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WORLDRADIO

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Win Kurt N. Sterba's key!

See details on pg. 7

FCC completes inquiry

The FCC has ended its probe into alleged irregularities at three 1999 South Carolina Amateur Radio exam sessions. The FCC says it found "nothing improper" at a 9 October 1999 W5YI-VEC test session in Iva.

The FCC initiated an audit of the W5YI-VEC last year, and the VEC has cooperated in the probe. In December, the FCC asked W5YI-VEC to detail how it screens and accredits VEs and its procedures for verifying the results of W5YI-VEC test sessions.

In a letter to W5YI-VEC's Fred Maia, W5YI, FCC Special Counsel for Amateur Radio Enforcement Riley Hollingsworth said the forgeries and a Clemson "sub-session" where two volunteer examiners are alleged to have fraudulently upgraded themselves "constitute an alarming failure of oversight and integrity in the Volunteer Examiner program at those sessions."

The "sub-session" followed a scheduled exam session on 14 July 1999 in Clemson. The FCC alleges that then-volunteer examiners William J. Browning, ex-AB4BB and AF4PJ, and James F. Chambers, KF4PWF, in Hollingsworth's words, "apparently awarded themselves upgrades to Extra class" at the ad hoc exam session at Browning's home by forging the signatures of other VEs.

The FCC also says someone forged the signature of VE Grady Robinson, AK4N, on applications for all 10 examinees at a 26 August 1999, session in Clemson. Hollingsworth said that Robinson "was not present at the session and was in no way at fault."

As a result of the Clemson inquiry, Browning forfeited his Amateur Radio license. Chambers has been called in for retesting and his role "is still under review," Hollingsworth said. Browning and Chambers handled all paperwork for both the regular exam sessions and the "sub-session" in Clemson.

"It would appear that these forgeries and the upgrading of the volunteer examiners at their own 'sub-session' could have been detected by merely attempting to verify the presence of the volunteer examiners whose names and call signs appeared on the examination session documents," Hollingsworth told the W5YI-VEC.

Hollingsworth said Maia has responded to the FCC's letter. When contacted, Maia offered no comment on the FCC's latest request for information about W5YI-VEC's examination procedures. In the past he has said his VEC screens volunteer examiner applicants as well as it can and carefully logs every exam session. — *ARRL Letter*

ARRL DXCC Desk announces new 17-Meter Award

The ARRL DXCC Desk now is accepting applications for its new 17-Meter Single Band DXCC Award. The 17-Meter DXCC certificates will be dated but not numbered, and 17-meter credits also will count toward the DeSoto Cup competition for 2001. To determine prior credits on 17 Meters, contact DXCC for an update to help avoid duplicates and additional costs. Copies of DXCC records are available (in Adobe PDF format) by contacting the DXCC Desk at dxcc@arrl.org (if requesting via U.S. mail, include $1.50 for postage or an SASE with $1.50 in postage). For more information, contact DXCC at dxcc@arrl.org. — *ARRL Letter*

Hams help in storm emergency

Ice storms have caused wide-spread power and telephone outages and hazardous driving conditions in Texas, Arkansas and Oklahoma, and there's more to come. Amateur Radio Emergency Service nets were activated on HF and on local repeaters to handle emergency traffic and to support public safety and relief agencies. Several deaths have been attributed to the severe weather.

President Clinton has declared a state of emergency in Oklahoma and Arkansas. Hundreds of thousands still were without power, and many still had no telephone service — even cellular systems were out.

Hams also have been locating and assisting the many stranded motorists. South Texas Section Manager Ray Taylor, N5NAV, says an estimated 200 Texas amateurs have been pitching in. At one point, ARES members helped with communication after hospital telephones were knocked out; they also got a generator going after one hospital's emergency power system failed.

Hams also have been supporting relief activities of the Red Cross, the Salvation Army and the Baptist Men's Kitchen as well as state police. The Red Cross has opened shelters to assist those stranded by the inclement weather or left without utilities. — *ARRL Letter*

WORLDRADIO

March 2001 Year 30 Issue 9

On the cover: Kurt N. Sterba's actual key will be given to the highest bidder. See page 7 for details.

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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.*

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Editor's Log

It's quite a challenge keeping track of all of those enlisting in the ***Worldradio*** Lifetime Subscriber Corps (WLSC). What are the benefits to enlisting in the WLSC? You get your favorite Amateur Radio magazine delivered to your door, every month, by a career federal employee specially selected for this important task. This employee has taken an oath to make sure your copy of this journal arrives without regard to rain, snow or dark of night. OK, so it's just your ordinary letter carrier. Unfortunately, we can't offer a retirement program, or health care for life (don't get me started on that subject). All we can promise is the best in Amateur Radio news for you.

Our latest enlistees:

Rodney L. Scribner, KA1RFD
Gardner, ME
James F. McGivern, III, K1NK
Oradell, NJ
D.E. Wright, K9DJ
Green Bay, WI
Bob Pearce, KIØKE
Elysian, MN
Frank Gassmere, K9BWQ
Midlothian, IL
Mike Benevelli, KB9OCH
Burbank, IL
Robert Randall, N2TWY
St. Peters, MO
Michael Manlove, AD6GK
Redwood City, CA

Frank and Mike received their lifetime subscriptions as a gift from John R. Kent. Thanks, John. You should really change your first name to "Clark." You truly are a "Superman."

•

I received some letters and e-mail messages saying I was bashing the ARRL in the January "Editor's Log." One was a scathing letter from a very well-respected amateur I greatly admire.

If I sounded like I was bashing the ARRL, it was completely unintentional. I am proud to say that I am a member, have been for quite some time, and I will continue my membership as long as I am a Ham.

In my eyes, the ARRL is similar to the American Medical Association, the top-notch association for those in the medical profession. Just as the AMA *Journal* is a benefit of membership in the AMA, so is *QST* when you are a member of the ARRL. Each of those publications are the "Rolls Royce" of their respective organizations.

Not only do you receive *QST* when you become a member of the ARRL, you reap additional benefits, some of them not well known. Who represents this hobby when the government wants to auction off spectrum? The ARRL. Who provides educational services for any school interested in Amateur Radio? The ARRL. Who provides an outgoing QSL service that is extremely affordable? The ARRL. I could go on and on, listing the additional benefits of being a member, but just let me say this. If I sounded like I was bashing the ARRL, I sincerely apologize. I was merely drawing a comparison between our two publications.

One final thought for those of you still on the fence about joining the ARRL — what would happen to this hobby if the ARRL decided to shut their doors? We wouldn't have any organized and strong voice to protect this hobby. What would happen then? I don't even want to think about it.

•

Update on the quest for QSL cards — please refer to the list of cards I am seeking from the list in the Editor's Log in the last issue. It's now been over two months, and I have received some additional cards. I received a card from GIØKVQ (sent direct), 9A3MA (direct), VP2E (N5AU/mgr) and ZS6EZ (direct). Chris, ZS6EZ also enclosed a note stating that the one IRC was not enough to cover the cost of sending an airmail envelope from South Africa to the U.S. I have sent Chris two greenstamps to cover his costs. (For an in-depth explanation of how IRCs are supposed to work, but don't, see this month's Letters to the Editor section).

Out of 20 sent out, I have received five QSL cards in return. So far, a 25% return rate. I've also received LOTS of comments about my QSL card "quest."

One more note about the "quest" — A few readers mentioned NØTT is not the manager for 3E1DX. They're right! I made an error transcribing my list from handwritten to typed in this here Mac. I did send the card to the correct manager, NØJT. One reader pointed out the error and told me not to hold my breath waiting for that one!

•

Several readers have commented that they could not find my e-mail address. I have updated my listing in QRZ so you can now find it there. If you can't access QRZ, the e-mail address is: wf6o@arrl.net. Or you can send e-mail to the office at: n6wr@ns.net. For those of you that use the postal system, my home address is: 5699 Time Court, Sacramento, CA 95824-2062.

I welcome your comments and suggestions. — *WF6O*

Real Performance for the Real World!

Today's elite-class operators demand the best RF weaponry available. Yaesu's exciting new MARK-V FT-1000MP answers the call, with an expanded array of receiver filtering, 200 Watts of power output, and Class-A SSB operation capability for the cleanest signal on the band. Enhanced front-panel ergonomics on the front panel save you seconds in a pile-up or a contest "run," and Yaesu's HF design and manufacturing know-how ensures that no short-cuts have been taken in our effort to bring you the best HF transceiver money can buy. For more QSOs in your log, and more awards on your wall, there's only one choice: the MARK-V FT-1000MP from Yaesu!

I. Interlocked Digital Bandwidth Tracking System (IDBT)

The IDBT feature greatly simplifies SSB operation by matching the bandwidth of the DSP (Digital Signal Processing) system to the net bandwidth of the 8.2 MHz and 455 kHz IF stages. The IDBT system accounts for the settings of the IF WIDTH and SHIFT controls, and automatically sets a DSP bandwidth which matches the analog IF bandwidth.

II. Variable RF Front-End Filter (VRF)

Protecting the MARK-V's receiver components from strong out-of-band signals, the VRF system acts as a high-Q "Preselector," located between the antenna and the main bandpass filter networks, providing additional RF selectivity on the 160-20 meter Amateur bands for multi-operator contest teams, DX-pedi tions, or for operation near MW/SW broadcast stations.

III. 200 Watts of Transmitter Power Output

Utilizing two Philips BLF147 Power MOSFETs in a 30-Volt, push-pull configuration, the MARK-V's transmitter puts out up to 200 Watts of clean output power, thanks to the conservative design of the PA section.

IV. Class-A SSB Operation

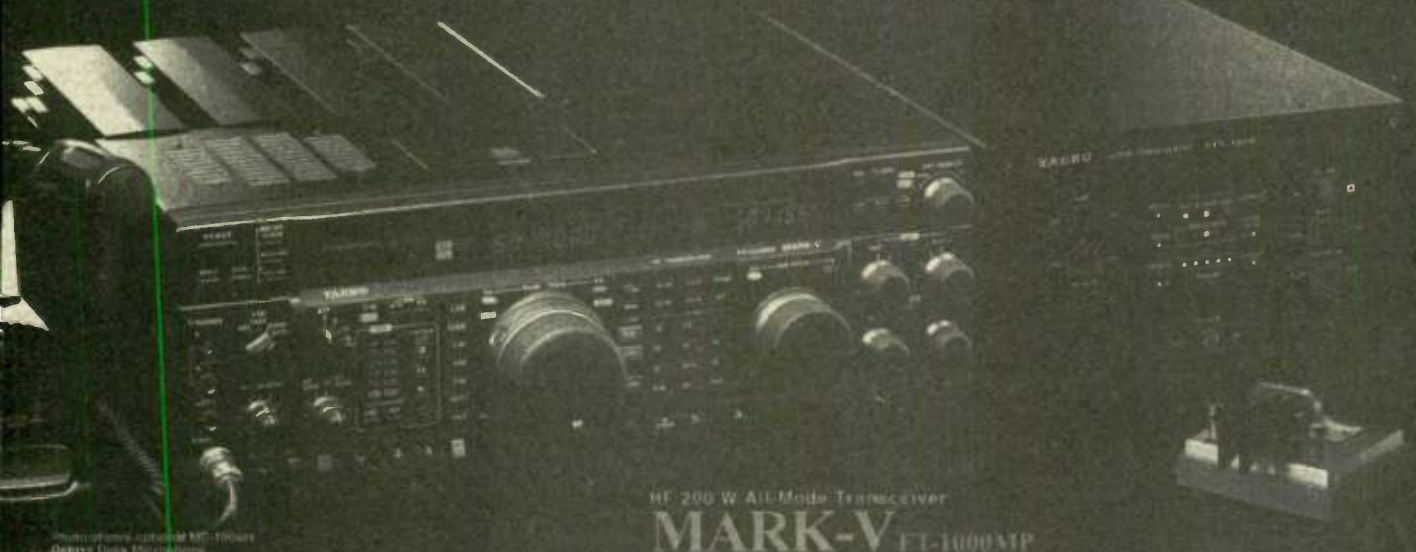
Exclusively available on the MARK-V FT-1000MP, a press of a front-panel button engages Class-A SSB operation of the transmitter, at a power output level of 75 Watts. Class-A operation produces incredibly clean signal quality, with 3rd-order IMD typically suppressed 50 dB or more, and 5th- and higher-order products typically down 80 dB or more!

V. Multi-Function Shuttle Jog Tuning/ Control Ring

The immensely-popular Shuttle Jog tuning ring, which is concentric with the Main Tuning Knob, has a new look in the MARK-V: it now includes the activation switches for the VRF (left side) and IDBT (right side) features, so you don't have to move your hand position to activate these important circuits during contest or pile-up situations!

Features

■Frequency Coverage: (RX) 100 kHz–30 MHz; (TX)160–10 m Amateur Bands ■Dual In-band Receive w/Separate "S" Meters ■Ten Pole Collins® Mechanical Filter Built-in ■RX DSP Noise Reduction and CW Peaking Filter ■High-speed Automatic Antenna Tuner ■Two TX/RX Antenna Jacks plus RX-only Jack ■TX Microphone Equalizer ■RF Speech Processor ■Direct Digital Synthesis ■CW Spot and Two Key Jacks ■Two Headphone Jacks (1/4" and 3.5 mm) ■Low-Level Transverter RF Drive Jack ■Separate FP-29 Power Supply (30 V/13.8 V DC Output)



HF 200 W All-Mode Transceiver

MARK-V FT-1000MP

EXPAND YOUR DX HORIZONS WITH THE FTV-1000 50 MHz TRANSVERTER!

- 50 MHz Transverter with 200 W PEP Power Output
- Class-A Bias Selection for Low TX IMD (PO: 50 W)
- High-Performance Receiver Front-End
- Automatic, Effortless Operation with MARK-V FT-1000MP
- Upgrade to High Power with VL-1000 Linear Amplifier

Specifications

Frequency Range:	50-54 MHz
Antenna Impedance:	50 Ohms
Power Output:	200 Watts PEP
Spurious Emissions:	At least 60 dB down
Power Source:	DC 30 V and 13.8 V (supplied by FP-29 Power Supply of MARK-V)
Dimensions:	9.6" x 5.4" x 13" WHD (243.5 x 126.5 x 331 mm)

FTV-1000

200 W 50 MHz Transverter

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Operation Santa Claus had another successful year due, in part, to this enthusiastic group of Amateur Radio operators.

Serving children

Carole Perry, WB2MGP

On 6 December 2000 a wonderful event took place at Kennedy International Airport in New York. A philanthropic organization called Community Mayors of New York State hosted a Holiday party for Special Education students in the New York City school system.

The motto of Community Mayors is, "No man is so tall as when he stoops to help a handicapped child." The group is comprised of people from different walks of life whose mission it is to do good works for handicapped children. In partnership with hundreds of volunteers from the New York City Police Department, the New York City Fire Department, the New York City Department of Sanitation, Port Authority Police, FBI, CIA, Department of Immigration, and many other groups, a Herculean effort was put forth to bring a little happiness to the lives of those less fortunate.

I've been impressed for some time by the charitable works performed by the Community Mayors. For the past three years I've made sure the Amateur Radio community had a chance to show all the benefits they could provide at an event of this magnitude.

Three years ago I had to go before the planning committee of the Community Mayors Holiday Planning Committee to explain the benefits of having a well trained tearn of Amateur Radio operators to shadow their key people in the huge Port Authority Airlines hangar. After many years of being on "combat duty" with trying to promote the advantages of Amateur Radio to the general public, I have learned the lesson of always being prepared, and of always, always, having a glitzy presentation. I went to the meeting with handouts and endorsements, so everyone could take home something to read at their leisure. I also gave a plug for the ARES group I'd be bringing in to set up the communications.

I wasn't shy about showing videos and press releases about the astronaut contacts, youth forums, and community events my Ham radio students have participated in throughout the years. They were skeptical at first, but admitted that there was a tremendous need for better communications at such a large and noisy event.

Well, that was all three years ago. At this point, the Community Mayors wouldn't even consider running the event without the help of Amateur Radio operators. My good friend, Charlie Hargrove, N2NOV, heads up the ARES group on Staten Island. Charlie brings his team in and assigns shadows to the key people running the event. With 4,500 youngsters and 1,500 volunteers, the logistics of running this event are mind-boggling. I was assigned the job of shadowing Jerry Parker, the master of ceremonies, who also happens to be my husband. This is no easy task since the man is a bundle of boundless energy and is everywhere at once.

Charlie figured out where to set up the base, and got in touch with all the other groups who would be using their radios in the hangar. After three successful years at this event, the head of the Port Authority security gets in touch with us to offer assistance in setting up the Amateur Radio equipment.

Thousands of children, including several hundred who were wheelchair bound, were served lunch, given toys by FAO Schwartz, Toys 'R' Us, and Macy's, and were greeted by the Macy's Santa Claus and Mayor Guilliani of New York City. If the Community

Mayors were impressed with us, so were we with them. In all my years of doing special events for children, I've never been involved with something of this magnitude.

It was very dramatic when the big moment came and Santa arrived (from the North Pole, of course) at the hangar. One of the Hams contacted me to pass along the information that Santa and the Mayor had just arrived. I then relayed the message and the MC gets everyone quiet so we can observe the hangar doors opening as a Delta Shuttle taxis in carrying these special guests on board. They get off the plane and are driven through the isles of children's tables on board a small train borrowed from a local amusement park in Coney Island. There is no doubt that this would be the highlight of their Holiday season.

Many well-deserved accolades and tributes have come to the dedicated Amateur Radio operators who donate so much time and effort to this worthwhile event. We all look forward to giving our assistance again for "Operation Santa Claus" next year.

The wonderful 2000 team under Charlie's leadership was: Karen Hargrove, N2ZYF; Jan Wolfe, W2KMA; Alan Hobron, KC2DPP; John Kiernan, KE2UN; Guy Richman, KC2AYG; Frank Katalenas N2UMC; Mark Phillips, G7LTT; Ray Valvik, N2ZWT; Bill Butler N2BGR; Sal Baglieri, KC2BGT; Mike Bartmon, KF2EO; Andy Borrok N2TZX; Harvey Fermaglich, N2EOI; Robert Robinson, KB2PSM; Phyllis Robinson, KC2DKD; Joe Carpentieri, KA2BRH; Carole Perry WB2MGP, and Charlie Hargrove, N2NOV.

Isn't it great to be in a hobby and service that can bring people together and promote such good will?

Once again, I have been asked to moderate the Youth Forum at the Dayton Hamvention in May 2001. If you are under the age of 18 and would like to be a speaker at the forum please get in touch with me as soon as possible. E-mail at: wb2mgp@ix.netcom.com or call at 718/980-9609.

Attention: Kurt fans

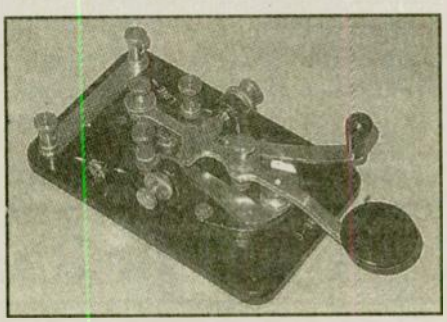
Here's a chance to own a genuine Kurt N. Sterba memento and help a most worthy cause.

The prize is a J-38 key actually used by KNS on the amateur bands. The key, (autographed on the bottom) will go to the highest bidder.

Send your bid to J-38, ***Worldradio***, 2120 28th St., Sacramento, CA 95818.

The bidding will close 30 days after the first bid is received. The highest bidder will be notified as being the winner. The winner will then make out his or her check to "Handi-Hams" send it to ***Worldradio*** and the key will be sent.

For the few that may not know of Handi-Hams, it is a charitable organization in Minnesota that enables the severely disabled to become amateurs and then furnishes equipment.



This J-38 key has Kurt's name engraved on the bottom of the base and comes with a certificate of authenticity.

Go into the ARRL's Straight Key Night with a real "Straight Key" from the Straight Arrow.

David Splitt, KE3VV

It was just a slight error...

When I decided to dedicate the January Rules & Regs column to responding to e-mail, little did I know that the column would generate more e-mail than ANY previous column, including the "soapbox" columns on restructuring and Morse code. The reason? Simple! I made a mistake in the January column and my sharp-eyed readers were quick (and virtually unanimous) in pointing it out. I want to thank everyone who took the time to send e-mail and I want to let them explain my goof to the rest of you...

When I read the e-mail from John, WA6PGA saying, "My YF, Margrit, N6FQG, was a Novice and passed her Tech written exam back in 1986. She has a letter from the FCC that says her Technician Plus license was issued on 21 October 1986 (ahead of that magic 21 March 1987 date). What specifically does she do to get a piece of paper in her hand that says she's now a General licensee? Thanks and keep up the good work!" My response to John was far from an example of the "good work" he praised. I quoted the FCC regulation (as modified by the December 1999 Restructuring Order):

FCC Part 97, Section 505(a)(8) now reads: "The administering VE's must give credit as specified below to an examinee holding any of the following license grants or license documents: (8) An expired FCC-issued Technician Class operator license document granted before 21 March 1987: Element 3. Then I made the mistake of reading the FCC regs too literally. I wrote "There is the irony... Margrit has a valid TechPlus license (Elements 1 and 2) but does not qualify for Element 3 because she does not have an expired pre-21 March 1987 Technician license. I know that might not make sense, but that is what the regs say." Chalk that up as Extra Class Oooops!!

Thank goodness that John and Margrit have more sense than to listen to me!

Thank goodness that John and Margrit have more sense than to listen to me! Even before the ink was completely dry on the January issue, John sent the following good news:

"...we waltzed into the exam room, showed the VE team her present TechPlus license, gave 'em a copy of it, filled out the necessary form, showed the FCC letter that attested to the fact that she had been a Technician prior to the magic date, paid our sixPlus bucks, and left. Two weeks later Margrit was officially a General Class. . . no fuss, no muss, no additional testing of ANY kind, presto, and bingo — life is good! Perhaps you wanna let others know; she's never let her license expire (I certainly saw to that!). Cheers, adieu, and 73! From WA6PGA."

Well I am glad Margrit got her General Class and I am glad she "never let her license expire," but I was still in the dark about the VE's and FCC giving her credit for the "unexpired" license after they changed the wording of the regs to eliminate credit for "unexpired" licenses. Those of you who have already figured it out, bear with me (or go read Kurt's latest ... he makes fewer mistakes than me).

As I said, as soon as the January issue hit the streets, the e-mail began

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 21 January 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 Technician	Group B General	Group A Am Extra
Ø	KCØJNV	++	ABØPW
1	KB1GGI	++	AA1ZZ
2	KC2HJX	++	AB2LK
3	KB3GWA	++	AA3WM
4	KG4LGP	++	AG4FJ
5	KD5MWD	++	AD5BT
6	KG6ETS	++	AD6UW
7	KD7LOY	++	AC7KW
8	KC8QCZ	++	AB8JR
9	KB9YRF	++	AB9BG
N. Marianas	KHØLO	++	++
Guam	KH2UZ	++	++
Hawaii	NH7CU	++	++
American Samoa	WH8ABF	KH8DO	AH8U
Alaska	KL1AU	KLØZS	++
Virgin Island	WP2AIM	NP2LM	++
Puerto Rico	WP3IX	++	WP3T

++ All calls in this group have been assigned

to flood in. The first VE to write in was Bud Hovey, WF2B, who told me, "Our VE team has certified a number of Technicians for General who had pre-21 March 1987 licenses. They either showed us a document from the FCC or a copy of the license or a page from an appropriate callbook of the era. Even though they are currently licensed they still were granted the upgrade by the FCC." Unfortunately, even though I sensed the "rightness" of John's position, I was still unconvinced because he quoted the FCC rules for Part 97 from the out-of-date FCC web site (now there's an irony... the FCC website does not have the up-to-date FCC rules).

The next e-mail came from Dale, WB6BYU, who wrote, "I was reading your comments in the January ***Worldradio*** regarding the upgrade credit for Margrit, N6FQG. I would suggest an alternate reading on the question of credit for Element 3. If Margrit appeared at a VE session with a copy of her original license dated October 1986, which, of course, had expired in 1996, wouldn't that qualify as "An expired FCC-issued Technician Class operator license document granted before 21 March 1987?" Certainly, all such licenses issued before 1988 have expired: folks who have renewed have received a new document with a later date. If you gave the verbatim reading of the rules, it requires that the document has expired, not that the operator no longer holds the call sign. Just a thought..." And a good thought it was, indeed. All we have to do is wrap our minds around the fact that the FCC considers ALL pre-March 21, 1987 Technician licenses to have "expired," whether or not the licensee had renewed their license. OK by me!

Incidentally, John and Margrit are former neighbors of Dale and when I copied all of them on my response, they renewed their acquaintance and exchanged their own e-mails! I am glad that part of the column had some positive impact! Another interesting and challenging exchange resulted from an e-mail send by Win Guin, W2GLJ. Win wrote, "I enjoy your Rules & Regs articles in ***Worldradio***; however, I must disagree with the conclusion given to John, WA6PGA, in Issue 7 regarding the license status of Margrit, N6FQG. As I interpret

the FCC Rules Part 97.505 (a) (8), It matters not whether the Technician Class pre-21 March 1987 licensee holds an expired or unexpired license as in both cases the licensee would be granted credit for the 3(B) Element." That puts it in a nutshell, Win! Call it "expired" or call it "unexpired," if you had the Tech license pre-87 variety and had, in reality, passed all the elements needed for the post-Restructuring General Class, you should have one with no further testing.

Despite my occasional tough scrutiny of the ARRL, the folks at HQ are still reading the column and were VERY helpful, as usual. Brennan Price, N4QX, Field and Regulatory Correspondent for the League wrote, "I work along side John Hennessee here at ARRL. I am attempting to learn through osmosis all that John knows. That's a big task!" That sure is, Brennan. John is one of the most knowledgeable Hams at HQ! Brennan's e-mail continued:

"I enjoy reading your column in ***Worldradio***, even if you are tough on my employer from time to time. But as a Volunteer Examiner, I have to take issue with your interpretation of N6FQG's ability to upgrade to General. Bart Jahnke [see the next e-mail] can attest that thousands of Hams in Margrit's situation have upgraded to General without testing. The distinction lies in what the FCC accepts as an expired license under Section 97.505(a)(8). While Margrit's call sign is currently valid, her current license was issued on 24 July 1996. Her previous license, issued on 21 October 1986, expired on 21 October 1996. Since her Technician Class license was issued prior to 21 March 1987, and has expired, it qualifies for Element 3 credit under 97.505(a)(8). In fact, all such licenses qualify, because any licenses issued before the magic date expired on 20 March 1997, at the latest."

Wow! A lawyer could not have laid it out better! Brennan's colleague, Bart Jahnke, W9JJ, the Manager of the ARRL VEC and I exchanged a number of e-mails that covered the waterfront on this issue. Here is part of a Q&A we had on Technicians becoming Generals:

KE3VV: "Do you require the old Tech license or will the Tech Plus 'renewal' license be accepted (i.e., does it show the original date of issuance as pre-3/21/87)?"

ARRL VEC: "A new or currently valid Technician or currently valid Technician Plus license can only potentially convey credit for Elements 1 and 2. Credit for Elements 1, 2 and 3 are required for General."

KE3VV: "If you know, how has the FCC been responding to requests for documentation of pre-3/21/87 Tech licenses?"

ARRL VEC: "If the FCC can verify a pre-3/21/87 Tech license from their active database (I understand it to have data back to the late '70s or so) they will issue a license verification letter. Otherwise the FCC refers the inquiring party to their Records Contractor, ITS, which charges a fee."

KE3VV: "If a pre-3/21/87 Tech licensee that actually did let the license expire comes in with just the old expired license, will the VEC process the papers to issue a new General license? In other words can someone who is not currently a licensed Tech Plus get a General license by submitting an 'expired' pre-3/21/87 Technician license document and paying the fee?"

ARRL VEC: "No. The expired Tech license is only good for Element 3 credit. Without proof of current Element 2 credit no new license can be earned."

KE3VV: "What documents are VEC's (or your VEC) accepting as proof of pre 3/21/87 Tech license?"

ARRL VEC: "At a test session, the VE's will credit documents presented by applicants. Valid credit documents for Element 3 may include the actual FCC Technician license document issued before 21 March 1987, as indicated on the license. In addition, applicants potentially could have taken the Element 3 written test up through midnight 20 March 1987, which would not have resulted in a license issuance until 15 July 1987. For ARRL VEC purposes, we are advising ARRL VE teams that a Technician class license issued through 15 July 1987, is acceptable for General class grandfather credit. In addition, the following are acceptable proof:

* An original Element 3 CSCE issued before 21 March 1987.

* An FCC-issued License Verification Letter indicating that the applicant was licensed as a Technician licensee prior to 21 March 1987. NOTE: To request a letter, write to FCC, ATTN: Amateur Section, 1270 Fairfield Rd, Gettysburg, PA 17325 (or fax 717/338-2696).

* An International Transcription Service (ITS) FCC Records Contractor extract/certification from FCC Fiche Records. There is a charge for this service. You can obtain information for ITS by calling 717/337-1433 (or visit http://www.itsdocs.com/).

* A 1987 Edition, or earlier, Radio Amateur Callbook listing is acceptable as proof (be sure to include the year of publication reference, if not printed on the page). Radio Amateur Callbook will, for a $10 fee, provide a notarized "Proof of Licensing" document which will serve your credit-proof requirements. For more information contact: Radio Amateur Callbook, 575 Prospect St., Lakewood, NJ 08701; E-mail: 103424.2142@compuserve.com; or call 732/905-2961 (choose option 5).

