Emergency Communications • Public Service • International Friendship

Worldradio

Year 26, Issue 12 June 1997 • $1.50

From left to right: Missionary pilot Al Yoder, PP8ZPA, chopper pilot Capt. Mike Charles and Hank Scheltema, WA4VSP.

MAYDAY! MAYDAY!

Will Sill, KD3XR

The international distress calls "SOS," and "MAYDAY" are much talked about, but seldom heard in real life. When you *do* hear one it sends the chills down your spine. . . especially when you personally know the source!

Al Yoder, PP8ZPA, with whom I regularly QSO, is a missionary pilot stationed in Brazil. On 12 March, he was enroute to St. Vincent Island from Boa Vista in northern Brazil. He and a passenger were on their way toward the U.S. in an old reliable single-engine Cessna float plane. He'd asked me to kinda "ride along" for company, and just in case he needed a phone patch. Starting out from far western Brazil the day before, he had detoured many hours eastward to avoid Venezuelan airspace. Red tape had delayed permission to cross their territory, and he elected to fly around it rather than wait any longer. Because of the mountains and poor propagation conditions he was out of radio contact for a time. But we had a sked on 15 and 17 Meters, and I tuned in early to listen for him.

Suddenly at about 9:15 a.m. the radio came alive at a solid S-5 with his familiar voice — "MAYDAY! MAYDAY!" I grabbed the mike and responded: "Gotchya, Al — KD3XR here. What's your position?" He also knows my voice and call, and there was no time for a lot of palaver. He was fairly calm under the circumstances, but his voice betrayed some understandable tension. He reported an explosion in the engine on its right side, that he had lost some power, and was getting serious vibration. Worse, he was descending into cloud cover over mountainous jungle terrain, losing altitude at about 500 feet per minute, in an aircraft with minimal navigation aids. Except for altimeter, compass, and GPS receiver, he was "flying blind." Thank the Lord for GPS and Amateur Radio!

My own part in the drama was *very* small: After acknowledging his call and getting his position, I telephoned his mission aviation coordinator (and father-in-law) Hank Scheltema, WA4VSP, who quickly came up on frequency. He had been checking in with Al himself every hour, relaying up-to-the-minute weather information, but was away from the radio at the time. The moment he got on the frequency, Hank began helping Al fly through the clouds "by radio," using detailed maps of the area, GPS coordinates and altitude information. After a very tense half hour that *seemed* much longer, Al shouted with obvious relief: "I see the river." He had hoped to be able to follow it (the Cuyuni River) to Georgetown in Guyana, but the plane could not maintain altitude. With an experienced pilot in a float plane, the next part was easy: In a matter of moments, he was safely on the water, but many miles upriver from Georgetown!

What a huge sigh of relief for everyone. But their troubles were not over: Shortly after confirming a safe landing, they informed us they were passing through a very dangerous area frequented by miners. . . not noted for welcoming intruders into "their" territory. And then came an end to their hopes of floating downstream to Georgetown with the transmission: "We are approaching a falls!" (Talk about having a bad day!)

(please turn to page 6)

NEWSFRONT

Worldradio

Some information has been supplied to *Worldradio* Newsfront courtesy of *Newsline*.

Upper Midwest floods

Guided in many cases by Amateur Radio operators, rescue workers in the upper midwest used helicopters and all-terrain vehicles to carry thousands of people from flooded homes. Rivers swollen by rain and melting snow devastated parts of Minnesota and North Dakota.

In the city of Fargo, volunteers including students from local colleges and high schools worked around the clock to prevent the Red River from inundating the city. Amateur Radio operators, working with rescue operations kept track of the rising waters. Dale Cary, WDØAKO, lives right across the river in Moorhead, Minnesota:

"This past week the hams have been stationed at the volunteer center, which has been the Civic Center downtown, also at the Red Cross offices, and the office of the Salvation Army.

"They have been dispatched out to different areas around the Fargo-Moorhead area, and checking with the different areas in the community to see how things have been going with constructing the dikes, if they needed more supplies, or more manpower. And all the information has been relayed back to the volunteer center."

According to reports from the ARRL, a statewide Minnesota ARES High Frequency net was activated to assist the Salvation Army in the Minneapolis-St. Paul area. The Salvation Army is bringing in relief supplies for the Granite Falls area.

Amateurs are also providing communications to local Salvation Army chapters coordinating delivery of relief supplies to affected areas. Other amateurs are still busy reporting new flooding areas to the National Weather Service. An informal ARES High Frequency flood net was activated each evening at 5 p.m. Central Time on 3.990 kHz. Further details of the massive operations will be featured in a future issue.

FCC database tested

For a limited time, amateurs and others had real-time access to the FCC's amateur database under a beta-testing program. The Wireless Telecommunications Bureau made the three databases available to the public at no charge for approximately 30 days.

Information that was available included amateur applications. It allowed real-time query capability of the Commissions Amateur Radio database.

The other programs included a frequency search program for 929 and 931 MHz and the database transaction downloads. The three applications were available until 12 May at: http://gullfoss.fcc.gov/beta.htm —*via FCC*

Alinco cuts prices again

For the second time in less than a year, Alinco has announced price reductions to dealers. The company cites the favorable dollar-yen exchange rate as one reason behind the price cuts.

But Alinco also says that it does not set prices at the consumer retail level. Because of this, over the counter prices can vary from one dealer to another. —*via Alinco, ARRL*

"Rockoon" launch foiled by RFI

An RFI problem led to scrubbing the planned North Carolina launch from a balloon of an amateur rocket carrying amateur fast scan television and APRS systems.

The project is known as rockoon. That's a word derived from a combined rocket and balloon. According to Bill Brown, WB8ELK, at three minutes before the scheduled 22 March lift-off, three loud pops were heard from the rocket gondola. It turned out that RFI in the gondola caused the automatic-descend system to fire prematurely.

Rockoon is a project of the Huntsville, Alabama L5 Society and is made up of hams and space enthusiasts. That group spent the past two years developing and testing components for the rocket balloon flight. No new date has been set to try again, but one will be announced as soon as the RFI problem has been solved. —*via ARRL Letter, VHF Reflector, others*

Mexico-OSCAR 30

The recently launched Mexico Oscar 30 Amateur Radio satellite is now officially dead. Project managers now say that the bird has apparently been lost for good due to a catastrophic on-board failure.

The satellite did make it to orbit and transmitted telemetry for about one day. It appears as if a crystal oscillator in the uplink receiver's first local oscillator never started oscillating. In other words, the satellite was totally deaf. Because it could not hear the commands on the uplink, battery charging parameters suitable for the unanticipated cold temperatures could not be loaded, and the satellite ran out of power. Later at-

tempts to revive it were unsuccessful.

The satellite was built at the Autonomous University of Mexico in Mexico City by Professor David Liberman, XE1TU, and his students. *—via AMSAT-NA BBS*

DX

In DX, The Cuban VHF Group is making plans once again for participating in the ARRL's June VHF QSO Party. They would like to know if it is worthwhile to put in a special effort on the 1 and 1/4 meter band. They currently have doubts about 220 to 225 MHz as in past contests they have only worked five or six stations. If you will be active on 1 and 1/4 meters during the contest contact Jose Amador, CO2JA, by e-mail to co2ja@co2bqq.ispjae.edu.cu.

Also, those active on 2-meter moonbounce will be interested to hear that SM5DIC, is now active as 5X1D from Uganda on 144 MHz. He uses 300 watts to a 17-element antenna and has already made a contact with W5UN.

The CY9AA DXpedition is a go for 26 June 26 to 03 July. Operation will be 160 through 10 Meters SSB and CW, plus SSB on 2 Meters near 114.200 for North America and 144.300 for Europeans. *—via various DX sources*

New Jersey ham wins RFI case

A major court win for a New Jersey radio amateur took place in April. A Superior Court judge has ruled that FCC regulations prevent him from declaring that interference allegedly caused by ham operator Walter Kornienko, K2WK, Lafayette, New Jersey constitutes a public nuisance.

According to the April 16th edition of the *Star-Ledger* newspaper, Leopold and Karen Korins sued Kornienko last year. They claimed that Kornienko's transmissions from his 1,500 watt Amateur Radio station were "bleeding" into their telephone lines, blocked television reception and even activated their electric garage door opener. Attorney Kevin Kelly, representing the Korins, asked Judge Reginald Stanton in Morristown to declare the situation a nuisance and direct Kornienko to cut back on his hobby.

But Kornienko's lawyer, Richard Clark, claimed his client had a right to operate under a federal license. He maintained that it was the Korins' responsibility to shield their home from unwanted radio signals and that the New Jersey court had no jurisdiction in the case.

Judge Stanton agreed. He told the Korins that neither he nor any state court had jurisdiction in this matter. He said that it is the FCC that controls everything to do with the operation of an Amateur Radio station.

RS-16 satellite

There was better news for the newest Amateur Radio satellite. RS-16 should be ready for general use in June. Russian space enthusiast Leonid Labutin, UA3CR, says that this latest Amateur Radio satellite is undergoing final testing right now. Once tests are complete it's expected that the Mode A transponder will be switched on.

RS-16 was launched as part of a compound satellite package called Zeya. In addition to the RS-16 package, the Zeya spacecraft is made up of an experimental navigation system, a number of experimental reflectors, solar panels and batteries. *—via AMSAT-NA BBS*

FCC proposes vanity license fee hike

The cost of a vanity Amateur Radio call may soon go up. The FCC has proposed raising the fee for a vanity call sign from $30 to $50 for the 10-year license term. The fee increase was among those included for all FCC regulated services in a Notice of Proposed Rulemaking designated 97-49.

Fee adjustments are an annual exercise for the FCC. The Agency says it must calculate its fees to recover the amount of regulatory fees that Congress has required it to collect in Fiscal Year 1997. The FCC says that the regulatory fees will recover the costs of enforcement, policy and rulemaking, international and user information activities for Fiscal Year 1997 which began last October.

The $5 figure per year is the lowest fee in the new schedule. The FCC says that it anticipates receiving 10,000 applications for vanity call signs in the 1997 Fiscal Year. *—via FCC, ARRL*

First solar flare

Some good news for high frequency DXers. The National Oceanographic and Atmospheric Administration has confirmed the first major flare of the new solar cycle took place on 03 April. Because the region of the sun erupting is still off on the east limb about 20 degrees from center disc, it may not have as great an effect on earth's geomagnetic activity as it might have.

The Amateur Radio supply industry has been waiting for sunspot activity to develop. The sale of desktop high frequency gear is at an all time low. The industry hopes that improved DX conditions will lead to increased sale of the more profitable desktop high frequency transceivers.

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Worldradio

June 1997

Features

Departments

Next month's columns will include Amateur Satellites, County Hunter, RFI & You, Traffic, Wires & Pliers, and Youth Forum

Worldradio

June 1997 **Year 26, Issue 12**

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

Subscription Department: *Worldradio*, 1901 Royal Oaks Dr., Ste 190, Sacramento, CA 95815; 800-366-9192.

Periodicals postage paid at Sacramento, CA & additional offices.

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

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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. You readers are participants — an alliance of active radio amateurs concerned with reality, using radio as a communications tool to develop the skill, quality and full potential of Amateur Radio.

We emphasize the positive aspects of this great activity, and desire your contributions dealing with dramatic, personal and humanitarian uses of Amateur Radio. Articles for consideration may be submitted through the U.S. Postal Service or e-mail to kb6hp@ns.net

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STAFF: Publisher—Armond Noble, N6WR; Editor—Lou Ann Keogh, KB6HP; Associate Editors—Norm Brooks, K6FO, Wendy G. Green; Advertising Director—Helen Noble; Advertising Manager—Brenda Evans; Graphics Director/Advertising—Dianne Dunning; Circulation Manager—Marcia McZeek; Administrative Assistant—Beth Habian.

Publisher's Microphone

We now give due recognition to those who stand tall and look good. The latest to join the ***Worldradio*** SuperBoosters (Lifetime Subscribers) are:

- **Louis Fiore, W2QFN, Orlando, FL**
- **Leslie Whitley, AH6OV, Kea-'au, HI**
- **Jonathan Rich, Waban, MA** (a gift from father, Joe Rich, W1EK)

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The ARRL has proposed that Novice Class licensees be upgraded to the Technician Plus license with an open book test.

Why waste time and effort with the facade of an open book test? Just give them the license. Possibly an entire new system of licensing should be created to match the mores of today. A dart board. You get the license class that your dart hits.

Recently in a competition of 13-year-olds of 50 nations, American youth came in 17th in science (beaten by Bulgaria) and 28th in math. Is this something to be proud of? The only element that would like these results are those who would rejoice that the students did not face the stress of having to study.

I have been wondering why the canny investors are putting so much of their money overseas rather than in the U.S. The answer may be that they have more faith in the financial futures of countries where math and science mean something.

One wonders if the U.S. has crested and will follow the paths of Greece, Rome, etc. Will some Gibbon of the future trace the "Decline and Fall of the USA" to open book tests for amateur licenses?

If anything we should be raising standards not lowering them. There were the days that the next generation would be smarter and do better than the generation before. That is no longer the case.

The college grading system has deteriorated into "A" for passable work and "B" for nice try. Is this something to be proud of?

In the USA a great number of engineers and physicians are from other countries. It seems Americans do not want to tackle the difficult and hard subjects.

Is it all inevitable anyway? No. In Dayton, OH, an elementary school in the "inner city" was the lowest ranking school. Finally, the parents and the teachers said they thought there was a better way. They refused to accept sub-par work. They raised the standards. Today, that school is the academically top-ranked in the district. We can assume they do not have open book tests.

At one time the amateur exams were essay type and with the drawing of schematics. There was also an oral examination with the Radio Inspector. I don't think that I am really reverting to the "Once we had wooden ships and iron men, now we have iron ships and wooden men" thinking but obviously some things have changed and not for the better.

The USA is now sixth in the world in per-capita income. It wasn't too long ago that we were number one. The key to national wealth is manufacturing. Manufacturing is tied to engineering and science. Engineering and science are NOT tied to open book tests.

As individuals we have to be seriously concerned about each building block in the foundation of a society. Is there anyone who would like to stand up and say he is proud of the way it seems to be going on? Do you want a country in which 25% of high school graduates cannot identify Abraham Lincoln? Do you want open book exams for amateur licenses? It is all tied together!

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There was a reference recently that called Amateur Radio "a contribution to society," which it certainly is. There aren't too many other avocations that also benefit others rather than just the participant.

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A letter writer in last month's ***Worldradio*** commented on an ARRL opinion survey that didn't poll nonmembers. Since the vast overwhelming majority of nonmembers are people who will never again participate in Amateur Radio, what would be the point?

—Armond, N6WR

"The quick-release remote front panel gives you so many installation options."

"And with dual receive you can talk on one band, and listen on another!"

"Plus, the high-tech Enhanced Smart Search™ is great for finding repeaters --and you can watch it all on the dual display."

"Looks like Yaesu did it again!"

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Get wide receive coverage--from 110 to 550 MHz and 750 to 1300 MHz* for public safety, marine, aircraft, and weather channels. Enjoy up to 50 Watts of VHF power output (35 Watts on UHF) with High/Medium/Low choice on each band, and "plug and play" 1200 or 9600 bps packet. Utilize 208 memory channels--the greatest available on any remote mobile--to store repeater offset, CTCSS tone, packet baud rate, and power level.

Yaesu's popular Omni-Glow™ display provides a wide field of view, and includes a DC voltage meter. Quickly program, or clone frequency memories with optional Windows™ PC programmable ADMS-2D.

"User-friendly" describes the streamlined front panel layout. Eight clearly-marked keys, and separate Volume/Squelch controls for each band, make operation easy. And the backlit DTMF microphone includes 3 user-programmable keys...but no awkward keypad cover!

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Features

- Frequency Coverage
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  - 750~1300 MHz*
  - TX: 144~148 MHz
  - 430~450 MHz
- Detachable Front Panel (remotable w/optional YSK-8100)
- 3 Power Output Levels
  - 2m 50/20/5 Watt
  - 70cm 35/20/5 Watt
- 208 Memory Channels
- Enhanced Smart Search™
- CTCSS Encode
- Built-in Duplexer
- S-Meter Squelch
- Dual Receive (V+V,U+U,V+U)
- Crossband Repeat (bidirectional or one-way)
- PC Programmable w/optional ADMS-2D
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- Auto Power Off (APO)
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- DTMF Autodialer (6 Memories)
- Time Out Timer (TOT)
- Accessories: Consult your local Yaesu dealer.

*Cellular & 900 MHz Cordless Phone frequencies blocked.

Specifications subject to change without notice. Specifications guaranteed only within the 2-m and 70-cm amateur bands. Some accessories and/or options are standard in certain areas. Check with your local Yaesu dealer for specific details.

The float plane is shown here with the engine cowling removed.

MAYDAY

(continued from page 1)

Fortunately, there were friendly gold miners there who helped them secure the aircraft and avoid being swept further downstream, but still more complications developed. All government offices in Guyana were closed in observance of national mourning. The country's President, Cheddi Jagan, was buried that day. Ironically, the only official contact possible was with the Presidential Palace. But that contact was enough. Hank exchanged urgent messages by phone and FAX, and help was provided by a Guyanan Army helicopter, which carried pilot and passenger to Georgetown.

Happy ending . . . ? Not quite yet. The river was rising and the plane would not last long if it were not retrieved very quickly. Hank, WA4VSP, flew to Georgetown and went upriver with PP8ZPA, taking tools and parts. Miners helped them tow the plane (with a canoe!) to a sand bar, where Hank and Al worked feverishly to get the cylinder replaced before the river swept them away. Working in the wee hours of the morning with rising water around them and fish nibbling at their toes (Hank says he is grateful they were not piranhas) the plane was finally ready to fly just before the rising waters flooded their sand bar "repair base." But the chopper they had arranged to pick up WA4VSP was delayed, so in order to get everyone out, they had to jettison half the gasoline, food, and emergency gear before flying the loaded Cessna out under its own power.

Subsequently, the plane completed the planned flight across the water to the southeastern U.S., running just fine despite the "white-knuckle" experience in the clouds over Guyana!

Primarily we thank God for His mercies. . . but Amateur Radio has once again proven to be an important factor in saving lives! **WR**

Hams thwart suicide

Gregg Puckett, KD6KTH

At 2:30 in the afternoon on a Saturday this last February, Dale Kobetich, KE6ZGR was working at his home in Laguna Canyon. Deciding to take a break, he went for a short hike into the hills above his house. As Dale hiked along the remote road leading to a water reservoir, he came upon a car parked near a water tank. A young woman was sitting in the car; the windows were closed and she had rigged a hose from the tail pipe into the passenger compartment, taping the contraption to make certain it was secure. The engine was running.

Dale tried to get the woman's attention by tapping on the window and talking to her, but she refused to acknowledge him and seemed very irrational. Fearing he might cause her to do something even more drastic, Dale backed off to a vantage point several yards away and put his Amateur Radio experience to use. Fortunately, on this particular day, Dale had chosen to bring his handy-talkie along. "I'm not sure what made me take it along that day, because I often don't," Dale said, "But I'm sure glad I did."

Dale put out a call for help over the SOARA (South Orange Amateur Radio Association, Orange County California) 2-meter repeater; SOARA member Steve Kuver, KD6MHL, responded. Steve placed a 911 call to the Laguna Beach Police Department, and relayed the description of the situation, the woman, her vehicle and its license plate number to the police dispatcher.

The Laguna Beach Police responded immediately, but knowing she had been discovered, the woman had already ripped the hose out of the window and driven away before the police arrived. Dale was able to observe and relay the woman's direction of travel north on Laguna Canyon road.

At this point, SOARA member Ray Hutchinson, KF6CNZ, and his wife, Debby, were mobile in Irvine, and had been monitoring the activity on the repeater. Realizing that they were near Laguna Canyon Road, and that the woman was traveling in their direction, Ray and Debby drove to the interchange of the I-405 freeway and Laguna Canyon Road, and pulled to the side of the road in a position where they could observe which way the woman would choose to go. They were able to observe the woman enter I-405 northbound. Ray relayed this information, and further that a Laguna Beach Police cruiser was approximately four cars behind the woman's vehicle! Because the woman entered the freeway, the California Highway Patrol became involved.

Approximately one week later, Steve received a conference call from the woman involved, relayed through the Laguna Beach Police Department. She was calling to express her thanks to all the people involved for their efforts in preventing her attempted suicide.

With quick thinking and a sense of service to the community, Dale, Steve and Ray chose to become involved, and they had the perfect tool in Amateur Radio. —*via Amateur Radio Newsline*

Send your news to ***Worldradio*** at the same time you send it to other amateur publications and see who prints it first. We get the news out before anyone else.

VEs and waivers: Good idea or not?

Joe Sabutis, NWØA

A current topic that is receiving some discussion is whether it is a good idea to have amateurs who received their upgrades with a physician's waiver act as Volunteer Examiners who administer the 13 word per minute and 20 wpm code exams. (See, for example, the letter by Mark D. Tetrault, AA1OV, that appeared in the August, 1996, issue of QST). A physician's waiver appears on the back of the current FCC Form 610 and provides a means for a doctor to certify that a person is exempted from taking, and is given credit for, the 13 wpm and 20 wpm code exam elements because of a physical impairment that would last 365 days or longer. What is at issue is that those VEs who used a physician's waiver to upgrade never took the code tests that they are administering.

Being an Amateur Radio Volunteer Examiner, I agree that it is not within a VE's authority to question a waiver signed by a physician, and the upgrade should be processed as if the candidate had taken and passed the 20 wpm Morse code element 1C.

I also support the option of a physician's waiver. We have a gentleman in our club who contracted polio as a child. Now at a retirement age, he has times when an entire side of his body will go numb. I know that he can copy 20 wpm in his head, but if he experiences the numbness during a test, he could neither communicate test answers in a written or spoken form. It is for this gentleman that the physician's waiver exists.

But I would have to disagree with amateurs who state that it is nonsense to think that a VE with a waived license cannot administer or correct a VE session. Let me give two reasons: First, a physician's waiver by its very nature implies that it is physically impossible for a candidate to endure a 5 minute code element and the subsequent question and answer phase. Just as a VE team should not question the nature of the waiver, how can the same VE team be assured that the person who exercised the waiver option is able to endure and perform duties such as correcting exams and signing 610s and CSCEs for periods that can exceed three hours or more?

Secondly, although the grading materials for a test session are "written in English," *all* VEs are responsible for the administration of the *entire* examination element, not just the grading responsibilities. A person who exercised the waiver option has not really demonstrated that he/she can copy code at, say, 20 wpm, and thus cannot be assumed capable of verifying that the code being sent is the correct text to accompany the answers "written in English." As I read the FCC's rules, it is the responsibility of *all* three VEs for the integrity of the test session. Having one person who has not demonstrated code ability unfairly shifts this verifying process onto the remaining VEs, is not in the spirit of the VE program, and could invalidate a test session.

At the very least, if it was known that a VE had obtained his/her upgrade by a physician's waiver, candidates at this test session may feel resentment against or lack of confidence in the team administering the exams. The possible generation of these feelings should be avoided if the Volunteer Examiner process is to survive. **WR**

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w4zc@macconnect.com

Changes in Rules

In response to three petitions for rulemaking, the FCC has adopted changes to the Amateur Service rules that — among other changes — will make it easier to obtain 1x1 call signs for special event stations and harder to get a club station license.

Other amendments to the rules included in a Report and Order released 01 April 1997, will allow hams to append special designators either before or after their call signs, or both, and will recognize, but not require, the use of a session manager at Volunteer Examiner testing sessions.

The FCC declined to give examination credit for formerly held licenses, and turned down an ARRL request for a lifetime operator's license.

Under the new amendments, the FCC will allow a licensee to substitute a self-selected call sign from the block of 1x1 call signs for temporary use during a special event operation. The station must announce its regularly assigned call sign at least once an hour. The special event call signs will be coordinated and issued by outside volunteer entities, not by the FCC. The Commission will announce later when and how volunteer entities may volunteer their services. The chief of the Wireless Telecommunications Bureau then would certify volunteer entities to serve as amateur station special event call sign coordinators, who would issue 1x1 calls from a common, on-line special event call sign database. By definition, a 1x1 call sign consists of a single prefix letter, K, N or W; the region number, 0 to 9; and a single suffix letter, A to W, Y and Z — 750 call signs in all. The FCC turned down a suggestion that would have limited special event call signs to stations licensed to Amateur Extra class operators.

In proposing to increase the eligibility requirements for a club station license, the FCC said it was "important to determine that the applicant for a club station license is a legitimate radio club and not just a person seeking to acquire additional call signs." Under the rules changes, the FCC has raised the eligibility requirement from at least two members to a minimum of four. Applicants for a club station license must have a club name, a document of organization, management, and a primary ham radio purpose that's consistent with FCC rules.

Responding to a petition by the National Conference of Volunteer-Examiner Coordinators (NCVEC), the FCC said VECs could elect to designate a session manager if they wanted to, but they would not be required to do so. The Commission's new rules recognize the VE session manager function but emphasize that the three Volunteer Examiners at a test session would still be held "jointly and severally responsible for the proper conduct of each examination administered."

Another change will allow hams to include a self-assigned indicator before, after or both before and after the assigned call sign when identifying. Current rules only permit using such indicators after the station's regular call sign. Self-assigned indicators include those used to indicate location or type of operation, such as /KP2 when operating in the U.S. Virgin Islands or /m when operating in a vehicle. They also can denote participation in an unusual event or other atypical station operation, according to the FCC.

Citing mostly negative comments, the FCC decided against allowing exam credit for formerly held amateur operator licenses. The Commission also said "no" to the ARRL's suggestion that the operator license be valid for the lifetime of the holder. The FCC said operators would still have to renew their station licenses every ten years and that it did not want to maintain a separate database to keep track of

Amateur Radio Call Signs

The following shows the last call sign in each group to be assigned for each VEC Region under the sequential call system as of the first of April.
For more information, contact the Federal Communications Commission, Consumer Assistance Branch, 1270 Fairfield Road, Gettysburg, PA 17325-7245, toll-free 1-800/322-1117.

Radio District	Group A Am Extra	Group B Advanced	Group C Tech./Gen.	Group D Novice
Ø	ABØEW	KIØHM		KBØAIR
1	AA1RX	KE1HL	N1YWB	KB1CDF
2	AB2DK	KG2KS		KC2BGQ
3	AA3PO	KE3ZI	N3YZS	KB3BST
4	AE4BV	KU4EV		KF4QIR
5	AC5LX	KM5IC		KC5ZSK
6	AD6AV	KQ6NW		KF6JXT
7	AB7UQ	KK7GL		KC7VMM
8	AA8ZU	KI8BQ		KC8GTE
9	AA9UG	KG9JZ		KB9PZR
N. Mariana Is.	NHØA	AHØAX	KHØGS	WHØABG
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Hawaii	AH7S	AH6PA	KH7DJ	WH6DDT
Amer. Samoa	AH8O	AH8AH	KH8DH	WH8ABF
Alaska	**	AL7QT	KLØFM	WL7CUE
Virgin Is.		KP2CJ	NP2JQ	WP2AIH
Puerto Rico	NP3C	KP3AR	NP3MI	WP4NMZ

*All of the Group A call signs for Guam have been assigned. Any request for a Group A call sign will now be assigned a Group B format. **2x1 call signs are available for this group.

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station license expirations.

The FCC announced all of the rules changes in a Report and Order, FCC 97-99, adopted 20 March and issued 01 April. The amendments become effective 30 days after the Report and Order is published in The Federal Register. *—via ARRL Bulletins 17 and 18*

No more date of birth

Effective 21 February, the FCC no longer will distribute date of birth information as part of its Amateur Radio license data. No reason has been given for the change, but the field has been physically removed from the data stream. At least some call sign look-up systems could be affected by this change. *—tnx ARN*

FCC strengthens local government ties

The FCC may be getting ready to hand over some of its regulatory authority to local governments. Chairman Reed Hundt has announced the formation of a new Local and State Government Advisory Committee.

Their responsibility is to advise the commission on matters of concern to their political constituencies. This includes public rights of way, removal of barriers to entry into various aspects of communications and oversight of the site selection of any type of radio transmitting facility.

The committee will be made up of elected officials of state and local governments or their representatives and one member from the FCC. There will be fifteen members in all. It is not known if any representative of the nation's Amateur Radio community will serve on it. *—tnx ARRL Letter*

League petitions for RACES flexibility

The ARRL is seeking a change in FCC rules to relax regulations regarding the Amateur Radio Service and the Radio Amateur Civil Emergency Service (RACES). The League wants the FCC to allow hams actively supporting emergency or disaster communication or involved in drills and tests to communicate "between and among" RACES stations and those stations registered with civil defense organizations operating under RACES. The League also wants the FCC to relax time limitations on RACES emergency drills and tests. This would permit stations operating under RACES (organized under the Federal Emergency Management Agency and operating under local civil defense agencies) to communicate, as necessary during emergencies, tests and drills, with stations operating under the Amateur Radio Emergency Service, or ARES (begun by the ARRL in 1935) or with other non-ARES or non-RACES stations also engaged in emergency communication or drills. Right now, RACES and ARES operate independently of each other, although some hams participate in both organizations.

Relaxing the rules "would permit intercommunication with other amateurs active in emergency communications, and enable a form of 'mutual aid' in the Amateur Service," the League said in its filing. "It is time that the Commission permit, but not require, communications between RACES participants and non-RACES amateurs during emergencies or emergency drills and preparedness exercises." The League said the Commission has an opportunity to eliminate a restriction that "arguably should never have been enacted in the first place," and that has "outlived whatever utility it may ever have had."

The League also seeks to increase the time limit on RACES training drills and tests from one hour per week to up to five hours per week. *—tnx ARRL*

Spread Spectrum NPRM

The FCC is proposing to liberalize the use of spread spectrum modulation techniques in Amateur Radio, but not all hams are happy with what the regulatory agency has in mind.

