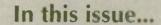
NEWS · FCC · DX · MARS · QRP · SAR · CONTESTS · FM · QCWA · QSLs

WORLDRADIO

Year 31, Issue 3

www.wr6wr.com

September 2001 • \$1.50



Worldradio accepts eQSLs — 4

Young Ham of the Year — 12

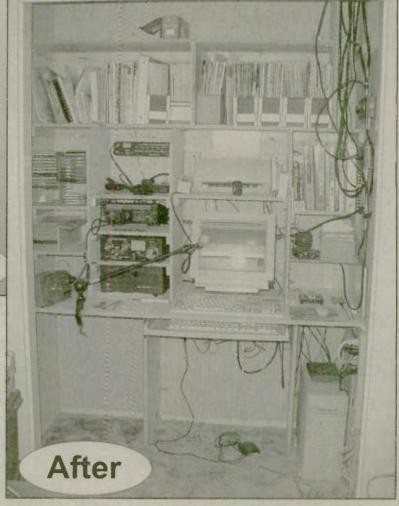
St. Mary's Island - 14

DXpeditioning on a shoestring — 18



Before

Transforming a closet into a first-class Ham shack



Court upholds

A U.S. appeals court has rejected a challenge to a federal rule that forbids building owners from restricting installation of direct broadcast television dishes or broadcast television antennas on leased property. The court says that the FCC was 100% correct in overriding land and deed restrictions when it comes to installing antennas for television and satellite television reception.

The Building Owners and Managers Association International and other real estate trade groups had argued that the FCC exceeded its authority in 1998 in imposing the regulation on leased property. They also said it was arbitrary, capricious and an unconstitutional

taking of private property.

But Judge Raymond Randolph found these arguments without merit. In his finding he stated that this rules does supersede state and local law, zoning, land-use and building regulations and homeowners' association rule that attempt to limit the installation and use of such antennas. More important, he said the over-the-air reception devices rule is well within the purview of the FCC to issue.

The rule covers patios, balcony railings and gardens with exclusive availability to a specific renter. It does not extend to common areas of the property. Nor is it applicable to two way radio system antennas including those used by Hams, GMRS or CB radio operators. — Newsline

League will ask congress for help on CC&R's

The ARRL says it will ask for congressional action to help Hams who have had their activities severely hampered or curtailed by land use or deed restrictions. Meeting 20-21 July, the ARRL's Board of Directors adopted what it terms as a goal of legislative action to provide amateurs with the

same level of protection from real estate covenants, conditions and restrictions now enjoyed by small satellite dish owners and others receiving over-theair broadcast signals.

Board members felt that amateurs should be granted the right to install an antenna having a visual impact similar to that of a home television satellite dish or other antenna that falls under the FCC's Over the Air Reception Devices policy. Back in 1999, the agency affirmed the rule that prohibits deed restrictions that impair the installation, maintenance or use of antennas used to receive video programming. — ARRL, Newsline

DXCC approves operations for credit

The T5AR operation from Somalia, and the 3XY1BO, 3XY7A, and 3XYO3A operations from Guinea have been approved for DXCC credit. Operators whose previous submittals for any of these operations were rejected may contact DXCC to update their records without having to re-submit the cards. — ARRL Letter

Congo operation questioned

A letter issued 28 June by Secretary General Jean Philippe Monkonzi of the Postal and Telecommunications Ministry for the Democratic Republic of Congo has stated that no licenses were issued authorizing operation under the call signs 9Q5BQ and 9Q/CX2CC and called the stations "radio pirates." Pierre Petry, HB9AMO, was reported to be operating as 9Q5BQ but has since returned to Switzerland. During the recent International Amateur Radio Union HF Championship contest 14-15 July, the Amateur Radio Association of the Democratic Republic of Congo obtained special permission to operate ARAC headquarter club station 9QØAR. QSLs for this special operation are being handled by F2YT.

— The Daily DX, ARRL Letter

Amateur Radio helps save four lives

Just four weeks after exercising their emergency communications skills during ARRL Field Day, members of the Northern Southeast Amateur Radio Emergency Services and Juneau Amateur Radio Club put those skills to use to help to save a fellow Ham operator and several companions.

On 22 July, Mark Griffith, KLØMO, was rafting down the Herbert Glacier River with three friends when their raft was severely damaged. The group was stranded on a small island in the middle of the raging river, swollen by heavy rainfall.

Early that evening, Griffith used the KL7PF repeater phone patch to call 911, and search-and-rescue personnel were alerted. Meanwhile, Bob Dewey,

WL7QC, overheard Griffith's transmission and set out for the trailhead to meet with the rescue personnel. He was able to contact Griffith on simplex, providing direct contact with rescue personnel.

The Juneau Mountain Rescue team had to cut its way through dense undergrowth to get to the stranded rafters. The weather prevented the use of a helicopter, and the river was too fast, and had too much debris, to use a rescue boat.

The four huddled for the night beneath the remains of their raft. Although Griffith's battery was depleted, it retained enough power to receive Dewey's communications.

A member of the SEADOGS search-and-rescue dog team located the rafters at around 1 a.m., and they were airlifted off the island around 7 a.m. by the U.S. Coast Guard. The four rafters suffered only mild hypothermia.

"Ham radio really saved their lives," said incident commander Bruce

"It was a great help in finding out exactly where they were and what condition they were in. We were able to get updates throughout the night on how they were doing." — N3WWE, ARRL Letter

WORLDRADIO

On the cover: I'm not eligible for the Station Appearance prize, but I'm sure proud of my oldest daughter's closet since she moved out. — Rick McCusker, WF6O

Publisher: Armond Noble, N6WR
Associate: Glen Rudesill, W6RWR
Editor: Rick McCusker, WF6O
Associate: Norm Brooks, K6FO
PROOFREADER: Jane Albusche

GRAPHICS MANAGER: Ashley Guy, W6GUY GRAPHICS ASSISTANT: Clayton Guy, K6GUY ADVERTISING

DIRECTOR: Helen Noble MANAGER: Brenda Evans GRAPHICS DIRECTOR: Diani

GRAPHICS DIRECTOR: Dianne Dunning

SUBSCRIPTION STAFF

CIRCULATION MANAGER: Marcia Watson ADMINISTRATIVE ASSISTANT: Cheryl Ashby

Published monthly by Worldradio, Inc., 2120 28th St., Sacramento, CA 95818 USA; 916/457-3655. Club call: WR6WR.

Worldradio (USPS 947000) is an international conversation. You're invited to participate. Our goal is to be a valuable resource of ideas and experiences beneficial to the Amateur Radio community. We publicize and support the efforts of those who bring the flame of vitality to this avocation. As readers, you are participants in an alliance of active radio amateurs concerned with reality, using radio as a communications tool to develop the skill, quality and full potential of Amateur Radio. We emphasize the positive aspects of this great activity, and desire your contributions dealing with dramatic, personal and humanitarian uses of Amateur Radio.

Articles for consideration may be submitted through the U.S. Postal Service or e-mail to articles@wr6wr.com.

Worldradio is an independent magazine not affiliated with any other firm, group or organization. Permission is hereby granted to non-profit Amateur Radio club newsletters to reprint our articles with appropriate source credit. Any other use without written permission is a violation of copyright laws and violators will be prosecuted. If there is something useful, we wish to share it.

To Subscribe: Send check to Worldradio, 2224 Beaumont St., Ste. D, Sacramento, CA 95815 or call 877/472-8643. Periodicals postage paid at Sacramento, CA & additional offices. SUBSCRIPTION RATES: \$14.79* one year; \$27.79* two years; \$40.79* three years; \$186.79* Life; *\$10 extra per year for surface mail delivery to non-U.S. ZIPs. Please remit international postal money order. IRCs will be accepted.

POSTMASTER: Send address changes to Worldradio, Inc., P.O. Box 189490, Sacramento, CA 95818 USA.

September 2001 Year 31 Issue 3

- 2 NEWSFRONT
- 4 Editor's Log
- 5 The 4X Experience
- 8 Rules & Regs
- 9 Subscription Information
- 12 Young Ham of the year
- 13 Ready-made project boxes
- 14 St. Mary's Island, ASØ96
- 18 DXpeditioning on a shoestring
- 22 What goes around comes around
- 24 Silent keys
- 25 Special Events
- 26 Awards
- 28 Letters to the Editor
- 30 Station Appearance
- 31 DX World
- 33 DX Prediction
- 37 QSL Managers
- 38 Search and Rescue
- 40 FM, Repeaters & VHF
- 42 County Hunter
- 44 Visit Your Local Radio Club
- 46 QCWA
- 48 Wires & Pliers
- 50 Youth Forum
- 51 Inside Amateur Radio
- 52 QRP
- 54 Propagation
- 56 Old-time Radio
- 57 Aerials
- 59 Contest Chart
- 60 Hamfests
- 62 New Products
- 63 VE Exams
- 64 The Mart
- 66 Worldradio Books
- 68 ARRL send congratulations

CW Keyers & Paddles • Voice Keyers

Contest Card - PC voice keyer and CW interface card • XT-4 - small, battery powered CW memory keyer • lambic keys, Paddle Pads & more!

P.O. Box 133 R Slinger, WI 53086

Unified Microsystems www.qth.com/w9xt

UM Unified Microsystems

TiCK Keyers

PO BOX 92492 ROCHESTER, NY 14692

http://www.frontiernet.net/~embres embres@frontiernet.net send SASE for catalog

Communicated by Wireless – Amateur, Military or Commercial 40 years ago?

JOIN THE OLD OLD TIMERS CLUB INC.
3191 Darvany Dr. • Dallas, TX 75220
(214) 352-4743 http://users.ticnet.com/ootc/ootc@ticnet.com Init: \$5 & \$10 per yr.

MARS, RACES, SKYWARN, CD, PATCHES, DECALS, CAPS

Custom Name — Call Caps & more.
Call or write for catalog sheets
& full color photo.

CAPS, Unlimited • (972) 496-6036 P.O. Box 460118A • Garland, TX 75046

e-mail: k5hgl@home.com www.skywarnsupply.com

Northern Ohio Amateur Radio Depot

821 Pearl Rd. • Brunswick, OH 44212

1-877-964-5566

www.noard.com

"Serving NE/Central OHIO Hams"

THE BIG DK-DX

Don Johnson, W6AAQ's 3.5 — 30 MHz mobile antenna, manufactured by:

H. Stewart Designs
P.O. Box 643 • Oregon City, OR 97045
(503) 654-3350

See Worldradio, Oct. 1994 issue.

-HI-PERFORMANCE DIPOLES-

MPO-5
Antennas that work! Custom assembled to your center freq. ea. band - advise ht. of center and each end - hang as inverted "V" - horizontal, veri dipole, sloping dipole - commercial quality - stainless hardware - legal power - no-trap. high-efficiency design. Personal check, MO or C.D.D.
MPD-5
(2) Stamp SASE for 30 Dipoles, Slopers & Unique Antennas Catalogue W9INN ANTENNAS BOX 393 • MT. PROSPECT, IL 60056 • PHONE: (847) 394-3414

Editor's Log

very once in a while you have the pleasure of meeting someone who strikes you as a very wise and astute individual. One of the qualities usually shared by such individuals is that of value. The word "quality" comes to mind when they consider a major purchase or a long term commitment to a product. These individuals read all the reviews, talk to friends and generally just keep a keen eye out for a good quality product before they make the decision to spend their hard-earned dollars on something.

Every month, we list the newest Worldradio Superboosters (Lifetime Subscribers) for you at the beginning of the Editor's Log. Why do we do that? To give you the chance to seek out one of these individuals and seek wisdom from them. After all, they fit the mold of the person described in the first paragraph. You, too, can be a wise individual by learning from them and following in their footsteps.

Our latest additions to the long list of *Worldradio* Superboosters are:

• R.J. Benoit, W1LIB Flemington, NJ

• Franklin Pope, N4FEP Laurens, SC

• Henry Dean, N8DOE Sanford, FL

• Ian Hopkins, KN4OW Port St. Lucie, FL

• Larry Fields, WD8ITF Barberton, OH

 Patrick Juras, K8BVC Elk Rapids, MI

 John Emmett, NØMHZ Aberdeen, SD

• Anthony Bogusz, W9MT Harwood Heights, IL

 Wilton Mason, WD5DNA Springhill LA

• Gordon Ryan, W7FEO Moses Lake, WA

Anthony Bogusz, W9MT, is a very, very lucky individual. He happens to know Stuart Oserman, WA9ZPL. As a result of that friendship, Stuart purchased a Lifetime Subscription for his friend, Anthony. Don't you wish you had a friend like that?

Occasionally I remind you that Worldradio is a magazine that depends heavily on you and your stories. We try to bring the human interest side of this fabulous hobby to all of our readers. But it all depends on you, our readers, to send us your stories. Have you had an experience in Amateur Radio that would make a good story to share with our readers? No, you say? What about a fond memory of your first contact? How did you get involved in the hobby? Did your "friend" do something you still laugh about to this day? Why not share the story with our readers? What, you don't think you can write? How do you know you can't until you've tried? Send us your story! You may win a Pulitzer Prize for that story.

The "Quest" continues! Another card arrived this week bringing the total to 16 out of 20 sent. Four more to go! Maybe my harsh words about the dismal QSL return rate has had an effect on this problem. Then again, maybe I just got lucky. From e-mails and letters the readers have sent about the "Quest" and their own QSL card return rates, maybe "lucky" describes it best. With a return rate of just over 75%, I'm a happy camper!

While I'm on the subject of QSL cards (insert drum roll here), we have come to a major decision about our awards offered to our readers. I know there are a lot of our readers who are saving money by using the eQSL service on the Internet. So, after several e-mails back and forth between the webmaster of eQSL and me, we will now honor your eQSL cards in your application for any of our awards.

Why are we doing this? The eQSL system is a cost-effective and secure way to exchange QSL cards and we want to take that step into the future of the hobby. Besides, with technology available today, anyone who wants to cheat can do it, easily. But we have complete faith and trust in our readers to do the right thing.

If you haven't used the service, just log onto www.eQSL.cc and take advantage of the latest service in Amateur Radio.

- WF60

A New Dual-Band Engineering Milesto Mobile for the 21st Century's Active Ha

The Yaesu Engineering Team has done it again! The exciting new FT-7100M Dual Band Mobile brings you the ruggedness and operating case of our single-band mobiles, and the convenience of remote-head mounting capability (optional YSK-7100 Separation Kit required), in an all-new 144/430 MHz Dual Band design!

Providing 50 Watts of power output on 2 meters, and 35 Watts on 70 cm, the FT-7108M has power to spare when you're in a fringe area. For repeater access or selective simplex calling, you get built-in encoder-decoder circuits providing 50 CTCSS tones and 104 DCS (Digital Code Squelch) codes. And the FT-7100M's huge 262-channel Memory System lets you store up to six Alpha-Numeric characters, for easy channel identification.

Operation of the FT-7100M is simple and straightforward, with separate Volume and Squelch controls for each band during dual-band reception, and eight single-function front panel keys provide the easy feature access you need during mobile operation. What's more, you also

get three user-definable keys on the microphone to use for important control functions.

Rugged, reliable, and versatile, the FT-7100M provides the highest cost-performance available among Dual Band FM Mobiles. See your Yaesu Dealer today for a test drive!

FEATURES

- Frequency Range: TX 144-148, 430-450 MHz
 RX 108-137 MHz (AM), 137-180 MHz, 320-480 MHz 810-999.99 MHz (Cellular blocked)

 VHF/UHF, VHF/VHF, and UHF/UHF Dual Receive
- operation'
- Channel Steps: 5/10/12.5/15/20/25/50 kHz/step
- Power Output: 50 Watts (144 MHz)
 35 Watts (430 MHz)
- Power Amplifier Type: 2SK3478 Power MOS FET
 Efficient Cooling System: Direct-flow heat-sink
- and thermostatically-controlled fan 262 Memory Channels: 120 "regular" memories, 5 pairs of band limit memories, and one "HOME"
- channel on each band
- Alpha-Numeric Memory Labels: 6 Characters on lower display field, 5 Characters on upper
 Smart Search™ Automatic Memory Loading
- System 50 CTCSS Encode/Decode Tones
- 104 DCS Encode/Decode Codes
- CTCSS and DCS Search
 ARTS™ (Auto-Range
- Transponder System)
- Automatic Repeater Shift (ARS)

- DTMF Microphone (U.S. version): Includes 16-memory Auto-dialer, and Direct Frequency
- Band Scanning, Band-Limit Scanning, and
- Memory Scanning
 Three Priority Channel Modes: VFO, Memory,
- and Home Channel Priority
- RF Squelch: Opens at user-defined signal level
- Tx Time-Out Timer (TOT)
 Automatic Power-Off (APO)
- 1200/9600 bps Packet Compatible
- Battery Voltage Meter
- Compact Size: 5.8" x 1.9" x 6.9" WHD
 Large (0.9" x 2.3") Liquid Crystal Display
- Cloning Capability: To other FT-7100M Transceivers
 Optional YSK-7100 Separation Kit
 Optional CT-39A Packet Cable

144/430 MHz FM Dual Band Mobile Transceiver

YAESU

445.000

Vertex Standard US Headquarters 17210 Edwards Road, Cerritos, CA 90703 (562)404-2700

World Radio History

The 4X Experience.

Dave Paperman, W5WP

aving been to Israel a number of times I have visited most of the usual tourist attractions. Having been a member of the IARC (Israel Amateur Radio Club) for many years shaped my decision to make this visit primarily an Amateur Radio "operating" visit.

I had been invited to use a friends (Shimon, 4X6RD) apartment complete with radios, amplifiers and a tri-band (TH7DX) antenna. As calmly as pos-

sible, I accepted his offer.

Licensing, which was never difficult to obtain in Israel now requires even less paperwork since both Israel and the United States are now signatories of the CEPT (Committee Europeanne Postes et Telegraphiques) agreement. Licensing was automatic — just add the 4X prefix to my home call.

RadioCom®© DSP-filter analyzer, CAT with decoder of RTTY, Synop, CW PSK31, FAX and SSTV. CAT for more than 80 receivers and transceivers.

BuTel-ARC control software for ICOM (R2, R3, R10) and AOR (AR8000, AR8200, AR8600, AR5000)

Wavecom® Professional real time data decoder/ analyzer/ processor of radio communication transmissions, Audio-IN, variable IF-interfaces, all major HF, VHF, UHF, SFH and SAT modes/ codes.

ARMAP and HAM-Label Logbook and QSL design.

PCCardBox® = ISA or PCI card BUS to PCMCIA. Use your ISA or PCI-card with your laptop. Works with Wavecom decoders and other internal radios.

COMPUTER INTERNATIONAL

St. Johns, MI 48879-1903 Tel/Fax: 1 877 977 6918 info@computer-int.com

www.computer-int.com

All major credit cards accepted

Although my friend's station is well equipped, the gear is not quite up to today's DXing and contesting standards (no SSB or CW filters, pre DSP – one does get spoiled) so I had brought along an Icom IC-706-MKII. Also included in the baggage was a G5RV antenna to extend my operating bands to 40/80 Meters. Since he does not operate CW, an AEA memory keyer

"Working Europe and Asia in the same time period with almost equal signal strength is a real shock."

was included in the operating equipment. I was also determined to do some additional operating with the new digital mode, PSK31. Along with my laptop I brought an adapter box (between laptop and rig for audio isolation), which I had fabricated the previous month for Field Day activities.

I arrived at Ben Gurion Airport (Tel Aviv) more or less on time the afternoon of 2 July. A long Flight; 3.5 hours from Houston to Newark, a change of equipment and 10.5 more hours to Tel Aviv, all on Continental Airlines new service to Israel. After clearing immigration (no problems – no long lines) and customs (through the "nothing to declare" line) it was a great relief to be met by an old friend

Ed, 4Z4UR, who proceeded to take me directly to the apartment I would be using throughout my stay. The balance of that evening was devoted to unpacking clothes and equipment.

Excitement overcoming "jet lag," that night I reconfigured the station to accommodate the equipment I had brought with me. A power supply for the IC-706-MKII was available. Antennas, other interconnections and how to operate the European style air conditioning control (a MUST in Tel-Aviv in July) had been clearly labeled by 4X6RD. All went smoothly. The installation of the G5RV, which required the addition of a rope and pulley arrangement to my friends tower would have to wait the availability of the local tower "guru," Tzvi, 4X4CQ.

All that accomplished, I hit the "airways." Running 80 watts most of the time to the TH7DX antenna located atop the five story apartment building, I tuned the bands listening to local conditions. The first station heard was EM5IUA operating from IOTA (Islands On The Air) EU-180. This operation turned out to be my first QSO of the trip. Essentially this was a "test QSO" (it would not count for my IOTA score as I was not in my home country). With the knowledge that all was well, I finally sacked out. Operating did not begin in earnest until 3 July at 0814 UTC when, again running 80 watts I broke through a "pileup" and worked 5I3A, Yanbe Island (Tanzania) on 10-meter CW.

The pileup began for me when I "staked out" a frequency and started calling "CQ." Operating from Israel is a whole new adventure. Working Europe and Asia in the same time period with almost equal signal strength is a real shock. Having stations "drop in" on you from countries that are considered quite rare from my home QTH is another shocker! In one case I ran into a station operating from Bangladesh (S2) and a Swedish operator who spoke fluent Hebrew (far better than mine.) Most operation was on 15 and 20 Meters. There were some openings on 10 Meters and night time into Europe



on 40 Meters. I made no contacts on 80 Meters due to the configuration and location of the G5RV.

The sources of QRM were interesting. While we in the fifth district complain about QRM from the "three coasts" (East, West and North – 8,9, and 0 land) one begins to understand the complaints of Middle East operators trying to work the U.S. and Canada who have to contend with QRM from Europe and North Africa.

After several days, Tzvi found time from his busy work schedule and a move to a new apartment to come by and install the rigging for the G5RV on the tower, a "home brew" monopole crankup! Due to the lack of roof space, the G5RV was installed in an inverted "V" configuration. With this antenna came new surprises; the final QSO count included many contacts on 6 Meters, a band for which I had NO dedicated antenna. I can only speculate that the version of the "home brew" G5RV has "talents" I was not aware of!

Of equal importance to me were the "eyeball QSO's"; the visits and club meetings that I attended, some for the first time. Language was not a problem. The majority of Israeli Hams speak English. Some are Americans who have emigrated to Israel.

I felt welcome on the repeater systems, which cover virtually all of Israel. Using the repeaters, I came across friends I had made while DXing from home. This led to quite a few very pleasant evenings spent visiting them and their families. The repeaters, incidentally, operate with the same "splits" as U.S. repeaters. The "smart" controllers come from the U.S. and ID in English!

I was also invited to participate in the IARC Field Day which takes place in July. The site I operated from is located in a park approximately 30 miles from Tel Aviv. Located within this park is a grove of trees that is a memorial to 4X operators who have passed away. The site is named, appropriately, the "Silent Key Forest."

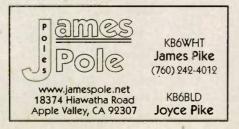
The city of Tel-Aviv is a truly cosmopolitan city. One can walk down the streets and hear many different languages spoken. Parks abound; most with well maintained landscapes. Res-

taurants are many and excellent offering a variety of menus. There are museums, theaters and other places of cultural and historical interest. Interspersed with the boutiques carrying the latest fashions are small family type markets. Being a resident in the apartment, I found it convenient to fix many of my own meals. I did this for two reasons; eating "at home" allowed me more operating time and also provided the pleasure of small market shopping with its variety of food fresh from the farms that abound in Israel, markets virtually extinct in the part of the United States in which I reside.

All in all, this particular trip to Israel was one of the most enjoyable I have made. Good friends, good operating conditions, great pileups. The Icom 706-MkII performed flawlessly on all bands and modes. All the things I look for and enjoy when I go abroad to play radio happened on this trip — even the added pleasure of being able to work friends from home (K5LBU, K5NZ, KC5AEP among others).

To fulfill a promise to Mark Stern, 4Z4KX, the contest manager of the IARC I would like to remind all operators of the Holyland Contest which takes place in April of each year. The IARC is trying to build U.S. participation in this very special contest. The contest is a challenging one for those operators not resident in the eastern part of the U.S. After some discussions with Mark, the awards are now issued to the winners in the U.S. call districts as opposed to the country as a whole. The certificates are real "wall hangers," very beautifully done.

By the time I had gone QRT on 19 July at 1714 UTC (last QSO 4LØDXP, 20-meter CW) I had worked over 1,300 contacts, participated in the IARU contest (mixed mode) and been "blooded" in PSK31.



Special thanks go to Shimon, 4X6RD, Ed, 4Z4UR, Tzvi, 4X4CQ and the leadership and members of the IARC.

Recovered from jet lag, IC-706-MKII reinstalled in the truck, I am ready to go again!

In the March 2001 issue of QST Magazine I learned that 4X/W5WP had won in the "mixed mode" category (working both SSB and CW) of the 2000 IARU contest!

CONNECTORS - MADE IN USA

		110071
PL-259ST	Silver Teflon	\$1.00 ea.
PL-259STG	Silver Teflon Gold Pin	\$1.19 ea.
PL-259GT	Gold Teflon	\$1.29 ea.
9913 2 pc	. N Connector with Silve	r Teflon
& Gold Pin	(Install like PL-259)	\$3.00 ea.

COAX CABLE

RG-213/U	Type IIA	95% Braid	33/ft.
RG-8X	Type IIA	95% Braid	14/ft.

450 OHM LADDER-LINE

16 Gauge	Stranded Cu-clad	15/ft.
18 Gauge	Solid Cu-clad	12/ft.
300 Ohm	KW Twinlead	12/ft.
72 Ohm	13 Gauge Twinlead	20/ft.

ANTENNA WIRE

#14 7/22	Hard	Drawn	Copper
#14 1/66	riaiu	DIAWII	Coppei

INSULATORS

.08/ft

Dog Bone Type Ant	enna Insulators	50/ea.
HI-Q Antenna Ins.	6 3/8" Long	\$3.95/Pr.
450 Ohm Ladder-lir	ne Insulators	49/ea.
Ladder-line Coax C	able Adapter	\$5.95/ea.

ALL BAND DOUBLETS

With 100 feet of 450 Ohm Ladder-line
All-Bander 135 Feet Long \$29.95PPD
Shorty All-Bander 70 Ft. Long \$44.95PPD

G5RV ANTENNAS

G5RV-MD 80-10 Meters 102' Long With Xfmr & 70' RG-8X \$49.95PPD G5RV-E 80-10 Meters 102' Long No Xfmr or Cable G5RV-JR 40-10 Meters 52' Long No Xfmr or Cable Only \$24.95PPD Only \$24.95PPD

SLOPER ANTENNA

| Complete Kit With Instructions | SLA-I | 160, 80 & 40 Meters | 60' | \$49.95PPD | SLA-IC | Coils Only for SLA-I | \$24.95PPD |

HALF-SIZE DIPOLES

| Complete Kit With Instructions | HSD-160 | 160 Meters | 135' Long | \$49.94PPD | HSD-80 | 80 Meters | 70' Long | \$47.95PPD | HSD-40 | 40 Meters | 35' Long | \$44.95PPD |

Add Shipping To All Non-postpaid Items Add 10% Or \$4.00 Minimum To Order Ohio Residents Add 7% Ohio Sales Tax

VGE / VAN GORDON ENGINEERING

Box 21305, S. Euclid, OH 44121 Phone 216/481-6590 • Fax 216/481-8329

WRC-2003 and 40 Meters

lthough there are probably a lot hotter topics in Ham radio than the behind-the-scenes maneuverings leading up to the next World Radiocommunication Conference (WRC) from 9 June through 4 July 2003, in Geneva, Switzerland. The International Telecommunication Union (ITU) will set the final agenda sometime in the near future, but it looks like one of the issues slated for discussion will be resolution of the use of amateur and broadcast services in the vicinity of 7 MHz — the 40-meter band.

The lead dog in the 2003 WRC parade is the FCC, and more specifically, the FCC's WRC-03 Advisory Committee. The International Bureau of the FCC (primarily its Planning and Negotiations Division) bears the major burden of the support tasks for the Committee's WRC-03 efforts, including a lot of the brainpower and logistics. The Advisory Committee is just getting started (they met in January for the first time to get things started for WRC-2003), but they already have a website you can check out at www.fcc.gov/wrc-03/ and you can send

stuff to the Committee at their own e-mail address: wrc03@fcc.gov

The WRC-03 Advisory Committee is the major source of input to the FCC as it works to prepare the United States' positions on each agenda issue. The Interdepartment Radio Advisory Committee (which we all fondly refer to as the IRAC) Radio Conference Subcommittee coordinates input from government agencies like FEMA, the military (DOD), the intelligence community (i.e., Uncle Sam's SWL group), and other folks with whom we Hams share the ether. The final U.S. positions are the result of agreement of the FCC, the National Telecommunications and Information Administration, and the U.S. Department of State, so you know the FCC staffers have a tough job

bringing it all together.

The WRC agenda

The ITU Council has recommended that the WRC-03 agenda include Item 1.23, the consideration of "realignment of the allocations to the amateur, amateur satellite, and broadcasting services around 7 MHz on a worldwide basis taking into account Recommendation 718" from the 1992 WRC. There is another item on the agenda that may have a significant impact on the amateur-broadcast realignment. The Council has also recommended in Item 1.36 that WRC-03 "examine the adequacy of HF broadcasting allocations from about 4 MHz to 10 MHz, taking into account the seasonal planning adopted by WRC-97." As

Amateur Radio Call Signs

The following shows the last call sign in each group to be assigned for each VE Region under the sequential call system as of 16 July 2001.

For more information about the sequential call sign system, see Fact Sheet PR5000 #206-S dated August 1996 or contact the Federal Communications Commission, Consumer Assistance Branch, 1270 Fairfield Road, Gettysburg, PA 17325-7245, toll free 888/225-5322

District	Group C	Group B	Group A
	Technician	General	Am Extra
Ø	KCØLBB	++	ABØRO
1	KB1GZT	++	AA1YT
2	KC2IGS	++	AB2ML
3	KB3GVY	++	AA3XG
4	KG4OJZ	++	AG4JT
5	KD5PCG	++	AD5ET
6	KG6HDQ	++	AD6YN
7	KD7NVM	++	AC7ZQ
8	KC8RVM	++	AB8LH
9	KB9ZYS	++	AB9CO
N. Marianas	KHØNH	++	++
Guam	KH2VL	++	++
Hawaii	NH7FT	++	AH6RM
American Samoa	WH8ABF	KH8DP	AH8W
Alaska	KL1DP	++	++
Virgin Island	WP2AIN	NP2LT	++
Puerto Rico	WP3LP	++	WP3T

++ All calls in this group have been assigned

To subscribe call: 1-877-472-8643

TEACH Morse Code

Want to TEACH CW & need help?

If you or your club would like to help people pass a 5 wpm test, Morse Code 2000TM is a course that will help anyone teach CW!

New Ver. 2 CD - Includes this & more!

A 180 page Instructor's Manual on CD with 100+ pages of Work Sheets & Lesson Sheets! 150+ Morse Code ASCII Files to send using Morse Academy, MFJ-414 Morse Tutor, etc!

VE style practice exams with Q&A! Teaching aids, progress logs, handouts etc. are in .doc and .pdf format -you can edit to suit!

\$29.95 includes S&H (Mass. add \$1.50 tax) Check or MO to: Dragonwyck Design, Inc. PO Box 77, Georgetown, MA 01833

VISA/MC Orders: 978-352-7711 sales@morsecode2000.com

www.morsecode2000.com

Very Important Notice!!

If you received this copy of *Worldradio* and you're not a regular subscriber, this was your free sample copy. We sent it to you so you could see all the news, features and columns in *Worldradio*.

You are cordially invited to join in with all the other active Amateur Radio operators by subscribing.

Worldradio is two-way communication. Send in your news, information and letters.

Your comments and suggestions are most welcome.

Amateur Radio is a very rewarding activity and *Worldradio* hopes to reflect that.

NEWS:

2120 28th St.
Sacramento, CA 95818
(916) 457-3655
Fax: (916) 457-7339
n6wr@ns.net

SUBSCRIPTIONS:

2224 Beaumont St. Ste. D Sacramento, CA 95815 (877) 472-8643 (8 a.m.-5 p.m. PT, M-F) Fax: (916) 920-1015 subscribe@wr6wr.com

Name	Call	
Address		
City		
State	ZIP	
ON	ew	□ Gift
We grate Interna	(only \$1.25 per issue) (\$1.16 per issue • save \$2) (\$1.14 per issue • save \$4) (Be a WR super booster) (year, \$24.79 - 2 years, \$47.79 - 3 years, \$286.79) (fully accept U.S. Funds drawn on Utional Money Orders, Canadian Post	.S. Banks, tal Money
Check enclose	U.S. Funds), or you can charge your	
Card#	Exp.d	ate
Signature		
Please clip (photoco	opies o.k.) and mail to:	
	Worldradio	
For charge sub	mont St., Ste. D • Sacramento scriptions only, call TOLL FREE: ekdays, 8 a.m. to 5 p.m. Pacific ti	(877) 472-8643

Thank you!

any amateur who passed the more basic written elements of the license exam can tell you, the 40-meter band above 7 MHz falls smack in the middle of this spectral territory.

If you are thinking that now would be a good time to see where the FCC and its Advisory Committee are going on these 40-meter issues, the Committee has published the preliminary views of its Working Groups on many of the WRC-03 agenda items, including both agenda items 1.23 and 1.36. The final reports are not due until next year, so we still have time to get in a few words before the momentum builds.

7 MHz caveats

Before we develop a position or make recommendations to the ARRL or the FCC (or just argue amongst ourselves in a civilized manner on the great 75-meter Ham Forum), it is important that U.S. amateurs know a bit about the history of the 7 MHz band and the relative position of Region II (and especially U.S.) amateurs in any decision-making process relative to 7 MHz and the rest of the world:

The history of amateurs and the 7 MHz 40-meter band is complex. Prior to the so-called Cairo Conference in 1938, amateurs had exclusive use of the 300 kHz from 7000 to 7300 kHz That was throughout the whole world, which had not yet been divided into three. With the rise of Nazism and

the gathering of war clouds in Europe and the Far East, there was a lot of political pressure to open up more of the spectrum to broadcasting. The European propagandists won and 150 kHz was chopped off of the amateur band in Regions I and III. We got to keep our full 300, but the broadcasters outside of the Western Hemispherical limits of Region II got to use the upper 150 kHz.

Things were no better for Regions I and III after World War II banished the Nazis. The world was safer for democracy, but not for Hams outside the Americas. At the 1947 Conference in Atlantic City, New Jersey, the Region II/III allocation was reduced again and the 200 kHz from 7100 to 7300 kHz was reallocated to the broadcasting service on a primary basis for Regions I and III. As we all know, you can't limit radio waves to a region (at least on HF), so a full two-thirds of the Region II amateur allocation is really iffy after dark when the broadcasters crank up their high-powered rigs. There are some other restrictions particular to countries that have assigned 7000-7050 kHz to the fixed service on a primary

The ARRL role

The ARRL is taking a very active role in the FCC's WRC-03 Committee, especially in Informal Working Group 6 which is handling the drafting of

FCC positions on agenda items 1.23 (7 MHz) and 1.36 (broadcasting 4-10 MHz), as well as all of the other agenda items focused on Amateur Radio. The ARRL's very capable Technical Relations Manager, Paul Rinaldo, W4RI, is the designated driver on the 7 MHz issue under agenda item 1.23. If you want to send your thoughts on the issues directly to Paul, his e-mail is prinaldo@arrl.org. The draft "Preliminary View on WRC-03 Agenda Item 1.23" prepared by Paul for Informal Working Group 6 (Document IWG-6/014, Revision 2, dated 17 April 2001) states the issue quite succinctly: "The need for a worldwide exclusive spectrum allocation for the amateur and amateur-satellite services in the three ITU Regions." That is the gauntlet laid down for WRC-03, and it will not be an easy goal to reach.

One thing that many Hams may not know is that the U.S. position on fixing the 7 MHz problem involves a 100 kHz downshift of the 40-meter amateur band worldwide.

This recommendation was approved by Informal Working Group 6 and was presented to the June meeting of the Advisory Committee, but was not adopted because the FCC recommendation and the National Telecommunications and Information Administration (NTIA) are at odds. The NTIA, which is part of the U.S. Department of Commerce, is (according to its own web site at http:// www.ntia.doc.gov/) the President's chief advisor on domestic and international telecommunications and information technology issues. As you might guess from the fact that the NTIA is an agency of Commerce, it carries a lot more water for commercial and business interests (ah...er...ummm...maybe.... could that mean.... BROADCASTERS ??) than Amateur Radio interests. Duh!

The NTIA view

Anyway, the NTIA position, while it does not agree with the FCC and ARRL position, is fairly objective in its assessment of the problem facing

Screwdriver Antenna Owners

Keep Your Eyes on the Road



Screwdriver Antenna Memory

Replace your existing up/down manual tuning switch with the microprocessor based controller that adds computer controlled memory function to your screwdriver antenna system.

KO6YD Designs

PO Box 1090 Elverta, CA 95626-1090 Voice Mail:888-83-KO6YD info @ ko6yd.com

Automate Tuning of your Screwdriver Antenna

- Eliminate Antenna Band Markings
- Memorize 16 locations & return on command
- Jog mode to "fine tune" the antenna
- . VFO style knob for easy operation
- Mount antenna out of sight (Great for RVers)
- Built in IC706 Tune Controller keys radio when tuning
- Works with your existing antenna
- Size: 4W X 2H X 4D
- . Simple 4 Wire Connection to Antenna

Assembled & Tested with Case Shipping & Handling

6.0

149.95

CA residents add sales tax

We Accept: Visa and M/C

Order ONLINE!

sales @ ko6yd.com

* Visit our Website for more information

www.ko6yd.com

a return to the days when amateurs had a clear 300 kHz free from nighttime interference from HF broadcast stations. The NTIA analysis goes like

"As part of a long standing historical situation, the amateur/amateur satellite exclusive allocation in Region II goes from 7000 to 7300 kHz, while it goes only from 7000 to 7100 in Regions I and III. The other 200 kHz for Regions I and III are allocated exclusively to the broadcasting service. The Amateur Radio community has been trying to "realign" this "imbalance" for decades. WRC-2000 for the first time specified that the agenda item be on the agenda for the next WRC, in this case WRC-03.

It is unlikely that the broadcasting service community will wish to relinquish any spectrum, particularly since this spectral region is within the 4 to 10 MHz spectral region where under WRC-03 agenda item 1.36 the broadcasters are in effect asking for more spectrum. [emphasis added]

The NTIA analysis continues, "It is equally unlikely that the amateur/ amateur satellite service proponents will propose reducing the amateur/amateur satellite allocation in Region 2 so that the "realignment" would take away spectrum just to have equal amounts for each Region. Because of the potential impact of such realignment, the agenda item will most likely become an allocation item involving the other allocated services." In other words, the NTIA scoffs at the idea that you can realign the 40-meter band and predicts a battle for spectrum among all the services currently inhabiting that portion of the spectrum.

The NTIA recommendation is very politic, without taking much of a position. They want the U.S. position to be: "To accommodate the desire to have the same spectrum allocation in all three regions for the amateur/amateur satellite services in the frequency spectrum range around 7 MHz, the U.S. believes that careful consideration will have to be given to the needs of the fixed service and the broadcasting

service in this part of the frequency spectrum.

Well, the NTIA recommendation is as inarticulate and wishy-washy a non-position as any I have ever seen. Pure bureaucratic mush. And yet, at the same time, it is a very realistic and politic position for the Commerce Department, which is as much of a commerce-promoter as it is a commerce regulator.

Your views count

We are, of course, a long way from WRC-03 and still quite a ways from the deadline for fashioning the final U.S. position. So how do we slice up the pie and avoid throwing out the baby with the bath water? The worst case scenario is that those of us in Region II could end up squeezed into the same 100 kHz with amateurs in regions I and III. The clear 300 kHz seems like wishful thinking, but is a worthy goal, even if it means moving down a hundred clicks to 6900 kHz. What should we do? How do we bargain? Should we exchange bandwidth for exclusivity by compromising on 6900 to 7100 kHz free and clear of broadcasters? Can we get 300 kHz by going down to 6800 kHz and sharing that 100 kHz with whoever dwells there now so we can get 6800 to 7100 and stay below the broadcasters?

I would like to devote several more columns to this topic, so it is up to you to write or e-mail me with your views. You now know the issues and have some background. If enough of you respond, I can avoid doing a column on the dead-end WRC-03 issue of mandatory Morse code below 30 MHz and the tongue-in-cheek, eyes-rolledup-to-heaven position of the ARRL board which has asked the FCC to keep a Morse code requirement for the U.S. no matter what. None of us want that - even for next April, so let's hear it from you guys! Forty meters...what do you suggest we do? Watch this space!