* QRZ.COM has posted a copy from their archives of their very first CD ROM product on their web page, as originally published in 1993. This data includes licensees from 1983 to 1993. A printout of a listing from this CD ROM, showing a Technician license effective/begin date prior to 3/21/87 is acceptable. Their URL is http://www.qrz.com/search1993.html

Bart reminded me that the ARRL had previously published this information in *QST* and added that other reasonable forms of verification showing license class as Technician and the license ending date along with a license beginning/effective date before 3/21/87 may be acceptable as well. He suggests that you contact your local VE team to determine if some other form of credit proof may be acceptable.

Thanks, Bart! And thanks to all the VEC's and VE's that have been doing

a great job on the upgrade despite errant advice from logic-constricted lawyers.

Denny, WA8EYQ, sent an e-mail saying, "I just finished reading my free sample copy of ***Worldradio***, January, 2000, and took special notice of your reply to Margrit, N6FQG. "All Tech licenses issued before Mar. 1987 have passed their expiration date. Those who renewed were given a license which read TechPlus and valid on the date issued. No indication is there to show that it had been an originally issued prior to March 1987. This license carries no evidence of having passed a 'General' written test, and therefore would not be sufficient to upgrade to the new General requirements. If the licensee had saved the original copy of the 'expired' Tech license, that should suffice as proof for the purpose of upgrading to General under the new restructuring. The FCC doesn't say so in the rules, but it implies that any 'proof' of having held a pre-1987 Tech license is sufficient for the upgrade to General, and they do this by providing anyone who asks with a letter to that effect. Anyway, this scenario seems plausible and further, it removes the irony, as you say. If this is true, it would explain why there have been so many upgrades to General since the new restructuring took place." Right you are, Denny, and I hope you got yourself a subscription to ***Worldradio*** so you can read your words of wisdom.

John Abbott, K6YB, jumped in on the side of giving credit for the pre-87 Tech licenses, but based his opinion on outdated regs that still had the words "expired or unexpired" in Part 97, Section 505(a)(8). John said, "I write a Tech manual called 'Ride the Airwaves with ALFA & ZULU,' and am a VE, so I get a lot of questions about the upgrade requirements. I keep my copy of the FCC regs published by W5YI handy at all times!" After I informed John that the regs had been amended in December 1999 to delete the words "or unexpired," and suggested that he check it out on the ARRL web site (which is up-to-date), he responded, "OK Dave. I went to the ARRL site, and of course you are correct — the W5YI book is wrong! At any rate, this is one of the strangest things I've run across, and it should make your March article interesting!" Lord, I hope so! I can't afford to keep making mistakes just to keep readers interested!

John, K6YB, added an interesting anecdote that is worth passing along. "I used to be a frequency coordinator and on the board of the Utilities Telecommunications Council for the Land Mobile Service. I had to go to Washington every three months and meet with our attorneys — then socialize with the FCC officials at evening dinner/cocktail parties. It was quite an experience, seeing lawyers involved in all this stuff and writing the regulations, etc. And the mind set of the FCC at that time of auctioning off frequencies was abhorrent to me, being an old Ham. It seemed the same as auctioning off our national parks to the highest bidder, who then would decide who got to use the parks. A similar thing has happened in the electric utility business here in California, which is what I worked in when in the UTC. The idiot power companies sold off their generating plants to people outside the state. Surprise! Those people are now charging an arm and a leg for the energy! But it's all a lot of fun — otherwise life would be boring. Keep up the good job. I sure enjoy ***Worldradio*** magazine — it's the last publication that is reasonably priced so kids can even buy it, and has the real Ham flavor I knew years ago. It's nice to see my friend Carole Perry, WB2MGP, in the magazine now. She was my hero when I started teaching Ham radio to kids back in 1989, as a volunteer at my XYL's school."

Well, John, if the California energy crisis gets much worse, every day will be Field Day in the sunny state on the shaky side (10-4!). That's it for this month, my friends. Now I'm gonna go chew on my copy of ***Worldradio*** to see if it truly has "the real ham flavor."

— David Splitt, KE3VV, the best darn Rules & Regs columnist the worked has ever know, can be reached by mail at: 6111 Utah Avenue, N.W. Washington, DC 20015, or by sending e-mail to: davidsplitt@erols.com.

ARRL 10-meter contest: FT-817, Raibeam 3L

Armond Noble, N6WR

When Chip Margelli, K7JA, was showing the new Yaesu FT-817 at the ARRL Pacific Division Convention, I said to myself, "I've got to have one of those!" So, I, along with many others, marched over to the HRO booth and submitted our orders for the radio and waited for the boat from Japan to arrive.

In what seemed like months (actually, just a few weeks) the radio arrived. I could hardly wait to get on the air with this miniature radio!

This is really some little radio! It goes all the way from 160-10M, then 50, 144 and 430. But there's even more. If the bands are dead, you can listen to AM or FM broadcast. The audio quality on FM is surprisingly good — considering the small speaker. And you can check your clock with WWV!

All the usual modes are included plus Packet, Digital and PSK31. All in a package measuring 6.5 by 5.3 by 1.5 inches. And, the batteries (size AA), if you wish to use them, fit inside! As options, you can get 2.3 kHz SSB and 500Hz CW filters. The keyer is built-in. Backpackers, campers and anyone wanting a very small, yet very capable transceiver will be buying this rig — and I would bet there will be lots of them on the air on Field Day.

The ARRL 10M contest and the FT-817

It was a great EVENT! The annual 10-meter contest was held from 09-10 December, 2000.

The *Worldradio* Staff ARC station, WR6WR, was on the air using 5 watts — generated by the exciting new Yaesu FT-817. The antenna was a Raibeam 3-element Yagi up about 30 feet in a yard surrounded by trees.

The brand-new Yaesu FT-817 All-mode HF/VHF/UHF QRP rig is a solid performer for a tranceiver no bigger than a paperback book.

How did it work out? Early in the contest, utilizing the "search and pounce" technique, the rate box in the upper right corner of the computer screen showed a rate of 59.3 for the last 10 contacts. This tiny, two-pound radio had enough 'oomph' to break through the pileup and work South Africa, which is a long way from Sacramento, California. Just about all the DXpedition stations in the Caribbean were contacted. And, of course, many JAs, VKs, etc.

Unlike many QRP operators, who tack "QRP" after the call sign in an attempt (I assume), to garner pity, I never do that. I'll stand up on my own two feet and not ask for any advantage.

One can tell how well his signal is tickling the loudspeaker at the other end when the replying station doesn't respond, "again?"

The usual contest procedure is that the big stations sit in one spot and call CQ. The smaller stations move up and down the band answering the calls. But, I decided to do some calling and on 28.721 MHz from 2054 to 2107Z worked 18 stations in 13 minutes and the rate box hit 121.8. There was a later run with six QSOs in seven minutes.

Credit must, of course, be given to

the antenna. Those helping to put up the supporting mast were impressed with the quality of materials used on the Raibeam antenna.

The number of contacts made was 417, well over 100 more than I made in last year's (QRP) 10M contest. I think the difference was the antenna.

This FT-817 was also used in the ARRL Sweepstakes contest, and many stations, when hearing the "Q" in the exchange would say something like "good signal for QRP."

During the 10M contest, 12 stations, when recognizing the WR6WR call sign as being from ***Worldradio***, made nice comments about the magazine. Thank You!

Aside from the fun part of Amateur Radio, this piece of gear could also play a role in emergency work. An obvious suggestion would be for boaters — not just as a backup for the main rig, but to take with them into the life raft.

Yaesu can be justifiably proud of not only creating a real "kicks" radio — this one could save your life!

Bill Orr, W6SAI, SK

Amateur Radio legend William I. "Bill" Orr, W6SAI, of Menlo Park, California, died in his sleep 24 January.

Orr was best known for his numerous Amateur Radio books and reference works, many aimed at beginners. His titles include "The Radio Handbook", "The Beam Antenna Handbook", "The Quad Antenna Handbook", "The VHF-UHF Manual" and "The W6SAI HF Antenna Handbook, some written in collaboration with Stu Cowan, W2LX.

Licensed in 1934 at age 15 as W2HCE in New York, Orr graduated in electrical engineering from the University of California in the early 1940s.

In his younger years, Orr was a well-known DXer and DXCC Honor Roll member. He also was involved in DXpeditions to various exotic locations, including St. Pierre and Miquelon and Monaco, among other locales.

From the 1940s through the 1980s, Orr was a frequent contributor to *QST*, writing about tube-type amplifiers, Project OSCAR, and other topics. Orr constructed some of the amplifiers once used at ARRL Maxim Memorial Station W1AW.

For many years Orr worked with tube manufacturer EIMAC. Orr's application notes for EIMAC products were favorite reading within the amateur community. In later years, Orr penned columns for *Ham Radio* magazine and, more recently, for *CQ*.

In 1996, Orr was named the Dayton Hamvention Technical Excellence award winner.

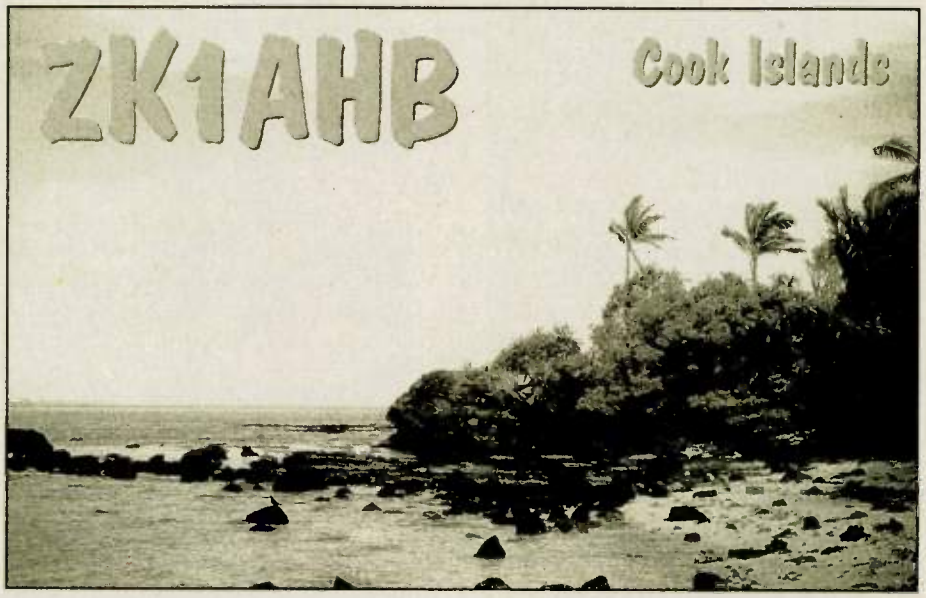
Chip Margelli, K7JA, of Yaesu, said Orr's readers always could build his projects knowing that Orr had tested them in the field first to be sure they worked.

Another friend, Marv Gonsior, W6FR, says Orr "had a great sense of humor, a lot of wit about him."

Orr owned a condominium in Maui, Hawaii, and operated from there two or three times a year as KH6ADR. — *ARRL Bulletin*

My first DXpedition to the South Cook Islands

Mark McMullin, KM6HB/ZK1AHB



The pile up — we've all been a part of them, usually trying to work that "new" one. But what is it like to be on the other end for a change?

Having worked contests before, I have experienced the "chaos" of a pile up. But being a "six lander" in California, those experiences were brief and far between. So I asked myself the time-worn question. Where do I go from here?

Since I was also planning a family vacation, a location had to be found with that in mind. A twirl or two of the globe brought us to the Cook Islands, somewhat off the beaten path but also family friendly. The currency exchange rate was very favorable and the weather was great year round. So why not? Reservations were made for 9-18 July 2000 for what would be my first DXexpedition.

Air New Zealand would fly us into Rarotonga (OC-13), then Air Rarotonga over to Aitutaki atoll (OC-83) in the South Cook Islands group.

As in any endeavor, planning and preparation sets the stage for success. Research was essential. How do I get a license? What are the power standards? Will the hotels allow antennas? How much weight can I take onto the aircraft? Not surprisingly, all the answers were easy to find and and presented no problems at all.

Getting a Ham radio license is easy in the Cook Islands — one stop at the local telecom office in Avarui and a $20.00NZ fee. Visitors are assigned a 2x3 call and in most cases you can pick your last three letters.

Power in the Cooks is 220v. This presented a small issue as my com-

puter and rig were 120v. A call to the folks at Teleadapt (877/835-3232 or www.telegdapt.com) provided numerous and inexpensive solutions for voltage conversion.

Next was the weight of all my gear. Air New Zealand had a 44 pounds per person limit and a 60" length restriction. Fortunately, if you travel as a family or group the weight total is cumulative. Lo and behold my Yaesu FT-990 weighed almost 30 lbs itself! Regardless, I was still under the total weight limit. Over the limit charges apply on most airlines.

I packed my FT 990 and computer in plastic shipping totes, surrounding both with bubble wrap. My MFJ vertical was shipped using 4-inch wide plastic irrigation piping capped on both ends. Both were cheap to buy and I experienced no damage to any of my gear. My cost in totes and the pipe was under $10 and I wouldn't have used the totes if I thought for I minute my "veteran FT- 990" would have been worse off.

The piping had ample room for coax, a 5-foot mast and the three sections of the vertical. One thing to keep in mind on any trip to a destination that requires an "island hop" is that the weight restrictions obviously differ greatly between a Boeing 767 and a twin turbo prop island hopper. Be prepared to pay extra for being over weight limits. In my case I didn't have to, but I would have if I had taken a linear amplifier.

As the day of departure was now rapidly approaching, a trip out to the garage and RadioShack was necessary to gather up an assortment of connectors, fuses etc. As it turned out I didn't need much of it but there was no corner RadioShack on the Cooks I could run to if I had forgotten something. Be prepared!

Finally, the day arrived and we climbed aboard Air New Zealand flight 17 to the Cooks via Tahiti then on to Rarotonga.

Rarotonga is the main island in the South Cooks group and is the seat of government. The Cooks are self-autonomous and are a protectorate of New Zealand.

We soon arrived at the Rarotonga Beach Resort and were greeted by a superb and friendly staff. Our room had a spectacular view of the beach and ocean. After a quick stop at the Telecomin office I had license in hand!! I was now ZK1AHB!

Back at the hotel I couldn't wait to get on the air. I unpacked all my gear and had the vertical set up — all in about 30 minutes. I ran the coax, turned on the rig and listened. Oddly, all the bands seemed dead, my noise level was zero... hmm, did I have a short in the coax? High SWR? A quick QSY to 30 Meters and WWV was barely audible! Well it was the beginning of summer "down under" and it was about noontime in the Cooks.

I put out a CQ and before long VK's and ZL1's started to answer. I started to think that perhaps a "solar event" had occurred because the bands were just too quiet. Eric, ZL2AAG, heard me ask another station if he knew the latest WWV numbers.

My hunch was correct — he told me the A index was at 30! And to boot a major solar flare was due to hit the Earth in 6 hours! The forecast was for possible satellite and power grid disruptions. With stateside, Europe and Asia nowhere to be found, a new flare wouldn't be much help either.

The next day WWV was reporting the A index at 300! I was out of the pile up business. So I reverted to plan B — rag chew QSO's. Propagation was still open into VK and ZL and I had many many enjoyable QSO's while overlooking the beach. It took me back to my start in Amateur Radio in the early 90's when VK's and ZL's would be a daily 5/9 occurrence on 10 Meters.

The solar flare put a damper on my grandiose DX plans but I did enjoy two solid nights of super openings into Europe and Asia. 15 and 17 Meters turned out to be my best bands.

All in all it was a fantastic trip and there was much to do aside from Ham radio. I learned a lot — especially of the need to travel lighter next time. And to bring an amplifier if possible. All the planning and equipment sometimes just cannot overcome poor band conditions. This can happen just as easy to the major DXpedtioner or the first timer. But most importantly I proved to myself that I could do it and next time it will be easier. So the question remains. Were do I go next year?

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"As I got older, my high frequency hearing loss was destroying my ham radio for me . . ."

-- Martin F. Jue, K5FLU
President and Founder
MFJ Enterprises, Inc.

I know I'm not the only ham who can't understand all the speech in a QSO caused by high frequency hearing loss. I developed a solution that I want to share with my fellow hams.

I almost gave up my ham radio hobby

I have been a passionate ham radio operator for over 40 years ever since I was a teenager. I loved every minute of it. Still do, but I almost had to give it up.

As I grew older (I'm 56 now) I found myself asking *"What did you say?"* so often it got downright embarrassing. I can hear pretty good most of the time. I just can't always understand what people are saying and my left ear is weaker than my right ear.

It got to where I was having trouble carrying on QSOs. I could hear, but I just couldn't quite make out all the words.

My hearing problem almost put a stop to my lifelong hobby.

There was no way I was going to give up ham radio . . .

Research showed me what to do

I searched the literature and spoke to hearing and speech experts.

According to their research on the intelligibility of speech in hearing English words:

1. The frequencies important for speech intelligibility are the consonant sounds from 500 to 4000 Hz. They contribute 83% of word intelligibility.

Frequencies from 500 to 1000 Hz contributes 35% of word intelligibility and 35% of sound energy.

Frequencies from 1000 to 4000 Hz contributes *48% of intelligibility* but has *only 4% of sound energy!*

2. In contrast, frequencies from 125 to 500 Hz contributes 55% of sound energy but only 4% to word intelligibility.

In other words, nearly half the speech intelligibility is contained in 1000 to 4000 Hz frequency range with only 4% of the speech sound energy.

On the other hand, the low frequencies 125 to 500 Hz have most of the speech energy but contribute very little to intelligibility.

How I improved my ability to hear and understand QSOs

The research showed me what to do.

First, drastically increase the speech energy above 500 Hz where 83% of intelligibility is concentrated.

Second, drastically reduce the speech energy below 500 Hz that contributes only 4% of intelligibility.

Amateur radio communications limit audio to about 300 to 2700 Hz.

I split the audio band into four overlapping octave ranges centered at 300, 600, 1200, 2400 Hz.

I could boost or cut each range by nearly 20 db to give me full control. This let me maximize speech intelligibility for most kinds of frequency loss.

My left ear is weaker than my right ear so I split the output audio into left and right channels with separate 2½ watt amplifiers. A balance control lets me equalize the perceived loudness to each ear. *Now both ears help in improving speech intelligibility!*

I couldn't believe my ears!

I built one and hooked it to my rig.

I boosted the high frequencies, cut the low frequencies, set the volume and adjusted the balanced control so I could hear each side equally loud.

I couldn't believe my ears! Speech that I could hear but barely understand before was now highly understandable. I got my ham radio back!

With this concept, you'll *understand* QSOs better and enjoy ragchewing and contesting more, even if you don't have high frequency hearing loss.

It helped me so much I wanted to share this with my fellow hams

I developed this into an accessory that any ham can use.

I made it immune to RFI, added a front panel phone jack, on/off speaker switch, two selectable transceiver inputs, a bypass switch for in/out comparison and built it into 10Wx2½Hx6D inch aluminum enclosure. Needs 12 VDC.

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Enhancing portable SSTV

Del Radant, N6JZE

With the advent of the Kenwood VC H-1, Visual Communicator unit, there's been much interest in Slow Scan TV. It is now possible to show the NCS of a Public Service event existing conditions at a portion of an activity where additional assistance may be needed.

There was recent discussion in the San Diego section about the possibility of supporting the American Red Cross and the California Department of Forestry with some visual records of the extent of any destruction during any emergency.

To prepare for this evolution, several local Amateur Radio operators purchased the Kenwood VC H-1 Slow-Scan Visual Communicator and the Kenwood TH-G71A Dual Band Transceiver.

We demonstrated the capability of these units by showing the various members of our local clubs what was possible using this combination. Some of the pictures were not as clearly defined as we would have liked. So a project was instituted to enhance the picture quality by adding a digital source separate from the reproduction device furnished on the VC H-1. By adding a digital source with high pixel capability, we did achieve the desired detail in the pictures. Here's how we accomplished our goal of enhancing the video picture.

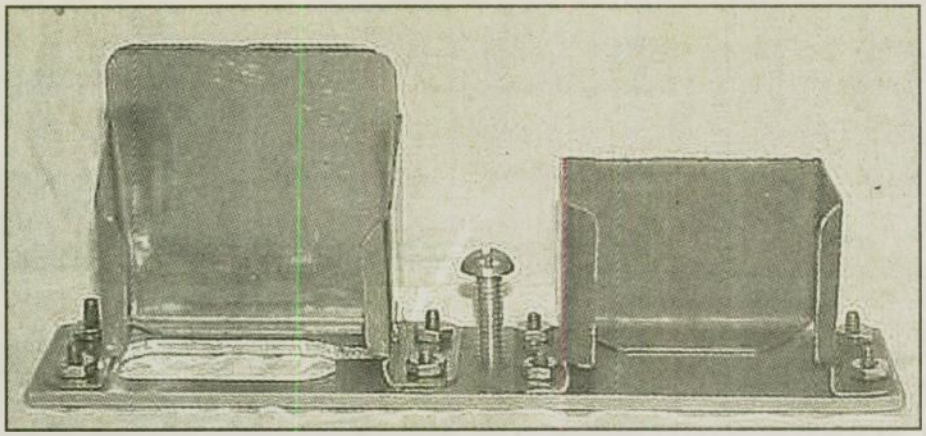
Ready to record—this is the complete setup for enhanced SSTV using a digital camera. The digital camera provides a much higher resolution picture, so that the image received is of much higher quality.

The digital source

The major restriction in the choice of a digital camera, is that the camera must have a video output jack. This is necessary for the transfer of the picture to the VC H-1, to store it there and, at a later time, send it to

the distant receiving office. Most of the later model camcorders, have a "video out" capability, so one may view the picture from the camera on a TV screen.

The choice of the digital camera, is of one that has a "VIDEO OUT" port. Most of the better models are so equipped. Digital cameras hold numerous pictures, while a camcorder normally has only one still frame available from the recorded tape (a DVD camcorder can provide a number of pictures from the special DVD tape).



The base of the mount is constructed from heat-treated aluminum. The actual mounts for the radio and visual communicator are made of copper.

Mount construction

The combination of these devices required a supporting device that was able to accommodate all three items and still be portable and could be mounted on a tripod. This was accomplished by constructing an aluminum and copper mount to hold each unit, provide convenient access to the controls, and also offer application of power from an outside source. I constructed several mounts for various sizes of cameras and camcorders.

Copper was chosen for the construction of supports for the Kenwood units because it's easy to bend and shape for each item. The base support was made from heat-treated aluminum.

The copper mounts are made from 22 gauge material. Ordinary tin snips will cut this material quite easily. (I suggest that a trial form be made of heavy card stock, fit it around your units and see if it satisfies the needs, then transfer these dimensions to the copper stock.) The basic dimensions are 5 1/4 X 2 1/4" for the transceiver and 5 1/2 X 2 1/4" for the VC H-1 unit.

All the bending and forming was done using a bench vise with a 3" jaw. A hand-operated electric drill was used to drill the small mounting holes. A floor-mounted drill press was used to drill the larger holes for the VC H-1 plug hole in the flat aluminum stock.

The base material used is heat-treated aluminum, specifically chosen for its rigidity. It can be flat or angle shaped, whichever is most readily available. The dimensions are 2 1/2 X 12".

The opening for the cable plug can be made by drilling four adjacent 1/2" holes in the chosen position and filing away the excess material. An electric scroll saw with the proper fine tooth blade may also be used to make this hole.

Some care must be taken when drilling the hole for the power plug for each unit. A very small drill be used to place the hole directly over the pin in the unit (you can see this pin through the small drill hole). Then enlarge it 3/8" for the power plug.

Adjustments can be made to accomodate the available camera and transceiver. The mount for the VC H-1 is standard and the hole in the base is required. Sizes of the support can be adjusted. A single slot to admit the plug to enter from the bottom causes the transceiver to be raised upward, hence a modification would be needed in the copper mount construction. The hole for the insertion of the external power cable must be made for the chosen mounting location of the unit.

The dimensions furnished for the

copper stock are for a Kenwood TH-G71A unit, and the Kenwood VC H-1. Use a file to remove the small molding nibs, on each side of the Ni-Cad battery case of the Kenwood TH G71A. They prevent the unit from sliding smoothly into the support.

Other handi-talkies work as well, but you must make an adapter to plug into your chosen transceiver to feed the audio and keying circuits. The cable for the TH-G71A is furnished in the package of the VC H-1, and plugs into the Kenwood transceiver (it's much easier to use the Kenwood unit).

The short cable from the video output jack of the camera, to the socket of the VC H-1 is also a home-brew cable. When using the digital camera, the viewing head piece on the VC H-1 is removed, and the cable plug, takes its place. The plugs and angle adapters are available from RadioShack. Follow the detailed instructions when constructing this cable. The plugs and adapter are tip-ring-sleeve (TRS) devices. (Note plug size and type, on plug-in lens unit.) Ordinary audio plugs WILL NOT work, as one uses the tip and the opposite end uses the ring. The "video out" plug for the camera is also a tip-ring-sleeve unit.

Mounted on a good-quality tripod, the unit is ready for any type of public service event or disaster.

We also substituted nickel metal hydride (NiMH) batteries for the furnished alkaline batteries. RadioShack has these batteries and a spare set is now kept for the VC H-1. When battery operated, it consumes considerable current. The furnished AC Power pack is rated at 2500 MA @ 6 volts. Charger devices for NiMH are available.

My Olympus C3030 Zoom camera uses NiMH batteries also and it too operates on 6 volts. A home brew cable is required for each 6 volt unit, that brings the current from a double 6 volt gel cell battery. It is charged as a 12 volt unit but it provides power, as two separate 6 volt power sources. One cable for the camera, and one for the VC H-1.

The TH-G71A transceiver has a Ni-Cad battery, and a additional fully charged unit is on hand. A Kenwood PG 3J power cable may be used if operating near an automobile, or from a deep cycle battery. With 12 volt power, the transceiver developes 5+ watts output. (DO NOT use a Kenwood PG 3J cigarette lighter cable, as a power source for the VC H-1, as it requires 6 volt DC power.)

One of the members uses this setup with a Sony camcorder and an Alinco Dual Band Transceiver. The picture definition with a high pixel count camera, produces a much better photo.

Another member also uses an Olympus C3030 Zoom camera, but chose to keep his camera in hand, so an appropriate cable was constructed, to reach the tripod mounted VC H-1 and Kenwood transceiver. You can take many pictures, and then transfer up to ten pictures to the storage in the VC H-1 unit for later transmission. This action frees space for other exposures on the camera's memory chip.

The cable for the video from the camera to the VC H-1 is made from microphone cable. (Follow the drawing for the correct length and connections, using extreme care not to fill the internal lugs with excess solder). If the system does not function correctly try reversing the cable. The end for the VC H-1 is using the RING, and my camera uses the TIP. I color code the VC H-1 end with red shrink tubing.

Follow the instructions in the booklets that come with each unit. Set up an operation with your friends and practice in the operation of all the controls. Be ready for any emergency within your area. You can also take pictures with the digital camera and, at a later date, display the information at a club or public event.

Software considerations

There is a Kenwood program, KCT-24S, that permits a remote unit to receive and transfer your pictures to a computer for processing and printing. Windows 98 is required to use it.

Additional accessories are available for many cameras, that permit the transfer of the snapshots into your own computer for printing out the phtographs in color. Adobe PhotoShop 5.0 LE was furnished with the Olympus Camera. Other photo processing programs are included within Windows 98, and some programs are furnished with Hewlett Packard products.

A cable is furnished with the Olympus C3030 camera package to view the pictures on the Smart Card in the camera on a color TV. This feature allows you see your work and allows you to experiment with exposures and additional features to improve your skills.

It has been a real pleasure to send photos on any VHF/UHF repeater operation or any amateur frequency using Slow Scan TV. Join in and share the fun!.

Jamboree on the Air success story

Gary Smith, N7IHZ

This past October at the Jamboree-on-the-Air event held at Hooper Park, Utah, I issued a challenge the Scout groups. I announced that the first two Scouts who came to me with having successfully passed their first Amateur Radio license exam would be honored with some neat prizes.

The first Scout to complete the challenge and get his license since JOTA was John Westbroek of troop number 1211 from Lindon, Utah.

John has been very enthusiastic since JOTA about Amateur Radio and obtaining his license. He has studied and re-studied with as much interest and devotion as he also puts into Scouting. John shows much interest in whatever he becomes involved with and has the perseverance to continue with dedication to enhance his skills.

His appearance while in uniform says a great deal in itself. Being neat and having pride in what he does and what the uniform stands for definitely stands out.

The scouts had the opportunity to experiment with a wide range of Amateur Radio equipment and modes.

There is not much doubt that whatever John sets out to do he will accomplish.

At the Davis County Amateur Radio club meeting held 13 January, 2001 presented John with a free one-year membership to the DCARC, a one year membership to ***Worldradio*** magazine and a current repeater directory.

A week after John achieved getting his Amateur Radio license so did his father, Glen! John's call sign is KD7LNC and his Dad's is KD7LLE. Way to go fellow Scouters! John's younger brother is now interested in getting his license.

As a additional incentive for this Scout/Amateur Radio father and son team, I loaned them one of my handheld dual band transceivers, spare batteries, charger and manual so they could start learning and becoming familiar with the great hobby of Amateur Radio.

John has expressed interest in attending JOTA 2001 and being an instructor on the Radio Merit Badge course. This is certainly good news as Scouting and Amateur Radio goes hand in hand.

I encourage Scouts and Amateur Radio operators to communicate with each other to support activities such as Jamboree-on-the-Air, to learn one from another to enhance our skills in both these areas as well as all other things we get involved with in our lives.