The matter goes back to December 1995 when the ARRL petitioned the FCC to relax its rules to give Amateur Radio more opportunities to contribute to the development of spread spectrum techniques. Specifically, the League asked to have the FCC relax restrictions on spreading sequences. It also asked for greater flexibility in spreading modulation. In response, the FCC now has proposed to drop rules restricting amateur stations to transmitting only frequency hopping and direct sequencing spreading techniques. As requested by the League, the FCC also has proposed to require automatic power control for spread spectrum transmitters, to ensure use of the minimum power level needed to carry out communication.

In spread spectrum the energy of the transmitted signal is distributed among several synchronized frequencies within a band and reassembled at the receiving end. This reduces power density and duration of a transmission on a particular frequency and lets spread spectrum almost invisibly share the same spectrum with users of other, narrowband modes. And that's exactly why some hams oppose the ARRL and the digital community in their quest for increased use of spreading modulation technology. The weak signal community in particular fears that widespread use of spread spectrum will raise the ambient noise floor of the various bands. They say that even a hundredth of a decibel increase in band noise is intolerable because it will bury already weak signals in even more noise. Weak signal operators are very open in their dissatisfaction with expanding the use of spread spectrum. They are using their open remailer on the Internet to orchestrate mass opposition to the proposed rule making change. But in releasing the proposed regulatory change the said the rule amendments would increase spectrum efficiency and allow amateur operators to contribute to technological advancement. This makes it sound like a shoo-in for prompt approval.

Either way, comments on WT Docket 97-12 are due 05 May, with reply comments due no later than 05 June. After that it will be a matter of wait and see. *—tnx ARN, FCC, ARRL* **WR**

NEWSFRONT
(continued from p. 3)

MIR problems

It might be quite some time before you hear very much from the amateurs on board Russia's MIR space station. Ground controllers have ordered the crew to minimum activity status after the partial failure of yet another of the space stations oxygen generating systems.

A fire on the MIR took out one of the back-ups. Another system was reported overheating late on 03 April and had to be shut down. A supply rocket with spare parts was launched toward MIR on Sunday the 6th but do not expect any live Amateur Radio signals from the MIR crew until at least one of the systems is fixed. News reports say that could take several weeks to a month or more to accomplish. *—via AMSAT-NA BBS*

Fryes joins Kenwood

An equipment manufacturer is taking a different road to stimulate sales. According to Kenwood Communications latest authorized dealer list, giant California computer mass merchandiser Fryes Electronics is the first non-traditional ham equipment outlet offering Kenwood amateur products.

Fryes is based in Santa Clara, California, with store locations throughout California. Because of its vast supply of computer peripherals and parts, Fryes has become a popular place for hams who build or upgrade their own systems.

Having Fryes now listed as a Kenwood retailer affirms an announcement made last year by Kenwood. That announcement said that Kenwood was seeking non-traditional alternative outlets for their Amateur Radio equipment. *—via ARN*

STS-83 redo

While nothing's certain yet, NASA is investigating the possibility of reflying the STS-83 SAREX mission as early as July. According to a posting on the AMSAT bulletin board by writer Phillip Chien KC4YER, if it happens, it will be the fastest post-Challenger turnaround for a shuttle, and the most rapid turnaround for a shuttle crew ever. *—via AMSAT-NA BBS*

ARRL asks FCC to privatize malicious interference complaints

Citing "a substantial need to improve and increase the quantity and quality" and timeliness of enforcement in malicious interference complaints, the ARRL has called on the FCC to "create a streamlined, privatized enforcement process" to handle and adjudicate the most serious Amateur Service rules violations. In a petition for rulemaking filed 28 March, the League asked that the FCC change its rules to permit members of the volunteer Amateur Auxiliary to bring evidence of malicious interference violations directly before the Chief Administrative Law Judge. He or she would be authorized to determine if the complainants have a valid case, to issue show-cause orders, and to designate complaints for hearing.

The League recommended that the FCC capitalize on the volunteer resources available through the Amateur Auxiliary to relieve the evidence-gathering burden in such cases. If the rules changes are approved, the League said it would likely assist members of the Amateur Auxiliary in preparing and submitting complaints and in presenting cases at administrative hearings. "The increased use of volunteer resources would seem to be entirely appropriate in the Amateur Service, which involves avocational use of radio only," the ARRL concluded.

While noting that most hams obey the rules, the League said Amateur Radio needs the Commission's help "in a very few, persistent, serious enforcement cases" but has not been getting it in recent years because of the FCC's staff and budgetary limitations.

"Indeed, notwithstanding the best efforts of the Commission over the past several years, there has been no resolution of the four or five most serious cases brought to the Commission's attention," the League said in its petition. Even in some of the cases the FCC did act upon, the League said the Commission did not go far enough to make the problems go away permanently.

The League cited a case in New Orleans where fines against several amateurs were reduced but remain unpaid and uncollected. "There is a widespread, and growing, perception that administrative forfeitures are not collectable," the ARRL said, pointing to the complex, time-consuming method of collecting fines that is required by federal law. The ARRL noted that while the FCC suspended one ham's license in that city in 1996, it failed to look into malicious interference charges against at least two other hams in that area. The League said examples like these send a message that the FCC won't enforce Amateur Service rules in malicious interference cases. Informal mediation attempts also have failed. "Malicious interference problems, if left unchecked, tend to spread and increase in intensity," the League said. The ARRL suggested that a series of "visible, successful enforcement actions" would deter rules violations and promote self-regulation.

The ARRL also suggested that some FCC policies get in the way of timely, effective enforcement. Current Wireless Telecommunications Bureau policy requires the Commission to independently corroborate evidence gathered by Amateur Radio volunteers. "The policy often acts as an absolute obstacle to any enforcement activity whatsoever," and it demoralizes volunteers, who view their efforts as wasted.

While noting that malicious interference cases often attract a lot of attention within the amateur community, the League said ham radio can be "justifiably proud" of its history of voluntary rule compliance. "The overall level of compliant behavior among amateurs has not deteriorated over the years," the League emphasized, citing fewer than 10 active malicious interference cases in the U.S. at present. *—via The ARRL Letter*

2-meter SSB Net

South Florida hams take note. There is now an SSB net that meets on Sunday at 8:30 local time on 144.230 MHz. N5PIP in Pompano Beach is the net control. For you grid square chasers. That's Grid Square locator EL96. *—via Usenet*

Maritime Mobile — submerged!

Capt. Dan Reilly, W4NMK, USN (Ret)

On board the United States Submarine *Cutlass* operating in the western Atlantic, 1962. . . .

"K4TGB this is W4NMK. . .maritime mobile *submerged!* Alice, we are running at snorkel depth in the eye of the hurricane. Please report our position and barometric pressure to the Weather Bureau. . .over."

"W4NMK, this is K4TGB, roger Dan, it is getting mighty windy here in Virginia Beach, too. The forecast is for the hurricane to come ashore on the Delaware peninsula. I'll also call Jean and let her know the boat is okay. . .over."

"Roger, Alice, I see the hurricane wall approaching and the pressure is rising so down we go. 73. . .this is W4NMK, maritime mobile submerged. . .going deep. Out."

The QSO related above took place in 1962 and was one of many while I was operating my ham station aboard the submarine *Cutlass* as Captain.

Just after taking command, the Navy rescinded its prohibition of Amateur Radio operation from ships, which was prohibited since the end of WWII. I immediately requested permission to operate W4NMK from my ship. After a very long delay (or so it seemed), permission was given and we commenced operation in late 1961.

I was fortunate that the ship had recently received an AN/URT-32 transceiver, a 500 watt SSB unit. The antenna was a retractable whip with an internal antenna tuner. We could run with the boat completely submerged and, with the base of the antenna just above the surface, we could communicate. As a matter of interest, we found the closer that the antenna base was to the surface, the better we could get a signal out.

As the first submarine with a ham station, it appeared we were a rarity! Our first run after going on the air was to St. Thomas for operations in that area. It never occurred to me that we would be *deluged* with requests for QSL cards! So on arriving in St. Thomas, we obtained an old *Callbook*™ from KV4AA, Dick Spenceley, now an SK for many years. Then a request to our submarine tender print shop produced some QSL cards, with a picture of the boat. It was determined that such correspondence was official, so I was spared the expense of stamps — a DXers dream!

While running submerged, we often worked over 70 stations per hour. Keeping up with acknowledgments kept me busy when the boat was below communication depth or when on the surface — but all contacts were acknowledged as long as we had an address.

Of course, we could not pass official traffic, but on one occasion I did "bend" the rules.

DXCC was accomplished in a matter of weeks, but of course, would not count for an award since we were not operating from a fixed location. One morning I made WAC in thirty minutes! The farthest contact we made was to the USS *Arneb*, returning from Operation Deepfreeze in the Antarctic. She was in the exact opposite position on the globe from us (antipode), in the South Pacific.

Phone patches back to families in Norfolk were handled by several hams in that area, and proved a big help for morale for the ship. Upon return to port, we were able to show our gratitude by taking some of these hams on board and letting them also operate submerged!

Many times I found that we were able to get into the beach via ham frequencies when we could not get through on the Navy circuits. Of course, we could not pass official traffic, but on one occasion I did "bend" the rules.

In October, 1962, when operating off the Virginia capes, we were in contact with a ham in Norfolk who told us to listen to any broadcast frequency we could hear for an important announcement that the President would make that night. That night, President John F. Kennedy made the live announcement which history would call the Cuban Missile Crisis!

Shortly after hearing that broadcast, we received a message from our squadron commander telling us to return to port immediately and load up for patrol. We were to send our Logistic Report of things we would need — everything from food, diesel fuel, spare parts, to *torpedoes!*

For several hours, we attempted to contact the squadron to no avail. Realizing that time was of the essence in getting into port, loading out, and departing for a possible war patrol, I contacted a Norfolk ham and we had her call the squadron with our requested items. My neck on the line!

Upon arrival in port, everything was ready and we departed on patrol for the North Atlantic. Naturally, radio silence was in effect until the crisis was over, but in late November, we were able to run phone patches telling our families that we were on the way home!

Returning to the opening QSO exchange above, the *Cutlass* had been operating in the Western Atlantic when hurricane warnings had been raised. The projected storm track took it right over our operating area so we submerged to 250 feet — even at that depth, there was a bit of a roll as the hurricane approached. About the time we estimated the storm to be in the immediate vicinity, the motion decreased and we rose to periscope depth and raised the snorkel to admit fresh, outside air. Clearly we were in the eye of the hurricane, the sun was shining and the great wall of dark, menacing clouds could be seen in all directions. With the snorkel raised, we were able to measure the barometric pressure which continued to fall for a few moments as the very center of the storm approached and then rise as the center passed and the rear wall approached. "Hurricane hunting" via submarine!

Some years later in the late '60s and early '70s, I commanded two large amphibious ships and again was active as a maritime mobile — but then we were not a rarity since I had the good sense not to try to submerge! (One of these ships was the USS *Pocono*, flagship of the Atlantic Amphibious Force)

Once during a space recovery mission, we were on station off the Canary Islands and for some reason

we could not reach the east coast. My antenna was a whip-mounted on one side of the stack and our ship's heading blocked the signal to the east. So I simply ordered a change in course to clear the antenna. That particular ship, the USS *Algol*, displaced 10,000 tons — was that a record for having a 10,000 ton rotator?

During our operations in the Atlantic, Mediterranean, and Caribbean, we made many contacts with folks "on the beach" which resulted in many eye-ball QSOs when the ship came into port. I particularly enjoyed the hospitality extended to us in Martinique, Panama, and other places in the Caribbean. Even today I occasionally have a contact with someone who remembered W4NMK/ maritime mobile *submerged!*

An example of just such a contact happened in January of this year as I was running APRS near the Georgia/Florida line when I received a message from a friend I had last worked in 1963.

At a reunion of old submariners in September 1996, the one thing most of my old crew remembered was the phone patches they were able to make and how much they meant to morale.

Today, with all submarines nuclear powered, running very deep, hardly ever coming to the surface and then communicating via satellites, the days of maritime mobile — submerged is now a thing of the past. *—via Western Carolina ARS*

Rebecca Rich, KBØVVT, is pictured above, after she and her parents upgraded their licenses at Hambash '97 in Kansas City last March. Parents David Rich, KGØUS, and Barbara Rich, KGØUT and eight-year-old Rebecca, all upgraded to Extra Class.*—photo by Larry Andrew, KBØPJR*

Club service since 1947

Steve Godwin, KD6ZZ

Members of the Key West (Florida) Amateur Radio Club, W4LLO, accept a plaque presented by the American Radio Relay League commemorating 50 years as an affiliated club. The club was founded during World War II, in 1943, by a group of amateurs in anticipation of the time when hams would be allowed to return to the air.

The club became affiliated with the ARRL on 02 May 1947. The club operates a repeater on 146.94(-) MHz which is frequently used by vacationing hams who are among the tens of thousands of annual visitors to the island.

Pictured in the first row (from left to right): B.O. Lowery, W4NLG; Steve Godwin, KD6ZZ, President; Carmelita Gossard, W3YWK, Monroe County Emergency Coordinator; Mel Gossard, K3ML, Trustee.

Second row (left to right): L.T. Perpall, WA4JFJ, BBS Sysop; Jake Eckardt, N3WFU, Vice President; Tom Hendrix, W9CK; John Ritlop, KF4PBN; John Wahl, KF4PBK; Dr. Lou Persons, W4PJG.

Members not pictured: John Allen, KF4NUD and Mitchell Major, KF4PBJ. Photo courtesy of Shirley Perpall, KE3LXP, Secretary. **WR**

Field Day Bonus Points . . .

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•50 points if 3 or more beam elements lie in the same plane with no greater than 10-degrees deviation. An extra 150 points if the plane is within 10-degrees of horizontal

•Add 10 points per inhaled moth or fly, while speaking into the microphone. 5 points per stuffed mosquito, squashed on log; must submit log

• The "Yeah, right" bonus: Add 100 points for each 20-meter net control operator who appears on your frequency and, who after listening to your plea, apologizes and politely agrees to let you continue

—MARC *BARC* Metropolitan ARC, North Little Rock, AR

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MFJ-989C world famous *3 KW* Antenna Tuner

MFJ-989C **$349.95**

More hams use MFJ-989s than any other 3 KW antenna tuner in the world!

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Two *massive* 250 pf transmitting variable capacitors with extra wide (0.27 inch) spaced stator plates can handle 6000 volts and amps of RF current for arc-free operation.

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MFJ . . . the world's most trusted name in antenna tuners

Is your station safe from summer lightning?

Raymond P. Bilger, W3TDF

So, you bought a new rig (receiver, transceiver, etc.), and it's sitting on a wooden table, still in the box. What are the chances of it becoming part of the lightning path, and being destroyed? "None," you say, huh? Well, by gosh you're right. So now you remove it from the box and admire it sitting on the table. Still no chance of it becoming part of the path, right? Absolutely! Next, after checking the manual, you hook up an antenna, and plug it into the AC, or a power supply that is plugged in. Now your nice new rig is part of a possible path. Whether the path be "cloud to antenna, to feed line, to radio, to AC to ground" (or the reverse). Anyway, leave it that way, and you are inviting trouble.

For peace of mind you can pull the plug from the AC. If you are in the basement you can drop the cord/plug onto the cement floor. So now you have reduced the potential path by having a half inch gap between the plug prong and the grounded(?) cement floor. Will it jump that half inch? Did it jump between your antenna and the cloud?

Okay, so you put the cord up on the table, but in the meantime you had put the rotator control box on the wooden table, and it's plugged in. How much distance between that control box and the rig? Not nearly as far as it is between the cloud and your antenna, right? Is there a light, or clock near the rig that is still plugged in?

But wait, why not just remove the antenna from the rig? Very good thinking, but that plug still better be pulled, and no ground left attached either! Why? Please study these possible paths.

Cloud to antenna, to rotator, to wire, to control box, to 6 inch gap, to rig, to ground;

or:

Cloud to ac mains, to house wiring, to clock, to 6" gap, to rig, to ground.

If you are using a metal desk instead of a wooden table, then those 6" gaps become much less, depending on whether there are rubber feet on the various items mentioned. Of course, if you are not in the basement then you can pull *all* the plugs and just drop 'em on the floor.

As food for thought — picture yourself as an amateur magician. You levitate, (elevate if you must), the entire operating position and pass a loop over it, left to right (and/or vice versa). Did it make it without any wires, or anything else interfering?

That ground that you insist on having attached to your rig, etc., is (1) to keep you from getting electrocuted should there be a problem with a breakdown between the AC mains and any part of your operating hardware that you might touch, and (2) to improve the transfer of RF from the rig to the ether. If you want to leave it on there to enhance that path that I have been talking about, then you're on your own.

If you take a direct hit from that terrible lightning, then there isn't much to worry about. You will probably lose the TV, microwave, stereo, telephones, refrigerators, and maybe the whole house. Remember, the direct hit may be several blocks away, but, it's those fingers (like tentacles), from the main bolt that we are to be concerned with. There may be hundreds of them, so our chances of getting hit with one of them is hundreds to one of taking the direct hit. The only ground in my shack is tied to a panel with SO-239 coax connectors on it. When I pull the power, I transfer the coax cables from the coax switch to that panel. There is also an AC receptacle on that panel, with all pins grounded. It isn't for power, it's for the rotator control box cord to plug into.

Have I thought of everything? I think so, but if you come up with any suggestions, please don't hesitate. I'm listening! Just because you have equipment insurance is no reason for you to subject yourself to lost operating time while waiting for replacements. Remember, the important concern is the path, and keeping you or your equipment from being a part of it. WR

Hams assist in Douglas County siren test

Dave Kline, WJØZ

On 05 April 1997, a group of 57 Amateur Radio operators volunteered their time on a soggy Saturday morning to participate in the annual Douglas County siren test. This event provides a vital service to emergency officials and the citizens of the Omaha, Nebraska area by determining the operational status of the tornado warning system.

The county's 73 sirens were observed for proper operation, with 62 of them under the watchful eyes of the A.R.E.S. group. Reports gathered from Amateur Radio operators help the county to determine which sirens need to be repaired before the onset of the severe weather season.

Sarpy County A.R.E.S. also provided this service to their respective emergency management agency. All together, over 100 sirens were checked by hams in the greater metropolitan area.

Thanks go to the following stations who participated in this vital community service:

AAØDW	KBØUKM	NØWAV
AAØH,	KBØVMF	NØYUE
AJØA,	KBØWYG	NØZHY
KØIL	KBØYEA	N9ARX
K9RZ	KBØYOO	NWØM
KAØUWO	KD4UXU	WAØDGA
KA4ZZQ	KEØMX	WAØFTH
KBØBRM	KEØXQ	WAØSAQ
KBØFSI	KGØEJ	WAØUKE
KBØKYM	KGØSY	WAØZQX
KBØLIL	KGØXJ	WA6POZ
KBØOVQ	KIØCU	WA6SWJ
KBØQXF	NØAZF	WBØMNL
KBØRHU	NØHPP	WBØSMR
KBØTGY	NØJDL	WDØEWH
KBØTGZ	NØJSB	WH6BUL
KBØTHC	NØKWP	WJØZ
KBØTHD	NØTRK	WXØI WR

No photos? Before submitting a plain-text story to ***Worldradio****, see if other local amateurs or club members happen to have photos available.*

I'll be better prepared – next time!

Sam Vigil, WA6NGH

The plan was simple. Throw a few things in the van, head out to a campground in the Los Padres National Forest (encouragingly called High Mountain Camp), and become the high scorer in the Santa Barbara Section for the ARRL January VHF Sweepstakes.

Look at all the things in my favor. I'm an "old-timer," a veteran of more than a few Field Days, and proud owner of a new, state-of-the-art dual band handy-talkie.

Now for a few qualifiers. Although I've been a ham since 1961, I haven't exactly been very active all those years. But now with the kids grown, I've returned to my old hobby with a vengeance. First I spent some time rehabilitating my vintage Collins KWM-1 transceiver. I then tackled a few QRP kits and some antenna projects, and now most recently, have been exploring VHF and UHF operations. I've really enjoyed meeting a lot of the local folks on the repeaters and getting involved with the ARES and RACES organizations. But alas — at heart, I'm still a "wannabe" contester and DXer! Hence VHF Sweepstakes.

The first problem was just getting out of the house. My XYL was tied up in a meeting until about 2 p.m. on the Saturday of the contest, so we couldn't leave home until then. I also needed to build a new antenna, because all I had at this point was a dual band rubber duck! With the help of an article by Dennis Blanchard, K1YPP, in the July 1995 *QST*, I whipped up a twin lead J-pole. As usual, it took longer than planned, but when I actually tested it, I made a solid QSO on a previously unreachable repeater many miles away in Santa Barbara, California.

After packing ham gear, camping gear, and food, we started on the road at 3:30 p.m., with sunset less than two hours away.

Our first surprise was an unpleasant one, and it came at the Ranger Station near High Mountain Camp. We were told that recent storms made the road passable only to 4-wheel-drive vehicles. But the Ranger suggested an alternative to us, Pozo Summit, the second highest point in the area accessible by road, at about 1,500 feet. There were no facilities or campsites available there, but we could park at a turnout and sleep in our van.

When we arrived at Pozo Summit we faced a surrealistic scene of destruction. The area had suffered a major wild fire the previous summer that had blackened 166 square miles. Our first choice, High Mountain Camp, had escaped the fire, but Pozo Summit had been at the center of the firestorm. As far as the eye could see, not a patch of green was visible.

The turnout described by the Ranger was barely wide enough for the van, with a 200 foot drop-off on one side, and the entrance to an off-road motorcycle trail on the other.

But the biggest problem for me was that there were no trees! I had intended to loft my J-pole about 15 feet up a convenient tree, but the tallest thing around was a four-foot-high, burned out Manzanita bush. Bummer!

Although it was not cold, the wind picked up and we retreated into the van to eat our dinner. I started scanning the VHF and UHF bands. I could hear four VHF repeaters and one UHF repeater, but no simplex activity at all. After two hours of scanning I decided to try one of the repeaters. I soon discovered that although I could hear them, my three watt HT into a ground level J-pole just wasn't enough.

I finally made a good, solid contact on the WB6FMC machine, a local repeater that I hadn't previously used. It is located on Cuesta Ridge, about 10 miles away from where we were on Pozo Summit. It wasn't exactly DX, but it was a contact. Unfortunately since repeater contacts don't count for Sweepstakes, my score so far was still zero. My sole contact, Pete Ohanian, KE6NOX, was located near Madera, California, in the Sierra Nevada foothills, over 100 miles away! He was running 50 watts into a 13 element Yagi. We tried simplex with no luck. He was barely breaking squelch at my end and he couldn't hear me at all. I finally heard some simplex activity, but both QSOs were ragchewers and either didn't hear me or didn't want to get in the contest. I gave up at 10 p.m.

What went wrong? Pete, KE6NOX, was of the opinion that the VHF Sweepstakes activity was likely to be SSB or CW weak signal stations rather than FM. He works 2M SSB with a transverter and said that the pickings are pretty slim in Central California, even with his higher

power and superior antenna. San Luis Obispo County, my QTH, is fairly lightly populated with about 200,000 people, but I know there are over 200 amateurs registered with the local ARES organization, most of them VHFers, so where were they?

Obviously a ground level J-pole is not a great antenna, and in retrospect, Pozo Summit was not all that great a location. But there is always the next challenge — the next contest! For the ARRL June VHF QSO Party, I have made the following resolutions:

1. Since I will be operating QRP, build a better antenna, like the 5-element cubical quad designed by Jim Reyenante, KD6GLF, in the January 1995 *QST*. Or the ultimate revenge, the 33-element "Rope Ladder Quagi" by Jim Ford, N6JF, in the March, 1995 *QST*. It is a bit difficult to rotate though!
2. Go where the stations are.
3. Borrow my son-in-law's 4WD.
4. Bring my own antenna mast, and not assume that a nice convenient tree will be available. At least have a mobile antenna as backup.
5. Get packed and away early!

Be sure to listen for me! WR

Up in the attic . . .

Eric Via, AD4SS

It's up there now — up in the dark attic — shining copper wire, stretched to perfection, hung with love. . .and judging from my first-ever contact last night to Massachusetts, (I'm in Texas) — it *works*! But there is a story involved. . . .

I like to keep my hair *very* short; we're talking with a number one clipper, and so I had my wife cut my hair as she always does, out in the garage.

Shower? I can do that later — right now I want to see what happens if I string this tangled up dipole carcass up in the attic!

•Lesson learned: It's probably *not* a good idea to have your hair cut and have hair stubble down your shirt and pants before going to crawl around in fiberglass insulation! Got it!? Most people probably don't need to be taught this lesson, but then you don't know me, spontaneous, silly, and "do first, think later" attitude!

I get up to the attic, my wife goes to bed and I start setting up the dipole.

•Lessons learned: Bring all tools (string, nails, flashlight, coffee, hammer, knife) up to the attic *with you*! Hair stubble in pants itches.

Insulation itches. Copper wire *somehow* comes to life in the dark on the floor and tangles itself up in ways that Houdini himself couldn't get undone! A 40M dipole is LONG!! Attic space *isn't* that long!

I hung one end, stretched it all the way down, straight and true, and things are looking good. . . FB indeed!

•Lessons learned: Hair stubble in pants seems to have found a home in a place I don't care for it to be!

Where did I set my coffee?? Thirty-two years old may be young, but I sure can't stretch, climb, and bend like I used to! Oh, youth — where are you!?

I hit the center of the dipole, and it was a straight stretch indeed! I'm a happy soon-to-be ham operator!

I secured the center-feed, and planned my next stretch of the wire — it was looking good — an even better route for the next leg of the dipole was coming up. The roof goes up higher! (probably around 30 feet up or more!) The bad part is it's not as long as the first stretch.

•Lessons learned:

Just because you untangle *one* end of the dipole doesn't mean you don't have to untangle the *other* end! Phooey. Coax feedline must really love copper, because they were tangled up in each other like you wouldn't believe! There are going to be some wide-awake rats, roaches, bats, and other critters in my attic, because I do NOT know where I put down my coffee cup!

If you're one of those people who are "into" pain, have your hair cut with clippers more often, and make sure that you don't brush the hair off yourself, either! A heavy hammer stuck in the pants pocket of your jeans will cause gravity to be stronger on your jeans (thus pulling them down). This is really convenient if you want *more* insulation in your pants!

I continued my journey, untangling, snarling, itching, and it was getting exciting. I had to make a few bends in the dipole but nothing major. I'm sure it will affect my signal somehow, but I'm not going to worry about it for now.

At one point as I sat untangling, I took a minute to get philosophical . . . here I am, with a computer downstairs on safe ground. It has a nice, even "cool" device on it that MOdulates and DEModulates. I can send messages to darned-near anyone in the world with it, it costs very little per message. It's fast, efficient, and modern, and here I sit, itching in a mountain of fiberglass insulation, stringing a wire across my attic — so I can use ancient Morse code to *maybe* talk with other people.

Am I completely nuts!!!? Have I lost my mind!!!? And the people I'm going to be "talking" to have done this very same crazy thing that I'm doing!? They don't *deserve* to be talked to!!!

Now the good part comes — here's where Murphy's Law kicks in.

I'm way in the back part of the house, about to put up the end of the dipole. I'm over my bedroom and I'm itching like a madman and cursing and sweating and I need a smoke.

Remember that I said my wife (a very smart gal) went to bed!?

I'm being as quiet as I can, and I just KNOW the attic floor will give in and I'll fall right down on top of her through the ceiling. I even had it planned what wise-guy remark I was going to use when this happened — it was somewhere between "We gotta stop meeting like this," or "Hey, Honey, just thought I'd drop in and see you."

But I didn't fall through. . . this time. . . I think fate has it that I will

probably die in a nastier accident later. . . oh boy. . . perhaps fate also has it that my kids are meant to be fatherless and that later I'll decide I want to set up a *tower*??

Okay, my Weimarner, Luke, sleeps in my bedroom with us, and he also decided to go to bed when my wife did, and Luke also decided that the night I put up a dipole in the attic would be a fine time to suddenly become Mister Watch-dog!!

BARK GROWL BARK BARK BARK RUFF BARK!

Aarrrgh. . . .

Why!? Why me!? I can't figure out what to do — I can just picture my wife below sitting up in bed wondering what the heck's going on — wondering why her husband isn't coming to tell the dog everything's okay.

I can't figure out if I should sit still and hope Luke stops barking, yell down through the roof to the dog, "It's ME — your master, up in the attic with insulation and hair stubble down my pants putting up a wire antenna — be quiet!" or, simply go ALL THE WAY back across the attic, down the stairs, and shut the dog up, complete with the hammer in my pocket.

I decided to go back down, and so I flirted with death even more, and scampered all the way across the attic, ran downstairs, and pulled the dog from our bedroom and locked him in a spare room so he'd be quiet.

•Lesson learned: Dogs don't care for people crawling around in attics (I don't either anymore). I'll pay for this with Mrs. Via in the morning.

To give this long (sorry) story a happy ending — I finally finished, got the antenna up wonderfully, took a shower, let the dog out of the room, apologized to my wife, never found my coffee, and left a pair of pliers in the attic.

Was it worth it!? YES! I had my first contact with my HW-8 and my attic dipole last night with AA1OK in Massachusetts!!!

Now I see why you other guys are crazy, and I see the thrill! Stay tuned!

Yours in QRP, Eric "Mr. Attic" Via, AD4SS, Wylie, Texas

Plan ahead for —"*The Colorado 14er*"

The 1997 Colorado 14er Radio Event will be held Sunday, 24 August. During the event, a group of Amateur Radio operators will operate portable from the summits of a number of Colorado's 14,000-foot mountains. The operating times will be from 9 a.m. to 12 noon, local time.

Radio amateurs are encouraged to work as many of the mountain-top stations as possible. However, this is *not a contest*, no points are awarded, no scores recorded. A special event QSL card may be obtained by QSLing to the mountaintop station's home QTH (please include an SASE). Most mountaintop stations will be running low power handheld radios. To reduce QRM, *please do not use high power* (more than 50 watts) and do not call 14er stations unless you can *hear* them.

