



In This Issue

August 2017

Volume 101 Number 8

Tom Gallagher, NY2RF
Publisher

Steve Ford, WB8IMY
Editor

Becky R. Schoenfeld, W1BXV
Managing Editor

Ken Gilfort
Caroline Kenney
Assistant Editors

Bart Jahnke, W9JJ
Contest Branch Manager

Rick Lindquist, WW1ME
Happenings

Bob Allison, WB1GCM
Product Review Lab Testing

Mark J. Wilson, K1RO
Al Brogdon, W1AB
Bernie McClenny, W3UR
H. Ward Silver, N0AX
Paul Wade, W1GHZ
Jon Jones, N0JK
Rick Palm, K1CE
Joel R. Hallas, W1ZR
Barry Shackleford, W6YE
Kai Siwiak, KE4PT
Bruce Draper, AA5B
Contributing Editors

Michelle Bloom, WB1ENT
Production Supervisor

Jodi Morin, KA1JPA
Asst. Production Supervisor

Maty Weinberg, KB1EIB
Production Coordinator

Sue Fagan, KB1OKW
Graphic Design Supervisor

David Pingree, N1NAS
Senior Technical Illustrator

Debra Jahnke, K1DAJ
Business Services Manager
QST Advertising

Bob Inderbitzen, NQ1R
Marketing Manager

Yvette Vinci, KC1AIM
Circulation Manager

Diane Szlachetka, KB1OKV
Advertising Graphics Designer

Steve Ewald, WV1X
Field Organization Supervisor

Gail Iannone
Convention Program Manager

Allison McLellan
Digital Media Support Specialist

Technical

WA3TFS Companion SSB Transmitter for the All-Mode SDR Receiver 34

James Forkin, WA3TFS
This SSB transmitter pairs with the author's "All-Mode 1 kHz to 1.7 GHz SDR Receiver."

Aircraft Tracking, FlightAware, and How You Can Be of Service 41

Kevin Parmenter, KG5Q
Use your ham radio skills to contribute to this global flight-tracking system.

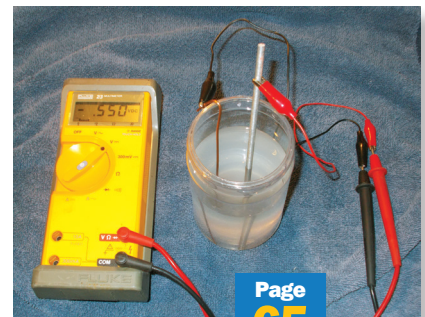
Feed Lines, Decibels, and Dollars 44

Steve Ford, WB8IMY
Take care when selecting a feed line for your station. The right choice may result in considerable savings, in more ways than one!



Product Review 47

Mark Wilson, K1RO
QRPme RockMite II QRP Transceiver Kit; Micro-Node International Nano-DV Digital Voice Node; JYE Tech FG085 Function Generator Kit; Cushcraft R9 80 – 6 Meter Vertical Antenna; MFJ-17758 40- and 80-Meter Dipole Antenna; KIO Technology Broadband Hexagonal Beam Antenna



News and Features

Second Century 9

Tom Gallagher, NY2RF
Summer Reading: Consider...the Unassuming Battery

Youth DX Adventure on the Caribbean Island of Saba 70

Ruth Willet, KM4LAO
A team of young hams spend a week honing their radio skills in a genuine DX setting.

The Streak: 23 Years of Daily Contacts 73

John Shannon, K3WWP
A low-power operator who uses indoor antennas offers hints for getting contacts into the log.

Strategies for Reviving a College Radio Club 75

SueAnne Griffith, KK4UWV
A steady stream of activities and unabating recruitment efforts are two keys to survival.

Hamvention 2017 – So Long, Dayton; Hello, Xenia! 77

2017 will be long remembered as the year Dayton Hamvention moved to a new venue, the Greene County Fairgrounds and Expo Center in Xenia, Ohio. Here's a look at what went on.

Happenings 80

Rick Lindquist, WW1ME
FirstNet first responder broadband network may drive changes for ARES; FCC enforcement news; election news; more.