- David Splitt KE3VV, our Rules & Regs doctor has his finger firmly on the pulse of the FCC and the ARRL. If you have a question or opinion he can be reached by sending snail mail to: 6111 Utah Avenue, N.W., Washington, DC 20015, or by sending e-mail to: davidsplitt@erols.com.

THE ORIGINAL WD4BUM HAM STICK™ ANTENNAS for HF MOBILE OPERATION S2495 each

The only lightweight HF mobile antenna recommended by noted author Gordon West. WB6NOA

- Monobanders for 75 to 6 meters Very rugged fiberglass & stainless
- Telescopes for easy adjustment.
 3 8 x 24 TPI base fits most
- mounts.
- Low profile & low wind load. Needs no springs or guys. Complete tuning & matching instructions included.
- · Approximately 7 ft. tall . 600 watts.

Cat.# Band Cat.# Band 9175 75 meters 9115 15 meters 9140 40 meters 9112 12 meters 9130 30 meters 9110 10 meters 9120 20 meters 9106 6 meters 9117

LICENSE PLATE MOUNT

- · Mounts benind license plate
- · Mount is constructed of type 304 Stainless Steel
- · Complete with S/S hardware
- · For Antenna's with 3/8" x 24 Thread
- · Accepts PL-259 Direct
- · Ground strap included
- · Complete mounting instructions included

100 % MADE IN USA

\$44⁹⁵ CAT. #TM-1

MOBILE COLINEAR **ANTENNAS**

THE ULTIMATE PERFORMER

- · Honest 4.5dB gain.
- · 1000 watts DC.
- · 17-7 ph stainless steel top sec.
- Rugged fiberglass base station.
- · Base fitting is std 3/8 x 24 TPI. Length

9007 - 146 MHz 7'2" • 9038 - 220 MHz 4'9 9440 - 440 MHz 2'5"

\$2495

Base station version available 9007-B · 9038-B · 9440-B

\$3495

Tri-Magnetic Mount



MODEL 375 Only \$3995

- Holds all Hamstick Antennas and many others.
- Over 400# of holding power. 13" x 13" foot print,
- 3/8 x 24 thread mounting. • 15 RG 58 coax
- w/PL-259. · No rust aluminum construction.
- All 100% made in USA Add \$8.00 per order for S/H

Lakeview Company, Inc.

3620-9A Whitehall Rd., Anderson, SC 23626 • 864-226-6990

FAX: 864-225-4565 • E Mail: hamstick@hamstick.com • www.hamstick.com

World Radio History

Young Ham of the Year

Bill Pasternak, WA6ITF

atrick Clark, KC8BFD, a
7-year-old from Elkview,
West Virginia who is heavily
involved in public service,
emergency communications and youth
recruitment of new radio amateurs, has
been named the 2001 "Amateur Radio
Newsline Young Ham of the Year"
according to Award Administrator
Bill Pasternak, WA6ITF. The award
is jointly sponsored by Amateur Radio
Newsline, Vertex Standard USA, Inc. of
Cerritos, California and CQ magazine
of Hicksville, NY.

Licensed since age 10, Patrick comes from an all-Ham family. His sister Erin is KC8PZZ. Mother Tina is N8TSY and his dad is Jeff Clark, K8JAC. Following in his family's footsteps, Patrick has been involved in emergency service work from the day his Amateur Radio license arrived in the mail. This included the West Virginia Field Day flooding of 1998 when the annual emergency preparedness drill took on a real life meaning as the skies unexpectedly opened up:

"It was sad to see how many people lost their houses," said Patrick, who with his mother, drove to the flood ravaged area to provide communications assistance. The story of one of the disaster victims still hangs in Patrick's mind:

"People showed up at the shelter having nothing. The incident I remember most is when a family came in and said that they had just lost their father, and the child did not have his medication...and we need his medication because he is a diabetic...so we contacted Metro 911 and got him his medication. And it sort of made mom and I feel we had actually accomplished something and helped save a kid's life..."





Patrick Clark, KC8BFD, was named the 2001 "Amateur Radio Newsline Young Ham of the Year."

If you get the feeling that providing public service communications is almost a way of life for Patrick, you would not be wrong. In addition to his Amateur Radio Emergency Service (ARES) activities, KC8BFD is also a Certified Severe Weather Spotter with Skywarn. He also holds certification in Basic Life Support and use of a defibrillator. While not a scout, he is a regular operator with the Jamboree on the Air, has spoken twice at the Dayton Hamvention Youth Forum, and promotes Amateur Radio to other youngsters through personal appearances. This includes the annual Sheriff's Youth Camp. And while maintaining a 3.5 grade point average, Patrick still finds the time to act as Net Control Station for the weekly Kanawha Amateur Radio Club's weekly 2-meter net. In his spare time he is trying to get the Worked All States Award on 10 Meters.

"I like the challenge of getting [awards like] the Worked All States Award (WAS). I am mailing out QSL cards tomorrow to try to get 42 states confirmed."

Among those commenting in favor of Patrick's nomination was Morris "Mac" McMillian, W8XF, who is ARRL Section Emergency Coordinator for West Virginia. McMillian believes that the future of Amateur Radio is in good hands with a young man like Patrick Clark, KC8BFD:

"I have always been able to rely on Patrick's ability to think on his feet in a drill or actual ARES activation, both as EC and now as SEC," says W8XF, adding: "To how many youngsters can you turn over a brand new Yaesu FT-847 on Field Day and say go for it? I did just that with Patrick. Not only was he proficient with it, be he taught me new features on my radio!"

The 2001 Newsline Young Ham of the Year Award will be presented at the Huntsville Hamfest in Alabama. The award ceremony will be co-hosted by Bill Pasternak, WA6ITF, of Amateur Radio Newsline and YHOTY Award Committee Chairman Larry Zettwoch, KR4IF. Also present will be representatives of corporate underwriters Vertex Standard USA, Inc.. and CQ Communications, Inc.

As "Young Ham of the Year," Patrick Clark will receive, courtesy of Vertex Standard USA, an expense-paid trip to the 2001 Huntsville Hamfest, along with a gift of Yaesu Amateur Radio equipment. CQ magazine will treat Patrick to an expense-paid week in Spacecamp Huntsville, and will present him with a variety of CQ products. Amateur Radio Newsline will provide Patrick with a commemorative plaque at the award ceremony. The cost of year's plaque has been underwritten by Dave Bell, W6AQ.

LOW PROFILE HF ANTENNAS THAT REALLY WORK! "Work the World Without Working Up the Neighborhood"

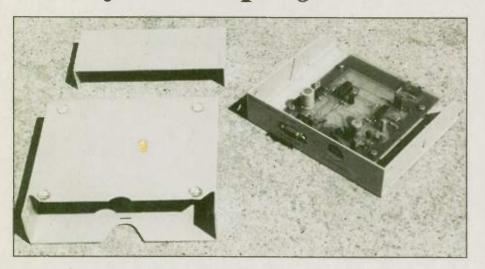
ASOTRONBILAL COMPANY

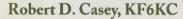


Florissant, CO 80816 www.rayfield.net/isotron

To subscribe call: 1-877-472-8643

Ready-made project boxes

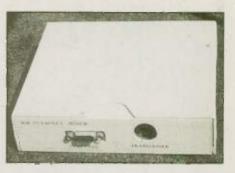


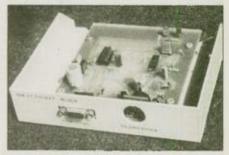


emember all those 5 1/4 inch plastic floppy disk holders you have no use for any longer? Well, why don't you put them to good use as small project enclousures? That's what I did one day after looking at

the price of enclosures in an electronic parts catalog.

The plastic case comes apart quite easily and lends itself nicely to cutting, drilling and gluing. The two main sections slide together allowing easy access to the circuit card. As you can





see from the photographs, I used one to house a packet TNC circuit card.

So the next time you are in need of a small enclosure consider using a plastic floppy disk holder. It's fun and easy on the pocket book.

BATTERIES

KENWOOD

KNB-4 7.2v @ 2200 mah \$59.00

PB6 7.2v @ 750 mah \$35.00

PB-13 7.2v @ 750 mah \$37.00

PB-14 12v @ 800 mah \$43.00

PB-18 7.2v @ 1500 mah \$47.00

12v @ 1100 mah \$59.00 KNB-3 7.2v @ 1200 mah \$38.00

> 7.2v @ 1500 mah \$49.00 12v @ 800 mah \$49.00

PB1

REPLACEMENT (ALL NEW - MADE IN USA)

	YAESU				
ı	BP85B	12v	600 mAh 3"	\$69.00	
1	BP84	7.2v	1200 mAh 3"	\$39.00	
1	BP82,	BP83			
ı	SA/SA	Т			
ı	BP8	8.4v	1400 mAh	\$50.00	
ı	BP7		600 mAh	\$53.00	
ı	88		1400 mAh	\$51.00	
ı	15		1400 mAh	\$53.00	

ICOM

	Y/	AESU		
			Milita	'n
FNB-2	10.8v	600 mAh		E
FNB-4	12V	750 mAh	\$39.00	E
FNB-4A	12v	1000 mAh	\$55.00	ם
FNB-17	7.2v	600 mAh	\$30.00	E
FNB-10S	7.2v	1200 mAh	\$39.00	_
FNB-12S	12v	600 mAh	\$40.00	E
FNB-25	7.2v	600 mAh	\$35.00	D

FNB-26 7.2v 1200 mAh \$44.00

FNB-26S 7.2v 1500 mAh \$49.00

800 mAh \$49.00

ALINCO BP-10N 7.2V@ 700 mAh \$35.00 BP-12N 12v @ 700 mAh \$47.00 BP-16N 7.2v @750 mAh \$37.00 DP-18N 12v@ 600 mAh \$47.00 J-180 DJ-580

EBP-20N 7.2v @800 mAh \$34.00 EBP-20NX 7.2v @1500 mAh \$44.00 EBP-22N 12v @ 800 mAh \$49.00

MasterChargers Master Charger I DELTA V, RAPID CHARGER
ALL VOLTAGES 4.8v - 13.2v 1/2-2 HOURS
MASTERCHARGER IIa TAPER CHARGER
ALL VOLTAGES 4.8v-13.2v 8 Hours+

DUAL CHARGERS MasterCharger I+I • MasterCharger I+IIa • MasterCharger IIa+IIa
 MASTERCHARGES TWO BATTERIES AT SAME TIME

ALL MasterChargers (SINGLE & DUAL) FEATURE • INTERCHANGEABLE CUPS • FULLY AUTOMATIC OPERATION
• BUILT IN OVERCHARGING PROTECTION • MORE THAN 50 CUPS AVAILABLE • USER FRIENDLY • OPTIONAL DC CHARGER

SALE All 7.2 Volt at 1500 MAH BATTERY **PACKS** \$39.00

CAMCORDER Panasonic P8 80/88 Orig Pan Sony NP77H 2400 mah \$39.00 \$39 00 Soriy NP55 1000 mah Sony NP22 500 mah \$29 00 Canon 8mm 2000 mah \$36 00 Panasonic Palm 2400 mah \$39.00 JVC GR Type C 1500 mah \$36 00 2000 mah RCA/Hitachi 8mm 2400 mah

ALL BRANDS AVAILABLE

NEW

KENWOOD TH22AT /79

PB32,	6v 6	9	600mAh
PB33,	6V 6	9	1200mAh
PB34,	96V 6	ð	600mAh

YAESU FT-11R /51R

П	FNB31,	48V	0	600mAh
ı,	FNB33,	4 8v	0	1200mAh
ı	FNB33(s),	4 8v	@	1500mAh
	FNB35SS,	7.2v	0	1500mAh
	FNB38,	9 6 v	@	600mAh

П		ICC	M-W21	AI	/ 2GX
	BP-	157,	7 2v	0	900mAh
l	BP-	157(s). 7 2v	0	1500mAh
ì	BP-	132,	12v	0	850mAh
	*av	adable v	with and v	vitha	ut microphone"

MOTOROLA 7.5V @ 1200 MAH

ALL BATTERY PACKS - GUARANTEED TO HAVE THE ADVERTISED CAPACITY

SEND FOR FREE CATALOG

DEALER INQUIRIES WELCOME

FNB-27S 12v

BATTERY-TECH, INC.

800 S. Broadway • Hicksville, NY 11801 (800) 442-4275 • FAX: (516) 496-9523 • N.Y.S. (516) 496-9520









St. Mary's Island, ASØ96

Sri Bhat, VU2SBJ

he St. Mary's Island (constituent part of ASØ96 group of Isles) is about 3 kilometers from the coast of Malpe in the Udupi district. The island is barren and uninhabited, with no shelter or drinking water. About 400 x 150 meters in size, the small island is often explored by tourists who visit the island for a few hours usually on weekends when

a few boats offer services from the Malpe coast. The boat trip takes about 25 minutes from the Malpe coast to the island. Some boats can't go all the way to the island, and tourists are transferred into a smaller boat for the remainder of the journey. Some other types of boats move all the way from coast to the island. Overnight stays on the island are restricted by the police authorities of the district.

Beginning at about 0530 UTC on

Saturday, 05 May 2001, the IOTA station was on the air almost continuously until about 0030 UTC on Monday, 7 May. Utilizing 10 operators, this IOTA event operated four stations on phone and CW on various bands simultaneously.

Despite uncertainties with the weather, the IOTA expedition to ASØ96, St. Mary's Island, was a grand success. The total count of logged QSOs crossed 3,500 in the less than 40 hours of effective operating time. Logs are still being sorted out and more statistics will soon be available. It is our desire to QSL every QSO logged. A well-planned event by the Manipal and the Mangalore amateurs, the IOTA expedition was the first of its kind for all of the operators who participated. Hoping WPC's approval will come in on time, which eventually did, other coordinating efforts began just a few days prior to the scheduled date.

The team that took part included Manikant, VU2JRO; Bhat, VU2NJN; Sri, VU2SBJ; Gopi, VU2GPH; VU2MHC (MIT Ham Club, Manipal) from Manipal and Mur, VU2MTT; Chets VU3DMP; Pai, VU2PAI; Prakash, VU2JIX; Rohit, VU2RDQ and Sukanya, VU2RDJ from Mangalore. SWL Laxminidhi from Manipal and two others from the Mangalore Coast Guard also accompanied the

An enormous amount of luggage

Work the World with a motorized High Sierr A Antenn ATM

The legendary H\$1500[™] mobile antenna has been the choice of thousands of amateurs around the world!

Continuous tuning 3.5 to 30MHz and 6 meters

Announcing our newest motorized vertical antenna
The H\$1500MVATM for home or base use
Only 7 feet tall and remotely tuned
The perfect answer for restricted locations

For more information about High SierrA AntennAsTM and Mobile MasterTM accessories visit our web site

www.cq73.com

info: 530-273-3415 orders: 888-273-3415

a division of Heath Tech, Inc. P.O. Box 2389 • Nevada City, CA 95959 was carried. The six lead acid batteries (two extras) probably were the bulkiest items. A very useful sledge prepared by VU2RDQ was a boon to move the batteries. About 250 liters of drinking water, and another 50 liters for 'other' purposes came second in line in terms of bulk. Tarpaulins, bamboo staves for tents, aluminum masts, radio equipment and antennas came in next. Due to forecasts calling for rain, adequate waterproofing for equipment (worth our life for most of us), utensils for cooking, and food were the other components of the luggage that was carried. Rain and a flat tire delayed our start by about 60 minutes. Eventually after a quick breakfast specially arranged by VU2NJN at the wee hours of the morning at a hotel in Udupi, we reached Malpe and began unloading stuff from a mini truck and three other cars at about 7:45 a.m. on Saturday. It took about 30 minutes to load the boat, and a similar amount of time to unload after about 25 minutes of travel to the island. It was drizzling and the sky was dark so you can imagine the uncertainty in our minds. Fortunately, it was not windy. The boat people refuse to travel if it is windy.

After we landed on the island and unloaded all the stuff using a human chain, it took us about 4 hours to get most of the things in place and to set up two stations. Fortunately it stopped raining. (Later the temperature went up to as high as 42 C). We were the only people on the island then. A very useful tip from K2KW encouraged us to install at least one vertical with the mast right in the sea water. You have got to see to believe how dramatically it improves the performance of the antenna. It was comparable to that of the other beams that were erected. (For more details on the special performance of verticals in salt water, visit http:// www.k2kw.com/k5k/dxcomp.htm)

Propagation conditions from St.

CALL (800) 727-WIRE (9473)

That's All You Need to Know About

Wire, Cable and Accessories!

20 Years of Quality & Service!

Web Site: http://www.thewireman.com Email: n8ug@thewireman.com

TECHNICAL HELP: (864) 895-4195 261 Pittman Rd. • Landrum, SC 29356

THE WIREMAN™ INC

Mary's Island was overall moderate with solar flux showing 165 points on Saturday and 160 points on Sunday. The peak was showing a downtrend in the coming days.

The 10-meter band was good on 5 May from 1200 to 1500Z with a huge pileup from Europe. There were stations from North America, South America, JA's, and VK's coming

through as well.

Conditions on 15 Meters were exceptionally good and the pileup from Europe was tremendous from 1700 to 2000Z. Some stations from North America/South America were also strong on 15M. However, 20, 17 and 12-meter bands were not encouraging on 5 May. But we logged lots of stations on 12M on 6 May. The 20-meter band improved on 6 May with stations from Europe, North America and South America coming through pretty well. Overall, the 17-meter band was quite moderate. We did our best to log maximum QSOs with optimum band propagation and minimum operating time.

We stopped operations early in the morning on the 7th. The specially hired boat was to pick us up at 7 a.m. It arrived right on time. We were almost done disassembling all the stations and the other stuff. It's amazing how much less time it takes to pull down a station as compared to setting it up! It took us less than 90 minutes to get all the stuff back to one place. We reached on the shore of Malpe at 9 a.m. A promisingly busy day at work for each of us looked certain. Nevertheless, it was worth every minute of the fun we had on ASØ96.

The small effort to publicize the IOTA event on the web paid off well. Though the event was confirmed just a few days prior to the event, the good response on the band made all efforts towards our maiden IOTA expedition very worth while.



Visit us on the web at: www.wr6wr.com

Now introducing the all new CD-ROM from Worldradio.



The Worldradio 2000 CD-ROM

This CD-ROM contains two out-of-print books:

40+5 Years of HF Mobileering.

The Little Pistol's Guide to HF Propagation

Everything You Forgot to Ask About HF Mobileering.

Yes, in one CD-ROM we've assembled one of the greatest collection on HF Mobileering and HF Propagation. Don Johnson. W6AAQ, and Robert R. Brown, NM7M, give you the insight needed to get your HF signal out there!

This CD also contains the 2000 Worldradio Archive. That's right, you'll find every issue from 2000 — and in full color where possible!

This CD is yours for only \$24.95 + \$2 s/h (CA residents add \$1.87) To order call: 916/457-3655 or on the web at: http://www.wr6wr.com or send check to Worldradio at: 2120 28th St. Sacramento, CA 95818

MFJ Pocket size Morse Code ReaderTM

Hold near your receiver -- it instantly displays CW in English! Automatic Speed Tracking . . . Instant Replay . . . 32 Character LCD . . . High-Performance Modem . . . Computer Interface . . . Battery Saver . . .

Is your CW rusty? Relax and place this tiny pocket size MFJ Morse Code Reader near

your receiver's speaker. Then watch CW turn into solid text messages as they scroll across an easy-to-read LCD display.

No cables to hook-up, no computer, no interface, no other equipment needed!

Use it as a backup in case you miscopy a few characters - - it makes working high speed CW a breeze even if you're rusty.

Practice by copying along with the MFJ-461. It'll help you learn the code and increase your speed as you instantly see if you're right or wrong.

Eavesdrop on interesting Morse code QSOs from hams all over the world. It's a universal language that's understood the world over.

Please, please don't use it on CW exams (or at least, don't get caught!).

Automatic Speed Tracking MFJ AutoTrak™ automatically locks on, tracks and displays CW speed up to 99 words-per-minute.

Simply place your MFJ-461 close to your receiver speaker until the lock LED flashes in time with the CW.

Three Display Modes

1. Bottom line scrolls and fills with text, then that entire line is displayed on top line until bottom line refills -makes reading text extra easy!

2. Top line scrolls, bottom line displays speed in words-per-minute.

3. Both top and bottom lines scroll. Two-line LCD display has 32 large



1/4 inch high-contrast characters. MFJ Instant Replay

The last 140 characters can be instantly replayed. This lets you re-read or check your copy if you're copying along side the MFJ-461.

High Performance Modem Consistently get solid copy from MFJ's high performance PLL (phaselock loop) modem. Digs out weak signals. Even tracks slightly drifting signals.

Of course, nothing can clean up and copy a sloppy fist, especially weak signals with lots of QRM/QRN.

Computer Interface The MFJ-461's serial port lets you display CW text full screen on a bright computer monitor -- just use your computer and terminal program.

More Features When it's too noisy for its microphone pickup, you can connect the MFJ-461 to your receiver with a cable.

Battery saving feature puts MFJ-461 to sleep during periods of inactivity. It wakes up and decodes when it hears CW. Uses 9 Volt battery (not included).

True Pocket Size

Fits in your shirt pocket with room to spare - smaller than a pack of cigarettes. Tiny $2^{1/4}x3^{1/4}x1$ in. $5^{1/2}$ ounces.

No Instruction Manual needed! Super easy-to-use! Just turn it on -it starts copying instantly!

Accessories

MFJ-26B, \$4.95. Soft leather protective pouch. Clear plastic overlay for display, push button opening, strong, pocket/belt clip secures MFJ-461.

MFJ-5162, \$5.95. Receiver cable connects MFJ-461 to your radio's external speaker 3.5 mm jack.

MFJ Pocket Morse Tutor

Learn Morse code anywhere with this MFJ-41 tiny MFJ Pocket-\$**79**95 sized Morse Code Tutor™! Practice copying letters, numbers, prosigns, punctuations or any combination or words or QSOs. Follows ARRL/VEC format. Start at zero code speed and end up as a high speed CW Pro! LCD, built-in speaker.

MFJ Code Oscillator

MF.J-557 Deluxe Code **Practice**

MFJ-557 Oscillator has a Morse key and oscillator unit mounted together on a heavy steel base -- stays put on your table! Portable. 9-Volt battery or 110 VAC with MFJ-1312, \$14.95. Earphone jack, tone and volume controls, speaker. Adjustable key. Sturdy. 81/2x21/4x33/4 in. MFJ Pocket CW Keyer MFJ-403P



Built-in lambic

56995

Paddle. Thumbwheel speed control. Adjustable weight. Adjustable sidetone with speaker. Iambic modes A or B. Fully automatic or semi-auto "bug" mode. Reversable paddle. Tune mode. RF-proof. Battery Saver. Tiny 2¹/₄x3¹/₄x1 in.

MFJ miniature Travel lambic Paddle MFJ-561, \$19.95. 13/4Wx13/4Dx3/4H in. Formed phosphorous bronze spring paddle, stainless steel base. 4 ft. cord, 3.5 mm plug.

Free MFJ Catalog and Nearest Dealer . . . 800-647-1800

http://www.mfjenterprises.com

• 1 Year No Matter What^{IN} warranty • 30 day money back guarantee (less s/h) on orders direct from MFJ

MFJ ENTERPRISES, INC. 300 Industrial Pk Rd. Starkville, MS 39759 PH: (662) 323-5869 Tech Help: (662) 323-0549 FAX: (662)323-655 1 8-4:30 CST, Mon.-Fri. Add shipping. Prices and specifications subject to change (c) 2001 MFJ Enterprises, Inc.

MFJ Sound Card-to-Rig Interface

Use sound card and rig for all digital modes!

Plug and Play! Includes software, audio cables, power plug . . . RFI-proof ... Isolation transformers -- no hum, noise, distortion ... Operate PSK-31, packet, APRS, AMTOR, RTTY, SSTV, CW, Meteor Scatter, others . . . Use as Voice Keyer, CW Contest Memory Keyer



audio, eliminates ground loops and provides microphone override.

Works with all transceivers with 8-pin round or modular microphone plugs.

Operate PSK-31, packet, APRS, AMTOR, RTTY, SSTV, CW, high speed CW Meteor Scatter and many others. Also use as Contest Voice Keyer and CW Contest Memory Keyer.

Digital Modes or Normal Operation Choose digital modes or normal transceiver/computer operation with the push of a switch

Selecting the ON digital mode, all connections are made between your rig and computer for instant digital operation.

In the BYPASS normal mode, your transceiver and computer connections are restored for their normal operation.

Audio Isolation Transformers Audio isolation transformers and relay eliminate ground loops, audio hum, noise and distortion.

RFI-Proof

Extensive RF suppression and line isolation eliminates RF feedback problems. Automatic Microphone Override

You can override any digital mode and transmit microphone audio at any time by

pressing mic PTT -- great for SSTV and Contest Voice Keyer operation.

More Impressive Features Serial port -- lets computer control your radio to override and/or interrupt digital transmissions.

VOX Control -- lets you use automatic VOX control when not using computer serial port control.

Level Controls -- for transmitter drive and for receiver-to-sound card drive level. No need to adjust microphone gain or sound card level when you change modes.

Stereo or Mono Audio Input -- A front panel switch selects left, right, or both sound card audio output channels to accommodate various programs.

Off-the-air recording -- for replaying or for use with spectrum analyzer pro-

Speaker on/off switch lets you hear receiver audio when you want it.

Rugged Construction -- All aluminum cabinet and surface-mount construction gives you years of trouble-free service.

Use any Transceiver with 8-pin Mic

Internal jumpers program m crophone wiring for any brand or model radio -- no soldering required. Order MFJ-1275 for 8pin round mic plug. Order MFJ-1275M for 8-pin modular mic (RJ45) plug.

Everything you need is included MFJ-1275/MFJ-1275M includes audio cables, power plug and a CD with a collection of the most popular amateur radio software to operate PSK-31, RTTY, SSTV, PACKET, AMTOR, CW, HSCW Meteor Scatter, Contest Voice Keying and other modes. Uses 12 VDC or 110 VAC with optional adapter (MFJ-1312B, \$14.95). No Matter What Marranty

Protected by MFJ's famous No Matter What™ one year limited warranty. MFJ will repair or replace (at our option) your MFJ-1275/MFJ-1275M no marter what for one full year

Try it for 30 Days Order from MFJ and try it -- no obligation. If not delighted, return it within 30 days for refund less shipping

Free MFJ Catalog and Nearest Dealer . . . 800-647-1800

http://www.mfjenterprises.com

1 Year No Matter WhutTM warranty "30 day money back guarantee (less s/h) on orders direct from MFJ

MFJ ENTERPRISES, INC. 300 Industrial Pk Rd, Starkville, MS 39759 PH: (662) 323-5869 Tech Help: (662) 323-0549 FAX: (662)323-6551 8-4:30 CST, Mon.-Fri. Add shipping.

\$49.95. 32-bit packet termi-

MultiCommHost™ for MFJ-1278 Multimode TNCs. MFJ-1289H, \$79.95. Supports all packet, HF modes. Adds PSK-31. 32bit host mode runs under

Windows 95,98,Me,NT,2000,XP™. Syncs

with popular logging programs. Toolbar, Hotkeys, user defined macros, quick connects, receiver buffer, more!

MultiCommHost™ for packet only. MFJ-1284H. nal software gives you true

Operate PSK-31 with your MFJ-1278, MFJ/TAPR TNC 2 Clones

multi-tasking in Windows 95,98,Me,NT,2000,XPTM. Uses standard Windows commands. Also adds PSK-31!

Download free MFJ-1289H/MFJ-1284H demos http://www.cssincorp.com/multicommhost Call 800-647-1800 to order activation key.

MFJ... the world leader in ham radio accessories!

DXpeditioning on a shoestring

Henryk Kotowski, SMØJHF

usually take more wire than the length of a shoestring. A reel of 100 meters is my standard — just in case. My budget is always tight and I would never spend thousands of dollars on going somewhere and working a pileup day after day. I don't make much money and couldn't afford it in the first place. But some people do it; easy come easy go.

Amateur Radio is, of course, fun but it is only a spice in my life.

When I travel I want to see places and meet people. Some of the places I have visited recently sound exotic to most Americans, but these destinations are easy to reach from Stockholm, Sweden where I have my home.

Most Northern Europeans travel intensively to the south because of the

VLF CONVERTER



Approaching Madeira, northeastern coast

climate, long holidays and good income. I am flexible and can make decisions about going somewhere on short notice and thus can take advantage of package trips offered for a fraction of the

original price.

One such destination is Madeira (CT3). It counts as Africa yet it is a region of Portugal. There are numerous flights from most European countries, excellent infrastructure, beautiful and diversified nature, a hundred microchmates and two hundred Hams. I was actually going to the Dominican Republic in December last year but the flight was delayed and having had a bad experience with this particular carrier I canceled my trip.

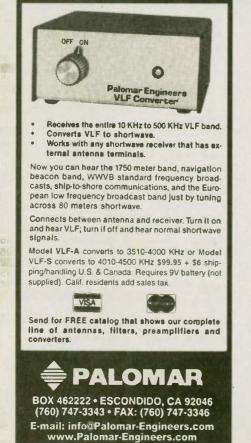
Finding another trip a few days before Christmas was not easy - but I spotted an offer of a week in Madeira (flight, modest hotel, airport transfers) for \$150. I had already been there but it

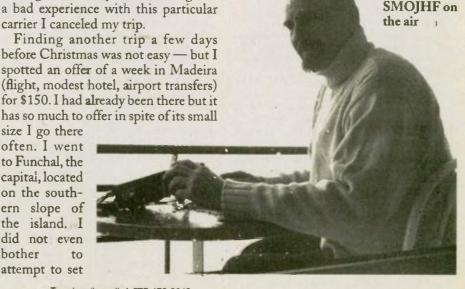
size I go there often. I went to Funchal, the capital, located on the southern slope of the island. I did not even bother attempt to set

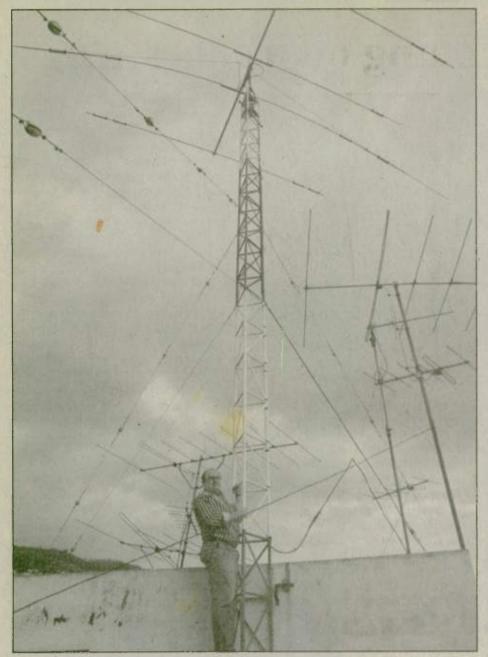
up an antenna there. The only open direction is South Atlantic and this is not the right direction if you want to have a decent QSO rate. Of course, there are a few ZD7's and maybe a ZD9 but they were not the objective of my radio activity.

I phoned Luis, CT3EE, who I know personally. He helped me to get in touch with another Luis, CT3DL. CT3DL is the president of the local organization, ARRM. He runs a flower store just a hundred yards from the

CT3/







Antenna of the CS3B beacon







Group picture in front of the ARRM in Funchal, Madeira (not in order: CT3LG, CT3KJ, CT3KR, CT3KU, MAB, CT3KT, CT3KB, CT3KN, CT3HF).

hotel where I was staying. Both Luis's were busy because of the approaching

> Tired of Expensive Inkjet Cartridges?

New Compatible Cartridges for Canon & Epson / SAVE 40 - 60%



Save 90% on Refill inks for: HP, Canon, Epson, Lexmark 700 / 000 / 000 / 01000

HP /00 / 800 / 900 / P1000 Series							
6 Refill kit Black	\$39.95	\$6.70/fill					
12 Refill kit Color	\$44.95	\$3.75/fill					
Canon 2000 / 4000 / Multipass Series							
60 Refill kit Black	\$29.95	\$0.50/fill					
60 Refill kit Color	\$39.95	\$0.67/fill					
Other Models CALL! CALL!							

➤ www.inkjetsw.com <</p> 1-800-447-3469

Owner: A.J. N8HVD 1826 W. Broadway Ste. B44 • Mesa, AZ 85202

holiday season and could not come to the club on Saturday when I took the group picture. The club has a nice place at its disposal courtesy of the local government. It's located at the bottom floor of a block of flats at 136A, Avenue of the USA. While there I met a few of the club's 200 members — both young and old. It seems that there is

hope for Amateur Radio in Madeira!

During my visit I rented a small car to explore the island. Renting a car is easy and cheap (something like \$25 a day), but most tourists are afraid of winding and narrow roads, steep cliffs or simply driving — so there isn't much traffic. Downtown Funchal is another story - traffic is just like any other congested large town.

I spent most of the time going to the West, East and North. The northern coast is extremely attractive from my point of view. The scenery is different there, the coast is perpetually attacked by northern winds and storms... and it's open towards Europe and North America.

I found an unusual hotel, Cabanas de Sao Jorge, consisting of a village of round huts and stayed there for a couple of days. I suspended a random wire from my room to some trees down below and connected the automatic antenna tuner and the IC706. The wire worked on all bands from 6 to 160M.

I was on the air evenings and morn-



Luis, CT3DL, the president of ARRM and a florist

ings and was amazed by excellent signal reports on different bands from hundreds of stations — even as far away as Japan. It is still possible to create a pile up from CT3, even with a piece of wire. I managed to talk to Cedric CT3FT on 50 MHz and Dietmar, CT3/DL3DXX, on 1.8 MHz, both on the nearby island of Porto Santo. During the day I was cruising along the coast, going down to fishing villages and almost climbing to the snow covered peaks of the mountains. Back in Funchal, while walking in the very center of town, I spotted an HF Yagi antenna that I had not seen before. I





Joao, CT31J, in his kitchen radio shack.

consulted a current listing of licenced amateurs that I had obtained from the ARRM, easily identified the owner of this antenna and rang the bell. Joao gladly showed me around — the roof and the shack. In the kitchen, his full size radio is placed among onions and bananas. Joao is a relatively new amateur but like most of CT's he had earlier interest in CB. CB is extremely popular in many countries, a fact that many Amateur Radio organizations ignore. But not in Madeira! Classes are organized and help is given to upgrade to a regular Ham license. The local government supports Amateur Radio in many ways — buying 2 meter repeaters, allowing a contest station and the HF beacon to be set up on their grounds and letting the club use the rooms of the their headquarters building free of charge.

A matter of concern for the ARRM is cooperation with the mainland Amateur Radio organization, REP, in Lisbon. One example of the lack of cooperation is the fact that QSL cards are not being forwarded to Madeira.

www.WEB-TRONICS.com

Powerful on-line source for your quality electronic equipment & supplies.

Everything from resistors, capacitors, semiconductor devices & Inductors to computer boards, data acquisition, test equipment, small CCD cameras & much, much, more!

Circuit Specialists, Inc. 800-528-1417/480-464-2485 Since 1971 FAX 480-464-5824 220 S. Country Club Dr., #2 · Mesa, AZ 85210 By the way, I don't collect any QSL cards so if we have the pleasure of a QSO and you need my card, please end a request, direct or via e-mail.

DC ACE ELECTRONICS, INC.

MAHA 204 AA SMART CHARGER-RAPID CHARGES
AA OR AAA NICADS OR NIMH - \$22.00
MAHA 777 UNIVERSAL CHARGER - \$44.95
ACI AT600 IIP DUAL BAND HT - SALE \$249.95
MOBILE WATT/SWR METERS - COVERS 140 TO 500 MHz
150 WATT SCALE - \$ALE \$25.00 EA.

STANDARD/ADI 12V 600 MAH - \$29 12V 1AH NIMH - \$39

FOR ICOM-NIMH
BP-7 13.2V 1AH - \$45
BP-8 8 4V 1.8AH - \$45
BP-83 1.2AH 7.2V - \$35
BP-84 1AH 7.2V - \$29
BP-173 NIMH - \$45

PB-34 1AH 9.6V - \$39 PB-33 1.1AH - \$35 PB-32 1AH - \$29.95 YAESU-NIMH FNB-27 12V 1AH - \$45 FNB-41 1AH - \$39.95 FNBV47 1.8AH - \$49.95 FNB-38 650MAH - \$39.95 VX1R NIMH - \$25

NICADS-BUTTON TOPS

KENWOOD-NIMH

INSERTS-ICOM
BP-7 600MAH - \$25
BP-8 1400MAH - \$25
BP-5 600MAH - \$21
BP-3 270MAH - \$14

INSERTS-YAESU FNB-10 600MAH - \$15 FNB-14 1AH - \$24 FNB-17 600MAH - \$17 FNB-4 600MAH - \$25 FNB 2 600MAH - \$22 FNB-2 NIMH 900MA - \$29

> INSERTS-TEMPO S1-5 600MAH - \$23

INSERTS-BEARCAT 100/200 600MAH - \$15

INSERTS-KENWOOD 240)-W/CON - \$24.95 25/2600 600MAH - \$22 PE-6 600MAH - \$15 700MAH AA - \$1
850 AA MAH - \$1.25
1300MAH NIMH AA
BT (NEXCELL) - \$2.50
TABBED NIMH AA
\$2.50 EA
AAA 550 NIMH \$2.50
D-4.4AH - \$5.95
1200MAH SUB-C - \$2.50
1800MAH SUB-C - \$3.50
1800MAH SUB-C - \$3.75
ANTENNAS-DUAL BAND
D-9 SMA 6' DUCK - \$19.95

ANTENNAS-DUAL BAND RD-9 SMA 6' DUCK - \$19.95 RD-98 SMA 12' GAIN - \$25 2M 5/8 BNC DUCK - \$9.95 DUAL BAND 12' GAIN - \$12.95 1/4 WAVE 2M MAG MOUNT 1/4 WAVE DUAL BAND MAG \$12.95 EA.

5 ELE 2M BEAM ANTENNA MASPRO-6.8 DB GAIN - \$49

DC ACE, INC.

P.O. BOX 364 • LINCOLNSHIRE, IL 60069 PH: (847) 821-8122 - VISA/MC ADD \$6 SHIP/HANDLING PER ORDER - FREE CATALOGI WWW.DCACE.COM • E-MAIL: SALES@DCACE.COM



11-oz. cobalt blue ceramic mug, logo in light blue.

High Status Item

A fellow amateur comes to your home. Being a gracious host, you make the coffee. Subtley, you make sure your friend's coffee is in the Worldradio mug. He looks at the mug and knows.

Some try to make a point with a Ferrari, a Masserati or a chauffered Rolls-Royce. A yacht on the Riviera says something, but having a Worldradio mug says even more!

Only \$7 for a work of art that speaks volumes about you. Add \$4 for the Post Office. Also, amateurs fortunate enought to reside in California will gladly pay 54¢ additional for the privilege.

Address your order to the international headquarters of

Worldradio

2120 28th St. Sacramento, CA 95818

Checks, Visa, MC, Amex are appropriate methods of exchange. Those of you who wish to save 33¢ to invest in extensive stockportfolios, contact "n6wr@ns.net" kindly, usual transaction data.

What goes around comes around

Bill Wach, KF2JK

'm sure we all have some part of our hobby past that we look back on in fond memory of those days as a kid discovering the wonders of this great hobby. I remember my first kit; it was an S-38 that I saved up for. I'm sorry to say it never worked even after many attempts to locate the problem, I never knew if my father was disappointed in me or felt sorry that I didn't have a radio.

One day the S-38 was gone and when dad got home he had a box I thought it might be a repaired S-38. To my surprise it was a brand-new short-wave receiver. I guess-he knew how much I liked the hobby and wanted me to continue my interest in not only SWL but also electronics. Maybe he saw it as the future.

I would spend hours listening to broadcast stations from all over the world, but the thing that got me were those funny sounds on certain parts of the dial. I found out later it was the Amateur Radio bands and I just had to learn more about those sounds — Morse code. My antenna was a long wire running from my bedroom window to the roof of my grandfather's tool shed in back of us, favoring east and west.

One day my dad was meeting with an old navy buddy and asked me to come along. I knew him as Sammy. We met him for lunch and they talked about the war, WWII. He asked me what I was interested in and both my father and I replied, short wave radio. His eyes lit up and he said," do you know the code?" I said no but I would like to, he reached for a pencil and began to write the code on a napkin, I found out later from dad that Sammy was a radio operator in the navy.

2 Meter J Antenna By Don Johnson, WA6ISC \$39.95 + \$7.50 S/H

14656 Sontag Road • Grass Valley, CA 95945 (530) 273-1415 • E-mail: wa6isc@telis.org 6 meter version available As the years went by I knew the code well and got my novice ticket and upgraded from there, my family grew and my career got better, but I never lost my love for the hobby. I built lots of kits along the way and THEY ALL

"In the corner next to one of the tube sockets were the letters BW — my initials!"