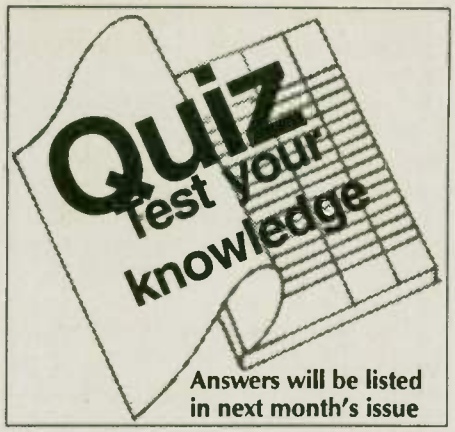
Radio operators with 14er hiking experience who wish to participate should contact Bob Witte, KBØCY at 719/488-0859 or RobtWitte@ aol.com (e-mail is preferred). To avoid having multiple stations on the same peak, radio amateurs who wish to operate from one of the peaks must coordinate with KBØCY.

Frequencies used during the event:

- •146.43 MHz Longs Peak
- •146.46 San Juan Range (Handies, Redcloud, ..) Sangre de Cristo Range (Crestone, Humboldt, ...)
- •146.49 Bierstadt, Grays and Torreys
- •146.55 Coordinating Frequency (Net Control, Pikes Peak)
- •146.58 Mt. Evans
- •147.42 Elk Range and North Sawatch Range
- •147.45 Mosquito Range (Quan dary, Lincoln, ...)
- •147.48 South Sawatch Range (Huron and peaks south)
- •147.51 Pikes Peak (QSOs)
- •147.54 reserved for mountaintop stations only
- •223.5 primary 222 MHz frequency
- •446.000 primary 70 cm frequency
- •446.025 alternate 70 cm frequency
- •446.050 alternate 70 cm frequency
- •52.525 primary 6M FM frequency
- •Other bands/modes: standard calling frequencies

Thanks to everyone who participated in last year's event. We had another safe and fun event. Mark your calendars for Sunday, 24 August, 1997. WR

Join your local radio club and participate in public service events, and help newcomers to the hobby. You never know when your area may be the site of an emergency — be prepared to be of service to your community. Check pages 44 and 45 to find a club near you.



The answers to last month's quiz questions are: 168. B; 169. A; 170. C; 171. D; 172. D; 173. B; 174. C; 175. D' 176. A; 177.D; 178. A; 179. C; 180. B; 181. A; 182. C; 183. C; 184. A;

185. What is the principal characteristic of a varactor diode?
A. It has a constant voltage under conditions of varying current
B. Its internal capacitance varies with the applied voltage
C. It has a negative resistance region
D. It has a very high PIV

186. What is a common use of a varactor diode?
A. As a constant current source
B. As a constant voltage source
C. As a voltage controlled inductance
D. As a voltage controlled capacitance

187. What is a common use of a hot-carrier diode?
A. As balanced mixers in SSB generation
B. As a variable capacitance in an automatic frequency control circuit
C. As a constant voltage reference in a power supply
D. As VHF and UHF mixers and detectors

188. What limits the maximum forward current in a junction diode?
A. The peak inverse voltage
B. The junction temperature
C. The forward voltage
D. The back EMF

189. How are junction diodes rated?
A. Maximum forward current and capacitance
B. Maximum reverse current and PIV
C. Maximum reverse current and capacitance
D. Maximum forward current and PIV

190. What is a common use for point contact diodes?
A. As a constant current source
B. As a constant voltage source
C. As an RF detector
D. As a high voltage rectifier

191. What type of diode is made of a metal whisker touching very small semiconductor die?
A. Zener diode
B. Varactor diode
C. Junction diode
D. Point contact diode

192. What is one common use for PIN diodes?
A. As a constant current source
B. As a constant voltage source
C. As an RF switch
D. As a high voltage rectifier

193. What special type of diode is often used in RF switches, attenuators, and various types of phase shifting devices?
A. Tunnel diodes
B. Varactor diodes
C. PIN diodes
D. Junction diodes

194. What are the three terminals of a bipolar transistor?
A. Cathode, plate and grid
B. Base, collector and emitter
C. Gate, source and sink
D. Input, output and ground

195. What is the meaning of the term alpha with regard to bipolar transistors?
A. The change of collector current with respect to base current
B. The change of base current with respect to collector current
C. The change of collector current with respect to emitter current
D. The change of collector current with respect to gate current

196. What is the term used to express the ratio of change in DC collector current to a change in emitter current in a bipolar transistor?
A. Gamma C. Alpha
B. Epsilon D. Beta

197. What is the meaning of the term beta with regard to bipolar transistors?
A. The change of collector current with respect to base current
B. The change of base current with respect to emitter current
C. The change of collector current with respect to emitter current
D. The change in base current with respect to gate current

198. What is the term used to express the ratio of change in the DC collector current to a change in base current in a bipolar transistor?
A. Alpha C. Gamma
B. Beta D. Delta

199. What is the meaning of the term alpha cutoff frequency with regard to bipolar transistors?
A. The practical lower frequency limit of a transistor in common emitter configuration
B. The practical upper frequency limit of a transistor common base configuration
C. The practical lower frequency limit of a transistor common base configuration
D. The practical upper frequency limit of a transistor in common emitter configuration

200. What is the term used to express that frequency at which the grounded base current gain has decreased to 0.7 of the gain obtainable at 1 kHz in a transistor?
A. Corner frequency
B. Alpha cutoff frequency
C. Beta cutoff frequency
D. Alpha rejection frequency

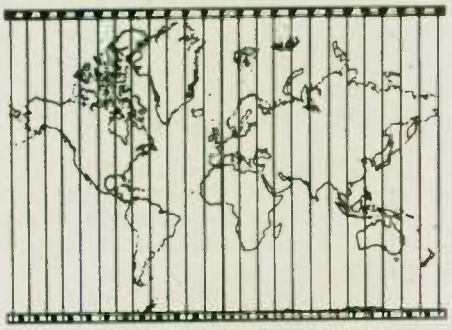
201. What is the meaning of the term beta cutoff frequency with regard to a bipolar transistor?
A. That frequency at which the grounded base current gain decreased to 0.7 of that obtainable at 1 kHz in a transistor
B. That frequency at which the grounded emitter current gain has decreased to 0.7 of that obtainable at 1 kHz in a transistor
C. That frequency at which the grounded collector current gain has decreased to 0.7 of that obtainable at 1 kHz in a transistor
D. That frequency at which the grounded gate current gain has decreased to 0.7 of that obtainable at 1 kHz in a transistor

202. What is the meaning of the term transition region with regard to a transistor?
A. An area of low charge density around the P-N junction
B. The area of maximum P-type charge
C. The area of maximum N-type charge
D. The point where wire leads are connected to the P- or N-type material

203. What does it mean for a transistor to be fully saturated?
A. The collector current is at its maximum value
B. The collector current is at its minimum value
C. The transistor's Alpha is at its maximum value
D. The transistor's Beta is at its maximum value

204. What does it mean for a transistor to be cut off?
A. There is no base current
B. The transistor is at its operating point
C. No current flows from emitter to collector
D. Maximum current flows from emitter to collector

Awards



Contact All Time Zones

To help commemorate 25 years of ***Worldradio,*** we announce a new award to be known as "Contact All Time Zones" (CATZ).

Rules

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

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

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

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

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

The award may be endorsed as the applicant wishes in regard to band and/or modes.

Application

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

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

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

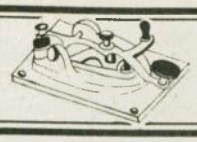
It is not necessary to mail your QSL cards to ***Worldradio.*** Send a statement signed by two other licensed radio amateurs (General Class or above) that they have inspected and verified the required QSL cards.

Address applications to CATZ Award, ***Worldradio,*** 2120 28th St., Sacramento, CA 95818.

Those receiving the CATZ award will have their name and call sign reported in the ***Worldradio*** DX column. **WR**

Photographers! If you fancy yourself the qualified photographer among club members, volunteer to get out there and cover the events!

Silent Keys



Robert G. Osborn, Jr., N6MSO

Robert G. Osborn, Jr., N6MSO, a long-time Malibu resident, passed away Friday, 21 March 1997, after a lengthy illness. Born in Dayton, Ohio, 16 October 1916, early in life he was inspired by a close personal association with the Wright Brothers. He graduated from Ohio State University in 1940.

At the outbreak of World War II he joined the Army Air Corps and was commissioned a Second Lieutenant. His assignment was to dismantle, evaluate, and rebuild captured German rockets and later, jet aircraft. He ultimately rose to the rank of Captain. In 1946, following the war, he came to live in Malibu, California and became a pioneer in manned high-performance jet and rocket-powered aircraft for Santa Monica-based Douglas Aircraft.

During the next 10 years much of his time was spent at Edwards Air Force Base in the Mojave desert. N6MSO was part of that special community of test pilots and engineers memorialized in "The Right Stuff." He played a key role in extending man's reach into space beginning with the construction of the Douglas Skyrocket, which in the early 1950s established new records for highest altitudes and speeds achieved in manned flight. Some of his achievements in this endeavor were chronicled in the contemporary book of the era, *The Lonely Sky.*

Bob Osborn capped his 27-year career in the aerospace industry by contributing his considerable rocket expertise to the highly successful Saturn/Apollo moon missions including the historic first manned moon landing.

He also spent countless hours forwarding family member's communications to and from American servicemen in harm's way in remote areas overseas.

"Bob-O," as he was affectionately known to his friends, became a leader in the cause of community emergency preparedness. An active Amateur Radio operator, he became a dedicated volunteer in the Disaster Communications Service with the Malibu Sheriff's Office He contributed and raised thousands of dollars to support emergency communications in the Malibu region.

Such was his devotion, that he remained on duty at his disaster communications post while his own home burned during the Malibu fire of 1993. He was selected the 1995 Sheriff's Department *Volunteer of the Year* by the Board of Supervisors of Los Angeles County, and was also awarded a certificate for distinguished service by Sheriff Sherman Block in 1996. He is survived by his son Robert G. Osborn, III, daughter Lynn Osborn Dornhelm, and three grandchildren —*submitted by Jeff Reinhardt, AA6JR*

Jo An J. Smith, KE6GQD

Jo An J. Smith, KE6GQD, passed away 07 March 1997 from complications of pneumonia which strained her already weakened heart. She was 55.

She had just recently became an Amateur Radio operator, and was eagerly anticipating becoming an active ham. Jo An was a piano teacher, teaching piano to children out of her home. She leaves her husband, William T. Smith, KE6GTC, after 35 years of a happy marriage.

She is also survived by her two sisters, Nilha, who lives in Castro Valley, California, Kathy lives in Reno, Nevada, and her aunt Dorothy and uncle Everett Gracey, WA6CBA, of Reno, Nevada. —*contributed by Everett L. Gracey, WA6CBA*

Delf Norona, WA8NDY

Delf Norona, WA8NDY, died 04 March, of a massive heart attack at his home in Buckhannon West Virginia. He was 74.

Delf was first licensed as a Novice in 1962 with the call sign WN8NDY, and upgraded to General Class the following year as WA8NDY.

He was a member of local Amateur Radio clubs, a Life Member of the American Radio Relay League, and a member of QCWA.

Delf was active with Amateur Radio emergency preparedness during the '60s and '70s. He was a local coordinator for ARES and RACES, and served as WV Section Emergency Coordinator. He also had served as SEC for West Virginia Air Force MARS.

He is survived by his wife, Mary Jane, WA8WCK. —*contributed by Bob West, WA8YCD*

Special Events

Rochester DX Association 50th Anniversary

June 1997 marks the 50th anniversary of the Rochester DX Association (in Rochester, NY). The club will be celebrating this milestone on the air. The highlight is planned to take place and revolve around our Field Day operation, 28 and 29 June, using the club call, W2RDX.

Look for us on the air with the club call during June with most activity after 14 June, signing W2RDX/50. If a special call is issued it will be used for Field Day and as long as possible before Field Day.

Special QSL cards will be available with an SASE sent to: Irv Goodman, AF2K, 515 Drumm Rd., Webster, NY 14580. DX QSL cards can be sent to the Bureau and will be returned via the bureau.

Fort Steuben Bicentennial

The Steubenville ARC (Ohio) and Weirton ARC (West Virginia) will operate W8CWO on 14 and 15 June, 1550-2200 UTC both days to commemorate Fort Steuben's bicentennial (1797-1997), named for Baron Von Steuben. Operation will be on 7.270, 14.270 and 28.470. For certificate, send SASE to Bill Leist, WA8DRL, 2444 Alexander Manor East, Steubenville, OH 43952.

Corvette Homecoming

The Western Kentucky DX Association will operate KB4ALC from 0000 UTC 07 June to 2400 UTC 08 June, in celebration of the 1997 Corvette Homecoming. Operation will be on 3.860, 7.235, 14.235 and 21.310. For certificate, send QSL to KB4ALC, Kenneth E. Newman, 505 Emmett Dr., Bowling Green, KY 42101.

Normandy electronics commemorative

The Historical Electronics Museum ARC will operate W4GR on 07 and 08 June, from 1400-2100 UTC both days to commemorate the contribution of electronics to the success of the Normandy invasion on 06 June 1944. W3GR will operate an original U.S. Navy TBL-13 transmitter on CW in the lower portion of the General segment of the 40 and 20 Meter bands. SSB operation will be on 40, 20, 15 and 10; also on VHF, 70 cm ATV and the RS-12 Satellite. Send QSL and two 32-cent stamps for certificate to: HEMARC W3GR, c/o Historical Electronics Museum, P.O. Box 746, M.S. 4015, Baltimore, MD 21203.

Young Eagles Day

The Oswego County Amateur Radio Emergency Service, OCARES, Fulton Amateur Radio Club and Experimental Aircraft Association Chapter 486 will operate KY2F, 14 June from 1200-2100 UTC during Young Eagles Day from the Oswego County Airport in Fulton, New York. Operation will be in the lower half of the General 80, 40, 20, 15 and 10 Meter phone bands. For certificate, send QSL and a large SASE to KY2F, Box 5281, Oswego, NY 13126.

Pearson Air Museum

The Clark County ARC will operate W7AIA on 21 and 22 June, 1600-2400 UTC each day to commemorate the grand re-opening of Pearson Air Museum and the 60th anniversary of Russian Transpolar Flight. General phone subbands 80, 40, 20, 15 and Novice/Tech phone subband 10. For certificate send #10 SASE to CCARC, 4211 N.E. 140th Ave., Vancouver, WA 96862. **WR**

Off the air

Thanks to Bob Brown

Worldradio is always a "high priority read" when it arrives at the Scipione QTH. There are many great features . . . but the greatest in recent years was Dr. Bob Brown's Propagation columns that ran through December, 1996. This is just a short note to publicly thank Bob for sharing his rare expertise and keen wit with us for so many years, as well as to thank Armond, N6WR, for finding such a rare gem as NM7M.

I have used many of Bob's practical tips, and also bought a copy of Bob's 1992 book, *Long-Path Propagation,* which became the basis of some interesting over-the-pole experiments that I ran with several fellow QRP/CW ops in Russia, Hungary and Poland. NM7M has a knack for providing clear explanations of theories from physics and electronics that are inherently complex. That talent in itself clear written communication — is a rarity these days. He also has a great sense of humor — witness the cool-looking sunglasses that always graced the sun that radiated from the masthead of his ***Worldradio*** column.

I am enjoying the columns of your new Propagation maven — Carl Leutzelschwab, K9LA, but I just couldn't pass up the opportunity to say a hearty THANKS, in writing, to Bob Brown for sharing so much of himself with readers over the years. Bob, reading your monthly column was equivalent to earning a Ph.D. in *P*ropagation *H*ypercompetently *D*escribed at your former institution, Princeton University. The tuition was amazingly low, class was always held in a comfortable setting, and you never gave me a grade lower than an "A." Bob, you're the greatest!!

73/Gud DX.

Paul Scipione, AA2AV
Metuchen, NJ

Station Appearance

Stephen Bosbach KG5BR

*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.

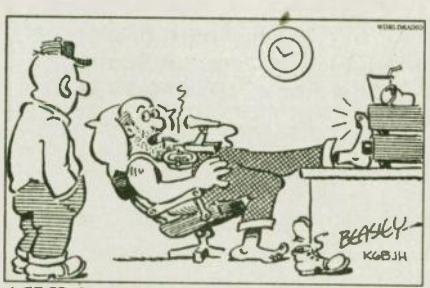
My ham shack is confined to a small corner of an extra room adjoining the garage and utility room. With limited space, I located a sturdy desk that had been used as an office cubicle with high panels on each side. I cut the front half of these panels off and built shelves between them to hold the gear. This leaves most of the desk level free for log, notebook, headset and key. All cables exit the back and go underground through the floor and slab to the tower behind the house. (Grounding points, underground PVC conduit and 220-volt outlets were planned before the house was built).

Starting on the top row of the desk shelf (left to right) is an Icom 02-AT with charger, my homebrew 1 kW tuner, built on the ARRL design with some modifications my own, miniature 24-hour clock, and a Heathkit SB-221 amp. On the second row is a Kenwood 7950 2-meter transceiver, an MFJ, 815B SWR/watt meter, an Ameritron RCS-8V coax ready to switch band loops on the five band homebrew quad, a Time-wave DSP-59+, a Kenwood TS-440S and matching speaker.

On the bottom is the rotor control for the Ham IV and a Heïl headset.

A word of note about the development of this station. I was first licensed in 1979 as KA7HCW and started with a borrowed HT-37A and an SX-101 from my father-in-law, now KF7OC. I have a modest income and since then I have purchased all of my ham gear used, except for the coax relay and the headset. It has taken me 18 years to get the shack to this level of effectiveness and I am proud of the results that can be obtained.

New Amateur Radio operators should not get discouraged because they do not have the equipment shown in the Station Appearance column. I had a lot of fun with the old Halicrafters gear and compromises necessary in rented living quarters made me a better operator. Be patient, file the good ideas and plan for the future. **WR**



I TRIED TO LEARN JUNIOR RESPECT FOR AMATEUR RADIO --- I DON'T KNOW WHERE HE GETS HIS SLOB HABITS!

Amateur "Hi"

*Ever had a funny or strange experience with Amateur Radio, either on or off the air? If so, type it up (or print neatly) and send it to us for consideration in our monthly AMATEUR "HI" contest. You could win a free year's subscription to **Worldradio**!*

Failure to communicate

Art Flavell, AL7NM

'Twas the night before Christmas and Wanda, the XYL, was busy stuffing goodies in the grandkids' stockings. It was finally quiet in the house and I decided to sneak up to the shack and see if any like-minded souls had the same idea.

Forty and eighty meters were both quiet and after one short QSO with another grandpa, I went back downstairs.

"Talk to anybody?" the XYL asked.

"Just one," I said. "The bands are pretty dead."

"Well, you could talk to me," she said.

"Okay," I said, trying to be agreeable. "Dah-di-dah-dit dah-dah-di-dah."

Then she hit me. **WR**

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Buy either Alinco DX-70 model AND the EDX-2 Auto Antenna Tuner (at the same time of purchase) and get this FREE World Time Alarm Clock from Alinco. Great for the shack, camping, travel, Field Day or DX-peditions.

This battery-powered timepiece has a moveable bezel imprinted with cities representing the world's time zones. As the bezel is rotated, the indicated time shifts automatically to the local time of the chosen city. A moving sun/moon graphic shows if the displayed time is day or night. You'll sound well-informed, knowing the local time of your DX contact!

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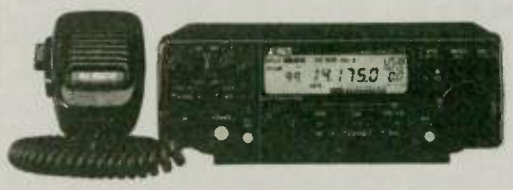

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- DX-70T outputs 100 watts HF, 10 watts on 6M, MSRP under $1,000!

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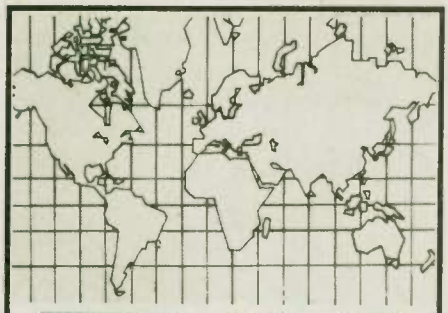


DX WORLD

John F.W. Minke III, N6JM
P.O. Box 310, Carmichael, CA 95809-0310
• E-mail: n6jm@pacbell.net •

W-100-N

There were no applications for ***Worldradio***'s *Worked 100 Nations Award* during the month of March 1997.

And, don't forget Armond's new famous CATZ Award. Who will be the first one to qualify for this award? All contacts count since last summer, 01 July 1996.

Spratly Islands (1S)

Charlotte Richardson, KQ1F, and Paul Young, K1XM, arrived on Layang Layang, one of the Spratly Islands (AS-051), as scheduled. Paul was reported working contacts as early as 21 March, signing with 9M6TPR. They were to remain on the island through 28 March, including the WPX contest. On 24 March around 1830 UTC, 9M6TPR was busy working the Europeans on CW near 14.028 MHz with a good signal into California.

The couple will also visit East Malaysia using the same calls from two different IOTA island groups, Borneo Island (OC-088) and Sipadan Island (OC-133). These islands are not part of the Spratlys. Charlotte's call is 9M6TCR.

Bouvet Island (3Y)

Kaare Pedersen, LA2GV, was on Bouvet Island (AN-022) on 22 February for three hours and managed to work a few Europeans on 18.090 MHz signing with 3Y2GV. He was unable to give any advance warning of this operation.

The DXpedition for next year is still on schedule, and will depart in January from Cape Town. The on-air time is expected to last for 12 days.

Maldive Islands (8Q)

Several calls were found during the month of March coming from the Maldive Islands (AS-013). This activity, by frequency, was as follows:

8Q7BE	1.827 MHz	0030 UTC
8Q7AF	3.794 MHz	2100 UTC
8Q7BE	7.007 MHz	2045 UTC
8Q7BV	7.013 MHz	0224 UTC
8Q7AF	7.042 MHz	2000 UTC
8Q7BE	10.102 MHz	1300 UTC
8Q7BV	10.114 MHz	2000 UTC
8Q7BV	14.011 MHz	1800 UTC
8Q7SM	14.027 MHz	1700 UTC
8Q7BE	14.033 MHz	2115 UTC
8Q7DX	14.205 MHz	1230 UTC
8Q7CR	21.320 MHz	1030 UTC

Botswana (A2)

Only two reports were found for Botswana. A22BW was worked on 15 March at 1600 UTC on 21.298 MHz, and A22RV was worked on 18 February at 1930 UTC, on 14.226 MHz. Both were European reports.

Nauru (C2)

C21RK has been very active from Nauru Island (OC-031) recently. This station was also active in the ARRL International DX Competition in March. In fact, he was my 100th DXCC country on 80 Meters. Look for him on 75 Meters between 3.795 and 3.800 MHz from 1230 UTC. This station also works other bands and has been reported on 20 Meters between 14.188 and 14.255 MHz; try around 0330 UTC.

Other calls reported from Nauru include C21NJ, on 14.213 MHz at 0800 UTC, C21CS, near 21.285 MHz at 1715 UTC, and C21DJ on 14.243 MHz at 0800 UTC.

St. Paul Island (CY9)

The CY9AA DXpedition to St Paul Island has been changed to 26 June to 03 July. No other details are presently available.

Mayotte (FH)

Activity from Mayotte Island (AF-027) has been represented by at least two calls during the month of March. Try looking for FH5CB on 20 Meters near 14.253 MHz from 2030 to 2230 UTC, or on 15 Meters between 21.265 and 21.303 MHz after 1500 UTC.

The second call, FH5ES, was reported on CW and found near 14.010 MHz at 2045 UTC, or 21.002 to 21.010 MHz from 1130 to 1200 UTC.

New Caledonia (FK)

425 DX News says Erik, FK8GM, plans to be active from Matthew Island (OC-218), hopefully at the end of April. His length of stay is not known.

New Caledonia consists of six different IOTA island groups. Most of the activity is from the main island, New Caledonia Island (OC- 032).

FK8GJ was very active during March, and was found on five different bands. Follows is the activity from that one, and as you can see, FK8GJ will be shown often:

FK8CP	1.832 MHz	CW	1115 UTC
FK8GJ	3.503 MHz	CW	1130 UTC
FK/JAØUH	3.505 MHz	CW	0934 UTC
FK8CP	3.797 MHz	SSB	1045 UTC
FK8HC	3.799 MHz	SSB	1115 UTC
FK8GJ	7.004 MHz	CW	1145 UTC
FK8GW	7.007 MHz	CW	1100 UTC
FK8GJ	10.102 MHz	CW	0745 UTC

FK8GX	14.007 MHz	CW	0830 UTC
FK8GJ	14.014 MHz	CW	0745 UTC
FK8FI	4.084 MHz	RTTY	1130 UTC
FK8FB	14.128 MHz	SSB	2000 UTC
FK8GM	14.190 MHz	SSB	0900 UTC
FK8GK	14.206 MHz	SSB	0800 UTC
FK8HC	14.207 MHz	SSB	0700 UTC
FK8GJ	18.072 MHz	CW	2200 UTC

Martinique (FM)

Six calls were reported recently from the island of Martinique (NA-107), with most of them on the lower bands:

FM5BH	1.839 MHz	0145 UTC
FM5DP	1.844 MHz	0153 UTC
FM5BH	3.797 MHz	2300 UTC
FM5DP	3.799 MHz	2345 UTC
FM7FJ	7.014 MHz	0200 UTC
FM5BH	7.022 MHz	2100 UTC
FM5DN	7.049 MHz	2130 UTC
FM5BA	14.027 MHz	1930 UTC

Central African Republic (TL)

There is not much to report on this one. Only three calls were reported during the month of March and all were from European sources:

TL8BC	14.120 MHz	1615 UTC
TL8CK	21.215 MHz	1700 UTC
TL8PH	21.313 MHz	1215 UTC

Heard Island (VKØIR)

By the time you read this the QSL cards for the Heard Island Dxpedition should be in your hands. Some 60,000 cards were reported to have been printed in Germany. Most likely many cards will include multiple contacts.

South Shetland Islands (VP8)

According to *Ohio/Penn DX Bulletin*, the operator at the Polish Antarctic Base, HFØPOL, is Mark, SP3GVX. He can often be found after 0100 UTC near 7.007 MHz. He should become more active as his winter approaches.

Aves Island (YVØ)

Island/DX News notes that there have been rumors of a DXpedition to Aves Island (NA-020) this year. The Radio Club Venezolano says that there are no plans for an operation from Aves Island this year and the closest date would be some time in 1999, probably March or April.

Auckland Islands (ZL9)

If you managed to work K8VIR/ZL9 in early April, that was Ed Hartz, who was a member of Hooker Sealion Research. Unfortunately, we received this announcement on 13 March, which allowed little lead time for this issue of ***Worldradio***. Ed ran with a limited power source.

IOTA

Pleasant Island (NA-161) is to be activated by KL7AK/P from 23 May for about 3 days. The island is just outside the entrance to Glacier Bay National Park in Alaska. Four operators will participate, whose calls include KL7HFI, WL7QC, KF6XC, and KL7AK. KL7AK is Rick, formerly N6IV.

Giovanni Lorenzi, IT9TZZ, and Tino Tindaro, IT9NGN, plan to activate Stromboli Island (EU-017) signing portable ID9 from 30 May through 06 June, according to *Island/DX News*.

Prior to his team going to the Charlottes for the IOTA contest Lew Jenkins, N6VV, will operate from Quadra Island (NA-091) from 18 through 21 July signing with N6VV/VE7.

Look for activity from Goree Island (AF-045) in Senegal in June operated by 6V1A.

The Grantham Radio Club plans to be active from Chausey Island (EU-039) in France from 25 through 31 May. No call sign was given.

Here is a selection of various IOTA islands reported during the month of March 1997. Many of these reports are courtesy of the *OH2BUA WebCluster* via the Internet.

