



# In This Issue

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## Technical

### Cheap and Easy SDR 30

Robert Nickels, W9RAN

Get your feet wet with the latest technology for the price of a night at the movies.

### Down Periscope! 36

Burt Yellin, K2STV

Keep that vertical out of sight and safe from lightning when you're not using it.

### A Sampling Down Converter for Low Frequency Oscilloscopes 39

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Here's a down converter that will let you use that old low frequency 'scope as a modulation monitor for bands up into the VHF range.

### A Uniquely Tuned 2 Meter Transmitter Hunting Loop 44

John Portune, W6NBC

This compact, inexpensive, easy-to-build loop is ideal for close-in direction finding and transmitter-hunting.



### Build a Legal Limit Bias T that Covers 1.8 to 230 MHz 46

Phil Salas, AD5X

This simple device lets you send up to 3 A dc down your coax, along with the RF.

### For Best Results, Consider a Balun in Your Antenna System 49

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If you need a balun, almost nothing else will do. If you don't need one, it won't hurt to have it.

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ICOM IC-2300H 2 meter FM transceiver; LNR Precision FX-2 40/30 meter QRP CW transceiver



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Old timers and newbies team up to bring more Morse code to the bands.

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With almost 200 items up for bid, there was something for just about everyone.

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### Five Band Worked All States for the Small Station 78

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With persistence and some creative thinking, 100 W and a wire can put 5BWAS on the wall.

### Try RTTY Contesting on for Size 80

S. Khrystyne Keane, K1SFA

With a RTTY contest on the air almost every weekend, you're sure to find one that's a perfect fit for you.

### Happenings 81

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2013 Director and Vice Director election results; hams respond to Hurricane Sandy; tall ship Bounty sinks off North Carolina coast; USPS seeks to phase out IRCs.

## Our Cover

Our January *QST* cover celebrates the joy of Do-It-Yourself hamming. Among the items shown (clockwise from left center): A Small Wonder Labs ([www.smallwonderlabs.com](http://www.smallwonderlabs.com)) RockMite transceiver for 20 meters built into a "ham" can by Dar Piatt, W9HZC; a 40 meter CW transmitter built in 1974 by ARRL RFI Engineer Mike Gruber, W1MG; a 6 meter direct-conversion receiver built by ARRL Senior Engineer Zack Lau, W1VT, and a digital station clock ([www.arrl.org/shop](http://www.arrl.org/shop)) assembled by ARRL Product Review Engineer Bob Allison, WB1GCM.

# Radiosport

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## 2012 ARRL UHF Contest Results 88

John (JK) Kalenowsky, K9JK

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ARRL members can access the digital edition via a link at [www.arrl.org/qst](http://www.arrl.org/qst)

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