WORKED. My first was an HW16 and a VFO to match, then as a General Class operator I built an HW101 — I wish I still had that rig. Now I have a new Kenwood and by its side are a pair of Drake twins along with an FT101.

I still like the old stuff and I am always looking for the ones I couldn't afford back in those early day as a dreamer. One day I was putting up a new antenna and needed new coax. I visited the local communications store

for the item needed. As I walked in and said hello to the owner, I turned to where I knew the spools of coax were and saw two shelves of classic receivers and one of them was an S-38. Wow, did that bring back memories! I asked the owner how much he wanted for it. Although it looked a little rough I thought the price wasn't bad, so I not only walked out of there with my coax, but with a classic from the past. I put the antenna project on hold so I could play with the 38 for a while, I had quite a tube collection and wanted to see if I had any of the ones that made this old rig come to life. Although it was in working order I wanted to know what tubes were used. I removed the top cover and looked around spotting some of the ones I knew I had and then I saw it - I couldn't believe my eyes! In the corner next to one of the tube sockets were the letters BW - my initials! I scratched them in after I built my own S-38 radio way back then — could this be? Is this my first kit? I called the store and asked the owner where he got the radio, but he couldn't remember, all he told me was that he had it for some time and when it came in it didn't work.



Everything adds up: Kenwood's new FM Tribander (144/220/440MHz) offers dual-channel RX capability and prime performance in a superbly compact design.

- Receives 2 frequencies simultaneously

- Receives 2 frequencies simultaneously even on the same band
 0.1~1300MHz high-frequency range RX (B band)
 FM/FM-W/FM-N/AM plus SSE/CW receive
 Bar antenna for receiving AM broadcasts
 Special weather channel RX mode
 435 memory channels, multiple scan functions
 7.4V 1550mAh lithium-ion battery (std.) for high output² and extended operation
 16-key pad plus multi-scroll key for easy operation
 Built-in charging circuitry for battery recharge while the unit operates from a DC supply
 Tough construction: meets MIL-STD 810 C/D/E standards for resistance to vibration, shock
- standards for resistance to vibration, shock humidity and light rain

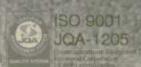
 •Large frequency display for single-band use
 •Automatic simplex checker
 •Wireless remote control function

- Battery indicator Internal VOX MCP software

¹Note that certain frequencies are unavailable. ²5W output



3975 Johns Creek Court, Suwanee, GA 30024 P.O. Box 22745, Long Beach, OA 90801-5745, U.S.A. COMMUNICATIONS CORPORATION Customer Support: (310) 639-5300 Fax: (310) 537-8235



KENWOOD

World Radio History

Silent Keys

Norman J. Foot, WA9HUV

Amateur Radio pioneer Norman J. Foot, WA9HUV, died 5 June in Elmhurst, Illinois. He was an Electrical Engineer, and started his career in radio with the E.F. Johnson Company in the mid 1930s. In 1942, Mr. Foot moved his family to Chicago and went to work for Bill Halligen, the founder of Hallicrafters. Norm co-wrote many, many articles with Mr. Halligen, such as "A New Tuning System for the Amateur Receiver" — still referenced in many recent histories of the Hallicrafters Corporation.

During WWII, Hallicrafters was associated with the Northrup Corporation. Norm continued on as Engineering Manager helping to design many of the military microwave defense systems as well as early radar systems. During this time he was sequestered at the Massachusetts Institute of Technology working on projects from radar to portable transmitters including the SCR-299 mobile station.

After the war ended, Mr. Foot continued to work in defense-related fields. Among his many projects was

an electronic counter-measures system designed to make the SR-71 spy plane invisible to enemy radar.

His work kept him away from home for weeks at a time, including some work done at "Area 51" — the not-so-secret installation in Nevada. He retired in 1980 and started Footronics — his own RF and microwave consulting firm. He continued to write articles for the Amateur Radio community and helped firms develop products that used RF. — WD9ABG, W6CUB, Chicago Tribune

Arnold C. Perry, KL7BT

A communicator in both his hobby and in his professional life, Arnold "A.C." Perry died 16 March in Wasilla, Alaska.

He served in the Civilian Conservation Corps during the Great Depression days, then went into the Army Air Corps as a ground radio man, transferring in 1941 to the Alaskan Communications System, (ACS). He later joined the Army Airways Communications System (AACS) serving until 1948 when he retired with the rank of staff sergeant.

"A.C." held various positions with several government agencies that took him to many isolated posts — from Death Valley, California, to the far north in Alaska and Greenland. He was an "Elmer" to many Hams and as an avid amateur his collection of electronic equipment literally filled his basement. "A.C." was eager to try any equipment that provided better communications than he had. — W6QEU

Chet Atkins, W4CGP

Chet Atkins, W4CGP, whose guitar style influenced several generations of country and rock musicians died 30 June at his home in Nashville Tennessee after a long battle with cancer.

He was born Chester Burton Atkins on 20 June 1924, on a farm in Luttrell, Tennessee, some twenty miles northeast of Knoxville. While his brother urged him to learn to play the fiddle, Chet took a fondness to the guitar early on. According to his internet biography, at the age of nine, he traded a pistol for a guitar.

During his long and illustrious career, Chet Atkins recorded more than 75 albums of guitar instrumentals and sold more than 75 million records. He played on hundreds of hit recordings including Elvis Presley's "Heartbreak Hotel" and the Everly Brothers "Wake Up Little Susie." But it was not until 1988 when the ARRL released its promotional video "The New World of Amateur Radio" that most of Ham radio learned that the world's greatest guitar picker was also one of them.

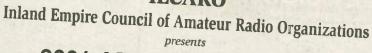
Newsline

Vera M. Tallman, K4ICA

Vera Mayree Tallman, K4ICA, of Mt Pleasant, Tennessee, died 19 June 2001. She was founder and past president of YL International SSBers (http://www.qsl.net/yl-issb/). She also was a nurse and one of the first airline stewardesses for American Airlines in Little Rock, Arkansas. A service was held 23 June in Mt. Pleasant.

— KS4TD, The Daily Herald, ARRL

IECARO



2001 ARRL Southwestern Division Convention

Riverside, California Convention Center & Holiday Inn September 7-9, 2001

For additional information visit our web site: http://www.qsl.net/arrl-2001swdc/

IECARO was started in 1996. It includes Riverside, San Bernardino, and Inyo Counties. It is comprised of approximately 15 Amateur Radio Clubs. As an ARRL Affiliated Council, IECARO periodically sponsors the annual ARRL Southwestern Division Convention, sharing this task with other councils in the Southwestern Division. Member Organizations collectively join together as Partners and share in the labors of holding the convention. IECARO's first convention was held in Riverside in September 1997 with the next scheduled for September 2001.

Special Events

ARRL Southwestern Convention

ARRL Southwestern Division Convention will be on the air as special event station W1AW/6 from 1900UTC 7 Sep. to 1900UTC 9 Sep. (24 hour operation may be possible, as long as there's contacts to be made!). Suggested frequencies are: 3.530, 7.030, 14.030, 21.030 and 28.030 MHz CW - 3.860, 7.250, 14.250, 21.350 and 28.450 MHz SSB. Local contacts can be made on 146.52 MHz FM. There will be three stations on the air, with SSB, CW and a little PSK31 and SSTV. All Hams attending the convention are welcome to be a guest

OSL cards are available by sending a #6 SASE to Fred Roberts, W6TKV, 5464 Peacock Lane, Riverside, CA 92505. DX OSLs will be sent via the OSL Buro. For more info: Fred Roberts, W6TKV, phone: 909/687-8145; e-mail: w6tkv@arrl.net or web page: www.pe.net/~froberts/page7.html.

Bicycle Tour

Members of the Tualatin Valley ARC will by joined by other Amateur Radio operators in providing communications assistance for Cycle Oregon 2001, 8 - 15 Sep. for Oregon's desert region around Steens Mountain. The club will be operating special event station W7OTV from a focus location each day (Sep. 8 eve. only, 15 Sep. morning only.) Time of operation will be 6 - 8 a.m. and 6 - 8 p.m. each evening. Suggested frequencies are 7.290, 14.290 and 28.490 MHz. Hams making contact will receive a special award marking their achievement. Send QSL cards to P.O. Box 5132, Aloha, OR 97006-0132.

Railroad Museum

The Starke County ARC will operate special event station W9JOZ from the depot operator bay at the Hoosier Valley Railroad Museum, north Judson, Indiana 9 a.m. - 5 p.m. 8 Sept. Those attending the event will be treated to free train and motorcar rides. Suggested frequencies are: 7.240, 7.190 and 14.290. Send QSL's to: W9JOZ, 405 W. Jackson St., Knox, IN 46534.

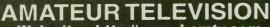
Silver Iubilee

The Lakeland ARC, K4LKL, will

operate a special event station to celebrate the 25th anniversary of the club from 0000Z 15 Sep. to 2359Z 16 Sep. Suggested frequencies are: 7.240, 14.250, 21.365 and 28.380 MHz SSB - 7.030, 14.050, 21.050 and 28.050 MHz CW. For a special certificate, send your OSL and an SASE to Lakeland ARC, P.O. Box 792, Eaton Park, FL

University of Texas,

Celebrating 80 years of Amateur Radio at the University of Texas at Austin, the UT ARC will operate K5T from 29 Sep - 7 Oct. The operation will take place from the on-campus club station and will be a multi-operator station. The club will be on all bands-160 meters to 70 and 23 cm. They'll bu using SSB and CW on the HF and VHF/UHF weak signal bands and will also operate RTTT and PSK31. A special K5T QSL card will be abailable. For more info, including the QSL route, see: http://n5xu.ae.utexas.edu/ 80years/.



Web site: http://www.hamtv.com

Transmit Live Action Color Video & Audio TC70-20 20 watt pep 70cm

ATV Transceiver



PLUG-IN & PLAY ATV Only \$529

Includes 1 TX crystal & UPS surface shipping in contiguous USA. Can be shipped within 24 hrs of your call using Visa or MC. Opt. 2nd TX crystal add \$20. Specify: 439.25 (cable ch60), 434.0. 427.25 or 426.25 MHz.

DX is over 100 miles line of sight using 14 dBd gain beams at both ends. It's easy to get on with this Transceiver. Just plug in your camcorder or camera, TV set, mic, antenna and 13.8Vdc @5A power supply - that's it! Full motion color and sound just like broadcast TV, no other black boxes or computers are necessary. Any Tech class can get on ATV. Show the shack, family, projects, home video tapes, computer programs, radio club meetings, do public service events - RACES, etc. Hams, call or email for our 10 page ATV catalogue or down load from our web site. We have it all for the 420 MHz to 10.4 gHz ham bands: ATV transmitters - AM and FM, downconverters starting at \$49, receivers, modules, antennas, etc., for base, repeaters, portable, R/C, rockets, balloons and more.

CALL (626) 447-4565 M Th 8AM 5:30 PM PS P. C. ELECTRONICS Since 1965 2522-Q Paxson Lane Arcadia CA 91007

Web: www.hamtv.com

VISA 24hr FAX: (626) 447-0489 Tom (W6ORG) & Mary Ann (WB6YSS

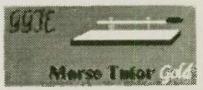
PEATIVE

LEARN MORSE CODE

the fastest way possible as over 25,000 others have since 1987. Morse Tutor Gold is fun and it can use your Sound Blaster compatible sound card (not required).

FEATURES

* Structured lessons * Text import * Character, word, conversation drills * create character drills * Farnsworth and Standard modes * Exam drills includes all characters * Adjustable tone frequency, volume (with sound card), and code speed (0.1 to 100 WPM) * Keyboard entry *



For all DOS computers. At dealers, the ARRL, or send \$29,95 + \$4 S&H (CA residents add 7.5% tax) to: GGTE • 23801 Cassandra Bay • Dana Point, CA 92629 Visit us at http://www.ggte.com

G.G.T.E.

Sound Blaster, the Sound Blaster Logo and the Sound Blaster Compatibility Logo are trademarks of Creative Technology Ltd

31 on 31 Award

ooking for the newest award you can earn in Amateur Radio? Have we got an award for you!

Worldradio is now offering the new "31 on 31 Award" to our readers. How do you earn this new, highly coveted and prestigious award? Work 31 countries on PSK31! It's easy!

Of course, there are rules.

1. The 31 countries must be soverign nations. No teeny little possessions of another country.

2. The countries contacted must be on *Worldradio's* list of nations. No, you can't send in a list of DXCC countries. There are some similar countries, but believe us, our list is different than the League's list.



80 THRU 10 METERS WITH A TUNER

* GREAT FOR R.V. PARKS, *
CAMPGROUNDS, FIELD DAY,
BASE STATION OR PORTABLE
* DESIGNED TO WORK WITH *
AUTO-TUNERS, BUILT-IN TUNERS
AND MANUAL TUNERS

* 18 FT. - 3 PC. *
FIBERGLASS SCREW
TOGETHER, NO GROUND
PLANE RADIALS REQUIRED

* INSTALL IT ON *
YOUR CHIMNEY,
TOWER OR FENCE POST

* WEIGHT 7 LBS. *

\$124.99 (TUNER NOT INCLUDED)

ANTTRON ANTENNA COMPANY P.O. BOX 2744 YOUNGSTOWN, OH. 44507 1-800-837-5516

E-MAIL ANTTRON@JUNO.COM
WEB - HTTP://ANTTRON.TRIPOD.COM
CALL FOR CATALOG AND DEALER
LIST

This is not to the country of country and to be the country of the country of country and the country of the co

3. Send us a list of your contacts, by call sign, date and time, and band. If you want to send some commentary along, we just might put it in the magazine. We trust our esteemed readers, so we aren't asking for verification from other

amateurs, your letter carrier, the local CIA office or the IRS. Just send your list. That's it! We don't even want your hard-to-get QSL cards.

4. Enclose \$3.10 and we'll send you a nice 8x11 unfolded certificate suitable

for framing.

5. Send your funds and list to: Worldradio, 2120 28th St. Sacramento, CA 95818. Attention: 31 on 31. (If you want to send in more than the \$3.10, we'll have lunch on you!)

Need a list of the nations? Send your request along with an SASE with 55 cents postage, and we'll send the list—and a handy log sheet for you to keep track of your contacts.

Contact All Time Zones

n commemoration of *Worldradio's* 25th Anniversary in 1996, we first offered the "Contact All Time Zones" (CATZ) award.

· Rules

The start date for valid contacts is 01 July 1996 at 0000Z.

The world is divided into 24 time zones. Each time zone is 15 degrees wide. For the sake of this award, half-hourly zones and out-of-zone artificial time changes will be ignored.

This award is based on the true 15 degrees each, world map 24 time zones.

The applying station must have one (two-way) contact on Amateur Radio allocated frequencies with a station in each of the world's 24 time zones. Contact with one's own nation does not count.

The operator applying for the award must have made all 24 contacts from a location within the same country.

The award may be endorsed as the

applicant wishes in regard to band and/or modes.

Application

The applying radio operator must be in possession of 24 QSL cards, one from each of the time zones.

A list shall be made showing each contact's call sign, date, band, mode and the time zone starting with the prime meridian (0°) and moving eastward.

There is a fee of \$5 to cover the cost and mailing of the 8 x 10 certificate (mailed unfolded).

It is not necessary to mail your QSL cards to *Worldradio*. Send a statement signed by two other licensed radio amateurs (General Class or above) that they have inspected and verified the required QSL cards.

Address applications to CATZ Award, Worldradio, 2120 28th St.,

Sacramento, CA 95818.

Recipients of the CATZ award will be announced in the *Worldradio* DX column.

Seek, Find, Buy, Sell, All, Here. HamRadioMarket.com

Ham Radio Market is an Amateur Radio public service feature provided by the Wireless Industry Association, Houston, TX. 800 624-6918



Carries your mobile radio anywhere. Qualifies as carry-on luggage. Padded waterproof case, lower compartment for power supply. Call us 24/7

800-206-0115 ww.powerportstore.com

CUTTING EDGE ENT. 620 Highland Ave. Santa Cruz, CA 95060

REFLECTIONS

by Walt Maxwell, W2DU,

IS BACK (as REFLECTIONS II) AND

Worldradio has it!

The all-time great classic has returned! Greatly revised with additional chapters, this is THE best reference for the Ham on SWR, antennas and tuners. Softcover, 8.5" x ll", 416 pp., many figures, charts and photographs!

Only \$19.95 + \$4.00 s/h.

(California residents please add \$1.50 tax)

Visa/MasterCard/American Express accepted. Please include your name (as it is on the credit card), address, card number and the expiration date, and send to

WORLDRADIO BOOKS

2120 28th St., Sacramento, CA 95818

(916)457-3655 • Fax (916)457-7339

n6wr@ns.net • http://www.wr6wr.com

Letters to the Editor

New Hams ...

Your editorial comments in the Letters to the Editor in the June issue prompted this reply. This is the first time I have ever submitted a comment to an Amateur Radio publication, but your comments struck home.

Let me begin by stating that I am a fairly new Ham. I was first licensed in 1989, and received my Extra Class license in 1990. No, I didn't have to build a spark radio for the FCC to get my license. I just took a multiple choice test (and a 20 wpm code test)

I have read the letters from the Hams who feel that we have relegated Amateur Radio to the CB level by lowering the code requirements, and the death of Ham radio cannot be far behind. In your response to the Letter to the Editor, you drove home some important points.

At our radio club meetings, we do a miserable job of welcoming new Hams. It is easier to condemn new amateurs than to welcome them into the fold. I am sick and tired of hearing the comments about no code Hams, and using that as a justification for ignoring them.

There is only one way to bring the new members of the Amateur Radio fraternity up to the level of competence that many of the senior members of the fraternity deem desirable. That involves close contact with those newer members. I realize it is easy to sit back and complain about the lack of competence among many newer Hams, but it may be necessary to ask yourself "what have I done to improve the situation?"

As I noted earlier, I am a comparatively new amateur. However, I have discovered that one of the true joys of Amateur Radio is teaching Novice and Technician classes. I have been fortunate enough to have many younger people in my classes (ages 7 - 13). I always explain to the younger members of my classes that they are to police the instructor: If I use any terms that they don't understand they are to speak up, because adults are reluctant to admit what they don't know. If you

XMATCH® Antenna Tuners or info send \$3 to: 7001 Briscoe In. • Louisville, KY 40228 HIGH POWER & HIGH EFFICIENCY

Patented & Custom Built by Paul, N4XM Vacuum Variable Models Available See http://c-space.net/xmatch/

think that you know all there is to know about Amateur Radio, try teaching a class It's an excellent lesson in humility! More than once I have had to say "I don't know, but will have an answer for you

Of course, when you teach classes, you involuntarily become an Elmer. I have spent many an hour helping erect antennas and set up stations. I have also spent many a rewarding hour (at my shack or theirs) helping many new Hams with their first contact (particularly on CW). Incidentally, over 50% of the graduates of my classes have gone on to get their Extra Class licenses. Why is that? Because they were shown that CW can be fun! Of course, some of the graduates are still Technicians; but they are still good Hams. Younger students love CW it's a secret code that most adults don't understand!

So, my point is this: If you don't like the changes taking place in Amateur Radio today, don't sit back and gripe about it. If you really want to change things, get off your duff and get involved. Spend the time that you are currently spending writing that letter to the editor deploring the current state of hamdom on working with younger Hams and you will not only find that you are enjoying yourself, but you are contributing to the growth of our great hobby.

Jess Young, W8JY (via e-mail)



P.O. Box 579 • 101-D Railroad Street Knightdale, NC 27545 USA Ameritron Amplifier Sales & Service 40 years experience. Service manager with former amplifier manufacturer. Repairs to

Amp Supply, Dentron, Heath, Drake, etc. Sales: Toll Free 1-888-789-7373 Service: 1-919-266-7373

Fax: 1-919-250-0073 Email: omeganc@bellsouth.net WebSite: omega-electronics.com

Still more on attitudes...

I am writing in response to the letter by William E. Caldwell, WA8ABE in the July 2001 issue. I get the impression that this is one unhappy character. In his letter he states that VE's all get paid. Nothing could be further from the truth. True, some instances of VE's selling licenses have been uncovered in the recent past but, to state that all of us are getting paid for our trouble is a gross insult to all of the honest VE's who give their time, and risk their licenses to provide a service.

I have been a VE since 1993 and I have never left an exam session with a penny more than I started with. It has been drilled into me the need for honesty and to avoid even the appearance of any

wrongdoing.

It seems that there are quite a few Hams today who spend less time enjoying a hobby and more time looking for someone to condemn. Many seem to forget that Ham radio is first a hobby and not a job or obligation. If you don't like things as they are then you can leave. In the same issue is a letter from Larry Woody, KC5UVG, who points out how hard it was to find Hams who were willing to help him earn a license. How many of the Hams who write letters complaining about the way radio is today are the same Hams who refuse to help a newcomer learn the hobby? I say if you don't like the way someone is operating on the air you should be willing to help them learn or else you have no right to talk.

We should really be a fraternity of radio fans and learn to respect each other for the different interests we have in the hobby before we manage to fight among ourselves enough to see the spectrum given away to another group or industry who can get along. We all have something in common — we are all Amateur Radio operators who cared enough to study and earn our licenses. Why can't we act like that when we interact? The license structure has changed once again. This isn't the first time and I doubt it will be last. CW may pass as a license requirement but I can't see it disappearing from the bands.

I hope Mr. Caldwell and others like him can find some pleasure in Ham radio and find it with in themselves to share some of their many years of experience with those of us who are younger and

haven't seen what they have. Put away the anger and share the knowledge they possess before it's too late and they are all gone. This hobby has been around for the better part of 100 years and much of that history has already been lost. Lets not lose the rest by fighting and falling into petty little groups of us vs. them. I am proud to be a Ham and this kind of thing will not put me out of the hobby I worked hard to enter!

Don Cripe, KE3MM (via e-mail)

This is in reply to Mr. Willam E. Caldwell, Sr., WA8ABE, Letter to the Editor in *Worldradio*, July 2001. Mr. Caldwell has made some statements which are not substantiated by fact. "We have been spoiling the new Hams for much too long, in the name of new amateurs" etc.

A number of years ago, as one of several instructors in Ham radio classes, I can vouch that no special treatment took place. Facts were taught. Tests were impartially administered and graded accordingly. Both instructors and students actually enjoyed the experience. Incidentally, many of the students who came from the CB ranks are now damn good Hams. "Good" not because I say so, but because many went on to participate in public service activities and some stepped in to aid incoming students.

WASABE ignores what in my judgment is the prime reason for enlarging our Ham ranks. Today, there is a crying need from practically all communication services for more radio spectrum. Eyes have been cast on the Ham bands. We need much new blood with the concomitant result of more Hams available for public service. This is turn, will continue to justify our use of this valuable radio spectrum. I hasten to add more does not imply a diminution of the quality of those new Hams entering our ranks.

Mr. Caldwell, the volunteers who man the various radio classes around the country are just that — volunteers! No pay, period. A single question would have given you the answer instead of dogmatically stating "all VEC examiners get paid for their trouble."

The ARRL represents its membership before the FCC, congressional members and a host of entities. No one "grovels" when the League does this. Factual accounts from those in attendance as well as minutes of the meetings suggest a

mutual exchange of information.

Mr. Caldwell and I can agree on one thing, however, we enjoy QST!

Mr. Larry Wood, KC5ŪVG, in his letter to the editor of *Worldradio*, July 2001, concludes with these five words... "who have you helped lately?" Beautiful words to live by in this day and age of modern Ham communications.

Charles E. Ziegler, W8RV Columbus, OH

1.52 - do you?...

The article by J.D. Harper (K6KSR), "I .52-do you?" is great advice for the FM crowd. Instead of hanging out with the clique groups on the repeaters, more people should try 146.52. You will be amazed at how far you can work without

repeaters

I have been involved with FM on 2 Meters since 1969. Back then, the names Inoue (ICOM), Yaesu, and Kenwood were unheard of in this country. FM rigs bore such names as Progress Line and "pre-Prog" (GE), Motrac (Motorola), and Carfone (RCA), as many of us converted surplus land mobile radios to the amateur band. The original FM calling frequency on 2 Meters was 146.94 Mc (at the time, Hertz was a car rental company). It was used for simplex in some areas and became a repeater output in others. 146.76 was also used for this purpose in some areas, much as 146.55 and 146.58 are today.

There is one error in the article. Unlike the case of CB, where the FCC had designated 27.065 MHz (channel 9) as an emergency channel and 27.085 MHz (channel 11) as a calling channel (no longer reserved), 146.52 MHz was never designated as the 2-meter national calling/simplex frequency by the FCC. 146.52 came into widespread use as a simplex frequency when .76 and .94 began filling up with repeaters. This happened before the ARRL got into the act and began setting up its bandplan for 2 Meters. The designation of 146.52 MHz as the national calling frequency is in the ARRL bandplan, but it does not exist anywhere in Part 97. The FCC did set aside subbands within the 2-meter band for CW (144.0-144.1) and repeaters (144.5-145.5 and 146-148 MHz), but the Commission never designated any spot frequencies for specific purposes.

Phil Galasso, K2PG (via e-mail)

Visit us on the web at: www.wr6wr.com

000000000000

Please send the following friends a free sample copy of *Worldradio*.

Name	
Address	
City	
State	Zip
Name	
Address	
City	Property
State	Zip
Name	1
Address	
City	
	Zip
Name	
Address	
City	
State	Zip
Name	
	_ Zip
Name	
Address	
	Zip
	Was River
Name	
Address	
City	
	Zip

Mail to: Worldradio Send-a-Friend P.O. Box 189490 Sacramento, CA 95818

0000000000000



Know Your Zulu

24-hour Navigator™ Watch by haverhills with linked metal band only \$4995*+ \$200 S&H

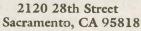
Wear this watch to work, to play, to swim and dive. The Navigator Watch is steered by a sophisticated Japanese quartz movement that is powered by a tiny silver-oxide cell. The battery should last at least 18 months before you need to replace it.

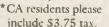
The Navigator has both luminous analog dial and LCD display. It gives you dual time capability. The LCD display shows time continually - in 12hour or 24-hour mode. Push the button and you display day and date. There is a subtle vet insistent alarm and a switchable hourly time signal. The stopwatch/chronograph reads to 1/100 secs and has "interrupt" and "lap" mode. A light switch illuminates the display. The Navigator Watch is available in silvertone (stainless steel execution, with linked, sivertone metal band). The Navigator is water resistant to 150ft. The crystal is "mineral glass" - it is virtually scratch-proof.

For fastest service, order with credit card 916/457-3655 or by fax 916/457-7339. If you prefer check or money order, write to us at



Worldradio







Station Appearance

Send Worldradio a picture of your shack and the staff will choose a winner to receive a free one-year subscription to Worldradio! Stations will be judged by neatness (wires tucked away, etc.) and accessibility of equipment. Monetary value of equipment is not a consideration.



Al Schwartz, W7LAH

was first licensed in the mid-1940's and have been licensed for a total of 54 years. I work all bands from 80 through 2 Meters with the exception of 6 Meters.

On a whim one day, I built a homemade rack system to house the hodgepodge collection of Amateur Radio gear. On the left is a RadioShack HTX-212 2-meter transceiver, power supplies and SWR Bridge along with a speaker and power supply/voltmeter.

In the center rack in an Icom 737 HF transceiver, home-made antenna switch, RF amp meter, speaker, rotator control for the beam antenna and an AC line voltage meter.

On the right rack is a RadioShack scanner, SWR/watt meter, clock and speaker.

The desk is your typical government surplus type gray metal desk. It's nothing fancy, but it does the job for me. The station may not be as fancy as some of the others I've seen, but I wanted to keep it basic, but still functional and roomy enough for some additional gear when the time comes.



And licensed now?

Then you should belong to the

Quarter Century Wireless Association

For information write: 159 E. 16th Ave., Dept R Eugene, OR 97401-4017 http://www.qcwa.org Electronic Battery Booster

Converts 12volt battery to a Regulated, 13.5Volt Power supply at 11Volts input! For Field Day, Sailboats, Solar! Two models, 23A or 30A

e-mail w4rry@fastq.com www.fastq.com/~w4rry/index.html Send check for \$94, 23A or \$124, 30A unit to Leo Lehner, 5811 E. Crocus Dr, Scottsdale AZ 85254 30 Day unconditionally guaranteed

W-100-N

nly one application for Worked 100 Nations was processed in June and was issued to a DX station:

604. Chartchai Varavisuthsarakul **HS1NGR**

CATZ

In honor of the resident Worldradio cats we have two applications for that award, aka Contact All Time Zones:

44. Edward P. Madison W2SN 45. Samuel D.L. Moore, II K7SAM

When applying for the above award it would be appreciated that locations of the stations listed be included. Many nations include more than one time zone and this eliminates me having to guess where they are.

Maldive Islands (8Q)

Bernie McClenny, W3UR, in his The Daily DX, reports that Pierre Pasteur, HB9QQ, will be back in the Maldive Islands (AS-013) the last week of October and the first week of November signing with 8Q7QQ from Gan Island, approximately 250 kilometers south of the equator.

Activity is mostly planned for 6 Meters with a 4 element wide spaced yagi and an Icom IC-746 with 100 watts. When 6 Meters is closed look for him on 10, 12, 17 and 30 Meters CW. Also check 28.885 MHz.

Bhutan (A5)

The Daily DX reports that Yeshey Dorji, A51AA, will have a group of American amateurs and others visiting him in Bhutan this October.

Madagascar (5R)

425 DX News notes that Jack Mainguy, F6BUM, will be in Madagascar (AF-013) between 2 and 27 September. He may also operate from IOTA islands (AF-090) 3 to 7 September, and (AF-057) 23 to 26 September. His preference is CW.

And, according to The Daily DX, Albert, 5R8O, is now 5R8GŽ. His 5R8O was a special call issued by the Malagasy Authority Transmission

because the station was being operated from Antananarivo Gendarmerie County. Albert can typically be found operating CW on 10, 15 and 20 Meters.

Chesterfield Islands (FK)

The September planned DX pedition to the Chesterfield Islands by Bill Horner, VK4FW, and the ODXG has been postponed and/or canceled. This DXpedition had been scheduled for September and was canceled due to the lack of operators committed to making the trip.

Somalia (T5)

The Ohio/Penn DX Bulletin says that Bruce Richards, WD4NGB, has been issued the call T5DX by the new Transit onal Government that was put into office last year. His license is valid for one year beginning with 1 July 2001. We don't know when Bruce will go there.

In June Baldur Drobnica, DJ6SI, and Tom Lind, DL1QW, were active from this one signing with T5X and T5W and collected some 14,000 contacts between the two of them. QSL requests should be sent via their home calls.

Ducie Island (VP6)

The Daily DX reports that the Pitcairn Island Amateur Radio Association announces that it will undertake an IOTA DXpedition to Ducie Island (OC-182), with operations to begin at 0000 UTC on 16 November 2001. This operation will utilize three sta-

QSL DESIGNER for Windows 95, 98. NT. Design, Print or E-mail your QSL Card. Save up to 20 card styles with graphics.

HAM LOG-BOOK PROGRAM for Windows 95, 98, NT. Multiple log books, search, sort, print QSL cards and labels.

Download and register selected program for only \$10, or get single program CD \$21, dual program CD \$31. For details visit web: http://www.n3jl.com

Communication Products Ltd. P.O. Box 2980 Montgomery Village, MD 20886-2980 E-mail: joe@n3jl.com

Visit us on the web at: www.wr6wr.com

tions operating around the clock, with emphasis on providing contacts to as many different individual stations as possible.

The leader of the DXpedition is well known operator Tom Christian, VP6TC, president of PIARA. Other DXpedition members include Dave Brown, VP6DB: Kan Mizoguchi, JA1BK/VP6BK; Hiroyoshi Tamama, JA1SLS/VP6BB; Jin Fujiwara, JF1IST; and three other operators to be named later. This international DXpedition will be attempting to provide worldwide coverage for this rare island. Satellite log checking is planned by the team.

The Pitcairn Island Amateur Radio Association has filed an application for membership in the IARU. This application has been approved by Region III, and the application has been forwarded to the full membership of the IARU for final approval.

Support for this DX pedition is being provided by Yaesu (Vertex Standard), Create Design, and Suzuki Motors.

The QSL Manager will be Garth Hamilton, VE3HO, and the Pilot station will be Dr. Bill Avery, K6GNX.

North Cook Islands (ZK1/N)

Don't forget that DXpedition to the North Cook Islands headed by Victor Rivera, ZK1CG, in October, (see July DX World). According to The Daily DX, the multi-national group will also include the South Cook Islands in their tour, from mid-October through mid-November. Their first stop will be Manihiki Island (OC-014), in the North Cook Islands between 18 October and 1 November, where they will also participate in CQ Worldwide DX Contest as ZK1CG.

The next stop is on to the South

MULTI-BAND SLOPERS

SUO EN ARME DE CELLENT WAY OF OBTAINING 190 BU SET DE IN A VERY
LLISME SIMP SLOPERS CAN BE TOWER FEED CREGNOURD FED IN OUT OF THE LIST A COUNTY OF THE LAND AS A STORE AND A TOWER WHICH LEAST A WEIGHT STORE AND A TOWER WHICH A LEAST A WEIGHT STORE FELL FOR THE FELL OF THE LAND A SET OF THE PROPERTY OF

BOX 393, MT. PROSPECT, IL 60056

WORLDRADIO, September 2001 31

Cook Islands where they will operate from Rarotonga Island (OC-013), in the South Cook Islands between 1 and 13 November. Activity is expected on 2 through 160 Meters (excluding 30 Meters) on CW and SSB.

The team operators will include: Ralph Parker, VE7XF; John Haworth, AA7PM; Bob Preston, W7TSQ; Roger Huntley, W7VV; Tuatai Tupou, ZK1MA; and Victor, ZK1CG. It is interesting to note that Tuatai is licensed as ZK1MA on Manihiki Island and I wonder if they will use that call outside the contest.

The team is asking for financial assistance. Contributions may be sent to Roger at 13710 235th Street, Snohomish, WA 98296, USA. Donations of \$20 will receive a sand sample from Manihiki North Cooks. Donations of \$100 or more receive a Manihiki Pearl Shell to mount on your wall or desk or use as an ashtray. Donations of \$500 or more receive a Black Pearl from Manihiki Lagoon and a Pearl shell and a Sand sample.

IOTA

Roger Balister, G3KMA, RSGB IOTA Manager, reports on the following acceptable IOTA island groups as of 1 June 2001:

AS-096 VU3DMP St Mary's Island (May 2001) AS-096 VU2GPH St Mary's Island (May 2001) St Mary's Island (May 2001) AS-096 VU2JIX AS-096 VU2JRO St Mary's Island (May 2001) AS-096 VU2MTT St Mary's Island (May 2001) AS-096 VU2NIN St Mary's Island (May 2001) AS-096 VU2PAI St Mary's Island (May 2001) AS-096 VU2RDJ St Mary's Island (May 2001) AS-096 VU2RDQ St Mary's Island (May 2001) AS-096 VU2SBJ St Mary's Island (May 2001) AS-154 TAØ/IT9WDY Giresun Island (April 2001) AS-154 TAØ/IT9YRE Giresun Island (April 2001) EU-065 F6BFH/P Molene Island (May 2001) EU-065 F9IE/P Molene Island (May 2001) OC-129 UT2VU/DU7 Cebu Island (April 2001) OC-221 YE8XM/P Kai Kecil Island (April 2001) OC-224 YE8XM/P Yamdena Island (April/May 2001)

OC-246 YE8XM/P Sermata Island (April 2001) The Southern Cross DX Group is

Repair most ICOM Radios.

Specialize in HF, VHF, UHF, Marine, Radar, Repeater

COMTEK

26611 HWY 3 NW Poulsbo, WA 98370

(360) 779-9730 w7jv@aol.com www.w7jv.com

planning several IOTA DXpeditions in the next few months from the following Chilean islands:

Hornos, CE9C (SA-031) December-January Lennox, CE9L (SA-050) January

Nueva, CE9N (SA-050) January Picton, CE9P (SA-050) January Riesco, CE9R (SA-???) February

Check their website at http:// www.gsl.net/ce9c for further details.

Look for Marcel Dehonin, ON4QM signing with FOØDEH this fall from Pukapuka Island (OC-062), Napuka Island (OC-094) and Hereheretue Island (OC-052).

During the month of June there was a large amount of IOTA activity which is typical of such activity during our warmer months. Some of the calls listed below also included multi-island activity from the same IOTA group. There are such awards as Islands of Scotland Award, which extends beyond IOTA activity where that award accepts credit for individual islands rather than island groups as in IOTA.

AF-019 IG9/I4CIL	Lampedusa Island	01 Jun
AF-083 3V8SM	Djerba Island	08-20 Jun
AF-090 5R8GY	Nosy Boraha Island	01-09 Jun
AN-006 EM1HO	Galindez Island	05-27 Jun
AS-012 JN3FPV/6	Kyushu Coastal Is.	30 Jun
AS-015 9M2/JI1ETU	Penang Island	01-30 Jun
AS-026 HL4HLD	Cheju Island	04-13 Jun
AS-032 JA6CTW	Yaku Island	06-30 Jun
AS-032 JF6WTY	Tanega Island	29-30 Jun
AS-045 HL5FUA	Ullang Island	09 Jun
AS-053 HSØ/IK4MRH	Phuket Island	04-10 Jun
AS-056 JA6GIJ/6	Danjo Islands	09 Jun
AS-056 JA6LCJ/6	Danjo Islands	09-10 Jun
AS-056 JA6GXK	Mejima	03-07 Jun
AS-056 JA6JPS/6	Danjo Islands	09 Jun
AS-083 UAØQMU/Ø	Vilkitsky Island	04-30 Jun
AS-090 HLØZX/2	Soijak Island	27-29 Jun
AS-094 BD7YC	Hainan Island	09 Jun
AS-103 BV9AAC	Penghu Island	06 Jun

THE EASY TO USE **LOGGING SOFTWARE - SINCE 1989** Log-EQF for DOS and 32-bit Win-EQF for Windows

Complete station control for rig, TNC, antenna switch, and rotator.

Complete station control for rig, TNC, antenna switch, and r
 CW keyboard and memory keyer.
 Works with major callsign database CD's and the GOLIST QSL Manager Program (GOLIST starfer database included).
 Award tracking, QSL and address labels, DX cluster spotting, beam headings, and more.
 Log-EQF (DOS) \$49.95 -or- Win-EQF [Windows) \$59.95.
 (\$3 shipping outside U.S.), VISA and MasterCard accepted.
 Secure ordering from our web site.