AF-019	Lampedusa Isl.	IG9/IK2SGC	26 Mar
AS-005	Dickson Isl.	RAØBK	14 Mar
AS-018	Sakhalin Isl.	UAØFDX	05 Mar
AS-051	Layang Layang	9M6TPR	21 Mar
AS-052	Okino Torishima	JF1IST/7J	09 Mar
AS-053	Phuket Isl.	HSØ/IK4MRH	25 Mar
AS-078	Hokkaido Isl.	JA8DGO	12 Mar
AS-103	Pescadores Isl.	BV9AYA	29 Mar
AS-126	Terutao Isl.	HS9AL	13 Mar
EU-008	Isle of Skye	GMØKJW/M	21 Mar
EU-010	Isle of Lewis	GMØKCY	15 Mar
EU-011	St. Martins Isl.	G3JKM/P	28 Mar
EU-017	Eolie Isl.s	ID9/IK3RIY	31 Mar
EU-020	Gotland Isl.	SM1TDE	24 Mar
EU-031	Procida Isl.	IC8/IZ8BFY	22 Mar
EU-036	Hitra Isl.	LA8LA	23 Mar
EU-037	Oland Isl.	SM7DLZ	13 Mar
EU-042	Sylt Isl.	DK8OL	22 Mar
EU-045	Ventotine Isl.	IBØJN	22 Mar
EU-046	Ringvassoy Isl.	LA1CI	17 Mar
EU-049	Aegean Isl's.	SV8CYV	25 Mar
EU-055	Karmoy Isl.	LA9GIA	24 Mar
EU-056	Nordoyane Grp.	LA4GHA	18 Mar
EU-075	Poros Isl.	SV1TP/P	28 Mar
EU-082	Kildin Isl.	U1ZA/A	20 Mar
EU-084	Stockholm Isl's.	SMØDRB	20 Mar
EU-127	Helgoland Isl.	DAØHEL	21 Mar
EU-128	Fehmarn Isl.	DK7LA/P	31 Mar
EU-129	Usedom Isl.	DL4NZC/P	31 Mar
EU-133	Kotlin Isl.	RA1AD	18 Mar
EU-133	Gogland Isl.	RR4DX/P	28 Mar
EU-141	Vardo Isl.	LA5SJA	31 Mar
EU-158	Peloponnisos W.Grp	SV3YY	18 Mar
NA-019	Kodiak Isl.	WL7EM	12 Mar
NA-034	Siesta Key	W2FXA/M	10 Mar
NA-036	Vancouver Isl.	VE7DUG	06 Mar
NA-037	Shemya Isl.	KL7FBI	20 Mar
NA-041	Revillagigedo Isl.	KL7JEF	19 Mar
NA-046	Martha's Vinyard	W1GAY	11 Mar
NA-055	Moose Isl.	AA1KS	13 Mar
NA-055	Deer Isl.	W1RFC	17 Mar
NA-057	Bahia Isl.	HR1RMG/HR6	28 Mar
NA-065	Widbey Isl.	AA7KE	06 Mar
NA-072	Contradora Isl.	HP1XBI/1	31 Mar
NA-080	Ltl Bahama Bank	C6AGN	25 Mar
NA-111	Wildwood Isl.	KA3UNQ/M	24 Mar
NA-138	Amelia Isl.	W5IJU	22 Mar
OC-006	Tasmania	VK7CW	16 Mar
OC-070	Abon Isl.	YE8XM	23 Mar
OC-117	Misima Isl.	P29VXX	01 Mar
OC-129	Negros Isl.	DU7LA	28 Mar
OC-137	Lamb Isl.	VK4CY	18 Mar
OC-141	Groote Eylandt	VK8KTC	13 Mar
OC-141	Stuart Isl.	VK8NGE	21 Mar
OC-146	Sulawesi Isl.	YC8FI	18 Mar
OC-149	New Georgia Grp.	H44TQO	13 Mar
OC-166	Kalimantan Cstl.	YC7JBA	21 Mar
OC-201	Waiheke Isl.	ZL4OK	20 Mar
OC-219	Tukang Besi Isl.	YB8ZY	08 Mar
OC-220	St. Peters Isl.	VK5ISL	26 Mar

SA-008	Tierra del Fuego	LU8XPA	31 Mar
SA-016	Isla Sao Luis	PR8OL	26 Mar
SA-026	Isla Santa Catarina	PP5VB	13 Mar
SA-064	Isla Las Huichas	CE7AOY	16 Mar
SA-068	Guyanese Cstl Isl.	8R1AK/P	13 Mar
SA-082	Isla Aguja	HK3JJH/2	20 Mar

IOTA Contest DXpeditions

The following is a list of proposed IOTA islands and calls in the RSGB IOTA Contest this July 26 and 27:

EU-091	Saint Andrea Isl.	IJ7
EU-099	Les Minquiers	GJ
EU-106	St. Tudwells Isl.	GWØNWR/P
EU-124	Ynys Mon	GW7V
EU-150	Insua Isl.	CQ2I
NA-051	Queen Charlotte Isl's.	N6VV/VE7
NA-138	Florida State East Grp.	W5IJU

DXCC Applications

The DXCC Desk reports that the number of unprocessed applications at the end of February, 1997 was 191 (23,172 QSL cards). During the month 252 applications (24,436 QSL cards) were received for endorsements and new awards.

Applications being sent out at the end of the month were received less than a month earlier. A few received prior to that time were waiting for paper records to be converted, or were being audited, and so had not yet been completed.

DXCC Matters

Questions have been asked about the status of the 7O1A operation from Aden in Yemen. Headquarters at the ARRL has been in communication with the Ministry of Communications, resulting in the following information:

The Ministry of Communication in Sana'a, capital of Yemen, has advised the ARRL by both FAX and telephone that while it is aware of a document issued by its Aden office, the Ministry of Communications in Sana'a, as the main body responsible for communications, had never issued an official authorization for Amateur Radio.

In accordance with this communication, the 7O1A operation cannot be accepted for DXCC credit.

DXCC RTTY most-wanted survey

Don Hill, AA5AU, P.O. Box 656, P.O. Box 625, Belle Chasse, LA 70037, is conducting a Most Wanted DXCC Survey for RTTY. If you are interested in participating, contact Don. The survey form is also available on the Internet on *425 DX News*, Issue #306. It may be found at http://promet12.cineca.it/htdx/425/425-n306/html.

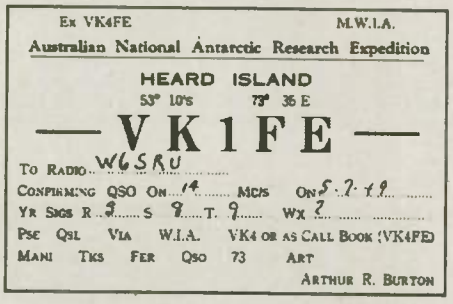
DXAC

Wayne Mills, N7NG, has been appointed by ARRL President Rod Stafford, KB6ZV, to chair the DX Advisory Committee (DXAC).

Antique QSL Department

Now that the famous 1997 VKØIR Heard Island DXpedition is history, perhaps you might be interested in QSL cards from previous DXpeditions to Heard.

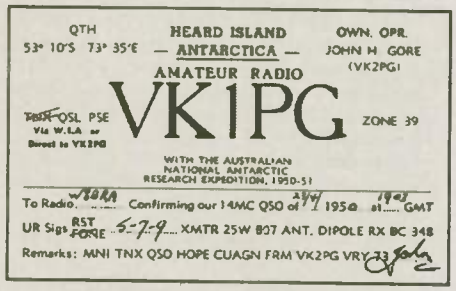
The Australian National Antarctic Research Expedion card for VK1FE dates back to July 1949. Jules Wenglare, W6YO, provides us with a card for a contact he made back on the 5th of that month on 20 Meters CW. The call W6SRU belonged to a friend of Jules. Jules said that Lloyd, W6SRU, surprised him when he told him that he worked Heard Island, before Jules thought it was discovered. The operator of VK1FE was Arthur R. Burton, VK4FE.


Ex VK4FE M.W.I.A.
Australian National Antarctic Research Expedition
HEARD ISLAND
53° 10'S 73° 35 E
— VK1FE —
To Radio W6SRU
Confirming QSO On 14 Mcs On 5-7-49
Yr Sigs R 9 S 9 T 9 Wx 2
Pse QSL Via W.I.A. VK4 or as Call Book (VK4FE)
Mani Tks Fer Qso 73 Art
Arthur R. Burton

The QSL card arrived via the W6 QSL Bureau, then operated by Horace Greer, W6TI. Horace is now a Silent Key, with the call now held by the Northern California DX Club.

Dave Kennedy, N4SU, provides the rest of these Heard Island relics. Also a member of the 1949 team was Robert W. Allison, who signed with VK1RA. Dave worked this one on 16 July 1949.

John H. Gore, VK2PG, was on Heard Island with the same team back in 1950 and 1951. Signing with VK1PG, he worked Dave on 23 April 1950. Notice that he was running only 25 watts to a dipole. The receiver was a war-surplus BC-348.


QTH 53° 10'S 73° 35'E
HEARD ISLAND — ANTARCTICA —
OWN. OPR. JOHN H. GORE (VK2PG)
AMATEUR RADIO
VK1PG
ZONE 39
QSL PSE Via W.I.A. or Direct to VK2PG
WITH THE AUSTRALIAN NATIONAL ANTARCTIC RESEARCH EXPEDITION, 1950-51
To Radio W6RA Confirming our 14MC QSO of 23/4/ 1950 at 1040 GMT
UR Sigs RST 579 5-7-49 XMTR 25W 807 ANT. DIPOLE RX BC 348
Remarks: MNI TNX QSO HOPE CUAGN FRM VK2PG VRY 73 John

The VK1NL card dates from 1957. Dave worked them 15 May on CW. However, the band is not indicated.

I have not included the cards from the 1983 DXpeditions, VKØCW, VKØHI, VKØJS or VKØNL. That was only 14 years ago, hardly relics. Notice that the VK1 prefix was then used for the Australian Antarctic territories.

Miscellaneous

Regular supporter Bob Donvan, W7CF, managed to work FT5ZG on 40 Meters recently, using a TenTec Paragon II to an R-7 antenna. Bob resides at the bottom of a gully, thus proving you don't need a super station, or a listmaster to work DX.

Bill Schuchmann, W7YS, reminisces about a contact with the late Katashi Nose, KH6IJ, back in 1974. It seems that Nose used to work the former holder of W7YS back in the early 1930s. Bill wrote and asked him if he had an original W7YS QSL card and received the following note:

"I don't have a card from W7YS. It was destroyed by my parents during the war at the time of Pearl Harbor and martial law when having radio transmitting and radio in general (for us at least — Japanese

DX Prediction — June 1997

Maximum usable frequency from West Coast, Central U.S. and East Coast *(courtesy of Engineering Systems Incorporated, Box 939, Vienna, VA 22183).*

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. 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.

WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
10	*(15)*	*19	*15	*(13)*	*18
12	*(17)*	*15	*14	*(13)*	*(16)*
14	*(20)*	*17	13	16	21
16	*(22)*	17	*(12)*	18	25
18	24	*(14)*	*(12)*	19	27
20	25	18	23	17	29
22	21	21	28	15	26
24	*(18)*	23	30	13	23
2	*(16)*	*25	30	*(11)*	*19
4	*17	*25	28	*(14)*	*17
6	22	24	24	18	*15
8	18	*23	*16	17	*14

CENTRAL USA

UTC	AFRI	ASIA	OCEA	EURO	SO AM
8	*(18)*	15	*16	*(13)*	*13
10	*(20)*	*13	15	*(13)*	*15
12	24	14	13	16	19
14	27	17	*(13)*	18	23
16	29	17	*(12)*	19	*26
18	*30	*(15)*	*(12)*	20	*28
20	25	19	23	18	*29
22	21	21	28	17	*26
24	18	21	30	14	*22
2	*15	20	30	*(12)*	*18
4	*17	19	28	*14	*16
6	22	19	*24	17	*14

EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
7	*(17)*	15	*18	13	*14
9	*(19)*	*(13)*	15	14	*15
11	23	*(15)*	14	17	18
13	26	17	*(13)*	*19	23
15	29	15	*(13)*	*20	*26
17	29	*(12)*	*(12)*	*20	*28
19	*27	*(14)*	*(15)*	*19	*29
21	22	*(17)*	*(26)*	18	*27
23	19	*(19)*	29	*16	*25
1	*16	20	30	*13	*20
3	*13	19	29	*12	*17
5	20	19	25	*15	*15

Americans) was like having human body parts on hand.

"I was away from home at the time. All my prewar QSL cards were destroyed together with my transmitter and receiver. They were chopped up with an axe and dumped into the cesspool since my alien parents were so frightened and were afraid that they might be shot to death if the martial law authorities caught them with my transmitting parts."

Bill is also editor of the Northern Arizona DX Association newsletter and mentions that: "There are times when it seems as if we send out more mail than we receive, and nothing is slower coming than that last QSL needed for some award. The QSL has to be in your hand before you say 'I worked him!' My mailbox has recently given up cards from as far back as 1986, sometimes even further back. Right now, two of the club members are eagerly awaiting the final cards that will make them holders of the 5BDXCC Award."

Very familiar words, Bill.

Don't expect to buy the "Flying Horse Radio Amateur Callbook" from now on. According to *Ohio/Penn DX Bulletin* the printed version beginning with the Spring, 1997 edition will no longer be in printed form. The *Callbook*™ will now only be available on CD-ROM.

That HF1GD that you have been hearing on the bands is not a new country. This is a special event station operating in Gdansk on the Polish Baltic Coast celebrating its anniversary of 1,000 years. The station will be active until the end of the year.

QSL Routes

These QSL routes come from several sources and cannot be guaranteed. Please report any errors.

3A/DJ7RJ	—DJ7RJ	9A11ELS	—9A2AA
3A/I1YRL	—I1YRL	9G5VJ	—G4ZVJ
3DA/AA3JA	—JH7FQK	9H1PF	—K5YG
3DAØNX	—JH7FQK	9H3ZZ	—(*4)
3DA5A	—JH7FQK	9J2BO	—W6ORD
3E1DX	—NØJT	9K2/YO9HP	—YO9HP
3V8BB	—YT1AD (*1)	9K2AI	—IK7JTF
3XY3A	—F5IEV	9K2RR	—KU9C
3Y2GV	—LA2GV	9L1ZZ	—9L1IS
3Z2GD	—SP2FOV	9M6TCR/PR	—KQ1F
4B1AC	—XE1BEF	9Q5BQ	—HB9AMO
4K8F	—UA9AB	9Q5HX	—IK2MRZ
4L5A	—IK3HHX	9U5CW	—EA1FFC
4N7ZZ	—YU7F1J	9U5T	—F2VX
4U1WB	—KF4OMW	9Y4SF	—WA4JTK
5N1ANE	—N5DRV	A22BW	—DK3KD
5N3/SP5XAR	—SP5CPR	A35CE	—DL2GBT
5R8DG/EW/KH	—WB8LFO	A35UF	—DL5UF
5XØAD	—EAØURE	A35WA	—DF5WA
5X1D	—SMØBFJ	A92GD	—K1SE
5X4F	—K3SW	AH7G	—N2AU
6O0X/YL	—VK6ZX	AH8A	—AC7DX
7L3TDU/1	—7L3TDU	AL7O	—AL7BL
7P8/OE2VEL	—OE2GEN	BA4TB	—9A2AJ
7X2YL	—F5RUQ	BD4TB	—9A2AJ
89PJB	—AA4NC	BG4TBD	—9A2AJ
8P9CK	—AA1M	BOØKS	—BV2KI
8P9IJ	—VE3VET	BV9AYA	—BV2KI
8P9JA	—K4MA	C36LU	—CN8GI
8Q7AF	—I8RIZ	C36NL	—CN8GI

C56/DK3FW	—DK3FW	IR4R	—IK4ALM	NE8Z/XE3	—NE8Z	T97M	—K2PF
C6A/DL3ABL	—DL3ABL	IZ9Z	—IT9EQO	NP3/AA2OX	—AA2OX	TA/GØPWW	—W3TB
C6A/DL6MHW	—DL3ABL	JØTW	—K3TW	NP3/K3CN	—K3CN	TJ1PD	—N5DRV
C6AGN	—KA1DIG	J3K	—WB8GEX	OK8AUY	—LX1NO	TL8IM	—KB9XN
C6AJR	—DL3ABL	J43CRN	—SV3YY	OY/DF8QJ	—DJ4QQ	TM5DX	—F5EJC
C91CO	—W4DR	J45RDS	—SV5BYR	OY/DK6QW	—DK4QQ	TO5UFT	—F5MNW
C91J	—N5FTR	J45T	—SV5TH	OY/DL3QQ	—DK4QO	TO9BDX	—F2VX
C9RRJ	—N5FTR	J52AK	—IV3TIQ	OY/DL4YBZ	—DK4QQ	TR8CA	—F6CBC
CN36GI/LU/NL	—CN8GI	J52DW	—LX2DW	OY/DL6YFB	—DK4QQ	TT8FC	—EA4ASK
CO2KK	—W5WP	J75T	—DL6LAU	OZ5HCA	—OZ5MJ	TY1NI	—PE1IVQ
CO4BM	—CT1ESO	J77FT	—DL7FT	P29VIG	—JA3IG	TZ6LL	—DL1FCG
CS7PSP	—CT1EDX	J79MV	—AA6MV	P29VXX	—DL7UFN	UAØFAA	—RB4MF
CT1EGW	—N2AU	JF1IST/7J1	—JI1FXS	P29WK	—N3ART	UN8GA	—NØTSL
CY1COP	—VO1COP	JH6VLF/1	—JH6VLF	P4/KI7LC	—W7WW	V2/KX9X	—KX9X
D68KJ	—DL1DA	JW5HE	—OZ8RO	P4ØL	—W7WW	V2/NM9H	—NM9H
D68TW	—K3TW	K4ZLE/6Y5	—K4ZLE	PJ7UQ	—W3HNK	V26C	—WA2C
E17DCA	—EA7URS	K9AW/KH2	—WF55T	PJ8/W8EB	—AA8GL	V26CW	—NM9H
E21EJC	—HS1GOS	KC4/KA7DHE	—K4MZU	PJ9JT	—W1AX	V26HY	—XW2A
E21EWC	—F5SHQ	KC4/VEØHSS	—K4MZU	PP5AVM	—PP5LL	V26NA	—KX9X
ED7MCA	—EA7IA	KC4/VE7MKZ	—K4MZU	PQ/R5L	—PP5LL	V31DX	—AA6BB
EK6DO	—EK6GC	KC4AAB/C	—K4MZU (*3)	PZ5DX	—K3BYV	V47XC	—GØIXC
EM1HO	—I2PJA	KC4AAD/F/G	—K4MZU	R1A/VEØHSS	—K4MZU	V5/W8UVZ	—W8UVZ
EP7BCA	—EA7URS	KC4USB	—K4MZU	R1ANF	—RK1PWA	V5/ZS6YG	—WØYG (*5)
EW35WB	—EW1WB	KC4USL/AM	—K4MZU	R1ANW	—K4MZU (*3)	V51Z	—ZS6EZ
FJ/K1YJK	—K1YJK	KC4USV	—K4MZU (*3)	R1FJP	—RK1PWA	V63KU	—JA6NL
FK8GM	—F6AJA	KC4USX	—K4MZU	R1FJR	—F5PYI	VEØHSS	—K4MZU
FO9CI	—N7QQ	KF8UN/KP2	—KF8UN	RA2FBC	—DJ2OJ	VE3AEA	—VE3SJL
FR5KH/J	—F6FNU	KG4AN/AU/GC	—WT4K	RFØZ	—RA3DEJ	VI3GP	—VK3ER
FS/JA4DND	—JA4DND	KG4QD—K4QD/WA4VQD		RK2FWA	—DK4VW	VKØTS	—VK1AUS
FS/JA5AUC	—JA5AUC	KH2/AD4WF	—AE6EZ	RM9RX	—UA9QCO	VK2IJQ/P	—DL6IAK
FT5ZG	—F5RQQ	KH4/K1NT	—JA3IG	RX9FM	—W3HNK	VK5ISL	—I1HYW
GMØKJW/M	—GØKJW	KH7R	—K9PG	RZ1AXN	—RA1AD	VK8NGE	—VK4FW
GW7V	—GWØGEI	KH7X	—K9PG	S57V	—S53YZ	VP2EJT	—G3PJT
H44MS	—DL2GAC	KL7AK/P	—KL7AK	S59A	—S59UN	VP2END	—JA4DND
H44TQO	—SM4NLL	KP2/KF8UM	—KF8UM	S79GN	—IK2GNW	VP2EUC	—JA5AUC
HB5CC	—HB9BCK	KP2AD	—OK1AJY	SV5DZZ	—IZ2AEQ	VP2MEP	—W5LVM
HF1GD	—SP2BIK	LØH	—LU4HHQ	TØNY	—EA3NY	VP2V/KK9A	—WD9DZV
HP1XBI	—F6AJA	LM1SKI	—LA1K	TØOPB	—F5SSG	VP5/K6KNZ	—VE1JX
HP2CWB/HP4	—HP2CWB	LM2SKI	—LA2T	TØOXL	—F5XL	VP5/WD5FLK	—WD5FLK
HS1AZ	—K6VNX	LZØL	—LZ1KCP	T22MS	—DL2GAC	VP5E	—VE1JX
HS6CMT/3	—JA7FYF	MØAMM	—M1AFS	T48RAC	—VE3ESE	VP8CRE/MS	—K4MZU
HS9AL	—I4LCK	N4BQW/KH4	—WA4FFW	T88JA	—JA6BSM	VP8MX	—K4MZU (*3)
IIØS	—IKØAZG	N7GSZ/AM	—GØGOF	T88RV	—JH3HRV	VQ9UO	—W3FUO
IQ2C	—IZ2ABW	N7QXQ/HR6	—W7TSQ	T88X	—JE6DND	VQ9ZX	—WJ7S
VU2AXA/P	—VU2DVC	YM3DL	—DL4VBP				
W1BRK/KHØ	—JA1BRK	YN6WFM	—JA6WFM				
WP2Z	—KE2VB	YO/G3VUN/P	—G3VUN				
WQ4RP	—K4HQ	YTØA	—YU1EXY				
XE3/N9SW	—N9SW	ZD9BV	—W4FRU				
XL9NJ	—K2NJ	ZF2VU	—N5XIQ				
XQ7AF	—I8RIZ	ZK1JOO	—VE6JO				
XT2AE	—W4BYG	ZP2EHA	—DH1PAL				
XT2AW	—DF2WO	ZP9JA	—K4MA				
XU2FB	—N4JR	ZS9F	—KK3S				
XU6WV	—KØTLM	ZV8CL	—PY3KL				
YB8ZY	—YC8KAR	ZW2SA	—PY2EUY				
YC3UUQ	—YB3BC	ZYØSG	—PT7AA				
YI1US	—WA3HUP	ZYØSK	—PS7KM				
YI1WMS	—IK2DUW	ZY2IB	—PY2AE				
YJ8AA	—VK4AAR	ZY8M/R	—PT2GTI				
YM2KC	—TA2FE						

NOTES:

*1. Hrane, YT1AD, the operator will handle his own operations during the period 26 to 31 March 1997.

*2. Please include $5.00 (U.S.) Or 10 IRC; funds go to Down's syndrome. This method of solicitation of a QSL card is not endorsed by this reporter.

*3. Bob, K4MZU, is the QSL Manager for many Antarctic stations, with exceptions. For KC4AAC, the route applies for operators Craig or Greg only; for KC4USV, it's for operator Greg only; for R1ANW, it's for operator Henri only. Operations at KC4AAB and VP8MX are for the year 1972.

*4. QSL requests for this one may be sent via the bueau to G4RTO, or direct to ON9CCQ.

*5. Do not attempt to send QSL requests via the South African bureau. Most likely, your request will never reach ZS6YG, who is really WØYG.

QSL Addresses

CN8SN —Najib Smouni, B.P. 122, Beni-Mellal, Morocco

DU6CD —Henry Yusay, Yusay Apts, 23rd Street, Bacolod City, Negros Occidental, Philippines

FH5ES —P.O. Box 127, Kaweni, F-97600 Mayotte, France

FK8GX —M. Michel, 61 Route des Forets, Monts Koghis, F-98830 Dumbea, New Caledonia

FO5OP —Georges Couderc, P.O. Box 887, Raiatea, French Polynesia

HC8K —Ted, HC5K/HC8K, P.O. Box DX, Cuenca, Equador

HFØPOL —Henryk Karwowski, SP3FYM, P.O. Box 832, 66 400 Gorzow Wlkp, Poland

HH2LE —P.O. Box 2523, Port-Au-Prince, HAITI

HL2AMF —Lee Dong-Ku, P.O. Box 19, Bupyeong, Incheon 160-70, South Korea

HP1DTR —P.O. Box 87/2450, Panama City 7, Panama

J39JQ —P.O. Box 799, St Georges, Grenada

K8VIR/ZL9 —Ed Hartz, P.O. Box 9, Te Anaw, New Zealand

KG4CQ —Tom Mann, PCS Box 1005, Box 30, FPO AE 09593-0130

LA5M —VBARC, P.O. Box 62003, Virginia Beach, VA 23466

P29SH —Steven Hong, SIL Box 180, Ukarumpa, EHP 444, Papua New Guinea

P2ØTL —SIL Box 115, Ukaaarumpa, EHP 444, Papua New Guinea

PP8BV —Rubem Figueira, P.O. Box 1204, Manus-Amazonas, ZO 69006-970, Brazil

R1ANT —P.O. Box 600, St Petersburg 198206, Russia

TA3BN —Nuri Boylu, P.O. Box 976, 35214 Izmir, Turkey

TZ6HY —Yatt, B.P. 8044, Bamako, Mali

TZ6YL —Trish Erwin, B.P. 395, Segou, Mali

VI21DS —Oceania DX Group, P.O. Box 929, Gympie, QLD 4570 Australia (See Note 2)

ZL9DX —Ed Hartz, P.O. Box 9, Te Anaw, New Zealand

Many thanks to the following contributors: N4SU, W6YO, W7CF, W7YS, K8VIR/ZL9, Western Washington DX Club (WAØRJY), Northern Arizona DX Association (W7YS), American Radio Relay League (K5FUV), *The DX Magazine* (N4AA), *Island News* (W5IJU), *425 DX News* (I1JQJ), *The Ohio/Penn DX Bulletin* (KB8NW), *OH2BUA WebCluster* (OH2BUA), *The Low Band Monitor* (KØCS), *DX News Sheet* (G4BUE), and *QRZ DX* (N4AA).

The SSB portion of the ARRL International DX Competition was disappointing. There was lots of activity, in spite of the poor band conditions. A special delight for me was working another new one on 75/80 Meters. A check of my cards showed this to be number 100. Now, all I need is those cards. As for 5BDXCC, it's only 99 as my Canal Zone contact is no good for that award. Maybe next year. Very 73 de John N6JM. **WR**

Weather spotter classes

Matthew Trotta, N9NPP, is attempting to establish a website dedicated to information on Severe Weather Spotting classes nationwide. If you know of spotter classes in your area please send the schedule via e-mail to: Matthew Trotta, N9NPP@aol.com —*via Usenet*

ANAHEIM, CA
(Near Disneyland)
933 N. Euclid St., 92801
(714) 533-7373
(800) 854-6046
Janet, WA7WMB, Mgr.

BURBANK, CA
2492 W. Victory Bl., 91506
(818) 842-1786
(800) 854-6046
Eric, KA6IHT, Mgr.
Victory Blvd. at Buena Vista
1 mi. west I-5

OAKLAND, CA
2210 Livingston St., 94606
(510) 534-5757
(800) 854-6046
Mark, KE6OFP, Mgr.
I-880 at 23rd Ave. ramp

SAN DIEGO, CA
5375 Kearny Villa Rd., 92123
(619) 560-4900
(800) 854-6046
Tom, KM6K, Mgr.
Hwy. 163 & Claremont Mesa

SUNNYVALE, CA
510 Lawrence Exp. #102
94086
(408) 736-9496
(800) 854-6046
Ken, K1ZKM, Mgr.
KDM@HAMRADIO.COM
So. from Hwy. 101

NEW CASTLE, DE
(Near Philadelphia)
1509 N. Dupont Hwy., 19720
(302) 322-7092
(800) 644-4476
Chris, K1SI, Mgr.
RT.13 1/4 mi., So. I-295

PORTLAND, OR
11705 S.W. Pacific Hwy.
97223
(503) 598-0555
(800) 854-6046
Earl, KE7OA, Mgr.
Tigard-99W exit
from Hwy. 5 & 217

DENVER, CO
8400 E. Iliff Ave. #9, 80231
(303) 745-7373
(800) 444-9476
Joe, KDØGA, Mgr.

PHOENIX, AZ
1939 W. Dunlap Ave., 85021
(602) 242-3515
(800) 444-9476
Gary, N7GJ, Mgr.
1 mi. east of I-17

ATLANTA, GA
6071 Buford Hwy., 30340
(770) 263-0700
(800) 444-7927
Mark, KJ4VO, Mgr.
Doraville, 1 mi. no. of I-285

WOODBRIDGE, VA
(Near Washington D.C.)
14803 Build America Dr.
22191
(703) 643-1063
(800) 444-4799
Rick, AAØQB, Mgr.
Exit 161, I-95, So. to US 1

SALEM, NH
(Near Boston)
224 N. Broadway, 03079
(603) 898-3750
(800) 444-0047
Chuck, KM4NZ, Mgr.
CLW@HAMRADIO.COM
Exit 1, I-93;
28 mi. No. of Boston

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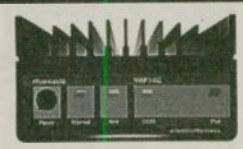

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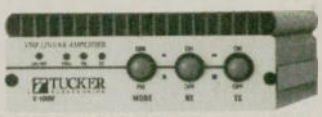

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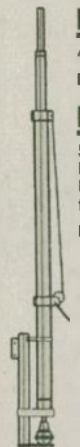

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FH5CQ	F6ITD	OT6A	ON7LR
FK5DK/X	WB2RAJ	P29MO	K3BYV
FM5CD	F5VU	P4OV	AI6V
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HB4FG	HB9ALM	PYØDPY	PY1UP
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HD2RG	HC2RG	RØ/LY2BMV	LY2BI
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HG6N	HA6KNB	R1FJZ/FJL	DF7RX
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IR1A	IK4GPG	SQ6CWP	SP6CWP
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TF7/ON6QR/P	ON4GO	ZW2WAL	PU2LCD
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TK1A	TK5KP	ZXØF	PY5EG
TL8CK	F6EWM	ZX5J	PP5JR
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TM5Z	F6KIM	3G1X	CE1IDM
TM6T	F6KBF	3V8BB	YT1AD
TM7I	F5JYD	3XØHME	F5GMX
TM8FL	F8KLY	4H9RG	DU9RG
TMØPX	F5BZB	4L4KK	SV2AEL
TP1OCE	F6FQK	4L5A	IK3HHX
TRØA	F6FNU	4U1ITU	F6IMS
TU2DP	K4MQL	4U1SCO	F5SNJ
TU2XR	AK1E	4U1UN	WB8LFO
TU4VQ	KE6YUW	5L2PP	EL2PP
UK8IZ	IK2QPR	5NØT	F2YT
UN6P	RL8PY	5R8EN	F6AJA
URØD	UT7DX	5X4B	DL8AAM
UTØU	UT5UDX	5X4F	KB4EKY
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VP2MF	VE3FHO	7Q7EH	W1EH
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WH7/WR6R	WR6R	9G1YR	G4XTA
WP4U	AA3BG	9G5RC	N1OCS
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XR4B	CE4ETZ	9H3YY	DK4DX
XR8S	CE8SFG	9J2PI	KBØKVA
YM3DL	DL4VBP	9J2AE	F6FNU
YP4A	YO4KCA	9J2SZ	SP8DIP
YW1A	YV1AVO	9K2/YO9HP	YO9HP
YR8D	YO8KGA	9K5HN	9K2HN
Z21KD	DK5XJ	9M2IY	JA1INP
ZA1AJ	OK2ZV	9M2TO	JAØDMV
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ZK2ZE	LA9GY	9M8CC	PBØALB
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ZPØM	ZP5XF	9Q5TR	4Z5DP
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DL7CM —(ex DL7UHR) Hans-Rainer Uebel, Am Goldmannpark 47,D-12587 Berlin, Germany

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OT6A —ON7LR,UBA Sectle Lier,Guldensporenin 42, B-2500 LIER Belgium

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S92YL —Lesley Lewis, Box 522 So Tome

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WHØAAV —Toribio C. Mercado Jr, P.O.Box 1941, Saipan MP 96950, USA

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YS1RRA —Romualdo Ricardo Alvarado, Reparto los Heroes, Calle Gabriel Rosales 101, San Salvador, El Salvador

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U.K. hams to face the 12.5 kHz challenge on 2M FM

The United Kingdom has decided to take the point position for Europe in going to a very tight inter-system spacing standard for 2-meter FM repeaters. The new standard chosen is 12.5 kHz and the RSGB is saying that it will be instituted immediately.