I look forward to JOTA 2001 and another rewarding experience with Amateur Radio and Scouting.

Frozen, but radiating!

Rick McCusker, WF6O

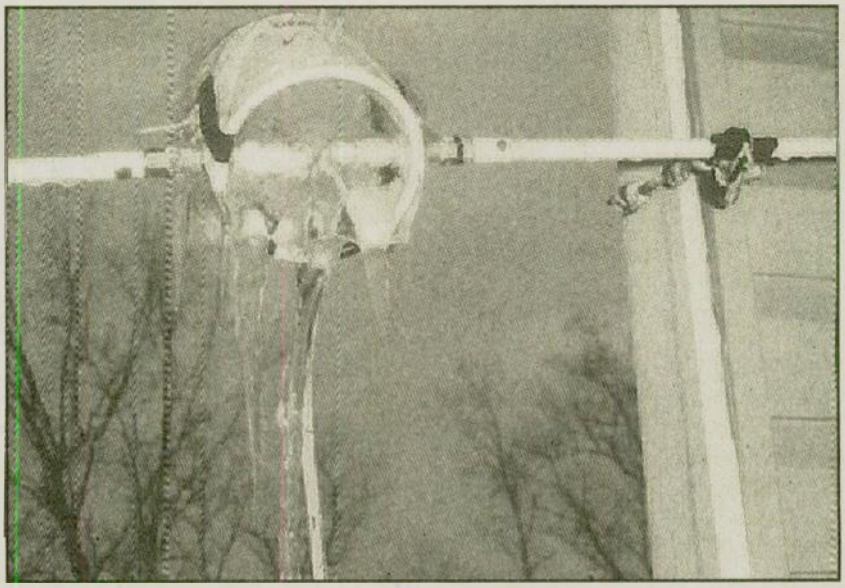
Readers of this magazine have realized I have become somewhat "hooked" on the PSK31 mode. The first thing I do when I get home (after greeting the family, of course) is to wander out to the shack and fire up the computer and the rig. I usually check 10 Meters for activity, and if there's nothing there I'll drop down to 15 or 20 Meters.

One chilly night out in the garage, I was checking the activity on 20 Meters while seated in my brand new 'executive' chair with my brand new space heater warming things up under the desk (thanks, Santa!). That brand new chair beats the heck out of the metal folding chair I had been using. Now, I 'Ham' in style!

Lots of signals floating across the airwaves that cold January evening — but one caught my eye. There was a CQ from NØBIL. I answered the call, and we started to engage in a very pleasant QSO.

The usual information was passed — the weather, the gear, names, etc. One piece of information from Bill Brewer, NØBIL, was his complete surprise that I had answered his CQ. After asking why he was surprised, he said, "My antenna is frozen." "What do you mean?" I asked.

It turns out that Bill lives in a 'antenna-challenged' apartment complex. His antenna set up is two Hustler mobile antennas mounted on a 4-inch diameter piece of heavy PVC pipe. They are mounted in a dipole fashion, and fastened using "bungee" cords to a ladder next to his balcony. In fact, when he wants to do some mobile operating, he takes the setup apart and uses one of the antennas as a mobile antenna. When Bill said his antenna was frozen, he wasn't kidding. Ice had built up inside the PVC pipe and had completely covered the antenna connections. As we ended the conversation and were saying our farewells, I asked Bill to send me a photo of his 'frozen' antenna.



The center of Bill's antenna mount is filled with ice, but I was still able to copy his 5-9-9 PSK signal.

Bill sent the photograph, and I couldn't believe my eyes. Here was an antenna that should not have worked. But it certainly did. His signal was a nice 5-9-9 from Spring Lake, Michigan to Sacramento.

Was this an example of excellent 'weatherproofing' of the antenna connection? You be the judge. Take a look at the photograph. Yes, it was certainly 'frozen' — but it was radiating!

Don't ever give up!

Charles R. Lackey, W4QBE

It all started about five years ago when I bought a boatanchor receiver (RME 4350) at a hamfest for $25.00. The receiver went on the shelf to be aligned and reconditioned when I had the time. Now I'm retired and when not doing 'honey do's', I. spend my time "messing" with Ham radio, according to my XYL.

Well, the RME went through a successful alignment and I was fascinated with 160 Meters, which my Collins 75S-1 does not cover. So I dug deep into the junk box and came up with an old 813 and other parts I had not used in 15 years; thus was born a drifty, chirpy home-brew rig for topband. After about six months and a great learning experience, I had a pretty good rig for CW.

All was rosy except for DX, around 1830 kHz, there was a raspy noise which repeated itself every 54.5 kHz. Using other boatanchor receivers accumulated during 48 years of Hamming, I was able to trace the birdie down to its second harmonic at 109 kHz. It went as high as 30 MHz with reduced level. In my mind, I could just see the 54.5 kHz signal coming from the power plant about five miles away. We were having some strong winds and a tree blew over on our overhead primary, knocking out our power for several hours. I fired up our 5 kva emergency generator and then it struck me, check for the 54.5 khz birdie now that the power company is off the line. It was still there, so it wasn't the power company unless the 54.5 kHz was coming in on the ground which wasn't switched but I didn't think this was possible. We are fed by a 1,000 foot underground 7,200 volt primary from the overhead line — the 54.5 kHz signal should have been bypassed to ground.

The next thing I tried was removing the antenna from the RME receiver — nothing but receiver noise; the signal was coming from the antenna. The antennas I used were a 1,000 foot beverage and an inverted L; the signal being strongest from the inverted L, which was expected. The next step was to build a loop and mount it on an old music stand. I could null other 1.8 MHz signals but not my 54.5 kHz birdie on 1830 kHz. The loop was located in the basement, so the next step was to move the loop outside and persuade the XYL to listen to the RME while I turned the loop — still no null. I thanked the XYL and scratched my head.

I finally ran the audio from the RME outside so I could listen with headphones while turning the loop. Still no null. As I was scratching my head some more, the wind blew over the loop and the phones started howling like a mashed cat. I picked up the loop from the ground and the signal level returned to normal. Was the 54.5 kHz coming from the ground? Then I remembered that I had buried chicken wire for part of my inverted L ground. I could hold the loop near my rain gutters which were bonded to ground and the signal would increase. Was my wonderful ground system of chicken wire, welded rebar and many radials picking up this strange 54.5 kHz signal?

Several years before my retirement, a friend had gone to work for the government in maintenance of VLF transmitters and I remembered him saying something about them being below 100 kHz. Could I be picking up one of these? I put a longer piece of coax on my loop and connected the speaker where I could hear the RME and found the signal stronger when the loop was near the ground away from any of my station grounds. To get away from any possible station grounds, I connected the receiver through a 100 foot extension cord and moved the RME

out into the woods. No change. The signal was still strongest when the loop was laying flat on the ground. Since it was getting dark and I had scratched most of my hair out, I quit for the night.

After much thought through the night, I lugged my heavy RME to a location about six miles away and using hookup wire for an antenna found the 160-meter band to be void of any signals at 9 a.m. The birdie at 1830 kHz was not there, either. On the way home, I made two more stops about a half mile on either side of my home QTH and no 54.5 kHz there, either.

After all this, I did what I should have done in the first place, turn off each branch circuit breaker and listen for the 54.5 kHz to go away. On the third circuit breaker, I lost the signal, No wonder! I had turned off the breaker feeding the RME! Back to work with the circuit breakers. The 54.5 kHz signal finally disappeared when the next to the last circuit breaker was opened. I had finally found the culprit! The 54.5 kHz was coming from my powered down 18 inch satellite receiver. I told the XYL that I had finally found the trouble and it would be down him hill from now on. (Another foolish assumption!)

First thing I did was turn the satellite receiver on; no help. I then removed all cables except the power cord; no help. Next, I grounded the chassis since the power cord did not carry a safety ground. There was a slight decrease in 54.5 kHz signal level. Next thing was to wrap the power cord around a 1/2 x 8 inch 43 mix ferrite rod; no help. Next, I tried a Corcom 10 ESK1 EMI filter, no help. Next, I tried a one to one isolation transformer; no help. I designed a 54.5 kHz trap and installed it across the line; no help (probably poor design). After some more head scratching, I moved the satellite receiver to other locations in the house with only power attached. All receptacles and locations gave the same results except for the receptacles on my work bench. Scratched head some more! Could the AC line length be affecting the radiation from the satellite receiver?

I then reinstalled the satellite receiver to its normal location but fed the receiver through a 100 foot coiled extension cord. The 54.5 kHz noise dropped 5 dB. After coiling the extension cord around a 14-1/4 x 1-1/4 x 1 inch steel bar, the level was reduced 7 dB. While the 54.5 kHz birdie was not entirely gone, it was reduced enough for me to now hear DX on 1830 kHz.

Some lessons learned from this interference chase are:

1. Don't assume anything. I blamed the power company and government equipment.

2. Try various antennas. I tried two antennas near the RME. I had another antenna 350 feet away from the RME which I did not try. After finding the culprit, I tried this antenna and the level was much lower than the two antennas near the RME — this could have saved me lugging the heavy RME receiver all over the county.

3. When using a loop, you get strange results when sitting on the signal source.

4. Clean your own house first. One of the first things I should have done was to open my branch circuit breakers, one at a time.

5. Try everything you can to correct the problem. A 100 foot Wal-Mart extension cord and a piece of scrap steel solved the problem.

6. Don't ever give up.

You asked for it — and now we offer it!

I Worked Them All!

For those of you who are fans of the PSK31 mode, ***Worldradio*** now offers a brand new certificate for your paper-hanging pleasure. Several amateurs have wondered if there is a certificate available for contacting other amateurs in all 50 states with this new mode.

Now there is!

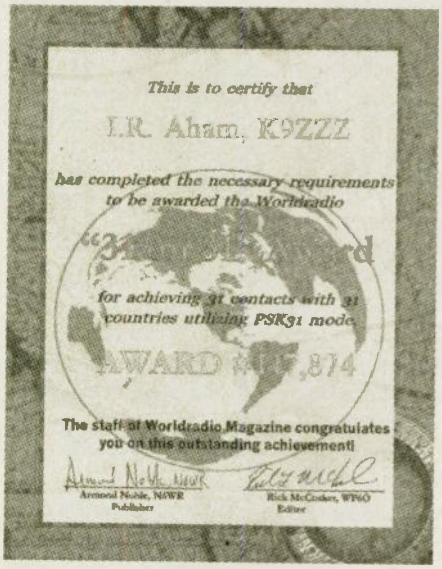
Be the first on your block (or even in your grid square) to earn this highly coveted and prestigious award.

Here's how to get it;

Contact a station(s) in each state of the United States. Make a list containing the call sign of the station contacted, the date and time, and which band was used for the contact. Then send us the list, along with your $5 fee.

That's it! We don't want your QSL cards, because we know ***Worldradio*** readers wouldn't even consider cheating to obtain this new award. Each of the winners will be listed in a future issue of ***Worldradio*** (in increments of 10).

Send your list to: ***Worldradio*** — I Worked Them All!, 2120 28th St., Sacramento, CA 95818



31 on 31!

Here's the new award for those operating the newest mode in Amateur Radio, PSK31.

Rules

1. Contacts must originate using PSK31. Spots by DX nets or by packet cluster cannot be used. You can't be in QSO in another mode and say, "by the way, I sure would like to switch to PSK31 so I can count this contact towards the new prestigious and most coveted ***Worldradio*** 31 on 31 Award."

2. Contacts must be two-way.

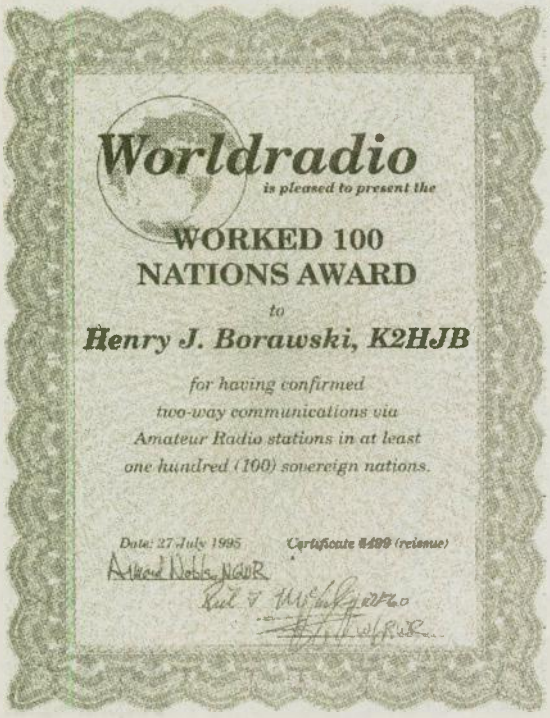
3. Contacts must be made with 31 different nations, and your own nation does not count. A nation is a country having its own government — (not some little possession or territory of another country) and has a unique call sign prefix assigned by the ITU. The nation must have a permanent population. In other words, a DXpedition to a small, unpopulated island that's claimed by France doesn't count.

4. Contacts with amateurs using a recriprocal license are not valid for this award. The contact must be with an amateur licensed by the other country.

5. Contacts must be made with land-based, permanent stations. Contacts with mobile, portable or maritime stations do not count.

6. Contacts made after 31 March 1999 count towards this award.

7. To apply, send a list of your contacts, or a photocopy of any QSL cards (don't send the originals!), along with a statement of verification signed by two other amateurs of General Class or higher to: ***Worldradio*** 31 on 31 Award, 2120 28th St., Sacramento, CA 95818. Enclose $3.10 (for an 8 X 10 unfolded certificate) as a check, money order, credit card number or three (3) IRC's. Please include your complete address with telephone number or e-mail address.



100 Nations Award

In an effort to encourage personal communications among peoples around the world via Amateur Radio, ***Worldradio*** offers the Worked 100 Nations Award to those confirming two-way amateur communications with permanent stations in 100 distinct countries having a permanent, native population.

The purpose of the Worked 100 Nations Award is to demonstrate the unique opportunity Amateur Radio offers for communications between international borders to further worldwide understanding.

The W100N is not a radio sport award as such, but a token of achievement in communication. At the same time, it offers all Amateur Radio enthusiasts several features not found in other awards.

1. W100N virtually eliminates the need to work geographic areas heard only during DXpeditions. Almost all national entities have amateur stations consistently on the air.

2. W100N, then, will be of perennial interest. The advantage to those stations having worked a national entity long absent from the air will be minimal.

3. W100N is difficult to achieve, yet is within reach of all moderately well-equipped stations whose operators utilize good communication skills.

Rules

1. The Worked 100 Nations Award is available to any licensed Amateur Radio operator who can prove confirmation of two-way communications with governmentauthorized Amateur Radio stations in at least 100 different nations of the world.

2. No contacts with stations using reciprocal calls will count toward this award, such as N6JM/UL7.

3. All contacts must be with land-based stations. Contacts with ships, at anchor or otherwise, and aircraft cannot be considered.

4. All contacts shall be made from the same country.

5. Only contacts made on or after 01 January 1978 will count.

6. The application shall include the following:

a. Letter requesting W100N.

b. List of contacts in alphabetical order by prefix showing nation, station call, date, band and mode.

c. A signed statement by two other licensed radio amateurs, General class or above that they have inspected the required QSL cards.

d. A fee of $5 to cover the cost of the award.

7. All applications and requests shall be addressed to:

W100N Award Manager
Worldradio
2120 28th Street
Sacramento, CA 95818

8. There are no special endorsements to this award; however, endorsements may be made if the achievement bears such recognition. All modes and bands may be used.

Upon approval of an application for W100N, a certificate will be issued and the issuance of the award will be noted in a future issue of ***Worldradio***.

Letters to the Editor

QSL cards...

Many of us will be interested in following the results of your DX QSL "experiment" listed in the Editor's Log, February, 2001, issue of ***Worldradio***. I applaud your keeping this very important issue of QSLing in the limelight. Your mention of sending one IRC to the non U.S. stations or managers brings up an important point: As you mentioned in your Editor's Log, the cost of purchasing an IRC is now $1.75. There is a widespread assumption that the old IRCs purchased at $1.05 or even older ones purchased at $0.95 are all worth the same value and accepted by foreign post offices at the same rate. Technically true, practically false.

The contractual agreement printed on the front side of the coupon in French, or on the reverse side of the IRC in six other languages, specifically states that the coupon will pay for enough postage to send one air mail envelope. The exact wording is: "This coupon is exchangeable in any country of the Universal Postal Union for one or more postage stamps representing the minimum postage for a priority item or an unregistered letter sent by air to a foreign country." (The much older IRCs do not state "air mail.") Note that the agreement makes no reference to the purchase price as having any influence on the postage received by the redeemer. That IRC agreement is accepted at face value in USA post offices but not in most foreign countries, who, by the way, are all members of the Universal Postal Union, the "Union Postale Universelle," which issues those IRCs. The fact that it is not is proven by the prolific lists of "IRCs needed for a return QSL" or the fact that many foreign QSL managers demand two, three or more IRCs.

Two years ago I tried an experiment with an old Ham friend, Berny, in Germany. I sent him three IRCs, two purchased here in the USA and one that I had received from a JA. I asked Berny to redeem the IRCs in three different post offices, two in Germany and one in Austria, just across the border from his QTH. In each case the purchase cost stamped in the center of the IRC was converted into German Marks or Austrian shillings at the daily currency conversion rate and then that value of postage was handed over. Since the air mail rate in both countries is quite high, the value of stamps received was grossly insufficient to send even a five-gram letter to the USA. It may not be the "official" policy of the country's post office but that's what's happening.

Since Hams are some of the biggest users of IRCs, I would have expected that at some point in the last twenty years that an influential ARRL would have intervened to apply some pressure on the U.S. State Department to have the Union Postal Universelle agreement enforced worldwide. When one of our closest allies, Germany, ignores the agreement, I would expect the U.S. State Department would have some clout. But I guess no one wants to touch on that subject and rock the boat.

The recent postage hike plus the terrible rate of return of DX QSLs that you, I, and many other DXers around the world have experienced has to be an incentive for implementation of an alternative method of confirming QSOs. In defense of our old tradition I can tell you that I really enjoy getting the hard copy QSLs and do not want to see that tradition ended. I REALLY enjoy getting my envelope from the bureau or seeing a foreign SASE in the stack of mostly junk mail. But there has to be an ALTERNATIVE for the teenager, or pensioner, to get a confirmation without shelling out $4+ for each card. Otherwise, we are relegating DXing to a hobby for the wealthy and in effect signing the death warrant of DXCC and DXing. As all we OTs become SKs there will be no one to take our place. Should that be a worry? Yes, in my opinion we MUST look at the future not only of DXing but of Ham radio itself.

John Baer, W6SL
Arroyo Grande, CA

Having read about your experiment with sending QSL cards, I decided to do one of my own, The thought had occured to me some years ago, but until recently, there had been no follow through.

Upon receiving a license in 1971, my first goal, as is most likely that of most new amateurs, was Worked All States (WAS). Each day, the newcomer looks forward to seeing the mail carrier as does today's avid and experienced DXer.

Last summer, while re-arranging a room, I started to take cards off of a wall and toss them into the "round file." After several dozen had been discarded I thought that it would be interesting to send 100 of the old cards back to the address of the operator at the time of the QSO. Each envelope had the original card and a short note indicating that old cards were being discarded. The cards, sent at the rate of ten per week, dated from 1971-90.

The results of this endeavor have been quite interesting. My goal, (although, how can one really have an idea of what would happen) was to receive three responses. Five replies were eventually received. Approximately 20 envelopes came back with "no forwarding address," "return to sender," or "deceased." Whatever happened to the majority of the envelopes/cards is anyone's guess.

The first response made the entire effort worthwhile. A one page, typed, letter came from a 90-year old man. He described how much he had enjoyed his days on the air and that he still gets on 6 Meters when possible. Here is a quote from a portion of that letter — "For many years, I was a gunsmith by trade, and was one of perhaps two dozen men in the country who could drill, ream, and rifle a muzzle loader barrel the old way — make the lock, the set triggers, the stock, and the whole works. Now I can no longer see to do much of anything..." Additonal accounts of his life made his letter one of the most moving I've read.

Another reply came from a man who had our QSO when his children were 13 and 14. He is now the grandfather of three. His response, other than saying that it was quite a surprise, was that not many people stay in the same house for 25 years.

The third envelope returned included a note indicating that the operator was still in the area, and how I may contact him. It was not my intention to track these people.

The last two responses included a "Thank You" card from a widow and the other was a letter from the family of a man who had died suddenly in 1991.

I was both surprised and pleased by the replies. Perhaps there is at least one lesson to be learned — time rolls on, but those who had their brief moment on the stage are, if fortunate, still remembered.

Richard A. Perkins, WA7SNY
Ashland, OR

I love hearing of your travails searching for QSL cards. I thought you might like to see my numbers.

In the last eleven years I have mailed 1,649 cards domestically, all with SASE. I am still waiting for 98 cards.

QSL's to the "rare ones" totaled 1,211, most direct or to managers with a "green stamp" or two and with a foreign sized airmail envelope enclosed. For the DXpeditions I usually enclose about five bucks to help out. Still waiting for 310 cards. However the DXpeditions are 100 percent.

My biggest complaint are the stations that keep the "green stamp" and return via the bureau. That is just not the gentlemanly thing to do in a hobby situation.

73 and good DX
Terry Dummler, WQ7A
(via e-mail)

Worldradio's new look

I opened up the February issue and the pages just stood out. I picked up the January issue — Wow! The new layout is just great. Keep up the nice work. Your staff and you need a nice pat on the back. Thanks for the magazine.

Thomas Herold, N9BUL
(via e-mail)

Heil on sound...

This is in regards to Heil's article in Jan 2001 Worldradio.

Is he for real? He thinks he is an expert in audio. He may be right in some aspects of audio, but I will quote part of his article regarding electret elements. "On the other hand some electret elements are just simply not acceptable for Amateur Radio bands. The majority of these are mushy and very narrow banded.

"They are very difficult to make work over a wide frequency range." Wow. What is he thinking about? I don't think I have heard any electric elements that fit into his thinking.The electret mikes are able to operate over a very wide range of frequencies according to the manufacturers of these mikes. I hear many electret mikes on the bands that are not and have not heard any mushy ones. However I have heard many of Heil's microphones with extremely narrow pass bands of frequencies. My thinking must be wrong. I will take steps to throw away my home made electret mike at earliest oportunity.

Ralph Saroyan, W6JPU
Fresno, Calif

Slippery slopes....

There is a growing sentiment among some state and federal legislators that certain aspects of radio communication should be regulated or enforced by state authorities, rather than exclusively by the Federal Communications Commission. Although a portion of the Amateur Radio community supports the idea in some instances, these are dangerous propositions that could have dire side-effects for ham radio operators in the long run.

Various laws have been enacted or proposed that would allow state authorities the ability to enforce regulations against such things.as illegally amplified or modified CB radios and radio interference. On the surface, radio amateurs would seem to benefit from such laws, but once the states have the power to control certain aspects of electronic communication, it is a slippery slope leading to further infringement of radio operators' privileges.

In the past, some state jurisdictions enacted laws prohibiting scanners in one form or another, directly challenging Amateur Radio operators' use of their legal VHF and UHF equipment. Although the FCC eventually rectified this situation, initially these laws placed radio amateurs at odds with state regulations. Not long ago the Iowa legislature enacted an "eavesdropping" statute making the monitoring of ANY non-broadcast electronic communication a class D felony. (See DC Currents, *QST*, September 1999) In application, the FCC will probably ensure that this law does not impact Amateur Radio, but it represents an increasing desire by the states to regulate electronic communication.

The Amateur Radio community must resist this "regulation creep" by opposing any delegation of radio communication control to the states. State regulation of antenna structures in the past has taught us well that state legislators are not always benevolent toward Amateur Radio.

Jeffrey L. Baker, Esq., WK3U
(via e-mail)

Two neighbors, two destinies...

I just finished voicing your Feb 01 WR article, "Two neighbors, two destinies."

Well, do I remember NMC. I have a QSL card, verifying reception from my home in Lordship, CT (near Bridgeport, on the water) 3 Aug 1961, I note freq as 2662, "verifying report of passing Priority traffic." (I had to make up the cards myself, to be signed and returned.)

R.G.Brubaker, CHRELE, USCG, CO wrote: "NMC handling weather traffic with CG Light Vessel San Francisco (NNCS) on 2662 kcs." Postmark is San Bruno CA.

I did a lot of USCG DX'ing and have a pile of homemade QSL's, all signed and verified by the various stations. Still proud of them!

Tom Carten, K1PZU
Wilkes-Barre, PA

Product Review — MFJ-852 AC Line Noise Meter

Dick Diddams, W7QHE

Enjoying 160 Meters is even more pleasurable if you operate from a low noise location. The winter months are here and that means 160 Meters is wide open — if you can hear those signals. The last time I seriously operated 160 Meters was before moving to Salinas two and half years ago. That previous winter I confirmed 47/50 states and 7/9 countries (not counting Alaska, Mexico, Canada and Hawaii).

My current 160-meter antenna is an 1/2 wave inverted V with an apex of 72 feet. Unfortunately the long wire is parallel with a high voltage overhead power line. My FT-1000D indicates a noise of S-8 versus my previous station location of S-3. Obviously, line noise coupled into my antenna is a problem, but what about other interference. Can I do anything with the unwanted noise? Do I have signals that can be tracked down, identified and eliminated? To locate where my noise is being generated and quantify its type, I purchased an MFJ-852 AC Line Noise Meter to be my Dr. Sleuth.

Technical summary

According to MFJ the 852 is a single-frequency broadband AM receiver (0.3 uV sensitivity for audible detection and <2.0 uV for usable meter deflection) operating in the 135 MHz region with an 100 kHz IF bandpass. Signals are picked up with a removable and telescoping 1/2 wave dipole so it can easily fit in your jacket pocket or wife's purse. The user supplied power is an internal 9 volt battery.

The interfering signal is detected via a diode AM circuit which simultaneously demodulates the noise signals and generates a DC level for AGC control. The composite energy is amplified with the

1) AF component routed to the receiver's headphone monitoring circuit (line level for recording) and the

2) DC component drives the AGC line to the receiver's semi-log (0 - 100 scale) signal-strength indicator meter.

QTH noises

Not only did I have the classic utility-line interference from arcing or corona, I had a repetitive noise resulting with peaks and valleys of two S-units on the FT-1000D. Noises were initiating from the metal grounded crank-up tower, a second noise from my receiver and a third noise from the atmosphere that was vertically polarized which read 65 out of 100 on the 852 meter.

Conclusions

Using Dr. Sleuth, I uncovered a two S-unit noise was radiating from a battery charger used for my two-meter handheld and the 65/100 corresponded with a VHF transmitter in the vicinity and probably was not a source of 160 meter noise. The grounded tower noise baffled me, but probably is associated with some galvanized corrosion that may be detecting the VHF transmitter signal. Connecting a new ground rod to the tower improved but did not eliminate the noise. Installed an old JPS ANC-4 which brought forth improvements. Bottom line — my noise level is now between an S-3 and S-4 (most of the time). Not outstanding, but acceptable and much better than it was!

I recommend Dr. Sleuth, (AKA) AC Line Noise Meter, model MFJ-852. The 10-page instruction manual, with schematic, provides good and non-complex information on hunting down power line noise. The $99.95 (+shipping) was worth it to me — it may appeal to you if you wish to work 160 Meters DX or have line noise that prevents full operating enjoyment. Included in the manual is how to be politically correct dealing with the utility company.

Al Gross, W8PAL

Al Gross, W8PAL, of Sun City, Arizona, who brought the world the walkie-talkie, pager and cordless telephone died, 21 December 2000.

Licensed in 1934 at the age of 16, his early interest in Amateur Radio helped set his career choice.

Gross pioneered the development of devices that operated in the relatively unexplored VHF and UHF spectrum above 100 MHz. His first invention was a portable hand-held radio transmitter-receiver. Developed in 1938 while he was still in high school in Cleveland, he christened it the "walkie-talkie."

The device caught the attention of the U.S. Office of Strategic Services — the forerunner of the Central Intelligence Agency. The OSS recruited Gross, and this led to the invention of a two-way air-to-ground communications system used by the military behind enemy lines during the World War II. The system allowed OSS agents to communicate with high-flying aircraft.

After World War II, Gross set up Gross Electronics Inc. to design and build various communications products, some of them under government contracts.

He also launched Citizens Radio Corporation to design, develop and manufacture personal wireless devices.

Cartoonist Chester Gould asked if he could use Gross' concept of a miniaturized two-way radio in his Dick Tracy comic strip. The result was the Dick Tracy two-way wrist radio.

During the 1950s and 1960s, Gross secured several patents for various portable and cordless telephone devices. In September 1958 Gross Electronics received FCC type approval for mobile and hand-held transceivers for use on the new Class D 27-MHz Citizens Band.

"If you have a cordless telephone or a cellular telephone or a walkie talkie or beeper, you've got one of my patents," Gross once said. He added that if his patents on those technologies hadn't run out in 1971, he'd have been a millionaire several times over.

Over the years, Gross worked as a communications specialist for several large companies. Since 1990 and until his death, he was a senior engineer for Orbital Sciences Corporation.

Gross received numerous awards and honors during his distinguished career, including the 1992 Fred B. Link Award from the Radio Club of America and the 1999 Edwin Howard Armstrong Achievement Award from the Institute of Electrical and Electronics Engineers.