EOF Software - 547 Sautter Drive - Crescent, PA 15046 Phone/FAX: 724-457-2584 • e-mail: n3eqf@eqf-software.com web site: www.eqf-software.com

	Honebu Canatal I.	01.07
AS-117 JH4TEW/4 AS-147 JI3DST/8	Honshu Coastal Is. Okushiri Island	
AS-147 JISDS 178 AS-159 YMØKI		02-05 Jun
EU-006 EI/G6UW/P	Kefken Island	22-24 Jun
	Aran Islands	19-22 Jun
EU-007 EJ9HQ/P	Blasket Islands	01-03 Jun
EU-007 EJ4GK/P EU-008 MM/DH5JBR/P	Blasket Islands	01-03 Jun 23-29 Jun
EU-008 GMØVIV/P	Inner Hebrides Is.	05-27 Jun
EU-009 GMØHTT	Orkney Islands	08 Jun
EU-010 GMØEEY	Benbecula Island	20-30 Jun
EU-011 M/DL8AAV/P	Isles of Scilly	01-08 Jun
EU-011 G3HTA/P	Isles of Scilly	10-22 Jun
EU-012 GM4LBE	Yell Island	14 Jun
EU-012 MM5PSL	Shetland Islands	01 Jun
EU-012 GMØIFM/P	Unst Island	06 Jun
EU-016 9A/S5ØIPA/P	Kolocep Island	29-30 Jun
EU-016 9A4W	Brac Island	02-20 Jun
EU-016 9A6A	Hvar Island	02-30 Jun
EU-017 ID9S	Stromboli Island	01-03 Jun
EU-017 ID9/I2AE	Salina Island	05-09 Jun
EU-028 IA5/IZ5AXB	Gorgona Island	16-17 Jun
EU-028 IA5/IK2DUV	Giglio Island	01-08 Jun
EU-028 IA5/IK3SWA	Elba Island	04-14 Jun
EU-031 IC8GVV	Isle of Capri	17 Jun
EU-031 IC8AMR	Ischia Island	14 Jun
EU-032 F6KFI/P	Oleron Island	04 Jun
EU-032 F/DJ5MT/P	Oleron Island	12-26 Jun
EU-033 LA6LN	Vesteralen Islands	16 Jun
EU-036 LA8LA	Hitra Island	23-25 Jun
EU-036 LA9VBA	Frey Island	05-30 Jun
EU-037 SK7CA/7	Oland Island	30 Jun
EU-037 SM7DLZ	Oland Island	11 Jun
EU-037 SM7CRW	Oland Island	03 Jun
EU-045 IBØ/IZØCKJ	Ventotene Island	23-24 Jun
EU-045 IBØ/IK2DUW	Ventotene Island	18-27 Jun
EU-047 DJ9IN	Norderney Island	27 Jun
EU-047 DL1BBR	Norderney Island	24 Jun
EU-048 TM1H	Houat Island	01-04 Jun
EU-049 SV8/PA3HGP	Samos Island	06-07 Jun
EU-049 SV8DCY	Lesvos Island	08-20 Jun
EU-049 SV8DC1	Samos Island	
EU-052 SV8CS	Zante Island	04-27 Jun 11-30 Jun
EU-052 SV8/IKØREH/P		
EU-052 SV8/IROREH/F	Kefalonia Island	12-19 Jun
EU-056 LA9VDA/P		05-29 Jun
EU-057 DL1HSF/P	Gossen Island Ruegen Island	16-24 Jun
	TOTAL DESIGNATION	
P.C. IIS / TH. QAWII/D		01-03 Jun
EU-057 DL8AWJ/P	Ummanz Island	02-04 Jun
EU-057 DL4PM	Ummanz Island Ruegen Island	02-04 Jun 03-09 Jun
EU-057 DL4PM EU-060 SV2FPU/8	Ummanz Island Ruegen Island Skyros Island	02-04 Jun 03-09 Jun 18-28 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-063 JWØPK	Ummanz Island Ruegen Island Skyros Island King Karls Land	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P	Ummanz Island Ruegen Island Skyros Island King Karls Land Pilier Island	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO	Ummanz Island Ruegen Island Skyros Island King Karls Land Pilier Island Andros Island	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1CEI/8	Ummanz Island Ruegen Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1CEI/8 EU-072 SV8/IZ2CPP	Ummanz Island Ruegen Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Alonissos Island	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 19-29 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1CEI/8 EU-072 SV8/IZ2CPP EU-075 SV1TP/8	Ummanz Island Ruegen Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Alonissos Island Hydra Island	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 19-29 Jun 12-22 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1CEI/8 EU-072 SV8/1Z2CPP EU-075 SV1TP/8 EU-079 LA9VDA/P	Ummanz Island Ruegen Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Alonissos Island Hydra Island Soroyane Islands	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 19-29 Jun 12-22 Jun 12-15 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1CEI/8 EU-072 SV8/122CPP EU-075 SV1TP/8 EU-079 LA9VDA/P EU-082 RA1QY/1	Ummanz Island Ruegen Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Alonissos Island Hydra Island Soroyane Islands Kildin Island	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 19-29 Jun 12-22 Jun 12-15 Jun 29-30 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1CEI/8 EU-072 SV8/1Z2CPP EU-075 SV1TP/8 EU-075 V1TP/8 EU-079 LA9VDA/P EU-082 RA1QY/1 EU-082 RA1QQ/1	Ummanz Island Ruegen Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Alonissos Island Hydra Island Soroyane Islands Kildin Island	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 19-29 Jun 12-22 Jun 12-15 Jun 29-30 Jun 29-30 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1CEI/8 EU-072 SV8/1Z2CPP EU-075 SV1TP/8 EU-079 LA9VDA/P EU-082 RA1QU/1 EU-093 EA5/DK5IM/P	Ummanz Island Ruegen Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Alonissos Island Hydra Island Soroyane Islands Kildin Island Kildin Island Kildin Island Tabarca Island	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 19-29 Jun 12-22 Jun 12-15 Jun 29-30 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1CEI/8 EU-072 SV8/IZ2CPP EU-075 SV1TP/8 EU-079 LA9VDA/P EU-082 RA1QY/1 EU-093 EA5/DK5IM/P EU-096 OH1TD	Ummanz Island Ruegen Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Alonissos Island Hydra Island Soroyane Islands Kildin Island Kildin Island Korpo Island	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 19-29 Jun 12-22 Jun 12-15 Jun 29-30 Jun 01 Jun 22-25 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-063 JWØPK EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1CEI/8 EU-072 SV8/1Z2CPP EU-075 SV1TP/8 EU-079 LA9VDA/P EU-082 RA1QY/1 EU-082 RA1QQ/1 EU-093 EA5/DKSIM/P EU-096 OH1TD EU-101 OH6MIL	Ummanz Island Ruegen Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Alonissos Island Hydra Island Soroyane Islands Kildin Island Kildin Island Kildin Island Tabarca Island	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 19-29 Jun 12-22 Jun 12-15 Jun 29-30 Jun 01 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1/CEI/8 EU-072 SV8/1/2/2P EU-075 SV1/TP/8 EU-075 SV1/TP/8 EU-079 LA9VDA/P EU-082 RA1QY/1 EU-082 RA1QQ/1 EU-093 EA5/DK5IM/P EU-096 OH1TD EU-101 OH6MIL EU-107 F6HKA/P	Ummanz Island Ruegen Island Skyros Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Alonissos Island Hydra Island Soroyane Islands Kildin Island Kildin Island Kildin Island Karpo Island Skarporen Island Skarporen Island Les Sept Iles	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 19-29 Jun 12-22 Jun 12-15 Jun 29-30 Jun 01 Jun 22-25 Jun 23 Jun 23 Jun 23 Jun 23 Jun 23 Jun 23 Jun 23 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1CEI/8 EU-072 SV8/1Z2CPP EU-075 SV1TP/8 EU-075 SV1TP/8 EU-079 LA9VDA/P EU-082 RA1QY/1 EU-093 EA5/DK5IM/P EU-096 OH1TD EU-101 OH6MIL EU-107 F6HKA/P EU-107 F6ELE/P	Ummanz Island Ruegen Island Skyros Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Alonissos Island Hydra Island Soroyane Islands Kildin Island Kildin Island Kildin Island Karpo Island Skarporen Island Skarporen Island Les Sept Iles	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 01-03 Jun 25-30 Jun 19-29 Jun 12-22 Jun 12-15 Jun 29-30 Jun 29-30 Jun 23 Jun 23 Jun 23 Jun 23 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1/CEI/8 EU-072 SV8/1/2/2P EU-075 SV1/TP/8 EU-075 SV1/TP/8 EU-079 LA9VDA/P EU-082 RA1QY/1 EU-082 RA1QQ/1 EU-093 EA5/DK5IM/P EU-096 OH1TD EU-101 OH6MIL EU-107 F6HKA/P	Ummanz Island Ruegen Island Skyros Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Alonissos Island Hydra Island Soroyane Island Kildin Island Kildin Island Tabarca Island Korpo Island Skarporen Island	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 01-03 Jun 25-30 Jun 19-29 Jun 12-22 Jun 12-15 Jun 29-30 Jun 29-30 Jun 23 Jun 23 Jun 23 Jun 23 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1CEI/8 EU-072 SV8/1Z2CPP EU-075 SV1TP/8 EU-075 SV1TP/8 EU-079 LA9VDA/P EU-082 RA1QY/1 EU-093 EA5/DK5IM/P EU-096 OH1TD EU-101 OH6MIL EU-107 F6HKA/P EU-107 F6ELE/P	Ummanz Island Ruegen Island Skyros Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Alonissos Island Hydra Island Soroyane Islands Kildin Island Kildin Island Kildin Island Karpo Island Skarporen Island Les Sept Iles Les Sept Iles	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 19-29 Jun 12-22 Jun 12-15 Jun 29-30 Jun 01 Jun 22-25 Jun 23 Jun 23 Jun 23 Jun 23 Jun 23 Jun 23 Jun 23 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1CEI/8 EU-072 SV8/1Z2CPP EU-075 SV1TP/8 EU-079 LA9VDA/P EU-082 RA1QU/1 EU-093 EA5/DK5IM/P EU-096 OH1TD EU-101 OH6MIL EU-107 F6HKA/P EU-107 F6ELE/P EU-110 9A/LY1DS	Ummanz Island Ruegen Island Skyros Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Alonissos Island Hydra Island Soroyane Islands Kildin Island Kildin Island Tabarca Island Korpo Island Skarporen Island Les Sept Iles Les Sept Iles Sveti Nikola Island	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 19-29 Jun 12-22 Jun 12-15 Jun 29-30 Jun 29-30 Jun 23 Jun 23 Jun 23 Jun 23 Jun 23 Jun 22-24 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-063 JWPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1CEI/8 EU-072 SV8/1Z2CPP EU-075 SV1TP/8 EU-079 LA9VDA/P EU-082 RA1QY/1 EU-082 RA1QY/1 EU-093 EA5/DK5IM/P EU-096 OH1TD EU-101 OH6MIL EU-107 F6HKA/P EU-107 F6ELE/P EU-110 9A/LY1DS EU-110 9A/LY1DS	Ummanz Island Ruegen Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Alonissos Island Hydra Island Soroyane Islands Kildin Island Kildin Island Kildin Island Kaporen Island Korpo Island Es Sept Iles Les Sept Iles Sveti Nikola Island Veti Nikola Island	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 19-29 Jun 12-22 Jun 12-15 Jun 29-30 Jun 29-30 Jun 23 Jun 23-24 Jun 23 Jun 22-24 Jun 22-24 Jun 22-24 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1CEI/8 EU-075 SV1TP/8 EU-075 SV1TP/8 EU-079 LA9VDA/P EU-082 RA1QY/1 EU-082 RA1QY/1 EU-093 EA5/DK5IM/P EU-096 OH1TD EU-101 OH6MIL EU-107 F6HKA/P EU-107 F6ELE/P EU-110 9A/LY1DS EU-110 9A/LY1DS EU-1110 9A/LY2TA EU-121 EJ3HB	Ummanz Island Ruegen Island Skyros Island Skyros Island Skyros Island Sking Karls Land Pilier Island Andros Island Tinos Island Hydra Island Soroyane Island Kildin Island Kildin Island Kildin Island Korpo Island Korpo Island Skarporen Island Les Sept Iles Les Sept Iles Les Sept Iles Sveti Nikola Island Clear Island	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 19-29 Jun 12-15 Jun 29-30 Jun 29-30 Jun 22-25 Jun 23 Jun 23-24 Jun 23 Jun 22-24 Jun 22-24 Jun 20 Jun 24-26 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1CEI/8 EU-072 SV8/1Z2CPP EU-075 SV1TP/8 EU-079 LA9VDA/P EU-082 RA1QQ/1 EU-093 EA5/DK5IM/P EU-096 OH1TD EU-101 OH6MIL EU-107 F6HKA/P EU-107 F6ELE/P EU-110 9A/LY1DS EU-110 9A/LY1DS EU-112 EJ3HB EU-122 MI/EI/NET/P EU-125 OZ1RDP	Ummanz Island Ruegen Island Skyros Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Alonissos Island Hydra Island Soroyane Islands Kildin Island Kildin Island Kildin Island Tabarca Island Korpo Island Les Sept Iles Les Sept Iles Les Sept Iles Les Neti Nikola Island Clear Island Clear Island Rathlin Island	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 19-29 Jun 12-22 Jun 12-15 Jun 29-30 Jun 29-30 Jun 23 Jun 23 Jun 23 Jun 23 Jun 23 Jun 22-24 Jun 22-24 Jun 22-24 Jun 24-26 Jun 02-03 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1CEI/8 EU-072 SV8/1Z2CPP EU-075 SV1TP/8 EU-079 LA9VDA/P EU-082 RA1QQ/1 EU-093 EA5/DK5IM/P EU-096 OH1TD EU-101 OH6MIL EU-107 F6HKA/P EU-107 F6ELE/P EU-110 9A/LY1DS EU-110 9A/LY1DS EU-112 EJ3HB EU-122 MI/EI/NET/P EU-125 OZ1RDP	Ummanz Island Ruegen Island Skyros Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Alonissos Island Hydra Island Soroyane Islands Kildin Island Kildin Island Kildin Island Korpo Island Korpo Island Les Sept Iles Les Sept Ile	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 19-29 Jun 12-22 Jun 12-15 Jun 29-30 Jun 29-30 Jun 23 Jun 23 Jun 23 Jun 23-24 Jun 23 Jun 22-24 Jun 20 Jun 24-26 Jun 02-03 Jun 03-04 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1TP/8 EU-072 SV8/1Z2CPP EU-075 SV1TP/8 EU-079 LA9VDA/P EU-082 RA1QQ/1 EU-082 RA1QQ/1 EU-093 EA5/DK5IM/P EU-096 OH1TD EU-101 OH6MIL EU-107 F6HKA/P EU-107 F6ELE/P EU-110 9A/LY1DS EU-110 9A/LY1DS EU-1110 SA/LY2TA EU-121 EJ3HB EU-122 MI/EI/NET/P EU-125 OZ1RDP EU-125 OZ/DJ1AA/P	Ummanz Island Ruegen Island Skyros Island Skyros Island King Karls Land Pilier Island Andros Island Andros Island Alonissos Island Hydra Island Soroyane Islands Kildin Island Tabarca Island Korpo Island Korpo Island Skarporen Island Les Sept Iles Sveti Nikola Island Clear Island Rathlin Island Rathlin Island Rathlin Island Roemoe Island Mandoe Island	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 12-22 Jun 12-15 Jun 29-30 Jun 01 Jun 22-25 Jun 23 Jun 23-24 Jun 23 Jun 22-24 Jun 22-24 Jun 20-03 Jun 03-04 Jun 26 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1/CEI/8 EU-072 SV8/12YYO EU-075 SV1TP/8 EU-075 SV1TP/8 EU-079 LA9VDA/P EU-082 RA1QY/1 EU-082 RA1QY/1 EU-093 EA5/DK5IM/P EU-096 OH1TD EU-101 OH6MIL EU-107 F6HKA/P EU-107 F6ELE/P EU-110 9A/LY1DS EU-110 9A/LY1DS EU-110 9A/LY1DS EU-112 EJ3HB EU-122 MI/EI7NET/P EU-122 GN3XRQ EU-125 OZ1RDP EU-125 OZ/DJ1AA/P EU-129 DL2BWO/P	Ummanz Island Ruegen Island Skyros Island Skyros Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Hydra Island Soroyane Island Kildin Island Kildin Island Kildin Island Kildin Island Les Sept Iles Aveti Nikola Island Clear Island Rathlin Island Rathlin Island Rathlin Island Rathlin Island Roemoe Island Mandoe Island Goermitz Island	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 19-29 Jun 12-22 Jun 12-15 Jun 29-30 Jun 20-30 Jun 23 Jun 23-24 Jun 23 Jun 22-24 Jun 22-24 Jun 20 Jun 04-26 Jun 09-03 Jun 09-03 Jun 09-09 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1CEI/8 EU-072 SV8/1Z2CPP EU-075 SV1TP/8 EU-075 SV1TP/8 EU-079 LA9VDA/P EU-082 RA1QY/1 EU-082 RA1QY/1 EU-093 EA5/DK5IM/P EU-1093 EA5/DK5IM/P EU-101 OH6MIL EU-107 F6HKA/P EU-107 F6ELE/P EU-110 9A/LY1DS EU-110 9A/LY1DS EU-112 SJ3HB EU-122 MI/EI7NET/P EU-122 GN3XRQ EU-125 OZ/IDJ1AA/P EU-129 DL2BWO/P EU-129 DL1NGH/P	Ummanz Island Ruegen Island Skyros Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Alonissos Island Hydra Island Soroyane Islands Kildin Island Kildin Island Kildin Island Tabarca Island Korpo Island Les Sept Iles Les Iles Sveti Nikola Island Clear Island Rathlin Island Rathlin Island Rathlin Island Rathlin Island Roemoe Island Mandoe Island Goermitz Island Usedom Island	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 19-29 Jun 12-15 Jun 29-30 Jun 29-30 Jun 29-30 Jun 22-25 Jun 23 Jun 23-24 Jun 23 Jun 22-24 Jun 22-24 Jun 20-03 Jun 04-06 Jun 09 Jun 06-09 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1CEI/8 EU-075 SV1TP/8 EU-075 SV1TP/8 EU-075 SV1TP/8 EU-079 LA9VDA/P EU-082 RA1QQ/1 EU-093 EA5/DK5IM/P EU-096 OH1TD EU-101 OH6MIL EU-107 F6HKA/P EU-107 F6ELE/P EU-110 9A/LY1DS EU-110 9A/LY1DS EU-112 EJ3HB EU-122 MI/EI7NET/P EU-125 OZ/DJ1AA/P EU-125 OZ/DJ1AA/P EU-129 DL2BWO/P EU-129 DL1NGH/P EU-130 IV3/IN3XUG	Ummanz Island Ruegen Island Skyros Island Skyros Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Alonissos Island Hydra Island Soroyane Islands Kildin Island Kildin Island Kildin Island Korpo Island Korpo Island Les Sept Iles Les Sept Ile	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 19-29 Jun 12-22 Jun 12-15 Jun 29-30 Jun 29-30 Jun 23 Jun 23 Jun 23 Jun 23 Jun 23 Jun 22-24 Jun 22-24 Jun 22-24 Jun 23 Jun 24-26 Jun 03-04 Jun 06-09 Jun 06-09 Jun 23-25 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV8/12YYO EU-075 SV1CEI/8 EU-075 SV1TP/8 EU-075 SV1TP/8 EU-075 RA1QU/1 EU-082 RA1QU/1 EU-093 EA5/DK5IM/P EU-096 OH1TD EU-101 OH6MIL EU-107 F6HKA/P EU-107 F6ELE/P EU-110 9A/LY1DS EU-110 9A/LY1DS EU-112 EJ3HB EU-122 MI/EI7NET/P EU-125 OZ/RDP EU-125 OZ/RDP EU-129 DL2BWO/P EU-130 IV3/IN3XUG EU-131 IU3THJ	Ummanz Island Ruegen Island Skyros Island Skyros Island King Karls Land Pilier Island Andros Island Andros Island Alonissos Island Hydra Island Soroyane Islands Kildin Island Kildin Island Kildin Island Korpo Island Korpo Island Skarporen Island Les Sept Iles Otto Nikola Island Rathlin Island Rathlin Island Rathlin Island Roemoe Island Mandoe Island Goermitz Island Usedom Island Grado Island Grado Island	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 19-29 Jun 12-22 Jun 12-15 Jun 29-30 Jun 29-30 Jun 22-25 Jun 23 Jun 23 Jun 23 Jun 22-24 Jun 23 Jun 22-24 Jun 23 Jun 20-03 Jun 04-09 Jun 06-09 Jun 03-05 Jun 08 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV8/12YYO EU-067 SV1CEI/8 EU-072 SV8/1Z2CPP EU-075 SV1TP/8 EU-079 LA9VDA/P EU-082 RA1QU/1 EU-082 RA1QU/1 EU-093 EA5/DK5IM/P EU-096 OH1TD EU-101 OH6MIL EU-107 F6HKA/P EU-107 F6ELE/P EU-110 9A/LY1DS EU-110 9A/LY1DS EU-112 EJ3HB EU-122 MI/EI7NET/P EU-125 OZ1RDP EU-125 OZ1RDP EU-125 OZ/DJ1AA/P EU-129 DL1NGH/P EU-129 DL1NGH/P EU-131 IU3THJ EU-132 3ZØWI	Ummanz Island Ruegen Island Ruegen Island Skyros Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Tinos Island Hydra Island Soroyane Islands Kildin Island Kildin Island Kildin Island Tabarca Island Korpo Island Skarporen Island Les Sept Iles Les Sept Iles Les Sept Iles Les Sept Iles Authorit Island Clear Island Rathlin Island Rathlin Island Rathlin Island Rathlin Island Roemoe Island Mandoe Island Goermitz Island Usedom Island Grado Island Venežia Island Venežia Island Venežia Island	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 12-22 Jun 12-15 Jun 29-30 Jun 01 Jun 23-24 Jun 23-24 Jun 23-24 Jun 22-24 Jun 22-24 Jun 24-26 Jun 03-04 Jun 09 Jun 06-09 Jun 23-25 Jun 08 Jun 14-16 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1/CEI/8 EU-072 SV8/12YYO EU-075 SV1TP/8 EU-075 SV1TP/8 EU-079 LA9VDA/P EU-082 RA1QY/1 EU-082 RA1QY/1 EU-093 EA5/DK5IM/P EU-109 GOH1TD EU-101 OH6MIL EU-107 F6HKA/P EU-107 F6ELE/P EU-110 9A/LY1DS EU-110 9A/LY1DS EU-112 GN3XRQ EU-122 MI/EI7NET/P EU-122 GN3XRQ EU-125 OZ/IRDP EU-125 OZ/IRDP EU-129 DL2BWO/P EU-129 DL1NGH/P EU-130 IV3/IN3XUG EU-131 IU3THJ EU-132 3Z/ØWI EU-132 HF1UKF	Ummanz Island Ruegen Island Skyros Island Skyros Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Hydra Island Soroyane Island Soroyane Island Kildin Island Kildin Island Tabarca Island Korpo Island Skarporen Island Les Sept Iles Aveti Nikola Island Clear Island Rathlin Island Rathlin Island Rathlin Island Rathlin Island Goermitz Island Usedom Island Goermitz Island Usedom Island Grado Island Venežia Island Wolin Island Wolin Island	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 19-29 Jun 12-22 Jun 12-15 Jun 29-30 Jun 29-30 Jun 22-25 Jun 23 Jun 23-24 Jun 23 Jun 22-24 Jun 22-24 Jun 22-24 Jun 20 Jun 04-09 Jun 06-09 Jun 06-09 Jun 08 Jun 08 Jun 14-16 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1CEI/8 EU-072 SV8/12YPO EU-075 SV1TP/8 EU-075 SV1TP/8 EU-079 LA9VDA/P EU-082 RA1QY/1 EU-082 RA1QY/1 EU-093 EA5/DK5IM/P EU-1093 EA5/DK5IM/P EU-101 OH6MIL EU-107 F6HKA/P EU-107 F6ELE/P EU-110 9A/LY1DS EU-110 9A/LY1DS EU-112 GN3XRQ EU-125 OZ1RDP EU-125 OZ1RDP EU-125 OZ/DJ1AA/P EU-129 DL1NGH/P EU-130 IV3/IN3XUG EU-131 IU3THJ EU-132 3ZØWI EU-132 HF1UKF EU-136 9A6AA	Ummanz Island Ruegen Island Skyros Island Skyros Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Tinos Island Alonissos Island Hydra Island Soroyane Island Kildin Island Kildin Island Tabarea Island Korpo Island Les Sept Iles Les Sept Iles Les Sept Iles Les Sept Iles Les Nikola Island Clear Island Rathlin Island Rathlin Island Rathlin Island Roemoe Island Moormitz Island Goermitz Island Goermitz Island Usedom Island Grado Island Venežia Island Wolin Island Wolin Island Wolin Island	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 19-29 Jun 12-22 Jun 12-15 Jun 29-30 Jun 29-30 Jun 22-25 Jun 23 Jun 23-24 Jun 23 Jun 22-24 Jun 23 Jun 24-26 Jun 03-04 Jun 26 Jun 09 Jun 06-09 Jun 23-25 Jun 08 Jun 14-16 Jun 10-16 Jun 19-24 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1CEI/8 EU-072 SV8/1Z2CPP EU-075 SV1TP/8 EU-075 SV1TP/8 EU-079 LA9VDA/P EU-082 RA1QY/1 EU-082 RA1QY/1 EU-093 EA5/DK5IM/P EU-096 OH1TD EU-101 OH6MIL EU-107 F6ELE/P EU-110 9A/LY1DS EU-110 9A/LY1DS EU-110 9A/LY1DS EU-112 GN3XRQ EU-125 OZ/DJ1AA/P EU-125 OZ/DJ1AA/P EU-129 DL2BWO/P EU-129 DL1NGH/P EU-130 IV3/IN3XUG EU-131 IU3THJ EU-132 3ZØWI EU-132 HF1UKF EU-136 9A6AA EU-153 RA1OHL/P	Ummanz Island Ruegen Island Skyros Island Skyros Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Alonissos Island Hydra Island Soroyane Islands Kildin Island Kildin Island Kildin Island Karboren Island Korpo Island Les Sept Iles Les Sept	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 19-29 Jun 12-22 Jun 12-15 Jun 29-30 Jun 29-30 Jun 23 Jun 24 Jun 25-24 Jun 26 Jun 09 Jun 06-09 Jun 06-09 Jun 08 Jun 14-16 Jun 10-16 Jun 19-24 Jun 19-24 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV8/12YYO EU-067 SV8/12YYO EU-075 SV1CEI/8 EU-075 SV1TP/8 EU-079 LA9VDA/P EU-082 RA1QQ/1 EU-093 EA5/DK5IM/P EU-096 OH1TD EU-101 OH6MIL EU-107 F6HKA/P EU-107 F6ELE/P EU-110 9A/LY1DS EU-110 9A/LY1DS EU-112 GN3XRQ EU-125 OZ1RDP EU-125 OZ1RDP EU-129 DL2BWO/P EU-129 DL1NGH/P EU-130 IV3/IN3XUG EU-131 IU3THJ EU-132 JZØWI EU-132 HF1UKF EU-136 9A6AA EU-155 IK4HLQ/4	Ummanz Island Ruegen Island Ruegen Island Skyros Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Tinos Island Hydra Island Soroyane Islands Kildin Island Kildin Island Kildin Island Tabarca Island Korpo Island Skarporen Island Les Sept Iles Les Sept Iles Les Sept Iles Les Sept Iles Australiand Sveti Nikola Island Clear Island Rathlin Island Rathlin Island Rathlin Island Rathlin Island Goermitz Island Usedom Island Grado Island Grado Island Venežia Island Wolin Island Wolin Island Wolin Island Losinj Island Losinj Island Losinj Island Coanno di Piallazza	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 12-22 Jun 12-15 Jun 29-30 Jun 01 Jun 23-24 Jun 23 Jun 23-24 Jun 23 Jun 22-24 Jun 22-24 Jun 20-30 Jun 09 Jun 09 Jun 09 Jun 09 Jun 06-09 Jun 23-25 Jun 08 Jun 14-16 Jun 10-16 Jun 19-24 Jun 19-24 Jun 19-24 Jun
EU-057 DL4PM EU-060 SV2FPU/8 EU-060 SV2FPU/8 EU-063 JWØPK EU-064 F5LRC/P EU-067 SV8/12YYO EU-067 SV1CEI/8 EU-072 SV8/1Z2CPP EU-075 SV1TP/8 EU-075 SV1TP/8 EU-079 LA9VDA/P EU-082 RA1QY/1 EU-082 RA1QY/1 EU-093 EA5/DK5IM/P EU-096 OH1TD EU-101 OH6MIL EU-107 F6ELE/P EU-110 9A/LY1DS EU-110 9A/LY1DS EU-110 9A/LY1DS EU-112 GN3XRQ EU-125 OZ/DJ1AA/P EU-125 OZ/DJ1AA/P EU-129 DL2BWO/P EU-129 DL1NGH/P EU-130 IV3/IN3XUG EU-131 IU3THJ EU-132 3ZØWI EU-132 HF1UKF EU-136 9A6AA EU-153 RA1OHL/P	Ummanz Island Ruegen Island Skyros Island Skyros Island Skyros Island King Karls Land Pilier Island Andros Island Tinos Island Alonissos Island Hydra Island Soroyane Islands Kildin Island Kildin Island Kildin Island Karboren Island Korpo Island Les Sept Iles Les Sept	02-04 Jun 03-09 Jun 18-28 Jun 01-08 Jun 24 Jun 01-03 Jun 25-30 Jun 12-22 Jun 12-15 Jun 29-30 Jun 01 Jun 23-24 Jun 23 Jun 23-24 Jun 23 Jun 22-24 Jun 22-24 Jun 20-30 Jun 09 Jun 09 Jun 09 Jun 09 Jun 06-09 Jun 23-25 Jun 08 Jun 14-16 Jun 10-16 Jun 19-24 Jun 19-24 Jun 19-24 Jun

DX Prediction - September 2001

7 /	aximum	usabl	e frequ	ecy from	West			CENT	RAL U.S	S.A.	so
IVI	Coast,	Central V	U.S. and E	ecy from East Coast (Box 1934.	courtesv	UTC	AFRI	ASIA	OCEA	EURO	AM
of En	gineerin	g System	ms Inc., I	Box 1934,	Middle-	8	(15)	13	*24	19	*20
				ers listed		10	(20)	12	*21	19	*18
				n usable fre		12	29	*16	*18	*25	*29
(MU	F) in M	Hz for	contactin	g five maj	or areas	14	33	14	23	*27	*36
				a-Kenya/		16	*35	(13)	21	*26	. *40
				ustralia/Me		18	*35	(12)	(17)	*24	*41
Europ	e-Gen	many/Fra	ankfurt, an	d South A	merica—	20	*32	22	32	*21	*41
				sunspot n		22	*27	*26	*39	14	*43
109. (Chance of	of contac	et as deter	mined by	path loss	24	*23	25	*42	*13	*35
				ood, plain I		2	*21	20	*38	*12	*29
fair, a	nd in (pa	arentheses,) for poor	.UTC in h	ours.	4	*18	16	*34	*11	*25
						6	16	14	*28	*12	*22
		WES	T COAS	Т				EAS	T COAS'	Т	
					SO						SO
UTC	AFRI	ASIA	OCEA	EURO	AM	UTC	AFRI	ASIA	OCEA	EURO	AM
10	(14)	*14	*25	(12)	*21	7	19	12	*24	*12	*21
12	22	*12	*22	19	18	9	22	*12	*21	18	*18
14	29	*16	*18	25	*30	11	*35	*16	*18	*24	*28
16	33	*16	21	25	*37	13	*41	14	24	*27	*35
18	*34	20	(17)	23	*41	15	*41	(13)	21	*27	*38
20	*32	*29	31	18	*42	17	*40	(12)	19	*26	*41
22	*27	*29	*38	13	*41	19	*35	18	26	*23	*41
24	23	*28	*42	(12)	*39	21	*29	24	36	16	*41
2	*21	*26	*43	12	*32	23	*25	25	*41	*16	*39
4	*18	*21	*40	*15	*27	1	*22	20	38	*12	*32
6	16	*18	*35	13	*23	3	*18	15	*34	*12	*27

EU-155 IK4RQJ/P	Scanno di Piallazza	08-10 Jun
EU-170 9A4A	Pag Island	14-21 Jun
EU-170 9A6PKT/P	Pag Island	11-13 Jun
EU-171 OZØITT	Mors Island	14-25 Jun
EU-171 OZ4PAX	Vendsyssel Island	03-30 Jun
EU-171 OZØBB	Mors Island	07-24 Jun
EU-174 J48SAM	Samothraki Island	01-15 Jun
EU-174 J48T	Thassos Island	10 Jun
EU-178 ES1AKM/8	Kihnu Island	29-30 Jun
EU-178 ES1RA/8	Kihnu Island	29-30 Jun
EU-178 ES4BG/8	kIhnu Island	29-30 Jun
EU-184 OH6AW/8	Hailuoto Island	29-30 Jun
EU-187 J49HW/P	Chrysi Island	01-04 Jun
EU-187 J49DX/P	Chrysi Island	01-04 Jun
EU-187 J49NG/P	Chrysi Island	01-03 Jun

NA-034	KM4RX	Anna Maria Island	16-23 Jun
NA-045	XF3/KB5SKN	Isla Mujeres	18-24 Jun
NA-045	XF3/AB5EB	Isla Mujeres	18-24 Jun
NA-046	W1RQ/1	Martha's Vineyard	24-29 Jun
NA-047	W2RA/VYØ	Baffin Island	11-18 Jun
NA-051	VE7QCR	Queen Charlotte Is.	07 Jun
NA-055	N8PW/1	Mount Desert Is.	27-28 Jun
NA-057	HR6/WA9YYY	Roatan Island	17-21 Jun
NA-059	NO7F/KL7	Unalaska Island	28 Jun
NA-066	KM6RY	Santa Catalina Is.	12 Jun
NA-067	KU4OJ	Ocracoke Island	02 Jun
NA-072	HP1XVH	Contadora Island	29 Jun
NA-073	V31TE	Ambergris Caye	24-29 Jun
NA-075	VE7NH	Pender Island	12 Jun
NA-083	WZ3AR/4	Chincoteague Is.	27-30 Jun
			1

13

28

*13

*23

*22

K-Y Filter Company

3010 Grinnel Place Davis, CA 95616 (530) 757-6873

(15)

*15

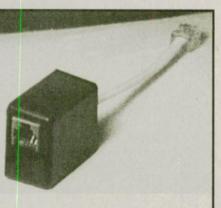
*29

12

*21

K-Y modem/telephone RFI filters are truly superior!

Please visit us at: http://www.ky-filters.com/am.htm



NA-110 KD4NIN Fripp Island 29-30 Jun NA-110 K9JWV James Island 06 Jun NA-110 AA4V Isle of Palms 02-30 Jun NA-112 W4LVS/P Bogue Banks 30 Jun NA-125 VE2MAM/P Grande Basque Is. 15-18 Jan NA-143 AB5EB Galveston Island 01 Jun NA-154 VE9GLF/VE1 Pictou Island 19 Jun NA-154 VE9MY/VE1 Pictou Island 19 Jun NA-213 K4USI/P Daunhin Island 20-21 Jun OC-033 FK8HZ Lifou Island 07-19 Jun OC-046 FOØFUI Moorea Island 29 Jun OC-121 3D2LB/P Beachcomber Is. 06-07 Jun OC-130 DU8DI 04-20 Jun Mindanao Island OC-137 VK4CY Lamb Island 10-29 Jun OC-144 YC4FII Balitung Island 14-18 Jun OC-195 VK7KPB Flinders Island 17 Jun OC-201 ZL1DD Waiheke Island 07-29 Jun OC-233 VK7TS/P Bruny Island 18 Jun OC-235 DU9BCD Camiguin Island 07-30 Jun 12-17 Jun OC-247 YB8HZ/P Sabalana Island SA-026 PP5OW Santa Catarina Is. 10 Jun **SA-088 PSAØ88** Tacami Island 14-16 Jun

RSGB IOTA MILLENNIUM PROGRAM

Neville Cheadle, G3NUG, reports that 232 applications for the RSGB IOTA Millennium Programme certificates (IOTA 2000) have now been processed by CDXC as of 6 June 2001.

If you still have not applied be sure to do so prior to the end of the year. Send your details to CDXC at g3nug@btinternet.com. There are no charges for these awards. The certificates are very attractive and worth framing to be added to the wall of your shack.

If you are unaware of the above program it is too late as your collection of IOTA groups applied to the year



MINI HF BEAM

Most Antennas are large, heavy structures requir-ing heavy-duty towers, rotors and require extra muscle during installation and lots of extra dollars before the job is done.

The Hybrid-Quad is sensibly designed, built from high-quality materials and mounts with standard TV hardware and rotor. It's small size gathers very little ice and wind which allows you to spend more time

ON the dir, rather than IN the dir.
MQ-1 Four-Band Antenna.....\$279.95 6,10,15,20 Meters

6,10,12,15,17,20 Meters Shipping charges extra.

> T.G.M. Communications
> 121 Devon St. Stratford,
> ON Canada NSA 226 Tel. & Fax (519) 271-5928 http://www3.sympatico.ca/tgmc/index.html

2000. This is just a reminder to those of you who did participate during the year and have forgotten to submit your application.

RSGB IOTA Convention

The RSGB's annual International HF & IOTA Convention will be held this year at the Beaumont Training & Conference Centre in Windsor, Berkshire, England the weekend of 12-14 October. My wife and I attended this one in 1999 and had an enjoyable time with the Brits. For more information check their website at http://www.rsgb.org/hfc2001/.

DXCC - 12 Meters

The ARRL DXCC Desk announced the addition of the 12-Meter Single Band DXCC award and is now accepting applications. The certificates will be dated but not numbered. Your 12-meter credits will not count toward the DeSoto Cup competition until 1 October 2001, but will be included in the DXCC Challenge totals. If you do not know what credits you have on 12 Meters, you may contact DXCC Desk for a copy of your record. However, if you have been active in the program they will show on the printout provided by the DXCC Desk. If you do not have internet access, and wish to know your 12-meter credits, please send a note to DXCC along with \$2.00 for postage and handling.

Antique QSL department

Over the years (since 1978) I have used old cards from Japan. I just received several photo copies of such cards from Clem Moritz, W1EVT, who he had worked since he got his ticket in 1934 until the war started.

TAKE COMMAND WITH A
QRO AMPLIFIER TM

WWW.Qrotec.com
QRO TECHNOLOGIES, INC.

Tel & Fax:(800) 956-2721/(419) 636-2721
Email: sales@grotec.com
P.O. Box 939, Bryan, Ohio 43506



Clem said that he was on the bands on that fateful day of 7 December 1941 until sundown, knowing that the next



day he would be off the air for the duration.

The cards shown here are all from the year 1938. In those days Clem was operating as W3EVT in Virginia. Yes, Virginia used to be in the third call area. Clem is not new to DX and has the honor of holding 5DXCC #3. He said he would have been #1, but Gus, W4BPD, didn't get his cards to him in time.

So here are cards for old timers Horoshi Murai, J2MI; Shigi Okaya,



Manufacturer's Day Aug 25th - Salem NH



KANTRONICS



KAM '98

- Single port VHF or HF
 RTTY, CW Packet, GTOR, AMYOR, WEFAX.
- · GPS NMEA-0183 compatible
- 6-16 VDC, DB-9 connector port

Call Now For Your Low Price!





KAM XL

- DSP modem offers great performance on Packet 300 1200 G-tor Pactor. Amter PSK-31
- •RTTY, Navtex ASCII, Wefax, CW, GPS NMEA-0183 and more!

Call Now For Special Pricing!



KPC-3 Plus/KPC-9612 Plus

High-performance low power TNC Great for packet, and APRS compatible

Call For Special Low Price!



Detailed illuminated map shows time, time zone, sun position and day of the week at a glance for any place in the world Conference of november for the of day and night charge as your state of the other states of un vall Sie 3 12 x 212

Reg \$1295. SALE \$999.95



Host mode control gram for Kantronics TNCs Pacterm '98 ports multiple windows for each Packet and HF mode plus synchronizing with Log Windows Super support from CSS Supports PSK-31





Loawindows The first and best logging program for Windows, Log Windows has been a favorite for nearly a decade. It will be the last logging software you'll ever need

Supports remote antenna switching with TopTen band decoder, TNC con rol, rotor control, DXCC 2000, DXCC, WPX, WAC, WAS, VUCC, WAS, IOTA Grayline display, Telnet Cluster and more

Wefax 99 Wefax for your Kantronics KPC or KAM TNCs. Receive real time HF Weatherfax images to keep track of hurricanes, typhoons and other weather events worldwide



If you're a weather fan you'll enjoy taking advantage of this on option on your Kantronics TNC Plus, being able to save the images to Windows bitmap files do automatic scheduling



Digital Trio Get Pacterm '98 Log Windows and Wefax '99 all in package for a ciai price. Great the ham that requires the best The Digital Trio lets you do all

the popular HF modes, and logs your contacts at the same time. Supports PSK-31



MA-40

40 Tubular Tower

REG. \$1007 **SALE \$849.95**

MA-550

55 Tubular Tower Handles 10 sq ft at 50mph Pleases neighbors with tubular streamlined look

Reg.\$1704

SALE \$1399.95

TX-455

55 Freestanding Crank-Up Handles 18 sq. ft. 4 50 mph No guying required Extra-strength const Can add raising and motor drive acces.

Towers Rated to EIA Specifications at Great Prices!

Reg.\$1915

SALE \$1599.95

World's Largest **U.S.** Tower Dealer

All US Towers shipped by truck: freight charges addtl.

ANAHEIM, CA

clear Disney, land) 933 M. Euclid St. 92801 (800) 854-6046 Janet KL7MF Mer anaheim@hamradio.com

BURBANK, CA

2492 W Victory BI 91506 (818) 842-1786 (800) 854-6046 FOR KAGHIT Mor Victory Blvd at Buena Vista 1 mil west (5 burbank@hainradio.com

DAKLAND, CA

2210 Livingston St , 94006 (510) 534 5757 (800) 854-6046 Mark WI7YN Mgr I-880 at 23rd Ave ramp oakland@hamradio.com

SAN DIEGO, CA

5375 Kearry VIII a Rd., 92123 (658) ab 1 490 3 (800) 854-6046 Tom KNICK Mar Hwy 163 4 Clar most Mesh sandlego chamradio.com

SUNNYVALE, CA

510 Lawrence Exp. #102 94085 (800) 854-6046 Ken, K1ZFM, Mgr So from Huy 101 sunnyvale@hamradio.com

NEW CASTLE, DE

1509 N Duton Hwy 19720 (800) 644-4476 Rick, K31L Mgr RT 13 1/4 mi., So. 1-295 newcastle@hamradio.com

PORTLAND, OR

11705 S.W. Pacific Hwy 97223 (503) 598-05-6 (800) 854-6046 T gard 99W ent from H v 5 & 217 portland@hamradio.com

DENVER, CO

8400 E Hiff A.e. #9, 80231 (800) 444-9476 John N5EHP Myr denver@hamradio.com

PHOENIX, AZ 1939 W Dunlap Ave 85021 (800) 444-9476

Gary, N7GJ Mgr 1 mi east 011 17

ATLANTA, GA

071 Buteru H. y 30 140 (800) 444-7927 Mark KJ4VO Mgr. Doraville 1 mi no of 1 285 atlanta shamradio.com

WOODBRIDGE, VA

(Near Washington D.C.) 14803 Build America Dr. 22191 03 643 1063 (800) 444-4799

Mike N4A DK, Mgr Ent 161 + 95 So to US 1 woodbridge@hamradio.com

SALEM. NH

(Near Buston) 24 N. 5 Codway 03079 (800) 444-0047 huck, KM4NZ, Mgr Mes ha nradio com - rit 1 1-93 28 mi No of Boston salem@hamradio.com

ook for the

COAST TO COAST

apita Deliverses From The Store Nearest to You!

