \$30 per year. Membership is available to the immediate family of a member living at the same address, and to anyone who is legally blind, for \$12 per year. A complete list of dues rates is available at www.arrl.org/join. Foreign remittances should be by international postal or express money order or bank draft negotiable in the US and for an equivalent amount in US funds.

Copyright © 2025 by the American Radio Relay League, Inc. Title registered at the US Patent Office. International copyright secured. All rights

reserved. Quedan reservados todos los derechos. Printed in the USA.

QST®, DXCC®, VUCC®, DX Century Club®, ARES®, Amateur Radio Emergency Service®, Logbook of The World®, LoTW®, and ARRL The National Association for Amateur Radio® are registered trademarks of the American Radio Relay League, Inc.

ARRL and QST in no way warrant the products described or reviewed herein.

QST is available to blind and physically handicapped individuals from the Library of Congress, National Library Service for the Blind and Physically Handicapped. Call 1-800-424-8567 or go to www.loc.gov/nls.

Indexed by Applied Science and Technology Index, Library of Congress Catalog Card No: 21-9421.

To ensure prompt delivery, we ask that you periodically check the address information on your mailing label. If you find any inaccuracies, please contact Member Services at circulation@arrl.org or 860-594-0200.

Reprints and permissions: permission@arrl.org

Online Privacy Policy: www.arrl.org/online-privacy-policy

Telephone: 860-594-0200