Our Cover

August 21 is the date of the total solar eclipse, which will have a path of totality through parts of Oregon, Idaho, Montana, Wyoming, Nebraska, Kansas, Iowa, Missouri, Illinois, Kentucky, Tennessee, Georgia, North Carolina, and South Carolina. Visit <https://eclipse2017.nasa.gov/> for more information, and see Ward Silver's, N0AX, article, "The Solar Eclipse QSO Party — Are You Ready?" on page 94 to find out how hams can engage in some citizen science on the big day. [NASA photo]

Radiosport

Contest Corral 86

Bruce Draper, AA5B

2017 ARRL International DX CW Contest Results 87

Matt Wilhelm, W1MSW

Two tales of competition, decision making, and the strong desire to rest.

2017 ARRL RTTY Roundup Results 91

Jeff Stai, WK6I

Next year, "heavy-duty" devotees will enjoy a new entry category.

The Solar Eclipse QSO Party — Are You Ready? 94

Ward Silver, N0AX

From 1400 – 2200 UTC on August 21, 2017, hams will have the Sun's shadow in their sights.

The 2017 ARRL 10 GHz and Up Contest 95

The 2017 ARRL International EME Competition 95

The 2017 ARRL September VHF Contest 96



Columns

Classic Radio.....	104
Correspondence	24
The Doctor is In	63
Eclectic Technology.....	46
Hands-On Radio	65
Hints & Kinks	67
How's DX?	97
Member Spotlight.....	13
Public Service.....	84
Up Front	20
The World Above 50 MHz	99
100/50/25 Years Ago	108

Departments

ARRL Member Services	14
ARRL Section Managers.....	16
Convention and Hamfest Calendar	106
Field Organization Reports.....	108
Ham Ads.....	154
Index of Advertisers.....	156, 157
New Products	43, 93
Officers, Division Directors, and Staff	15
QuickStats.....	142
Silent Keys	109
Special Event Stations.....	102
Strays	98, 101
W1AW Qualifying Runs	103
W1AW Schedule	96

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.

Interested in Writing for QST?

www.arrl.org/qst-author-guide
e-mail: qst@arrl.org

August 2017
Volume 101 Number 8

QST (ISSN:0033-4812) is published monthly as its official journal by the American Radio Relay League, Inc., 225 Main St., Newington, CT 06111-1494, USA. Periodicals postage paid at Hartford, CT, USA and at additional mailing offices.

POSTMASTER: Send address changes to: QST, 225 Main St., Newington, CT 06111-1494, USA. Canada Post: Publications Mail Agreement #90-0901437. Canada returns to be sent to IMEX Global Solutions, 1501 Morse Ave., Elk Grove Village, IL 60007.

US & Possessions: Membership in the ARRL, including a 1-year subscription to QST, is available to individuals at \$49. Licensed radio amateurs age 21 and under and the eldest licensee in the household may qualify for the rate of \$25. Life Membership, including a subscription to QST is available at \$1,225.* Membership includes \$21 per year for subscription to QST. Membership and QST cannot be separated. Libraries and institutions, \$49 per year. Single copies \$6.95.

International

To compensate for additional postage for mailing outside the US, the following rates apply:

Canada: Membership in the ARRL, including a 1-year subscription to QST, \$62, payable in US funds. Life Membership, including a subscription to QST is available at \$1,550.* Libraries and institutions, \$62 per year.

All Other Countries: Membership in the ARRL, including a 1-year subscription to QST, \$76, payable in US funds. Life Membership, including a subscription to QST, is available at \$1,900.* Libraries and institutions, \$76 per year.

Membership without QST is available to the immediate family of a member living at the same address, and to anyone who is legally blind, for \$10 per year.

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.

Membership in the ARRL, including a 1-year subscription to Digital QST only, is available to Canadian and International members at \$49.

Copyright © 2017 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.

The 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.

*Payment arrangements available. Please write for details.

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 at circulation@arrl.org or 860-594-0200 immediately. Thank you for your assistance.

Reprints and permissions: permission@arrl.org

Details of our Online Privacy Policy can be found at www.arrl.org/online-privacy-policy.

Telephone: 860-594-0200
Fax: 860-594-0259