Don't procrastinate!

Call our computer house directly to get your Worldradio subscription started with the next issue. Charge cards only - VISA, MasterCard, American Express.

One year Two years Three years \$14.79 \$27.79 \$40.79

For delivery outside U.S. ZIP codes, please add \$10/year to above prices.

Call 8:00 a.m. - 5:00 p.m. PST

DX World

J3FI; and T. Wakimoto, J3FK. As to the whereabouts of these pre-war Japanese operators we do not know. Many did return to the bands following the war in 1952. Sixty-three years ago is a long time.

QSL Information

The Ohio/Penn DX Bulletin offers advice on QSL information via the website of Dennis Eremin, RZ1AK, at http://www.qsl.net/rz1ak/home.htm. Click on secure your mail. Here Dennis offers tips on sending direct QSL cards to Russia and other CIS nations.

Early in June I received a long overdue QSL card for a direct request for working EKØI on Spafaryev Island (AS-059). If the QSL manager would have waited another three months he could have made it flat 10 years! If I made my request via the bureau system I wonder how long it would have taken?

Thanks go to the following con-

tributors for this month's column: G3KMA, G3NUG, RZ1AK, W1EVT, K3ZT, Western Washington DX Club (WAØRJY), Northern Arizona DX Association (W7ST), WebCluster (OH2AQ), 425 DX News (I1JQJ,), The OPDX Bulletin (KB8NW), DX-News (NJDXA), The Low Band Monitor (KØCS), The Daily DX (W3UR), and QRZ DX (N4AA).

Well, we had our first — overnight guests of visiting DXers that is. Norby Oberweis, LX1LX, and his lovely young XYL, Manu, LX2LX, were stateside and touring about. Norby had been on the air a couple of days earlier on Santa Catalina Island (NA-066) and was on his way to Utah. Perhaps some of you worked them last year while they were honeymooning on Easter Island.

— John F.W. Minke III, N6JM, can be reached by snail mail sent to: 6230 Rio Bonito Dr., Carmichael, CA 95608, or by e-mail to: n6jm@pacbell.net.

ARRL petitions for new 60M band

petition filed this week by the ARRL could result in a new high-frequency band for U.S. amateurs. The ARRL has asked the FCC to allocate 5.250 to 5.400 MHz to the Amateur Service on a domestic (US-only), secondary basis.

The League told the FCC that the new 60-meter band would aid emergency communications activities by filling a "propagation gap" between 80 and 40 Meters. "There are times on certain paths when a frequency in the 80-meter band is too low, and a frequency in the 40-meter band is too

high for reliable ionospheric propagation," the ARRL said in its petition. The ARRL said the propagation gap can hamper communication between the U.S. and the Caribbean during severe weather emergencies.

The FCC has not yet invited public comments on the petition. Even if the petition finds favor with the FCC, it's likely to be several years before the new band actually becomes available.

As proposed by the ARRL, amateurs General Class and higher would be permitted to operate phone, CW, data, image and RTTY on the new band running maximum authorized power.

"An amateur allocation in this band would improve the Amateur Service's already exemplary record of providing emergency communications during natural disasters when even modern communications systems typically fail," the ARRL concluded.

A copy of the ARRL petition is available on the ARRL Web site, http://www.arrl.org/announce/regulatory/5MHz. — ARRL Letter

Command Technologies, Inc.

Visit Ham Radio's Big Signal Store HF thru VHF Power Amplifiers 1KW and Up

www.commandl.com

Toll Free: (800) 736-0443 Local: (419) 459-4689 15719 County Rd. 2.50 – P.O. Box 326 Edon, OH 43518

QSL Managers

		_			_
3AWØYR	OM2SA	01	Ø/OK2DA/F	OK2DA	E
3V8BB IK	7XGF [*]			WØYR	Dus
3V8GI	YT1AD	OF	IØWØYR	W3UR	Spe
	OK2HWB		1Ø/W3UR	OH1MK	Sh
5B4/UA1CBX	UA1CBX	OF	HØYLS	JH1ARJ	Ch
7Z1AC	WA4JTK	O.	Ø/JH1ARJ	JH4RHF	CII
8R1RPN	OHØXX	0.	Ø/JH4RHF		Во
8S4C/5	SM4DDS	0.	Ø/JP1NWZ	JP IIVVZ	БО
9A/IN3DEI	IN3YGW		JØ/JR4PMX	OHØRJ	vit
9A/IN3TJV	IN3YGW		JØIOHØRJ	OH1NX	VII
9A/IN3YGW	IN3YGW	0	JØ/OH1NX	OH1TX	Ri
9A/ON5JE	ON5JE	0	JØ/OH1TX	OH1VR	KI
9A/WØYR	WØYR		JØ/OH1VR	JP1NWZ	10
9A7K/p	9A7K ,		JØU	WØYR	10
9H3O	DL7VRO	_	KWØYR	ON7SS	to
9H3TZ	DL7VRO	_	S4OSA	12MQP	10
9Q5BQ	HB9AMO		4ØB	PUINEZ	L
C6/K2VOL	KJ4Z		U1NEZ/p	PYINEZ	-
C6/K4TKE	KJ4Z		Y1AMF/p	PY1LVF	3
C6/KJ4Z	KJ4Z	F	Y1LVF/p	PYINEW	3
C6A/WØYR	WØYR		Y1NEW/p	PYINEZ	A
CN8LI	ON4ANT		PY1NEZ/p	RU1ZC	1
CQ2EHX	CT1EHX		RIANB	WØYR	2
D6/WB4MB	UWB4MBU		R3/WØYR SV9/WB2GA		-
ED3CDB	EA3DZK	13	WB2GAI	NI/F	11
EM0HQ	UR5EAW	١.		3D2SJ	
EP3SP	W3HC		T3ØED	IN3ZNR	
GSØNHR	G3OCA		T48Z	JE8BKW	
GS3EE0	G3OCA		T88BB	WA1ECA	
GS3ZBI	G3OCA		TG9AJR UAØKCL	RA3DE.	
HAWØYR	WØYR		UA1PBP/9	RK1PWA	
HA5ORP	PA3GEC		UE1WPI	RA1W2	1
HR6/WØYI	R WØYF			UR3MF	
I/WØYR	WØYF		UW7M V31TE	W7A	1
II1ARI	I1JQ.		VE/WØYR	WØYF	
J75KG	K5KC		VO2/K2FR		
JW4LN	LA4LN		VP2VCA	WØYI	
KD10S/KH	10 JH10R		VP2VE	K3RG	
KG4AS	N4SI/	- 9	VP5/WØYF		
KG4XE	AA5X		VU3CHE	K4VU	D
KG4ZI	W502		WØYR/4	WØY	
KH7/WØY			WØYR/6	WØY	
KI8CT/KH			WØYR/9	WØY	R
KL7/WØY			WAØAAD	WØY	R
KS4/WØY	R WØY		WAØJPX	WØY	
LXØHQ	LX1K LY1D		WW8DX/8	NE	BZ
LYØHQ			YB33AR	YB1F0	CC
LY3TA	LY3E R WØY		ZF1AD (C		
OEWØY			ZS5T	ZS5BE	30
OHWØY	1NR/POK1		ZV3B	PY3C	EJ
OHØ/OK	INKIPOKII	41/	2.00		

3B8GLIshwar S. Mandary, 6, Shastri Road, Candos, Quatre-Bornes, Mauritius 4L2MMamuka Kordzakhia, P. O. Box 123,

Tbilisi 380004, Georgia

4L4CRMike Janverdashvili, Agmashenebeli 26, Kaspi 383440, Georgia

5B4AGNBob Henderson, P. O. Box 62155,

8061 Pafos, Cyprus

9A5KKresimir Kovarik, M.Sufflaya 15,

HR-43000 Bjelovar, Croatia

9A5KKresimir Kovarik, Zagorska 14, HR-49210

Zabok, Croatia DL1YCJan Wilgenbusch, Wagenfeldstr. 13,

D-48301 Nottuln, Germany

E4/OE1GZAGunter Zwickl, c/o SICT, P.O.Box

1133, Ramallah, Palestine

EA9CDJose Antonio Mendez, P.O. Box 2078,

51080 Ceuta, Spain

EX8MIOAlex Barmushkin, P. O. Box 381, Bishkek 720065, Kyrghyzstan

EY8CQAiexander L. Rubtsov, P. O. Box 126, Dushanbe 734025, Tajikistan

G3OCAken Frankcom, 1 Chesterton Road, Spondon, Cerby DE21 7EN, England

HB9AMOPierre Petry, 3 Hutins-des-Bois, 1225 Chene-Bourg, Switzerland

HSØ/EA4BKAEduardo Campos Tortosa, GPO Box 2008, Bangkok 10501, Thailand

HSØ/KA3TDZHans D. Hollstein, 86/1 Sukhumvit Soi 23, Bangkok 10110, Thailand

HZ1MDMohamad al-Daigani, P. O. Box 864, Riyadh 11342, Saudi Arabia

I1JQJMauro Pregliasco, Corso Novara 39, 10154 Torino - TO, Italy

IK2QPRPaolo Fava, Via Bertani 8, 46100 Mantova - MN Italy

IK7XGFAlfredo Colapietra, P.O. Box 13, 71036 Lucera - FG, Italy

IN3ZNRFabrizio Vedovelli, Via Gramsci 27, 38100 Trento - TN, Italy

IT9YREFerdinando Rubino, P.O. Box 30, 96012

Avola - SR, Italy IZ7AUHFrancesco Giacoia, Casella Postale 2224/TA05, 74100 Taranto - TA, Italy

IZ8CCWP.O. Box 360, 87100 Cosenza - CS,

JD1BKGYoshiyuki Jingo, 4-303, Kiyose-Syokujyu, Chichijima, Ogasawara, Tokyo 100-2101 Japan

JE8BKWHideki Sanada, 4-2-11-312, 24-Ken

2-Jo, Sapporo, 063-0802 Japan JG6BKBMizuho Tanaka, P.O. Box 7, Hayato

899-5191, Kagoshima, Japan JWØHRVlad Shakun, P. O. Box 224, N-9178 Barentsburg, Norway

JWØHSIvan Lesiv, P. O. Box 127, N-9178 Barentsburg, Norway

JW5DWBjorn Dommersnes, P. O. Box 659,

N-9171 Longyearbyen, Norway

K2FRDFred Stevens, 263 Keach Rd, Guilford, NY 13780, USA

KB2FB/DU7David Collins, Pons Garcia Building, Tagbilaran City, Bohol 6300, Philippines

KJ4ZMike Coffey, P.O. Box 7033, Oak Ridge, TN 37831-3333, USA

KU9CSteve Wheatley, P.O. Box 5953, Parsippany, NJ 07054-6953, USA

LA4LNTom V. Segalstad, P.O. Box 15 Kjelsas, N-0411 Oslo, Norway

LY1DRSaulius Zalnerauskas, P.O.Box 922, Kaunas 3005, Lithuania

LY2BCREduard Vaisman, P.O.Box 70, Klaipeda LT-5800, Lithuania

LY3BEEugene Vaisman, P.O. Box 70, Klaipeda LT-5800, Lithuania

N4AACarl Smith, P.O. Box 249, Leicester, NC 28743-0249, USA

NE8ZRick Dorsch, P.O. Box 616, Hamburg, MI

OHØXXOlli Rissanen, #599, 1313 So. Military Trail, Deerfield Beach, FL 33442, USA [w3ur]

OH1MKMarjatta Kaistila, Nahvontie 5B1,

FIN-25410 Suomusjarvi, Finland

ON7SSMarc Domen, Ferdinand Coosemansstraat 32, B-2600 Berchem, Belgium PU1NEZCarlos Guilherme Correa, Calle Presi-

den'e Backer 9 apto. 306, 24220-045 Niteroi, RJ,

FY1LVFJose Luiz Vieira Fernandes, Apartado Postal 18009, 20722-970 Rio de Janeiro, RJ,

PY1NEWEmanuel Tavares Filho, Apartado

Postal 100659, 24001-970 Niteroi, RJ, Brazil PY1NEZRogaciano de Lima Correa Filho, Calle Belizario Augusto 91 apto. 1101, 24230-200 Niteroi, RJ, Brazil

PY3CEJAlencar Fossa, P.O. Box 6022, Porto Alegre - RS, 91031-970, Brazil

RK1PWANick Shapkin, P.O.Box 73, 164744 Amderma, Arkhangelskaja, Russia

SM4DDSKjell Bonerfalt, Oskarsvagen 4B, S-702 14 Orebro, Sweden

SV8CRIPanagiotis Nalmpantis, Agia Paraskevi, GR-811 02 Mytilini, Greece

TG9AJRJuan Carlos Munoz, P.O. Box 61 Periferico, Guatemala 01011, Guatemala

UAØKCLYuri Lobachev, Institutskij Prospect 9 KV 170, Chernogolovka, Noginskij Rajon, Moskovskaya Obl., 142432, Russia

UR3MPAndy Yarovoi, P.O. Box 50, Perevalsk, 94300, Ukraine

VE10TADana Rushton, P.O. Box 1862, Truro,

NS B2N 6C7, Canada VE6VKRuss. A. Wilson, 1235 Richland Road

N.E., Calgary, AB T2E 5M5, Canada VE9MYLen Morgan, 35 Upper Quaco Rd., Bax-

ters Corner, N.B., E2S 2S2, Canada VP8CMTKeith Grimmer, P. O. Box 544, Stanley,

Falkland Islands WØYRMichael D. Lonneke, 20732 Furr Road,

Round Hill, VA 20141-1808, USA

W3HNKJoe Arcure, P.O. Box 73, Edgemont, PA 19028, USA

W3URBernie McClenny, 3025 Hobbs Road, Glenwood, MD 21738, USA

WAØVOM/SU1Jeff Bodin, American Embassy,

Box 2456, APO AE 09839, USA YB0KOH. Bambang Soetrisno, Jl. Belanusa,

I/12, RT04/RW01-36, Ds. Pamoyanan, Bogor 16136, Indonesia

YB2SSBHerry Gagaryanto, P. O. Box 45, Kudus 59301, Indonesia

YB8DOAH, M. Ishak Iskandar, P. O. Box 1262, Makassar 90012, Indonesia

YCØSKILie Ambar Angin, Jl. Betet Raya No. 29 AA, Jembatan Lima, Jakarta Barat 11220, Indone-

YCØVIPHandy Sujono, P. O. Box 1005 JKB,

Jakarta 11010, Indonesia YC2VTODeta Ariani Sayekti, P. O. Box 67

YKBS, Yogyakarta 55281, Indonesia YC2VVDIr. Sardjana M., Jl. Melati Kulon No. 6,

Baciro, Yogyakarta 55225, Indonesia YC3CPJA. P. Indrajaya, P. O. Box 18 W. O.,

Surabaya 60244-A, Indonesia YC7IPZGusti Tamardjaja, P. O. Box 138, Tara-

kan 77100, Indonesia YC7PTLSe Yusuf, P. O. Box 555, Palangkaraya

73000, Indonesia YC8BJKJerry Katuuk, P. O. Box 623, Biak

98115-A, Indonesia YC8CPSBaharuddin Karim, Perumaban Pondak Ungu Permai, Blok AC II No. 10, Bekasi

17610, Indonesia YC8QPRicky Mewenkang, P. O. Box 1402,

Manado 95014, Indonesia YC8RBRidwan Nggilu SH, P. O. Box 1006,

Gorontalo 96100, Indonesia

YC8TXWRonny Monoarfa, P. O. Box 166, Tahuna 95800, Indonesia

YC9BUKadek Kariana Sp., P.O. Box 106, Singaraja 81100, Bali, Indonesia

YE1DDeddy D. Iskandar, P. O. Box 99, Karawang 41300, Indonesia

WORLDRADIO, September 2001 37

Visit us on the web at: www.wr6wr.com

The versatility of the "radio guy"

friend called me last week to tell me (well, actually to brag) about his new "do everything" radio. His first words were: "You still running those old TS-430s rigs?" When I assured him they were still operable and on the air, he began to tell me about his new rig. It does everything, he said, including VHF, UHF, 6 Meters, HF, and I think he said it cooked supper too. He then told me about his new walkie-talkie that has built in packet so he can do the APRS and GPS thing and nave his car show up on maps as he drives around town.

I patiently listened to his list of new stuff, biting my tongue as I wanted to ask if he actually talked to anyone on the rigs (he called me on his cell phone to tell me about the new radios). Please don't think I'm against new stuff heck, I love new stuff as much as you. My take on "things"

is what do you do with it?

Years ago I do remember when a walkie talkie only had one or two channels and weighed as much as a brick. (Gee, maybe that's why they are often called bricks!) Anyway, the advances in radio technology are wonderful and I'd never advocate a regression even to radios that glow in the dark (and I once heated my shack with quite a few at one time). But there's more to Amateur Radio than a shiny new radio.

Some of the greatest memories I have include stringing a dipole at the Riverton, Wyoming airport during a search and rescue mission, or operating in the middle of a rainstorm during the floods of 1983. I have fond thoughts of putting a Heathkit HW-18 (tube radio) in a vehicle that was headed to help when the Teton Dam broke in Idaho. As I ponder the joy of Amateur Radio, few thoughts concern what radio I actually used.

*Of course I recall my first new rig and also the first HF mobile (it was a tube radio), but only because that first HF

was in my car as I made the 10 hour drive to Denver as a "tech" and headed home as an "advanced" operator. Those first contacts on that old rig were some of the highpoints. The rig is long gone, but those contacts I vividly recall. I didn't want to burst my friend's "new radio" bubble, but the moment he unboxed it, it was out dated. Somewhere, some company is already planning to introduce yet a more sophisticated rig with many more features.

Amateur Radio isn't about "new" radios (the gospel according to Jerry). It's adding a human component to our technology and then sharing an experience with others. The fellow I talked

with on my first HF mobile contact talked with me for almost an hour. He then took the time to write me a long letter welcoming me to the HF component of the hobby. I have no idea what rig he used, but I remember his comments as to how to improve my mobile installation and some of his stories about HF operation. Whether or not his suggestions were the key to my later mobile contact with Peru and Scotland, I don't know, but what a thrill it was to know my 100 watts went that far.

As you introduce others to the hobby, take the time to invite them to go with you as you attend various activities and events. If you're building an antenna or installing a radio, invite a newly licensed friend over to help you even if you don't need the help. New rigs are great to have and show - just take the time to create experiences that include the human element as well.

The Timpanogos team

When I was an ROTC cadet many years ago, I remember several lectures on the importance of communications as it related to our squad. When I watched those old black and white war movies, it was always the radio operator seemed to be where the action was and always played a key role as the good guys won the battle. At my first ROTC field exercise (it was a cold and snowy day in Wyoming as I recall), I quickly volunteered to be the squad radio operator. Imagine my surprise when they gave me a significantly heavy backpack radio complete with a large whip antenna and heavy battery pack. After packing that stuff on the field exercise I was less eager to be the radio guy next time out.

I think, however, that my initial interest in field communications was sparked back in those ROTC days and I understood the need for reliable command and control. Today, our radios are much smaller, but the need for communications

remains a big issue.

In Utah County to the south of where I live, a group of volunteers each summer makes up the Timpanogos Emergency Rescue Team, or TERT. These volunteers station themselves each summer weekend in some pretty rugged, albeit popular terrain called Mount Timpanogos. This popular hiking and climbing area is close to a large Utah town and lures many unsuspecting and ill-prepared hikers and climbers to its trails.

Each summer TERT bandages wounds, locates lost persons, carries the more seriously injured down the mountain, or calls in a chopper for the critical cases. One critical member of



the team has always been an Amateur Radio operator. The team is not complete without the radio guy. (Don't leave home without him/her.)

What a difference it would make if we (Amateur Radio operators) could somehow convey this understanding to other agencies and groups, that a skilled communicator is key to, as they said in ROTC, a successful mission. There

are times as I listen to scanners or observe an event that I cringe at the communications problems that could be so easily solved with a talented field communications specialist involved.

Whether it is setting up an efficient antenna or diagnosing a radio problem, the event can only be enhanced by including, as a critical element,

someone with experience in communications. Often it's the "radio guy" who even fixes the pop machine, the FAX machine, the telephone, the lights, the generator, the stuck door, and just about every other techno problem. I remember one callout where the radio guy got the Red Cross snow blower running so the walks could be cleared during a snow storm and another "radio guy" fixed their copy machine. Don't underestimate the need for someone who understands technology!

And my hat's off to TERT who makes great use of Amateur Radio and saves lives each summer!

An attitude adjustment

A law enforcement official (an assistant chief) penned a message on an Internet discussion group recently where he took to task all of the volunteer radio people who, as he put it, are really wanna-be cops. He lumped them (meaning us) all together and claimed our thrills in life all came from the lights and sirens we all install so we can monitor police calls and then respond as we see fit.

He suggested that when we "learn our place" he would be willing to work with us, but until then, we should just let his people take care of things. How arrogant can someone be! My worry was that this chief didn't get out much and had certainly not had much interaction

Start your holiday shopping now and give the gift of Amateur Radio to a friend! Call 1-877-472-8643 with volunteers. Comments like his trouble me because as a command official in his department, the line officer who wants to advance in the department usually must mirror the chief's politics.

My theory is that this "chief" is worried that the volunteer radio operators might offer a threat to his command. After all, many of the radio volunteers I know are airline pilots,

doctors, lawyers, college educated, financially secure, mentally stable individuals. I can count on one hand the wannabe operators that push the envelope and they never seem to stay around long anyway.

So, Mr. Police Chief, come over to the next ARES or REACT meeting and get involved. If you shed your attitude toward those you serve, you

might find a great resource among our volunteer ranks. You might even enjoy calling us friends and sharing expertise. Or, when you're a retired chief, you can sit and watch your replacement involve volunteers and really make a difference in the community.

Until next month, conserve those electrons, but be ready

to serve when the lights go out! Best wishes from Salt Lake City.

"The team is not

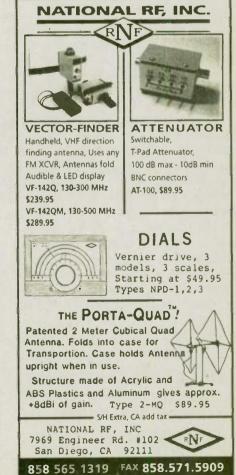
complete without

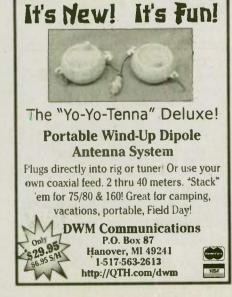
the radio guy. (Don't

leave home without

him/her.)"

— Jerry Wellman, W7SAR, can be reached by sending snail mail to: P.O. Box 11445, Salt Lake City, Utah 84147, or by sending e-mail to: jw@desnews.com.





You can't operate on that machine!

ver the years there have been several instances where the FCC has asserted that a person who operates a repeater is under no obligation to "repeat" the signals of another Ham. In the mid-1990's this was the basis for civil action in several parts of the country where a repeater owneroperator or a radio club sponsoring a system went into state court to request (and usually obtain) a 'restraining order' to keep certain 'unwelcome' amateurs from harassing or in any other way utilizing a particular system. Now, the government is taking the issue of banning unwelcome users a step further as it intervenes on the side of a radio club and tells a Northern California amateur that he cannot use a repeater because the system license holder has, basically, told him to 'go away'.

Back on 17 January of this year the Mt. Diablo Amateur Radio Club sent a letter to James H. Davis, W6IBD, of Concord, California requesting that he refrain from using their W6CX repeater system. According to the FCC, the letter was issued as a result of Davis' alleged failure to follow the operational rules set forth by the licensee and control operators of the W6CX repeater. The FCC says W6IBD received the letter on 18 January but did not adhere to the request to refrain from using the W6CX system.

The regulatory agency appears to believe that it is the responsibility of a repeater operator to demand a certain level of decorum on a machine. According to chief rules enforcer Riley

Doug Hall Electronics

RECEIVER VOTING SYSTEMS REMOTE BASE INTERFACE

WWW.dheco.com 815 E. Hudson St. • Columbus OH 43211-1199 (614) 261-8871 • FAX: (614) 261-8805 Hollingsworth, it all centers around adherence to rules on both the part of the system licensee and those who want to use the services of an Amateur Service repeating device.

"The commission requires that repeaters be under the supervision of a control operator. And we hold such control operators and licensees responsible for the proper operation of the repeater system. And we expect them to take whatever steps are appropriate to insure compliance with repeater rules and that might include converting the repeater to a closed repeater or taking it off the air entirely," says FCC Special Counsel for Enforcement Riley Hollingsworth, K4ZDH.

Hollingsworth says the FCC does not require a repeater to convert to closed operation in order to ensure compliance among the users. But the regulatory agency does say that the commission expects user compliance with all rules. And in this case it tells Davis it expects him to abide by the request to stay off the W6CX system.

The history of Israel's repeaters

Obtaining information about the Tel Aviv repeater was quite a task. First we thought that all the clues would be in the hand of 4X1IK Israel Kass. It soon became apparent that quite a lot of amateurs where involved. Here is the story:

Kass obtained an old 'out of service' VHF repeater from Motorola. Danny Rosenne, 4X1SK, started somewhere in 1977 to prepare the repeater for amateur use. This meant adjusting the unit to Israeli R7 repeater pair (145.775 MHz. with its obligatory offset of down 600 KHz). We received a 'two 'bottle' (cavity) duplexer which none of us amateurs knew how to tune at that time.

The first location of the machine on a trial basis was at the home of 4X1IK in Ramat Gan, a northern Tel Aviv suburb. When everything seemed to work satisfactorily, it was decided, by the group, (which in the meantime grew to three) together with Srulik Haramaty 4Z4JT, to move the equipment to the Volvo garage. This location was owned by Kass in Petah Tikva which is also north of Tel-Aviv. It worked fine, but the coverage was very limited. So the search began for yet another site.

One of the highest structures in the



To subscribe call: 1-877-472-8643



town was the 'Hasneh' building in mid Tel-Aviv. The IARC got permission to install the repeater there. The result was tremendous coverage. One could hear its signal all around Tel-Aviv, way up North to Haifa and down to Beer Sheva well as into Jerusalem.

At that point David Shmueli, 4X1WA joined the organization. David worked in the repeater service department of Motorola. His expertise was, and still is, important to the upkeep of the entire Israeli repeater network.

But the 'Hasneh Building' was not the repeaters resting place for long. It was moved, a few years later, to a senior citizens' home called 'Mishan.' Its roof is absolutely empty to enable emergency helicopters to land. Only our antenna, which has limited height is installed in one of the corners of the building. Another benefit of this site is the electrical mains supply we are hooked up to. It is the elevator which has an emergency generator thus giving the repeater uninterrupted electricity.

The Tel-Aviv repeater of today gives time of the day and date as well as pre-recorded announcements. In the foreseeable future all the repeaters of the older MSR2000 model will be updated to the more modern Motorola MSF5000 type machines. One of the next projects is a 10-meter FM repeater in the Tel-Aviv area. But this is only in the planning stage.

Epilogue

Since those days, from 1977 to about 1982, a lot has changed in the Israeli repeater network. We now have twentyfive different machines installed all over the country. Five of them on UHF all the others on VHF. You can find a list of them, together with their locations at www.iarc.org.

Earlier we mentioned point David Shmueli, 4X1WA. Without his helping and guiding hand, his constant urging to improve the equipment, it is doubtful the network would be as advanced as it is. But there is also a large list of helpers behind the scenes. Far too many to list here. But we have to mention three people, who work for Motorola Israel. They are Nathan Gidron a SWL. Yair Yosefi, 4X4GH and Ehud Zager, 4Z4UR.

A great moment lost

I cannot for the life of me understand why nobody had a tape recorder sitting by their rig to record Dennis Tito, KG6FZX's, Ham radio operation from the ISS.

Ever since I got on the air on 6-meter AM in the 1950's I have had some sort of tape recorder tied to my receiver(s) to capture anything that might be deemed important to preserving our past. I recorded the very first contact on 6-meter AM between a YL on Long Island and an amateur in Osaka, Japan That was triple hop F2 in 1959. I have audio from 1970 of the late Jean Shepherd, K2ORS, on the WA2SUR repeater in NYC "roasting" repeater owner/operator George LeDoux, K1TKI, as only "Shep" could. I recorded the first words of Owen Garriott, W5LFL, from the shuttle Columbia using an IC-2AT hand held hard-wired to a Panasonic cassette portable.

And as I write this, I am sitting only a few feet from my current home station where I have inexpensive recorders (mostly Sony) connected to my FT-847, FT-4700, Sangeean ATS-806, and several other pieces of gear. Even one tied across the speaker of a now ancient Clegg 99'er 6-meter AM transceiver that sits tuned to 50.4 MHz -'just in case.' If something important shows up on the air and if I am around when it transpires, it will be caught

ion tape.

May I leave this month with the suggestion to every one of you involved in any specialized area of VHF / UHF communications — be it space, FM, weak signal or what have you. Go out to your local Wal-Mart, K-Mart, or wherever; spend \$20 on a standard size cassette recorder, some batteries and a few C-90 cassettes. Keep it next to your radio and close to the receivers speaker, ready to go, just in case another bit of Ham radio history, like the first words of Dennis Tito from space, come your way. These moments tend to be few and far in-between and those who come after you will truly appreciate the legacy you have left behind for them.

- Bill Pasternak, WA6ITF, can be reached by mail sent to: 28197 Robin Ave., Saugus, CA 91350, or by e-mail sent to: billwa6itf@aol.com.

NOTT LTD

BROADBANDER BB3

Remotely Tuned 3.5-30 MHz Mobile Antenna. Monoband Operation On 160 Meters

With Accessory Coil.

Now Available with Preset Frequency Memory Device (SAM).

BB10 BASE STATION ANTENNA

160, 80 & 40 Meters. High Efficiency With Only 34' Height. Remotely Tuned From Your Hamshack.

3801-4001 La Plata Hwy. Farmington, NM 87401

PARK N' TALK WHIP FOR **STATIONARY OPERATION**

Improve Your Mobile Antenna With A 22' Whip On Top. Telescopes For Easy Storage.

> E-Mail: judyn@nottitd.com MasterCard / Visa / Discover

1-800-443-0966 Phone: (505) 327-5646

FAX: (505) 325-1142

2001 MARAC National Convention

was fortunate to attend the Mobile Amateur Radio Awards Club's (MARAC) national convention in Hampton, VA. 5-8 July with my Dad, Bill Jansen, K2HVN. It was a great gathering of county hunters and the weather was great - sunny, low 80s and low humidity. Approximately 150 amateurs and non-Ham family members attended the convention. Without a doubt, the most enjoyable part of the convention was the time sitting around tables in the hospitality room sharing stories with fellow county hunters. I took a few notes to share what transpired during the convention.

Forums

Eldon Hall, N8STF, gave a presentation about his trip to Australia. Eldon's trip was most memorable because he surprised Alan Roocroft, VK4AAR, with his USA-CA certificate and number. Eldon had conspired with Ted, K1BV, to not release Alan's number until Eldon arrived at Alan's house. Eldon showed up at Alan's house (half-way around the world") and presented Alan with his USA-CA certificate for contacting all 3,076 counties. Alan and his wife, Meewah, were very surprised. To make 3,076 county contacts from so far away is amazing.

In addition to meeting with Alan and his wife, Eldon also visited with county hunters Cliff Bilston, VK3CB, and his wife Helen; Jim Cunningham, VK4BS; Rex Glew, VK3MW and June Sim, VK4SJ, and her husband Doug Sim, VK4BP.

Esther Imsande, KB6HW, gave a presentation on how county hunters can use global positioning system (GPS) satellites and Delorme's Street Atlas version 8.0 computer software. Esther and her husband, Chuck Imsande, W6YLJ, use a laptop and a GPS antenna/receiver while driving to determine their position as they travel through counties. Esther gave a detailed explanation of how she uses the program to include knowing exactly how long they need to drive to get to a county line ("we'll be there in 11 minutes!"). Esther also told a story of another county hunter, John Harvey, KKØL, who uses the program to plan his county hunting trips well in advance.

John Thompson, K6OHM, gave a slide presentation discussing his 26 years working for a Mickey Mouse outfit - what I mean, of course, is that he worked for Disney for 26 years, from 1968-1994. In his career with Disney, John worked in almost every aspect of the business; from concessions

to entertainment to construction to printing tickets to buying "plush" items,

Bob Voss, N4CD, gave a lesson on mobile antennas and mobile radio installation. Most of the discussion centered on eliminating noise - whether it comes from the ignition or fuel pumps (notorious in Ford vehicles). Bob's tips included making sure antenna mounts are making solid metal contact, grounding the mobile radio, grounding the antenna mount to the car frame, and running the power feed directly to the car's battery. Bob also discussed the antenna findings of Barry, W9UCW. Barry found that mounting antenna resonators vertically or horizontally on top of the mast made no difference in signal field strength readings. What does make a difference is the length of the mast (since 95% of the antennas radiation occurs in the mast) and where the antenna is mounted.

Ed Palagyi, KN4Y, and Bob, N4CD, led a CW forum for 24 CW ops and discussed Q signals and abbreviations frequently used on the CW county hunters net (14.0565 MHz). The CW ops also discussed the use of QRL to determine if the net was in use; however, most CW ops preferred the use of "QNF?" to ask if the net is busy.

MARAC Board of Directors meeting

The MARAC Board of Directors meeting was attended by approximately 50 county hunters. The board discussed several topics of interest to county hunting. First, since this is an awards club, the Awards Custodian, Gene Olig, KD9ZP gave out several awards. Last county awards were given to Nell Devitt, KØGO; John Howe, KE4UP; Carol Morkdid, KIØJD; Kent Reinke, KL1V; Gene Tyree, N4ANV; Randy Davis, N8ELQ; Ed Hoyt, W5RIT; Nelda Smith, W6XJN; Bill, K2HVN; Dave Splitt, KE3VV; Bob, N4CD; Eldon, N8STF; Mat Matthew, WØNAC; Larry Prichard, W9SUQ;

The NiCd Lady Company

Individual Cells—Replacement Packs—Lead Acids Rebuilding Service-O.E.M. Assembly ... for

* Handheld Radios, * Laptops * Cellular Phones * Camcorders * Portable Scanners * Test Equipment * Digital Cameras

Check into our rebuilding service — Substantial savings over NEW! Convert your pack to NiMH! Same size pack — HIGHER capacity!



Call for a price list or visit our website: WWW.nicdlady.com Or e-mail us at: nicdlady@nicdlady.com

20585 Camino del Sol Unit B Riverside, CA 92508

Phone: (909) 653-8868 (909) 653-5189 Art Dechent, WA4WQG and Bill Grew, WG9A. Additional awards were given out at the banquet Saturday night. Gene announced a new award for a Team of the Year — similar to County Hunter of the Year.

Randy, N8ELQ, announced winners of recent elections for District Officers; Stanley Heinsma, VE1BES, in the Northeast district, John Robson, WB9STT, in the Northcentral district, and Bob, KC6AWX, in the Pacific district. The board thanked John Butler, WB2NFB, for his many years of service to the board and MARAC.

Also discussed were several options for cutting costs of the monthly MARAC newsletter, the Roadrunner. Options considered included eliminating the listing of officers and the Treasurer's report. Members were also encouraged to change their membership to receiving the Roadrunner via the Internet versus printed/mailed copies. Lastly there was discussion about the Awards Committee and the Board of Directors, with recommendations from the members, decided to allow the Awards Chairman to pick a member from each of the Districts as long as the Directors had an opportunity to approve the selection.

The awards banquet

John, K6OHM, was the MC for the Awards Banquet. Rev. Art, WA4WQG, led the group in an invocation, then Father Joe Chambers, KF5AT, remembered the county hunters that passed away during the last year. Those county hunters who became silent keys within the past year included: Tom, KØVZR; Paul, KCØSX; George, K1PUT; Eileen Holmes, K2AGJ; Burt Sussman, NJ2S; Alex Marion, W2CUE; Andy, W3XE; Tom WA4RDN; Mike Peterson, NO5X; Mel Boatman, W5AWT; Jay Lowers, K6RLS; Larry, K6SLP; Edmond, WH6AF; Scott Siebelink, KF8DV; Elmore, W9DDO; Les Springmire, W9GPC; Hazel, K9QPR and Bill, KØOJG.

In recognition of all their hard work, John, K6OHM, presented the conven-



Bob Voss, N4CD, was named County Hunter of the year.

tion staff with 1st day covers from the first day issue of the Amateur Radio stamp dated 15 December 1964 and postmarked in Anchorage, AK.

When it was time for awards, Gene Olig, KD9ZP, gave out Awards to many county hunters. Last county awards went to Carol Reitman, AB2LS; Eldon, N8STF; Hugh Clark, K8GPC; and Tom Carr, KGØBB. Others were recognized for achieving last county milestones: Don Kimble, AE3Z, 50 last counties; Don Guy, W9GUY, 50 last counties; Kent, KL1V, 75 last counties; Pete, K4QFK, 500 last counties; and Eldon, N8STF, 500 last counties. Silver Glasscock, KCØJG finished his 5th time around. Tom, KGØBB, and Walt Orday, K1DFO, received Bingo awards. Carol, KIØID, received a 5 Star Award. Ace, N3AHA, received a Mobile DX award for contacting 268 DXCC countries while operating mobile. Jeff Bechner, W9MSE, was awarded the 1st place mobile finish in the CW county hunter's contest (held the 1st week in May) while Ed, KN4Y, received the 2nd place award.

The big awards were the mobile, net control and county hunters of the year awards. Bob, N4CD, received both the CW and SSB mobile operator of the year awards — a plaque for each hand. Jeff, W9MSE, was this year's CW County Hunter of the Year and Fred Crawford, K5CWR, was announced

as the SSB County Hunter of the Year. Chuck Theisen, K9IA, received the Awards Custodian award for helping the Awards Chairman, Gene, KD9ZP, with getting the thousands of awards out to the county hunters during the year. Bill, K2NJ, presented Ace, N3AHA, with the President's Award for contributing to MARAC and county hunting through 10 years of Worldradio County Hunter columns.

By all accounts, the convention was a tremendous success. My hat is off to Gene and Pete and all the convention helpers that made this a very memorable experience. The MARAC plans to conduct the 2002 convention in Visalia. I hope some of you will be able to make one of the upcoming national conventions.

Mobile from all 3,076 counties

Though it is not a race to the finish line, several county hunters are closing in on transmitting from all 3,076 counties. At the convention I took some time to talk to some of the mobile ops getting close to finishing. Bob, N4CD, needs to operate from only about 40 or so counties - all in the Northwestern U.S. Jim Thomas, KB4XK, only needs to operate from 80 or so counties. Jim is making a trip to AK, ND and MT in Jul/Aug and will only have 14 or so left after the summer. Pete, K4QFK, has a few hundred left; however, a concerted effort may result in him finishing in the next year. Pete is accompanying Jim to AK, ND, and MT. Although only three Amateur Radio operators have transmitted from all 3,076 counties today (Ken Wosika, KB7QO; Gene Kowalewski, W1TEE; and Ed Eastwold, WAØSBR), there may be three more to finish in the next two years. An unbelievable accomplishment for all these county givers! Congratulations to all.

— "Ace" Jansen, N3AHA, our county huntin' columnist can be reached by snail mail sent to: 105 Balch Springs Circle, Leesburg, VA 20175, or by e-mail sent to: jansens@tidalwave.net.



Visit Your Local RADIO CLUB

ALABAMA

Tuscaloosa ARC, Meets 2nd Mon./ monthly, 7 p.m., Red Cross Bldg., 15th St., Tuscaloosa, AL. For info: David Drummond, W4MD, (205) 339-7915, trustee for W4KCQ, 146.82(-) (118.8) 4/02

ARIZONA

Arizona Repeater Association. Inc. Operates 24 VHF-UHF rptrs. in AZ. Meets 4th Thurs./monthly, 7:30 p.m., 2124 W. Cheryl Dr., Phoenix, AZ, North entrance, Info:D. Baize (602)542-7950 or:www.arizonarepeaterassociation.org

Cochise Amateur Radio Assn., (CARA). Meets 1st Mon./monthly, 7:30 p.m. at club facility on Moson Rd., Sierra Vista, AZ. K7RDG/R 146.76(-)rptr.PL162.2.