As his IEEE biography put it: "It is clear that Mr. Gross was a true pioneer and helped lead the way to today's wireless personal communications revolution." — *ARRL Letter*

Aubrey Hawkins, KC5USI

An Irving, Texas, police officer, shot and killed after answering a robbery call, was an Amateur Radio operator. Aubrey W. Hawkins, KC5USI, a Technician licensee, died on Christmas Eve while responding a robbery-in-progress call. He was 29. Hawkins had been a police officer in Irving since October 1999. Police said seven escaped prison inmates wanted in connection with the killing remain at large. An Eagle Scout, Hawkins was active in RACES and SKYWARN. Marv Kontak, N5MK, reports that more than 2,000 attended Hawkins' funeral 28 December. Hawkins' wife and a nine-year-old son survive. — *N5MK, ARRL Letter*

Lew E. Tepfer, W6FVV

Well-known SSTVer Lew E. Tepfer, W6FVV, of Weed, California, died 22 December 2000, as a result of an auto accident. He had recently announced that he was stepping down after 20 years as the head of the International Visual Communication Association.

Well-known in the amateur Slow Scan TV community, he was awarded a plaque inscribed to "Mister IVCA" at the Dayton Hamvention a few years ago. — *ARRL Letter*

Peter J. Gellert, W2WSS

National Traffic System veteran Pete Gellert, W2WSS, of New York City died 23 December 2000. Gellert was manager of the Empire Slow Speed Net for more than 25 years. Veteran traffic handler and ARRL Official Relay Station Gary Ferdinand, W2CS, himself a former NTS net manager, says Gellert's monthly bulletin always contained words of encouragement and interesting commentary on the art of traffic handling. "I know of no other single individual who has contributed so much to nurturing traffic handling and who has affected the lives and operating habits of so many others," Ferdinand said. — *ARRL Letter*

W. S. Georgia Jr, KD3P

W. Scudder Georgia, KD3P, of Bethesda, Maryland, died 26 December 2000. An Amateur Radio operator in his teens, Georgia became a covert communications officer during World War II, training clandestine radio operators behind enemy lines for the Office of Strategic Services. Georgia received the Medal of Freedom, the nation's highest civilian honor, for his wartime service. He continued after the war as a covert operative for the CIA, from which he retired in 1973. At age 74, Georgia took up scuba diving, and he celebrated his 78th birthday with a 78-foot dive in the Caribbean. On his 80th birthday, he parachuted out of an airplane in Delaware. — *ARRL Letter*

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.*

W.J. Saunders, K3UAL

I have been licensed since 1962. I hold awards for RCC, DXCC, WAC, WAS, and I am an official observer.

My station consists of two separate consoles and is as follows:

Left console, bottom shelf: L to R — Icom 745, Kenwood 870, Kenwood 711A all-mode 2-meter transceiver. Second row: L to R — Ameritron ALS-600 solid state amplifier, packet station with a Kenwood TM-241A and Kam TNC, SP-31 speaker and a HeathKit monitor scope. Third row: L to R — SP-23 speaker, data transfer switches, power-line monitor, frequency counter, marine band VHF radio, Hygain antenna directional controller, SP-430 speaker. Top row: L to R — Astron RS-20M, Astron RS-35M power supplies.

The right console has the following: Bottom: L to R — stacked Yaesu FT-757GX, FC-75 automatic antenna tuner, FP-757GX switching power supply, Heathkit SB-201 linear amplifier, Icom IC-706 and an MFJ tuner. Second row: L to R — MFJ tuner, and a speaker. Third row: L to R — speakers and antenna direction controls.

The antennas I use are a 3-element triband beam, an R7 vertical, a G5RV dipole, a Butternut 40-80M vertical and a 2-element 17M beam.

(Ed. Do you have a setup you're proud of? We'd like to see it. It doesn't have to be the home QTH, either. If you've installed Amateur Radio gear in your car, truck, boat, snowmobile, little red wagon, airplane, or strapped it to Fido's back, we'd like to see it. Just submit a photograph, along with a description of the setup, and you could be the winner of a one-year subscription! That's all there is to it! So come on, send us your photo!)

DX World

John F.W. Minke, III, N6JM

W-100-N

The following DXers have successfully completed the requirements for *Worldradio's* Worked 100 Nations Award:

589. Julio L. Ortiz AD6DK (All 20M SSB)

590. Ray L. Johnson AD6KQ

591. Edward F. Erickson W2CVW (All CW)

CATZ

33. Julio L. Ortiz AD6DK (All 20M SSB)

Conway Reef (3D2)

Activity from Conway Reef (OC-112) should be on right now as it was scheduled for the period of 18 though 27 February. Operators include: YT1AD, YU1RL, YU1NR, YU7AV, YS1RR, Z32AU, and Z32ZM. Look for them on all modes, including PSK. Thanks *425 DX News*.

Agalega Island (3B6)

Hans-Peter Blaettler, HB9BXE, reports that the supplementary work for the postponed DXpedition to Agalega Island (AF-001) has been completed. Now included as the 15 team members for the May 2001 attempt include: HB9BQI, HB9BQW, HB9BXE, HB9CRV, HB9HFN, HB9JAI, HB9JBI, 3B8CF, 9A4TU, CT1AGF, DL3KUD, DL6UAA, F6HMJ, G3KHZ, and NK6F. They plan for 14 days of continuous operation beginning 5 May. For further information see their website at http://www.agalega2000.ch.

Bouvet Island (3Y)

Dr. Chuck Brady, N4BQW, made an appearance from Bouvet Island (AN-002) on 16 December 2000 on 14.195 MHz. Chuck, the only Amateur Radio operator, is a member of a scientific expedition team has been assigned the call 3YØC. The expedition is scheduled for four months so Chuck should be available through April. He is primarily a SSB operator. His operating frequencies are 3.795, 7.095, 14.195, 21.295, and 28.495 MHz. There may also be some 6 and 160-meter operations.

They can run the generator only 3 to 4 hours a day and even at that must skip one day of running it at all to have enough fuel to carry them through until mid March.

There have been problems being caused by unruly DXers trying to work 3YØC when he's off his normal operating frequencies, trying to discretely get technical advice on his radio and amplifier problems. According to *The Daily DX* some of these DXers could not restrain themselves and start calling, making it impossible for Chuck to get the help he needs to be able to get his station shipshape so he can work the pileups in the way we would all like him to be able to.

Mark "Mac" McIntyre, WA4FFW, will handle the QSL chores, and asks that no cards be sent until sometime in April after Chuck returns with the logs in hand. There will be no computer logs. Further information is available from the website maintained by Deon, ZR1DQ, at http://www.qsl.net/zr1dq.

Mozambique (C9)

According to *The Daily DX* Japanese operators JG6BKB, JJ6VOV and JR6XIW have purchased their airline tickets to Mozambique, where they plan to be active beginning 16 March. They will use C93/ appended with their home calls on 6 through 80 Meters mainly on CW but some SSB, RTTY and PSK-31 are expected. Yuki, C93AN, may join the group if he is in the country. Dipole antennas will be used for low bands. The group will be active until 30 March or 4 April. QSL via JG6BKB either direct to Mizuho Tanaka, P.O. Box 7, Hayato 899-5191, Kagoshima, Japan or via the JARL QSL bureau.

Comoros Island (D68)

Activity from Comoros Island (AF-007) should be on right now with the planned operation beginning 8 February and should last through 28 February. Look for them signing with D68C. Details were included in the January issue.

North Korea (P5)

Bernie McClenny, W3UR, of *The Daily DX*, reports that the much-anticipated multi-national North Korean operation, which was announced in mid October, first scheduled for late October then early January 2001, was scrapped. Obviously this is a disappointment to the organizers of P5UK and the DX community.

Bernie also noted that North Korea has only been activated legitimately two times since it was added to the DXCC Enitity List in 1991.

Macquarie Island (VKØ)

Alan Cheshire, VKØMM, completed his tour of duty on Macquarie Island on 16 December 2000 and has returned. Alan says all proceeds from the QSL process will be donated to Camp Quality, an Australian charity that provides care for children with cancer and other terminal illnesses. See Alan's website at http://www.geocities.com/vk0ld/qslinfoX.html.

I O T A

Roger Balister, G3KMA, provides the following operations that have

been approved by IOTA committee during the month of November 2000. These operations have provided the committee with acceptable validation material. This list also includes operations where validation material was volunteered, i.e., not specifically required for credit to be given. In all cases, cards now submitted will be accepted by checkpoints if they meet normal standards. This means the island name must be on the card.

AS-147 JG1SZE/8 (September 2000)	Rebun and Rishiri Islands
EU-066 RV3AGG/1 2000)	Solovetskiye Islands (August
EU-066 UA3DPB/1 2000)	Solovetskiye Islands (August
EU-090 9A7K/P	Palagruza Island (June 2000)
EU-147 RV3AGG/1	Nemetskiy Kuzov (August 2000)
EU-147 UA3DPB/1	Nemetskiy Kuzov (August 2000)
EU-174 SV8/IT9YRE/P	Thasos Island (August 2000)
EU-179 EN8ZIB	Berezan' Island (August 2000)
NA-047 VE7QRZ/VYØ	Baffin Island (September 2000)
NA-193 VE7QRZ/VY1	Herschel Island (August 2000)
NA-217 WF1N/P	Isles of Shoals (September 2000)
NA-217 W1DIG/P	Isles of Shoals (September 2000)
NA-219 W5BOS/C6A	Cay Sal Bank Cays (October 2000)
OC-035 YJØPD	Efate Island (November 2000)
OC-035 YJØV	Efate Island (November 2000)
OC-066 FOØCLA 2000)	Tatakoto Island (April-August
OC-166 YC7IPZ	Tarakan Island (resident)
OC-236 YC8RSW/P	Lembeh Island (October 2000)
OC-236 YC8TXW/P	Lembeh Island (October 2000)
OC-236 YC8UFF/P	Lembeh Island (October 2000)
SA-050 CE8/KD6WW	Navarino Island (November 2000)
SA-050 CE8/R3CA	Riesco Island (January 2000)

In IOTA Directory 2000 Riesco Island falls in an unnumbered group but, following the procedure explained there, will not attract a new reference number until a further valid operation has taken place.)

There are still several IOTA operations that have yet to be accepted by the IOTA committee and hopefully will be by the annual update due date, which was 1 February 2001.

As usual IOTA activity drops off during the winter months. However, here is some of what has been worked by IOTA chasers during the month of December 2000:

AF-050 5T5YD/P	Arguin Island	10-26 Dec
AN-006 EM1KY	Galindez Island	09-10 Dec
AN-006 LU1Z/UT1KY	Peterman Island	24 Dec
AS-017 JS6PXB	Okinawa Island	22 Dec
AS-017 JR6AP	Okinawa Island	22 Dec
AS-017 JR6EA	Okinawa Island	18 Dec
AS-026 HL4HLD	Cheju Island	07 Dec
AS-028 UAØQBA	Kotelny Island	06-21 Dec
AS-032 JA6CTW	Yaku Island	15-28 Dec
AS-040 JH6TYD	Goto Island	15-22 Dec
AS-045 HL5FUA	Ullang Island	10-22 Dec
AS-053 HSØ/IK4MRH	Phuket Island	17-28 Dec
AS-056 JA6GXK	Mejima	15-25 Dec
AS-117 JH4TEW/4	Tashima Island	11 Dec
AS-117 JH4TEW/4	Innoshima Island	13-28 Dec
AS-117 JH4TEW/4	Yokoshima Island	06-24 Dec
AS-136 BD4ED	Chong Ming Island	09-16 Dec
AS-150 BA4DW/P	Tianheng Island	07-12 Dec
EU-008 GMØEWX	Isle of Skye	17-24 Dec
EU-008 GMØIQD	Isle of Skye	24 Dec
EU-008 GM3SWK	Isle of Skye	23 Dec
EU-009 GM3POI	Orkney Islands	26 Dec
EU-009 GMØHTT	Orkney Islands	05-17 Dec
EU-010 GMØEEY	Benbecula Island	16 Dec
EU-016 9A4KF	Hvar Island	01-25 Dec
EU-016 9A4W	Brac Island	16 Dec
EU-016 9A6BND	Vis Island	09-14 Dec
EU-027 JW3FL	Bear Island	10-28 Dec
EU-027 JW1I	Bear Island	07-26 Dec
EU-029 OZ1AA	Sjaellard Island	25 Dec
EU-029 OZ/DK9LO	Lolland Island	01 Dec
EU-031 IC8AMR	Ischia Island	21 Dec
EU-031 IC8POF	Isle of Capri	17 Dec
EU-032 F5NBQ/P	Oleron Island	26-28 Dec
EU-033 LA4MQ	Vesteralen Islands	06 Dec
EU-038 PA/ON5FP/P	Texel Island	28 Dec
EU-042 DJ5DT/P	Isle of Sylt	07-22 Dec
EU-042 DK8OL	Isle of Sylt	25-28 Dec
EU-046 LA1CI	Ringvassoey Island	23 Dec
EU-046 LA5TFA	Tromsoe Island	10 Dec
EU-046 LA5QFA	Vanna Island	06 Dec
EU-047 DJ9IN	Norderney Island	26 Dec
EU-047 DQØKBM	Borkum Island	12-17 Dec
EU-049 SV8CRI	Lesvos Island	24 Dec
EU-052 SV8EP	Kefalonia Island	10 Dec
EU-052 SVØFM	Stavros Island	22 Dec
EU-055 LA2BKA	Reksteren Island	20 Dec
EU-057 DL4PM	Ruegen Island	23 Dec
EU-060 SV2FPU/8	Skyros Island	01-20 Dec
EU-063 JW5RIA	Hopen Island	16-26 Dec
EU-076 LA7DHA	Lofoten Islands	17-20 Dec
EU-098 DH3ZK	Poel Island	10-16 Dec
EU-129 DL5SE/P	Usedom Island	11-16 Dec
EU-129 DL7VOX/P	Usedom Island	28 Dec
EU-130 IV3WMI	Grado Island	10 Dec
EU-131 IK3PQH	Lido Island	16 Dec
EU-133 RA1AD	Kotlin Island	10 Dec
EU-133 RA1ACD	Kotlin Island	18 Dec
EU-136 9A9ØØBP	Krk Island	09-25 Dec
EU-171 OZ1IIT	Mors Island	05-19 Dec
EU-171 OZ1GKU	Mors Island	16 Dec
EU-171 OZ4PAX	Vendsyssel Island	18 Dec
NA-010 VE1XA	Cape Breton Island	09 Dec
NA-019 KL7QK	Kodiak Island	26 Dec
NA-019 WL7EM	Kodiak Island	21 Dec
NA-025 J8/KQ6MW	Mustique Island	05-09 Dec
NA-031 W1LY	Conanicut Island	26-28 Dec
NA-036 VE7IM	Vancouver Island	18 Dec
NA-041 KL7FNH	Baranof Island	10 Dec
NA-051 VE7TLL	Queen Charlotte Islands	26 Dec
NA-055 WB1BQJ 25 Dec	Mount Desert Island	
NA-055 AK1L	Vinalhaven Island	05-26 Dec
NA-057 AH6PN/HR6	Roatan Island	06-15 Dec
NA-059 NO7F/KL7	Unalaska Island	11 Dec
NA-066 N6FH/P	Santa Catalina Island	09-11 Dec
NA-066 KJ6Y/P	Santa Catalina Island	09-11 Dec
NA-066 WB9AWX/P	Santa Catalina Island	10-11 Dec
NA-066 N6IC/P	Santa Catalina Island	09-11 Dec
NA-066 W6VX/P	Santa Catalina Island	09-11 Dec
NA-072 HP1XVH	Contadora Island	23-28 Dec
NA-079 K4QD/P	Dry Tortugas Island	10-11 Dec
NA-080 C6AIE	Abaco Island	05-13 Dec
NA-080 KBØCY/C6A	Abaco Island	25 Dec
NA-110 AA4V	Isle of Palms	09-25 Dec
NA-110 KD4NJN/P	Fripp Island	28 Dec

NA-110 WB4WTY	Folly Island	17 Dec
NA-140 K3RE	Smith Island	16 Dec
NA-143 AB5EB	Galveston Island	18-19 Dec
OC-033 FK8HZ	Lifou Island	25 Dec
OC-046 FO5JV	Tahiti Island	24-26 Dec
OC-066 FOØCLA	Rangiroa Atoll	26 Dec
OC-067 FO5QS	Huahine Island	20 Dec
OC-130 DU9EQZ	Mindanao Island	23-24 Dec
OC-137 VK4CY	Lamb Island	22 Dec
OC-137 VK4YI	MacLeay Island	14 Dec
OC-149 H44NC	New Georgia Islands	20-23 Dec
OC-201 ZL/SM3TLG	Waiheke Island	05-08 Dec
OC-210 YC8RRK	Sangihe Island	12-16 Dec
OC-237 YB3ZMI	Madura Island	15-16 Dec
OC-241 YC9MKF/P	Semau Island	09 Dec
OC-241 YC9WZJ/P	Semau Island	06-09 Dec
OC-241 YC9BU/P	Semau Island	01 Dec
OC-242 YB8HZ/P	Bonerate Island	15-19 Dec
SA-008 LU3XX	Terra del Fuego	21 Dec
SA-008 LU3XQC	Terra del Fuego	18 Dec
SA-024 PY1NEZ/2	Comprida Island	14-17 Dec
SA-026 PP5OW	Santa Catarina Island	10-24 Dec
SA-026 PP5TO	Santa Catarina Island	18 Dec

Japan Island Award

With the recent interest in working islands, another award has arrived on the scene. This one is working for Japanese islands, offered by the Tsushima Club, an affiliate of the Japan Amateur Radio League (JARL). To qualify for the Japan Island Award, you must have worked a minimum of 50 Japanese islands. The major islands of Japan, such as Hokkaido, do not count for this award.

When applying for this award, prepare a list of the islands worked and submit with a fee of five IRC's to Mr. Masayuki Shoji, JF6OID, 1471-1 Oaza Kutamichi, Izuharar-machi, Shimoagata-gun, Nagasaki 817-0031. E-mail: jf6oid@bronze.ocn.ne.jp.

I have received the rules and JIA QSL Card List from Japan. Nothing is mentioned regarding start dates or band restrictions, so I assume all contacts count. It also mentions photocopy of the QSL card list, and I'm not sure if they mean a copy of the filled out list or copies of the QSL cards.

The list of islands may also be downloaded from http://www.dxawards.com/Lists/ja-islands.htm. However, this is not the JIA QSL Card List that I mentioned above, but is evidently prepared from that.

DX Prediction — March 2001

Maximum usable frequecy from West Coast, Central U.S. and East Coast (courtesy of Engineering Systems Inc., Box 1934, Middleburg, VA 20118). The numbers listed in each section are the average maximum usable frequencies (MUF) in MHz for contacting five major areas of the world centered on Africa—Kenya/Nairobi, Asia—Japan/Tokyo, Oceania—Australia/Melbourne, Europe—Germany/Frankfurt, and South America—Brazil/Rio de Janeiro. Smoothed sunspot number = 113. Chance of contact as determined by path loss is indicated as bold *MUF for good, plain MUF for fair, and in *(parentheses)* for poor. UTC in hours.

CENTRAL U.S.A.

UTC	AFRI	ASIA	OCEA	EURO	SOAM
8	*(14)*	*12	*25	12	*21
10	*(18)*	12	*22	11	*20
12	29	11	*19	*21	*25
14	33	*13	*25	*26	*35
16	*34	*(12)*	22	*25	*38
18	*34	*(11)*	*(18)*	*23	*40
20	*32	21	31	19	*41
22	*27	*26	*38	14	*41
24	*22	*26	*42	*13	*40
2	*18	22	*39	*12	*32
4	*16	15	*35	*11	*27
6	*(15)*	13	*29	*12	*23

WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SOAM
10	*(14)*	*13	*24	*(12)*	*21
12	*(20)*	*12	*21	*(11)*	*(18)*
14	29	*12	*18	21	*31
16	32	*15	*22	25	*39
18	*34	15	*(18)*	23	*41
20	*32	*26	30	19	*42
22	*27	*29	*37	14	*41
24	23	*28	*41	*(12)*	*40
2	*21	*27	*42	12	*33
4	*17	*23	*38	11	*27
6	*(15)*	*17	*34	*13	*23
8	*(14)*	*14	*28	12	*21

EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SOAM
7	18	*(12)*	*24	*11	*22
9	19	*11	*21	16	*18
11	*36	*14	*19	*24	*24
13	*41	*(13)*	*26	*27	*32
15	*42	*(12)*	23	*27	*36
17	*44	*(11)*	20	*25	*39
19	*36	*(16)*	26	*22	*41
21	*29	24	35	15	*41
23	*25	24	*41	*13	*40
1	*22	18	38	*12	*36
3	*20	14	*34	*12	*29
5	*20	13	28	*11	*25

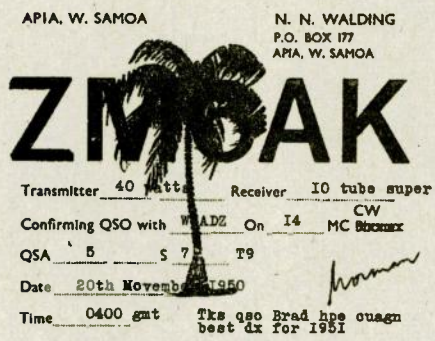
Antique QSL Department

This month's selection of old QSL cards comes from the collection of Lee Brooks, K8BHG. Lee says that he picked up these cards at hamfests.

The first card is that of W4HRP/J3 who was attached to the Signal Corps

in Japan. The date was 1946 and the only contacts at that time would have been with occupation troops. The operator was listed as a Don Bodine and the only Don Bodine that could be found in the present listings was a Donald R. Bodine, W5TMO, who may now be a Silent Key. The K6SDY call listed on the card would have been a Hawaiian call as the K prefix had yet to be issued to stateside locations.

CR6AQ was the call used by Joao



Ramos of Luanda in Portuguese West Africa, also known as Angola. The date of this contact was back in 1950. The operator probably has returned to Portugal or is a Silent Key.

The third card was from Western Samoa for a contact back on 20 November 1950 with ZM6AK. The operator was listed as N.N. Walding, who I assume is now a Silent Key. The recipient for this contact was W5ADZ, as on the other two cards. Also noted the operator was Brad and the 1996 listings showed him to be a Bradfield A. Beard in Texas. However, the latest listings show this call to be issued to a club, no doubt a memorial call to a former member, now a Silent Key.

QSL Information

Carl "Mac" McDaniel, W3HC, informs the DX community that he does not acknowledge QSL requests for stations he manages via the bureau. Carl, who manages cards for 125 stations, says, "We do not use the QSL bureau. To receive five pounds of cards from the W3 Incoming QSL Bureau I must pay $6.50 postage to receive them. Then I must verify them, include $6.00 a pound ($6.00 times 5 equals $30.00) plus another $6.50 postage to send them to the ARRL bureau. This amounts to $43.00 out of my pocket."

This can be a controversial subject. At one time QSL managers were available to reduce the need of sending a direct QSL request overseas. This also took the burden off the DX station of answering numerous QSL requests. However, the bureau system was still there. Unfortunately, things have changed. More and more DX stations "need" QSL managers. In my case I work many DX stations and send QSL requests, and with many of them with DX managers this can be a problem. I use the bureau anyway, but not to stateside managers.

I understand that some DX stations will not accept QSL requests from the bureau system at all, even those without managers. This, I feel is unreasonable. One of these fellows is a well known DXer in the Pacific, yet can afford to travel all over the world at the drop of a hat. To me it is a lot easier to answer bureau requests than opening many envelopes, shuffling SASEs and responding to each one.

Thanks go to the following contributors for this month's column: HB9BXE, JF6OID, ZR1DQ, W3HC, WA4FFW, K4VUD, K8BHG, Western Washington DX Club (WAØRJY), 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).

We are now into the new millenium. The year 2000 was a good close-out for the last one. Unfortunately, the last few months of the year did not provide the favorable propagation. Hopefully, this year will be a little better. If not, then catch up on those QSL cards. 73 de John N6JM

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

EMCOMM 2001

The 2nd annual Emergency Communications Conference will be held on Saturday, 31 March at Bishop Quinn High School in Palo Cedro, near Redding, California. EMCOMM 2001 will include seminars and workshops on topics such as Search and Rescue radio communications, emergency antennas for VHF and HF, choosing batteries and other emergency power sources, transmitting digital images on scene using HF and VHF, Public Relations and working with the media, an overview of the Incident Command System and SEMS, "Mutual Aid" practices, and the handling of formal traffic. There will also be a presentation by the NWS on their Skywarn program.

All Amateur Radio operators interested in volunteer Emergency Communications are invited to attend. The all-day event will begin at 9 a.m., with registration starting at 8 a.m.

For more information, check in on the Sojourners Net which meets daily at noon, on or near 7.232, or online at www.qsl.net/k6soj. For those without HF or Internet access, a request for information may be sent to EMCOMM 2001, D.W Thorne, K6SOJ, P.O. Box 16, Macdoel, CA 96058.

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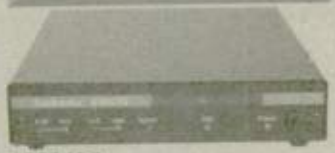

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4K9C	PA3EPG
4N7ZZ	YU7FIJ
4S7OF	KØJN
4S7VK	DJ9ZB
4T4AHW	OA4AHW
5N3CPR	SP5CPR
5P1ER	MØAXP
5R8FU	SM5DJZ
5R8O	5R8FL
5T5YD/P	F6FYD
5X1GS	WB2YQH
7Q7KZ	JA2LZF
7S2ØØØM	SM7TZK
7XØAD	EA4URE
7X2RO	OM3CGN
8P9EM	G3VBL
8P9HW	G4IOQ
9K2GS	W6YJ
9L1GG (1980)	ZP6CU
9M2/JI1ETU	JI1ETU
9M6BG	VR2BG
9M6CTT	JA8CCL
9N7RB	W4FOA
9V1YC	AA5BT
A41KJ	N5FTR
AX2ØØØ	VK2PS
BA4CH	BY4AOM
C21JH	VK2GJH
C56/G2YT	G2YT
CN2UN	ZP6CU
CO8EJ	EA5KB
CP6XE	IK6SNR
CT3/DK1BT	DK1BT
CT3/DL3DXX	DL3DXX
CT3/SMØJHF	SMØJHF
DL2GG/YV5	DJ7AO
DU1/LA5FH	LA5FHA
E2ØHHK	E21EIC
E2ØRRW	E21EIC
E29DX	HSØGBI
ED1SJC	EA1URS
ED6JN	EA6JN
ED8LPH	EA8URT
ER2ØØØA	ER1DA
EY1HQ	DJ1MM
EY8JJ	LA5JX
EY8ZC	EY8DV
EZ3A	EZ8CQ
FK8GM	WB2RAJ
FM/F2JD	F6AJA
FM5GU/I	KU9C
FO5RA	KM5M
FO8Z	W9ZGU
HBØ/DM2AU	JDM2AUJ
HG1OOO	HA5KDQ
HI3LFE	AD4Z
HSØZCW	K4VUD
HS4BPQ	E21EIC
HZ1AB	K8PYD
IIØZKZ	IØZKZ
IU4T	IK4MTF
IY4FGM	IK4UPU
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J38DX	K1KI
J6/LA4LN	LA4LN
JD1BCK	JM1TUK
JQ1SUO/JD1	JQ1SUO
JW/ES1AKM	ES1AKM
JW5DW	LA5DW
JY4NE	KB6NAN
K1D	W1DAD
KHØ/JA4GXS	JA4GXS
KHØ/JF4LNO	JA4GXS
KHØ/JN4AWW	JA4GXS
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LU1Z/UT1KY	UT7UA
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UK8LA	RW3RM
UK8OM	IK2QPR
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UP2ØØØL	UN7LZ
V26JT	K3JT
V47SS	DL2MDZ
V47UY	KJ4UY
V51HK	DL6OBS
VE2DX	VE2STN
VK9CEH	AA4EH
VQ9QM	W4QM
VR97BG	VR2BG
VR98BG	VR2BG
VS6BG	VR2BG
VS6UP	VR2BG
VS96BG	VR2BG
VS97BG	VR2BG
VU2HR2ØØØ	VU2JOS
W3M	W1KSZ
W5AA/TI8	W5AA
XE2NJ	F6FNU
XV3AA	JA6UGH
XV7AAZ	IN3QBR
XW3QBR	IN3ZNR
XW3ZNR	IN3ZNR
XX9TDM	VR2BG
YBØABB	MØCMK
YB3ZMI	IZ8CCW
YB5QZ	W3HNK
YC3DIK	IZ8CCW
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YO5TP	GI4GTY
YU2ØØØA	YU1FJK
YU8/9XØA	RW3AH
YZ30AA	YZ1AA
ZC4GL	KF4UCH
ZF2DR	K5RQ
ZP6CW	ZP6CU
ZP6GG	ZP6CU

3D2DIBill, P.O. Box 184, Suva, Fiji Islands
5R8FLP.O. Box 5005, Tananarive, Madagascar
A45XRChris Dabrowski, P.O. Box 2038, CPO 111, Oman
A92ZECapt. Julius Gostel Jr., PSC 451, Box 1198, FPO AE 09834, USA
AA4EHEd Hula, 1776 Peachtree St., Suite 410N, Atlanta, GA 30309, USA
BA4DWDavid Y. J. Zhou, P.O. Box 040-088, Shanghai, 200040, China
DL2MDZRainer Kuehnberger, Hofer Str. 54, D-95233 Helmbrechts, Germany
DL5EBEDominik Welel, Johannes-Meyer-Str. 13, D-49808 Lingen, Germany
DU9BCDPaul C. Dagondon, Kuguita, Mambajao, 9100 Camiguin Island, Philippines
E21EICChamp C. Muangamphun, P.O. Box 1090 Kasetsart, Bangkok 10903, Thailand
F6AUSSerge Soulet, Les Hautes Rivieres, F-79800 Sainte-Eanne, France
F6AUSSerge Soulet, P.O. Box 54, F-79402 Saint-Malxent-L'Ecole, France
FB1BONPatrice Brechet, P.O. Box 522, 85305 Challans CX, France
HC2BEVAlex Otto Ogorodov Rafalsky, Correo Central, Provincia Guayas, Ecuador
HR1RMGRene Mendoza Garay, P.O. Box 1000, San Pedro Sula, Honduras
HSØGBICherdchai Yiwlek, P.O. Box 9, MAptaphut I.E., Raygong 21151, Thailand
IZ8CCWP.O. Box 360, 87100 Cosenza - CS, Italy
JA4GXSKenji Sasaki, 2-15 Ishikannon-cho, Yamaguchi-city, 753-0038 Japan
JA6GXKMasafumi Ishihara, 493-4 Koba-Cho, Fukue, 853-0033 Japan
JA7KXDJunji Ogawa, 2-3-51, Kimachidori, Aoba-ku, Sendai-city 980-0801, Japan
JI3DSTTakeshi Funaki, 2-18-26 Hannan-cho, Abeno-ku, Osaka-city, Osaka 545-0021, Japan
JK7TKEKoji Fukui 1840-5, Izumi-cho, Tokorozawa-city, Saitama 359-1112, Japan
JM1TUKKazuyoshi Nasu, 3-12-11-201, Oda Kawasaki-Ku, Kawasaki 2100846, Japan
JQ1SUOEiji Shinoda, 3-3-17, Tomisato, Kashawa-City, Chiba 277-0081, Japan
K1KITom Frenaye, P.O. Box 386, West Suffield, CT 06093
LA5FHASvein Olav Brobakken, P.O. Box 15, 2838 Snertingdal, Norway
OA4AHWManuel Basurco C., Bronsino 626, Lima 41, Peru
OD5NHPuzant Azirian, P.O. Box 80903, Beirut, Lebanon
PA3EPGBen van Leeuwen, Zwolseweg 57, 8181 AC Heerde, The Netherlands
RAØJXVladimir I. Babynin, P.O. Box 1, Zeya-3, Amurskaya Obl., 676342 Russia
RA1QQNick A. Smerdov, P.O. Box 24, Cherepovets, 162627, Russia
SM5DJZJan Hallenberg, Vassunda Andersberg, SE-741 91 Knivsta, Sweden
VE2STNRichard G. Desaulniers, 461, Romeo, Ste-Dorothee, Laval, Quebec, Canada H7X 1R2
VK4EJBernie McIvor, 30 Brennan Parade, Strathpine 4500, Australia
VP8DCDP.O. Box 260, MPA, Falkland Islands
VR2BGBrett Graham, P.O. Box 12727, Hong Kong
W1DADPeter Schipelliti, 7 Dearborn Ridge Rd, Atkinson, NH 03811, USA
W3HCCarl F. McDaniel, 2116 Reed Street, Williamsport, PA 17701-3904, USA
W3HNKJoseph Arcure Jr., P.O. Box 73, Edgemont, PA 19028, USA
W9ZGUCarl Taylor, 3871 SW 31 Street, Hollywood, FL 33023, USA
WA7OBHLee Graves, 4341 SE Satinleaf Place, Stuart, FL 34997, USA

Special Events

Spring Training Camp

Port St. Lucie, FL ARA will operate special event station K4PSL to commorate the arrival of the New York Mets for the spring training camp. Daily operation from 1-10 March, 1700-2100Z. Suggested frequencies are: 14.050, 14.230, 21.230 and 28.350 MHz. Certificates are available from Dr. Maurice Sasson, 8590 Florence Drive, Port St. Lucie, FL 34952.