United Kingdom hams learned about the change in an article appearing in the March 1997 issue of the RSGB's *Radio Communications* Magazine. Thanks to its editor G3XDV, ***Worldradio*** has received permission to present this article to you to stimulate a dialogue on this side of the Atlantic on the future of 2-meter repeater band planning. Here is the text of the RSGB article:

Some Background on 12.5 kHz Repeater Spacing

"At the IARU Region 1 Conference in Tel Aviv the decision was made to move to 12.5 kHz channel spacing for FM voice on 145 MHz. The change will take place over three years, being completed by the start of 2000. Reaction to this decision has been, to say the least, mixed-ranging from 'it's about time — should have been done ten years ago' to 'totally unnecessary, and will make equipment useless.'

Current status

"The 25 kHz spacing system has been in use since FM first became popular on 145 MHz. In that time commercial practice has moved from 25 to 12.5 kHz FM, and is now beginning to experiment with even narrower systems.

At the same time demand for VHF and UHF spectrum has grown enormously. Demand has come from within the hobby, with new techniques such as packet radio needing spectrum, and requests for more repeaters, notably for local coverage. Demand has also come from outside the hobby: the many pressures on our bands from other services have been well publicized, and there's no need to repeat them here.

"In these circumstances it is increasingly difficult to justify — to ourselves or to others — our continued use of obsolete technology. And let's not fool ourselves: using 50 kHz for a single repeater contact is something which would not be tolerated in any other service. The old saying was 'use it or lose it'. That's not enough any more. Now it's 'use it wisely or lose it.' If we are seen to be using our precious spectrum wastefully, the demands from others who will - they claim - be able to use it more efficiently, will become overwhelming.

What do we get out of it?

"Two things. First, it sends a message. It sends a message to the regulatory bodies of all of Region 1 that we are prepared to change with and adapt to new technology. It is a tangible demonstration of our claim to be a technologically forward-looking hobby, interested in developing and improving our communications expertise. It shows that we are responsible spectrum users.

"Second, it gives us more channels within the band. The 145 MHz simplex channels are currently not overcrowded in most parts of the UK, though there are occasional problems in some places. (As an aside, not everyone agrees with this. When 144.525 was proposed as a temporary packet frequency, I received several messages saying that this was not acceptable as it was used by regular phone nets, which had nowhere else to go, the simplex channels all being full!)

"The repeater channels, however, are full. There's no room for any more 145 MHz repeaters, but there is a demand. Going to 12.5 kHz doubles the number of repeater channels available, neatly solving that problem.

Why not 15 or 20 kHz channels?

"12.5 kHz was not the only option discussed. But you have to consider existing equipment. Changing the transmit and receive bandwidths is reasonably easy. Changing the frequency stepping is much harder on many rigs. By going to exactly half of the current spacing, all existing channel frequencies are retained. Those with rigs which have 12.5 kHz steps get twice as many channels, but none of the existing channels go away.

"This is going to be important during the transition, and beyond: the choice of 12.5 kHz means that many older synthesized rigs that are not fully compatible will still have all their existing channels, and so will remain usable for the rest of their lives. No channel spacing other than 12.5 kHz would have ensured this.

New equipment

"12.5 kHz has been seen as a future standard by IARU Region 1 for some time. Manufacturers of amateur radio equipment are being informed that the change is now being implemented on a planned time scale. This change is being introduced throughout IARU Region 1 — in particular, throughout Europe, where most of the VHF activity is. This makes it possible for manufacturers to continue to produce a single model for the whole of Europe.

"For those who prefer to convert and use ex-PMR (Private Mobile Radio) equipment, the change will actually make life simpler. For some time it has been a complaint of many converters that the hardest problem has been finding wide filters to downgrade commercial equipment to amateur standard.

Existing equipment

"12.5 and 25 kHz specification rigs can inter-operate to a large extent. In one direction, the 12.5 kHz transmitter being received by the 25 kHz receiver, the voice will sound a little quiet. The frequency deviation is less, so the audio signal amplitude is correspondingly less.

"In the other direction, there will be some distortion on the peaks. The wider deviation will take the signal outside the narrower passband, so causing clipping of the audio.

"Existing equipment will need to be adjusted to take full advantage of the new channel spacing. On the transmit side the deviation will need to be turned down. This is almost always as simple as finding the right potentiometer and adjusting it.

"For receive, ideally a filter change is needed, but this need not be hurried — you can try keeping the existing filter. This will be a viable option for many stations, especially those in areas of low population where adjacent channels are unlikely to be in use. You will get a slight degradation in signal to noise ratio, and run a higher risk of receiving 'spill-over' from the channels 12.5 kHz on either side. If you can live with these drawbacks, you may never need to upgrade your receiver.

"However, in the long run you will probably want to find and fit (or get fitted) a new filter. This will give the best results, but does involve opening up the rig and using the soldering iron.

Is the change mandatory?

"I have received a couple of letters asking me to make it clear that this is not a change in the license conditions. This is of course correct: our bandplans and operating standards are all voluntary. But for communications to work best, it helps if everyone is using the same standards. For example, it would make little sense if half the operators on 14 MHz phone used USB and the other half LSB, even though both are quite legal according to the license.

"New repeater applications will be required to conform to the 12.5 kHz specification. Over the next three years existing repeaters will change to the new standard. The long time scale means that it should be possible to make the repeater changes as part of the regular maintenance schedule, so avoiding any additional outages.

"When and how individual rigs are modified is up to the amateurs concerned. As a minimum, operators who use repeaters will be requested to reduce peak deviation, to avoid causing interference to adjacent channels, and to stop distortion of your re-transmitted audio."

Addendum: The change has already begun

On 12 March I received the following update in the form of an RSGB GB2RS News Bulletin:

"The East Sussex 2-meter repeater, GB3ES, on channel R3, is being converted to 12.5 kHz operation whilst the repeater is off the air for maintenance. Tests have already taken place to confirm that the audio of stations with deviation set for 25 kHz operation will still be relayed acceptably. It is planned that GB3ES will return to service on Saturday the 22nd of March."

But can it work?

There is no doubt that 12.5 kHz inter-system spacing does work in commercial service. It has been the PLMRS standard on UHF in North America for several years. But modern commercial two-way radio equipment is built to far more exacting specifications and tolerances than ham radio gear. It's also three to ten times more expensive.

So, the question remains: "Can hams in the UK and across Europe make 12.5 kHz work on 2 Meters using off the shelf ham gear? This in itself causes us to ask if the ham radio manufacturing community will now produce radios for the European market that will make 12.5 kHz work?"

What about here in the U.S. where two meters is even more crowded than Europe? Will this cause U.S. hams to consider narrowing our inter-system spacing also? Will hams begin experimenting with 10 kHz (split from 20 kHz in some states) or even to 7.5 kHz (split from 15 kHz used in most areas)?

To answer these and other questions regarding the technicalities of repeater spacing, we have enlisted the assistance of a half dozen experts in this area. In the coming months, we will bring you their views on these important issues.

•

NFCC's expanding role opposed

Is the National Frequency Coordinators Council (NFCC) planning to expand into non-relay and even non-FM areas of bandplanning? Several hams who obviously have access to the very private "Coordinators Remailer" have been posting on the very open VHF Reflector remailer that they are concerned that some NFCC members seem to be determined to branch out from repeater coordination.

Information made public by one of them indicates that a faction within NFCC wants the organizations sphere of influence expanded to cover all modes of simplex operation. Specifically APRS packet, MIR

and other space activities as a start.

NFCC reportedly has suggested that APRS move to 144.31, .33, .35 and .39 MHz. APRS users are saying "no." They intend to stay where they are and work with recognized "Digital Coordinators" on additional frequencies for the APRS as needed.

A key member of the ham radio space community has told me that ham radio space operations are international in scope, that ham radio space operations are not regulated by the Amateur and Amateur Space Service rules of any one government. Rather, regulation and frequency selection is as the result of memoranda of understanding between various national ham radio societies and telecommunications agencies.

The space people feel that if the stories on the VHF Reflector are true, then NFCC is overstepping its authority if it even considers making any recommendations dealing with ham radio space operations. So far, no public comment from the somewhat 'cloistered' NFCC.

So, how does one get onto the "VHF Reflector?" First you must have a computer, modem, Internet provider (or Internet service like America Online, Prodigy, etc.) and e-mail. To sign up, send an e-mail to vhf-request@w6yx.stanford.edu. Leave the subject line blank. In the body of your message type only the two words "subscribe vhf" with no quotation marks.

The best repeater in town

When in Tucson, Arizona, Norman Martin, KC7FNK, says to try 146.82(-). This local coverage system has autopatch and is open to all. You can get wide area coverage on 146.88(-) which is on a mountain top at about 9000' elevation. This repeater can reach Phoenix from the Tucson area.

Arizona also hosts part of the ZIA Connection. This is a link consisting of about 15 repeaters covering most of Arizona and New Mexico with links west to San Diego, California, northeast to Colorado Springs, Colorado and east over into El Paso, Texas. Various frequency pairs are used, but all use a CTCSS 160.2 Hz. We are planning a feature on the ZIA Connection later this year.

Spring and summer are here

The summer VHF DX season is almost here. By the time you read this, there should be some nice sporadic E and maybe even a bit of F2 appearing on 6 meters. Two meters may also be a prime candidate for some long-range non repeater contacts. If you are new to ham radio or have never tried long-range VHF DXing, here are two easy and very cheap ways to get started.

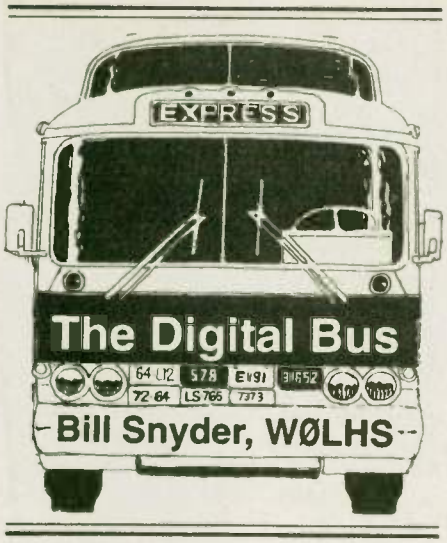
The first is to move your FM transceiver off of the local repeater and start monitoring one of the simplex channels, 146.52 and 146.55 MHz are the nation's favorites and if two meters opens, you have a good chance of hearing it on those frequencies. Over the years, I have worked some interesting DX contacts to the Midwest and southeastern United States while running only 10 watts to a ¼-wave vertical antenna on the trunk of my car in California.

Another way, often overlooked to get started in VHF DXing, is to take a step backward in time. This means to go to the local ham radio swapmeet and buy one of these "relic" 6-meter AM transceivers that lots of hams are trying to unload. Look for one that appears in good condition and make sure that it comes with some crystals in the 50.25 to 50.4 MHz range, or with a VFO (variable frequency oscillator).

Most of these radios used the old FT-243 type crystals that have not been easy to find for more than two decades. The crystal of choice is 8400 kHz (may be marked Kc) and multiplies out to 50.4 MHz which is the center of 6-meter AM activity these days.

Why AM? The RF does not know or care what mode it is. If it's generated in the latest all solid state "whizz-bang" all-mode radio, or a relic built by the Lettine Company in 1955, it doesn't matter! RF is RF is RF and it's not the mode that is so important, as is having a signal on the air.

During a 6-meter E or F2 opening, even 5 watts of AM to an indoor dipole can work stations thousands of miles away. "Skip is skip" and the ionosphere does not care if your signal is CW, AM, FM, SSB or what have you. They all bounce in the same way. SSB may give you more intelligibility under varying band conditions, but if you look to work only the strongest AM stations you hear, the chances are that they will hear you. WR



Owen Swenson, W7ZGT, an old-time ham from the Minneapolis-St. Paul, Minnesota area (W9ZGT in those days) was a fan of the late Boyd Phelps, WØBP or "Beep," when he was living in the St. Paul area. Owen has a bit to add to my column in the April issue of ***Worldradio***. In it, I reminisced about Beep, one of the early pioneers of Amateur Radio in the RTTY mode. Because Beep was a character worth lionizing, here are some of Owen's comments on our hero of the "Green Keys."

"Boyd Phelps was our skipper in our Naval Communications Reserve (NCR) group, and we used to drill in the Navy hangar at Wold-Chamberlin airport. I believe Boyd was a Lieutenant Commander then, but I don't know where and when he got his commission.

"Boyd always sported a crew cut and he also wore horn-rimmed glasses, and you could tell from his eyes that he had a lot going on in his head, usually something funny. For example, he called his hair-do a "high frequency haircut."

"After the war Beep got to be a part-owner or manager of the Lew Bonn Co. (a Amateur Radio supply store in St. Paul), and I think he continued his frequency measuring business for several more years.

"Speaking of Lew Bonn, he was a business man and didn't know that much about electronics. There was a story going around about the time Lew Bonn got caught behind a sales counter in the store when the on-duty clerk got busy with another customer. The ham who caught Lew there was a joker who knew Lew's lack of electronic knowledge, so he asked him for an "automatic volume control." Lew went back through the aisles of parts bins and after some minutes came back to the counter and said, "I'm sorry, we must be out of them. I know we had them last week."

"As I recall it, Beep and Adolph Emerson (whose call I don't remember) were in Mexico to put RTTY on the air for the first time from there. Emerson was an ARRL official for the district. . . . I'm told that the fatal auto accident occurred in Mexico, and that the families had a terrible time getting the remains shipped back for burial. I got this info in fragments from old ham friends in the Twin Cities.

"The NCR unit I mentioned was activated in 1940, but I had transferred to the Naval ROTC unit at the University of Minnesota in the fall of 1939. Two of my friends in the NCR unit, W9ZGU and W9ZSC were sent to San Diego to reactivate the USS *Ward*, an old WWI, four-stack destroyer. When the Pearl Harbor attack occurred 7 December, 1941, the USS *Ward* had sunk a Japanese mini-submarine an hour or so before the air attack occurred, and so it may have fired the first U.S. shot of the great war. Jud Trimmer, W9ZGU is now K6CG, and Dean Haes, W9ZSC became W7KLS, but is now a silent key.

"I was commissioned an Ensign and served my time on the USS *Massachusetts* in the Pacific operations. I spent my working career as a field engineer for General Electric Co. and retired in 1981. I am mildly active as W7ZGT, and stay in touch with old ham friends from Minnesota days, mostly by e-mail.

"I had been wondering about Armond Brattland, ex-W9FUZ from Brainerd, Minnesota who moved to California many years ago and became K6EA. He also had a column in ***Worldradio*** for some time. I sent an e-mail query to Lou Ann Keogh, KB6HP, at ***Worldradio***, and she got me the info I was after. Armond, (Army) was known far and wide in the Upper Midwest as "Uncle Fuzz," and used to visit us at meetings of the St. Paul Radio Club. We younger hams looked up to him as a real guru. According to the database he renewed his ticket in 1994. But since he was born in 1898, it is unlikely that he is still active, if in fact he is still alive."

Over the past few years I have been doing a lot of reminiscing on these pages. And my tales of yesteryear have brought a number of fan letters from other hams who like to think about the good old days of ham radio. Our Fargo Saturday morning breakfast group is composed mostly of old timers, and if you think this column is bringing up the past ham history, you should join us sometime on Saturday morning!

Most old folks get up early in the morning, I think. I know I do. That is the time of the day that I get my computer steamed up and do a lot of writing. I run out of gas about 10 a.m., so I just think about the old

JUST HANG IN THERE --- IF HE BACKS UP, YOU'LL GET A SHOT AT AN OPERATING POSITION

days the rest of the time I am awake.

Here are a few bits from the fan mail I have received. John Biester, KB9YY, from Beloit, Wisconsin had this to say about the five-meter days of yore (yes, kids, we did have a band on five meters; it was later shifted to six): "There was a time when I built a 5-meter transmitter hoping to keep contact with friends across town when we moved to a new home. We never did get the thing working, and it was probably just as well because none of us were licensed at the time."

I wrote once about intercepting two army CW stations that compromised one of the message codes we used during World War II. It all started with one CW operator asking a question, "WO?" which was interpreted as "Whose operating?" Joe Coffield, W2DDZ, had this correction to make, "I don't remember ever hearing WO for "whose operating," but I do recall WI for "What initials?" and also HR for "Hear" to get the other fellow's attention. One very popular Q signal was 'QTC STACK.'"

Well, Joe, the 66 CW operators I had in my platoon in the 58th Signal Battalion were all highly trained as high speed ops when I joined the outfit in Australia. And when we got into the fray up in New Guinea, every day was a QTC STACK day. In fact, when we invaded Hollandia, Dutch New Guinea, we reached a point where we had to bundle up routine radio traffic and send it by safe-hand messenger. There were no overland phone links with higher and some lower headquarters, so most everything went by radio or messenger. We operated 16 high volume radio circuits 24 hours a day. At night we had a lot of fade outs and the radio circuits other than local circuits would disappear for a few hours during the middle of the dark period. It was almost impossible to find a frequency at night that would hold up a circuit that was dependent on the Heaviside layer for bounce. We never had the luxury of radio teletype circuits, although we did have a lot of landline and VHF teletype circuits when we hit the Philippines. That was where I got my liking for RTTY and became one of the first to hit the HF bands when the FCC allowed it in February, 1953. I was on the air its very first weekend.

Here is a letter from Bill Hotine, K6HH, of Los Osos, California. Bill is a real old-timer, even outdating me, and I think I am old at eighty!

"A friend brought me an issue of *Worldradio* and I read your column about Boyd Phelps. It reminded me of my acquaintance with him when I lived in Douglaston, L.I. New York and had the call W2WQ. Boyd came to my house one day in 1929 and invited me to his shack that night to see British television transmitted from London by Baird. It was interesting to hear him relate how he figured out what the scanning disk rate should be, and also RPM and number of holes.

"In those early days of TV, a scanning disc with a spiral of holes was placed in front of a neon tube with a large plate that glowed red. We waited until the scheduled transmission time and then received the television signal on 100 Meters. We adjusted the speed of the scanning disk until it showed a picture of a mouse cartoon. The picture was about one half inch square.

"Boyd was a true genius in electronics, way ahead of me. I've held a commercial license since 1921, the same year I got call sign W2WQ at the age of 17. I worked as a technician for RCA Marine Department in New York City. I converted old Marconi 106 crystal detector receivers to use a tube in a tickler circuit by using an Atwater Kent Variocoupler to substitute for a loose coupler usually used.

"As you can see, I have been a ham since the days of 'spark.' I chose radio as my career and by study eventually became a mechanic and electrical design engineer with credit for 43 inventions patented, and many more not registered.

"I also wish to call attention to my article in the June and July, 1988, *73 Magazines* in which I describe my digital communications system for the amateur HF bands. The patents have been abandoned by me due to the high cost of maintaining them. Any ham can go on digital phone or RTTY using this system. The system is error-free in the ham bands due to redundancy of each bit (4 times on 21 MHz). So there is a ham system available to anyone who wants to spend about $50 for integrated circuits, transistors and a circuit board.

"I am still inventing; my latest is a gravitational type of radar which cannot be detected, and is capable of detecting objects 20 miles away. It is needed to detect missiles."

When anybody tells you he is from the "spark" days, he's an old timer!

Eavesdroppings

I WAS TOLD TO THINK SPRING: GO PUSH UP SOME DAISIES. . . THIS IS A GREAT CONTEST, PERHAPS I SHOULD GET IN IT. . . DOES 373 MEAN MORE THAN ONE BEST WISH?

Thanks to N9PGE, W5PGG, and WB6NQW. Write me: Bill Snyder, WØLHS, 1514 12th St. S., Fargo, ND 58103-4134. 73 and DIT DIT. WR

Computers & Basic Stuff

C.H. Stewart, KD5DL
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BASIC Line Losses, Part I

Imagine taking a typical HF rig's output power and dividing it by 100. Then divide it by 100 again. Then again by 100 more. Finally, shave off some of what's left, then try talking to somebody with it.

Paul Stroud did.

And in doing so, he and Fran Slavinski set the world's record for miles-per-watt on the 40-meter band late last December. Paul, AA4XX, sent a 96-microwatt signal from his homebrewed Sierra QRP transceiver through his antenna system and Fran, KA3WTF, 422 miles away, also using a Sierra, was able to copy it to set the 4.4-million miles per watt milestone!

That's the same power a 1.5-megohm resistor dissipates when connected across the terminals of a 12-volt battery! Or about 1/12,000th the energy used to light the bulb of a two-cell flashlight!

I was curious as to what magic Paul used to get such a weak signal to his antenna.

He told me that the line from his station to the antenna was 100 feet of RG-8X connected to another 100 feet of RG-213/U. The line ran from a 30-dB attenuation pad at the transceiver to the antenna. He figures his signal, by the time it got to the antenna, was down to 74 microwatts, and that another 2 dB (27 uW) was lost in the antenna's phasing system before being radiated.

The antenna itself was designed to give a front-to-back gain of around 25 dB and, of course, that helped offset the line losses.

Still, quite an accomplishment! Congrats to both ops.

Feedlines

When I was first starting out in Amateur Radio I was under the impression that big cable was for big power. I couldn't see spending more money for RG-8 when the smaller lines could handle my rig's 200 watts. For what I would have to spend on the big cable I could get a whole lot more of the little stuff, and I could coil up what I didn't use behind the bench in case I ever needed it later.

Paul Stroud and his dog, Henry, work on the more technical aspects of their accomplishment. Stroud had just finished measuring losses on his 200-foot transmission line. *—photo courtesy Paul Stroud*

Now I know better. If you have a recent edition of the *Antenna Book*, or an *ARRL Handbook*, take a look at the chapter on Transmission Lines and look for the graph depicting cable attenuation.

Lines with the highest attenuation factors (greatest power losses) are closer to the top of the graph, while those with the lowest attenuation (least losses) are nearer the bottom.

The topmost cable is RG-174 (the thinnest coax they make). Under it, in descending order, are the RG-58 and -59 (medium-thin) types, then RG-8 and the RG-200 (thicker) series lines, some of the 3/4-inch and 7/8-inch "hardlines" and, finally, "window" and "open feeder" lines at the bottom.

If we were to pick one frequency, say 30 MHz, and compare the attenuation for 100-foot lengths of each of these lines, we see these comparisons:

RG-174	6.2 dB
RG-58	2.6 dB
RG-59	2.0 dB
RG-8	1.2 dB
3/4-inch hardline	0.3 dB
7/8-inch hardline	0.26 dB
Window line	0.15 dB
Open line	0.10 dB

Let's compare: RG-174 is the "lossiest," with more than 6 dB of loss per 100 feet. That means that at 30 MHz only 24 percent of the power fed one end of a 100-foot section ever makes it to the other. The

Macintosh users . . .

Are you using logging software on your Mac? How about contesting programs? Our Mac-user readers want to know! E-mail to:

kb6hp @ns.net

or write us at: ***Worldradio,*** 2120 28th St., Sacramento, CA 95818.

```
10  CLS: PRINT "COAX LOSS FROM R AND X, BY KD5DL, 6/97"
20  PRINT: INPUT "LINE ATTENUATION (dB/100 FT)";D
30  INPUT "CHARACTERISTIC IMPEDANCE,";Z0
40  INPUT "LINE LENGTH, FT,";LL
50  INPUT "INPUT POWER, WATTS,";PI
60  A=LL*D/100: REM dB LOSS IN MATCHED LINE
70  INPUT "LOAD RESISTANCE, OHMS,";RL: INPUT "LOAD
    REACTANCE, OHMS,";X
80  B=((RL+Z0)^2+X^2)^.5: C=((RL-Z0)^2+X^2)^.5
90  E=(B+C)/(B-C): F=10^(A/10): G=(E-1)/(E+1)
100 H=(F+G)/(F-G): REM SWR AT LINE INPUT
110 K=2.718^(-.46*A): L=2.718^(-.23*A)
120 M=G^2: N=PI/(1-(M*K))
130 P=((1-M)*L*PI)/(1-(M*K)): R=PI/F
140 V=PI-P: U=N-PI
150 PRINT:PRINT "SWR AT ANTENNA";E
160 PRINT "SWR AT INPUT";H
170 PRINT,"POWER USED BY ANTENNA ";P;" WATTS"
180 PRINT "REFLECTED POWER ";U;" WATTS"
190 PRINT "TOTAL POWER LOST IN LINE ";V;" WATTS"
200 PRINT: INPUT "DO ANOTHER (Y/N)";A$
210 PRINT: IF A$="Y" OR A$="y" THEN 70 ELSE END
```

"lost" 76 percent just goes to warming the dielectric (insulation).

RG-58 is somewhat better. At 2.6 dB per 100 feet it only loses about 45 percent of the power it's fed.

RG-8, the old **standby**, loses 1.2 dB for the same length. Just under 76-percent of a 10-meter signal makes it through to the end. Still, nearly a quarter of the input power is attenuated (burnt up) by the dielectric.

The hardlines are far better. A .26-dB loss equates to an output of about 94 percent at 30 MHz.

Window line and open-wire feeders, at the bottom of the graph, attenuate the least. At 30 MHz a 100-foot section transfers about 96 percent of the power through to the load.

Obviously, if you're concerned about line losses, you'll want to stay away from cables near the top of the list and maybe concentrate more on those at the bottom.

The rest of the Story...

Let's take a closer look at my old RG-58. From what we see from the graph, if we were to connect one end of a 100-foot section to a 100-watt 10-meter transmitter and the other end to a 50-ohm matched antenna, we see we can expect only 55 percent of the power to make it to the antenna.

However, if we factor in SWR, we lose even more. At my station, for example, with dipoles 40-feet above ground, not one HF antenna, even when "resonant," is perfectly matched to its line. SWR is always greater than 1:1, as Table I illustrates.

Length	Freq.	Resist.	React.	SWR	Ant. Power
125'	3.5	30.1	-126.8	12.86	48.55
	3.6	34.3	-78.7	5.58	67.65
	3.7	39.0	-30.7	2.06	82.07
	3.8	44.2	+17.3	1.48	84.24
	3.9	50.1	+65.5	3.43	76.13
	4.0	56.7	+114.0	6.42	64.74
66'	7.0	82.6	-40.2	2.19	74.98
	7.1	86.8	-18.6	1.85	76.69
	7.2	91.2	+2.7	1.83	76.81
	7.3	95.7	+24.0	2.07	75.58
33.7'	14.0	54.3	-27.6	1.70	70.08
	14.1	55.3	-16.6	1.39	71.54
	14.2	53.6	-5.6	1.17	72.26
	14.3	57.3	+5.4	1.18	72.22
	14.4	58.5	+16.5	1.41	71.47
22.5'	21.0	78.5	-14.3	1.65	63.78
	21.1	79.7	-8.3	1.62	63.95
	21.2	80.8	-2.3	1.62	63.98
	21.3	81.9	+ 3.7	1.64	63.84
	21.4	83.0	+ 9.7	1.70	63.55
16.7'	28.0	59.7	-21.9	1.54	53.24
	28.4	63.1	-1.6	1.26	54.47
	28.8	67.0	+18.7	1.54	53.22
	29.2	71.3	+38.7	2.06	50.20
	29.6	76.3	+58.2	2.70	46.35

Table I. Dipoles are at 40-feet above ground at KD5DL

Remember this (it's important): Whenever reactance exists in an antenna system, and/or whenever the load resistance doesn't match line impedance, then SWR on the line will be something other than 1:1.

Power fed into such a system cannot be transferred effectively from the line to the antenna. Some of it "bounces" off the mismatched junction and returns through the line. If the antenna were 100 ohms, for example, the SWR at the antenna would be 100/50, (the same as 2:1 SWR), and only about 94 percent of the power will make it through to the load. The other 6 percent will be reflected because of the mismatch.

In other words, at 30 MHz, of the 55 watts that make it through a 100-foot section of RG-58 to the antenna, with an SWR of 2:1 (at the antenna) roughly 3.5 watts of it will be reflected.

The reflected watts will also be attenuated on their way back through the line. They'll reach the starting point as only 1.9 watts.

At the transmitter (or antenna matching unit) they will be reflected again, and will head back up the line toward the antenna. The same amount of attenuation, 45 percent, keeps all but one watt from making it through.

Overall, then, only about 52.5 percent of the 100 watts put into the line under these conditions will ever be used by the antenna.

Despite its lossy attenuation, no one will ever be able to tell if my SWR is 1:1 or 2:1 just by listening to my signal. (In fact, with this line, it would take an antenna SWR of 3:1 or more before anyone would hear even the slightest change in signal strength!)

Both the *Handbook* and the *Antenna Book* have two additional graphs; one showing the increase in line losses due to the effects of SWR, and another illustrating the differences between SWR at the two ends of a transmission line. This month's BASIC program does pretty much the same thing (see Figure 1).

Credit for the program goes to Irv McNally, K6WX, and Walter Maxwell, W2DU. The program is a derivation of Irv's Excel spreadsheet program (see the October, 1996 issue of ***Worldradio***), which he wrote based on information from Maxwell's book (and *QST* series), *Reflections*.