CALIFORNIA

Contra Costa Communications Club, Inc., WD6EZC/R. P.O. Box 20661, El Sobrante, CA 94820-0661. Meets 2nd Sun./monthly (except May & Dec.), 08:00, Denny's, El Cerrito, CA. 145.110 PL 82.5 Info: S. Clark, KB6SEI, (510) 724-0158.

Downey Amateur Radio Club Inc., W6TOI. Meets 1st Thurs./monthly, 7:30 p.m., So. Middle Sch. cafetorium. 12500 S. Birchdale, Downey, CA. VHF net W6GNS rptr. 146.175(+) Thurs.,7:30 p.m. http://www.downeyarc.org. Info L. Vaughn, kd6nzw at kd6nzw@downeyarc.org

East Bay Amateur Radio Club, Inc. Meets 2nd Fri./monthly, 7:30 p.m., Salvation Army, 4600 Appian Way, El Sobrante, CA. Info: (510) 233-7509, w6cus1@juno.com, 145.11(-)

Fresno Amateur Radio Club. Meets 2nd Fri./monthly, 7:30 p.m., Ernie Pyle School, 4140 N. Augusta, Fresno, CA. 146.94(-) 223.94(-).1/02

Garlic Valley ARC (GVARC). Meets last Sat./monthly, 8 a.m., The Little House Restaurant. Exit 101 at Monterey Rd., Gilroy. Info: Tony Armendariz, AD6ID@arrl.net. Talk-in: 147.825/-600KHz K6THR/R

Golden Empire Amateur Radio Society, (VEC). P.O. Box 508, Chico, CA 95927. Club call W6RHC, rptr. 146.85(-). Meets: 3rd Fri./monthly, 7:30 p.m. at 346 Cherry St. (Library Rm.), Chico.

Golden Triangle Amateur Radio Club. P.O. Box 1335, Wildomar, CA 92595. Meets 4th Mon./monthly, 7:30 p.m., Rancho Water Dist., 42135 Winchester Rd., Temecula, CA. Rptr: W6GTR 146.805 (-) PL 100. Info: H. Wijma, AC6VN, (909) 693-2383. Email: ac6vn@cs.com. Web: http:// www.qsl.net/gtarc

Livermore Amateur Radio Klub, (LARK). Meets 3rd Sat./monthly, 9:30 a.m., City Council Chamber, 3575 Pacific Ave., Livermore, CA. Net Mon. 1900 on 147.12(+). Info: LARK Sec., P.O. Box 3190, Livermore, CA 94551-3190.(925)373-1386.

Marin Amateur Radio Club. Box 6423, San Rafael, CA 94903. Meets 1st Fri./monthly, 7:30 p.m., also every Sun., 8 a.m. to 11 a.m. at Alto Clubhouse, 27 Shell Rd., Mill Valley, CA.Website:W6SG.Net

Nevada County ARC. Meets 2nd Mon./monthly, 7 p.m., Salvation Army Bldg., 10725 Alta St., Grass Valley, CA. Net Tues. 7 p.m. 147.015. Info: George, KQ6SA, (503) 447-2295, www.NCARC.-

North Hills Radio Club, Meets 3rd Tue./monthly, 6:30 p.m., Arcade Lib., Marconi near Fulton, Sacramento, CA. Nets 8 p.m. Tue., (except 3rd Tue.) & Thur., 145.19- PL 162.2, 224.40-. Info: (916) 944-1464. nhrc@k6is.org, http://www,k6is.org

Orange County ARC. Meets 3rd Fri./monthly, 7:30 p.m., Orange County Red Cross, 601 N. Golden Circle, Santa Ana, CA. Talk-in 146.550 (S). Contact Bob Buss, KD6BWH, (714) 534-2995, www.w6ze.-

River City A.R.C.S. Meets 1st Tues./monthly, 7:30 p.m., Sacramento Society for the Blind, 2750 24th St., Sacramento, CA. License classes offered. Info: (916) 492-6115.

Sierra Foothills ARC. P.O. Box 1005, Newcastle, CA 95658. Meets 2nd Fri./monthly, 7:30 p.m., Auburn Library (Beecher Rm.), 350 Nevada St. Thurs. nets 7:30 p.m. 145.430(-) PL 162.2. Info: M. Diridoni, mdiridoni-@rsvl.net

Sonoma County Radio Amateur, Inc. W6LFJ, P.O. Box 116, Santa Rosa, CA 95402. (707) 579-9608. Meets 1st Wed./ monthly, 7:30 p.m., Agilent Tech., 1400 Fountain Grove Pkwy, Santa Rosa. Net each Tues. 7 p.m., W6SON. Rptr. 146.73(-) PL 88.5. www.cds1.net/scra

Stanislaus Amateur Radio Assoc., Inc. (SARA). P.O. Box 4601. Modesto, CA 95352. Meets 3rd Tues./ monthly, 7:30 p.m., Modesto Police N/ E area Substation, 3705 Oakdale Rd. Modesto. Net 1.2+4 Tues. 7:30 p.m. 145.390(-)PL136.5

Tehachapi-Southern Slerra ARS. Meets 2nd Thurs./monthly, 7 p.m., except July, 125 East F St., Tehachapi, CA (Veteran's Hall). Info: KD6KMN, (661) 822-5995. www.ssars. net, 147.06(+), 224.42(-) PL 156.7. Pkt 145. 090(S) connect to W6PVG-7. ARES nets 7 p.m. 147.51(S) Mon.

Tri-County Amateur Radio Assoc. P.O. Box 75. Claremont, CA 91711-0075. Meets: 2nd Mon./monthly, 7:30 p.m., Brackett Airport, Pilot's Lounge in Adm. Bldg., La Verne, CA. Info: Alvin, W6EKZ at w6ekz@arrl.net or (909) 622-

Trinity County ARC. P.O. Box 2283, Weaverville, CA 96093. Meets 2nd Wed./monthly, County School. Adm. Buillding, Weaverville, 7:30 p.m. Bptrs: WA6BXN 146.73(-) PL 85.4. W6HOR 146.925(-) PL 85.4. http:// www. tcoe.trinity.k12.ca.us/~tcarc

West Coast Amateur Radio Club, (WCARC). P.O. Box 2617, Costa Mesa, CA 92628. Meets 3rd Thurs./ monthly, 7 p.m., Fountain Valley Sch. Dist. Office, 17210 Oak St., Fountain Valley, CA. Info: Jane, KD6ODV, (714) 531-6707

Westside Amateur Radio Club -Los Angeles. P.O. Box 11092, Marina del Rey, CA 90295. Meets 4th Tues./monthly, 7:30 p.m., ARC Bldg., 11355 Ohio Ave., W. L.A., CA (VA Cntr. grounds). Net Tues., 8 p.m. 147.195+, PL100, except mtg. night. Website: http://www.gsl.net/wa6rc Messages: (310) 848-1354

Willits Amateur Radio Society, (WARS). P.O. Box 73, Willits, CA 95490. Meets 4th Mon./monthly, 7 p.m., Brooktrails Fire Dept. 2 NW Willits, http://www.saber.net/wars. Talk-in: 145.13(-), PL 103.5.

FLORIDA

Gulf Coast ARC. P.O. Box 595, New Port Richey, FL 34656. Meets 4th Mon./monthly, 7:30 p.m., Marchman Tech. Ed. Cntr., 7825 Campus Dr., Bldg. C, Rm C122, New Port Richey. WA4GDN rptrs. 146.67 (-) & 145.33(-), serving all of Pasco

Highlands County ARC, Inc. Meets 3rd Mon./monthly 7 p.m., Agri Civic Cntr, (HWY 27 So.) Sebring, FL. Rptrs: KK4LI 147.045 & KE4WU 442.350. Club Net: every Wed. on 147.045, 8 p.m. ARES Net: every Wed., 147.27 at 7:30. Web page: www.strato.net/~hamradio

Port St. Lucie ARA, P.O. Box 7461. Port St. Lucie, FL 34985. Meets 2nd Fri./monthly, St. Andrews Lutheran Church, 295 Prima Vista Blvd. Contact: Roy Cox, (561) 340-4319. www.qsl.net/pslara or 146.955-.

GEORGIA

Cherokee Capital ARS. Meets 3rd Thurs./monthly, 7 p.m., Trinity Baptist Church, 1170 Rome Road, SW (GA Hwy 53) Calhoun, GA. 146.745(-). Info: Felton Floyd, AF4DN, (706) 629-0369. www.qsl.net/k4woc

HAWAII

Big Island Amateur Radio Club. P.O. Box 1938, Hilo, HI 96721. Meets 2nd Sat./monthly, 2 p.m., Keaau Community Ctr., behind Fire Station on Old Volcano Rd., Keaau. Talk-in on 146.88 (-). Lunch, 11 a.m. Fridays, Hilo Hawaiian Hotel - Queen's Court Rest.

Hawaii QRP Club. Meets daily at World Headquarters, 8-10 a.m., Jack In The Box Restaurant, mile 2, Volcano Highway, Hilo. Contact: via e-mail: kh6b@juno.com for info.

ILLINOIS

Dupage Amateur Radio Club. (DARC). P.O. Box 71, Clarendon Hills, IL 60514. Meets 4th Mon./monthly. 7:30 p.m., Fire Stn. #3, 6015 S. Cass Ave, Westmont, IL. Net Sun., 9 p.m. on 145.25. W9DUP rpts., 145.25(-) 107.2PL, 442.55(+), 114.8PL, 224.68 (-). www.w9dup.org

Hamfesters Radio Club, W9AA. P.O. Box 42792, Evergreen Park, IL 60805. Meets 1st Fri./monthly, 7:30 p.m., Crestwood Civ. Ctr., 139th & Kostner, Crestwood, IL. Nets: Sun. (local) 0100 UTC, 28.410 MHz; Mon. 9 p.m. 146.43 S., Packet Mailbox 145.65 MHz. Info: (708) 226-1570.

Schaumburg ARC, P.O. Box 68251, Schaumburg, IL. Meets 3rd Thurs./monthly, 7 p.m., Rec. Center, Bode and Springinsguth Roads. (847) 798-5248. http://members.aol.com/ sarcradio 11/01

LOUISIANA

Baton Rouge ARC. Meets last Tue./ monthly, 7 p.m., Catholic High School, 855 Hearthstone Dr., Baton Rouge, LA. Net: 146.79MHz, 8:30 p.m. Sun. www. brac.org. E-mail: W5GIX@ aol.com.

W5GAD Jefferson ARC Inc. P.O. Box 73665, Metairie, LA 70033. Gen. mgt. 4th Thurs.; Board, 2nd Thurs.; Open House 1st, 3rd, 5th, (all) 7:30 p.m., Clubhouse, Metairie Playground, 1521 Palm St., Metairie. (504) 831-1613. Net Tue. 9 p.m. 145.37 (PL 114.8)

MARYLAND

Maryland Mobileers ARC (MMARC), P.O. Box 935, Severn, MD 21144. Meets 1st Fri./monthly, 7:30 p.m., Baldwin Hall, Generals HWY, Millersville. Info net ea. Mon. 8:30 p.m. on 146.805(-), tone 107.2 Hz. http:// www.qth.com/mobileers

MASSACHUSETTS

Quannapowitt Rad'o Assoc., (QRA) Meets 3rd Thur /month 7:00-9:00 p.m. at Wakefield MA Public Library, 345 Main St., Wakefield, MA, Sept. to June. Info: Jeffrey S. Hollis, W1CKH, (781) 944-6218.

MICHIGAN

Chelsea Amateur Radio Club, Inc., WD8IEL Meets 4th Tues./monthly, 7 p.m., Key Bank, 1478 Old Chelsea-Manchester Rd., Chelsea. Info: Bill Altenberndt, WB8HSN, (734) 475-7938 Rpt: 145.450(-).

Hiawatha Amateur Radio Assoc. of Marquette Co. P.O. Box 1183, Marquette, MI 49855. Meets 1st Thurs./monthly, 7:30 p.m., 108 Stratofort, K.I. Sawyer AFB, MI. For info contact: Richard Schwenke, N8GBA, (906) 249-3837. www.qsl. net/k8lod 11/01

MINNESOTA

St. Cloud Amateur Radio Club. Meets 3rd Thurs./monthly, 7 p.m., Radio Club Bldg., 401 4th St. N., Waite Park, MN 56387. Info: (320) 255-1410, 146.94 or 147.015 or www.wØsv.org/2/02

MISSOURI

Macon County ARC. P.O. Box 13, Macon, MO 63552. Meets last Thurs./monthly, 7 p.m., Macon R-I High Sch., rm.167. Net every Wed., 8:30 p.m. 146.805. E-mail: nøpr@arrl.net 3/02

NEVADA

Carson Valley Radio Club (CVRC). Meets: 3rd Sat./monthly, 10 a.m. (Feb., Apr., Jun., Aug., & Oct.), Hill-top Com. Church, 3616 No. Sunridge Drive, Carson City, NV. Rptr.: 147.270(+). http://www.cvrc.net. For information: Dick Flanagan, W6OLD, (775) 267-4900, or w6old@arrl.net 4/02

Frontier Amateur Radio Society, (FARS). Meets: 2nd Sat./monthly, bkfst. mtg. 9 a.m., Country Inn, 1990 West Sunset, corner of Valle Verde, Henderson, NV. Info: J. Frye, NW7O, (702) 456-5396 or B. Scan- borough, WA6ASI, (702) 269-9551 8/01

Sierra Intermountain Emergency Radio Assoc., (SIERA). Meets 2nd Thurs./monthly, 7:30 p.m., Minden Med. Cntr, Hwy 395 & Ironwood Dr., Minden, NV. Info: George Uebele, WW7E, (775) 265-4278, ww7e@ arrl.net, Rpt. 147.330 MHz. 1/02

NEW HAMPSHIRE

Port City ARC, (PCARC), W1WQM. P.O. Box 1587, Portsmouth, NH 03802. Meets 1st Wed./monthly (Sept.-June), The Edgewood Ctr., 928 So. St., Portsmouth. Rptr. 146.805(-) PL 127.3, 110.9, 88.5.

NEW JERSEY

Bergen Amateur Radio Association, (BARA). P.O. Box 304, Hackensack, NJ 07601. Meets 1st Sun./monthly, New Milford Elks Lodge, Patrolman Ray Woods Dr., New Milford, NJ 07646. Nets: 28.350 Mon. 9 p.m., 146.79(-) 9 p.m. Wed.

Jersey Coast DX Assoc. (JCDXA).
P.O. Box 357, Bradley Beach, NJ
07720. Meets 4th Wed./monthly, 7:30
p.m., MARS Station on Ft. Monmouth,
Rt. 35 & Tinton Ave., Eatontown, NJ.
Info: Mike, KC2Q (732) 774-1095
kc2q@arrl.net 3/02

The Garden State Amateur Radio Assoc., (GSARA). Meets 1st & 3rd Wed./monthly, 8 p.m., MARS Bldg., Fort Monmouth, NJ. Info: B. Buus, W2OD, (732) 946-8615. 2/02

NEW YORK

Amateur Radio Association of the Tonawandas, (ARATS). P.O. Box 430, No. Tonawanda, NY 14120. Meets 3rd Tues./monthly (except July & Aug.), 7:30 p.m., Sweeney Hose Co., 499 Zimmerman St., No. Tonawanda, NY. Talk-in: 146.955(-) rptr. W2SEX. 2/02

Hall of Science ARC. P.O. Box 150131, Kew Gardens, NY 11415. Meets 2nd Tue./monthly, Hall of Science Bldg., 47-01 111 St., Flushing Meadow Park, 7:30 p.m. Info: Voice mail (718) 760-2022. 3/02

PROS, Pioneer Radio Operators Society. Meets 1st Wed./monthly, 7 p.m., Sardinia Town Hall, Savage Rd., Sardinia, NY. K. Moon, N2IFG, (716) 652-0923. 8/02

South Towns Amateur Radio Soc. (STARS). Meets 1st Thurs./monthly, 7 p.m., Hamburg Youth Cntr, Prospect Ave.Hamburg, NY (exc. Jul, Aug @ NIKE Base). Info: N2TEZ, 120 University Ave., Depew, NY 14043. Rpt: WB2ELW 147.090 (+) PL107.2 www.WB2ELW. com. 2/02

Suffolk County Radio Club. P.O. Box 283, Shirley, NY 11967. Meets 3rd Tues./monthly, 8 p.m., Bohemia Rec Ctr., Ruzicka Way, Bohemia, NY. Contact: Leskb2zhf@aol.com. Club info: (631) 399-4041

Westchester Emergency Comm. Assoc., (WECA). Meets 2nd Mon./monthly, 7:30 p.m., Westchester County Ctr., White Flains, NY. Contact WECA INFO LINE (914) 741-6606 for details. Talk-in WB2ZII/R 147.06(+) PL 114.8/2A. 11/01

Yonkers ARC, (YARC). Meets 2nd Sun./monthly, 10 a.m., 1st Pct., Yonkers Police Station, E. Grassy Sprain Rd., Yonkers, NY. Info: P.O. Box 378, Centuck Sta., Yonkers, NY 10710. (914) 963-1021. 146.665(-), 440.150(+). 2/02

NORTH CAROLINA

Randolph ARC. Meets 4th Tues./monthly, 7 p.m., Asheboro Pub. Lib, NC, Worth & Cox St.,downstairs mtg. rm. Talk-in KJ4AV Rpt., 147.255+. Info: Butch, WS4H. (butch@atomic. nit), or John, W4ZJN, (336) 498-1113. Net. Mon., 8 p.m. 147.255+ Rpt. 6/02

Stanly County Amateur Radio Club. Stanfield, NC. Meets 4th Thurs./monthly, 7 p.m. Talk-in 146.985(-) for location. Wed. net 9 p.m. 146.985(-). Fri. tech net 9 p.m. 147.390(+). Ph: (704) 888-4815. www.mdsmm.com/scarc/7/02

OHIO

Ashtabula County ARC. Ken Stenback, W8KS (964-7316). County Vo-Ed School, Jefferson, OH. Meets 3rd Tue./monthly, 7:30 p.m., County ptr., 146.715(-).

Clyde Amateur Radio Society (CARS). Meets 2nd Tue./monthly, 7:30 p.m., Municipal Bldg., Clyde, OH 43410. NF8E rptr. 145.35(-) and 442.625(+) MHz. Net Sun. 9 p.m. Info: E. Remaley, KA8CAS. 1/02

Van Wert ARC, Inc. Meets 1st & 3rd Sat./monthly, 8 p.m., Van Wert County EMA Office, 1220 Ridge Rd., Van Wert, OH 45891. Call-in: 146.25/.85. www.redrivial.com/w8fy 7/02

PENNSYLVANIA

Mercer County ARC, W3LIF. P.O. Box 996, Sharon, PA 16146. Meets 4th Tue./monthly, 7:30 p.m., Shenango Valley Med. Ctr, Farrell, PA. Net, Thurs. 9 p.m. on 145.35(-) W3LIF, Digi. 147.585.

TEXAS

Tri-County ARC for Parker, Tarrant & Wise Counties, (WC5C). Meets 1st Sat./monthly, 6:30 p.m., El Paseo Restaurant, Stewart St. at Main, Azle, TX. Info: kb5ylg@yahoo.com or (817) 291-5816 2/02

VIRGINIA

Mt. Vernon ARC (MVARC). Meets 2nd Thur./monthly (except Dec.), 7:30 p.m., !NOVA Mount Vernon Hospital, 2nd floor, ENG Conference Cntr. Rm. Info: Bob, KT4KS, (703) 765-2313. E-mail: mvarc@juno.com. Web: www. mvarc. org/. Net: Tue., 8:30 p.m. 146.655-. 10/02

Ole Virginia Hams ARC, (OVH). Meets 3rd Mon./monthly, 8 p.m., Northern Virginia Electric Coop. Tech Cntr., 5399 Wellington Rd., Gainesville, VA. Info: Mary Lu, KB4EFP, (703) 369-2877. http://www.qsl.net/olevahams 3/02

Southern Peninsula Amateur Radio Klub, (SPARK). Meets 1st Tue./monthly, 8 p.m., Sal. Army Bldg., Big Bethel Rd, Hampton, VA. Info: Dave Jarrett, W9RCC, (757) 713-5212 or e-mail: w4qr@arrl.net. Talk-in on 444.55+ PL167.9

Virginia Beach ARC. Meets 1st Thurs./monthly, 7:30 p.m., Virginia Wesleyan College, Wesleyan Drive off North Hampton, Village 2 Commons, Graybeale Bldg., Virginia Beach, VA

WEST VIRGINIA

Tri-State Amateur Radio Association. Meets 3rd Tues./monthly 7p.m., Museum of Radio & Tech. 1640 Florence Ave., Huntington, WV 25701. (304) 525-8890. 8/02

WYOMING

University ARC. Meets 1st Tues/monthly, 7:30 p.m., Univ. of WY, Engineering Bldg., rm. 2100, Laramie, WY. 146.01/61.



Worldradio wants to be your club's best friend, so we've put together a topnotch package that can really give your club a big boost.

For only \$5.42 per month we will give your club members the following:

- 1. CLUB BULLETIN EX-CHANGE: Put Worldradio on your club bulletin mailing list and we will, in exchange, send your bulletin's editor a copy of Worldradio every month.
- 2.SUBSCRIPTION
 PRIZES: We'll send your club
 EIGHT one-year Worldradio
 subscription certificates.
 You'll have a great raffle prize
 to sweeten the pot at your
 club meetings.
- 3. VISIT YOUR LOCAL RADIO CLUB listing. Send us the name of your club, meeting place address, date and time, inviting amateurs in your area to join your club's activities.
- 4. HAMFEST PRIZES: If you put on a hamfest, send an announcement for us to include in our Hamfest column. We'll send you some Hamfest prizes (one-year Worldradio subscriptions) for your prize drawing.
- 5. WORLDRADIO SPE-CIAL CLUB TREASURY SWEETNER: Make money for you club treasury by selling Worldradio subscriptions (new or renewal) to your club members.

For more details call or write:

Club Liaison
Worldradio

2120 28th Street Sacramento, CA 95818 (916) 457-3655 www.wr6wr.com

Contributing to the quality of life

am writing this just after coming home from the monthly meeting of the Florida West Coast DX Ring, where we completed planning for our annual Field Day excursion to Clearwater Beach. And that led me to wonder how many QCWA chapters make any effort to participate in the ARRL-sponsored Field Day events scheduled for the last "full" (Saturday and Sunday) weekend of June: And if not, why not? The charter of the QCWA reads, in part, that we are "a non-commercial association of radio amateurs organized for the promotion of interest in Amateur Radio communication and experimentation, for the establishment and advancement of the radio art and of the public welfare."

Well, now, promoting interest in Amateur Radio communication as well as establishing and advancing public welfare fit like hand and glove into Field Day, do they not? I tend to think so, which has stimulated my interest in just how many of our QCWA Chapters, as Chapters, normally participate in this opportunity to advance their own

emergency field operation skills and hopefully advertise their commitment to the welfare of the body politic.

Let me tell you a true story about a couple of folks that few of us, if any, remember anything about. I speak of Dr. Selman Waksman, the discoverer of the wonder drug Streptomycin, and of Dr. Charles R. Mott, CEO of the YMCA of the USA who was responsible for directing the resettlement of over a hundred thousand homeless refugees during the years of World War II. Dr. Waksman received the Nobel Prize for Medicine and Dr. Mott the Nobel Prize for Peace in 1945, the first Nobel Awards ceremony after World War II, in Stockholm, Sweden.

The Master of Ceremonies at the Nobel Awards banquet was King Gustav of Sweden. Seated on one side of him was Dr. Waksman, and next to him was Dr. Mott, who often spoke of the events and the conversations at the table that night. The literati of the world were gathered at the table that night to celebrate the resumption of the Nobel Awards after five long years of international conflict.

The great names in medicine, science, government, the humanities and the

arts had gathered there. In addition to King Gustav of Sweden, there was King Hakon of Denmark and King Christian of Norway, along with seven Presidents or Prime Ministers of other nations of the world. This banquet and ceremony truly represented a glittering array of power, of prestige and international status.

During the meal, King Gustav turned to Dr. Waksman and asked him, "Don't you think that one day, you will look back upon this awards banquet and ceremony as by far the most memorable event in your life? Will not the memories of the award you are receiving this evening remain with you always as a mark of the success you have achieved in the field of medicine?"

Dr. Waksman looked troubled as he listened to the King. But then after a few seconds pause, he slowly and thoughtfully answered King Gustav. "Yes,"Dr. Waksman replied, "I shall always cherish this day as an important day to remember. But I want you to know that yesterday is a day that I will remember even more. Yes, yesterday is definitely, by far, the more memorable for me of these two days here."

The King was surprised, and said to Dr. Waksman, "How so? Why yes-



Missionary Net • 14.280 MHz, Mon. through Fri., 2 - 3 Eastern Time (1800-1900 UTC DT, 1900-2000 UTC ST) Annually 15,000 check-ins, 8,000 traffic

Membership • 500 amateurs in 30 countries • Directory & bi-monthly newsletter

If monitoring the net, please come in & join us. You will be cordially received.

For further information, write:
Sr. Noreen Perelli, PBVM, N2NP
719 Tilden Street • Bronx, NY 10467
KC2KE@worldnet.Att.Net



terday? There was no program then, and there were no ceremonies held. We simply met for an hour or so to make sure that all those who were to receive their awards tonight were introduced to one another. Why would you remember some introductions as being more important than tonight, when you will be presented the Nobel Prize for Medicine, and you will be the recipient of the accolades of over 200 of the world's greatest achievers?"

Dr. Waksman's answer was something very much worth hearing. "Your majesty," Dr. Waksman replied, "It is true that yesterday we first met one another, along with all of the other nineteen Nobel Prize Laureates. But it was during that time, as we stood around chatting with one another, that a pretty little nine-year-old girl and her father came up to me and introduced themselves. The little girl held five rosebuds in her hand, which she gave to me, and said, "these roses are for you, Dr. Waksman. I bought them with the candy and ice-cream money I have saved, because my daddy told me that someday, I might meet you here and I could thank you then for saving my life."

"The father then spoke up and explained, "Dr. Waksman, those five roses have a very special meaning for my little girl. At the age of four, she was dying from hemo-toxemia, and there seemed to be no hope for her. But then, just in time, we learned that you had discovered Steptomycin, which we were able to give to her, and it saved her life. This week she is nine years old, so that every rose-bud she has given you represents a year of her life — a year that she would not have lived had it not been for you and your work and

your discovery."

Then Dr. Waksman concluded, "And that, your majesty, is what happened yesterday that makes yesterday so important for me to remember. A little girl brought me five roses, and by doing so, she reminded me that no work, no discovery, and no award means anything unless it somehow contributes to improving the quality of life."

Field Day, along with many other public service programs and events in which QCWA members, and some chapters, participate is in keeping with Dr. Waksman's discovery that no work, no discovery, and no award means anything unless it contributes to improving the quality of life. Advancing the public welfare, making a positive difference in the communities in which we live, and setting an example of perfection in operating skills are all things within the reach of each of us, both individually and collectively. For after all, are we not the Proud, the Many, the Elite, the Innovative and the Inquisitive — the QCWA? Of course we are! And if there is anyone reading this column who does not belong to the QCWA and was first licensed by the FCC 25 years or more ago, and who would like to be one of us, simply send an e-mail message to our General Manager, Jim Walsh, at QCWA Headquarters: jwalsh@teleport.com, drop him a snail-mail note at 159 E. 16th Avenue, Eugene, OR 97401-4017.

Meanwhile, don't forget the 8-day QCWA-sponsored Amateur Radio Cruise to the Caribbean Islands on 27 October - 4 November 2001. This is my last reminder that you do not have to be affiliated with the OCWA to participate. The cruise is open to all, and if you are a radio amateur or spouse/widow then you qualify for the special cruise discount. Contact Larry McAlvey, WA9JMO at 262/639-7327 or by e-mail to: wa9jmo@wi.net. Or call the White Travel folks at 800/547-4790 and reserve your stateroom without delay.

That's it for this time, friends. Please remember that it is what we give to Amateur Radio, its licensees and its affiliated groups, not what we take from them, that has the potential of improving the quality of life and contributing to the public welfare in our communities.

- Alan Pickering, KJ9N, our QCWA columnist can be reached by sending snail mail to: 620 Gran Kaymen Way, Apollo Beach, FL 33572, or by e-mail at: kj9n@juno.com.

INNOVATIVE (NO-TUNE) WIRE ANTENNAS Discover Them - Simple, Easy to Build - Save Money
135 ft - THE HOLY GRAIL 160 thru 10 meters
67 ft - THE HOLY GRAIL (lite) 80 thru 10

NEW 41' Mini-Grail kit 80 thru 6
35 ft - SMITHDOM Short 40 thru 10
100 W balun transformers for Windom or Smithdom antennas

For Additional Information on all products Send Name, Address, Call and #10 SSAE to: SMITHDOM PRODUCTS LLC 255 N OLD MANOR WICHITA, KS 67208



(800) 522-2253 (305) 899-0900

FAX (305) 895-8178

North Miami, FI Sao Paulo, Brasil

http://www.nemal.com

E-mall: info@nemal.com



NORM'S ROTOR SERVICE 5263 Agro Drive • Frederick, MD 21703 (301) 874-5885

We rebuild rotors, plus: Rebuilt Rotors for sale • Parts for U.S.-built rotors • We Buy Used U.S. Rotors/Controls for CASH!

NORM JEWELER, W3NRS

THE BIG DK-DX

Don Johnson, W6AAQ's 3.5 — 30 MHz mobile antenna. manufactured by:

H. Stewart Designs P.O. Box 643 • Oregon City, OR 97045 (503) 654-3350

See Worldradio, Oct. 1994 issue.



ELECTRIC RADIO

celebrating a bygone era

In our 12th year, ER is a magazine for those who are interested in vintage ham/military/ tube-type gear, AM operation and the history of Amateur Radio. Largest vintage-only classifieds anywhere! \$3 for a sample copy, refundable towards a subscription. ER, 14643 County Road G, Cortez, CO 81321

POWERPORT VX-5

Leather pouch with pocket on back for antenna tip & sturdy clip. Many other pouches available. Call us!

800-206-0115 24/7 w.powerportstore.com

CUTTING EDGE ENT. 620 Highland Ave. Santa Cruz, CA 95060



CUBEX QUAD ANTENNA CO.

40 YEARS OF QUALITY ANTENNAS SKYMASTER H.F. KITS FROM \$295.95 PRE-TUNED H.F. QUADS FROM \$439.95 Quad Antennas From 2 Through 40 Meters 2 METER 4 EL. PRE-TUNED \$49.95 + \$&H 6 METER 2 EL. PRE-TUNED \$69.95 + \$&H

BEST PRICES ON DOUBLE BRAIDED "DACRON" ANTENNA ROPE visit our new web site http://www.cubex.com

Write Or Call For Free Catalog 228 HIBISCUS ST. • JUPITER, FL 33458 (561) 748-2830 • FAX: (561) 748-2831

The Worldradio SD-20 antenna support

Mike Greenfield, N9JIY

ecently, I saw the World-radio ad for the "SD-20 Antenna Support", -- incredibly strong, ...compact at 47 inches, extends to 20 feet, etc. I had the 20 bucks. Soon I had an SD-20.

It IS lightweight, ...less than 2 lbs. It's made of very smooth, tapered, thinwall, black tubular material. Six sections extend and friction-lock at 20ft total length. Collapsed, with the end caps on, it's just 46.5 in long. It seems to scream, "Make me into a compact vertical antenna of some kind".

The top five sections extend to 15.67 ft,almost a 20-meter quarter-wave (234/15.67=14.9mHz) I didn't want to spread ground radials at a populated site. What to do?? I went to my computer and asked a piece of software this question: "What coil at the diameter of the SD-20 bottom section would make a 44-inch-long antenna resonant at 14.0MHz?" This might match the top longer section, making an odd sort of vertical dipole? NO RADIALS NEEDED! Worth a try.

1. Measured down the bottom section 18.75in and close-wound 30 turns of 22 guage coil wire.

2. Left leads on the coil long enough to reach past each end.

3. Painted the coil with lots of clear

nail polish to stabilize it.

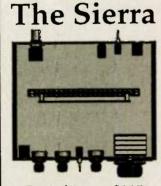
4. Fastened the leads up and down the section with packing tape rings.

So, here's what I did on the bottom section with some 22 ga enamel magnet wire

I left the wire loose at the top six inches of the section, and sanded the insulation off it.

Next, I got a 1-inch copper pipe union at a hardware store and split it lengthwise. I wedged the union open to the diameter of very top of the SD-20 bottom section, greased it inside with conductive grease, and slipped it over the very end of the SD-20, AND over the end of the (now) bare wire lead. I kept the wire pulled tight as I slipped the union over it. I eased the wedges out of the union and let it clamp tight on the end of the SD-20 AND the wire lead. I put more tape loops over the wire

For info, the union forces the SD-20



Basic kit \$215 w/6 bands \$369 Call or write for catalog



The Sierra is the only compact, low-current, multiband QRP transceiver available. It uses plug-in modules to cover all HF bands. There's no chassis wiring—all components, controls and connectors are mounted on a single board. The superhet receiver has 5 poles of crystal filtering, RIT, and AGC, yet only draws 35mA! Power out is 2 to 3 watts, with fast QSK and no relays. The prototype Sierra is featured on the cover of the 1996 ARRL Handbook, and lab test results can be found in the June, 1996 issue of *QST*.

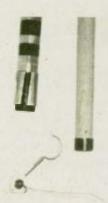
New KC2 LCD Counter/Keyer/ S-Meter/Wattmeter \$75

The KC2 is our newest QRP accessory, packing a 4-digit freq. counter, memory keyer, bar-graph S-meter and digital wattmeter into a 1"H x 3"W module! It's the ultimate add-on accessory for the Sierra and other QRP rigs. Draws only 7mA.

Wilderness Radio

P.O. Box 734, Los Altos, CA 94023-0734 (650) 494-3806 http://www.fix.net/jparker/wild.html





end a little out-of-round, but this doesn't hurt anything. The grease is the stuff electricians use to make aluminum electrical connections more conductive.

To connect coax to the antenna, I "captured" a coax female bulkhead connector in the twinlead loop of a snap-on TV twinlead standoff. Then I bent the snap end open enough to clamp over the copper union. I extended

the SD-20 full length, then ran wire down from the extended tip of the SD-20, and alligator-clipped it to the connector center. I made eight long turns around the SD-20 on the way down from the tip. Coax from the connector to my tuner, and I was on the air. 20M was easy. Other bands took quite a bit of tuner-fiddling. I ran only 35watts.

The pictures give an idea of what it looks like assembled.

Supporting the antenna — I use a 4 ft x lin wood dowel, padded out with rings of friction tape to wedge inside the SD-20 lower section, leaving about 18 in of dowel exposed. This 18 in is poked into a hole of some kind. The antenna is very light. It doesn't catch much wind. It doesn't take much to hold it up, and if it falls over it probably won't do much damage. Just the same be careful of other folks and electrical hazards, like good hams always do.

RIGblaster

rig to sound card interfaces

RIGblaster and a computer

the powerful replacement for old expensive adapters or TNC's.

PSK31 MFSK MT63

RTTY (FSK or MFSK)
Club annoucements
Repeater controller
CW (key or MCW)
Contest Voice Keyer
Voice or CW MS

SSTV Packet-/

Packet-APRS Hellschreiber AMTOR

Remote Base



New PLUS M8, M4, RJ

\$119.95 \$89.95



NOMIC \$34

\$34.95

plus shipping & handling

http://www.westmountainradio.com West Mountain Radio de N1ZZ and K1UHF

18 Sheehan Avenue, Norwalk, CT 06854 (203) 853 8080

Worldradio does it again!

SD-20

Antenna Support

O Incredibly strong lightweight carbon-fiber composite.

O Will support the ends of a dipole or center of a "V" (with some guying).

O Six frictionlocking sections extend from 47 inches to 20 feet.

O Light weight, less than 2 pounds.

Still only



(plus S/H)

To order your SD-20

Send \$19.95 plus \$5.00 S/H (CA add \$1.50 tax)

to:

Worldradio

2120 28th Street Sacramento, CA 95818

Or call to order by charge cards:

(916) 457-3655







From the mouths of babes

or the past 14 years I have had the honor of moderating the Youth Forum at the Dayton HAMVENTION. All of the children through the years have proven to be young adults we can all be proud of, in the way they conduct themselves personally, and in the hobby and service of Amateur Radio.

This year was no exception to the rule. Each and every child who gave a presentation made a big impression on the standing room only audience there to show support for youth in Amateur Radio. At this point I'd like to extend my thanks to the audience who were attentive, responsive and extremely courteous to all the speakers. As a forum moderator I can tell you that the audience plays a big role in making the youngsters feel comfortable. It's not easy for a child to get up in front of a big group of people and to do a presentation that they've worked very hard on for several months.

Laugh, & the world laughs with you...

the best of BEASLEY by Bob Beasley, K6BJH

A look at Amateur Radio's light side — whimsical cartoons from the pen of Bob Beasley. Great gift idea, too!

\$8.00 plus \$2.00 S&H. CA residents please add \$.60 tax.

> WORLDRADIO BOOKS P.O. Box 189490 Sacramento, CA 95818

The first speaker was Crystal Melhom, W9IOU, who is 15 and comes from Illinois. Her talk was about "Promoting Amateur Radio To Young People." Crystal comes from an all Ham family, which is the most common way for kids to get introduced to Ham radio. She and her dad participate in many activities like DXing and foxhunting through the organized efforts of their local radio club.

They both believe strongly that we should all use the Internet to help promote the hobby to children. They suggest that local clubs should have their own web sites and advertise the activities they are sponsoring. It's important to help build the reputation of the club as a good place for children to go to have fun and to do interesting things.

Zane Wruble, W2YL, is 12 years old and is from New York City. Zane's topic was "Getting Awards." She's extremely qualified to speak on this topic since she's gotten most of the awards herself already. Several weeks before Dayton she received her DXCC. For Worked All Zones she has worked 34 of 40 with 33 confirmed. Zane got a good laugh from the rest of us when she explained that "School has slowed her down." We wish her good luck with her contesting. I know we'll be hearing more from this Extra Class young lady.

Next up from the BARC Jr. group (who are always a wonderful presence at the Youth Forum) was Benjamin Arthur, KCØISG, who is 10 years old. Ben gave a terrific talk entitled, "How I Got My Ham Radio License." He delighted the audience with his anecdotal account of how his all Ham family kept challenging and encouraging him until he finally got his Technician Class license. At the end he pointed out to all of us that he was only nine years old when he got his ticket, good going Ben!

Jonathan Troup, KØDE, is 13 years old and is also from the Boulder, Colorado group. He holds an Extra Class license and gave his talk on "Elmering To Kids." I found this talk particularly interesting, because it's a

The subtle mark of elegance.....



Durable navy blue poplin caps with the attractive Worldradio logo imprinted in light blue are now available for a cost of \$7.00 + \$2.00 shipping & handling. *

The caps coordinate perfectly with the world-famous Worldradio mugs (see page 70) and mark the wearer as a person of discriminating taste! Caps are adjustable and come complete with a navy decorative braid across the front - truly a class item!

Order these fine caps from

Worldradio P.O. Box 189490 Sacramento, CA 95818

*CA residents please include \$.53 for the privilege of living in the Golden State. concept we don't often think of utilizing. Using bright, articulate youngsters to teach other kids is a super idea. I asked him if there were any problems with the other children accepting his role, and he told us "absolutely not!" His final words to the audience were, "Remember, if a kid can Elmer, so can you."

The next young lady wowed the audience with her very dramatic presentation about the 14'er Event. Kristin Wilson, KCØINX, is 12 years old and is from BARC Ir. too. This event promotes the combining of Amateur Radio with mountain climbing to "reach new heights." What made her presentation so exceptional was that she showed us what it was like to assemble the antenna in the event rather than just talk about it. I continue to be impressed with children like Kristin who add so much to our hobby and can share it with the rest of us in such an entertaining manner.

Patrick Clark, KC8BFD, is 16 years old and is from West Virginia. This was Patrick's second time doing a presentation at the Youth Forum. He's a young man who is truly dedicated to the service aspect of Amateur Radio. He did a power point demonstration talking about APRS and the benefits

in emergencies. Patrick is also from a Ham family and is definitely a credit to his parents and a great representative for all the hard working Ham radio operators who volunteer their time and expertise to help others.

I can't say enough good things about the children who participated in the 2001 Youth Forum. They were all truly wonderful!

I'd also like to extend my personal thanks to all the folks who continue to support my program by donating terrific door prizes for the kids. ICOM was in there as usual, donating a beautiful 2-meter rig. MFJ provided many radio accessories and kits. Ralph Irish, WA8GDT, from Utica, Michigan along with his radio club added many donations for the kids, and has always attended the Youth Forum to show his support. Worldradio was generous in donating a life subscription as a gift. Ten-year old Stephanie was presented with the gift by Rick McCusker, WF6O. She is presently studying for her license. Good luck Stephanie.

