



National Contest Journal (ISSN 0899-0131) is published bimonthly in January, March, May, July, September and November by the American Radio Relay League, 225 Main St., Newington, CT 06111-1494, USA. Periodicals postage paid at Hartford, Connecticut, and at additional mailing offices. POSTMASTER: Send address changes to: National Contest Journal, 225 Main St., Newington, CT 06111-1494, USA.

Publisher

American Radio Relay League
225 Main St, Newington, CT 06111
Tel: 860-594-0200
Fax: 860-594-0259 (24-hour direct line)
E-Mail: hq@arrl.org
Web: www.arrl.org/

Editor

Scott Wright, MD, K0MD
scottwrightmd@me.com

Deputy Editor

Fred Regennitter, K4IU

Managing Editor

Rick Lindquist, WW1ME
ww1me@arrl.org

NCJ Website

Kirk Pickering, K4RO, Webmaster
www.ncjweb.com

ARRL Officers

President: Rick Roderick, K5UR

Contributing Editors

Gary Sutcliffe, W9XT—Contest Tips, Tricks & Techniques

Mike Goldstein, VE3GFN—Little Pistol Pages

Jon Jones, N0JK—VHF-UHF Contesting!

Ed Muns, W0YK—Digital Contesting

John Miller, K6MM—NCJ Profiles

Don Daso, K4ZA—Workshop Chronicles

Neil Rapp, WB9VPG—Next-Gen Contesters

Dr. John W. Thompson, K3MD—Surveys and Book Reviews

Ned Stearns, AA7A—Technical Topics

Roberto Ramirez, CE3CT—DX Contesting

North American QSO Party, CW

Chris Hurlbut, KL9A

3117A Fen Way, Bozeman, MT 59718

cwnaqpmgr@ncjweb.com

North American QSO Party, SSB

Bill Lippert, AC0W

2013 6th Ave, SE, Austin, MN 55912-4321

ssbnaqpmgr@ncjweb.com

North American QSO Party, RTTY

Mark Aaker, K6UFO

300 Berry St., Unit 1009, San Francisco, CA 94158-1668

rttynaqpmgr@ncjweb.com

North American Sprint, CW

Jim George, N3BB

14721 Bear Creek Pass, Austin, TX 78737

cwsprintmgr@ncjweb.com

North American Sprint, RTTY

Ed Muns, W0YK

P.O. Box 1877, Los Gatos, CA 95031-1877

rttysprintmgr@ncjweb.com

Advertising Information Contact:

Janet Rocco, tel 860-594-0203;

fax 860-594-0303; jrocco@arrl.org

NCJ subscription orders, changes of address, and reports of missing or damaged copies should be addressed to ARRL, 225 Main St., Newington, CT 06111 and be marked **NCJ Circulation**. ARRL members are asked to include their membership control number or their QST mailing label.

Submit articles, correspondence, and club newsletters to NCJ, Scott Wright, K0MD, 1224 Meadowlark Ct., SW, Rochester, MN 55902.

The NAsprint and NA QSO Parties are not sponsored by ARRL.

Yearly Subscription rates: In the US \$25

US by First Class Mail \$34

International and Canada by airmail \$32

All original material not attributed to another source is copyright © 2020 by The American Radio Relay League, Inc. Materials may be excerpted from NCJ without prior permission provided that the original contributor is credited, and the NCJ is identified as the source.

In order to insure 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.

- 2 From the Editor *Scott Wright, MD, K0MD*

FEATURES

- 3 Mentoring New Hams and Teens in the Minnesota QSO Party
Mike Cizek, W0VTT
- 5 Maximizing Use of 4-Square Receive Arrays
Robert J. Zavrel, Jr., W7SX
- 10 The VHF+ Summertime Contesting Season
Jon Platt, W0ZQ
- 13 Op-Ed: Should Contesters Register for Events in Advance?
Harold Kramer, WJ1B
- 14 Capitol Contesting — How Remote Operating Keeps Me in the Game
Jamie Dupree, NS3T
- 15 NCJ Interviews: Ham Author Andrew Barron, ZL3DW
Fred Regennitter, K4IU
- 18 Magic Band, Magic Contesting *Jim Wilson, K5ND*
- 21 NCJ Profiles: Ed Gray, W0SD *John Miller, K6MM*

Columns

- 26 VHF-UHF Contesting! *Jon K. Jones, N0JK*
- 29 Digital Contesting *Ed Muns, W0YK*
- 30 The Little Pistol Pages *Mike Goldstein, VE3GFN*
- 31 Workshop Chronicles *Don Daso, K4ZA*
- 32 Contest Tips, Tricks & Techniques *Gary Sutcliffe, W9XT*

Contests

- 34 Results: North American QSO Party CW— January 2020 *Chris Hurlbut, KL9A*
- 42 Results: North American Sprint CW— February 2020 *Jim George, N3BB*
- 45 Results: North American QSO Party SSB— January 2020 *Bill Lippert, AC0W*

ADVERTISING INDEX

Alfa Radio Ltd: 20
Array Solutions: Cover 2
DXEngineering: 27
Elecraft: Cover 3
FlexRadio Systems: 23

Green Heron Engineering, LLC: 52
Heil Sound: 25
SteppIR Communications Systems: Cover 4
Unified Microsystems: 13