Use the cable attenuation graphs we already talked about, or manufacturer's data sheets, to find the dB loss value for the line at frequency, and input the data when asked by the program. You'll also be asked to input the line's characteristic impedance, length, input power, antenna resistance and any reactance.

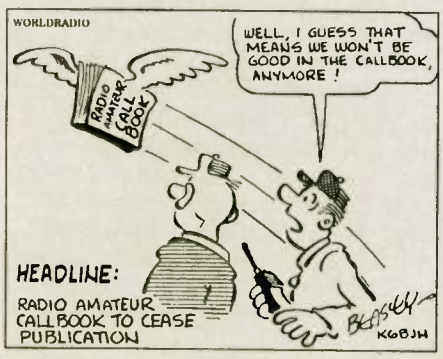
(If you don't know your antenna's resistance and reactance values, cheat and use mine from Table I. Our's won't be exactly the same, but you can get a close idea of how any particular cable might match up under similar conditions. If you have antenna modeling software, this program is a good complement to it. Run the antenna program first to determine resistance and reactance values for your particular antenna and location, then plug the values into COAX-RX).

Outputs will be SWR at the antenna and at the line input, power used by the antenna, power reflected, and power lost in the line.

Armed with COAX-RX.BAS and an attenuation graph, you'll now be able to make a subjective analysis of how transmission lines really affect the power delivered to your system.

You might be surprised by some of the results.

Next time, in Part II, we'll modify this month's program and take a closer look at open-wire lines. Until then stay radio active. **WR**



Search And Rescue Communications

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I was recently involved in a leadership selection process for a volunteer group which left me shaking my head in frustration. It was not the process (letters, interviews and final selection), but some after-the-fact comments that left a sour taste. (I'm passing along my impressions so any of you who are in leadership roles might learn from my experience.) As I contemplated what happened to me, several other similar situations came to mind and I began to understand why feelings are hurt and why these types of comments affect a volunteer's motivation.

As I said, it was not the process. I was not selected for the position I was seeking and, while disappointing, I was somewhat relieved in retrospect because of the time that would have been required. If the process had ended with a simple "you didn't get the job" it would have been fine. But the person making the decision told me that the organization should create an "editor" job and I could apply my journalism skills for the group.

I thought, what if I were a cook, a garbage collector, or a doctor. Would this person suggest those roles in the organization for me? Perhaps it was meant as a compliment but it left me somewhat dumbfounded. What about my other skills, interests, and competencies? Are we not unique individuals because we're comprised of many talents and many interests? I'm always happy to spend time with a new public relations person for any group and even serve as a coach, but I get enough journalism every day at a major newspaper. The last thing I want to do is spend my volunteer time doing what I do at work. I am motivated as I develop other competencies, not by doing the same thing and never "lengthening my stride."

Let's look at Amateur Radio. What if each ARES group only recruited public safety dispatchers because we need communicators. Our numbers would be pretty thin — in fact, there are not many dispatchers I know that are in ARES. Our local ARES group is comprised of school teachers, engineers, airline pilots, university professors, students, retired Navy ship captains, and just about any profession one might imagine. Each of us brings various levels of RADIO competency to the group and many would make fine public safety dispatchers — but they're not.

Our group has not made assignments based on profession. Our current ARES leader is an airline pilot for a major air carrier. Our second in command is a university professor and our logistics director is a salesman for cellular phones and pagers. Yet these people perform extraordinarily!

Here's my message. If you need a volunteer as financial manager, editor, mechanic, repeater repair person, planning coordinator, or commander-in-chief, discover someone who is interested and willing to tackle the job. They may make mistakes and they may not do everything a "professional" would do – but they're going to give the effort their heart and soul and a great deal of time. They'll probably become an expert, enjoy what they're doing for the group, and often put in more than a 40-hour week because they *want* to, not because it's their "job" that they *must* do. It's okay to ask the professionals to lend guidance and coaching, but don't assume they'll love doing their profession for you as a volunteer.

It is almost demeaning to someone to assume they would be willing to be limited to their profession on behalf of your volunteer group. Some might be willing, but many (I would even speculate that most) desire challenges in other interest areas! Motivation in a volunteer group is discovering what someone's interests are and then removing obstacles so they can excel.

New radio users

I have to mention with some personal glee that my wife has joined the "licensed" ranks. For years Janet would tolerate my radio habit and all those weekend public service events and weeknight meetings. The bug bit her and she tackled the book. After several weeks of study she is now KC7VKX and active on several local repeaters. She's a talented teacher and highly competent. I know, because she always has more parents wanting their kids in her class than the class has room for. I say this because it has opened my eyes to how confusing Amateur Radio can be to new users.

In past columns I've touched on this as well, but I feel this is critical to Amateur Radio and its role in public service. Concepts such as sub-audible tones, dual tone multi-frequency (DTMF), repeater offsets, Q-signals, rubber ducks, coax, and simple voice contact procedures are quite confusing. We (as experienced operators) can also make it worse if we don't carefully consider each concept before trying to offer explanations.

This month I want to list some basic radio concepts and challenge you to develop some coherent responses that you'd give to an inquiring new operator. The list:

What is a Q-signal, why were they developed and when would you properly use them?

Why do some repeaters need sub-audible tones, what exactly is a sub-audible tone, and how does it make the repeater work?

What does DTMF stand for and what is it used for?

I hear "signing clear," "for ID," "tie the ribbons on the QSO," "listening," and "monitoring." What does

each mean and is it appropriate radio terminology?

Some folks were talking about "auto patch," "repeater reverse," "uplink," and "reverse patch." Tell me what they mean? Does my radio do these things and how would I do them? When someone goes simplex and then back to duplex, where are they going?

There are some buttons on my radio that look like telephone buttons. What do I use them for?

What is an "open" repeater? What is a "closed" repeater? What is a control link and why can't I operate on those?

Some people say "73s and 88s" and others simply say "73 and 88." Is 73 and 88 plural or singular — and, what are they?

Once in a while someone will say they are "mobile seven" or "mobile zero." Does this mean they have seven cars or no cars? What does this mean and should I say it too?

The above questions are just a few of some I've recently fielded from my wife and from my neighbor (Bruce, KC7UJA). I'm realizing that the Amateur Radio service has developed a large number of unique procedures that are challenging to describe, justify, or explain. My challenge to you is to answer each of them for yourself, compare your notes perhaps at a club meeting, and encourage other questions. There is no such thing as a "stupid" question! The only bad question is one not asked. Please create an environment within your group that encourages questions and open discussion. When your people are intimidated or feel their opinions and comments don't matter, they're less likely to get involved.

"I can promise you anything in order to get you to join my group. Delivering on the promise is what's important."

Accountability and competency

A manager once told me the secret to getting ahead is to make your boss look good. He said the way you do this is by tackling big projects that let your boss get lots of attention and credit. I asked myself if I'd really like working for this person and would I follow a leader who earned his or her job by doing a couple of "big" projects. Is my job in ARES simply to make the ARES emergency coordinator look good?

Let's assume I want to be EC. Under the above philosophy, I could stage a huge recruiting drive and sign up 25 new members to ARES every three months so our membership would grow by 100 new members this year. On paper this would look great. The membership term is one year, so in December I would graph a growth of 100 people. Those lines on the graph would go up. Up is good, I have made my EC look good, I could be the next EC.

Wrong! What if ARES does not need 100 people? If they have nothing to do, will they continue as members? Organizations exist to allow ordinary people to do extraordinary things. An organization is not measured simply by "how many," but by its fundamental purpose and how well that purpose is being met.

Our ARES group has several primary clients who depend upon us to accomplish some specific needs such as staffing an emergency communications center, linking government officials with volunteer officials, etc. Our basic measurement of "looking good" is doing what we agreed to do. We look good when we set up communications between West Valley City and Salt Lake County. We look good when we link the American Red Cross disaster team to the on-scene fire department command post. Our leader (the county EC) looks good when we perform our basic skills for our client agencies.

Our client agencies hold ARES accountable for performance, not artificial goals such as membership totals, radio totals, etc. When we can't perform, we don't get called. If we don't get called, it doesn't matter how many people we have on our roster! The EC is accountable to the members to help make it happen that we can get involved. We are accountable to the EC to make it happen and be ready to respond.

The whole idea here is to build a quality program that meets the needs of your client agencies. From an ARES perspective this includes equipment readiness, communications procedures, and station setup and troubleshooting (including packet), to name a few areas. Your areas of basic focus are the "expectations" of who you're going to support. The Red Cross may simply want health and welfare message handling while the State EOC needs on-scene station set-up and packet relay for command traffic. The County EOC may ask ARES to tackle technical issues such as setting up the communications center, installing antennas, running coax, and then ensuring it is ready by staging regular exercises.

Now here's the kicker. If you build a quality program, you will *not* have to worry about membership! Brash statement? I don't think so.

Let me use Scouting as an example. This program exists as a youth program. If I, as a Scout leader, develop a basic program of camping, outdoor skills, games and activities, I'll attract Scouts. To keep the Scouts in the troop, I (as leader) must ensure that the basic program happens. This includes having others help as teachers, coaches, merit badge counselors, and camp leaders. It includes motivating parents to help drive the troop to events, and working with each youth to encour-

age advancement and help each participate in the program. The leadership job is a huge undertaking, but it's one of simply focusing on basics.

When a Scout group quits going on campouts, or swimming, or hiking, or on field trips, the Scouts go away. I can always convince youth to sign up as Scouts, but without a program, they'll go away and I'll be spending my time constantly holding recruiting drives. My yearly totals of new members will be great, but my retention and advancements will be low.

Looking good is *not* a matter of undertaking big, splashy, attention grabbing events. Those things will happen as a consequence of having a great basic program that is meeting the needs of your people. Resist the urge to seek spectacular things. The real program is your basics. If you look at numbers (as quality managers often do), look at the numbers that reflect your basic program.

If you're a search and rescue group, look at how many missions your group participated in and what percentage of your members were involved. Look at what percentage of your total are involved in training and practice missions. If it's the same five percent each time, what is your group doing to meet the needs of the other 95 percent? If you aren't getting called to participate, perhaps you've let your basic purpose erode and you're not able to meet an agency (such as a sheriff's office or state emergency office) need. If you have advancement levels, what percentage of your members are moving through this educational process? If your numbers are low, look at your basics. Is your program luring members under a pretense and then failing to provide these basics?

You "look good" when you consistently, over time, handle the basics and do them well. I would rather have 20 competent members of a public service group who can meet sponsoring agency needs than have 200 new volunteers each year with nothing to do because I have no basic program. The numbers may look good, but it's a hollow shell. I can promise you anything in order to get you to join my group. Delivering on the promise is what's important!

Have a great summer! See you next month. Until then, keep your antennas pointed up and your battery charged. Best wishes from Salt Lake City! **WR**

CM93 activiation

CM93 is a rare grid square located in California's Santa Barbara Channel. Specifically, it is in the area of Santa Rosa Island. Weather permitting, this area will be activated for the entire June ARRL VHF/UHF contest.

The bands that are to be used are (on SSB): 6M, 2M, 440 MHz, 1.2 GHz, and FM-only, on 220 MHz.

The attempt will be made by Steve Graboff, KE6GOS, and Kip Omweg, KD6TBE, from Steve's boat, the *Skeleton Crew*.

This trip was attempted two years ago under very poor weather conditions. On that occaision there were 40-knot winds and eight-foot seas. Only one day of operating was possible then, due to the terrible weather.

The duo is hoping for better weather this year, and another 6M opening similar to the one that occured two years ago. It was an incredible opening. **WR**

Lorraine S. Matthew, N4ZCF
MARS call AAA9PR

With a successful appearance at Dayton Hamvention behind us and an equally successful Armed Forces Day, MARS members everywhere look forward to continued operations throughout the coming months. Those operations will be based largely on new operations documentation for Army MARS, on greater interservice interoperability for all the service MARS members, and the adoption cooperatively of new technologies in a blend with the standard technologies already in use.

MARS members have been provided opportunities to examine the MARS programs from the point of view of their respective service headquarters staff. The speakers at the Dayton Hamvention offered one of these opportunities to all MARS members and guests present at the joint services MARS open forum meeting. Col. James C. Hylton, Assistant Chief of Staff, G3, HQ United States Army Signal Command offered an earlier opportunity to all Army MARS members when he appeared as a special guest on Chief Army MARS Command Net.

Col. Hylton was very strong in his assurance that "the Army Signal Command is fully committed to the support of the primary mission" of Army MARS. That primary mission as stated in the new DA PAM is to "provide DOD-sponsored emergency and/or disaster communications assistance for military or civil officials as an alternate means to normal communications facilities."

Part of that assistance is the provision of early information about any emergency or disaster to federal agencies via the Director of Military Support. Army MARS members have sufficient geographic coverage to have eye witness information about almost anything of importance that happens in this country. It is this function that has proved to be so vitally important to the mission itself.

Col. Hylton also recognized that, along with the Army commands, Army MARS has undergone significant decrements in many resource areas. He felt that the organization structure has stabilized at all levels of operation. One of the results of all the changes has been the requirement to rewrite all of the pertinent operating manuals for Army MARS. These procedural documents for general operation, for emergency operations, for the new region net plan, and for frequency utilization are being circulated and their contents are being put into practice. Many key areas have already been put into practice through Chief Sutton's judicious use of his Command Net Notes and through the use of Chief Army MARS Messages. Through these media, many key points have already been established and are in general use today.

Chief Army MARS and the two Area Directors have examined and reviewed the complete Army MARS program and have done the necessary revisions in order to ensure that Army MARS can successfully execute its global missions of today and into the future.

The increasing use of new technologies by Army MARS members will, of course, never supplant the HF radio basis for Army MARS operations. The blend of HF voice and digital modes was most evident during the Armed Forces Day operations. This is the one day when Army MARS members stay on Amateur frequencies in order to practice cross-band operations with the participating military stations from all the services. This type of participation also reflects the continuing emphasis on interservice cooperation and operations.

The digital modes were used to transmit the Secretary of Defense special message.

Later this month, Army MARS operators will really go back to basics as they participate in Field Day operations. I have personally operated from a lake front location, a county park (the highest point in Florida at 139 feet), a soccer field, and the top of a mountain to which a four-wheel drive vehicle was a requirement. Field Day is an ARRL sponsored event to demonstrate what can be accomplished by radio when all else fails. A person can participate, however, in a variety of classes including a fully commercially powered station without leaving home. This provision has two imports for MARS members. It allows operators who might be constrained in some way to still participate in the event. More important, still, this provision gives emphasis to the fact that in any emergency or disaster there will be stations in the area literally in a field operation mode, using emergency power and accommodating to the situation; but there will be stations outside of the stricken area who can operate normally as relay stations for vital information.

I encourage all MARS members to participate in Field Day during the last full weekend in June. Whatever class of operation you choose, you will be giving and gaining valuable experience for yourselves and for Army MARS. You will find the full details and criteria for Field Day in the May 1997 issue of *QST Magazine*. Please join in the experience.

Let's all keep Army MARS. . . proud, professional, and ready. WR

Young Amateurs: Send in your news, features and ideas. Let your voice be heard in *Worldradio*
2120 28th St. · Sacramento, CA 95818

Visit Your Local RADIO CLUB

For information on how to get your club listed in "Visit Your Radio Club," plus receive many other benefits, write to:
Club Liaison,
Worldradio,
2120 28th St.,
Sacramento, CA 95818.

ARIZONA

Arizona Repeater Association. P.O. Box 35758, Phoenix, AZ 85069-5758. Operates 20 VHF & UHF rptrs. in AZ. Meets 4th Thurs./monthly, 7:30 p.m., APS Bldg., 21st Ave. & W. Cheryl, Phoenix. Info: (602) 849-0851. 9/97

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. 5/98

Old Pueblo Radio Club, (OPRC). P.O. Box 42601, Tucson, AZ 85733. Meets 2nd Wed./monthly, 7:15 p.m., YMCA Lighthouse Cntr., 2900 N. Columbus (So. of Ft. Lowell). 2/98

Tucson Repeater Assoc., P.O. Box 40371, Tucson, AZ 85717-0371. Meets 2nd Sat./monthly, 7:15 p.m., Dept. of Emergency Mgmt., 130 W. Congress. Net Thurs. 7:30 p.m. 146.82(-), 146.88(-), 147.08(+), 448.550(-) & 145.15 Packet. 3/98

CALIFORNIA

Amateur Radio Club of Anderson, (ARCA). Meets 2nd Thurs./monthly, 7:30 p.m. Amer. Legion Post #746, 1709 Bruce Dr., Anderson, CA. Net every Tue., 7:30 p.m. on 146.64. http://www.snowcrest.net/bgorski/index.html 4/98

Coachella Valley ARC. Box 11092, Palm Desert, CA 92255-1092. Meets 2nd Wed./monthly, 7 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. 5/98

Contra Costa Communications Club, Inc., WD6EZC/R. P.O. Box 20661, El Sobrante, CA 94820-0661. Meets 2nd Sun./monthly (except May & Dec.), 0630, Baker's Square Restaurant in Richmond, CA. Info: Ed Caine, KA6OFR, (707) 996-0962. 1/98

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. 5/98

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. 6/97

Fresno Amateur Radio Club. Meets 2nd Fri./monthly, 7:30 p.m., Ernie Pyle School, 4140 N. Augusta, Fresno, CA. 146.94(-) 223.94(-). 11/97

Fullerton Radio Club, Inc., W6ULI. P.O. Box 545, Fullerton, CA 92632. Meets: 3rd Wed./monthly, 7:30 p.m., Sr. Citizens Ctr., 340 W. Commonwealth, Fullerton. Net ea. Tue., 8 p.m. 147.975(-). Info: Bob Hastings, K6PHE (714) 990-9203. 6/97

Garlic Valley Amateur Radio Club (GVARC). Meets last Sat./monthly, 8:30 a.m., Dimitri's Gilroy Inn, 1st and Wayland St., Gilroy, CA. Info: Hal, AC6LK, (408) 779-7787. Net Tues., 7:30 p.m. Club rptr. K6THR, 147.825(-). 6/97

Golden Empire Amateur Radio Society, (VEC). P.O. Box 508, Chico, CA 95927. Club call W6RHC, rptr. 146.85(-). Meets: 3rd Fri./monthly, 8 p.m. at 1528 Esplanade, Rm. 101, Chico. 9/97

Golden Triangle ARC, (GTARC). Meets 4th Mon./monthly, 7:30 p.m., Sharp Health Care Activities Rm., 25500 Med. Ctr. Dr., Murrieta, CA 92562. 6/97

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(+). For info: LARK Secretary, P.O. Box 3190, Livermore, CA 94551-3190. (510) 846-6513. 1/98

Marin Amateur Radio Club (MARC). W6SG. Box 151231, San Rafael, CA 94915-1231. Meets 1st Fri./7:30 p.m., Kaiser Hosp., Bldg. 2, Terra Linda, CA. (Summer exceptions; contact Pete N6IYU, 924-1578). Sun. AM Club at Red Cross, San Rafael. 9/97

Motorcycling Amateur Radio Club. Meets 2nd Sat./monthly, 8 a.m., Lake View Cafe, 2099 E. Orangethorpe, Placentia, CA, at 91 Fwy/Lakeview. Info: Ray Davis, KD6FHN, (714) 551-2010 or (714) 551-1036. 2/98

Mount Diablo Amateur Radio Club. P.O. Box 23222, Pleasant Hill, CA 94523. Meets 3rd Fri./monthly, 8 p.m., Our Savior's Lutheran Church, 1035 Carol Ln., Lafayette, CA. Net Thurs. 7:30 p.m. on 147.06(+) PL 100Hz. Info: (510) 932-6125. 7/97

North Hills Radio Club. Meets 3rd Tue./monthly, 7:30 p.m., Carmichael Elks Lodge, 5631 Cypress, Carmichael, CA. Nets 8 p.m. Tue., Wed., Thur., 145.190(-) PL 162.2 and 224.400(-). Contact: Bob, AC6HF, (916) 966-3654. http://www.ns.net/~NHRC 3/98

Orange County Amateur Radio Club. Meets 3rd Fri./monthly, 7:30 p.m., Orange County Red Cross, 601 N. Golden Circle, Santa Ana, CA. 146.550. Contact Bob Buss, KD6BWH, (714) 534-2995. 2/98

Poinsettia ARC. Meets 1st Thurs./monthly, 7:30 p.m., First Christian Church, Telegraph Rd. & Teloma Dr., Ventura, CA. Info: Bill Klope, KB6LJN, (805) 642-4955 4/98

River City A.R.C.S. Meets 1st Tues./monthly, 7 p.m., SMUD Bldg., Don Julio at Elkhorn, Sacramento, CA. License classes offered. For info contact Lyle, AA6DJ, (916) 483-3293. 9/97

Sacramento Amateur Radio Club. Meets 2nd Wed./monthly, 7 p.m. Sac. Blood Ctr., 32nd St. & Stockton Blvd., Sacramento, CA. Info net at noon on rptr. W6AKR 146.91(-). Steve Cates, KC6TEV, (916) 391-7341 or Les Ballinger, WA6EQQ, (916) 393-4775. 1/98

Sacramento "Old Timers" Amateur Radio Society and Sacramento Valley Chapter #169 QCWA (Quarter Century Wireless Assn.). Meets 2nd Wed./monthly, 8 a.m., Lyon's Restaurant, 1000 Howe Ave. For info contact Paul Wolf, W6RLP (916) 331-1830. 12/97

Santa Clara County Amateur Radio Assoc., (SCCARA) W6UW & W6UU. P.O. Box 6, San Jose, CA 95103-0006. (408) 249-6909. Meets 2nd Mon./monthly, 7:30 p.m., United Way, 1922 The Alameda, San Jose. Net all other Mon., 7:30 p.m. W6UU/R 146.385(+), 442.425(+) PL 107.2. 5/98

Shasta Cascade Amateur Radio Society, (SCARS). 2124 Airstrip Rd., Redding, CA 96003. Meets: 3rd Wed./monthly, 7 p.m. at the C.D.F. Conf. Rm. Grape St., near Parkview Ave., Redding, CA. Net 146.64, Wed., 8 p.m. 9/97

Sierra Foothills ARC. 1222 San Simeon Dr., Roseville, CA 95661-5365. 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, 7 p.m., Fri. 28.415. 3/98

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. 7/97

Southern California Six Meter Club. P.O. Box 10441, Fullerton, CA 92635. USB Net Tue., 7:30 p.m., 50.150. FM Rpt. Net Thurs., 7:30 p.m., 52.86/52.36 tx. FM Smplx, call freq. 50.300. Net Sun., 10 a.m. 50.40. 4/98

Southern Humbolt ARC, (SHARC). Meets 4th Tues./monthly, 7 p.m., Best Western Humboldt House Inn, Garberville, CA. Talk-in on 146.79(-). 5/98

Southern Sierra ARS. Meets 2nd Thurs./quarterly (Jan., Apr., Jul., Oct.), 7 p.m., Veteran's Hall, 125 East F St., Tehachapi, CA. Contact: Caroline, KD6KMN, (805) 822-5995. 147.06(-), 224.42(-), 145.090(S) Packet. 1/98

Stanislaus Amateur Radio Assoc., Inc. (SARA). P.O. Box 4601, Modesto, CA 95352. Meets 3rd Tues./monthly, 7:30 p.m., Stanislaus Co. Admin Bldg. 145.39(-) PL 136.5, 224.14, 440.225 PL 136.5. 3/98

Tri-County Amateur Radio Assoc. P.O. Box 142, Pomona, CA 91769. Meets: 2nd Mon./monthly, 7:30 p.m., Covenant United Methodist Church, corner of Towne Ave. & San Bernardino Rd. in Pomona, CA. 1/98

Trinity Country ARC. P.O. Box 2283, Weaverville, CA 96093. Meets 2nd Wed./monthly, County School Adm. Bldg. in Weaverville, 7:30 p.m., Rptrs: WA6BXN 146.73(-) PL 85.4, W6HOR 146.925(-) PL 85.4. 10/97

United Radio Amateur Club, K6AA. L.A. Maritime Museum, Berth 84, Foot of 6th St. San Pedro, CA 90731. Meets 3rd Fri./monthly (except Dec.), 7:00 p.m. Monitors 145.52 Simplex 10 a.m.—5 p.m. 7/97

Vaca Valley Radio Club. Meets 2nd Wed./monthly, 7:30 p.m. (Board mtg., 7 p.m.) Vaca Fire Dist. Stn., Vine St. in Vacaville, CA. Rptr. WD6BUS 145.47(-) PL 127.3. Mary Turner, (707) 451-2134. 5/98

Victor Valley Amateur Radio Club. P.O. Box 869, Victorville, CA 92392. Meets 2nd Tues./monthly, 7:00 p.m., Presidio Recreation Cntr., 11100 Apple Valley Rd., Apple Valley, CA. Talk-in 146.94(-), PL 91.5. Net Sun. 7 p.m. 146.94(-). 1/98

West Coast Amateur Radio Club, (WCARC). P.O. Box 2617, Costa Mesa, CA 92628. Meets 3rd Thurs./monthly, 7 p.m., Fountain Valley Sch. Dist. office, 17210 Oak St., Fountain Valley, CA. 145.440(-) PL 136.5. For info: Joe, KA6LPZ, (714) 963-4426. 10/97

Willits Amateur Radio Society, (WARS). P.O. Box 73, Willits, CA 95490. Meets 4th Mon./monthly, 7 p.m., Brooktrails Fire Dept. (northwest of Willits). Talk-in: 145.13(-), PL 103.5. 9/97

Yolo Amateur Radio Society. Meets 1st Tues./monthly, 7:30 p.m., Training Rm. of the Davis PD, 226 F St., Davis, CA. Contact Dave Nishikawa, KC6YFG, (916) 756-6375/Talk-in 144.430. 10/97

Yuba-Sutter Amateur Radio Club, (YSARC). P.O. Box 1169, Yuba City, CA 95992. Meets 2nd Tue./monthly, 7:30 p.m., Yuba City Police Bldg., 1545 Poole Blvd., Yuba City. 1/98

CONNECTICUT

Tri-City Amateur Radio Club. P.O. Box 686, Groton, CT 06340-0686. Meets 2nd Tue./monthly, 7 p.m., St. Lukes Lutheran Church of Gales Ferry on Rt. 12. Info: Bob Dargel, KA1BB, (860) 739-8016. 10/97

FLORIDA

Gulf Coast ARC. P.O. Box 595, New Port Richey, FL 34656. Meets 4th Mon./monthly, 7:30 p.m., 3852 Prime Place, New Port Richey. WA4GDN rptrs. 146.67(-) & 145.33(-), serving all of Pasco County. 9/97

Indian River ARC, Inc., (IRARC). 597 Capri Rd., Cocoa Beach, FL 32931-3011. Meets 1st Thurs./monthly, 7:30 p.m., Community Church of the Nazarene, 400 Crockett Blvd., Merritt Island, FL. 3/98

Port St. Lucie ARA. Meets 1st Fri./monthly, 7:30 p.m., St. Andrews Church, Prima Vista Blvd., Port St. Lucie, FL. Contact: Roy Cox, KT4PA, (561) 340-4319. Call in 146.955(-). 9/97

Saint Petersburg Amateur Radio Club. Meets 1st Fri./monthly, 7:30 p.m., Red Cross Bldg., 818 Fourth St. North, St. Petersburg, FL. Nightly net 6:30 p.m., 147.06(+). Rptrs. 147.06(+), 224.66(-), 444.475(+). Info: C. Wagner, KE4EYI, (813) 896-4274. 1/98

South Brevard Amateur Radio Club. P.O. Box 2205, Melbourne, FL 32902. Meets 1st Tue./monthly, 7 p.m., Public Library, 540 Fee Ave., Melbourne, FL. 6/98

Vero Beach ARC, W4OT. P.O. Box 2982, Vero Beach, FL 32961. Meets 2nd Thurs./monthly, 7:30 p.m., Emerg. Mgmt., Indian River County Adm. Bldg., 1840 25th St. Net Mon., 7:30 p.m. 146.64. 1/98

GEORGIA

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, N4OTC, 706/673-2291. 3/98

HAWAII

Big Island Amateur Radio Club. P.O. Box 1938, Hilo, HI 96721-1938. Meets 2nd Tue./monthly, 7 p.m., Army Reserve Center, 470 W. Lanikaula St., Hilo. Talk-in on 146.88(-). 6/97

Emergency Amateur Radio Club, (EARC). P.O. Box 30315, Honolulu, HI 96820-0315. Meets 4th Thurs./monthly, 7 p.m., Lincoln Elem. Sch., 615 Auwaiolimu, Honolulu. Nets: nightly 7:30 p.m., 146.88 & 146.80. Rptrs: 146.76(-), 146.80(-), 146.88, 146.98(-), 146.94(-). Info: (808) 833-6944, WH6CZB. 10/97

Koolau Amateur Radio Club, (KARC). 45-145 Mikihilina St., Kaneohe, HI 96744. Meets 2nd Sat./monthly, 9:30 a.m., Hoomaluhia Pk., Kaneohe, HI. 4/98

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. 7/97

Dupage Amateur Radio Club. (DARC). P.O. Box 71, Clarendon Hills, IL 60514. Meets 4th Mon./monthly, 7:30 p.m., Holy Trinity Church, SE corner of Cass & Richmond, Westmont, IL. Net Sun., 9 p.m. on 145.25. W9DUP repeaters 145.25(-) 107.2PL, 442.55(+) PL 114.8, 224.68(-). 2/98

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. 7/97

Hamfesters Radio Club, W9AA. P.O. Box 42792, Evergreen Park, IL 60805. Meets 1st Fri./monthly, 8 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: (312) 974-3291. 1/98

Schaumburg ARC. Meets 3rd Thurs./every other month, 7 p.m., Rec. Center, corner of Bode and Springinsguth Roads. Nets all other Thurs., 9 p.m., 145.23(-). Info: (708) 612-9446. 8/97

