



In This Issue

February 2014

Volume 98 Number 2

Harold Kramer, WJ1B
Publisher

Steve Ford, WB8IMY
Editor

Becky R. Schoenfeld, W1BXY
Managing Editor

Larry D. Wolfgang, WR1B
Senior Assistant Technical Editor

Steve Sant Andrea, AG1YK
Assistant Editor

Rick Lindquist, WW1ME
Happenings

Bob Allison, WB1GCM
Product Review Lab Testing

Mike DeChristopher, N1TA
Radiosport

John Troster, W6ISQ
Paul L. Rinaldo, W4RI
Mark J. Wilson, K1RO
Al Brogdon, W1AB
Bernie McClenny, W3UR
John Dilks, K2TQN
H. Ward Silver, N0AX
Paul Wade, W1GHZ
Jon Jones, N0JK
Rick Palm, K1CE
Joel R. Hallas, W1ZR
Barry Shackelford, W6YE
Kai Siwiak, KE4PT
Contributing Editors

Michelle Bloom, WB1ENT
Production Supervisor

Jodi Morin, KA1JPA
Assistant Production Supervisor

Maty Weinberg, KB1EIB
Production Coordinator

Sue Fagan, KB1OKW
Graphic Design Supervisor

David Pingree, N1NAS
Senior Technical Illustrator

Kelsey E. Moore
Copy Editor

Debra Jahnke, K1DAJ
Business Services Manager
QST Advertising

Bob Inderbitzen, NQ1R
Marketing Manager

Yvette Vinci, KC1AIM
Circulation Manager

Diane Szlachetka, KB1OKV
Advertising Graphics Designer

Technical

A Stealth Antenna for HF 30

David A. Cornell, W9LD

This 160 meter – 10 meter antenna blends into the neighborhood and won't break your budget.

A 10 Meter Beacon Transmitter 33

Lou Burke, W7JI

The beacon doubles as a crystal controlled CW transmitter, and can be built with 1 W or 3 W output.

A User-Configurable Morse Keyer 36

Forest Shick, WA2MZG

This iambic keyer project sends text from a keyboard and memories, and also sends code practice characters.

Using Your Grid Dip Oscillator 40

Eric P. Nichols, KL7AJ

The dipping oscillator grid current indicates resonance of tuned circuits and antennas.

Two Encoders for the TEN-TEC Orion Band-Output Signals 43

Phil Salas, AD5X

Make your Orion compatible with more external devices.

A 40 Meter Vertical Antenna for Small Spaces 46

John Portune, W6NBC

This antenna offers good performance in a compact footprint.

Real Signal Reports in Real Time 49

Steve Ford, WB8IMY

Use digital modes to determine how strong you really are.

Product Review 53

Mark Wilson, K1RO

Kenwood TS-990S HF and 6 Meter Transceiver

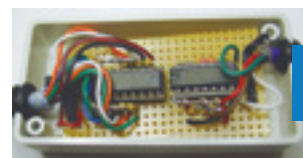
Page
72



Page
53



Page
43



News and Features

It Seems to Us 9

David Sumner, K1ZZ

Technology Is Taking Us...Where?

Inside HQ 13

Harold Kramer, WJ1B

Logbook of The World — The ARRL's Most Popular Member Program

Hiram Percy Maxim 72

Chris Codella, W2PA

A look into the life of The Old Man: Inventor, organizer — and founder of the ARRL.

Father and Son DXpedition to St Barts 76

Erik Martin, N5WR

This recap of a June 2013 trip to the Caribbean will chase your winter blues away.

Solar Banners — A Propagation Resource 78

Steve Sant Andrea, AG1YK

N0NBH's propagation banners list a slew of propagation parameters. Here's how to apply them to your ham activities.

Philip J. McGan Memorial Silver Antenna Award 80

Sean Kutzko, KX9X

Honor a ham's public relations efforts in the non-amateur community.

Happenings 81

Rick Lindquist, WW1ME

FCC considers comments on ARRL's symbol rate petition, plans announced to update the Communications Act of 1934, nominations solicited for six ARRL awards, more.

Our Cover

Winter is the perfect time to stay indoors and put in some quality time at your workbench. This month's cover takes a look inside two of the many projects found in this issue. The board at the top comprises the inner workings of the 10 meter beacon transmitter described in Lou Burke's, W7JI, article "A 10 Meter Beacon Transmitter," and the components at the bottom are for "A User Configurable Morse Keyer," as described in this issue by Forest Shick, WA2MZG.



February 2014
Volume 98 Number 2

QST (ISSN:0033-4812) is published monthly as its official journal by the American Radio Relay League, Inc., 225 Main Street, 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 #40612608. Canada returns to be sent to Bleuchip International, PO Box 25542, London, ON N6C 6B2.

US & Possessions: Membership in the ARRL, including a one year subscription to QST, is available to individuals at \$39. Licensed radio amateurs age 21 and under and the eldest licensee in the household may qualify for the rate of \$20. Life Membership, including a subscription to QST is available at \$975.* Membership includes \$15 per year for subscription to QST. Membership and QST cannot be separated. Libraries and institutions, \$39 per year. Single copies \$4.99.

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

Canada: Membership in the ARRL, including a one year subscription to QST, \$49, payable in US funds. Life Membership, including a subscription to QST is available at \$1225.* Libraries and institutions, \$49 per year.

All Other Countries: Membership in the ARRL, including a one year subscription to QST, \$62, payable in US funds. Life Membership, including a subscription to QST is available at \$1550.* Libraries and institutions, \$62 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 \$8 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.

Copyright © 2014 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® 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 on digital audio cartridge from the Library of Congress, National Library Service for the Blind and Physically Handicapped. Call 1-800-424-8567.

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@arrrl.org or 860-594-0200 immediately. Thank you for your assistance.

Reprints and permissions: permission@arrrl.org

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

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

Radiosport

Contest Corral 88

H. Ward Silver, N0AX

2013 ARRL 10 GHz and Up Contest Results 89

Bruce Richardson, W9FX

Another year, another adventure on the microwaves.



Columns

- Amateur Radio World..... 87
- At the Foundation..... 103
- Correspondence 24
- The Doctor is In 62
- Eclectic Technology 52
- Hands-On Radio 66
- Hints & Kinks..... 68
- How's DX? 90
- Personal Visions..... 98
- Public Service..... 85
- Short Takes 65
- Up Front..... 20
- Vintage Radio..... 96
- The World Above 50 MHz..... 92
- 75/50/25 Years Ago..... 101

Departments

- Convention and Hamfest Calendar 99
- Feedback..... 71
- Field Organization Reports..... 101
- Guide to ARRL Member Services..... 14
- Ham Ads..... 154, 155
- Index of Advertisers..... 156, 157
- New Books 32
- New Products 42, 61
- QuickStats..... 140
- Radio Tips..... 97
- Silent Keys 102
- Special Event Stations..... 95
- Strays 95, 100
- W1AW Portable Operations 39
- W1AW Qualifying Runs..... 100

Digital and Mobile Editions

ARRL members can access the digital edition via a link at www.arrrl.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.arrrl.org/qst-author-guide
 e-mail: qst@arrrl.org