

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 06111-1400. Periodicals postage paid at Hartford, CT and at additional mailing offices.

POSTMASTER: Send address changes to: QEX, 225 Main St., Newington, CT 06111-1400 Issue No. 322

Publisher American Radio Relay League

Kazimierz "Kai" Siwiak, KE4PT Editor

Lori Weinberg, KB1EIB Assistant Editor

Scotty Cowling, WA2DFI Ray Mack, W5IFS Contributing Editors

Production Department

Becky R. Schoenfeld, W1BXY Publications Manager

Michelle Bloom, WB1ENT Production Supervisor

David Pingree, N1NAS Senior Technical Illustrator

Brian Washing Technical Illustrator

Advertising Information

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 06111-1400 USA Telephone: 860-594-0200 Fax: 860-594-0259 (24-hour direct line)

Email: qex@arrl.org

Subscription rate for 6 print issues:

In the US: \$29

US by First Class Mail: \$40:

International and Canada by Airmail: \$35

ARRL members receive the digital edition of QEX as a member benefit.

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 © 2020 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 title, page numbers, and a description of where and how you intend to use the reprinted material. Send the request to permission@arrl.org

September/October 2020

About the Cover

Grant Saviers, KZ1W, and Robert Fanfant, N7QT, operated as H4ØTT during their November, 2019 "suitcase" DXpedition on Pigeon Island. Their 17 m to 160 m vertical antenna had a net height of 55 feet of fiberglass poles, around which was wound a continuously loaded spiral helix of 151 feet of wire. The antenna was capacitively top loaded to improve radiation efficiency. The four loading wires also doubled as part of the top level of guy wires. All of the antenna components were transported as checked luggage without difficulty from Seattle through Lomlom, and return. Travel from the Lomlom coral airstrip to Pigeon Island included wading through a lagoon, followed by a boat ride through mangrove swamps. The DXpedition yielded nearly 14,000 contacts in 11 days. [Grant Saviers, KZ1W, photo.]



In This Issue

- **Perspectives** Kazimierz "Kai" Siwiak, KE4PT
- The H4ØTT "Suitcase" Vertical Antennas for 160 m to 17 m Bands Grant Saviers, KZ1W and Robert Fanfant, N7QT
- Errata
- Generation and Reception of Single-sideband Signals using GNU Radio Companion John E. Post, KA5GSQ
- **Estimating LF HF Band Noise While Acquiring WSPR Spots** Gwyn Griffiths, G3ZIL, Rob Robinett, Al6VN, and Glenn Elmore, N6GN
- **Technical Notes**
- **Letters**
- **Upcoming Conferences**

Index of Advertisers

DX Engineering:Cover III	SteppIR Communication Systems:Cover IV
Kenwood Communications:Cover II	Tucson Amateur Packet Radio:24