Cherry Blossom Festival

The Macon ARC will operate special event station W4BKM 1500-2200UTC 17 Mar. at the 19th annual Cherry Blossom Festival in Macon, GA. Suggested frequencies are: 14.240, 21.335 and 28.390 MHz. Certificates are available by sending your QSL and a (X 12 SASE to Macon ARC, P.O. Box 4862, Macon GA 31208.

Bill Pasternak, WA6ITF

FCC looks at repeater interference

True to a promise he made in 1999, the FCC's Riley Hollingsworth has taken up the cause of repeater versus repeater and other related interference problems. Speaking late November 2000 on his Rain Report enforcement log, the agency's chief Amateur Radio rules enforcer says that it's paying off.

"This past period was an active one. In the repeater area especially. We confirmed the voluntary shutdown of an uncoordinated repeater operating on AM in Coventry, CT. K1JCL was operated by Alan Koepke. Mr. Koepke will seek coordination of the repeater. In the mean time it stays off," Hollingsworth said. The agency had information the repeater was interfering with other repeaters in Massachusetts, and New York.

In another repeater related issue, Hollingsworth said that his office had opened an inquiry into the operation of the K6POU repeater near Walnut Creek, California. He said extensive monitoring showed numerous alleged rule violations and a shortage of control operators. He also noted that he had allegations of unusual bandwidth and spurs from the K6POU repeater.

Hollingsworth noted that his office had similar issues with two other repeaters. There were allegations of interference from N2JTI in Haverstraw, New York, to repeaters in Lawrenceville, New Jersey. His office also opened an inquiry into the operation of the WR2MSN repeater in Yonkers, New York to "get to the bottom" of an interferance problem with a coordinated repeater operating under the call sign W2OQK.

Each system license holder was given the customary 30 days from receipt of letters from the FCC to respond. Hollingsworth indicated that we can expect more repeater related enforcement in the coming months.

ISS on the air

Amateur radio took another giant step on 13 November. That's when the crew aboard International Space Station Alpha plugged in their gear and went on the air, holding their first voice QSOs from orbit.

Operating on their standard downlink frequency of 145.800 MHz, cosmonauts Sergej Krikalev, U5MIR, and Yuri Gidzenko joined their Commander, Bill "Shep" Shepherd, KD5GSL, in a first check-out while flying over Russia. They contacted station R3K. Sergej Samburov, RV3DR, the Russian ARISS liaison responsible for installing much of the gear aboard Alpha, and Vladimior Zagainov, UA3DKR, a training officer, made the first engineering check. They were joined in greeting the space ship by Eugene Labutin, RA3APR, President of AMSAT Russia. Signals were loud and clear both ways — an outstanding achievement using 5 watts to a temporary antenna on the outside of the station.

Then it was on to the U.S. for the next major contact, with station NN1SS at the Goddard Space Flight Center, in Greenbelt, Maryland. Frank Bauer, KA3HDO, who heads the ARISS Administrative team, described the contact at Goddard as one of the most thrilling days of his life, especially when Shep told him the reception aboard Alpha was crystal clear.

The Goddard contact was followed by W5RRR at the Johnson Space Center in Houston, where more definitive engineering tests were run.

And why, you may ask, is all this so important? Because it is the culmination of a four year effort by dozens of dedicated Hams, and the realization of a dream. Because the International Space Station is a multi-nation effort, manned presence in space for the foreseeable future on a continuous basis is a virtual certainty. The many nations taking part can look forward to many contacts in many modes as time goes by — contacts with schools, families and all of us Hams "on the street." — *K6DUE*

How to contact ISS

Here are three tips from N7JGW to try and find the ISS when they are not doing general QSOs with amateurs.

1. Monitor 143.625. N7JGW says that he noticed on 2 passes near Houston, as Alpha came above the horizon in Seattle they were transmitting a continuous signal on 143.625, with an open mike. A brief QSO (in Russian) occurred, then the signal was abruptly cut off. A short time later KD5GSL appeared on 2M in QSO with W5RRR.

2. Search between 145.800 and 145.995. Maybe they will use a freq. in this part of the band, maybe not.

3. If KD5GSL wants to have a general QSO and work a pileup, Kerwin believes he will show up on 145.800 and call CQ. If he wants to have a pre-arranged chat with a friend, or family member via W5RRR, he most likely will show up on some frequency other than 145.800.

High speed SSB

The concept you are about to read came as the result of the following short note posted on the VHF reflector by Dave Parker KG4FTA. It deals with a topic rarely discussed in print — High Speed SSB.

Dave wrote, "Here it is in a nutshell — high speed CW (HSCW) operates by taking CW and speeding it up many times. Why not record SSB voice, and do the same thing?

Speed it up, using CoolEdit or a similar program, and slow down when receiving. That would admittedly, not work as well as HSCW, but might be fun to play with, especially for the bigger stations."

Boy did this bring back memories of an era gone bye. We (the pejorative "we") were doing just that back in the

1960's using tape recorders into our SSB radios of the time. Here's how it worked.

In my case, I used a Wollensak T-1500 recorder/player. I would record my "CQ" or other transmission at 3 inches per second and play it back into my Swan 250C at 7 inches per second. Receive was recorded at 7 IPS and then played back at 3 IPS. It worked — kind of. The big problem was the phase and frequency shift in the audio that made those of us playing this high speed SSB "game" sound a lot like David Seville's "Chipmunks." In fact, my tape recorder was known in local New York City 6-meter circles by the nickname of "Alvin."

You do know who Alvin is, don't you? No? OK. A quick trip back in time. Alvin was one of three "characters" called the "Chipmunks." They were created in the 1950's by songman/engineer Ross Bagdasarian a.k.a. David Seville using the studio facilities at Liberty Records in Los Angeles. According to a web posting, The Chipmunks were an entertainment novelty born from Bagdasarian's fascination with tricks and recording techniques. Among them was a procedure called "up-speeding," which is not much different than what we 6-meter SSB Hams were doing on the air only a few short years later.

In reality, all three "Chipmunks" — Alvin, Theodore and Simon are Bagdasarian's voice recorded at one speed and played back several percent faster. The complete story of this very fascinating man and the technology he introduced to the recording industry can be found at: http://www.tsimon.com/chipmunk.htm, but back to Ham radio.

As I mentioned earlier, this simple Wollensak-to-Swan 250 system kind of worked, but it did have some definite limitations. Operationally, it was a nightmare and did not lend itself to random QSO's. Unless the station on the "other end" knew what to listen for, transmissions sounded like "Alvin" doing an impersonation of "Donald Duck." Because of this, most QSO's were of an experimental nature and planned in advance over the phone. Sometimes the phone line was kept open to get an immediate verbal "QSL."

The system was also very slow to use. Then again, any linear recording system is, with tape being among the slowest. Unlike broadcast tape recorders, my little Wollensak's "tape counter" was, at best, a handy reference as to where on the tape one was listening, but not anywhere accurate enough to cue back to the start of a short recording. It could take a lot longer to find the beginning of a recorded segment than to play it out. The kindest word I can use to describe it all is 'cumbersome.'

There were also the technical problems. Aside from matching the line level out of the recorder to the mic level input of the Swan (a resistive pad handled that) the primary difficulty was the 300 to 3000 Hz. (aprox) passband (frequency response) of the Swan 250 C. As Ross Bagdasarian and numerous others before and after him found out, when you double the speed of an audio signal you also (almost) double the frequency of the audio. The Swan's design just did not like passing audio that was in the 600 to 6000 Hz range. I figure it actually passed 600 to about 3200 Hz. which made the system useable but far from truly useful. Playing around with the values of capacitors in the Swan's audio preamp stage helped a bit but not enough to warrant continuation of the experiment. I was not about to butcher the Swan just to sound like a Chipmunk.

Now we must digress for a moment.

As many of you know, I work in broadcast television. The thing that pays my salary is commercials. And the more commercials that a station can put into a programming break, the more income for the station. But how do you put more commercials into a show that requires a specific amount of time to air. Since most programming is on videotape, there are really only two ways. You can either remove program material or speed up the tape.

While it sounds simple, it really isn't. First of all, many producers and program syndicators frown on a station editing down a program to make more time for local commercial insertion. In fact, almost all programming comes with a contractual clause that tells a station it cannot do that. And until the mid-1980's it was not possible to speed up a videotape even a few percent without changing the pitch of the audio. That all changed when a company called Eventide introduced a "magic box" called the "Harmonizer."

Without going into specific detail, the Harmonizer was a device designed to permit, among other things, changing the 'speed' of an audio signal while retaining its 'pitch.' Teamed with a pair of 1" Type C broadcast videorecorders, you could speed up a program a few percent and record it on a new tape without introducing very much noticeable disturbance to the video and none to the audio. Most stations that used a Harmonizer to buy extra commercial time only took out about 30 seconds per half hour, but that 30 seconds could equate into an additional $5,000 to $10,000 or more in dally income depending on the stations market and rate card (the price charged for airing a commercial).

Needless to say, the Harmonizer quickly found a home in my industry. And in the hey-day of up-speeding programs, it was not uncommon to hear broadcast engineers who were also Hams joke about putting one on a repeater so that a question could be answered before it was completely asked. (Don't try to figure that one out. It was never meant to be serious.) But the more serious thinking amateurs were given to using such a device for

speeding up weak signal SSB contacts. Only their price, thousands of dollars, kept any experimentation from taking place.

Now fast forward our videotape of life to today. Now there are all sorts of audio workstation programs that permit manipulating audio in just about any way you can imagine. For under a $100 you can slow it down, speed it up, add echo, change its pitch and what have you. Even the low priced Goldwave audio editing program can be used for this purpose since it permits adjusting both the speed and the pitch of the sound.

I use Goldwave to edit Newsline. In our case its really a matter of inserting "actuality sound" or "interview sound" into a report (track) read by our anchorman. We neither speed it up nor slow it down — but we could if we had to. And we could shave off time without making an anchor or reporter sound like one of Liberty records Chipmunk offspring.

But one of these days I might use it to give High Speed "Chipmunk" SSB another try. It's only a matter of interfacing the audio card in the PC to the mic in and speaker out on the FT-847. Anyone else interested?

NZART on 440 MHz loss

New Zealand Amateurs probably have little chance of holding onto frequencies above 440 MHz. So admits Allan Wallace, ZL1AMW, the President of the New Zealand Amateur Radio Transmitters. NZART is the national society and Wallace has now spoken out on the future of the 70 centimeter band in that nation.

The NZART and the nations Ministry of Economic Development have been working for a year on the difficulties that the removal of Hams from the spectrum would have on their activities. ATV will be particularly hard hit. The Ministry has published new bandplans, and although the loss above 440 is regarded as inevitable, the matter is not yet fully resolved. — *Q-News*

VHF society conference

The fifth annual SouthEastern VHF Society conference is slated for 20-21 April at the Holiday Inn Select-Brentwood, Nashville, TN. The program will include presentations by antenna specialist L. B. Cebik, W4RNL, EME enthusiast Bob McGraw, K4TAX, and many other VHF+ operators. In addition to the technical program/presentations and conference proceedings, there will be pre-amp noise figure testing (50-1296 MHz.), antenna gain measurements (144-2304 MHz.), the family program, a flea market, vendor sales displays, the SVHFS auction, annual business meeting, Saturday night banquet with a guest speaker, K4UHF award presentation and many door prizes.

Reservations for the Holiday Inn Brentwood may be made by contacting the hotel at 615/373-2600. The hotel web site is: http://www.hotel-nashville.com/holidayinn/. The cut-off date for group rate of $80.00 per night is 2 March 2001. Mention the SVHFS 2001 Conference to get the group rate

You can pre-register for the conference by completing the registration form on the SVHFS web site at www.svhfs.org. To be added to the SVHFS mailing list contact Robin Midgett, KB4IDC, via e-mail at KB4IDC@arrl.net. The SVHFS mailing address is SVHFS Inc., P.O. Box 1255, Cornelia GA 30531. — *KB4IDC*

Dayton 2001

As you read this, the 2001 Dayton Hamvention is only a month or so away. Unfortunately, as I write this in late December 2000 our plans for this years "Ham Radio Town Meeting" have not yet been finalized. Actually, I had most of the plans in place until AMSAT-DL announced they had lost contact with the new AO-40 satellite.

A good part of the Town Meeting revolved around AO-40. Wether or not it will be a part of the program is, right now, in Gods hands. Lets all say a prayer that AO-40 will recover from what ails it and become an integral pat of the 21st century Amateur Radio scene.

So what will we talk about at this years Ham Radio Town Meeting? We will let you know in the May edition which will hit your mailbox in late April. Or better yet, be surprised. Drop by the Hamvention on Saturday 19 May from 2 P.M. to 4 P.M. EDT to find out.

A new family addition

We have saved the very best for last. As regular readers know, we are very lucky to have an extended family. An important part of that unit is a young woman who many of you will remember from the 1987 ARRL Ham radio promotional video titled "The New World of Amateur Radio." Back then she was Kelly Howard, N6PNY and over the years she became the daughter that Sharon and I never had.

In 1990 Kelly met Steven Lenhert. Not long after the two were married and over the years there have been two offspring. Michael is now 6 and Aimee is 2. And on 15 December 2000 the Lenhert family expanded a bit further with the arrival of Kelly and Steven's third child — a daughter they named Amber Lynn.

Amber weighed in at 7 lbs. and was 19" long when she made her debut. Kelly says she has her eyes. I know that you join with us in congratulating Kelly and Steven on receiving this beautiful holiday gift of new life from the Almighty.

— *Bill Pasternak, WA6ITF, can be reached at: 28197 Robin ave., Saugus, CA 91350, or via e-mail at: billwa6itf@aol.com.*

Jerry Wellman, W7SAR

SAR potpourri

Several weeks ago there was an emergency locator transmitter (ELT) active in the valley. Because I'm close to one of the small airports in the valley, I was asked to drive over and see if I could receive the ELT signal. I swung into the parking lot, hopped out of the Jeep, and made a quick survey up and down the ramp with my aviation radio in hand. I quickly determined the signal was not coming from this airport. As I reached for my Amateur Radio to call home to see if the signal was still being heard, I discovered it was no longer attached to my belt.

Fortunately the radio was found under my Jeep where it had bounced off my belt as I climbed out, presumably bumping it on the doorframe. This event led me to consider different ways to attach a radio to my person to avoid losing it. The upside of this experience is that it didn't happen in the field and that the radio was found.

Digging through my shed, I found the box of leather radio cases that I knew I'd someday need. Among the collection was a trusty, heavy-duty leather case I had once viewed as something too well constructed for every-day use. It's a full leather case with a very secure belt connector.

It requires you to turn the radio upside down to get it to detach from the belt connector. I also found a case made out of neoprene that looks pretty secure as well.

Some years ago I ordered the "standard" metal belt clips for most of my portables and abandoned the "old" heavy-duty leather cases. I'm not sure why I did this but must have had a good reason at the time — it's fortunate I haven't lost any radios! As I looked through a variety of catalogs and online radio outlets, I located a variety of cases that seem secure enough for field use. Because radio is the essence of our service, think how impaired you'd be if you reached down to relay a critical message and discovered your radio missing in thick underbrush or heavy snow!

An alternative to a good belt case would be a "radio pocket" that's part of your parka or equipment vest or a chest holder especially made for radio use. I have both available, depending on the weather and need. I would suggest you get in the habit of carrying the radio in a good holster, as you never know when the need will arise. When I left the home for the airport, I was in the habit of using the metal clip on the radio and didn't give a secure holder a second thought. Bad habits are hard to break, so I'm removing the metal clips from my radios, which will force me to remember the correct belt case.

Demise of the HF net

An e-mail recently announced the end of a Civil Air Patrol multi-state HF-SSB radio net due to lack of interest and participation. I thought how ironic that an Internet e-mail had replaced radio to get the word out. Over the past months I've noticed an increase of activity on Amateur Radio HF as operators obtain their General and Extra Class licenses. During some of the recent power outages and severe storms there has been significant support of emergency management agencies by Amateur Radio.

It's sad to me that a group such as CAP has lost much of their HF radio capability. One key to keeping a net vital to an organization is that it is used and that operators feel needed. I recall many times that CAP used HF radio in support of multi-state events and to relay radio traffic among various squadrons. Today we use e-mail because it is quicker and easier, but at what cost? Because so many agencies use Amateur Radio to augment their communications needs, certainly the argument can be made there is some value in having HF capability.

One group I associate with discussed the option of sending information and training materials to members via e-mail and then trashed the idea when they realized that members may be better informed, but it would cost the group by eroding radio skills — the talent for which the group existed. Another downside is that it causes members NOT to rely on radio for information and get out of the habit of being on the air in the event of an emergency notification.

Give some serious thought to how well you use your radio network and how well you use it to get information to your members. I believe I made the statement years ago that if you ignore your radio operators, they'll go away.

A winter search

A couple of counties away from me, SAR teams were active late one night when some folks were lost while skiing and snowmobiling, presumably in areas they shouldn't have been. It was a very weary command post operator who responded to a dispatch call that yet another party was presumed lost in the same area.

What caught my attention was some traffic between a staging area command post and a helicopter. The chopper needed some on-scene information and the staging area said they had no communications with their deployment coordinator in the mountains. The area isn't so remote that there isn't Amateur Radio coverage into their deployment area and it was apparent that use of this service would have been of great benefit. It often amazes me that an agency will overplan every aspect of public service and then allow some salesman to do their communications planning.

A recent internet discussion asked how many agencies made use of Amateur Radio and I was pleasantly surprised to discover how many rely heavily on this service, and how many rely not just on 2-meter VHF, but on HF, UHF, packet, and even television. Many groups maintained a significant cache of immediately available equipment including portable repeaters, yagi antennae, batteries, and tower masting. I might make a suggestion as one way to get the attention of a local agency. Approach them by asking

them to pose, for your solution, a communications problem they have recently faced.

It's always a good idea to invite local officials to observe your training and exercises, but they'll have increased interest if you show how you can solve a communications problem they have experienced. It's important that you don't boast in your ability to one-up their communications team, but show how you can augment and fit in with their existing operation. The key is to enhance and improve, not put your nose in the air and claim superiority.

Idiot proof?

I was sent a quote from a discussion concerning standardized connectors. It is worth repeating.

"We all know it isn't idiot proof, but we like to assume that WE aren't idiots and the people we work with aren't idiots, so we don't really need to make all the components idiot-proof. Now if we really think about it, I suspect most of us can recall experiences that don't totally support that assumption; but if you make a system totally idiot-proof, only an idiot would be willing to use it. As you correctly point out, we can't legislate stupidity out of existence — and we can't totally design it out of our hardware either."

Well said! It's important to keep our systems less-complex but silly to expect that everything we do can be reduced to an idiot-proof configuration. There is some expectation of skill not only to solve problems but also to intelligently handle the task of communicating. I often think that by trying to come up with a policy or procedure for everything, we rob our people of their ability to think and react to a situation at hand. After all, we want some level of skill from our people and our standards and expectations should reflect that.

Speaking of standard connectors, there are rumors that the ARRL will abandon the molex connector as their recommended item and will hop on board with the Anderson PowerPole connector. (If my sources are not correct, I hope someone at ARRL will give serious consideration of the PowerPole.)

A command post repeater?

A non-ham reader asked me whether or not their agency would be well served to purchase a portable repeater that they would install in their mobile command post. Bless his heart, it's amazing what some companies will do to make a sale. The reader was under the impression it would increase the range of their mobiles and portables and enhance their field communications.

Over the course of the e-mail exchange, I asked if the suggestion had been made concerning height of antenna and placement of the repeater. Nothing had been suggested so we began corresponding with some basics such as height advantage, coverage area, quality of antenna, etc. This reader had been told, correctly, that a repeater would extend radio range, but some of the facts had been omitted such as repeater placement advantage.

This is another area Amateur Radio can serve public agencies, as a buffer to which questions can be posed and solutions suggested when changes are pondered to communication systems. It's amazing what ideas will be given when a group of experienced operators gather to assist the poor agency administrator who has no radio knowledge.

A final thought

During the ice storms in the midwest, one HF operator provoked a laugh when he said it was sure cold in his shack. He went on to explain that he and his wife were in the midst of a discussion as to the best application of their portable generator. Apparently she wanted to power a small heater and he wanted to power his radio gear. I never did hear what they decided on, because he abruptly went off the air.

Until next month, best wishes from Salt Lake City.

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

FCC announces new address to overnight fees

There's a new address to submit fees via overnight courier to the FCC's fiscal agent, Mellon Bank. The bank has moved its Global Cash Management headquarters to a new Client Service Center, where all of the FCC's fee-related applications are processed. Only Mellon Bank's street address will change. The FCC says the following address should be used for all overnight deliveries: Federal Communications Commission, c/o Mellon Bank, Mellon Client Service Center, 500 Ross St, Room 670, Pittsburgh, PA 15262-0001. The FCC lockbox address to receive routine vanity fees has not changed. Applicants may submit FCC Form 605, FCC Form 159 (Fee Remittance form) and the required application fee to the FCC Bank Contractor address at: FCC Wireless Bureau Applications, POB 358130, Pittsburgh PA 15251-5130. — *FCC, ARRL Letter*

Chasing new counties

Several years ago, I had a part-time business as a mobile disc jockey for parties and weddings. I learned from playing music that the old cliché is true, "you can't please everyone!" There was always one person (okay, maybe it was more than one), who didn't like the choice of music I was playing and was quick to point out that the song they liked was guaranteed to fill the dance floor. What I learned was to try and satisfy the majority of people and not to cater to a couple "odd" requests.

As a county hunter and columnist I've also learned that I can't please everyone. Some folks would like to see this column used for certain topics. When I write these columns I don't have a dance floor in front of me to give me immediate feedback on what's working and what's not. The feedback I get on my columns is few and far between. Now I know there are a couple of you who read the column — I just don't always hear from you, and that's okay!

So when I do get feedback, I stop and think if this feedback is representative of my readers. I'm prompted to write this because I got some interesting feedback from my November 2000 column about how many counties should county hunters hunt for the USA Counties Award (USA-CA) offered by *CQ* magazine and the Worked All Counties (WAC) award offered by the Mobile Amateur Radio Awards Club (MARAC).

To summarize that article, I proposed that county hunters should hunt 3,141 counties not the 3,076 counties that *CQ* and MARAC say we should hunt. Needless to say this ruffled a few feathers. My reasoning was based on the fact that our government, namely the Census Bureau, tracks 3,141 "statistically equivalent entities" for their county total. This includes 3,006 counties, 64 Louisiana parishes, 43 independent cities (MD, MO, NV, and VA), 16 boroughs (AK), 11 census areas (AK), and Washington DC. The bottom line was I was questioning the status quo of how we count counties in Alaska and the independent cities of Virginia.

So what about the positive feedback I received? The first comment I received was from Andy, W3XE. Andy called the article "required reading" and questioned if MARAC was ready to start recognizing the true number of counties in the USA and if the county hunters "really wanted to work all the USA counties." The second positive comment I received was from Craig, KL4E. Being from Alaska, Craig was very supportive of the change. In his words, "the public should be protected from people who think that a parish is a county, but a borough is not." He believed the obvious answer was to use the divisions established by the Bureau of the Census as the defining standard for entities that qualify for the county hunter certificates. Although Sonny, W5VDW, believed we were continuing to go over "old ground," he also believed that counties recognized by the U.S. Census Bureau was a good start for determining the number of counties we hunt.

Yes, I received negative feedback too! Very active county hunters believed I was rabble rousing, wasting newspaper ink, and really not serious. They all thought the awards should stay at 3,076 counties. One county hunter thought it should stay that way because of tradition — since the first USA-CA award this is how we count counties. The same county hunter thought this would make the award too hard to earn and would be a major "turn-off" to many county hunters.

Another county hunter did not like that I proposed counting boroughs, census areas and DC and said that there were errors in the article (like forgetting about Puerto Rico, the Virgin Islands, Guam, etc). On one hand, he believed I erred in forgetting the rest of the U.S. territories (to include indian reservations, military bases, etc). And on the other hand he stated making radio contact with the Alaskan boroughs and census areas would be impossible and require mobile operators to either go "air mobile" or "dog sled" mobile to reach half the boroughs in Alaska. He suggested that someone should offer another award for contacting 3,141 county entities, but the USA-CA and WAC awards should not be changed.

A third county hunter suggested that if someone wanted to contact all the boroughs in Alaska, all the official counties in the USA, Puerto Rico, Guam, etc, then they should just do it. He believed that changing MARAC's awards would cheapen every number issued prior to a change.

A fourth county hunter reminded me that county hunting is a "fun" hobby and not something that needs a lot of analysis, legal opinions, or whatever else it was I was trying to convey. He told

me that the topic was discussed at the 3M county hunters, mini-convention in November and it was generally agreed that I wasn't too serious and that I was just writing a column — and wasting paper and ink. The bottom line of the comment was *CQ* established the rules over 30 years ago and they've worked pretty good so far.

So, was I serious? The answer is yes —and no! But first let me bring up another topic.

New Minnesota county — not!

Sometimes actions to create a new county fail. Pine County, Minnesota, is located 65 miles north of Minneapolis. The Committee for Change, a group of Pine City area residents, announced a proposal in July 2000 to create Pioneer County, composed of Pine County's southern-most 14 townships and the cities of Pine City, Hinckley and Rock Creek. The Committee for Change was successful in getting the necessary signatures, over 3,500, on a petition to put the question on the November 2000 ballot. However, according to the Pine City Pioneer, the county's newspaper for over 100 years, the proposal to split Pine County failed dramatically in the November election. With over 90 percent voter turnout in every precinct in Pine county, the movement to create Pioneer County received around 2,000 votes, nearly all of them in Pine City and surrounding townships. Over 7,000 voters rejected the proposal. In some northern townships, not a single vote was cast in favor of the split.