It's not too early to be on the alert for articulate and enthusiastic young people who would be interested in appearing at next year's Youth Forum. Please have them contact me at P.O. Box 131646, Staten Island, N.Y. 10313-0006.

QslKit at home Printing • QslCardboxes • DXCC, States Index Dividers • Contest Keyboard Overlays • DX Return Envelopes • DX Edge • Vinyl QSL Wall Holders • Laminated World Projection Maps • CALLSIGN BADGES • License Frames • Hats • Mugs • HAMSIGNS • and more!

HamStuff by W7NN www.HamStuff.com

10624 Zephyr Lane SW • Olympia, WA 98512

Need Ham Radio Equipment Insurance? HRIA

www.hamradioinsurance.com 800-545-8881

P.O. Box 201 · Canonsburg, PA 15317



Real Hams Do Code

Move up to CW with CW Mental Block Buster III.
Succeed with hypnosis and NLP. Includes two (2)
Tapes and Manual. Only \$27.95 plus \$5.00 S/H US—FL add \$2.02 tax.

800-425-2552

www.success-is-easy.com
Success Easy • 123 NW 13th St., Ste 313 • Boca Raton, FL 33432

MOBILE COMM. GUIDE & CRUISER'S RADIO GUIDE

Great books for mobile/boating! At major ham dealers/bookstores. FMS Services • 2539 S. Fairplay Way Aurora, CO 80014 • (303) 695-8715

Roger KØYY • fmsservices@home.com

Inside Amateur Radio

The following story has been excerpted from Inside Amateur Radio, by the late Lenore Jensen, W6NAZ. The book can be purchased from Worldradio Books, P.O. Box 189490, Sacramento, CA 95818. Price is \$9.00 plus \$2.00 shipping and handling. CA residents please add 70¢ sales tax.

Two Marys

o amateurs, their call signs are almost as important as their names. Mary Weddle, WC4T, found a new friend because of it. "When I finally met her at the Charlotte (North Carolina) Hamfest, it was the culmination of a curious search. I came away with a dear new friend.

"It all started about a year ago, when one of our Charlotte traveling-salesman Hams squawked a scratchy signal into one of our local mountaintop repeaters. 'Hey, Mary, I've just left the Roanoke (Virginia) area, and there's a lady up there with the same name as yours and almost the same call.'

'Oh sure, I replied, thinking it was a joke. But he went on, 'Her name is Mary Waddell and her call is WC4A; your name is Mary Weddle and your call is WC4T; now don't you think that's an amazing coincidence?'

"I did. Well, later at the hamfest, someone tapped me on the shoulder. I turned around to see a petite, attractive brunette lady. It was immediate recognition. Before she could tell me, I knew just who she was!"

Visit us on the web at: www.wr6wr.com

Webster

Since 1974 Your Factory
AUTHORIZED TITLE DISTRIBUTOR

115 BELLARMINE, ROCHESTER, MI 48309 Toll Free 800-521-2333 Fax: 248-375-0121

THE QSL MAN®

Since 1979 Quality Service and Value

Free samples
Wayne Carroll, W4MPY
P. O. Box 73

Monetta, SC 29105-0073 Phone or FAX (803) 685-7117 URL: http://www.qslman.com Email: w4mpy@qslman.com

A regen companion for the Tuna Tin 2

tattered edition of the "How to Become a Radio Amateur" from 1963 held the blueprint for the magic that would become my first QRP homebrewing experience in the mid-'60s.

The book contained "full information on setting up your own Amateur Radio station," offering a couple of circuits for simple gear to get you on the air.

A schematic for a single tube oscillator/transmitter using a 6DQ6A beam power amplifier tube was modified at my Novice station, WN1DWL, to incorporate a single 807 pumping out a mighty 5 to 10 watts. That was ORP at the time. An abandoned TV set was my "parts house."

The receiver featured in that classic ARRL publication was a two-tube regenerative with a pair of 6AQ5s one tube for the detector; the other for

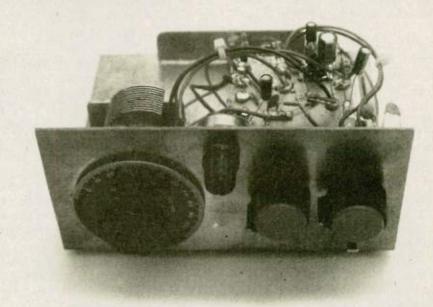
audio amplification.

While parts and chassis from both the 'DWL transmitter and receiver were cannibalized many years ago for other homebrew projects, good memories linger to this day of those bare-bones scratch-built projects.

The resurgence of Doug DeMaw, W1FB's, classic 1976 Tuna Tin-2 milliwatt CW transmitter has brought a palpable wave of nostalgia to QRP that has not been lost on this operator.

Using the TT-2 in concert with a Kenwood TS-140 receiver at KI6SN, though, just hasn't felt right. That uncomfortable clash of old vs. new got me to thinking: Isn't it about time to again experience the joy of Edwin Howard Armstrong's remarkable invention - the regen?

It took only a few moments of grazing on the Internet to find a ton of regenerative receiver circuits. There are dozens of tube-based designs, but with a transistorized transmitter in the TT-2, it seemed fitting to keep things symmetrical. It didn't take long to find a solid state regen design that matched the TT-2's stark simplicity.



The KI6SN version of Charles Kitchin, N1TEV's, Simple Regen Radio is a great companion to the classic Tuna Tin-2 40-meter transmitter.

Several builders on the QRP Internet mail group QRP-L had been posting messages about their satisfaction with a neat little circuit designed by legendary regenerative aficionado Charles Kitchin, N1TEV. With a 2N2222 RF amplifier, a 1N34A diode detector and LM386 audio amplifier, it was the kind of circuit that could be a fitting companion to the famous transmitter in the tuna fish can.

A full article titled "A Simple Regen Radio for Beginners" popped up on the Internet at: www.arrl.org/tis/info/pdf/ 0009061.pdf (You'll need ACROBAT READER to view it). If you can't get to it, drop me a line and I'll get you a copy of the schematic one way or another.

The receiver had been featured in the September 2000 edition of QST magazine. QRPers on the Internet were applauding its simplicity and utility as a short wave receiver. From the accolades it was receiving on the mail group, I suspected it might work nicely as a QRP station receiver as well — with the TT-2 in tow.

For more meticulous on-air work, Kitchin suggests adding a fine-tuning

circuit to the Simple Regen Radio incorporating a single potentiometer, two capacitors, a resistor and a diode. That seemed like a logical way to go, given the broad spectrum the receiver would cover via a 150 pF main tuning capacitor - roughly 4 to 10 MHz.

The KI6SN version was built using a combination of "Manahattan" and "ugly" construction. A small piece of double-sided printed circuit board served as the foundation for the radio. For convenience it was mounted on top of the main tank coil, which in this version is wound on a plastic 35mm film container. With the exception of the 150 pF tuning capacitor, all of the parts for the receiver are available from RadioShack. The radio runs off of a 9-volt battery that will give the operator many, many hours of listening

It took only a couple of hours to build this radio from the ground up. I fashioned a chassis from double-sided PC board, leaving generous room on the front panel for main tuning, fine tuning, regeneration and audio controls as well as an ON/OFF B+ switch and a headphone jack. In a way, it was looking

To subscribe call: 1-877-472-8643

a bit like the simple receivers I'd seen pictured in previous editions of "How to Become a Radio Amateur."

Frankly, after getting a running start using several small "Manahattan" PC island pads and a few "ugly" techniques, I was amazed by how quickly this circuit can come together. In a few blinks it was time to pop in a fresh 9-volt battery and see what this little radio could do.

After plugging in a pair of Walkmanstyle headphones and connecting my 40-meter dipole, the power switch was thrown. Bonsai! The dulcet tones of the studio announcer at KPRO AM 1570 came blasting through. Sweeping the main tuning capacitor across its range gave no discrimination to the received KPRO signal. It was all KPRO, all the time. The Simple Regen Radio was being swamped by RF from the commercial station, whose phased four-vertical antenna array is only three miles west of me. I was thinking for a time that there was no hope of recovery. The front end of the Kitchin regen just was no match for KPRO.

Disparing a bit, I reviewed Kitchin's original article. "You can receive dozens of international shortwave broadcast stations at night, even indoors, using a

39-inch whip antenna."

In this configuration could a 39-inch antenna be preferable to a half-wave 40-meter dipole? It was worth a try. I grabbed some hookup wire, measured a piece about the length of my arm and alligator-clipped it to the Simple Regen Radio's antenna terminal.

Instantly the mind-numbing KPRO signal disappeared and the shortwaves came alive. I was hearing the BBC from London in one place. Tuning a bit to the left was WWV at 5 MHz. Sweeping up to the other end I found WWV at 10 MHz. Wow. Amazing how sensitive regenerative receivers can be - with only a whisp of an antenna.

When reaching for the regeneration and tuning controls I noticed a slight shift in frequency. This is caused by what seasoned regenerative users know as "hand capacity." Putting a clip-lead between the receiver's chassis and

ground took care of that instability, though. Now we were cooking.

It wasn't hard to find the 40-meter band. Gently turning the main tuning capacitor, there was a hot spot of SSB activity. A slight move to the left put us right in the middle of the CW portion of the band.

At this point I was thankful to have put in the fine-tuning circuit. It would have been almost impossible to use this radio for QRP CW work without it. Indeed, once the main tuning capacitor is set for the general area of the band you want to tune, the fine tuning potentiometer then refines the tuning sweep to about 30 KHz - a very comfortable range for brass pounding operations.

And that 39 inch antenna? It's all this little receiver needs. W1AW's code practice session pounds in to this West Coast locale S-9 using the Simple Regen Radio. I've copied 40-meter Japanese CW stations with ease in the early morning hours. And Eastern U.S. coast stations are loud and clear at night here, too.

Since the Simple Regen is self contained with its own antenna, using it with the Tuna Tin-2 eliminates the need for T/R antenna switching. The two little radios make a great pair.

Calling CQ in mid-morning on 4 July brought a response from Barry Pfeil, K3KOA, in Mountain View, CA more than 400 miles northwest of me near San Francisco. He was S-8 on the Simple Regen Radio - with the yard-long piece of hookup wire for its antenna. Barry gave my 500 milliwatts an S-7, through some pretty heavy QSB. We chatted for about a half hour. I was able to fine tune to either side of his transmitting frequency to avoid a bit of QRM. 'KOA was solid copy and quite loud at KI6SN about 65 miles east of Los Angeles.

If you're looking for a "period piece" receiver as a companion to the Tuna-Tin 2, N1TEV's Simple Regen Radio is a wonderful addition to the minimalist QRPer's operating position.

- Richard Fisher, KI6SN, our very low-powered columnist can be reached via email: ki6sn@aol.com.

W9DXCC convention set for September

he 49th Annual W9DXCC convention will be 14-15 September at the Holiday Inn, Rolling Meadows, Illinois. ARRL RF



PADDLETTE™

An affordable. miniature, iambic paddle key (1" x 13/4", 1.5 oz.) and knee mount. Rugged and reliable. with only one

moving part per paddle. Strong magnetic hold down with 2 mating adhesive-backed magnets. Uses 56 pitch self-locking adjustment screws and includes a straightkey adaptor. Ideal for mobile and backpacking QRPers.

\$53.50 key & mount; \$44.50 key only. Add \$3 for Shipping and Handling Send Check or M.O. to: PADDLETTE CO. P.O. Box 6036 • Edmonds, WA 98026 (425) 743-1429 • KI7VY bham379627@aol.com www.paddlette.com

Safety Committee Chairman Greg Lapin, N9GL, will discuss "RF Safey and Your Linear," and ARRL Central Division Dick Isely, W9GIG and Vice-Director Howie Huntington, K9KM, will lead the ARRL Forum, which will include former 9-Lander Dave Patton, NT1N, who is among those at HQ involved with the ARRL Logbook of the World project. Jim O'Connell, W9WU, will represent the ARRL DX Advisory Committee. Of course, there will be DXCC card checking. More details and registration is available at the W9DXCC Web site, www.gth.com/ w9dxcc. — ARRL Letter

YOUR FAVORITE RECEIVER KIT IS BACK!

Cycle 23 Update

n last month's column, I mentioned that it was highly likely that Cycle 23 reached its peak in April 2000 with an SSN (smoothed sunspot number) of about 121. Since my last dedicated update on Solar Cycle 23 was in the December 2000 column, it's time to take another detailed look at Cycle 23's status—some interesting things have happened since the December column.

The big news is that Cycle 23 appears to have peaked in April of this year at at SSN of 120.8. Figure 1 is a plot of the most recent data, and it clearly shows what appears to be the peak. Also included in Figure 1 is a plot of Cycle 20. Cycle 23 has been fairly

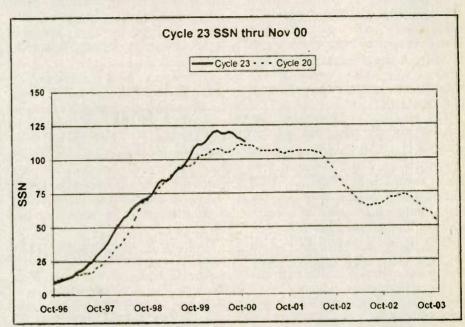


Figure 1 Solar Cycle 23 status.

ICOM IC-756 PRO

The impressive IC-756 Pro covers HF plus 6 meters. The high resolution 5 inch TFT color display provides more operating information than ever, including a spectrum scope. The 32 bit floating point DSP provides crisp, clear reception with 41 built-in filters. The "Pro" is the choice for serious DXers and contesters.



The IC-746 covers 160-10 meters *plus* 6 and 2 meters with 100 watts on all bands. Call or visit our website for further details and pricing on this and other ICOM radios.



Universal Radio 6830 Americana Pkwy.

- **Reynoldsburg, OH 43068**◆ Orders: 800 431-3939
- ♦ Info: 614 866-4267 www.universal-radio.com

similar to Cycle 20, so Cycle 20 is a good one to use to try to extrapolate what Cycle 23 may do.

Another indication that the peak occurred in April was the February 15 report by NASA scientists that the sun's magnetic field flipped. What that means is the sun's magnetic north pole, which was in the northern solar hemisphere early in the year, now points south. This transition happens like clockwork (as far as we know) at the peak of every cycle. An interesting point – the Earth's magnetic field also

flips, but with less regularity. The last time it did was some 740,000 years ago. For more detailed information on the sun's magnetic field reversal, go to http:// science.nasa.gov/headlines/y2001/ast15feb_1.htm?list78858.

From Figure 1, the question to ask is "what will Cycle 23 do?" Will it make a gradual descent from where it is now? Or will it level off for a while, like Cycle 20 did, before making its descent to minimum? There are predictions for the remainder of Cycle 23 out there, but only time will tell what it really does.

The impact of reaching the peak of a solar cycle and starting down depends on which end of the HF spectrum you're interested in. If you're interested in our higher bands (15M, 12M, and

Personalized Skywave Propagation Programs

- SKYCOM 2.0 \$20.00 (includes P/H)
- all WINDOWS OS and Y2K compatible
- Hourly HF Predicts & Beam Headings from your QTH to over 400 worldwide prefix areas
- Path Loss calculation identifies optimum path openings
- · Comprehensive Technical Manual

ENGINEERING SYSTEMS INC. P.O Box 1934 • Middleburg VA 20118 E-mail: w4het@aol.com Software for Active Hams

FREE to download from:

http://www.taborsoft.com/ Rt. 2, Box 106 · Farwell, TX 79325

Home of CAPMan & WinCAP Wizard 2

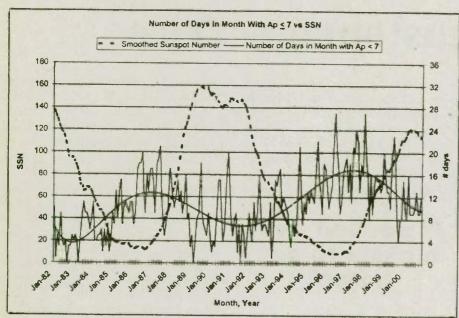


Figure 2 Solar cycle magnetic activity

10M), then the excellent worldwide propagation that we're experiencing will continue for another couple years. That's because the descent to solar minimum is much slower than the ascent to solar maximum. This can be partially seen in the plot of Cycle 20 in Figure 1 – it took about four years to get to the peak, and then just over 7 years to reach minimum.

For those interested in the lower bands (160M and 80M), reaching the peak of a solar cycle is kind of like seeing the light at the end of the tunnel. We know the really good days are coming, but they're still several years off. That's because we're just now entering the most stormy phase of the solar cycle. Figure 2 (an updated version of the plot in the August 1999 column) is a plot of the SSN (the thick dashed line) for each month from the end of Cycle 21 up through November 2000. Also shown is the number of days during each month that the planetary magnetic index Ap was less than or equal to 7, signifying a quiet geomagnetic field (generally best for low band propagation). The actual Ap data is kind of spiky, so I added a trend line (the thin solid line that looks sinusoidal) to better see what's happening.

What's obvious from the plot is that the stormiest period of a sunspot cycle, magnet cally speaking, is during the descending portion of a solar cycle. That's when the trend line is minimum. Taking a look at the history of solar flares indeed supports this. From 1976 (the start of Cycle 21) to the present,

there have been 24 flares of magnitude X9.0 and greater. Of these 24 flares, 20 occurred after solar maximum. And not too long ago (April 2 to be specific), the biggest flare so far of Cycle 23 occurred. To summarize, low band enthusiasts will have to put up with tough (but not impossible) conditions for several more years before the really good days return.

There you have it – an update on Cycle 23. I'll have brief updates every couple months in the regular columns, and a more extensive update down the road a bit.

Oceania DX contest

The OCEANA DX contest, formally known as the VK/ZL Oceania DX Contest, is about to re-emerge as the premier contest in ITU Region III. Both the New Zealand Amateur Radio Transmitters and the Wireless Institute of Australia Presidents have appointed Brian Miller, ZL1AZE and Martin Luther, VK5GN, to lead the formation of a joint management committee for the 2001 Oceania DX Contest. ZL1AZE will chair the 2001 committee. — Q-News, Newsline



Real customer service

Bill Schuchman, W7YS

ears ago, Cortland Street in downtown Manhattan, New York City, was to Amateur Radio what Dayton is now, but it was open every day except Sundays. Store after store, on both sides of the street were filled with all sorts of radio gear. It was called "Radio Row." Although I probably visited it many times, there is one visit that I will never forget.

As a boy of 15, I was bitten by the "Radio Bug" when I was exposed to Amateur Radio by my high school teacher W2KGA in a small village in the Catskill Mountains in 1938. In the Fall of that year, I was visiting my Grandmother in the Bronx, and I just had to go down to "Radio Row" and see if I could find a shortwave receiver to take back home. My Grandmother lived in the East Bronx, so I had to take a bus over to the subway, and then take the subway from 210th Street all the way downtown. The fare was only a nickel on the bus, and another nickel on the subway.

As I made my way down Cortland St., there were goodies everywhere, and suddenly, there in a window (I think it was a Davegas store), was a used National FB-7 receiver! It had a price sticker on it that said "\$10." In my pocket I had one ten dollar bill and a nickel. I went into the store and told. the clerk that I wanted to see the FB-7, so he took it out of the window and put it on the counter. I opened the top and looked inside, turned the tuning

"I needed two nickels to get home"

dial and the knobs, and I knew I had to have it. I told the clerk that I could only pay \$9.95 for the radio because I needed two nickels to get home (one for the subway, and one for the bus). Do you think he would come down five cents on that radio? He looked at me (I don't even think he said "sorry kid"), and he put the radio back in the window! Finally, I said "OK, I'll take it for \$10." I remember carrying it in my lap on the subway all the way to 210th St., and then WALKING three miles down Gun Hill Road to my Grandmother's house.

A year later, I finished high school and had a job in a radio repair shop in Albany, N.Y. where the place to go for parts was "Uncle Dave's Radio Shack." Later, it was known as "Fort Orange Radio". It was a four story building devoted to nothing but radio parts. I wanted a pair of 40-meter plug in coils for the FB-7, and went down to the store where Uncle Dave personally waited on me and picked out a set of coils for me. His call was W2APF, now a Silent Key, but a guy who went out of his way to help new Hams.

Unfortunately, when I went off to WWII (Signal Corps) I left my radio at the Catskill Mountain boarding house where I worked in the summer. When I returned almost four years later, the man I had worked for was very happy to see me, but he said "I wish you had showed up three weeks earlier because I just took all that junk you left here to the dump!" I had almost forgotten this story, but when I visited W1AW a few years ago, there in the lobby, behind a glass case, was a National FB-7 just like the one I used to have. It sure brought back memories. I still remember that long walk on that hot Fall day clutching my prize - all because that penny-pinching clerk would not come down a measly nickel on the price! I'm sure he wasn't a





Kurt's 160-meter vertical

reader asks, "I'm looking for a way to build a 160M vertical — or is this even practical? I have a yard that is not all that conducive to stringing out a wire for this band and I thought maybe if I could put up a 30 ft. +/pole with a top loaded coil it might put me on the air. How would I calculate the necessary coil size — say for 100 watts or less?

The reader couldn't have found a better place to ask that question. Krusty Old Kurt has a 30 ft. pole top-loaded for 160 Meters in his own yard. And it is living proof that such a short antenna actually works. It is considered short because a real quarter-wave vertical would be about 130 ft tall. A 30 foot pole is about 1/20 wavelength high and, if not top loaded, has a radiation resistance of a bit over one ohm. You want to raise this resistance as high a possible with top loading.

Description

Kurt's vertical is a 30-foot pole of 3 in. diameter aluminum tubing. At the top there are 12 radial wires each 25 ft long equally spaced. At the end of each wire is an insulator. The other side of the insulator goes to a wire that runs to a tree, the garage, the house; whatever support can be found in that direction. A circle of wire connects the inside ends of the 25 ft wires together. The whole thing looks like a big parasol.

At the bottom are 32 radials, some buried, some on top of the ground. Lengths range from 30 to 60 ft. as space permitted. The resonance is at 2200 KHz. A base loading coil brings this down to the desired frequency in the 1800 KHz band. The measured resistance is about 12 ohms and a 4:1 wideband transformer matches the 50 ohm coax feedline.

The pole

Start your own antenna design by deciding on the pole. The 30-foot height gives you only about one ohm

radiation resistance. If you can put up a taller pole do, it because the radiation resistance goes up as the square of the height. If you can't go any more than 30 feet don't be discouraged. Kurt easily works halfway across the U.S. with his and, with full power CW, Japan in one direction and Caribbean islands on the other.

Don't use a thin wire instead of a pole. If you must use wire use two parallel wires spaced 3' or so apart. This, or the 3" pole, gives more bandwidth. No matter what you do the antenna won't cover the whole 160-meter band. If it does then something is wrong. Short antennas are always narrowband unless they are lossy and inefficient. You don't want that.

The top hat

Kurt's top hat takes a circular area 50 feet across for installation. And the 12 wires also need end supports. Ideally the end supports would allow the wire to go out horizontally (the ends 30 ft. up). Kurt couldn't do that so the wires tilt downward giving the parasol look. But keep them as high as you can.

That's a pretty ambitious top hat project. If you don't like that then just run out two top wires in opposite directions forming a "T" antenna. This will work just as well if you can make them long enough. If possible make them long enough to resonate just at the top end of the band. Then use the base-loading coil to bring the whole thing to frequency. If you can't make them long enough don't panic, just use a larger coil.

COAX-SEAL The Original Connector Sealant

MOISTURE PROOFS ALL COAX CONNECTORS
Universal Electronics, Inc.
4515 Little Savannah Rd. • Cullowhee, NC 28723
(823) 293-2222 • FAX: (828) 293-2221

Visit us on the web at: www.wr6wr.com

The radials

Radials are an essential part of any short vertical. Don't even think of trying to work without them.

If you have the space make your radials 50 feet long or more. Longer is better. Try to put in at least 20 radials. More is better. And it is better to put in a lot of short radials than a few long ones. 50 ft. is short but if, for example, your house is in the way in one direction put radials in that direction no matter how short they have to be.

If you can get hold of a copy of QST for July 2000 read N6LF's article on ground systems. To go way back in time, W2FMI describes his 6-ft. 40-meter vertical (which is shorter in wavelengths than Kurt's 30-ft. 160-meter vertical) in March 1973 OST.

The loading coil

For best efficiency there should be

TEN METERS IS BACK! · 600 Watts · 1 MHz Band Width · Fiberalass And · Famous "Hamstick" Aluminum Technology Construction · All Hardware Mast Mount Included · Accepts PL-259 · Tunable For Near Direct By Frequencies · Only 10 Feet Tall \$54.⁹⁵ · CAT #-GP28 Lakeview Company, Inc. 3620-9A Whitehall Rd., Anderson, SC 29626 864-226-6990 · FAX: 864-225-4565 E Mail: hamstick@hamstick.com www.hamstick.com MasterCard • Visa • Discover Card Cash • Check • Money Order ALL 100% MADE IN USA Add \$8.00 per order for S/H



The Aerials Trilogy
by Kurt N. Sterba
and Lil Paddle
with bonus chapters!
and
An archive of all the
1999 Worldradio Magazine

The Worldradio CD-ROM is only \$24.95 + \$2 s/h (CA residents add \$1.87)
To order call: 916/457-3655
or on the web at:
http://www.wr6wr.com/products/
software_cdrom.html

issues.

Minimum System Requirements

PC Pentium 200 or compatible Windows 95 32MB of RAM MACINTOSH PowerPC

System 7 or greater
32MB of RAM

32MB of RAM 8X CD-ROM drive

8X CD-ROM drive

Aerials

enough top loading to resonate the antenna on your operating frequency. But, as a practical matter, it's better to have it resonant somewhat higher in frequency. Then you can bring it to the exact frequency you want with a bottom coil. Remember, its not going to be broadband enough to cover the whole 160-meter band with low SWR so you need to make the final frequency adjustment down at the bottom.

Use a really good coil here. Quarterinch refrigerator copper tubing is good and is easy to work with.

Steer horn antenna

A loyal reader of Kurt's Klassy Kolumn described an antenna demonstration he had seen on a video tape. It looked like a dipole but, on each side of center about a quarter of the way out, it was bent at about a 45 angle for a short distance then bent back. So it looked like the horns on the Texas longhorn steers that were prevalent back in the days of the Frontier West. It was fed in the center just like a dipole.

În the video demonstration of a scale model in the gigahertz range a device

of some kind with an audio output was moved around the antenna. The pitch of the tone varied with field strength and was used to show the radiation pattern. Radiation was strong off the ends; negligible off the sides.

This is the opposite of the radiation pattern of a dipole. The reader wants Kurt's opinion of the antenna. Well, Krusty Old Kurt has lots of opinions and is always happy to spread them around especially when he smells a

rat.

Moving a measuring meter around close to an antenna is not the way to find its radiation pattern. You need to move out several wavelengths and be in an open field without reflecting objects. A few small bends in a dipole will change the pattern a bit but not enough to make any major difference in the pattern.

An old saying goes: It doesn't matter what fancy name you give to it. If it looks like a duck, walks like a duck and quacks like a duck it is a duck. The Steer Horn Antenna looks like a dipole and in Kurt's always Korrect opinion it is a dipole. Maximum radiation is off

the sides, not the ends.

What goes UP must come DOWN!



144 pp., \$14+\$2 s/h
CA residents add \$1.05 tax.
VISA • MC • AmEx

How to put a BIG signal where

you want it.

Near

Vertical

Incidence

Skywave

Communication —

Theory, Techniques & Validation by LTC David M. Fiedler & Ed Farmer, AA6ZM, P.E. order from

WORLDRADIO BOOKS P.O. Box 189490 Sacramento, CA 95818

Contest Calendar

Dave Goodwin, VE2ZP

	00007 : -	Bands	4 . 00 4014 045	Multipliers	Exchange	Entry Categories	Entries
All Asia SSB	0000Z 1 Sep 2359Z 2 Sep	160-10M SSB	1pt/20-10M QSO 2pt/80M QSO 3pt/160M QSO Work Asia only	Asian prefixes worked on each band	RS Age (YLs May send 00)	Single op: All bands, Single band Multi-op: Single or Multi-bx	30 Sep Box 377 Tokyo
LZ DX (Bulgaria)	1200Z 1 Sep 1200Z 2 Sep	80-10M CW	6pt/LZ 3pt/DX 1pt/NA	ITU Zones worked on each band	RST ITU Zone	Single Op: All bands, Single band; Multi-op, single bx SWL	1Mo. Box 830 1000 Sofia
North Americans Sprint - CW	0000Z 2 Sep 0400Z 2 Sep	80-20M CW	1pt/QSO	Canadian Call areas, US States, other NA countries	Ser# Name QTH	Single op all bands only Entrants May combine their scores to form a "team".	1Mo. N6TR
Michigan QRP Club Labor Day CW Sprint	2300Z 3 Sep 0300Z 3 Sep	160-6M CW	5pt/ QSO with Member 4pt/DX 2pt/USA and Canada	US States, Canadian Provinces and Territories, DXCC countries Total score x1 25 if used a home- made TX or RX, x1.5 if all home- brew gear	RST QTH MI-QRP Membership number	A- 250Mw or less B- 250Mw to 1 w C- 1 w to 5 w D- Over 5 w out	30 days N8CQA
European DX SSB (Germany)	0000Z 8 Sep 2359Z 9 Sep	80-10M SSB	1pt/Eur 1pt/QTC QTC: reports of previous QSOs Time: Call: Ser#	WAE Countries worked on each band. x2 on 10/15/20 x3 on 40M x4 on 80M	RST Ser#	Single Op: All bands, Single band Multi-op: Single or Multi-bx All entrants May use Packet Cluster	15 Oct Box 1126 D-74370 Sersheim Germany
ARRL VHF QSO Party	1800Z 8 Sep 0300Z 10 Sep	50MHz to Microwaves	1pt/50 or 144MHz QSO 2pt/220 or 432MHz QSO 3pt/903 or 1296MHz QSO 4pt/above 2304MHz NOTE: do not use 146.52 or repeaters	Grid squares worked on each band	Grid Square	Single Operator: Multi-band, single band, ORP portable (Max 10w out) Rover (single or Multi-op, operating from at least 2 grids) Multi-op; Limited Multi-op (Max 4 bands)	30 days ARRL or e-Mail to SepteMberVHF@a Lorg
North American Sprint SSB	0000Z 9 Sep 0400Z 9 Sep	80-20M SSB	1pt/QSO .	Canadian Call areas, US States, other NA countries	Ser# Name QTH	Single op all bands only Entrants May combine their scores to form a "team".	1Mo. K7GM
Scandinavia CW	1500Z 15 Sep 1800Z 16 Sep	80-10M CW	1pt/QSO Work JW JX LA OH OJ OX OY OZ SM TF	Scandinavian prefixes worked on each band	RST Ser#	Single Op: All bands, QRP Multi-op single bx	31 Oct - la9hw or e mail sac@ contesting.com
YLRL Howdy Days (Women hams only)	1400Z 15 Sep 0200Z 16 Sep	80-10M CW . SSB. RTTY	2pt/QSO with YLRL mbr 1pt/QSO with others	None .	RST	Single Operator only	30 days KOJFO
Attantic QSO Party (Canada)	0000Z 16 Sep 2359Z 16 Sep	160-10M CW and SSB	1pt/QSO NB/NF/NB/PEI work everyone; other work only Mar and NF	Maritime counties and Newfoundland federal ridings. Mar and NF stations also count Provs/Terrs, US states and DXCC countries once, regardless of band.	RST OTH	Single op High Power: Mixed Mode, CW only, SSB only Single op Low Power: Mixed Mode, CW only, SSB only Multi-op High Power: Mixed Mode, CW only, SSB only Multi-op Low Power: Mixed Mode, CW only, SSB only	30 days LCARC, Box 6552 Stn.B Saint John NB E2L 4R9 CANADA
Scandinavia SSB	1500Z 22 Sep 1800Z 23 Sep	80-10M SSB	1pt/QSO Work JW JX LA OH OJ O> OY OZ SM TF	Scandinavian prefixes worked on each band	RST Ser#	Single Op: All bands, QRP Multi-op single bx	31 Oct - la9hw or e mail sac@ contesting.com
CQ/RTTY Journal WW DX RTTY	0000Z 29 Sep 2359Z 30 Sep	80-10M RTTY	1pt/own country 2pt/other NA countries 3pt/other continents	DXCC + WAE Countries + Canadian Provs, Terrs, Labrador + US States	RST QTH CQ Zame	Single Op: All bands High Power, All Bands Low Power, Assisted, Single Band Multi-op: Single TX High Power, Single TX Low Power, Multi-bt	1 Dec PO Box DX Stow MA, 01775 e- mail:K1RY@ contesting.com
Texas QSO Party	1400Z 29 Sep 2000Z 30 Sep (0200-1400 off- time for all)	80-2M CW & SSB	1pt/SSB 2pt/CW 5pt/Mobiles 7pt/Mobiles in CW	Texas counties (254) Texas stations count Texas counties, US States, Canadian Provinces and Territories and DXCC countries	ОТН	Single Op (SO), Multi Single (MS), Multi-Multi (MM), ORP-SO, ORP-MS, ORP-MM, CW Only- SO, CW Only-MS, CW Only-MM, Texas Mobile- SO, Texas Mobile-VS and Texas Mobile-MM	17007 Hillnew Lane, Spring, TX 77379 or by email to K5vuu@amine
Louisiana QSO Party	0000Z 30 Sep 2400Z 30 Sep	80-2M SSB and CW	2pvSSB QSO 3pvCW QSO	Stations outside LA: 64 Louisiana parishes per band Stations in LA: 80 ARRL sections per band	RST QTH	Single op Mixed Mode, SSB only, CW only, each with ORP(5w Max), Low Power (100w Max) and High power categories Multi-op Mixed Mode: QRP, low and high power	31 Oct PO Box 1871 West Monroe LA 71294 or e-Mail to laqp@tchaMs.org
RSGB 21/28MHz SSB (UK)	0700Z 7 Oct 1900Z 7 Oct	21.2-21.35 28.45-29.1	3pt/QSO Work UK stations only	UK Post Code areas UK stations will send the first two letters of their post code.	FST Ser#	Single op, Single op QRP Multi-op single bx	14 Nov G3UFY
Oceania DX Contest SSB	1000Z 6 Oct 1000Z 7 Oct	80-10M SSB	3pt/10M 2pt/15M 1pt/20M 5pt/40M 10pt/80M work Oceania only	Oceania prefixes on each band Score each band separately, then sum scores from all bands.	RST Ser#	Single op all bands Multh-op all bands SWL	27 Nov Box 6464 Wellingtion 6030 New Zealand e-mail: octest@ nzart.org.nz
European Autumn Sprint SSB	1500Z 6 Oct 1859Z 6 Oct	80-20M SSB	1pt/QSO '	None	your call, other stn's wall, Ser#, name	Single operator only	15 days I2UIY
California QSO Party	1600Z 6 Oct 2200Z 7 Oct	160-2M CW & SSB	2pt/SSB 3pt/CW Work California only	California Counties (58)	RST Ser#	Single Op, All bands Multi-op, single bt	15 Nov Box 853 Pine Grove CA
QCWA QSO Party	1800Z 6 Oct 1800Z 7 Oct	160M- UHF+	1pvSSB OSO 2pvCW OSO	OCWA Chapter, Canadian Provinces & Terrs, US States, DXCC countries count once on each Ibandf. Rules allow for 15 Ibands!: 180M, 80cw, 80ssb, 40cw, 40ssb, 20cw, 20ssb, 15cw, 15ssb, 10cw, 10ssb, 6M, 2M, 135cm, 70cm and beyond. A QSO wW2MM counts three Multiplier points.	1. RST 2. Year first licensed 3. QCWA Chapter# or Prov/Terr. State or country	OCWA Members, OCWA non-Members Nowices	95665 30 days W9HXL
Ibero-America Contest (Spain)	2000Z 6 Oct 2000Z 7 Oct	160-10M SSB	3pt/lbero-AM 1pt/others	CE CO CP CR CT CX C3 C9 DU EA HC HI HK HP HR KP4 LU OA PY TG TI XE YN YS YV ZP 3C + their	RS Ser#	Single op: all bands, QRP Multi-op single bx SWL	30 Nov Conception Arena! 08027 Barcelona
YLRL Anniversary Party CW	1400Z 10 Oct 0200Z 12 Oct	80-10M CW	1pt/QSO on your section 2pt/QSO with others	DXCC dependencies on each band ARRL Sections, Canadian Porovinces and territories, DXCC countries	RST Section	Single Operator only	30 Days KOJFO
Oceania DX Contest CW	1000Z 13 Oct 100pZ 14 Oct	80-10M CW	3pt/10M 2pt/15M 1pt/20M 5pt/40M 10pt/80M work Oceania only	Oceania prefixes on each band Score each band separately, then sum scores from all bands.	RST Ser#	Single op all bands Mutt-op all bands SWL	27 Nov Box 6464 Wellingtion 6030 New Zealand e-mail:octest@ nzart.org.nz
European Autumn Sprint CW	1500Z 13 Oct 1859Z 13 Oct	80-20M CW	1pt/QSO	None	your call, other stn's call, Ser#, name	Single operator only	15 days OK2FD
Pennsylvania QSO Party	1600Z 13 Oct 2200Z 14 Oct 05-13Z Off time	160-10M CW & SSB	1pt/SSB 1.5pt/CW 2pt/160, 80M CW 200pt/QSO with W3YA	Pennsylvania counties (67) Penn. stations will send a 3-letter county abbrev. x2 if you are QRP	RST QTH	Single op: High power, 100w, QRP Multi-op: Single bt, Multi-bt	15 Nov Box 614 St.College PA 16804
	1571		Work Penn. only				USA

(UK)
Addresses: CQ - 25 Newbridge Rd., Hicksville NY, 11801 USA.
Bands: The 30, 17 and 12M bands are never used in any contest.

| letters of their post code.
ARRL - 225 Main St, Newington CT, 06111 USA. Callsign - Callbook Address
Please confirm the dates of these events on the internet at http://holMe.sol.no/-|lanat/Me/haMMain.htMt or http://www.sk3bg.se/contest/

World Radio History

Hamfests — **September**

ARIZONA

Hualapai ARC/Dolan Springs ARC Kingman Fallfest 7 a.m. 29 Sep. at Mohave Community College, Kingman, AZ. (I-40 to exit 51, north to Jagerson Ave, East on Jagerson to the college). Free tailgate space. TI: 146.760(-) PL 131.8. For info: Charlie, W6PNM, 757-7553.

ARKANSAS

Queen Wilhelmina Hamfest 7/8 Sep. at Queen Wilhelmina State Park near Mena, AR. (13 miles west of downtown Mena on Hwy 88). TI: 146.79(PL 100). For info: Charlotte Lee, KC5DOR, 415 Crosstrails Rd. De Queen, AR 71832. E-mail: clee48@ipa.net. Phone: 800/264-1196 (day, 870/642-7656 (eves.)

CALIFORNIA

Sonoma County Radio Amateurs, Inc., Hamfest 7:30 a.m. 22 Sep. at Lewis Adult Education Center (corner of Lewis Rd and Lomitas Ave.,) Santa Rosa, CA. Open for vendors at 6:30 a.m. Free adm. Vendors \$10 per space. VE exams 9 a.m. to noon. For info: Rick Reiner, K6ZWB, 707/575-4455. SCRA, P.O. Box 116, Santa Rosa, CA 95402. Web site: www.cdsl.net/scra.

CONNECTICUT

Candlewood ARA Hamfest 9 a.m. – 2 p.m. 16 Sep. at Edmond Town Hall, Rte 6 in Newtown, CT. (Exit 10 on I-84). Adm. \$4 (under 12 FREE). Tables #10, tailgate space \$6 (includes 1 adm.). Setup at 7 a.m. TI: 146.67/07 (PL 100). For reservations or info: Ken Weith, KD1DD, 8a Hoyt Rd. Bethel, CT 06801. Phone: 203/743-9181.

FLORIDA

Suncoast ARC Pasco County Hamfest 9 a.m. - 3 p.m. at New Port Richey Recreational Center, 6650 Van Buren Rd., New Port Richey, FL. Adm. \$5 (XYL's & under 12; FREE). Tables \$15/ea. (with power add \$5). Tailgate spaces \$3/ea. TI: 145.35.



For info: Owent Godwin, KI4CT, phone: 813/909-1336; e-mail: ki4ct@arrl.net.