The Starved Rock Radio Club, W9MKS. P.O. Box 198, Tabor St., Leonore, IL 61332. Meets 1st Mon./monthly, 7:30 p.m. Rptr. net 7 p.m. Wed./wkly., 147.12(+). 11/97

LOUISIANA

Baton Rouge ARC. Meets last Tue./monthly, 7 p.m., Catholic HS cafeteria, 855 Hearthstone Dr., Baton Rouge, LA. Info: Norma Ramey, WD5GFD, (504) 654-6087. Club rptr. 146.79(-). 9/97

MAINE

Androscoggin Amateur Radio Club. Meets 1st Wed./monthly, 7 p.m., Auburn Police Station, 1 Minot Ave., Auburn, ME. Info: (207) 782-8699. 11/97

MASSACHUSETTS

Quannapowitt Radio Assoc., Inc. 6 Savin St., Burlington, MA 01803. Meets 4th Fri./monthly, 8:00 p.m., (May & Nov. meets 3rd Fri.), at Lynnfield-Wakefield Methodist Church, Wakefield. Info: Jim Chamberlain, N1AKG, (617) 944-5098. 3/98

Wellesley Amateur Radio Soc., & Babson Wireless Club. Meets 1st & 3rd Thurs./monthly, 7:30 p.m., Wellesley, MA (Sept.- June) Talk-in 147.03(+). Info: J. Driscoll, NV1T, (617)444-2686. 12/97

MICHIGAN

Adrian Amateur Radio Club, W8TQE. Box 26, Adrian, MI 49221. Meets 1st Fri./monthly, 7:30 p.m., Civil Air Patrol Bldg., Lenawee Co. Airport, Cadmus Rd., Adrian. ARES net Sun., 9 p.m. 145.37(-). Info: Brian Sarkisian, KG8CO, (517) 265-1537. 4/98

Eastern Michigan Amateur Radio Club, (EMARC). Meets 1st Tue./monthly, 8:30 p.m., Woodland Developmental Cntr., Kimball Township (Range @ Smiths Creek Rd.). Contact Frank Forsyth, N8XTO, (810) 987-3540. Talk-in: 147.30(+). 9/97

Edison Radio Amateurs Assoc. Meets 2nd Fri./monthly (Sept.-June), 7 p.m., Edison Western Wayne Div. HQ, 8001 Haggerty, Belleville, MI (So. of Ecorse Rd.). Net each Thurs., 8 p.m. on 145.33(-) and 442.80(+) rptrs. 4/98

Genesee County Radio Club, Inc. Meets 3rd Tues./monthly, 7:30 p.m., Genesee Area Skill Center, Torrey Rd., Flint, MI. (810) 634-6077. 3/98

MINNESOTA

Viking Amateur Radio Society (VARS). Meets last Tues./monthly, 7:30 p.m., basement EOC, Waseca, MN. Call-in 146.94(-). 7/97

MISSISSIPPI

Jackson Amateur Radio Club, Inc. Meets 3rd Thurs./monthly, 7 p.m., Am. Red Cross Bldg., Riverside Dr., Jackson, MS 39202. 10/97

NEVADA

Frontier Amateur Radio Society, (FARS). Meets: 2nd Sat./monthly, bkfst. mtg. 8 a.m., Country Inn, SE cor. W. Sunset, Valle Verde, Henderson NV. Club info: Jim Frye, NW7O, (702) 456-5396 or Bill Scarborough, WA6ASI, (702) 269-9551. 7/97

Wide Area Data Group, Inc. P.O. Box 3132, Sparks, NV 89432. Meets 1st Sat./monthly, 8:30 a.m., Bonanza Casino/Restaurant, 4720 N. Virginia, Reno. Info: (702) 356-8200. Call on 147.30(+) MHz. 5/98

Sierra Intermountain Emergency Radio Assoc., (SIERA). Meets 2nd Tues./monthly, 7:30 p.m., Carson Valley Museum & Cultural Cntr., 1477 Hwy 395 North, Gardnerville, NV. Contact: George Uebele, WW7E, (702) 265-4278, 147.330 MHz. 11/97

Sierra Nevada Amateur Radio Society (SNARS). P.O. Box 7727, Reno, NV 89510-7727. Meets 2nd Sat./monthly, 0800, KT's Restaurant, 5485 Equity Ave. (corner Equity & Financial). 146.61(-) PL 123. 443.075(+) PL 123. Contact Swede Ohlson, WDØAXP, (702) 852-2402. 1/98

NEW HAMPSHIRE

Great Bay Radio Assn., WB1CAG. P.O. Box 911, Dover, NH 03820. (603) 749-2970/332-9107. Meets 2nd Sun./monthly, 7 p.m., Rochester Community Ctr. Talk-in: 147.57. 11/97

NEW JERSEY

10-70 Repeater Assn., 235 Van Emburgh Ave., Ridgewood, NJ 07450. Meets 1st Wed./monthly (except July & Aug.), 8 p.m., VFW, Valley Rd., Clifton, NJ. Rptrs. 146.70(-), 224.84(-), 444.15(+). 10/97

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. 8/97

NEW YORK

Amateur Radio Assoc. 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. W2PVL. 10/97

Genesee Radio Amateurs, (GRAM). N.Y.S. Civil Defense Ctr., State St., Batavia, NY 14020. Meets 3rd Fri./monthly, 7:30 p.m. 147.285(+) W2RCX. 1/98

Hall of Science Amateur Radio Club. P.O. Box 131, Jamaica, NY 11415. HOSARC, 2nd Tue./monthly, Hall of Science Bldg., 47-01 111 St., Flushing Meadow Park, 7:30 p.m. Info: Arnie, WB2YXB, (718) 343-0172. 2/98

Orleans County Amateur Radio Club, (WA2DQL). Meets at Emergency Management Office, West County House Rd., Albion, NY 14411, 2nd Mon./monthly, 7:30 p.m. 145.27(-) — WA2DQL. 12/97

PROS, Pioneer Radio Operators Society. Meets 1st Wed./monthly, 7 p.m., Sardinia Town Hall, Savage Rd., Sardinia, NY. Net 9 a.m. Thurs. 3853 kHz. 3/98

The Radio Club of J.H.S. 22, N.Y.C., Inc. WB2JKJ. P.O. Box 1052, New York, NY 10002. 24-hr. hotline: (516) 674-4072. Fax: (516) 674-9600. Non-profit org. using Ham Radio to enhance the education of youngsters, nationwide. Join us — "Classroom Net," 7.238 MHz, 7 a.m. E.S.T. PSE QSL! 9/97

Suffolk County Radio Club, (SCRC). Meets 3rd Tues./monthly, 8 p.m., Bohemia Rec. Ctr., Ruzicka Way, Bohemia, NY. Talk-in: 145.21(-) rpt. Morten Eriksen, KA2UIU, (516) 929-6911. 4/98

Westchester Amateur Radio Assoc., (WARA). Meets 1st Wed./monthly, 7:30 p.m., Am. Red Cross Bldg., 106 N. Bway, White Plains, NY. Club nets: (10 Meters) 28.420 MHz Tues., 8 p.m. (2 Meters) 145.495(-) rptr., Thurs., 8 p.m. Info: Dan Grabel, N2FLR, (914) 723-8625. 4/98

Westchester Emergency Comm. Assoc., (WECA). Meets 2nd Mon./monthly, 7:30 p.m., Westchester County Ctr., White Plains, NY. Contact WB2VUK (914) 631-7424 or WECA INFO LINE (914) 741-6606 for details. Talk-in WB2ZII/R 147.06(+) PL 114.8/2A. 10/97

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(+). 10/97

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(+). Phone: (704) 888-4815. 5/98

OHIO

Ashtabula County ARC. Ken Stenback, AI8S (964-7316). County Justice Ctr., Jefferson, OH. Meets 3rd Tue./monthly, 7:30 p.m., County rptr., 146.715(-). 10/97

Clyde Amateur Radio Society (CARS). Meets 2nd Tue./monthly, 7 p.m., Municipal Bldg., Clyde, OH 43410. NF8E rptr. 145.35(-) and 442.625(+) MHz. Net Sun. 9 p.m. Info: E. Remaley, KA8CAS. 3/98

Greater Cincinnati Amateur Radio Assn., (GCARA). ARRL SCC, meets 4th Wed./monthly, 7:45 p.m., Brusman's Hall, 4813 Vine St., St. Bernard. Nets: Mon. 9 p.m. EST 147.15(+), Thurs. 9 p.m., 1.936 MHz. Info: WA8STX, (513) 772-7378 or KW8X 961-3250. 11/97

Toledo Mobile Radio Association. P.O. Box 273, Toledo, OH 43697; (419) 243-3836. Meets 2nd Wed./monthly, 7:30 p.m., Luke's Barn, Lucas County Rec. Ctr., 2901 Key St., Maumee, OH. 147.270(+) Net every Sun. 8:30 p.m. 1/98

Van Wert Amateur Radio Club, Inc. P.O. Box 602, 1220 Lincoln Hwy., Van Wert, OH 45891. Meets 1st & 3rd Sat./monthly, 8 p.m. Call-in: 146.85(-). 2/98

Western Reserve Radio Assoc. P.O. Box 81252, Cleveland, OH 44181-0252. Meets 2nd Wed./monthly, 7:30 p.m., Jenkins Community Cntr., Main St., Olmsted Falls, OH. Info: B. Beckman, N8LXY, Pres., 146.73(-), 444.900(+) MHz. 6/97

OREGON

Central Oregon Coast ARC. P.O. Box 254, Florence, OR 97439. Meets 3rd Sat./monthly, & every Wed./weekly, 9 a.m. for brkfst. at Woody's Rest. Net Wed. 7 p.m., 146.80(-). Info: 997-2323 or 997-4074. 1/98

Central Oregon Radio Amateurs, (CORA). P.O. Box 723, Bend, OR 97709. Meets last Thurs./monthly, 7 p.m., Bend Sr. Ctr., 1036 NE 5th, Bend, OR. 147.06(+) MHz. Info: (541) 385-9497. 6/97

Keno Amateur Radio Club. P.O. Box 653, Keno, OR 97627. Meets 3rd Thurs./monthly, 7 p.m., Keno Fire Stn. Rptr. 147.32(+) W7UFM. Info: Tom Hamilton, WD6EAW, (503) 883-2736. 11/97

Umpqua Valley Amateur Radio Club, Inc. P.O. Box 925, Roseburg, OR 97470. Meets 3rd Thurs./monthly, 7:30 p.m., Douglas County Courthouse, Rm. 310, Roseburg, OR. Info: W5PII/R 146.90(-) or (503) 673-1310. 6/97

PENNSYLVANIA

Butler County Amateur Radio Assn. P.O. Box 1787, Butler, PA 16003-1787. Meets 1st Tues./monthly, 7:30 p.m., Boy Scout Cntr., 830 Morton Rd., Butler, PA. Call-in W3UDX/R 147.36(+). Net 10:10 p.m. nightly. 10/97

Mercer County Amateur Radio Club, 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. 145.01. 3/98

Mid-Atlantic ARC. Box 352, Villanova, PA 19085. Meets 3rd Thurs./monthly, 8:00 p.m., Radnor Mem. Libraray, Wayne, PA. Call Bob Haase, W3SA, (610) 293-1919. 147.06(+) WB3JOE PBBS 145.09. 4/98

Warminster Amateur Radio Club, K3DN. P.O. Box 113, Warminster, PA 18974. Meets 1st Thurs./monthly, 7:30 p.m., Benjamin Wilson Sr. Cntr., Warminster, PA. Net on 147.09/R, Wed. 8:30 p.m. and 28.450 Sun. 9 p.m. 5/98

RHODE ISLAND

South Coast Wireless Society. P.O. Box 1516, Westerly, RI 02891. Meets 4th Tue./monthly, 7:00 p.m., Pawcatuck Neighborhood Center. Info: Bill, KA1ZZR, (401) 596-5849. 6/97

TEXAS

Brazos Valley Amateur Radio Club, (B-VARC). P.O. Box 1630, Missouri City, TX 77459. Meets 2nd Thurs./monthly, 7:30 p.m., Sugar Land Community Ctr., 226 Matlage Way., 3 blks SW of Imperial Sugar Co. at HWY US-90A & Brooks St. (HWY 58) in Sugar Land, TX. Talk-in: 145.47(-), 442.5(+) rptrs. http://www.hal-pc.org/~bvarc 7/97

Brownsville ARC (CHARRO). Meets 2nd Tue./monthly, 7:00 p.m., Confederate Air Force Hangar, Brownsville Airport in TX. Coffee mtg. Sat./weekly, 10 a.m., Days Inn, Hwy 83 & Price Rd. Talk-in on 147.040(+). 1/98

VIRGINIA

Southern Peninsula Amateur Radio Klub, W4QR (SPARK). Meets 1st Tue./monthly Salvation Army Community Bldg., Hampton, VA. Repeaters 146.73(-), 449.55(-). VE Exam Info: (804) 898-8031, W4RTZ. 2/98

Virginia Beach ARC. Meets 1st Thurs./monthly (except July), 7:30 p.m., St. Andrews United Methodist Church, Tucson & Princess Anne Rds., Virginia Beach, VA 23462. 2/98

WASHINGTON

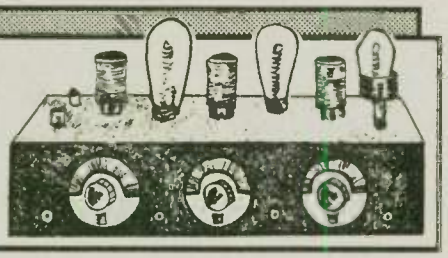
The Mike & Key Amateur Radio Club. Meets 3rd Sat./monthly, 10 a.m., Salvation Army Renton HQ., 720 Tobin St., Renton, WA. Talk-in on 146.82(-) rptr. Doors open at 9:30 a.m. 5/98

WEST VIRGINIA

Jackson County Amateur Radio Club. Meets 1st Thurs./monthly, 7:30 p.m., United Nat'l Bank of Ripley. Net Mon. 9 p.m. on 146.67(-) WD8JNU/R. For info: D. Tenant, N8ZYB, Rt. 1, Box 188, Mt. Alto, WV 25264. 6/97

Tri-State Amateur Radio Assn. Meets 3rd Tues./monthly, 7 p.m., The American Red Cross, 111 Veteran's Memorial Blvd., Huntington, WV. 5/98

Old-time Radio



160 AM — with the Chiburban Mobileers

Dan W. Damrow, W9GQY

Quite a few years ago 160 Meters was a very active band for hams in the Chicago-land area.

Our car radios were exclusively AM, so most of us modified the receiver to tune the 1.805 MHz portion of the 160 Meter band. It was an excellent band for mobile operation. The antennas had monstrous loading coils with 8' whips. Many hours were spent in tweaking each system for maximum output. If you had things working right, you could hold a 40 watt fluorescent lamp within a few feet of the antenna and get it to light up brightly.

My homebrew transmitter had a triode crystal oscillator into a 2E26 final, modulated by another 2E26 with the grid connected to a F1 carbon mike.

The results were phenomenal. We could cover great distances running 10 watts, all on AM phone. There was a large number of hams on frequency, both mobile and with fixed stations, so we always had someone to talk to at all hours of the day and night.

One weekend in 1950, while mobiling around the outskirts of Chicago a bunch of us decided to meet for an "eyeball QSO" at a campground in a suburban forest preserve. After enjoying the fellowship and comparing our mobile rigs, antennas and accessories, we decided to form a club.

We had our first meeting at a local fire station, and in no time at all we were organized. Finally we came up with a name for the group — the Chiburban Mobileers. Some of the die-hards stuck with it for quite a few years. I, for one, used 160 in my 17-mile commute to Argonne National Laboratory, which had at least one hundred ham employees. A few got on 160M mobile and we would talk each other into the lab each morning.

Time has brought about many changes, and we now operate SSB, on 1.935 MHz. There are one or two mobile stations, but most operate from their homes using commercial rigs. Band conditions just are not as good as we had it in the "good old days." Noise levels are much higher nowadays, and the SSB mode does not compare favorably with the AM we used with our homebrew rigs.

The ranks have been thinned by the demise of quite a few of our numbers, but the club lives on with the balance of our old timers. There are two on-the-air nets which meet twice a week, on Sunday and Tuesday.

Once a year during the summer, we have a picnic in a forest preserve not too far from where the founding members met. Clinging to a time-honored tradition among hams, we display homebrew equipment and gadgets that enhance our hobby.

The 160 Meter band seems to be a band that harbors old traditions. It reminds one of the weekend projects as we wielded our trusty "American Beauty" soldering irons. There was always some new circuit or antenna that had a high priority. Long live the "DC" Band ! **WR**

Have DX stamps?

Send your cancelled DX stamps to: The Stamp Club, Shriner's Hospital for Children, 2425 Stockton Blvd., Sacramento, CA 95817

Quarter Century Wireless Association, Inc.

John G. Troster, W6ISQ

Question

What do dipoles and Western US history have in common? Nothing, sez you? How 'bout that they are always mentioned alternately, in the annual "dipole" talk by Lew McCoy, W1ICP. Yep, Lew gave his annual "State of the Union" talk at the February mini-mid-winter QCWA 'fest in Palm Springs, mentioning these historical/hysterical items plus several more, all under the lecture umbrella title, "dipoles." As always, the lecture was pure McCoy, informative, on and off-the-cuff, and good fun. If you've not had the pleasure, naaah, everyone's had the pleasure, but anyhow, McCoy's no doubt on the podium again, at our National Convention in October in Kansas City. Plan ahead to be there! P.S. Lew custom designs dipoles to fit any space. Ask him.

QCWA Associates

The QCWA Board of Directors has been requested to consider the question: should a category be created for hams with less than 25 years of amateur service to join QCWA as Associates? There will be more about this in the *Journal* and, of course, the membership will be consulted. Don't panic!

You're invited to send your remarks and opinions, con or pro, on Associates to President Jack Kelleher, W4ZC, at his *Callbook* ™ address or fax 301/924-0420 or e-mail w4zc@macconnect.com

Herman C.H. (Duke) Knief, W2YTO

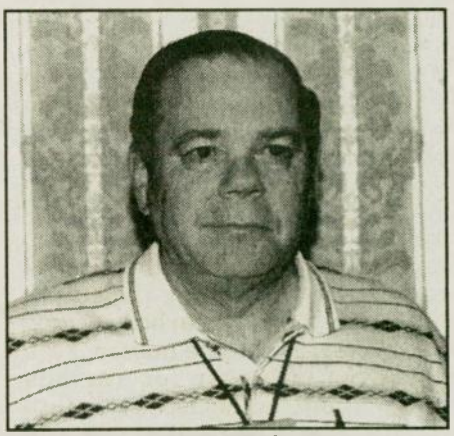
Duke Knief is our recently elected Treasurer of QCWA, and as it turns out, he's what you'd call an accountable type guy. No sooner elected, than he was on a plane from Nawth Carolina to Headquarters to check in for orientation with General Manager BJ Walsh and the QCWA accounting firm. Or maybe he just liked to fly because he spent 40 years in the cockpit!

Duke was born and raised in Larchmont, New York, which is only about 20 miles east of North Yonkers where Arch Doty, K8CFU, former BOD member grew up, and even as we write, they live within sight of each other, but now it's across the valley in Hendersonville, North Carolina.

Duke began explorations in radio at age 10 in grade school, building crystal sets with the other kids. The kids had an Elmer team, Bill Knott, W2QTH and Phil Lane, W2PHO. They took the kids into their shacks and showed them the blue ones that light up in the dark, coached them in ham art and lore, and treated them to conversations with far away places. In short, they ignited the spark — no pun intended! Also, a close friend of Duke's family, Gus Gironda, W2JE, former QCWA General Manager, was a further encouragement to young Duke.

Duke passed the ham exam when he was 13, and received the call W2YTO, which he still has. He went on the air immediately with a crystal controlled 6L6 oscillator and a Hallicrafter S-38, a sound beginning for any young fella. And even with his increasing ham activity, he kept up with his work-outs as a track man and his after-school jobs in the grocery and other stores to help nourish his ham habit. After graduation from Mamaroneck High School, Duke headed for the New York Maritime Academy, but realized he would rather fly than sail, so entered the Air Force training program in Keesler, MS. Training completed, he was commissioned an Observer/Navigator/Electronic Control Measures Second Lieutenant. He was just 20 years old. That was the beginning of a flying career that netted him 25,000 hours in the air before he quit counting, which was eight years before he retired from flying! Do a little arithmetic and you'll be impressed with how many years Duke has spent in the air! At least enough to go through four years of college, including summer school!

Duke's first assignment was a three year stint with a RB-47 Reconnaissance Group in Tokepa, Kansas. These were long, in-flight refueling flights all over the world and Duke began to think that he would rather be in the cockpit than in the rear. So he applied for flight training and became a member of the first class to be assigned directly to B-52s. Shortly thereafter, he was promoted to First Lieutenant.



Duke Knief, W2YTO, Treasurer of the Quarter Centry Wireless Association, Inc. —*photo courtesty W2YTO*

Then began the moving from place to place, routine with all career service people. B-52s were continuously on ground alert or airborne alert as they flew the world as part of the Nuclear Strike Force. His first three years were flying out of Rapid City, SD, and the next three years from Grand Fork, ND.

In '66, Duke decided on a change, so resigned from the Air Force with the rank of Captain, and went to flying for Pan American Airways.

During his 20 years with Pan Am, Duke flew DC-8s, 707s, L1011s, and 747s. During that time, he flew regular routes all over the world, mostly originating from the East Coast. He also flew Pan Am charter flights, a particularly notable one being for the White House press corps when the press was ferried along behind President Ford to Helsinki and Beijing and other Presidential destinations. When he had resigned from the Air Force, he joined the Air Force Reserve, putting him in the air in commercial jets all week for Pan Am, and in C-124s and C-141s for the Air Force on weekends. Do you get the feeling that Duke liked flying? During the Pueblo Crisis from 1967 to 1970, he was called back to active duty with the Air Force.

In '78, he retired from the Reserves as a Lieutenant Colonel. When some of Pan Am's routes were sold to United Airlines, Duke chose to switch over to United where he flew until his full retirement in 1994. When he left United, he was Senior Captain flying 767s on international routes.

Duke made it to the top of the DXCC Honor Roll, but that was before the new countries of Pratas, Scarborough Reef and North Korea came on. He is awaiting the operation in May from Scarborough to pick up one of those he missed. He's been QSL manager for various hams in countries he used to fly into such as Liberia and India, and also operated HZ1AB whenever he flew into Saudi Arabia. (That's "Hot Ziggity One American Boy" for you non-DXers).

Wherever Duke lived, he had his radio. In North Dakota he had rigs in a bathroom closet and his auto. In New Jersey, where he lived during his Pan Am and United career, he had quads and long wires. He also worked the ham bands from the cockpit when all was flying smoothly.

Duke met YF Jackie at a house party in Topeka, Kansas in 1956 when he was in the Recon Squadron. He remembers that day especially because he had bought a new Doberman puppy in the afternoon before the party! Well, they got married, Doberman and all. Now, 40 years later Duke and Jackie are parents of three children and are proud grandparents now, too. Daughter Krista is a retail store manager in Florida and married with two children; son Karl lives in New Jersey with four children, is a construction site supervisor; and daughter Kimberly, also in NJ, is married to a Sharp Corporation executive.

Why do the Kniefs live in Hendersonville, North Carolina? Well, they looked in New Hampshire, but that was too cold in the winter. They looked in Florida and that was too hot and muggy in the summer. Hendersonville is half way between, sort of. Besides one day while Duke was on a trip, Jackie sold their New Jersey house! After their move, Duke commuted to New York and Newark for his overseas flight assignments.

Duke now uses a TS-940 and Ten Tec Titan final feeding a Sommer tribander. He's active so you'll hear him tearing up the DX bands. He also operates a packet bulletin board in North Carolina using the call K4QC.

And how did he come to be addressed as the "Duke?" Well, he doesn't exactly recall. It was in the Air Force and somehow the fellas just began calling him Duke. After a while, he began calling himself Duke, too. Well, that's fine with us as we are all proud to claim Duke as One of Us, the Proud, the Elite, the Many, the Serving, the QCWA.

Until the next one 73 + 25, Jack, W6ISQ **WR**

AMSAT-NA call for papers

A call for papers is out from the 1997 AMSAT North America annual meeting and space symposium. The gathering will be held 17-19 October at the Airport Delta Hotel in Toronto, Ontario Canada.

Those who wish to present papers at this event, should forward their request to AMSAT. Topics may include all relevant Amateur Satellite disciplines. Send submissions and enquiries to Wayne Chandler, VE3WHC, via e-mail to: ve3whc@amsat.org —*via AMSAT-NA BBS*)

YLs on the Air

Kay Eyman, WAØWOF
Rte. 2, Box 366 • Garnett, KS 66032
E-mail: waØwof@juno.com

Contest info

YLRL Vice-President Nancy Rabel Hall, KC4IYD, has announced the winners of the 1997 YL-OM Contest. In the SSB portion, held 14-16 February, Elizabeth Anderson, VE7YL, was the first place YL winner; Valorie Catalano, KA1YKW, was second, and Terrie Tenney, AB7PX, was third. Manuel Greco, K2LFG, was the first place OM winner; Frank Glass, K6RQ, was second, and David Thompson, K4JRB, was third.

In the CW portion, held 21-23 February, Joyce Collins, N8UOO, was the first place YL winner; Edith McDade, WA4SRD, was second, and Rosel Zenker, DL3KWR, was third. Eric Rust, K5LH, was the first place OM winner; Frank Glass, K6RQ, was second, and Christopher Bowman, N4WZH, was third. Congratulations to each of the winners.

Public service

Mary Jo Hallberg, KØTGU, and her husband Chet, KØTCB, have traveled many miles from their home in Prairie Village, Kansas, and worked many hours with the Red Cross, helping victims of disasters in different parts of the country.

On 4 March, 1997, Mary Jo and Chet left home and spent almost two weeks in Little Rock, Arkansas, after tornadoes had devastated the state from the southwest corner to the northeast. There was total destruction in the path of the tornadoes and there were 28 fatalities. Chet worked in the communications field, providing telephones, pagers, cell phones, and other equipment, as needed. Most of his co-workers were Amateur Radio operators from several different states. This time, Mary Jo, a nurse, was assigned to work with families that had lost members.

She first made a list of fatalities from local newspapers and was able to compile a 3" thick, three-ring notebook of personal data, achieved by determining in which county a particular fatality had occurred, then contacting the County Coroner, and obtaining a Coroner's report. She could then learn which funeral home had handled the services and attempt to obtain death certificates and funeral agreements (or bills) to help locate the surviving family members.

The hardest part of the job was the family contact or condolence visit, which was made by a team, comprised of members from Health Service, Mental Health, and Family Service, as it is vital to take care of the survivors. Then an assessment of any private insurance (life and/or burial), or other financial resources that can assist with funeral expenses is completed. This information can consume hours of phone time, and often required travel in a two-hour driving radius of Little Rock, but was carried out jointly by the American Red Cross and FEMA, the Federal Emergency Management Administration, to provide financial assistance to the families with fatalities.

Mary Jo said this was one of the most difficult assignments she has done for the Red Cross. In Health Service, there were volunteers assigned to Headquarters, as Mary Jo was in this case, or as staff nurses, taking care of the 1,500-2,000 Red Cross workers on-scene in Arkansas. There were also assignments in a warehouse or kitchen, as itinerate nurses, or in one of the Service Centers that were located throughout the state, which offered services to people who had suffered material losses, such as homes, autos, medicines, eyeglasses, etc. In Mary Jo's words, "Disasters are always difficult jobs you will always love. The reward comes from the people you serve and seeing them rebuild to a workable/livable life."

Two other YLs helping in Arkansas after the tornadoes had gone through were Sr. Virginia Breene, KC5HSU, and Lou Ann Wilcoxson, KC5TRJ, both of Tulsa, Oklahoma. They were with a group of six amateurs who took a Salvation Army canteen to Arkadelphia, Arkansas, one of the hard-hit areas, and spent eight days helping with the canteen and communications.

Sr. Virginia has also been working with a special Habitat for Humanity project. Tulsa's mayor is a woman, who decided to form an all-female group to build a house in 15 to 16 weekends. Sr. Virginia is taking the Salvation Army canteen over each weekend, and although the project just got underway in late March, the mayor is calling it "The Best Little Her House" in Tulsa....

Updates

Congratulations to Dawn Young, ZL2AGX, winner of the New Zealand Women's Amateur Radio Operators' 1996 Achievement Award. Dawn was presented with the Myrtle Earland Memorial Rose Bowl, in recognition of her outstanding service to NZWARO and her many accomplishments in Amateur Radio.

Congratulations also go to Aola Johnston, ZL1ALE, who was awarded a Certificate of Achievement by NZWARO for her services to Amateur Radio, during the past 30 years.

Tina Muller, YO3FRI, works at the airport in Bucuresti, Romania, where she is a high-speed CW operator, coordinating all the incoming and outgoing flights. In her

The Muller family in Romania. Clockwise from front: Christine, YO2GLW, Andrei, YO3GLX, Tina, YO3FRI, and Tinel, YO3GCM.

spare time, she is active on the Amateur bands and enjoys working contests, packet, and RTTY.

Everyone in Tina's family is licensed. Her husband Tinel is YO3GCM; daughter Christine, is YO3GLW, and her son Andrei is YO3GLX. Tina serves as QSL manager for Marwan Soufan, OD5WS, and Ahmed Khodr, OD5RZ, and her QSL manger is Walter Rickett, WA2AUF.

Terry Hotalen, TR8TH, is a nurse serving in Gabon at the Bongolo Evangelical Hospital, which is supported by the Christian Missionary Alliance Church. She received her license a few months ago and her U. S. call is KF4LCD. Terry keeps skeds with her brother Earl Hotalen, KD4POX, in Florida.

Several readers of the article "A Heaven-Sent QSO," in the February, 1997, issue of ***Worldradio*** have expressed a desire to help the Maforga Christian Mission. Yuki Ishikawa, C93AN, who is serving as a missionary in Mozambique, contacted Nobuko "Ton" Uchiyama, JR6XIX, on 20 Meters last year and told her of the extreme poverty and lack of supplies, food, and medicine they were enduring.