Looking through the articles in the Pine City Pioneer online site, there was plenty of debate between the Pine County residents about this issue. Apparently there has been a feud in the county for decades between the northern part and the southern part of the county. This effort to secede from the county did not heal any wounds, rather it probably opened more wounds. However, Cindy Rolain, Editor for the *Pine City Pioneer*, says, "the idea lost at the polls, but succeeded in a quest to re-establish democracy in Pine County."

New Colorado county

On 15 November 2001, all areas within the Colorado city of Broomfield will be detached from the other four counties in which it is presently located (Adams, Boulder, Jefferson, and Weld), and will become the boundaries of the city and county of Broomfield. This will make Broomfield the 64th Colorado county and the 13th largest county in the state. This all came about because the Colorado voters approved an amendment to the state constitution at the 3 November 1998 statewide election. 61% (552,397) of the statewide voters favored the amendment. It has been almost 100 years since a Colorado city, Denver, became a combined city and county.

It will be three years between when the voters approved the amendment and when Broomfield becomes a city and county. Many community members, the *Broomfield Connection*, Broomfield residents, the Mayor and the City Council played a role prior to the election in placing the City and County of Broomfield issue on the ballot.

If you would like to learn more about the City and County of Broomfield, check out the following web site: http://www.ci.broomfield.co.us/county/citycounty.shtml.

Currently there are 3,076 counties according to *CQ* magazine and MARAC. More than likely, *CQ* magazine will adjust the number of counties and MARAC will follow. That would make the total 3,077 counties required for the USA-CA and WAC awards.

New California county

There was also a proposal earlier in 2000 to create High Desert County out of part of Kern County, California. The idea never received enough votes to get on the November ballot.

So why do I take the time (waste paper and ink?) to share with you the trials and tribulations of individual state's efforts to add counties? The point is a state can add a county and when there is a new county, we add it the list of counties we hunt. The addition of Broomfield County will cause us to hunt 3,077 counties, rather than 3,076. Adding counties does not cheapen the award for previous recipients and we certainly don't make people who already have the awards resubmit an application with another county contact.

Why is it then that some county hunters worry that changing the "entities" we count for the counties award would cheapen earlier county hunter accomplishments? Certainly we don't think early DX century club (DXCC) pioneers, awards were cheapened because the ARRL changed their DXCC rules in 2000 and now there are new DX entities to contact. Making contacts with all 334 DXCC entities is very difficult and may take a lifetime to achieve. Should hunting counties be so "easy" that a county hunter can contact all 3,076 counties 9 times in 9 years? That's exactly what one county hunter has achieved.

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Proposal

Sometimes I write columns to make people think a little, question the status quo, even if they disagree. I do agree that counting boroughs, census areas, and independent cities would make the USA-CA and WAC awards more difficult and quite possibly could "turn-off" some potential county hunters. What I would like to see *CQ* magazine and MARAC consider if they do not change the USA-CA and the WAC awards, is to recognize that the U.S. government counts counties differently than they do and consider adding another award for the county hunter. MARAC certainly has a lot of county hunter awards, some with names like the Master County Hunter and the Master County Hunter Gold. It seems it would be very easy for MARAC to add an award, County Hunter Top Gun, County Hunter Honor Roll, Extreme County Hunter or something equally stupendous to entice county hunters to hunt 3,141 counties. My personal opinion is it would be very difficult to convince the county hunter community that they should hunt 3,141 counties for USA-CA or WAC; however, I believe adding an additional award is warranted and should be considered.

Muddying the waters

Just to muddy the waters, I found a website for the National Association of Counties, www.naco.org/counties/general/print.htm, which lists the number of counties as 3,066. It appears they count Louisiana parishes and Alaskan boroughs, but they do not count the counties of Connecticut and Rhode Island, nor DC or any independent cities.

If you check out "Gateway to Counties," at: www.capitolimpact.com/gw/counties.html, you'll see they count 3,143 counties.

In their words, "if you include the census areas in Alaska and the independent cities in Maryland, Missouri, Nevada, Texas, and Virginia, there are 3,143 counties in the United States." Huh? I didn't know Texas had independent cities!

If you're new to county hunting, give a listen to the county hunter nets on 14.336 MHz and 14.0565 MHz. For additional information, check out http://www.countyhunter.com on the internet. 73 Ace N3 aha!

— Ace Jansen, N3AHA, our enticing county hunting columnist can be reached by mail to: 42857 Hollywood Park Place, Ashburn, VA 20147, or by e-mail to: jansens@tidalwave.net.

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.

Over, under and out

When our servicemen were in Viet-Nam, thousands of 'phone patches' were handled by amateurs operating in the Military Affiliate Radio System, MARS. The men were permitted to place calls across the ocean by radio, then linked by regular telephone from the amateur operator to wherever the family lived.

Gwen Rudolph, K6IHD, was such a Ham operator.

"Of course, we handled countless calls between man and wife, son and mother, and often to the children. It was necessary that each person say the magic word 'over' when he or she wanted the other to speak so I could turn a switch from transmit to receive.

"One day, a wife on this side said, 'Dear, I have the children instructed and they're all going to say hello. I'll put on the oldest, first.'

"So she did. The first one told his father about his grade in arithmetic, then said 'over.' The next told about a baseball game, ending with 'over' and they kept getting younger.

"Finally, the littlest one came on, saying, 'Hewo, Daddy. I wuv you.... under!'

"It made Daddy's day."

Visit Your Local RADIO CLUB

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 2/02

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. 5/01

CALIFORNIA

Amador County Amateur Radio Club. P.O. Box 1094, Pine Grove, CA 95665. Meets 1st Thurs./monthly, 7:30 p.m., Jackson Sr. Cntr., 229 New York Ranch Rd., Jackson, CA. Info: 146.835(-). 5/01

Clairemont Rpt. Assoc. Meets bimonthly brkfst mtg, 3rd Sat./odd no. months, Westminster, CA. Info: send SASE to P.O. Box 7675 Huntington Bch, CA 92615 or W6UTE in Call Bk. Net ea. Tue., 7 p.m. 145.220(-)PL 103.5 in So. CA 3/01

Coachella Valley ARC. Box 11092, Palm Desert, CA 92255-1092. Meets 2nd Wed./monthly, 6:30 p.m., Portola Com. Cntr., 45480 Portola, Palm Desert. Info: Bill Dews, (760) 346-8611. Net Thurs. 7 p.m. 146.025(+) PL 107.2. 5/01

Cupertino ARES (CARES). Meets 1st Thurs./monthly, 7:30 p.m., Cupertino City Hall, CA. Net each. Tues. 7:45 p.m. on 147.57 simplex. EC - Jim Oberhofer, KN6PE. www.zoy.net/CARES 6/01

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 6/01

East Bay Amateur Radio Club, Inc. Meets 2nd Fri./monthly, 7:30 p.m., Albany Sr. Cntr., 846 Masonic Ave., Albany, CA. Info: S. Primbsch, (510) 741-8227. 145.11(-) MHz. 9/01

El Dorado County Amateur Radio Club. P.O. Box 451, Placerville, CA 95667. Meets 4th Tues./monthly, 7:15 p.m., Federated Church, 1031 Thompson Way, Placer- ville. Web: hhp://edcarc.tripod.com. Net: Thurs., 7:30 p.m. 147.825(-) PL 82.5 6/01

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

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 345 Cherry St. (Library Rm.), Chico. 5/01

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. E-mail: ac6vn@cs.com. Web: http://www.qsl.net/gtarc 9/01

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. 2/02

Los Banos Amateur Radio Club. Meets 2nd Sat./monthly, 7 p.m., Los Banos Police Admin. Annex Bldg., 535 J St. Info: M. Germino, AD6AA, (209) 826-0903, E-mail: AD6AA@arrl.net. Net 147.060(+) PL 107.2 every Thur. 7 p.m. Rpt. KB6NMP 147.06(+) PL 107.2 & 444.00(+) PL 241.8. http://www.qsl.net/lbarc/ 6/01

Motorcycling Amateur Radio Club. Meets 2nd Sat./monthly, 8 a.m., Lake View Cafe, 2099 E. Orangethorpe, Placentia, CA, 91 Fwy/Lakeview. Info: R. Davis, KD6FHN, (949) 551-1036 or (949) 551-2010. 5/01

Mount Diablo Amateur Radio Club. P.O. Box 23222, Pleasant Hill, CA 94523. Meets 3rd Fri./monthly, 7:30 p.m., Our Savior's Lutheran Ch., 1035 Carol Ln, Lafayette, CA. Net Thurs. 7:30 p.m. on 147.06(+) PL 100Hz. Info: (510) 932-6125. 8/01

North Hills Radio Club. Meets 2nd Tue./monthly, 7:30 p.m., SMUD Bldg., Don Julio & Elkhorn, Sacramento, CA. Nets 8 p.m. Tue., (except 2nd Tue.) & Thur., 145.190(-) PL 162.2 Hz. Info: B. Griffin, (916) 729-7117. E-mail: dixdood@aol.com or nhrc@k6is.org 4/01

Poinsettia ARC. Meets 1st Thurs./monthly, 7:30 p.m., First Christian Ch., Telegraph Rd. & Teloma Dr., Ventura, CA. Info: J. Casper, N6PIQ, (805) 649-1445. 6/01

River City A.R.C.S. Meets 1st Tues./monthly, 7:30 p.m., SMUD Bldg., Don Julio at Elkhorn, Sacramento, CA. License classes offered. Info: (916) 492-6115. 10/01

Sacramento ARC. Meets 2nd Wed./monthly, 7 p.m. Sac. Blood Ctr., 32nd St. & Stockton Blvd., Sacramento, CA. Info net, noon on rptr. W6AK/R 146.91(-). T. Preston, KC6EO, (916) 722-9358 or L. Ballinger, WA6EQQ (916) 393-4775. 4/01

Shasta Cascade Amateur Radio So- ciety, (SCARS). P.O. Box 493549, Redding, CA 96003. Meets: 3rd Wed./monthly (Sep-May), 7:30 p.m. at the C.D.F. Conf. Rm. Grape St., near Parkview Ave., Redding, CA. Net 146.64, Wed., 8 p.m. 3/01

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 94.8. 6/01

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 ea. Tues. 7 p.m., W^SON. Rptr. 146.73)-) PL 88.5. www.cds1.net/scra 2/02

South Bay ARC. P.O. Box 536, Torrance, CA 90508. Meets 3rd Thurs./monthly, 7:30 p.m., Torrance Memorial Hosp., 3330 Lomita Blvd., Torrance, CA. Talk-in on WB6MYD rpt. 244.38(-). Info: (310) 328-0817. 8/01

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 2/02

Tehachapi-Southern Sierra 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. 1/02

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) 622-9930 2/02

Trinity County ARC. P.O. Box 2283, Weaverville, CA 96093. Meets 2nd Wed./monthly, County School. Adm. Buillding, Weaverville, 7:30 p.m. Rptrs: WA6BXN 146.73(-) PL 85.4, W6HOR 146.925(-) PL 85.4. http://www.tcoe.trinity.k12.ca.us/~tcarc 2/02

United Radio Amateur Club, K6AA. L.A. Maritime Museum, Berth 84, Foot of 6th, San Pedro, CA 90731. Meets 3rd Fri./monthly (except Dec.), 7:00 p.m. Monitors 145.52 Simplex 10 a.m.-5 p.m. 8/01

Vaca Valley Radio Club. Meets 2nd Wed./monthly, 7:30 p.m. (Board mtg., 7 p.m.) Vaca Fire Dist. Stn., Vine St., Vacaville, CA. Rptr. WD6BUS 145.47(-) PL 127.3. Jim Bullington, (707) 446-4347 8/01

Victor Valley Amateur Radio Club. P.O. Box 869, Victorville, CA 92392. Meets 2nd Tue./monthly, 7 p.m., The Lewis Cntr, 20702 Thinderbird Rd., Apple Valley, CA. Talk-in 146.94(-), PL 91.5. Net Sun. 7 p.m. 146.94(-) 3/01

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.qsl.net/wa6rc Messages: (310) 848-1354 11/01

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. 12/01

Yolo Amateur Radio Society. Meets 1st Tues./monthly, 7:30 p.m., Davis Explorit! Science Cntr, 3141 5th St., Davis, CA. Contact Dave Nishikawa, KC6YFG, (916) 756-6375/Talk-in 144.430. 3/01

COLORADO

Boulder Amateur Radio Club (BARC). Meets 3rd Tues./monthly, 7:00 p.m., NIST room 1107, 325 So. Broadway, Boulder, CO. Talk-in:146.70(-). Information: (303) 380-6540, e-mail: BARC5Ø@arrl.net or www.thisistrue.com/barc.html 8/01

CONNECTICUT

Tri-City Amateur Radio Club. P.O. Box 686, Groton, CT 06340-0686. Meets 2nd Tue./monthly, 7:30 p.m., Red Cross Bldg., 150 Eugene O'Neill Dr., New London, CT. Info: B. Dargel, KA1BB, (860)739-8016. 8/01

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 County. 1/02

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-. 2/02

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 1/02

Dalton Amateur Radio Club, Inc., (DARC). P.O. Box 143, Dalton, GA 30722-0143. Meets 4th Mon./monthly, 7:30 p.m., Magistrate Court Bldg., corner of Waugh St. & Thornton Ave., Dalton, GA. Info: Harold Jones, N4BD, 706/673-2291. 5/01

Gwinnett Amateur Radio Society, (GARS). P.O. Box 88, Lilburn, GA 30048. Meets 3rd Thurs./monthly, 7:30 p.m., Gwinnett Central Baptist Church on Gwinnett Dr., Lawrenceville, GA. 147.075+ PL 82.5. Contact: Mike Swiderski, K4HBI, (770) 449-0369. 8/01

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 Restaurant. 11/01

Koolau Amateur Radio Club, (KARC). 45-145 Mikihilina St., Kaneohe, HI 96744. Meets 2nd Sat./monthly, 9:30 a.m., Hoomaluhia Botanical Garden., Kaneohe, Hawaii. Information: (808) 235-3042. http://www.chem.hawaii.edu/karc/ 8/01

ILLINOIS

Chicago FM Club Inc., (CFMC). P.O. Box 1532, Evanston, IL 60204. 146.76(-) PL 107.2/224.10/224.18/443.75 PL 114.8. Ham help line: (773) 262-6773. Info net Tues., 9 p.m. on 146.76(-). Meets 3rd Wed./monthly, 8 p.m. 8/01

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 11/01

Fox River Radio League. P.O. Box 673, Batavia, IL 60510-0673. Meets 2nd Tue./monthly, 7:30 p.m., Old Bank Bldg., 900 No. Lake St., lower level, Northgate Shopping Ctr. & Rt. 31, Aurora, IL. 8/01

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. 10/01

Peoria Area Amateur Radio Club, (PAARC). P.O. Box 3508, Peoria, IL 61612. Meets 2nd Fri./monthly, Red Cross Chapter House, 311 W. John Gwynn Jr. Ave., Peoria, IL. Voice mail: (309) 692-3378. Rptrs: 147.075(+) & 146.85(-). 8/01

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

The Starved Rock Radio Club, W9MKS. P.O. Box 198, Tabor St., Leonore, IL 61332. Meets 1st Mon./monthly, 7 p.m. Rptr. net 7 p.m. Wed./wkly., 147.12(+) PL 103.5. Web: http://www.qsl.net/w9mks E-mail: w9mks@qsl.net 6/01

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. 2/02

MAINE

Androscoggin Amateur Radio Club. Meets 1st Wed./monthly, 7 p.m., Auburn Police Station, 1 Minot Ave., Auburn, ME. Info: (207) 782-8699.7/01

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 7/01

MASSACHUSETTS

Genesis Amateur Radio Society. P.O. Box 1234 Plymouth, MA 02362. Meets last Mon./monthly, 7:30 p.m. at Plymouth Airport, So. Meadow Rd. Tues. net: 146.685, W1LM, 8 p.m. 7/01

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(-). 5/01

Genesee County Radio Club, Inc. Meets 3rd Tues./monthly, 7:30 p.m., Genesee Area Skill Center, Torrey Rd., Flint, MI. (810) 733-2082. 3/01

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. 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

NEBRASKA

Ak-Sar-Ben ARC of Omaha. P.O. Box 24551 Omaha NE 68124-1551. Meets 2nd Fri./monthly, 7:30 p.m., Red Cross, 81st & Spring Sreet. http://www.qsl.net/k0usa 7/01

NEVADA

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. 2/02

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. 6/01

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

South Jersey Radio Assoc., (SJRA), K2AA. Meets Jan.-Oct., 4th Wed./monthly, 7:30 p.m. (Nov.-Dec. 3rd Wed), Bloomfield Fire Hall in Pennsauken, NJ. Talk-in: 145.29(-) rptr. 8/01

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

Genesee Radio Amateurs, (GRAM). P.O. Box 572, Batavia, NY 14021-0572. Meets 3rd Thurs./monthly, 7:30 p.m. (except Jul Aug Dec), Salvation Army Com. Cntr, 529 East Main St., Batavia, NY. URL: http://hamgate.sunyerie.edu/~gram 6/01

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. 3/01

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. 6/01

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, (SCRC). Meets 3rd Tues./monthly, 8 p.m., Bohemia Rec Ctr., Ruzicka Way, Bohemia, NY. Talk-in: 145.21(-) rpt. Info: W. Black, KB2YAP, (631) 289-5587 7/01

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

Westchester FM Repeater Ass'n. K2JQB Rptr. 146.91 MHz. Meets 3rd Thurs./monthly, 7-9 p.m., Yonkers Pub. Lib., 1500 Central Pk. Ave., Yonkers, NY, near S.E. cornor of Tucahoe Rd. Free Parking. Info: M. Grossman, K2CON at (718) 544-2370 or E-mail: K2CON@ hotmail.com 6/01

Yonkers Amateur Radio Club, (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. 146.865(-), 440.150(+). 2/02

NORTH CAROLINA

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/ 5/01

OHIO

Ashtabula County ARC. Ken Stenback, W8KS (964-7316). County Vo-Ed School, Jefferson, OH. Meets 3rd Tue./monthly, 7:30 p.m., County rptr., 146.715(-). 2/02

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

OREGON

Central Oregon Coast ARC. P.O. Box 254, Florence, OR 97439. Meets 2nd Sat./monthly, at Bliss' Route 66 Restaurant at Hwy 101 & 12th St. Net Wed. 7 p.m., 146.80(-). Info: 997-2323 or 997-4074. 6/01

Hoodview ARC. P.O. Box 20624, Portland, OR 97220. Meets 3rd Thurs./monthly, 7:30 p.m., Mt. Hood Com. College/Gresham, Rm 1001. Rptrs: 147.28(+), 443.475(+5) (tone 167.9) http://www.wb7qiw.org 5/01

Umpqua Valley Amateur Radio Club, Inc. P.O. Box 925, Roseburg, OR 97470. Meets 3rd Thurs./monthly, 7:30 p.m., Douglas County Court House, Rm. 310, Roseburg, OR. Info: K6AZW/R 146.90(-) (PL100) or (541) 784-3621. 8/01

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. 145.Ø5. 6/01

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., INOVA 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-. 10/01

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 3/01

Portsmouth ARC. Meets 4th Thur./monthly, 7:30 p.m., Am. Red Cross Chapter house, 700 London Blvd., Portsmouth, VA. Talk-in 146.850. Info: C.I Clements, Pres. (757) 484-0569. http://www.series 2000.com/users/wa4nvi/parc/htm 6/01

Southern Peninsula Amateur Radio Klub, W4QR (SPARK). Meets 1st Tue./monthly Sal. Army Com. Bldg., Hampton, VA. Rptrs 146.73(-), 449.55(-). VE Exam Info: (757) 898-8031, W4RTZ. 3/01

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. 2/02

Woodbridge Wireless, Inc. (WWI). Meets 2nd Tues./monthly, 7:30 p.m., Canteberry Woods Comm. Cntr.(corner of Springwoods & Chaucer), Lake Rige, VA. Talk-in 147.24(+). For info: http://www.pwcweb.com/wwi/ 7/01

WASHINGTON

The Mike & Key Amateur Radio Club. Meets 3rd Sat./monthly, 10 a.m., Salvation Army Renton HQ., 720 Tobin St., Renton, WA. Talk-in on 146.82(-) (103.5 CTCSS) rptr. Doors open 9:30 a.m. 5/01

WEST VIRGINIA

Jackson County ARC. Meets 1st Thurs./monthly, 7:30 p.m., St. John Episcopal Church of Ripley. Net Mon. 9 p.m. on 146.67(-) Info: Valerie Hunter, WB8ZOC. P.O. Box 62 Cottageville, WV 25239. 7/01

Tri-State Amateur Radio Association. Meets 3rd Tues./monthly, 7p.m., Museum of Radio & Tech., 1640 Florence Ave., Huntington, WV 25701. (304) 525-8890. 6/01

WYOMING

Sheridan ARC. Meets every Sat. at Bubba's, 7:30 a.m. exit 23 off HYW I-90, Sheridan, WY. Club call: W7GUX, 146.22/82. Info: G. Roelfsem, K7GR 8/01

University ARC. Meets 1st Tues./monthly, 7:30 p.m., Univ. of WY, Engineering Bldg., rm. 2100, Laramie, WY. 146.01/61. 12/01

Bob Heil, K9EID

Wiring unbalanced microphones to XLR inputs

There is a great movement in the Amateur Radio community to use professional recording studio mixing consoles, tube preamplifiers or the W2IHY EQ to process their microphone audio signal before it gets to the Amateur Radio transceiver microphone preamplifier.

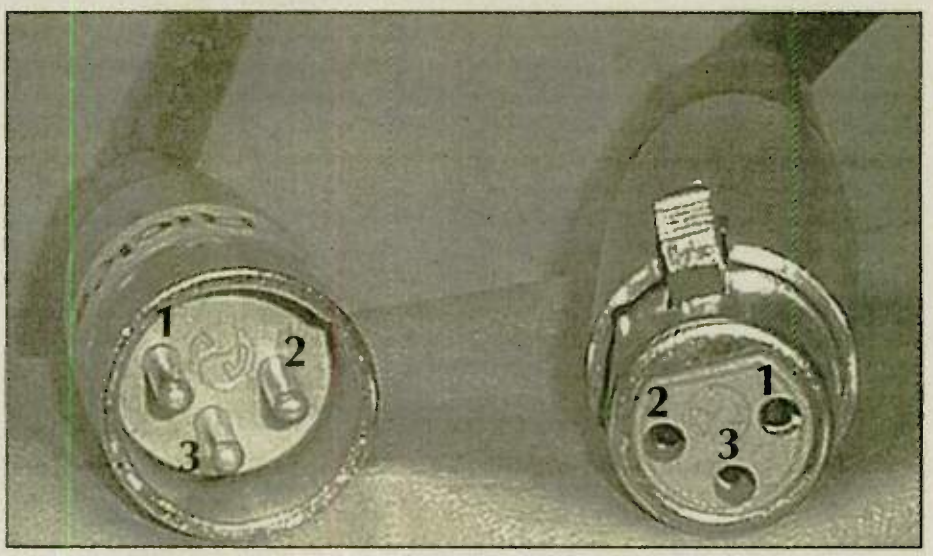
Most all of the professional audio gear on the market uses a balanced audio input. This input is usually terminated in an XLR connector. This is a three pin connector which has become the standard of the broadcast and professional audio equipment. Too bad it has not filtered down into the Amateur Radio equipment but not the case.

The reason for these balanced inputs was to eliminate noise picked up by long microphone cables that are so common in the broadcast and sound reinforcement business. The audio is fed into a balanced transformer which feeds one signal down pin #2 and a second signal to pin #3 that would be OUT of phase — yes OUT of phase from pin #2. Any noise falling upon these two leads would be cancelled, thus leaving only the signal. A very great move! The two signals wires were also inside the pin #1 shield which kept more of the outside noise from reaching the two signal leads, pin #2 and pin #3. This is a wonderful thing to have working FOR you and would certainly solve a lot of problems had the Amateur Radio designers stepped up to the plate — but we have been left with the unbalanced microphone leads and must deal with it. We certainly would have less RFI audio problems!

The big problem for many that don't really understand all of the balanced and unbalanced inputs is trying to connect these two together. Traditionally you have an unbalanced microphone that you would like to connect to a balanced input. So, how do you do that? It's simple!

The balanced XLR connector has three pins plus a chassis ground tab.

1. Ground or shield



2. - audio input
3. + audio input
4. CHASSIS GROUND tab

We have just two leads from the unbalanced microphone. The hot audio lead and the ground shield. The ground shield will be connected to pin #1, across the chassis ground tab at the top of the connector and to pin #2. The hot audio unbalanced lead will connect to pin #3. So, the XLR will be connected with ground shield on pin #1, ground tab and pin #2. Hot on pin #3. It's that easy. You have actually grounded the minus (-) audio input of the balanced input along with the shield and chassis ground while the hot audio lead feeds the + pin #3 input.

This is true for any interface connections — any time you have an unbalanced input that wants to feed a balanced input. Use high quality, heavy shielded, hopefully dual-shielded, microphone audio cable. Try looking for an industrial electronics supplier in your city. If you have a television or commercial radio station, find out where their engineers shop.THAT'S the place you get the high quality cable and many times those professional audio processors and equalizers.

— Have a question about audio? Bob Heil, K9EID, can be reached by mail to: 5800 N. Illinois, Fairview Heights, IL 62208-3505, or by e-mail at: bob@heilsound.com.

Funding can be fun

Carole Perry WB2MGP

If you are a teacher or instructor of Amateur Radio in a school setting, sooner or later your need for equipment and supplies will exceed your allotted budget. In the past 20 years of teaching "Introduction To Amateur Radio" to 6th, 7th, and 8th graders at Intermediate School 72 in Staten Island, New York I have found that it is best to include the children in the decision making process of how to raise funds for their program.

The youngsters really enjoy getting involved in the activities and are very creative in their suggestions. Here are some tips on fund raising that have proven to be very successful for us. The first step for a teacher of Amateur Radio in a school to do is to make your presence known to the local radio clubs. Most Hams will be glad to help out with their time, expertise, and donations, once they are aware of your efforts with the kids. You will be amazed at how many Hams come forward with gear or telegraph keys that have been buried in an attic or basement just waiting to surface for a good cause. The clubs can also steer you toward the local hamfests and flea markets for good buys on used equipment.

A cake sale has always been a lucrative project for us. The parents are extremely supportive about donating home-baked cookies and cakes.

Be sure to keep the parents apprised of your radio activities during the term, so that they can appreciate the value of your work with their children. I have also learned that it's a good idea to coordinate with the home economics teacher who works with the students in baking goodies to donate to the cake sale. It's always a good idea to include your colleagues in any extra-curricular activity in a school. For weeks ahead of time, my students are busy in their art classes, making posters to advertise the cake sale.

One term, some of my radio classes published a little newsletter called "*The Ragchewer*" that described all the local activities we were involved with; including Walk America for The March of Dimes, local parades, and providing communications for neighborhood clean-up campaigns. We also did interviews with interesting

Hams we spoke with on the local repeaters. The children were able to get some local merchants to purchase ads and then they sold the newsletter for 35 cents.

The biggest money-maker of all can be a properly advertised car wash. This activity requires a great deal of preparation and organization on your part ahead of time. Appeal to the PTA of your school to help out.

You will definitely require adult supervision in all facets of this fund raiser. Your school will need to provide you with the proper facilities, access to water, appropriate parking space, etc; Parents and local residents can drive their cars up to a designated area. Your Ham radio students should be prepared with the proper supplies, including their handi-talkies for communications.

The students should be ready with buckets, sponges, rags, portable car vacuums, and of course, easy access to water. Some of the older children can help the adult volunteers with traffic management, while others can offer assistance with collection of money. In the weeks prior to the car washing event, some students should be organized into groups handling advanced publicity, such as local newspaper ads, hanging up signs all over town, and spreading the word throughout the community. It's a good idea to invite the local Hams to volunteer for the occasion.

Everyone has a good time at a car wash event, and the drivers will be happy to pay $3.00 to have their cars cleaned for a good cause.

I can always count on the crafts teacher in my school to help out with some of our more creative activities. Many of the children enjoy making "coded jewelry." Dental floss or thin pieces of elastic can be used in the making of beaded bracelets. I purchase large bags of little stringing beads in three different colors. One color represents a dash and the other is a dot. The third color stands for a slash mark. Students can set up stands at any school event and sell the bracelets with the customer's name in Morse Code. Coordinated necklaces and bracelets make lovely gifts around the holiday season or for Mother's Day.

When planning your fund raisers for the school term, be sure to include as much outside help as possible. Most importantly, be sure to get input from your own students. Working together for a common goal is all part of what Hams are about anyway.

If you've had a particularly successful fund raiser, be sure to write me about it so we can highlight your group's efforts in this column and share our ideas. I'm also always interested in hearing from children who are enthusiastic, articulate Ham radio operators who would be interested in speaking at the Dayton 2001 Youth Forum in May. Please forward my address to any young Ham you may know who would like to participate.