ILLINOIS

Peoria ARC Peoria Superfest/ARRL Illinois State Convention 14-16 Sep. at Exposition Gardens, Peoria, IL. Open Fri. at 3 p.m., Sat. & Sun. 6 a.m. Adm. \$5/adv. \$7 at the gate (good for entire weekend). Flea market space \$5/ea (plus adm.). Flea market setup at 10 a.m. Fri. and 6 a.m. Sat & Sun. VE exams Sun. 10 a.m. - 1 p.m. DXCC card checking, live music Sat. night. TI: 147.075(+). For info: Peoria Superfest, P.O. Box 3508, Peoria, IL 61612-3508. Web page: www.w9uvi.org.

Chicago FM Club Hamfest 22/23 Sep. at Lake County Fairgrounds (Rte 45 & 120), Grayslake, IL. Tables \$20 for both days. AC power \$10. VE exams 9 & 11 a.m. both days. Free parking and camping (no hook-ups, AC power \$10). TI: 146.76(-103.7). For info: CFMC, 348 W. Natoma Ave, Addison, IL 60101-3422. Web page: www.chicagofmclub.org.

INDIANA

Owen County ARA/Bloomington ARC Hamfest 8 Sep. Spencer, IN. For info: Katie Smith, K9INU, 812/829-2140 or Millard Qualls, K9DIY, 812/332-0074.

KENTUCKY

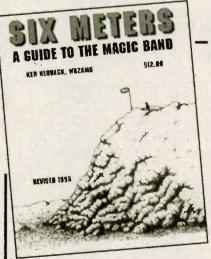
Greater Louisville Hamfest Association Hamfest/ARRL Kentucky State Convention 8 Sep. at Bullitt County Fairgrounds, (15 mi. south of Louisville on I-65). Adm. \$6/adv, \$7/door. Adv. Tickets with SASE. VE exams (walk-ins welcome). For info or tickets: P.O. Box 34444-N, Louisville, KY 40232-4444. Space info: 812/294-4021, or 812/284-5853. Flea market space: 502/935-7197 or 859/284-9090; fax: 859/284-5296. Web page: http://mx2.confluentasp.com/~glha/.

MASSACHUSETTS

Mohawk ARC, Inc. ARRL Hamfest 8 a.m. – 2 p.m. 9 Sep. at Athol/Orange Elks hall, 92 Athol Road (Rte. 2 to exit 16, Rte. 202 North to Jct. Rte. 2A at McDonalds. Left on Rte 2A, Elks 1 mi. on left). Adm \$3, (under 12 \$1). Tail gate space \$20 ea (reservations required). TI: 145.370(PL 136.5)/146.58 simplex. For info or adv registration: John Dould, AE1B, 22 South Athol Rd. Athol, MA 01331-2722.

MICHIGAN

Michigan ARA/Lowell ARC/Grand Rapids ARA SuperSwap 2001 8 a.m. 15 Sep. at Caledonia High School. Adm \$6 (12 and under FREE). Indoor tables \$10. Outdoor space \$5/ea. VE exams. TI 147.26(+) PL 94.8/146.52 simplex. For



SIX METERS

A Guide to the Magic Band

by Ken Neubeck, WB2AMU

A labor of love by the author, this 1998 revision of his earlier book provides comprehensive information on Six Meter equipment, modes, various forms of propagation, plus a little history of the Golden Age of Six Meters, in anticipation of increased operating opportunities as the sunspot activity increases. 96 pp.

\$12.00 + \$2.00 s/h. (\$4.00 for non-U.S. ZIP air delivery.) CA residents add \$.98 sales tax.

WORLDRADIO BOOKS

P.O. Box 189490 • Sacramento, CA 95818

info: Ed, N8UXN, 616/458-9029. Web page: www.w8dc.org.

Adrian ARC Hamfest/Computer Show 8 a.m. 16 Sep. at Lenawee County Fairgrounds. Adm. \$5. Tables \$10. Flea market spaces #3. For info: http:://users.aix.cc/w8tqe.

NEBRASKA

Ak-Sar-Ben ARC Hamfest 8 a., 8 Sep. at Sarpy County Fairgronds (5 minutes south of I-80 & Hwy 50, exits 439 and 440). Adm. \$1. Tables \$7/adv. \$10/door (includes 1 adm.). Pancake breakfast, DXCC, WAS and 5BWAS card checking. TI: 146.940(-). For info: Bill Newman, KØNSA, P.O. Box 24551, Omaha, NE 68124-0551. E-mail: k0nsa@arrl.net; web page: www.aksarbenarc.org.

NEW JERSEY

Garden State ARA Hamfest/Computerfest 8 a.m. 16 Sep. at American Red Cross,

CANCELLED

truck spaces \$20. VE exams 11 a.m. DXCC card checking, door prizes. TI: 147.045(-)PL 67/146.52 simplex. Mike, KC2Q, 732/774-1095; kc2q@arrl.net: or John, KA2PYJ, 732/796-0445; e-mail: jrmon1@worldnet.att.net. GSARA Hamfest, P.O. Box 357, Bradley Beach, NJ 07720.

NEW YORK

Saratoga R.A.C.E.S. Association Inc., Hamfest 7 a.m. - 3 p.m. 9 Sep. at Saratoga County Fairgrounds, Ballston Spa, NY. Adm. \$5 (includes parking and one tailgate space). Reserved tables \$5 each — first come, first served. Reservations and pre-pay welcome and encouraged. VE exams, fox hunt. TI: 146.40/170 and 147.84/147.24. For info: Darlene Lake, N2XQG, 314 Louden Road, Box 84, Saratoga Springs, NY 12866. Phone: 518/587-2385; e-mail: lake@capital.net.

ARA of the Souther Tier Hamfest/ Computerfest 6 a.m. at 29 Sep. at Chemung County Fairgrounds, Horseheads, NY. Adm. \$5/adv. \$6/gate. VE exams at 9 a.m. For info: john (VE) 607/565-4020; Randy (Dealers/tickets) 607/738-6857. Web page: www.arast.org.

PENNSYLVANIA

Uniontown ARC Gabfest/Hamfest 8 a.m. 1 Sep. at club grounds located on Old Pittsburgh Rd. (north of intersection of Rte 51 & 119. Free parking and free tailgate space with registration. TI: 147.045(+) or 147.255(+). For info: Carl, WA3HQK or Joyce, KA3CUT Chuprinko, 84 Heaven Hill Rd. Morgantown WV 26508. Phone: 304/594-3779.

RHODE ISLAND

Rhode Island Amateur FM Repeater Service, Inc. Auction and Flea Market, 8 a.m. 15 Sep. at VFW Post 6342, Main Street, Forestdale (N. Smithfield), RI. (Forestdale exit off Rte 146 in N. Smithfield, left at end of ramp and 6/10 mi. to the Post). Auction begins at 11 a.m. TI: 146.76. For info: Rick Fairweather, K1KYI, 106 Chaplin St. Pawtucket, RI 02861. E-mail: k1kyi@arrl.net. Phone: 401/725/7507 (7-8 p.m. ONLY!).

The Smith Chart

Electronic Applications of the Smith Chart, by Phillip H. Smith This is an updated edition of the original, classic reference book by the legendary Smith Chart inventor himself. This book describes how the Smith Chart is used for designing lumped element and transmission line cricuits and includes tutorial material on transmission line theory and behavior, circuit representation on the chart, matching networks, network transformations and broadband matching. It also includes a new chapter with example designs and a description of winSmith (see below). Our Price \$59.00

winSMITH



WinSmith, by Eagleware Corp With winSmith, engineers can have their PCs draw the Smith Chart and measure the distances from one point to another. Easily creates ladder networks of up to nine elements, which can be transmission line segments, inductors, registors or capacitors, or user-defined elements. Schematic entry simplifies circuit definition, and the Smith Chart display makes manipulation of values a simple task. Can do frequency sweeps, fine or coarse tuning as needed, and provides precise numerical results. One 3.5" disk. Runs under Windows 3.1, 95 or NT. Our Price \$79.00

Introduction to the Smith Chart This video teaches the Smith Chart in 50 minutes. Introduction the the Smith Chart is all engineers need to start using the chart to solve all types of transmission line and matching problems. This is a painless way to learn about the chart, designed to accompany the book Electronic Applications of the Smith Chart and the winSmith software package described above. An excellent way for young engineers to learn this important visualization tool and a good review for experienced engineers. Our Price \$99





Worldradio Books

2120 28th Street, Sacramento, CA 95818 • Tel: 916/457-3655 http://www.wr6wr.com Add \$5.00 s/h for first book. Add \$1.00 per book thereafter.

New Products

Cutting Edge Enterprises new WorldPack II

Have you been jealous of your friend's WorldPack that he uses to carry his FT-100? Well, the new improved World-Pack II will fit any of the modern mobile radios. So many of us have a radio that we'd love to take out of the car and carry easily and safely on a trip - either on a plane and into a hotel as a carry-on bag, on a road trip with a buddy, or hiking to a mountaintop QRP location. Yes, I mean ANY mobile radio! With the WorldPack II, you can take it with you.

The WorldPack II is a compact, comfortable backpack that holds your radio in the upper compartment. The adjustable interior sling allows for a variety of sizes to fit securely with equal accessibility. The pack is constructed of the same great padded heavy-duty nylon fabric as the original WorldPack. The optional power supply that fits in the zippered lower compartment is more powerful than the old model - now offering 8AH instead of 7. The tie-downs on the exterior of the pack are very well



designed to hold just about anything that you would need to carry. There are now twice as many tie-downs as the original model. Antenna pockets on the left hand side allow you to carry multiple antennas or antenna elements, while the pockets and tie-downs on the right side allow you to carry a working antenna so you can walk and talk. And then there are some little refinements that really tickle me... or actually don't - the loose end of the shoulder adjustment is now captive, and no longer hangs free to tickle your elbow. Another upgrade is the choice of colors for the lacings that has changed from a wild fluorescent green to a royal blue. Another thoughtful idea is the new wind cover for your microphone. This fuzzy little item slides over your microphone so you don't get that roaring wind sound with your audio signal when out of doors. It's these little extras that always seem to define the designs from the folks at Cutting Edge.

So, whether you've just bought a new mobile rig, or you're thinking of getting some new action out of your old one, the WorldPack II is the way to go.

Suggest retail price of the WorldPack II is \$67.95. The optional power supply kit (sold separately) is \$63.95. For more information or to locate a dealer near you, contact Cutting Edge Enterprises at 800/206-0115; FAX 831/426-0115; e-mail: sales@powerportstore.com or see their web page at www.powerportstore.com.



- Tune your tuner without transmitting.
- · Save your finals.
- · Stamp out tuneup QRM.

Turn it on. Adjust tuner for least receiver noise. Turn it off. Transmit with 1:1 SWR. It's that easy!

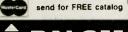
Model PT-340 ...

CORES



Palomar stocks ferrite and iron powder cores. Catalog free. Free RFI Tip Sheet tells how to get RFI out of TVs, telephones, stereo, etc. Our handy RFI kit fixes most household problems

+ \$6 S&H U.S./Canada. Tax in Calif





BOX 462222 • ESCONDIDO, CA 92046 (760) 747-3343 • FAX: (760) 747-3346 E-mail: info@Palomar-Engineers.com www.Palomar-Engineers.com

Truly direct-bury RG-213 type coax

The Wireman, Inc. introduces another Certified Quality product that satisfies another often requested amateur requirement. CQ113PE is an RG213-type coaxial cable specifically designed to be directly

The center conductor, solid polyethylene dielectric and 97% copper braid follow the specification for Mil Spec RG213/U and its predecessor RG8A/U, but CQ113PE then includes a moisture blocking material and adds a tough, UV resistant, abrasion fighting, moisture impermeable, black polyethylene jacket.

The cost of the new coax is close to that of regular RG213/U, making it an ideal choice for a total run from shack to antenna when part of the route needs to be underground. The price a t100 feet is \$0.45/ft, less for greater lengths.

Flexible RG217-type

The Wireman, Inc. introduces a heavy-duty coaxial cable in their Certified Quality line that solves the around-therotor problem of the full-power station, with or without a jumper.

The product is manufactured to the

MHz	DB/100 ft	Max input power-watts
1-4	~.11	
1-4 7.25	.2	
10	.4	6000
14.25	.5	
30	.6	
50	1.0	2000

Loss characteristics are very close to published RG217/U data.

specifications of MIL SPEC RG217/U, with two notable design changes: a stranded center conductor and a tough, UV resistant, black polyethylene jacket.

This cable is ideally suited to crank up tower usage due to the natural lubricity of the jacket, allowing it to slide easily through eyelets and guides, and coil neatly into circular nesting vessels. The overall stiffness precludes conductor damage, but allows easy rotation over many years. The two bare copper shields totaling 98% coverage add high lineal strength and integrity to the cable's projected 20+ year life.

Connectors are available in "N" and now, "UHF" (PL259) type without an adapter.

Contact The Wireman, Inc. for further information at 800-727-WIRE(9473), info@thewireman.com or order on line at www.thewireman.com

VE Exams

As a service to our readers, Worldradio presents a feature listing of those VE exams, times and locations which are sent to us. Please remember that our deadline for publication is three months in advance. For example, if your VE group is scheduling an exam for December, please have the information to us by mid-September. Worldradio, 2120 28th St., Sacramento, CA 95818. Please mark the envelope "VE Exams." List the location (City), any information examinees should

have (advance registration, etc.) and the name and telephone number of a person to contact for further information. Examinees should bring their original license (along with a photo copy), two forms of identification (at least one should be a photo), and required fee.

p/r pref=pre-register preferred but w/i OK w/i=walk-in only
p/r=pre-register only—no w/i w/i pref.=w/i preferred to p/r

Date	City	Contact	Notes
Alabama			
9/18/01	Opelika	Mary, KL7P 334/741-9087	p/r
9/21/01	Tuscaloosa	Bridget, KS4YT 205/554-0984	p/r pref.
Arizona		203,331 0,01	pri pici.
9/07901	T	D.: 1 VZIOI F20/740 2004	
	Tucson	David, K7IOU 520/749-2884	p/r pref
Arkansas	6		
9/08/01	Harrison	David, K5DEL 870/741-8604	p/r pref
Californi	a		
9/08/01	Carisbad	Rusty, AA6OM 760/747-5872	n/r nraf
Hotline	Carmichael	Info Hotline: 916/492-6115	p/r pref. w/i
9/27/01	Colton	Harold, AB6RN 909/825-7136	p/r pref.
9/08/01	Cypress	Harrison, AC6TI 714/457-4170	p/r pref
9/29/01	Escondido	Harry, WA6YOO 760/743-4212	p/r only
9/10/01	Fremont	Dennis, K6DF 408/255-9000	w/i
9/15/01	Grass Valley	John Plamer, KK6XJ 530-273-0524	p/r pref.
9/29/01	LaVerne	909/923-1090 - w6ekz@arrl.net	p/r pref
9/08/01	Lancaster	Adrienne, WA6YEO 805/948-1865	p/r pref.
9/15/01	Long Beach	Don, 562/420-9480	p/r pref.
9/15/01	Redwood City		w/i
9/08/01	San Pedro	Elvin, N6DYZ 310/325-2965	p/r pref.
9/08/01	Santa Barbara	Darryl Widman, 805/969-2326	p/r pref.
9/16/00	Santa Rosa	Hotline - Recording, 707/579-9608	w/i ok
Hotline 9/15/01	Sebastopol	Recording, 707/579-9608	
9/08/01	Stockton	Mark, W6DKI 209/465-7496	w/i
	Sunnyvale	John or Gordon 408/255-9000	w/i
Colorado			
call	All Colorado	Exam recording 303/360-7293	
Connecti	icut		
9/18/01	Middletown	Paul, K1PL 860/635-1742	p/r pref.
9/26/01	Newington	Larry, AB7GY 280/983-2163	w/i pref
9/08/01	Newington	Dan, K3UFG 860/206-3379	w/i
Florida	· ·		
9/13/01	Es Massa	I 1 VC4COA 041/(04 0505	
9/10/01	Ft. Myers Hollywood	Leonard, KC4GOA 941/694-2505 Robert, WE4B 954/524-6051	w/i
call	St. Pete	Mark, NP3R 727/528-0071	w/i
	Ot. I ctc	Mark, 141 31 72/1320-0071	w/i pref.
Georgia			
9/01/01	Ellijay	Sam, K4SWU 706/276-4877	w/i pref
Idaho			
9/08/01	Boise	Rich Dees, W7BOI 208/888-1343	w/i pref.
9/26/01	Grangeville	Larry, AB7GY 208/983-2163	w/i pref.
9/04/01	Lewiston	KB7LTY 509/758-8374	
Illinois			
Anytime!	Burr Ridge	Deni, W9DS 630/986-0061	-/-
9/21/01	Elmhurst	Gerald, W9EG 630/628-1336	p/r p/r
9/17/01	Libertyville	John, W9EM 847/223-3357	p/r pref
9/08/01	Oak Forest	David, NF9N 708/226-1570	p/r pref
Kontucky			pr. prei
Kentucky		C 74	
9/08/01	Ashland	Scotty Thompson - ki4at@aol.com	w/i
Maryland			
9/15/01	Laurel	John, WB3GXW 301/572-5124	p/r pref
Michigan			
9/07/01		Edward NOLIVN 616/450 0020	
9/08/01	Grands Rapids Marquette	Edward N8UXN 616/458-9029 Richard, N8GBA 906/249-3337	W/i
	- In quarto		p/r pref.

Date	City	Contact	Notes			
Nevada						
9/08/01 9/15/01	Las Vegas	Tim, WA6TNW 702/872-5268	p/r pref.			
	Minden	George, WW7E 775/265-4278	w/i pref.			
New Jers 9/08/01	Cranford	Danie Maria W2011 722/005 04/0	r. c			
9/12/01	Ft. Monmouth	Drew Moore, W2OU, 732/885-8460 Mike, KC2Q 732/774-1095	w/i pref w/i only			
9/26/01	Manahawkin	Dave, WA2TVS 609/698-2872	w/i pref			
New Yor	k		•			
9/02/01	Yonkers	Emily, AC2V 914/237-5589	w/i			
North Ca	arolina					
tba	Brevard	Harrison, KO4RV 704/877-4757 or				
704/883-909	6					
Ohio						
9/01/01	Cincinnati	Herb, WA8PBW 513/891-7556	w/i pref			
9/22/01	Van Wert	Robert, KA8IAF 419/795-5763	p/r pref.			
9/20/01	Youngstown	James, W8JV 330/534-1394	p/r pref.			
Oregon						
9/15/01 Call!!	Albany	WB9HZT 541/967-4167	p/r pref			
9/05/01	Astoria Bend	AA7OA, 503/338-3333 Joe, K7SQ 541/385-3152	p/r			
Tuesdays	Bend	Bill, K7ZM 541/389-6258	p/r			
9/08/01	Dallas	Robert, W7LOU, 503/623-1141	p/r only			
9/12/01	Eugene	Riley, W7EUD 541/345-2407	p/r pref			
9/26/01	Florence	Hal, N7HL 541/997-2323	p/r pref.			
9/22/01	Gresham	Patsy, W7PAT 503/668-4305	w/i only			
9/01/01 9/08/01	Lincoln City McMinnville	Carl, K7EWG 541/994-3113	p/r pref.			
9/12/01	Roseburg	Mike, W7MJ 503/843-4042 Mel, AB7DC 541/672-5884	p/r pref.			
Pennsylva	0	1101, 1151 50 541/072-5004	p/r pref.			
9/01/01	Erie	Norma, W3CG 814/665-9124	/:			
9/06/01	Philadelphia	Dusty, ND3Q 215/482-0386	w/i pref. p/r pref			
9/17/01	Telford	Paul, N3YSI 215/536-4659	p/r pref			
Rhode Island						
9/13/01	Providence	Judy, KC1RI 401/231-9156	w/i pref.			
South Ca	rolina	,,	w pici.			
9/19/01	Goose Creek	Robert, KU4OX 843/761-7637	p/r pref			
Texas		10001, 110 101 013/101 103/	pri piei			
9/08/01	Webster	David Fanelli, kb5pgy@clarc.org	w/i pref.			
Virginia		and anom, and payer chare. Org	w/i piei.			
9/08/01	Alexandria	John, WZ4A 703/971-3905	w/i			
Wisconsin		John, 11 2-1A 103/7/1-3703	W/1			
9/15/01	Sheboygan	A KOVI 020/074/2270	-1 6			
7, 25, 01	Direboygan	Art, K9XJ 920/876/2370	p/r pref.			
-	the State of the S					

Does your club hold VE Exam sessions?

List them in Worldradio!

The Mart

Classified •Buy •Trade •Sell •Inform

MART deadline is the 15th of the month two months prior to issue date. Please include an address on all ads so prospective clients can contact you by mail, if they prefer. Commercial rate: 35¢/word, prepaid. Private rate: 20¢/word, prepaid. For credit card orders only: (VS, MC,AmEx) http://www.wr6wr.com/martplacead.html or Fax 916/457-7339 with card number, exp. date, name as it appears on card, and signature.

WORLDRADIO ON CASSETTES for the blind. For information, contact TOM CARTEN, K1PZU, 123-Y King's College, Wilkes-Barre, PA 18711-0801 or e-mail: tfcarten@kings.edu. F00

FREE HAM GOSPEL TRACTS. SASE, KW3A, 265 West Ave., Springfield, PA 19064. 301-302

CERTIFICATE FOR PROVEN TWO-WAY RADIO CONTACTS with amateurs in all 10 USA call areas. Award suitable to frame and proven achievements added on request. Send SASE to W6LS, 45527 3rd St. East, Lancaster, CA 93535-1802 to get data sheet.

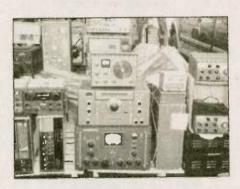
WANTED FOR MUSEUM: Apple-1 and other pre-1980 micro-computers, also early-micro-computer journals, newsletters and advertising literature. KK4WW, P.O. Box 341, Floyd, VA 24091; 540/763-2321. 601-702

FOR SALE: CQ/Ham Radio/QST/73 magazines and binders. SASE brings data sheet. W6DDB, 45527 Third Street East, Lancaster, CA 93535-1802. F00

PERSONALIZED HOURLY HF SKY-WAVE PREDICTIONS from your precise location: \$20.00 (including P/H) SKYCOM 2.0 runs on all Windows OS and is Y2K compatible. Calculates optimum frequencies, path loss, and beam headings to over 400 worldwide locations which you can easily add to if so desired. ATTN: W4HET c/o DX-ENGINEERING SYSTEMS INC., P.O. Box 1934, Middleburg, VA 20118; w4het@aol.com F00

ELECTRON TUBES: Transmitting, receiving, military obsolete...all types. Large inventory. Fast delivery. DAILY ELECTRONICS, 10914 N.E. 39th St., Ste. B-6, Vancouver, WA 98682; 360/896-8856, 800/346-6667, fax 360/896-5476; e-mail: daily@worldaccessnet.com; website: http://www.worldaccessnet.com/~daily/daily.html. 900-901

AUTO-CALL MAGAZINE, official journal of the Foundation For Amateur Radio, a federation of over 80 clubs in the greater Baltimore/Washington DC area. Great coverage of FCC, ARRL, VEC, Public Service and club activities in the area. A must for those even passing through the area. For a sample copy write FOUNDATION FOR AMATEUR RADIO, P.O. Box 7612, Falls Church, VA 22046-7612. F00



WANTED: OLD HEWLETT PACKARD calculators and/or accessories, working or not. JOHN BLUE, KG8MM, 2436 Covert Rd., Burton, MI 48509; 810/744-4485; jblue@tir.com 801-102

WANTED: COLLINS RADIOS, parts estate sales. FRED, W6YM, 17890 Sharon Ct., Pine Grove, CA 95665; 209/304-1329 anytime or e-mail: fhonnold@juno.com. 1000-1001

FOREIGN AIRMAIL POSTAGE for successful QSLing! Many countries, monthly bargains! Plus European nesting airmail envelopes, QSLs, eyeball cards, QSL albums and wall hangers! BILL PLUM, 12 Glenn Road, Flemington, NJ 08822-3322. (weekdays: 908/788-1020; fax: 908/782-2612.)

9-1201

COUNTY HUNTERS: Worked All Texas Award — beautiful certificate! TEMPLE AMATEUR RADIO CLUB, P.O. Box 616, Temple, TX 76503; www.tarc.org 601-602

QRP AMATEUR RADIO CLUB INTERNATIONAL. Awards, contests, outstanding quarterly magazine. \$15 annually for US, \$18 US for Canada, \$20 US outside US/Canada. KQØI, 117 E. Phillip St., Des Moines, IA 50315-4114; http://www.qrparci.org. QRP — The thrill is back! 1200-102

ANTENNA SCIENCE. Why do radio signals leave an antenna? Learn this and more from an enlightening paper by Max Research. Clearly written and fully illustrated for amateurs and radio hobbyists. \$4.95 postpaid. MAX RESEARCH, P.O. Box 1306, East Northport, NY 11731.

FOR SELL: Drake receiver R4C \$200. BILL STEMPEL, 425 Meshanticut Valley Pkwy., Apt.#109, Cranston, RI 02929; 401/946-1385, W1BBJ. 901

WANTED: HAM EQUIPMENT AND RELATED ITEMS. Donate your excess gear or related items, new-old-in any condition-to the Radio Club of Junior High School 22, the Nation's only full time non-profit organization working since 1980 to get Ham Radio into schools around the country as a teaching tool using our EDUCOM - Education Thru Communication. Send your radio to school. Your donated material will be picked up anywhere or shipping arranged and this means a tax deduction to the full extent of the law for you as we are an IRS 501(c)(3) charity in our 21st year of service. It is always easier to donate and usually more financially rewarding, but most important your gift will mean a whole new world of educational opportunity for children nationwide. Radios you can write off, kids you can't. Make 2001 the year to help a child and yourself. Write, phone or fax the WB2JKJ "22 Crew" today: The RC of JHS 22, P.O. Box 1052, New York, NY 10002. 24 hours, call 516/674-4072; fax 516/674-9600; e-mail crew@wb2jkj.org; internet: www.wb2jkj.org. Join us on the WB2JKJ Classroom Net, 7.238 MHz 1100-1230 UTC daily and 21.395 MHz 1400-2000 UTC

100 QSL CARDS \$8.50 postpaid. Send stamp for sample. ARTIST, P.O. Box 148652, Nashville, TN 37214. 6-901

QSL CARDS: Many styles, top quality. Order risk free. Plastic cardholders, T-shirts, personalized caps, mugs, shirts. Other Ham shack accessories. Free call, free samples. RUS-PRINT, 12730 State Line Rd., Leawood, KS 66209; 800/962-5783 or 913/491-6689; fax 913/491-3732; http://www.rusprint.com9-1201

BLISS Z MATCHMASTER BALANCED TUNERS 160-10M. High efficiency for balanced feed lines. Manual & new motorized remote. AIR & WATER KING, INC., 31345 Hwy 184, Dolores, CO 81323; 970/882-3922; www.airwaterkinginc.purification.com; e-mail angelie@bliss.org 9-1201

FREE!!! Ham Radio and other CD-Roms & Software disk catalog. MOM 'N' POP'S SOFT-WARE, P.O. Box 15003-HF, Springhill, FL 34604-0111; 352/688-9108; momnpop@gate.net 5-1201

ATLAS AND OTHER VINTAGE RADIO REPAIR 25+ years experience, certified test equipment. G.B. COMMUNICATIONS, INC., 963 Birch Bay Lynden Rd., Lynden, WA 98264; 360/354-5884; gcf@telcomplus.net 6-901

FULL COLOR QSL CARDS HIGH GLOSS COATING. Send stamp for sample. ARTIST, P.O. Box 148652, Nashville, TN 37214. 901

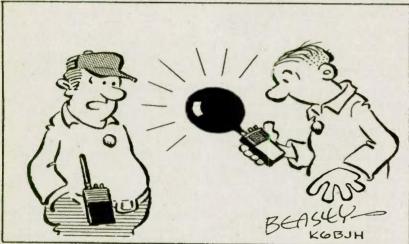
HEADING MAPS AND LISTS. Free. WIL-LIAM MASSEY, 1401 Deacon Rd., Mt. Holly, NJ 08060; www.delphi.com/baminfo. 901-902 EXOTIC 2002 CARIBBEAN HAMBOREE--Join us in meeting with Caribbean Hams, visiting interesting Georgetown, Guyana, operating from great DX location. March 29-31, 2002 information contact KK4WW, P.O. Box 341, Floyd, VA 24091 or www.publicusit.net/dlarsen. 701-202

FOR SELL: Transmatch, home brew, works great \$75. BILL STEMPEL, 425 Meshanticut Valley Pkwy., Apt.#109, Cranston, RI 02929; 401/946-1385, W1BBJ. 901

WANTED: Central Electronics GC-1 receiver gain control, 600L amplifier. JOHN D. BRAND, 9655 Tanglewood Circle, Orangevale, CA; 916/989-2303, k6wc@earthlink.net. 901

DRAKE TR/7, R7. Set 13 extender and service cards. See at http://www.atnet.net/~rsrolfne \$63.50. BOB W7AVK, 2327 Malaga Rd., NE Moses Lake, WA 98837 or w7avk@arrl.net. 901

Place your ad in The Mart



I THINK THAT'S CAUSED FROM TOO MUCH

ADVERTISERS' INDEX

Am-Com — 55 Antique Radio Classified — 56 Anttron Antenna Company — 26 ARRL Southwest Division Convention — 24 Battery-Tech — 13 Bilal Co. — 12 BullDog Iambic Key/AmateurRadioProducts.com Burghardt Amateur Radio Center - 40 Caps Unlimited -Chicago FM Club Radio Expo 2001 - 22 Circuit Specialists — 21
Command Technologies, Inc. — 36
Communication Products Ltd. — 31 Computer International — 6 COMTEK — 32 Courage Handi-Ham System — 12 Cubex Company, Inc. — 47
Cutting Edge Enterprises — 6, 15, 26, 47
DC Ace, Inc. — 21
Doug Hall Electronics — 40 Dragonwyck Design, Inc. — 8 DWM Communications — 39 Electric Radio — 47 Embedded Research -Engineering Systems, Inc — 54 EQF Software — 32 FMS Services — 51 G.G.T.E. - 25 GAM Electronics, Inc. — 20 H. Stewart Designs - 4, 47 Ham Radio Insurance Assoc., Inc. — 51 Ham Radio Outlet — 35 HamStuff by W7NN — 51 High Sierra Antennas — 14 IMRA — 46 Inkjet Southwest - 20 Poles — 7 Jade Products -Johnson, WA6ISC, Don — 22 K-Y Filter Company — 33
Kangaroo Tabor Software — 54 Kenwood USA, Amateur Radio Division - 23

KO6YD Designs/Confluent Designs — 10
Lakeview — 11, 57
LDG Electronics — 56
Lehner, Leo/Battery Booster — 30
MFJ Enterprises, Inc. — 16, 17
Morse Express — 38
Mr. NiCd's Batteries America — 19
National RF/Radio Engineers — 39
Nemal Electronics — 47
NiCd Lady, The — 42
Norm's Rotor Service — 47
Northern Ohio Amateur Radio Depot — 4
Nott LTD — 41
Old Old Timers Club, The — 4
Omega Electronics — 28
P.C. Electronics — 25
Paddlette Company — 53
Palomar Engineers — 18, 62
PAR Electronics — 40
QCWA — 30
QRO Technologies, Inc. — 34
QSLs by W4MPY — 51
R.F. Connection, The — 48
Smithdom Products LLC — 47
Success-Easy/Alternative Arts — 51
T.G.M. Communications — 33
TX RX Systems, Inc. — 60
Unified Microsystems — 4
Universal Electronics — 57
Universal Radio, Inc. — 54
VGE/Van Gorden Engineering — 7
W21HY Technologies — 46
W91NN Antennas — 4, 31
Webster Communications, Inc. — 51
West Mountain Radio — 49
Wilderness Radio — 48
Wireless Industry Association — 26
Wireman, Inc., The — 15
Worldradio Books — 15, 19, 21, 27, 30, 34, 49, 50, 58, 60, 61, 65, 66, 67
XMatch Antenna Tuners — 28
Yaesu — 5

The Science of Audio with Bob Heil, K9EID



lata ...t.d

scienceofaudio

.com

This video covers:

- · Audio signals
- · The human ear
- Microphones
- Phasing
- · Parametric equalization
- And much more!

You will hear how different microphones and equalization settings actually effects the audio you broadcast. Bob demonstrates different techniques and equipment that Amateur Radio operators can use to boost their signal. Use these techniques to cut through the pileups and make more contacts.

Send your check to Worldradio, 2120 28th St, Sacramento, CA 95818. Or, order with your credit card on our secure website. CA residents include \$1.87 sales tax.

RLDRADIO



66 WORLDRADIO, September 2001

• AERIALS II, by Kurt N. Sterba & Lil Paddle

Kurt N. Sterba, along with his soulmate, Lil Paddle, take on the world antennas in order to make sure that "Truth, Justice, and the dB claims, shall b correct, and maximum power with lowest SWR shall be available for all" rings or across the Amateur Radio world. 80 pp. \$10.00 + \$2.00 s/h (\$4.00 for non-US ZI air delivery.) CA residents add \$.75 tax.

• AERIALS III, by Kurt N. Sterba & Lil Paddle

Once again the wise words of our advocates for truthfulness in dB claims illumi nate our minds. This is Kurt and Lil's latest collection of antenna insights. 160 pp \$14.00 + \$2.00 s/h (\$4.00 for non-US ZIP air delivery.) CA residents add \$1.05 tax

• NEAR VERTICAL INCIDENCE SKYWAVE COMMUNICATIONS

- THEORY, TECHNIQUES AND VALIDATION,

by LTC David M. Fielder & MAJ Edward Farmer, AA6ZM, P.E.

A compilation of previously published articles regarding NVIS propagation and communication, a mode which allows medium and high frequency radio waves to "leap tall mountains with a single bound," enabling continuous, dependable coverage of areas of operation spanning several hundred miles. 144 pp., over 100 illustrative figures & tables. \$14.00 + \$2.00 shipping and handling. (\$4.00 for non-US ZIP air delivery.) CA residents add \$1.05 tax.

• SIX METERS, A Guide to the Magic Band, Revised, by Ken Neubeck, WB2AMU

A labor of love by the author, the book provides comprehensive information on Six Meter equipment and modes. A little history of the Golden Age of Six Meters is provided along with some explanations for the causes of various forms of propagation. 96 pp. \$12.00 + \$2.00 shipping and handling. (\$4.00 for non-US ZIP air delivery.) CA residents add \$.90 tax.

•REFLECTIONS II, by Walt Maxwell, W2DU

Greatly revised edition of the all-time classic, Reflections, with additional chapters. This will be your most prized reference regarding SWR, tuners and antennas. Myth-busting and truth-telling! Belongs on the bookshelf of every serious amateur. Softcover, 8.5" x 11", 416 pp., many charts, figures and photographs. Only \$19.95 + \$4.00 s/h (Non US ZIP delivery, contact us.) CA residents add \$.150.

• EVERYTHING YOU FORGOT TO ASK ABOUT HF MOBILEERING,

by Don Johnson, W6AAQ

This long-anticipated update on mobile antennas is packed with tips garnered from amateurs all over the country who have found a better way to adapt their mobile antenna installation to their specific needs. 72 pp., many photos and figures. \$8.00 + \$2.00 s/h. (\$4.00 for non-US Zip air delivery.) CA residents add

INSIDE AMATEUR RADIO, by Lenore Jensen, W6NAZ

Interviews with the people who make Amateur Radio the engaging hobby that i is. A collection of short stories and anecdotes detailing courageous rescues, hilari ous situations and heart-warming tales, as told by the hams who made them hap pen, through the "pen" of someone who truly knew what it was about "inside Ama teur Radio." A must for every ham shack coffee table. 93 pp. \$9.00 + \$2.00 shipping and handling. (\$4.00 for non-US ZIP air delivery.) CA residents add \$.68 tax.

• WHEN THE BIG ONE HITS, A Survival Guide for Amateur Radio Operators,

by Jerry Boyd, KG6LF & Jay Boyd, KN6BP

Tells Amateur Radio operators what to do to prepare for survival, safety of fami lies and loved ones, and perform disaster communications duties efficiently in the face of disaster. 56 pp. \$7.50 + \$2.00 s/h. (\$4.00 for non-US ZIP air delivery.) CA residents add \$.56 tax.

•BEST OF BEASLEY, by Robert Beasley, K6BJH

"Oh, to see ourselves as others see us..." A wacky view of Amateur Radio through the eyes of a very clever cartoonist. Great gift for a fellow amateur. 112 pp. \$8.00 \$2.00 shipping and handling. (\$4.00 for non-US ZIP air delivery.) CA residents add \$.60 tax.

To subscribe call: 1-877-472-8643

BOOKS, etc.



• What does a well dressed Amateur Radio Operator wear when drinking out of a WORLDRADIO mug? Why, this classy WORLDRADIO cap, of course! Durable navy blue poplin with light blue imprint. \$7.00+\$2.00 s/h. CA residents add \$.53 tax.







TOTAL PRICE

Guaranteed to make your beverage taste better! Cobalt blue 11-oz. ceramic mug with light blue imprint. \$7.00+\$4.00 s/h. CA residents add \$.53 tax. The Worldradio 1999 CD-ROM
Featuring the Aerials Trilogy, plus the whole 1999 year of Worldradio on archive for your viewing pleasure.
The Worldradio 2000 CD-ROM
Featuring books on HF mobileering and HF propagation, plus the 2000
Worldradio archive. Each is
\$24.95+\$2 s/h. CA residents add \$1.87 tax.

Would you like speedy, personal attention? Call WORLDRADIO — 916/457-3655

••••••Send your order to••••••

WORLDRADIO BOOKS • P.O. Box 189490 • Sacramento, CA 95818

n	u me the following items:				
Y	TITLE	PRICE	TOTAL		
	AERIALS II	\$10.00			
	AERIALS III	\$14.00		7011	
	BIG ONE	\$ 7.50		Check or money order enclosed for	· \$
	SIX METERS	\$12.00		Charge my andit and	
	BEST OF BEASLEY	\$ 8.00		☐ Charge my credit card: ☐ VISA ☐ MasterCard	7 A E
	INSIDE AMATEUR			D visa D master card	□ American Express
	RADIO	\$ 9.00			
	NVIS COMM.	\$14.00			
_	REFLECTIONS II	\$19.95		Account Number	Expiration Date
	SD-20 Antenna Support	\$19.95			
	WORLDRADIO MUGS	\$ 7.00			
	WORLDRADIO CAPS	\$ 7.00		C:	
	WORLDRADIO 1999 CD			Signature	
_	WORLDRADIO 2000 CD	\$24.95			
_	SCIENCE OF AUDIO	\$24.95		Name & call (please print)	
	SUB	TOTAL		trans a dan (proase print)	
	CA residents add 7.5% sale	es tax	1-		
	S&H charges: \$2.00 for the	e first		Address	
	book to an address, & \$1.0	0/book			
	for additional books. \$4.00		-	C. IC. ICID	
	\$4.00 Reflections II, \$2.00	cap,		City/State/ZIP	
	\$2.00 CD \$5.SD-20		1		

World Radio History

ARRL sends congratulations

Rick McCusker, WF6O

ne day at the beginning of June, I was sitting at my desk, minding my own business, when Armond Noble, N6WR, our publisher came into the office with big smile on his face. He placed this letter on my desk. "Isn't that nice?" he said. Yes, as a matter of fact, it is nice.

Even though we sometimes respectfully disagree with the ARRL, we realize the fact that the League is the one organized voice for Amateur Radio: We try to cooperate fully with the ARRL, and that's why you find news from the ARRL Letter and Bulletins in the pages of *Worldradio*.

This relationship has been going on for over 30 years, and we sincerely hope to continue it for another 30

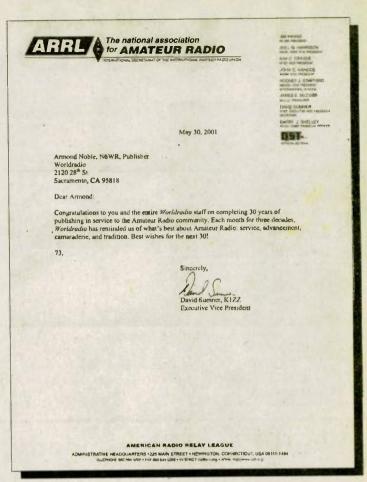
years - or longer!

We, the staff at Worldradio, thank David Sumner, K1ZZ, Executive Vice President of the ARRL for his kind letter on behalf of the ARRL. It's been a lot of fun, and we plan on having even more fun and a good working relationship with the League. Besides, with a classy guy like David sending out the letter, how can we do anything but continue the relationship?



(USPS 947000) P.O. Box 189490 Sacramento, CA 95818-9490

POSTMASTER: Send this page (NOT A COPY — THAT'S WASTEFUL!) with changes of address to above. (Please include mailing label intact. Please do not obliterate ANY information on the mailing label.)



Periodicals Postage Paid Sacramento, CA and additional mailing offices