Carole Perry, WB2MGP, P.O. Box 131646 Staten Island, New York 10313-0006. 718/980-9609

Alan Pickering, KJ9N

Plan ahead by letting go

By the time you read this article, the month of January, with its encouragement to make New Year's resolutions and contemplate the successes and failures of the past year, will have long passed on your calendar and you'll be looking forward to Spring. But when this article was originally written, it wasn't quite January as yet, and so I thought you might like to have a brief refresher on how it is that January, which begins our calendar year, came to be a time of both reflection upon the past and excitement about the future. January is named after the Roman god Janus, who was a two-faced god in the Roman Pantheon, and who looked in two directions at the same time: both forward and backward, simultaneously. Thus, a bust of the head of Janus was frequently mounted above the city gates of ancient Roman towns and villages, where, with one face looking in and one face looking out, Janus could watch those going in and those coming out of the city at the same time. A miniature head of Janus might even be mounted above the door to a house or a private courtyard. And all of this led folks to consider Janus as the "Guardian of Doors." Looking both forward and backward at the same time strikes me as not only a good idea, even if it is borrowed from ancient mythology, but a good practice for folks to follow no matter what time of the year we engage in that kind of an exercise. What classroom teacher, surrounded by a classroom of hyperactive kids, has not wished for another set of eyes located smack in the back of the head? How many times have you wished that you were able to watch the traffic behind you while driving, without having to see it in reverse form by way of a rear-view mirror? Well, Janus offers us a good model for the start of this next century and next millennium and underscores the importance of looking both backward and forward simultaneously. That is why some introspective thinking as we begin a new century and a new millennium is probably a good thing to do. There is a lot of the past that is worth retaining and continuing into the future. There are always wise and benign ways to use the memories that we have of the past to inform and improve the future. The Roman Poet Horace must have had this in mind when he wrote, "To enjoy the memory of the past is to live it twice over." Quite so, and one of the chief benefits of travel to strange and unfamiliar places — a benefit that almost always justifies the incidental discomforts that often accompany travel, is the opportunity that such travel provides to store up interesting memories that can be later shared with others. Then at those times when we gather with others who are our friends and colleagues, we can join right in and play fully that wonderful conversational game called "Can You Top This?" That's the time when we can rightfully enjoy bringing to mind the places we have visited, and the things we have seen and done. That will certainly be one valuable benefit of participation in the QCWA-sponsored Amateur Radio Cruise, that will be leaving Ft. Lauderdale on 27 October for eight days of travel in the Caribbean, including a stopover at San Juan, where those interested will be offered the opportunity to tour the great Radio Astronomy telescope at Arecibo. Any Amateur Radio enthusiast is welcome to come along — you do not have to be a member of QCWA to participate, nor to operate one of the two full amateur stations that we plan to use while aboard the M/S *Westerdam*, marine mobile and maritime mobile, both for local conversations and chasing DX. This cruise will surely be a most memorable and exciting cruise for its participants.

"...some folks get so caught up at examining what went wrong in the past..."

But the secret of looking backward in a positive and useful way requires care; it must be a positive experience whereby what we have learned can be examined in terms of usefulness to the future. You have no doubt often heard people tell others that they should "learn from their past mistakes." Balderdash, I say. If you could learn anything at all from making mistakes, then you ought to make as many of them as possible, and thereby get very smart. You can't learn a thing from your mistakes, with the exception of finding out how to repeat them more perfectly the next time. No, what we learn from mistakes is the "consequences" of making them. The mistakes tell us nothing — only the consequences are possible instruments for learning to avoid those same mistakes in the future. Hopefully, we will, indeed, learn from the consequences of making mistakes, and move on to the doing of things with a greater degree of success and achievement in the future.

Unfortunately, some folks get so caught up at examining what went wrong in the past that they can't get beyond the consequences and focus on the learnings therefrom for the future. The ancient Romans had a nice word for that behavior as well. They called it "mortmain" which means "dead hand." To suffer from mortmain is to let the dead hand of the past lie so heavily upon us that we are paralyzed by it, and unable to rise against it. To suffer from mortmain is to lose the ability to risk. When the ghosts of past failures and past mistakes and past choices are so strong that they haunt us, then the memories of wrongs done to us by others — supervisors, colleagues, customers, former clients — whomever and whatever, can drag through our minds and leave hurtful detritus in their wake. Living an effective and exciting life requires that we "travel light" as we

look backward at the past. Remember the anguish of Omar Kayyam when he cried out in his Rubaiyat: "The Moving Finger Writes; and having writ, moves on. Not all your piety nor wit shall lure it back to conceal half a line, nor all your tears wash out a word of it.." Or think of the words of Maud Muller: "Of all the sad words of tongue or pen, the saddest are these: 'It might have been.'" No, we must not let mortmain stifle nor conquer the opportunity to look forward as well as backward. We must put the regrets aside, let them go, and focus and to plan on the promises that come from facing forward, using the "other" face of Janus. That is the option given by not only the month of January, but every month that follows it. In other words, to plan ahead by letting go.

Fortunately, for Amateur Radio operators, this option is no better represented nor exemplified than in the QCWA-sponsored Endowment Program, the basic objective of which is to plan for the future by letting go of the past! Naturally, like all endowment programs of organizations which are not-for-profit and which receive gifts that are tax-exempt under section 501(C)3 of the Internal Revenue Code, cash and negotiable securities are always welcome since they help establish the financial future of the organization, stabilizing it for those times when income from other sources is less that required to carry out the organization's objectives. However, there is another aspect of the QCWA-sponsored Endowment Program that is particularly attractive to the families of amateurs when they finally become Silent Keys. The QCWA encourages it members and other amateurs who may be so inclined, to plan ahead to donate any state-of-the-art or historic electronic equipment to the QCWA Endowment Program, either as an immediate gift or as a bequest in one's will. You see, there is always the question of what will be the best possible way to utilize both historic and state-of-the art equipment when Father Time finally comes calling. How can surviving family members be counseled about this? Could not equipment of historic value from Silent Keys be best placed in a museum where the general public might examine and be inspired by it? The dumpster is not the place for these items which can be so very valuable to a museum, or, if state-of-the-art equipment is involved, then passed on to young, deserving amateurs whose excitement and enthusiasm might be enhanced by receiving it at nominal cost. By making a bequest in advance, i.e., planning ahead by letting go, both QCWA and the survivors, and others beyond are benefited, all with favorable tax consequences to boot. The QCWA is prepared and equipped to work with museums with which it already has agreements in order to find a home for truly historic equipment that can be displayed to the public, and virtually every chapter can arrange to sell at a reasonable price that state-of-the-art equipment which has to be left behind.

Arch Doty, W7ACD, is the Endowment Program Administrator for the QCWA and he is prepared to help any Amateur so inclined to plan for the future by letting go of their equipment upon their becoming a Silent Key. Arch can be reached as follows: snail-mail to Arch Doty, W7ACD, 2130 SW McCormick Hill Road, Hillsboro OR 97123-8724, phone 503/554-9142; FAX 503/554-9791; e-mail: archd@aol.com

And if you are interested in joining the Quarter Century Wireless Association and have the requisite 25 years since your initial FCC Amateur Radio license, then you will find all of the data about membership, including a downloadable Application for Membership, at the QCWA Web site home page at http://www.qcwa.org or write to the QCWA at 159 E. 16th Avenue, Eugene, OR 97401-4017.

I hope that all of our QCWA members will participate in the QCWA-sponsored Endowment Program, and that other Radio Amateurs will see its advantages for themselves as well. Until next time, 73 + 25, Alan, KJ9N

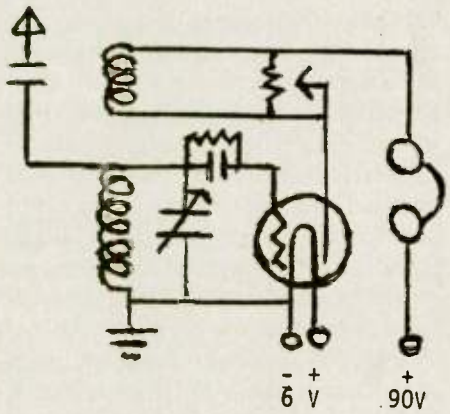
— Alan Pickering, KJ9N, can be reached by writing to: 620 Gran Kaymen Way, Apollo Beach, FL 33572, or by e-mail to: kj9n@juno.com

My first DX encounter

Dr. Maurice I. Sasson, W2JAJ

My first DX encounter — it was a disaster! I still remember it vividly. It happened in the spring of 1930. I was 17 then, a senior in high school. During the entire year of 1929 I was studying code on 40 Meters listening to dots and dashes emanating from the one tube Armstrong regenerative receiver some of us called it a Schnell one tuber] which I built from junk parts given to me by hams from the school radio club. The schematic diagram is seen in Figure 1. That was some blooper of a receiver. Every time I tuned over the bands, it transmitted bloopers, heterodynes and causing a ruckus to those Hams having QSOs, and also in my own ears. However, since all the neophytes used them, I did too, since I, too, was a neophyte. Little by little I was gaining experience. The single tube was a UX-201A. For power I used a storage battery and a B battery eliminator, both of which I borrowed from the living room BC receiver. The antenna condenser (condensers were not called capacitors in those days) was an integral part of the receiver that coupled the antenna to the grid coil. It was constructed from the plates of a discarded 201A tube, mounted on the baseboard facing each other. The space between them had to be adjusted by bending them towards one another to obtain maximum resonance and the loudest signal. Once adjusted, it coupled the antenna to all bands. The grid and tickler coils were wound on tube bases, one for each of the 80, 40, and 20-meter bands, which fit into push-in tube sockets for rapid band changing. Regeneration and blooping were controlled by a potentiometer wired across the tickler coil. The earphones had a resistance of 2,000 ohms, not like the headphones of today with their 8 to 32 ohms.

Then one day in December 1929, there appeared in the pages of *QST* a TNT transmitter devised and constructed by George Grammer, the technical advisor of ARRL. It was a Tuned Tank Transmitter (TNT) which he called a Single Control Transmitter. Every Ham and would be Ham was building one, and so did I. The plate or tank coils were wound with 1/4 inch copper tubing on a three inch diameter form, with the appropriate turns and spaces between them for each of the three bands: 80, 40, and 20 Meters. The grid coils, each one for a different band, were wound with No. 30 D.C-C wire on one inch Bakelite forms. The tank condenser was a Cardwell.



Schematic for a Schnell "one tuber."

Sangamo fixed mica condensers were used as grid, by-pass, and antenna condensers. The transmitting tube was a UX-210 with 500 volts on the plate. Its output was about 25 watts, which I measured with a hot wire ammeter.

There it was — my TNT transmitter. It looked just like the one George Grammer made. How proud I was. How nice it looked when the 210 lit up. What a great spark I got when I touched a pencil to the hot end-of the tank coil. What a severe RF burn I received when I inadvertently touched the same spot! I was young then, but I was learning fast.

My TNT worked very well. I knew that because I heard its CW tone when I tuned the receiver to 80 Meters and heard its 80-meter harmonic. Since I could do nothing more with it, I stored the TNT, the power supply and all the connecting wires (they were called connecting wires then, not cables) in my closet, while I kept studying Morse code day in and day out, and practiced sending code with my hand key (which I still use).

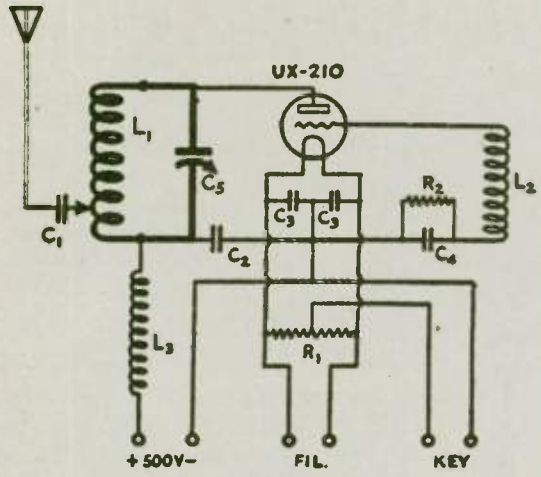
One day during the spring of 1930, I took the TNT, wired and all and placed it beside the Schnell. The weather was balmy that day. I went up to the roof to see if the Windom antenna I made with bell wire was still intact. I looked at it lovingly. I ran my fingers over the insulation. I couldn't help remarking to myself what a good transmitting antenna I made.

That is when I did something. It was 4 p.m. I fired up my TNT. I pressed the key. My receiver howled as it picked up the signal. I tuned the transmitter to the middle of the 40 meter band. With trepidation and nervous fingers, wondering what would happen, I tapped out CQ CQ CQ de W2CCI.- CQ CQ CQ W2CCI ARK.

W2CCI — the call letters of the Amateur Radio station of my high school radio club, Evander Childs of the Bronx, New York City.

I was bootlegging. I bootlegged because almost all the neophytes bootlegged at least once. I was a neophyte trying to learn everything quickly, wanting to know if my TNT and my antenna were putting out signals, wanting to know if anyone could read, my fist.

Then it happened. As soon as I sent the last dash of the letter K, there came back an answer. Someone was sending the call letters I had just transmitted. I knew at once my transmitter was transmitting, my antenna was radiating, my receiver was in tune with my TNT, my fist was being read. Then



The TNT Transmitter

L_1 — Plate Coil. See photograph.
L_2 — Grid Coil. See photograph.
L_3 — Radio frequency choke. Any commercial receiver-type short wave choke will do, or it may be made by winding 2 inches of No. 38 d.s.c. wire on a half-inch tube or wooden dowel.
C_1 — 2000 μμfd. (.002 μfd.) mica fixed condenser, receiver type.
C_2 — 2000 μμfd. (.002 μfd.) mica fixed condenser, receiver type if plate voltage does not exceed 500.
C_3 — 5000 μμfd. (.005 μfd.) mica fixed condenser, receiver type.
C_4 — 250 μμfd. (.00025 μfd.) mica fixed condenser, receiver type.
C_5 — 500 μμfd. (.0005 μfd.) variable condenser. Any good receiving condenser will be satisfactory.
R_1 — Center-tapped resistor, 75 to 100 ohms total resistance.
R_2 — Grid leak resistor, 10,000 ohms. Any small resistor rated at 5 watts or more will do.

Two General Radio or similar stand-off insulators will be necessary, as well as 7 Fahnestock clips, some miscellaneous small machine screws and nuts, and a few feet of bus wire. A UX-210 with suitable power supply should be used.

it happened again. I was scared and worried. My hands were trembling; my heart was racing. I could not copy his call letters. The signals were so loud in my ears, I grabbed the earphones, pulled them off my head and threw them on the floor. I closed all the switches and pulled out the plugs.

When I regained composure, I analyzed the situation. The station answering me must have been very, very close, perhaps even at the club station whose call letters I bootlegged, only five blocks away.

But I had worked my first DX. Even though the distance was only five blocks away, to me those five blocks were to me the same as if it was 1,000 or 2,000 miles away! I achieved what I wanted to do. I would be a fine Ham one day.

So I put my station back in the closet where it remained till 1935 when I received my own call letters—W2JAJ. But I said nothing to anyone about what I did that balmy spring day in 1935.

I was never able to use my TNT. In 1935 the FCC issued new regulations pertaining to Hams. One of them forbade the use of self-excited oscillator- transmitters, and the TNT was self-excited.

In my small radio museum the TNT has a special place of honor. Although the Armstrong one tube regenerative receiver is not beside it, the very same UX-201A that made the blooper work proudly stands beside it, as do the earphones and the hand key, which is taken out for use every New Year for the straight key day.

In 1983 at a radio club meeting in the Bronx, N.Y. I told this story just as it has been written in these pages, during a session devoted to storytelling. When I ended, someone in the rear stood up.

"I remember that day very well," he said. "It was I who answered that CQ. I knew it was a bootlegger because I was the last person to leave the radio room, and I locked it when I left.

That was at three o'clock. I answered that CQ from my home." He stopped and looked quizzically at me, but I had nothing to say. He continued. "I figured it must have been one of the boys who popped into the radio shack from time to time, but I couldn't be sure who it was. All these fifty years I have been wondering who it was that bootlegged W2CCI. Now I know. It sure is a small world." He approached the podium. We didn't recognize one another but we shook hands and smiled.

HAMS ARE HAMS ALWAYS.
TIMES MAY CHANGE,
TECHNOLOGYMAYCHANGE,
BUT HAMS WILL ALWAYS BE HAMS.

Richard Fisher, KI6SN

A harmonic convergence for AtlanticCon

For the third year, QRPers from around the U.S. and abroad will be converging this month for the New Jersey QRP Club-sponsored Atlanticon East Coast QRP symposium.

The 2001 event will be 30-31 March in Timonium, MD, coinciding with the ARRL Maryland State Convention.

QRP central will be at the Holiday Inn Select (Exit 16 from Interstate 83 North) about 20 minutes from Baltimore-Washington International Airport.

Featured speakers include a host of QRP luminaries including Tony Fishpool, G4WIF; Graham Firth, G3MFJ; Joe Everhart, N2CX; George Heron, N2APB; Jim Kortge, K8IQY; Rich Arland, K7SZ; and Dave Benson, NN1G.

"We have a hospitality suite on Friday and Saturday evening where QRPers gather to meet, chat about projects, show off their latest homebrew projects and see what new products the leading QRP vendors are showing," writes George in a pre-symposium announcement. "This will be the third year that this major east coast QRP weekend will be conducted — typically about 150 avid QRPers attend Atlanticon to listen to brilliant technical presentations from leading experts in our QRP community."

For late updates on the programs and breaking news before the event, visit the New Jersey QRP Club's web site: www.njqrp.org/atlanticon

The Elecraft K1 QRP transceiver became a pleasant handful at KI6SN during the Christmas / New Year's holiday.

A few hours with the Elecraft K1

Over the holidays I had the pleasure of playing with an Elecraft K1 QRP transceiver, owed to the kindness of Cam Hartford, N6GA — this particular radio's builder.

Elecraft cautions that you'll find it hard to believe its products are kits, and I must say the company has a good point. As has been the case in the past with QRP gear designed electronically and physically by Elecraft founders Wayne Burdick, N6KR, and Eric Swartz, WA6HHQ, this small two-band transceiver is top drawer all the way.

It's got bells (such as a built-in keyer) and whistles (such as audio filtering) that genuinely enhance the QRPer's operating experience. But it's not so festooned with add-ons that it takes a degree in engineering to figure out its operation.

Indeed, Cam's K1 arrived at KI6SN without a manual, and I had it on the air humming away in practically no time. If you're in the market for a transceiver kit reasonably priced and delivering fine performance, the K1 is certainly worth consideration.

QRP ARCI awards manager on the move

QRP Amateur Radio Club International's Award Manager, Thom Durfee, WI8W, has a new U.S. Postal Service address. It is: 3509 Collingwood Ave. SW, Wyoming, MI 49509. He can also be reached at: wi8w@arrl.net

QRP adventure in Europe

Russ Carpenter, AA7QU, of McKenzie River, OR, has announced the formation of the European section of the U.S.-based Adventure Radio Society.

"Over the years, the number of European members of ARS has been growing steadily," Russ writes. "We feel that it is now time to serve this important part of our membership more effectively, and to cook up some 'across the pond' events that will be rewarding for all of us."

Richard Newstead, G3CWI, is leading the European initiative of ARS. "Richard has shown extraordinary enthusiasm and focus during our preparation for this new venture. We are lucky to have his support. Take a look at Richard's site at: www.qsl.net/g3cwi."

The Adventure Radio Society

encourages outdoor Amateur Radio operation from beautiful and remarkable locations that the operator has reached using his own power.

Whither the NE602?

The NE60/SA612 double-balanced mixer that has been a workhorse in many, many QRP kit designs since the late 1980s, is apparently in such short supply in its through-hole configuration, the chip is becoming painfully difficult to find.

A recent casualty is the New Jersey QRP Club's popular SOP Receiver kit. In a letter to customers, the club wrote that "after we completed the first round of 200 kits, we found it nearly impossible to obtain certain parts (specifically the SA612 mixer integrated circuits) in through-hole DIP packages that the PC board was designed for. Thus, if we were to continue kitting the SOP receiver, we would be needing to redesign the board and incur additional tooling charges in going back to have a new board made at the PCB fab (fabrication) house. This would be too cost prohibitive for a low-margin, not-for-profit 'club operation' such as we have."

Many QRPers will recall when the NE602 burst onto the low power scene in February 1988 with the debut of the Neophyte direct conversion receiver featured in *QST* magazine.

Since then it has found a home in virtually every QRP transceiver on the market today. With recent revelations about scarcity of the chip, QRP homebrewers have been scrambling to find alternative sources, and circuit work-arounds to eliminate the need for an NE602/SA612 DIP package.

QRPers take Manhattan

Lots of potential builders have been sending queries to KI6SN@aol.com in hopes of finding a source for the punching tool that makes the small circular pads that create the PC board "islands" used in Manhattan-style circuit construction.

This tool and a piece of printed circuit board are all you need to pop out circular pieces that can then be glued to a PC board plane — creating solder points for tacking together electronic circuits.

While this is by no means the only source, I've found Harbor Freight tool company's 2,000 lb. Manual Punch Kit to be more than up to the task for creating the pads.

At about $20, the kit comes complete with seven sets of punches and dies and is capable of piercing up to 16-gauge steel.

Perhaps the best part is that there are several punch sizes from which to choose, including 3/32", 1/8", 5/32", 3/16", 7/32", 1/4", and 9/32"

If you're interested in learning more about the 2,000 lb. Manual Punch Kit or Harbor Freight, take a moment to visit the company's web site: www.harborfreight.com and key in ITEM 37405-0VGA.

NB6M miniboots (cont.)

The NorCal QRP Club web site now carries a rundown on the circuit — authored by NB6M himself, Wayne McFee. To see the circuit go to: www.fix.net/~jparker/norcal/miniboots/miniboot.htm

The web site also has charts showing output filter circuit values across the high-frequency bands, adding to the versatility of this great little amplifier.

I've been using one for months at KI6SN, and it's a pleasure to throw into line when a little extra power is needed to make the difference between a pleasurable QSO and having to go QRT.

Carl Luetzelschwab, K9LA

Overwhelmed with information

Last month's column listed four web sites that had a lot of solar data and propagation information. If you took a look at all that data, you could easily come away from it with the feeling of being overwhelmed, and asking the questions, "what is it?" and, "how does it relate to propagation?"

The intent of this month's column is not to explain it all, as that would take many columns — perhaps several future columns will attempt to do this. For now, I'd like to point out a problem that's due to the fact that IMHO (in my humble opinion) the amount of solar and propagation information that's available to us has significantly surpassed our understanding and application of it. This abundance of information is a prime breeding ground for the dissemination of misinformation due to a lack of understanding of the underlying theory and principles.

Specifically, let's take a look at one entity that we see on a very regular basis. That entity is solar flux. It's reported in some form or another on many web sites (including those listed last month), it's in most of the DX bulletins and propagation reports, and it's broadcast on WWV at 18 minutes past the hour. Let's answer two questions — what is solar flux, and how does it relate to propagation?

Flux is a measure of the rate of transfer of energy across a given surface. So solar flux measures the rate of transfer of solar energy. But the sun emits energy at many wavelengths, so what wavelength should we measure? Since we're going to measure it with equipment on the Earth's surface, we need to pick a wavelength that gets through the atmosphere relatively undisturbed. 10.7cm fits the bill, which equates to a frequency of 2800 MHz. For an interesting history of how this ended up at 10.7cm, check out http://www.drao.nrc.ca/icarus/www/history.html.

Just what does solar energy at 10.7cm represent? It essentially is a measure of the thermal radiation of the sun. Note that the words "ionizing radiation" are not mentioned at all. That's because if one calculates the energy of 10.7cm radiation using Planck's Law, one will find that 10.7cm is about 1 million times less energetic than what's needed to ionize any atmospheric constituent. Thus 10.7cm solar flux has nothing to do with the formation of the ionosphere.

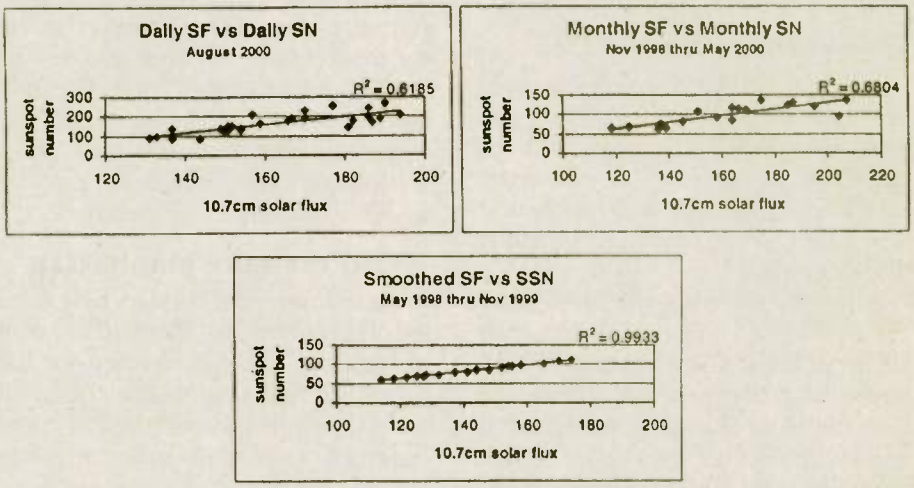


Figure 1 10.7cm Solar Flux versus Sunspot Number

But 10.7cm flux does correlate to sunspots, and this is why the measurement of 10.7cm flux has flourished — measuring 10.7cm solar flux is objective, whereas measuring sunspots is subjective. How well 10.7cm solar flux correlates to sunspots depends on the time frame of the measurement. Figure 1 shows 10.7cm solar flux versus sunspot number for representative daily values, for representative monthly averages, and for representative smoothed values.

For both the daily and monthly plots, it's easy to see that the 10.7cm solar flux can vary quite a bit for a given sunspot number. That's another way of saying the correlation isn't too good. But all the data on the smoothed plot nicely falls on a straight line – for a given sunspot number there essentially is one and only one value of solar flux. The R-squared number at the top right of each plot tells how well 10.7cm solar flux and sunspot number follow a linear relationship, with 1.00 being a perfect linear relationship. The data shows that the best correlation between 10.7cm solar flux and sunspot number is through smoothed values – smoothed 10.7cm solar flux and smoothed sunspot number (SSN), which are 12-month running averages and are how sunspot cycles are measured.

With a good understanding of what solar flux is, we can now move into how it impacts propagation. The earlier comment "10.7cm solar flux has nothing to do with the formation of the ionosphere" sets the stage for this, and along with the previous paragraph suggests that the time frame over which measurements are made again plays an important role.

A simple way to see how 10.7cm solar flux affects propagation is to plot it versus one of the common ionospheric parameters. Let's go with foF2, the critical frequency of the F2 region, as that is one factor that determines the MUF (maximum usable frequency)

of a path. Additionally, due to the emphasis on daily 10.7cm solar flux in the Amateur Radio community, we'll start with "daily" as the time frame of measurement.

Figure 2 plots a month's worth of the daily foF2 value at 2300 UTC from a middle latitude ionosonde (Dyess AFB at 33N/100W) versus the corresponding daily 10.7cm solar flux. It's not hard to see that there isn't a real good correlation — the very low R-squared number confirms this. In fact, if we believed this plot, it says the critical frequency goes down as 10.7cm solar flux rises — that's contrary to what should really happen. If we did the same plot for foE (E region critical frequency), for hmF2 (height of the F2 region peak electron density), or for any other ionospheric parameter, we'd get the same result. What this says is there isn't a very good correlation between daily 10.7cm solar flux and what the ionosphere is doing on that day.

If we plotted the monthly average foF2 against the monthly average 10.7cm solar flux, the correlation would be better. The best correlation, though, would be found when we used smoothed 10.7cm solar flux and correlated it to the statistical parameter monthly median foF2.

What about daily sunspot number? Is there a better correlation using that measurement? No, there isn't. Figure 3 shows that data, now using the same daily foF2 values but versus the daily sunspot number. Why doesn't the daily sunspot number do better? It's because the sunspot number, just like 10.7cm solar flux, is an indirect measurement of the true ionizing energy. And like 10.7cm solar flux, the best correlation is found when we use a smoothed sunspot number and the monthly median foF2.

The last sentence of the previous paragraph is the underlying premise on which the model of the ionosphere was built for our propagation prediction programs — a correlation between smoothed sunspot number (or smoothed 10.7cm solar flux) and monthly median ionospheric parameters. Think about that — if the

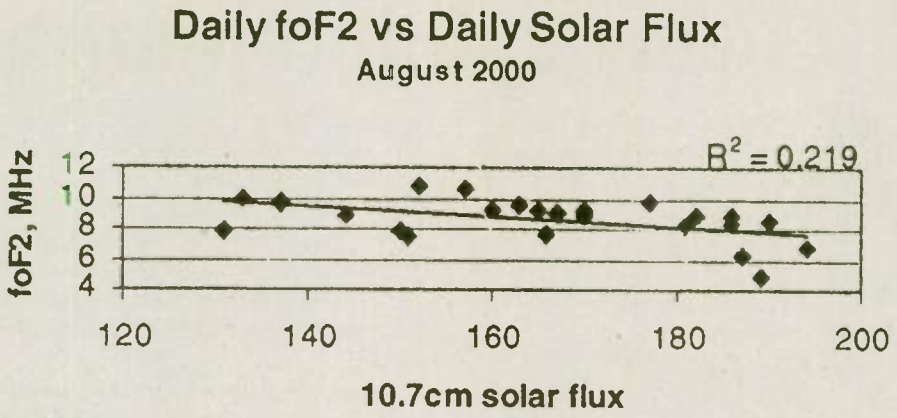


Figure 2 Daily foF2 versus Daily 10.7cm Solar Flux.

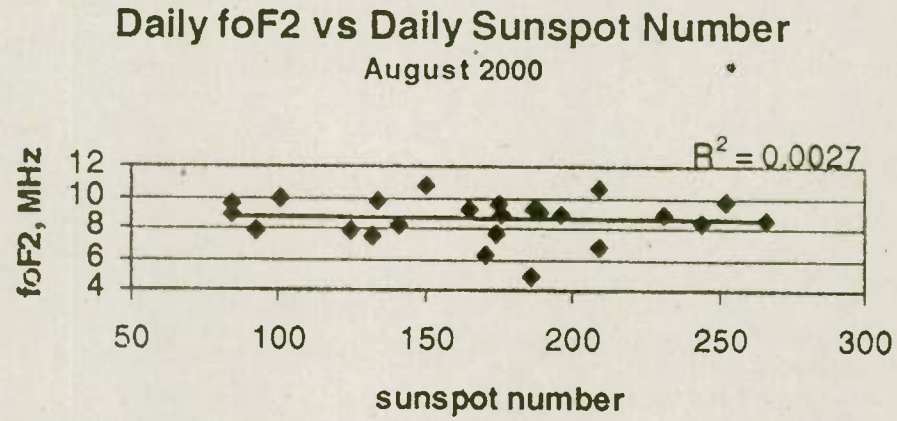


Figure 3 Daily foF2 versus Daily Sunspot Number.

guys who developed the model of the ionosphere for propagation predictions thought that there was a good correlation to daily measurements, we'd have predictions based on individual days, not a monthly prediction that is statistical in nature. They recognized this lack of correlation, but we amateurs seemed to have missed this along the way, with the result being a misguided emphasis on daily solar flux.

That's a pretty radical statement, isn't it? I even went one step farther to assure that there wasn't much of a correlation between what the ionosphere is doing on a given day and the daily 10.7cm solar flux. I listened to WWV on 10 MHz, 15 MHz, and 20 MHz for an entire month, recording signal strength each day at the same time on each frequency. I did this just in case there was a correlation to the ionosphere as a system, and not just one of its specific parameters. The results were the same — very little correlation to daily 10.7cm solar flux.

In summary, the primary purpose of this month's column was not to show that we're off base using daily solar measurements (but it's certainly good to know this). Rather, the primary purpose was more general — to urge you to do a little reading and investigating on your own to understand what all this solar and propagation data means, and to understand how it truly affects propagation. You may just be surprised with what you find.

Kurt N. Sterba

Vertical antennas and SWR

A longtime reader of Kurt's column sent in an article from a recent *QRP Quarterly*. He thinks the author is wrong when talking about a quarter wave vertical, he states that "lowest SWR does not equal most efficient or resonant in this case."

Well, the first part is absolutely correct. Lowest SWR does not equal most efficient in this case. Why is that? Very simple!

A quarter wave vertical has a radiation resistance of 36 ohms. If you put a perfect or near perfect ground plane under it so that there are no losses, your transmission line will see the 36 ohms at the antenna's base. You can come close to this with 120 halfwave radials. Since SWR, for the purely resistive load that you see at resonance, is Zo/Ra (where Z is the cable characteristic impedance and R is the antenna resistance) the SWR in this case is 50/36 = 1.39 for 50 ohm cable. Since there are no losses all the power is radiated.

But suppose you remove most of the radials. The ground losses go up and the antenna's base impedance goes up. Let's suppose the ground loss resistance becomes 14 ohms. The base impedance is now 50 ohms (36+14=1-50:1. It is a perfect match for the cable and SWR is 50/50=1.0. But the efficiency drops because only 36/50 or 72% of the power is radiated. 14/50 or 28% is used to heat the ground.

Lowest SWR at resonance

QRP Quarterly's author goes on to say that lowest SWR in this case does not mean resonance. This is wrong. Lowest SWR does mean resonance. The author goes on to give an example where SWR is lower than expected. He suggests that the measurement could be a bit off resonance thus adding reactance to the 36 ohm antenna impedance and bringing it closer to 50 ohms thus loweririg the SWR. Again, wrong, wrong, wrong. Adding reactance makes the SWR go up, not down.

You have to remember that the simple formula for SWR Zo/Ra (where Z is the cable impedance and R is the antenna resistance), holds only for resistive loads. If reactance is present another much more complicated formula holds. See the Transmission Lines chapter in your Antenna Book for the formula. If you don't own the Antenna Book and you are working with antennas you are working with one hand tied behind your back. Kurt told you so. Listen to him.

Using this formula (actually, it is so complicated the Antenna Book breaks it down into three formulas) we find that the SWR with a 35 ohm antenna load is 1.39.

But as soon as you add even one ohm of reactance the SWR goes up, not down. The lowest SWR is at resonance.

The only way to get a lower SWR is to add resistance which you can do by increasing the ground losses. Don't do it. It will make your signal weaker. As QRP's author says "BETTER SWR equals MORE LOSS" (in this case).

Using your antenna analyzer

Even major instrument manufacturers seem uncertain about the meaning of minimum SWR when measuring antennas. Advertising for a popular measuring device we'll call "259B" says, "Here's what you can do: Find your antenna's true resonant frequency." But the instruction manual that comes with the instrument doesn't tell you how to do this. Instead it states that, "The resonant frequency is NOT always at the point of lowest indicated SWR." In other words, looking for the lowest SWR may not give you the resonant frequency of the antenna.

How do you usually find the resonant frequency of your antenna? By looking for the frequency of lowest SWR? Right! Keep on doing it that way and you will get along just fine. Kurt told you so.

Here is an easy way to help you remember that reactance in the load increases the SWR. Fact: If you have 50 ohm coaxial cable and the load is 50 ohms resistive you'll have an SWR of 1.0. Fact: If the load has no resistance but has 50 ohms reactance you'll have infinite SWR. Just keep that in mind and you won't forget that the formula SWR = Z/R applies only to a purely resistive load.

The Sterba Curtain

The Curtain antenna is an array of dipoles stacked one over the other and also side-by-side. A Sterba Curtain with four dipoles one over the other and four in each line is called a 4 x 4 and has a gain of about 14 dBd. An 8 x 3, about 20 dBd. Nice gain figures but these arrays are big and mostly found in places like Radio Netherlands, Voice of America and the like. Too big for your backyard.

A reader wants to know if they would be useful for a field day installation. He plans to have a couple of 60 foot towers. Could he use a Sterba Curtain on 10 Meters?

Yes he can, but not the Radio Netherlands kind. There is a minimum size Curtain, a 2 x 2 called the "Lazy H" that would work. Two halfwave elements inline at the top of the towers and two more 3/4 wavelength below them. Gain is 6.6 dBd and bidirectional. You can use it on 15 and 20 Meters also — but with reduced gain.

Is it practical? Probably not. You'll have to use an antenna tuner with it. And it is not rotatable. Some of the Big Broadcasters mount the towers on railroad tracks and turn the whole curtain, but you aren't going to be doing that. In contrast, a triband beam will give about the same gain on all three bands, is easily rotatable, has good front-to-back ratio to eliminate interfering signals, and doesn't need a tuner.

On the other hand the Lazy H is inexpensive. You just need wire and insulators. If you have some handy trees and a dedicated 10-meter station it might be worthwhile. See the Antenna Book for details.

No, Kurt didn't invent the Sterba Curtain. It is named for the famous radio engineer E. J. Sterba who did pioneer work on shortwave antennas and transmission lines back in the 1930's.

— Have a question for Kurt? Send your comments or questions to: 2120 28th St. Sacramento, CA 95818, or by e-mail at: n6wr@ns.net

Contest Chart

Contest	Date & Time	Bands	QSO points	Multipliers	Exchange	Entry Categories	Entries
ARRL DX SSB	0000Z 3 Mar 2359Z 4 Mar	160-10M SSB	3pt/QSO Work stns outside Canada, USA only	DXCC on each band	RS QTH	Single Op: All bands, Single Band Assisted, Low power, QRP Multi-op: one, two or multi-tx	1mo. ARRL or e-mail to DXPhone@arrl.org
CLARA and Family HF Contest	1700Z 7 Mar 1700Z 8 Mar 1700Z 14 Mar 1700Z 15 Mar	80-10M CW 80-10M SSB	5pt/CLARA mem 3pt/YL 2pt/CLARA fam mem 1pt/OM	Canadian Provs, Terrs, Labrador + DXCC	Name QTH CLARA mbr?	Single op, all bands Trophy to high-scoring CLARA member, certificates to top family member, DX YL, OM All entrants are eligible for a prize draw	11 April VA3WX
World Wide Locator Contest (Czech Rep.)	0800Z 11 Mar 2359Z 12 Mar	160-10M CW and SSB	+1pt for each 500km measured from grid centre to grid centre x2 on 80M x4 on 160M	Grid Field (first two letter of grid square)	RS(T) + 4-character Grid Square (ie. FN25)	Single Operator - Mixed Mode, CW, SSB - High or low power (max 100w out) - All bands, single band, any two bands Multi-op: - Mixed Mode, CW, SSB - Single tx, two tx, Multi-tx	15 May OK2FD or e-mail to ok2fd@contesting.com NOTE: Electronic logs only
Commonwealth Contest or BERU (RSGB)	1200Z 10 Mar 1200Z 11 Mar	80-10M CW	5pt/QSO Work only Commonwealth	No mults: 20pt bonus for 1st three QSOs with each Commonwealth call area (DXCC ctys + VE/VK/ZL/ZS call areas - All G/GM etc. Count as one call area) and HQ stations.	RST Serial	Single op All bands: - Open (max 24 hrs of operation) - Restricted (max 12 hrs of operation) HQ stations will send 'HQ' after the serial QSO number	7 April G3UFY
Nova Scotia QSO Party	1200Z 11 Mar 2200Z 11 Mar (1600-1800 off time for all)	80M CW, SSB	1pt/QSO	Nova Scotai counties (18)	RST QTH	unknown	30 days VE1BYO
Wisconsin QSO Party (USA)	1800Z 11 Mar 0100Z 12 Mar	All Amateur bands (exc. 10, 18, 24) CW, SSB and FM	1pt/SSB 2pt/CW Stations outside Wisconsin work Wisconsin only. WI work everyone	Stations outide Wisconsin: Wisconsin counties (72) Station in Wisconsin: WI counties, US states, Canadian provinces and territories.	RST and WI county or State/Province/Territory	Single op, Multi-op single Tx, Multi-op Multi-tx. Within each, there are sub-categories for fixed, mobile, Novice- and Technician-class stations.	31 March WARAC Box 1072 Milwaukee WI 53201
CQ VHF Spring FM Activity Weekend	16-18 Mar Nine 6-hour periods starting at 1800 local time Friday	FM on all Amateur bands above 50MHz (146.52MHz may not be used, nor may you use repeaters)	1pt/50, 144MHz QSO 2pt/222, 432MHz QSO 3pt/902, 1296MHz QSO 4pt/2304MHZ and higher QSO Work each station once per band in each 6-hour period.	Grid squares worked on each band	Grid square	Single Op Fixed Station: - QRP (max. 10w) - QRO (more than 10w out) Multi-op Fixed station - QRP (max. 10w) - QRO (more than 10w out) Rover	30 days CQ-VHF Magazine or e-mail to weekend@cq-vhf.com
Bermuda Contest	0000Z 17 Mar 2359Z 18 Mar	80-10M CW & SSB	5pt/QSO	VP9 stations multiplied by DXCC/WAE countries worked on each band	RST	Single op, all bands (max. 24 hours of operation) The worldwide winner will have their airfare paid to Bermuda so they can collect their trophy in person!	25 May Box 275 Hamilton HM AX Bermuda
Alaska QSO Party	0000Z 17 Mar 2359Z 18 Mar	160-10M + Satellites CW & SSB	1pt/SSB QSO 2pt/CW QSO x2 on 160M,80M and satellites. Alaskans work everyone, others work Alaska only	For stations outside Alaska: Alaska cities For Alaskans: US States, Canadian provinces and DXCC countries.	Alaskans: RST City Others: RST State	Single op, Single op QRP Multi-op, single tx Suggested frequencies: 1835, 3700, 3875, 7035, 7135, 7235, 14035, 14245, 21135, 21335, 28135, 28335kHz	30 June KL7CC
YL ISSB QSO Party	0000Z 17 Mar 2359z 18 Mar	160-10M SSB	1pt/non-Member 3pt/Member in your continent 6pt/member on another continent	US states, Canadian Provinces and territories, VK and ZL call areas, yl/om teams, W/DX teams	RST QTH ISSB#	Single operator YL/OM teams W/DX teams	30 Apr N4KNF
BARTG RTTY	0200Z 17 Mar 0200Z 19 Mar	80-10M RTTY	1pt/QSO	DXCC + Canada/Australia/USA Call Areas	RST Serial#	Single Op: All bands, single band Multi-op SWL	29 May G4SKA
Russian DX Contest	1200Z 17 Mar 1200Z 18 Mar	160-10M CW and SSB	2pt/own country 3pt/other NA country 5pt/DX 10pt/Russian stations	Russian Oblasts and DXCC countries on each band. Russian stations will send a two-letter Oblast identifier.	RST Serial#	Single op: All bands, single band Multi-op, single Tx SWL	30 days SRR Box 59 105122 Moscow Russia or e-mail: ra3auu@contesting.com
Virginia QSO Party (USA)	1800Z 17 Mar 0200Z 19 Mar 0500-1100Z off time for all entrants	All Amateur bands (exc, 10, 18, 24) CW, SSB and FM	1pt/SSB 2pt/CW 3pt/VA mobiles 500pt/QSO w.K4NVA Stations outside Virginia work Virginia only. VA work everyone	Stations outside Virginia: Virginia counties (95) and Ind. Cities (42) Station in Virginia: VA counties and Ind. cities, US states, Canadian provinces and territories, DXCC countries.	RST and VA county or State/Province/Territory/DXCC country	Single Op: Mixed mode, CW only, Fone only, QRP CW only, VHF only Multi-op: Single or multi-trasnmitter.	15 April SPARC Call Box 599 Sterling VA 20167
CQ WPX SSB	0000Z 24 Mar 2359Z 25 Mar	160-10M SSB	0pt/VE 2pt/NA 3pt/DX x2 on 160 80 40M	Total of prefixes worked, regardless of band	RS Serial#	Single Op: All bands, Single band, Assisted, Low power, QRP Multi-op: Single or Multi-tx	1mo. CQ mag
SP DX Contest (Poland)	1500Z 7 Apr 2359Z 8 Apr	160-10M	3pt/QSO Work SP only	Polish provinces (49) SPs will send 2-letter province abbreviation	RST Serial#	Single Op: All bands, single band Multi-op SWL	1mo. Box 320 00-950 Warsaw
Spanish RTTY	1600Z 7 Apr 1600Z 8 Apr	80-10M RTTY	2pt/DX 1pt/NA x2 on 40, 80M	CQ Zones and Spanish Provinces (52) EA stations will send 1- or 2-letter province abbreviations	RST CQ Zone	Single Op: All bands, single band Multi-op SWL	Box 240 09400 Aranda de Duero (BU)
Japan Int'l DX High-Band CW	2300Z 7 Apr 2300Z 8 Apr	20-10M CW only	2pt/JA Work JA only	JA Prefectures (50) JAs will send 2-digit prefecture number	RST Serial#	Single Op: Both bands, single band Multi-op	30 Apr Box 59 Kamata Tokyo 144
QRP ARCI Spring QSO Party CW	1200Z 7 Apr 2400Z 8 Apr	160-6M CW	5pt/QSO with QRPARCI mbr., 4pt/DX non-mbr 2pt/North Am. Non-mbr.	US States, Canadian Provinces and Territories, DXCC countries Multiply your score by 1 if you ran over 5w, by 7 if you ran under 5w, by 10 if you ran under 1w, or by 15 if you ran under 250mw.	RST QTH plus QRPARCI mbr number, non-mbr send pwr	Single op: All bands, High bands (6-10M), Low bands (40-160M) Also iteams of two to five entrants - register your team with N6GA before the contest.	30 days N6GA
YLRL DX-YL to NA-YL CW	1400Z 11 Apr 0200Z 13 Apr	80-10M CW	1pt/QSO YLs in North America work YLs on other continents. Alaska counts as outside NA	DXCC countries ARRL/RAC sections	RST QTH	Single Operator only	30 days W2GLB or e-mail to pshanks1@juno.com
King of Spain	1800Z 14 Apr 1800Z 15 Apr	80-10M CW and SSB	1pt/QSO	Spanish Provinces (52) worked on each band. Spanish stations will send a one- or two-letter province identifier after the Ser#	RST Serial#	Single Op Multi-op SWL	16 May Box 220 Madrid Spain

Addresses: CQ - 25 Newbridge Rd., Hicksville NY, 11801 USA. ARRL - 225 Main St Newington CT, 06111 USA. Callsign - Callbook Address
Bands: The 30, 17 and 12M bands are never used in any contest. You can confirm the dates of these contests on the Internet at http://www.sk3bg.se/contest and http://home.sol.no/~janaime/hammain.html

Hamfests — March

ARIZONA

Arizona AFC Hamfest 6 a.m. - 2 p.m. 7 Apr., in the south parking lot at DeVry College, 2149 West Dunlap Ave, Phoenix, AZ. Adm. $1, tailgate spaces $5/ea. VE exams 8 a.m. - 10 a.m. TI: 147.280(+). For info: George, KQ7C, 602/274-6212.

ARKANSAS

North Arkansas ARS Hamfest 10 Mar., at Harrison Junior High School. Adm: $5 Tables: $15. Tailgating: FREE. Door prizes, VE testing, refreshments. TI: 147.000 (-). For more info: Bill Rose, N5VKF 870/741-6968. E-mail: billrose@cswnet.com.

CALIFORNIA

Yuba-Sutter ARC Hamfest, 10 Mar. at American Legion Post, 5477 Feather River Blvd. Linda, CA (just off of Hwy 65/70 at Feather River Blvd exit). Breakfast (served by Legion members) begins at 7 a.m. Swapmeet begins at 8 a.m. Free adm. for buyers, $10 for sellers. For additional info: Ron, W6KJ, 530/674-8533, or clara, KC7JPP, 530/742-2674.

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Shasta Cascade ARS Ham Radio Swap Meet on Sat., 3 March, 2001, from 10AM to 3PM at Downtown Mall, Redding, CA. Free admission. Free drawings, refreshments available, ARRL information table. Talk-in: 146.64- Note: Amateur Radio transmitters will only be sold to properly licensed amateurs. Vendor tables, $10 each, are limited. Early reservations are recommended. Setup time: 9 to 10AM For more info: Jim, KE6OUA, (530)222-8001. Email ke6oua@arrl.net

IOWA

Southwest Iowa ARC Fleamarket 9 a.m. 3 Mar., at Travellodge Inn (2325 Ave. N, Council Bluffs, IA, 51501). Adm: $2. Tables: $5. TI: 146.82/.22 K0SWI/R. For info: Rich Swig, WAOZQG, 2306 Rolling Hills Loop, Council Bluffs, IA 51503. Phone: 712/256-775. E-mail: wa0zqg@arrl.net.

MARYLAND

Greater Baltimore Hamboree/Computerfest, & ARRL State Convention 6 a.m. - 5 p.m. 31 Mar & 6 a.m. - 3 p.m. 1 Apr. at the Fairgrounds (I-695 to I-83 north, exit Padonia Rd. East. Right on Deereco Rd. to park & ride lot, or go east to York Rd. Gate). Adm. $10/adv for both days, $6/at gate for single day. 500 flea market tables, 600 outdoor tailgate spaces, 1,100 indoor spaces. Tables $20-25/adv, $35/at gate. VE exams 1 p.m. Sunday. TI: 146.67(-). For VE examin info: Bob Busch, WB3KXJ, 301/317-7819; e-mail: rbusch@erols.com. For info: LARC P.O. Box 3039, Laurel, MD 20709-3039. For advance tickets and space reservations see the web page: www.GBHC.org.

MASSACHUSSETTS

MTARA 16th Annual Amateur Radio & Electronics Hamfest on 11 March, 2001, starting at 9:00 a.m. at the Amherst Regional Middle School, Amherst Mass. Adm: $5.00 per Adult, Children under 12 FREE. Tailgating $5.00. Tables $15. Set-up: 7:00 a.m. Food Bar, 120V AC Available, Help Loading/Unloading, Ham & Commercial Exams at 10:00 AM. Raffle and Door Prizes. Handicapped Parking and access. Talk-in: 146.940. For info and reservations contact Cindy, K1ISS (413)568-1175 or via email: n1fi@arrl.net. Webpage: www.mtara.org

MICHIGAN

Southern Michigan ARS/Marshall High School Photo Electronics Club Hamfest 8 a.m. - 3 p.m. 17 Mar. at Marshall High School, Marshall, MI. Adm. $4/adv, $5/door. Tables $1 a foot. TI: 146.66 & 146.52. For info: SMARS, P.O. Box 934, Battle Creek, MI 49016, or call Jim Holloway, KG8GZ, 616/963-6602.

MINNESOTA

The 20th annual Midwinter Madness Hobby Electronics Show, 8:30 a.m. - 3:00 p.m 24 Mar., in the Ganglehoff Center, at Concordia University, St. Paul, MN. Adm: $7. Tables: $25, w/electricity $55. Commercial Booth: $95 and $40 extra for electricity. Call for advanced prices. There will be VE testing. For more info: RARC, P.O. Box 22613, Robbinsdale, MN 55422. Phone: 763/537-1722. E-mail: k0ltc@visi.com. Website: http://www.visi.vom/~k0ltc.

OHIO

Lake County ARA Hamfest/Computerfest 8 a.m. - 2 p.m. 23 Mar. at Madison High School, North Ridge Rd., Madison, Ohio. Adm. $5. Tables $8 for 6-ft., $10 for 8-ft. VE exams, demonstrations, hourly prize drawing. For info: Roxanne, 440/257-0024.

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Toledo Mobile Radio Association Hamfest.Computer Fair, 8 a.m. - 2 p.m. 18 Mar. at Lucas County Recreation Center, 2901 Key St. in Maumee, OH. Adm. $6, tables $25/reg, $30/wall. TI: 147.27(+). For info: Paul Hanslik, N8XDB, TMRA Hamfest, P.O. Box 273, Toledo, OH 43697-0273. Call: 419/385-5056. Web page: www.tmrahamradio.org.

TENNESSEE

Kerbella ARS/Shriners Hamfest, 8 a.m. - 4 p.m. 10 Mar. at Kebela Temple, 315 Mimosa Ave., Knoxville, TN. Adm. $5. Indoor tables $8 plus adm. Setup Friday 4 - 8 p.m., Saturday 5 - 8 a.m. Overnight security will be provided. TI: 145.43(-) or 146.52 simplex. For info: Paul Baird, K3PB, 1500 Coulter Shoals Circle, Lenoir City, TN 37772. Phone: 865/986-9562.

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
p/r=pre-register only—no w/i
w/i=walk-in only
w/i pref.=w/i preferred to p/r

Date	City	Contact	Notes
Alabama			
3/20/01	Opelika	Mary, KL7P 334/741-9087	p/r
Arizona			
2/01/01	Tucson	David, K7IOU 520/749-2884	p/r pref
Arkansas			
3/10/01	Harrison	David, K5DEL 870/741-8604	p/r pref
California			
3/10/01	Carlsbad	Rusty, AA6OM 760/747-5872	p/r pref.
Hotline	Carmichael	Info Hotline: 916/492-6115	w/i
3/11/01	Citrus Heights	Joe, KF6OQY 916-797-3149	p/r
3/22/01	Colton	Harold, AB6RN 909/825-7136	p/r pref.
3/313/01	Culver City	Scott, K6PYP 310/459-0337	w/i
3/31/01	Escondido	Harry, WA6YOO 760/743-4212	p/r only
3/12/01	Fremont	Dennis, K6DF 408/255-9000	w/i
3/03/01	Lancaster	Adrienne, WA6YEO 805/948-1865	p/r pref.
3/17/01	Long Beach	Don, 562/420-9480	p/r pref.
3/17/01	Redwood City	Al, WB6IMX 408/255-9000	w/i
call	Sacramento	Dick, N6DK 916/383-2113	p/r only.
3/10/01	San Pedro	Elvin, N6DYZ 310/325-2965	p/r pref.
3/10/01	Santa Barbara	Nancy, WR6V 805/967-4473	p/r pref.
Hotline	Santa Rosa	Hotline - Recording, 707/579-9608	w/i ok
Hotline	Sebastopol	Recording, 707/579-9608	
3/17/01	Stockton	Mark, W6DKI 209/465-7496	w/i
3/10/01	Sunnyvale	John or Gordon 408/255-9000	w/i
call	All Colorado	Exam recording 303/360-7293	
Florida			
3/08/01	Ft. Myers	Leonard, KC4GOA 941/694-2505	w/i
call	St. Pete	Mark, NP3R 727/528-0071	w/i pref.
Idaho			
3/10/01	Boise	Rich Dees, W7BOI 208/888-1343	w/i pref.
3/28/01	Grangeville	Larry, AB7GY 208/983-2163	w/i pref.
3/06/01	Lewiston	KB7LTY 509/758-8374	
Illinois			
Anytime!	Burr Ridge	Deni, W9DS 630/986-0061	p/r
3/12/01	Libertyville	John, W9EM 847/223-3357	p/r pref
3/10/01	Oak Forest	David, NF9N 708/226-1570	p/r pref

State	City	Contact	Notes
Nevada			
3/03/01	Henderson	Tim, WA6TNW 702/872-5268	p/r pref.
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TEXAS

Midland ARC St. Patrick's Day Hamfest, 8 a.m. - 5 p.m., 17 Mar. and 8 a.m. - 2 p.m. 18 Mar. at Midland County Exhibit Building. Adm. $7/adv, $8/door. Tables $12/ea for first four, $17 for additional tables. VE exams (1 p.m.), indoor flea market, tailgate area, T-hunts and hot meals. For info: Midland ARC, P.O. Box 4401, Midland, TX 79704, or contact Larry Nix, N5TQU by e-mail: oilman29@home.com. Web page: www.w5qgg.org.

WASHINGTON

Mike and Key ARC Electronic fleamarket, 9 a.m. to 3 p.m. 10 Mar. at Pavilion Exhibition Hall of the Western Washington Fairgrounds, Puyallup, WA. Adm. $6 (under 16 free with parent). Tables $27. Door prizes, VE exams, RV camping. RI 146.82(-) and 146.58 simplex. For info: 425/867-4797 (days, 253/631-3756 (eves); mwdink@eskimo.com. VE info: 206/824-9039; k7yh@worldnet.att.net.

WEST VIRGINIA

Charleston, WV area Hamfest/Computer Show 9 a.m. - 3 p.m., 17 Mar. at Coonskin Armory, 1707 Coonskin Dr., Charleston, WV. Adm $5, tables $5. VE exams at 12:30 p.m. TI: 145.35. Great food and free parking. For info: Jim Damron, N8TMW, e-mail: n8tmw@arrl.net.

WISCONSIN

SEWFARS ARC Swapfest/Computer Expo 8 a.m.-2 p.m. 4 Mar. at Waukesha County Expo Center, WI. Setup at 6 a.m.. Adm. $5/door. Tables $6. Electric $7.50. VE exams. TI: 146.820 (pl 127.3). SASE w/check to SEWFARS, Inc. P.O. Box 102, Delafield, WI 53018. Phone: 262/835-7035.

●

Tri-County ARC Hamfest 8 a.m. - 2 p.m. 18 Mar. at Jefferson County Fairgrounds Activity Center, Hwy 18 West, Jefferson, WI. Adm. $4, Tables $6. TI: 145.49. For info: TCARC, 213 Frederick St. Fort Atkinson, WI 53538. Call 920/563-6381 (eves.), Fax: 920/563-9551. E-mail: tricountyarc@globaldialog.com.

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MARS members special role

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With its bright color pictures of mobile rig, outdoor operating position and portable antennas, it looked just like the typical QSL card from a DXpedition.

And in a way it was — except this particular "confirmation card No. 014" came from an arm of the U.S. Government. The postcards that arrived in January 2001 at Amateur Radio stations in 46 states, as well as 81 Army Military Affiliate Radio System (MARS) members, was the largest contingent-acknowledged participation in one of Ham radio's least-known but most-dedicated public services. This is the Shared Resources HF Radio Program of the National Communications System, known as SHARES. As part of the armed forces, all three branches of MARS provide members to SHARES. Appointment is based on availability of vacancies in the SHARES system and individual MARS members' possession of equipment capable of operation on government frequencies. There's usually a sturdy waiting list.

A number of MARS members take a leading role in SHARES operations, serving as national and regional net control stations. Others provide essential linkage with ARES and RACES in the event of actual emergencies, and such emergencies do occur. (The previous SHARES national exercise in August 2000 coincided with Hurricane Debby.) In the October exercise, the scenario was an earthquake centered in Phoenix, Ariz., that temporarily wiped out AT&T circuits. SHARES members provided voice, digital and automatic link establishment (ALE) communications over a three-day span. (A number of Army MARS members are now ALE-equipped.)

SHARES logged 43 Navy-Marine Corps MARS participants. There were 33 from Air Force MARS, 40 Civil Air Patrol, four Army National Guard and one Army Corps of Engineer station plus the 1111 Signal Battalion and WAR 46, along with the 81 participants from Army MARS. Federal participants included FEMA, FAA, FBI, DEA, NASA, Immigration and Naturalization Service, Department of Energy, Federal Highway Administration, state emergency operations centers and other entities — 264 stations in all. This was the third of AT&T's Network Disaster Recovery tests in which Hams participated in 2000. Previous regional exercises were centered on St. Louis (April) and White Plains. N.Y.(July).

SHARES is structured to support Federal continuity of operations plans during the first critical hours of an emergency, was the notation on the "QSL" card. Twenty federal and industry organizations have included SHARES in 31 emergency operational planning documents.

In a year-end report Chief Army MARS Bob Sutton said, "Army MARS continued to be the major participating agency in all of the SHARES exercises. The significant accomplishment has been acknowledged by SHARES."

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