Dr. Dean Wyatt, WAØMJA, a veterinarian in Sioux City, Iowa, called me after he read the article, and there is a possibility that he and his wife, who is a nurse, will travel to Mozambique this summer and provide medical services.

He is now working through the Christian Veterinary Mission, which is a division of World Concern, a relief organization, based in Seattle, Washington, to send medical equipment, and he had contacted a large grocery chain in Iowa to see about getting food items that could be shipped to Mozambique. In addition, he has contacted another veterinarian, who is also an Amateur Radio operator, who has been successful in shipping laying hens, purchased in the Netherlands to countries in Africa, and this may be a viable option.

At press time, Dean had written to Yuki to determine exactly what is needed and was awaiting a response, but the mail delivery system is slow. If you would like to help with this effort, donations may be sent to the Coordinator of Christian Veterinary Mission, Dr. Kent Flowers, 19303 Fremont Avenue North, Seattle, WA 98133. **WR**

Let us know. . .

Are you expecting a visit this summer from some of your DX friends? Are you taking a trip to visit someone you have come to know on the air? Be sure to take lots of photos, and send the story to ***Worldradio*** so we can share it with all of our readers.

WITH THE HANDI-HAMS

Chris Peterson, KGØBP
HANDI-HAM Material Resources Coordinator

Screen access for the blind and visually impaired

There are many ways of accessing your computer screen if your vision is too limited to allow you to read it. Some of these methods involve software (programs that are stored in, and run on, your computer). Other methods involve software and hardware (equipment that connects to your computer to perform some function that is otherwise unavailable). This article is a brief discussion of three of the most widely used screen access methods.

Screen enlargement

If the text on your screen is just a little too small for you to read comfortably, some screen enlargement software might be just what you need. There are many software packages that will allow you to enlarge the text and images on your screen to several times their normal size. They accomplish this by focusing on a certain section of the screen and enlarging it to fill the entire screen. As you magnify a certain part of the screen, the amount of information that will fit on the screen at one time will decrease. Most of these packages will allow you to select a portion of the screen you want to view using your keyboard or a mouse. Screen magnification software is available for DOS, Windows 3.1 and Windows 95.

If you have Windows 95, some screen enlargement is already available to you. Just select the "disability options" icon from the control panel and move to the "screen" section. This will slightly enlarge all text and images on the screen and modify the background and foreground colors to provide a higher contrast. For someone with a minor visual impairment, this works very well and doesn't take up any extra system resources.

If you're using Windows 3.1 or a Macintosh, you can do similar things by enlarging fonts and changing default colors. Most people find that light text on a dark background provides a better contrast and is easier to read. Try experimenting with these settings to see if you can find a combination that is comfortable for you before exploring other types of software.

Braille displays

Displaying the text on the screen as Braille is very convenient for some people but also very expensive. Braille displays usually require a piece of hardware, the actual Braille display, that connects to one of your communications ports, and a piece of software that communicates with the Braille display.

When using a Braille display, you usually have access to only one line on the screen at a time. Some of the more inexpensive Braille displays give you access to only a portion of a line at a time. It is quite easy to select the line, or portion of a line, that you want to read by using your keyboard, or by using keys on the Braille display itself.

Most Braille display software only works in the DOS operating environment although there have been some attempts at making the Windows, and Macintosh operating environments available in Braille, with limited success.

Text-to-speech

Text-to-speech technology is perhaps the most widely used method of screen access. In order to use text-to-speech technology on an IBM-compatible PC, you will need a piece of hardware called a speech synthesizer. Some speech synthesizers are devices that connect to one of your communications ports. Others are devices that mount inside your PC. Although a sound card can generate some speech, it usually takes up too many system resources to make a good speech synthesizer. The Macintosh has a speech synthesizer built in, but the operating environment is somewhat uncomfortable for some blind users. Be sure you are comfortable with a Macintosh before buying one.

In order to accomplish screen reading on any computer, you will need screen reading software. Some manufacturers of speech synthesizers include screen reading software with their product. However, this is relatively uncommon and usually more expensive than purchasing a speech synthesizer and screen reader separately. There is even a

free screen reader called Provox™ that is very powerful, available on the Internet or through HANDI-HAMs. Provox works with many common speech synthesizers and is very easy to learn and use.

There are fewer options available for the Windows and Macintosh operating environments and these usually require more powerful systems to be really effective. Outspoken™ for the Macintosh is very easy to learn, although it lacks some features that some of the DOS-based screen readers normally include. Again, you should be sure you're comfortable with the Mac-intosh before purchasing one, or Outspoken. Windows has many of the same problems as the Macintosh. There are many screen readers available for Windows, but they are imperfect at best. Demonstration packages are available for most Windows and DOS screen readers so be sure you're comfortable with the screen reader you're planning to purchase. Some people use a combination of Braille and speech. There are a few software packages that will communicate with a Braille display and a speech synthesizer at the same time, but they're usually very expensive.

System requirements

Most DOS screen readers will work on any IBM-compatible PC/XT, AT, 386, 486, or Pentium™ with 640K of conventional memory. They usually use 100K of RAM or less, and can be loaded into high or extended memory if it's available. Since DOS is the most effective way of using a computer for most blind computer users, you don't need to spend a lot of money on a brand new Pentium™ computer just to get started. If you have done your homework, you have a pretty good chance of choosing the most effective screen access method for you..

For more information about anything mentioned in this article, or to learn more about the Courage HANDI-HAM System, contact:

Courage HANDI-HAM System
3915 Golden Valley Road
Golden Valley, MN 55422
612/520-0515
e-mail: handiham@mtn.org
WWW: http://www.mtn.org/handiham/ WR

Richard Fisher, KI6SN
1940 Wetherly St., Riverside, CA 92506
e-mail: KI6SN@aol.com

A noise blanker to buzz about

Under any other circumstance, the band conditions on 40 Meters would have been pitiful. Static wailed relentlessly, QSB was deep and unpredictable, and absorption was about what you'd expect for mid-Sunday afternoon. Brutal.

But things couldn't have sounded better for road testing a newcomer in the receiving line here at KI6SN.

Wilderness Radio's BuzzNot noise blanker kit is a tiny package — fewer than two dozen components on a top-quality silk-screened, plated-through printed circuit board just 1.1-inches by 0.6 inches. It was designed by Wayne Burdick, N6KR, to knock out "repetitive impulse noise, such as that produced by nearby power poles."

With power lines running just a few feet from the feedline of my G5RV antenna, and a cantankerous transformer atop the power pole on the back line of our residential lot, the BuzzNot and KI6SN seemed to be made for each other.

There were no promises by Wilderness that it would cure every errant buzz, but experience here on 7.040 MHz CW shortly after installing the BuzzNot in a Wilderness NorCal 40A transceiver proved the blanker was equal to the challenge of that Sunday afternoon.

Really not expecting a response, I sent a "CQ" primarily to discern if adding the noise blanker had affected the '40A's sidetone. It hadn't. And to my surprise, back came W7ELH, Frank Burford of Clearwater, Idaho. We exchanged RST 579 signal reports, and when he heard about the '40A's 1-watt output, Frank cranked his ICOM from 100 watts down to 6 — just above QRP levels. It was a golden opportunity to see what the BuzzNot could do.

A 10K potentiometer, fitted with an on/off switch, toggles the BuzzNot in or out of service — taking its input from the '40A's receiver bandpass filter and sending its output to the input of the '40A's crystal filter. The gain control of the BuzzNot determines the degree of noise suppression.

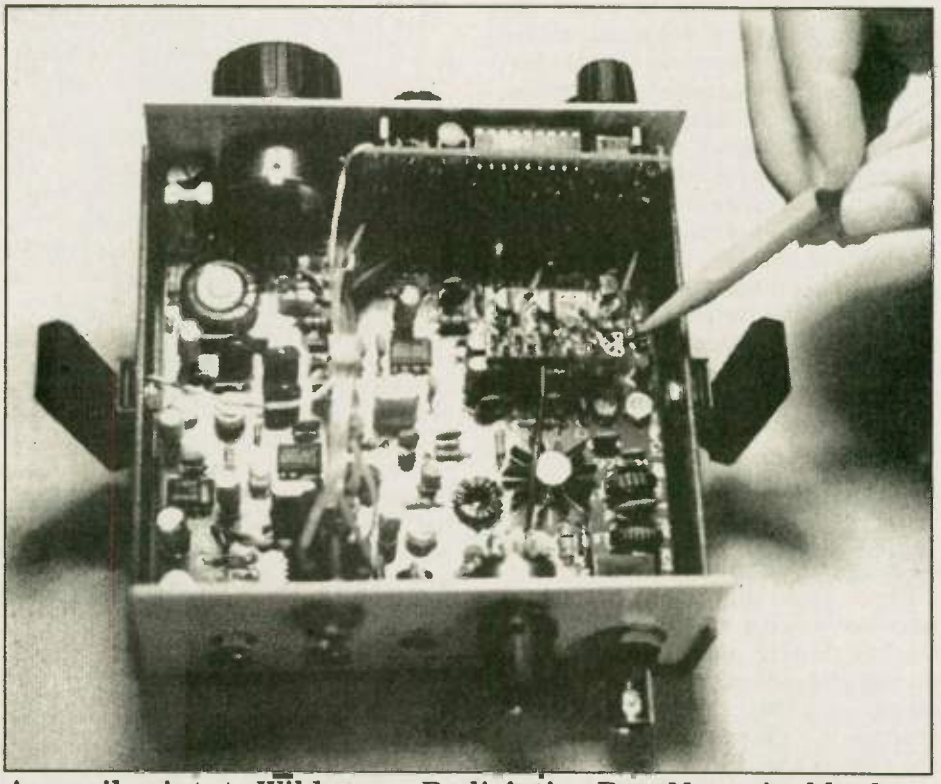
The combination of static, QSB and absorption sent W7ELH's 6-watt CW signal tailspinning into the noise — RST 339. Incredibly, turning on the BuzzNot and tweaking its gain quelled most of the noise and brought Frank back to 569. I was both amazed and pleased. To have the blanker save a QSO on its maiden voyage certainly was more performance than I'd expected. And having built lots of noise blankers over the years, it was great to have one that really works. And works so well.

It was fascinating to run the BuzzNot's gain control open and closed during the course of Frank's transmissions. Wilderness suggests that "when pulse-type noise is present, turn (the BuzzNot) ON and adjust (its potentiometer) clockwise to the lowest effective gain setting." And if you can't hear any reduction in noise, it's probably because the buzz is not the broad-band, headache-producing, short-pulse noise the blanker is designed to suppress.

Tweaking the blanker's gain control kept W7ELH perfectly readable for fully a half hour. The BuzzNot proved that a large portion of noise I'd always thought was atmospheric was actually being picked up from nearby AC lines. Amazing how a tiny PC board can negate years of ear-numbing suffering.

The BuzzNot comes with a well written and nicely illustrated four-page construction and operations manual. Soldering the parts on the board took about 30 minutes. Another hour was devoted to mounting it in the '40A.

Light as a feather, the PC board "floats" on clipped resistor leads that connect the blanker's circuit to a capacitor on the output of the '40A's receiver bandpass filter, and



A pencil points to Wilderness Radio's tiny BuzzNot noise blanker, barely visible in the NorCal 40A.

another lead to the input of the transceiver's crystal filter. There's also a lead to ground and another to the panel-mounted potentiometer, which supplies 12-volts to the BuzzNot's PC board.

Having never used such a fragile mounting scheme, I was curious just how much abuse the BuzzNot could take. After all, such an accessorized '40A is just great for backpacking, but could all its subcircuits withstand the rigors of the trail? As a test, the transceiver, with newly installed BuzzNot, spent a week in my much abused briefcase. Ten automobile trips to and from the office, a few good kicks under the desk and more than a little jostling didn't seem to have a negative affect on the BuzzNot. It hadn't moved a millimeter during its confinement and worked just fine after completing boot camp.

The BuzzNot draws only 7 milliamperes of current, so it's a bargain power-wise, indeed.

Because all the free space on the front panel of my '40A had already been consumed by the Wilderness KC-1 keyer/frequency counter, I reluctantly opted to mount the BuzzNot's gain control on the rear panel. To my surprise it worked out fine, and adjusting the noise blanker by reaching behind the radio has been no inconvenience at all.

There is no alignment procedure necessary with the BuzzNot. But the circuit's RF amplifier has an input impedance of a few picofarads, so it's best to re-peak the transceiver's input tuned circuit. In the case of the '40A, it takes a quick adjustment of C2. With Wilderness' popular Sierra transceiver, adding the BuzzNot requires re-peaking each band module — no big deal. It would not be difficult to install the noise blanker in virtually any of today's popular transceivers. And a great addition it would be.

The BuzzNot manual includes step-by-step assembly instructions, a complete parts list and details on installing the board in either the '40A or Sierra transceivers. There is also an Operation section giving details on transceiver alignment, and sections covering gain control setting, and bandwidth considerations.

A short tutorial covers the fundamentals of noise blankers, and there are sections on BuzzNot circuit details and troubleshooting.1

The manual's back page is devoted to a schematic of the BuzzNot as it mates with the Wilderness Sierra. As a bonus, Burdick offers a schematic for an NE555-based noise simulator, just in case you don't have any noise at the time you're testing the circuit.

The BuzzNot kit is available from Wilderness for $19, plus shipping ($3 U.S., Canada and Mexico; $5 DX). California residents add sales tax. To order, write: Wilderness Radio, P.O. Box 734, Los Altos, CA 94023-0734. The company can be contacted by phone between 9 a.m. and 6 p.m. Pacific time at: 415/494-3806.

QRP, Briefly

Myron Koyle, N8DHT, of Canton, OH, has stepped down as secretary/treasurer of QRP Amateur Radio Club International, replaced by Ken Evans, W4DU, of Lilburn, GA . . . New officers for the Michigan QRP Club are: Tim Pepper, K8NWD, president; Hank Kohl, K8DD, vice president; Buck Switzer, N8CQA, secretary; Stan Arnett, AC8W, treasurer; and Jerry Totten, K8JRO and Ralph Caryl, W8LHG, directors . . . In March, NorCal QRP Club reported it had shipped one thousand "38 Special" 30-meter QRP transceiver kits and that the popular project has spawned development of the "45 Automatic," a 40-meter, 5-watt superhet transceiver kit with automatic keyer . . . Bill Jones, KD7S, of Sanger, CA is working toward DXCC with his "38 Special" at 5 watts and reports snagging V63DA in Micronesia for his 14th country . . . Vintage Radio Kit Co., 427 N. Main St., Sharon, MA 02067, has a QRP tube transmitter kit called the "Cake Pan CW-5" featuring a 6C4 oscillator driving a 6AQ5 final . . . The popular "Electronic Data Book for Homebrewers and QRPers" by Paul Harden, NA5N, is now available for $20, plus $2.50 shipping, through Quicksilver Printing, P.O. Box 757, Socorro, NM 87801 . . . Eighty logs were submitted to the Arizona ScQRPions for its Freeze Your B____ Off QRP Winter Field Day held in February . . . The mysterious "C" and "S" beacons frequently heard near the 40-meter QRP calling frequency 7.040 MHz are believed to be coming from European Russia . . . Wayne Burdick, N6KR, who designed the popular NorCal 40 transceiver, reports that the California Institute of Technology (Caltech) is using the Wilderness NorCal 40A as a teaching tool in its Electrical Engineering/RF curriculum as part of the course "The Electronics of Radio, EE20" under Prof. David Rutledge. **WR**

Field Day stories with photos

This is Field Day month. Share your Field Day experiences with other amateurs by sending in stories with photos, to ***Worldradio,*** 2120 28th St., Sacramento, CA 95818.

10-10 INTERNATIONAL News

Chuck Imsande, W6YLJ
10-10 19636

10-10 Convention

By the time you receive this issue of ***Worldradio***, the 1997 10-10 convention will be only a few weeks away. Everything is ready for one of the best 10-10 conventions ever, with all details under control. Pre-registrations have been coming in and it looks like a good crowd will enjoy the weekend of 10 July through 12 July 1997. A full slate of activities are scheduled and world renown auctioneer, Col. Ed Redwine, K5ERJ #11843, will once again hold one of his famous auctions to provide our auction entertainment after the Saturday night banquet. This year's convention, "Dedicated to our Volunteer Managers," will be held at the Ramada Inn in Council Bluffs, Iowa.

Although registrations will be accepted at the door, we would appreciate your pre-registration by sending to K4CIH for an information package. So, if you would like to meet all of the 10-10 officers and a bunch of fellow 10-10ers, come to the convention and enjoy! A note to K4CIH at 4901 15th Place East, Tuscaloosa, AL 35404 will get you all of the convention information.

New Contest Manager

Ed Redwine, Director and Chairman of the Operations Committee has announced that Don Ward, WØRTV #13962, is the new 10-10 Contest Manager. Don will be responsible for all aspects of the 10-10 QSO parties, including scheduling the dates, obtaining the chapter (or person) to do the scoring along with all other details of 10-10 QSO parties. The contest manager, with the assistance of the Contest committee, will also be responsible for monitoring compliance with the rules, revision of the contest rules and making all final decisions regarding log acceptance from entrants in the parties.

10-10 now has five QSO parties each year, two CW, two phone and one 24 hour sprint on 10-10 Day, 10 October. New rules were effective January, 1997, and it is strongly suggested that they be reviewed if you intend to participate in the 10-10 QSO parties. These new rules were published in the January, 1997 *10-10 International News*. If you would like a copy, send a #10 SASE to Don Ward, WØRTV #13962, 10-10 Contest Manager, 4514 Ferrer Drive, St. Louis, MO 63129. It is also suggested that you check the log submittal due dates, as they have also been revised.

You do not need to be a 10-10 member to make contacts in 10-10 QSO parties. 10-10 members will be glad to work you and give you their 10-10 number. If you are looking for 10-10 contacts to become a member and receive your very own 10-10 number, QSO parties are great time to collect numbers and meet friendly people on 10 Meters.

Because of the new prefix multiplier now being used in 10-10 QSO parties, a new log submittal cover sheet has been developed. It appears on page 32 of the April issue of the *10-10 International News*. If you are a new member, or have lost your April issue of the magazine, a copy of the cover sheet is available from the 10-10 web site (http://www.lehigh.edu/lists/tenten-L) It is now a requirement that all log submittals use this new format cover sheet.

Our new contest manager comes to us with a lot of contest experience, having received his first license in 1953. Although Don has his Advanced Class license, he prefers 10 Meters to other bands and has been active in 10-10 for many, many years. He has been chapter head of the Gateway Chapter in St. Louis, MO for about 5 years and participates in all 10-10 QSO parties.

W6OI on the air

The 10-10 club station, W6OI #109, will be on the air every Wednesday. Louise Chapman, N6ELK #36654, has volunteered

to be the 10-10 net control operator for W6OI #109 on a trial basis. This will make each Wednesday beginning at 1800Z on 28.800 MHz a very special event. Please include a SASE when requesting a W6OI QSL card via N6ELK, 3210 Clark Ave., Long Beach, CA 90808.

Gateway Chapter reaches quarter century mark

The Gateway Chapter of 10-10 was founded in St. Louis County, Missouri, in June 1972. Now, 25 years later, the chapter plans a month-long celebration during June 1997. Norm Kahdeman, WBØCCF, #2933, one of the charter members of Gateway, is directing the special activities.

Gateway has the distinction of having operated a weekly net every Wednesday since 15 June 1972, beginning at 8 p.m. central time on 28.650 kHz. The net on 04 June 1997 was Gateway's 1,305th consecutive weekly net. You are invited to check in whenever band conditions permit.

10-meter mobile operations

Did you know that there are a number of 10-10 members who operate mobile whenever they are in the car? These mobiles mostly monitor 28.336 MHz and are always looking for contacts. Listen around 28.336 when band conditions warrant and ride along with the 10-meter mobiles while they are traveling.

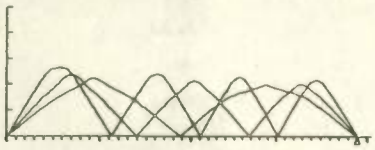
Information about 10-10?

If you would like information about 10-10 and how you can become a member and receive your very own unique 10-10 number, send $1 plus 2 first class stamps and an address label for the return of your information package to: Mike Elliott, KF7ZQ, #54625, 10-10 Information Manager, 9832 Gurdon Court, Boise, ID 83704-4080. No SASE please as the information package requires a 9 x 12 envelope. You will receive a copy of the 8 page prospective new member brochure which contains everything you want to know about the 10-10 organization, a listing of all 10-10 chapters, their day, time and frequency of net operation and an application form. Also enclosed will be a copy of the latest issue of the *10-10 International News*, the 32-page, 10-10 quarterly magazine.

If you have lost, or forgotten, your 10-10 number, send the same as above to Mike and you will get the information package along with your original 10-10 number.

If your membership in 10-10 has expired and you would like to renew your dues, send your dues ($10/year) to: 10-10 International Net, Inc., 643 N. 98th Street #142, Omaha, NE 68114-2332. You will become an "active" member again and receive all of the benefits of 10-10 including the quarterly *10-10 International News*. Remember 10-10 numbers are issued for life and your originally issued number is always yours. WR

Propagation



Carl Luetzelschwab, K9LA
1227 Pion Rd.
Ft. Wayne, IN 46845

It's really tough getting excited about 10M nowadays. We're at a solar minimum between Cycle 22 and 23, with occurrences of 28 MHz F-region propagation few and far between. But every once in a while a pleasant surprise comes along, and livens things up.

A good example was last year's IARU (International Amateur Radio Union) HF World Championship in July. Concurrent with the IARU contest was the WRTC-96 (World Radiosport Team Championship) contest.

The July/August issue of last year's NCJ (*National Contest Journal)* is what got me all fired up. Rusty Epps, W6OAT's article outlined the whole ball of wax for the WRTC — historical background, choosing the teams, special call signs, stations and rules, and awards for those who participate.

The bottom line was that 52 teams of top worldwide contesters would be on from the San Francisco area, and would be going head-to-head on as level a playing field as possible. The FCC recognized the significance of WRTC in helping advance international friendship and goodwill, so they arranged for special 1x1 call signs for the 52 teams — K6A through K6Z, and W6A through W6Z.

The awards were what nailed the lid on the coffin for me. If you worked at least 10 of the special 1x1 teams, you would earn a customized WRTC letter opener. If you achieved a "grand slam" by working all 52 teams, you would earn a special commemorative deck of WRTC playing cards. I figured working the special 1x1s was a great way to spice up the summer doldrums. The goal I set was to work all 52 teams to earn the deck of playing cards.

Even though the 52 teams were limited to 10-40M to keep things as even as possible, I figured those bands were enough to achieve my goal. I hadn't planned on 10M doing much, or even 15M for that matter — I figured 20M and 40M would bear the brunt of the effort. Due to family commitments, I didn't start operating until about 1730 UTC (12:30 p.m., local time in Ft. Wayne). The contest had started five and a half hours earlier at 1200 UTC, so I checked 40M and 20M and found little activity. A quick move to 15M showed things were really hopping, so off I went working the special 1x1s.

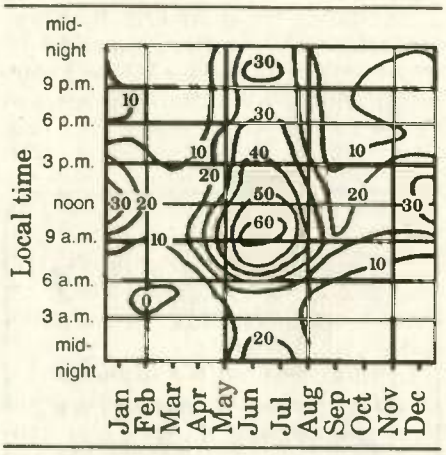


Figure 1. When sporadic E ocurs (data for the entire year).

Although most of my contacts were on 15M, 10M showed signs of life beginning around 1830 UTC. I managed to work several of the special 1x1s on 10M even though signals were fairly weak.

About 1930 UTC is when the pleasant surprise came along. Out of the blue many European stations participating in the contest popped up on 10M. From 1930 UTC until about 2030 UTC, I worked a DL (Germany), an S5 (Slovenia), an HA (Hungary), a G (England), and an OM (Slovak Republic). The signals from these Europeans were not weak like the special 1x1s in the San Francisco area — on the contrary, they had pretty decent signals.

How was this pleasant surprise possible? It was our old friend sporadic E (also referred to as Es). I really shouldn't have been too surprised, though, as I had worked some Italian stations on 10M about a month earlier. It's just that the long-term absence of F region propagation on 10M to Europe makes for a "celebration" when sporadic E comes along to take up some of the slack. Now's a good time to review sporadic E propagation, as the best time of the year for this mode of propagation is at hand.

The sporadic E that I will review is that which occurs at mid-latitudes. I mention this, as there appears to be several different types of "sporadic E" roughly dependent on geomagnetic latitude (one such different type is what I reviewed in the April column, auroral-E).

Our mid-latitude sporadic E is believed to be caused by wind-shear, and results in relatively thin but dense patches of ionization at E region heights of 110 km or so (about 70 miles). These patches drift, seemingly at random, until they disappear. The ionization can be great enough to refract frequencies all the way up to 220 MHz. Sporadic E events can last from only several minutes to several hours.

Usually sporadic E affects only small areas of the country at any given time. If you have packet radio, you may have experienced this — 6M spots are announced, rolling across the screen, but you can't hear a thing. That's frustrating.

Figure 1 shows how the occurrences of our mid-latitude sporadic E varies with local time and season. This figure is based on 10M sporadic E, but it also is a good guideline for 6M. The numbered solid lines are lines of constant percentage. For example, the most productive time and season for sporadic E is 9 a.m. to 11 a.m. local time dur-

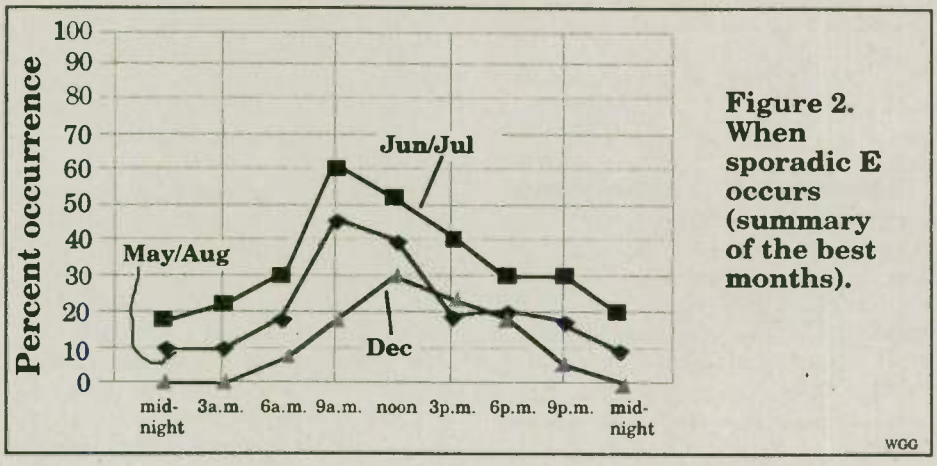


Figure 2. When sporadic E occurs (summary of the best months).

ing the months of June and July. For these conditions, you would expect sporadic E to occur about 60% of the time.

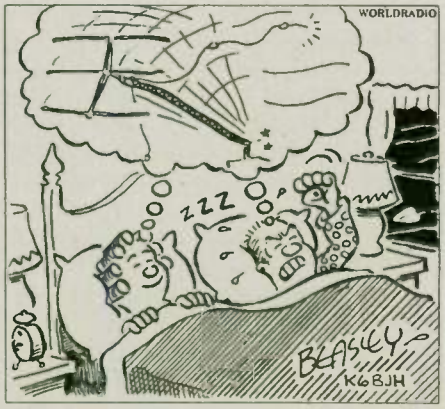
Note that the percentage gradually decreases later in the day during these two months, but still offers a good chance of occurrence all the way up to 11 p.m. local time or so. For reference, my European contacts during the WRTC contest were between 2:30 p.m. and 3:30 p.m. local time — this fits in well with the data in the figure. I should also point out that the local time in the data should be considered to be for the path midpoint.

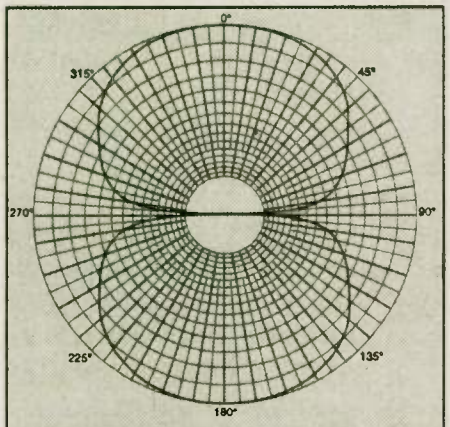
Looking at May and August shows them to still be hanging in there, but with a reduced percentage of occurrence. Other than December, which shows a decent peak around local noon, the other months won't be too productive. Figure 2 summarizes the percent occurrence versus local time for the "best" months: May/August, June/July, and December.

There doesn't appear to be any strong relationship between when mid-latitude sporadic E occurs and smoothed sunspot number (SSN) or magnetic field activity (A-index). This is good, as it offers some spectacular openings when F region propagation is just not possible. In fact, the summer of 1995 (SSN less than 20) was an extraordinarily good summer for transatlantic sporadic E on 6M. If you're interested in digging deeper into sporadic E, just drop me a line and I'll give you several good reference articles.

To close this month's column, I encourage you to dust off the 10M position on your radio (and keep the 6M radio warmed up, too). It's mid to late May when you're reading this, and as we've seen, June and July are historically the best months for sporadic E. You may be rewarded with some pleasant surprises. You may not work Europe (especially if you're on the west coast), but there will be plenty of other areas to work.

In case you're wondering if I worked all 52 of the teams, I regret that the answer is "no." Unfortunately when I worked who I thought was W6C, it was really K6C for a second time. So I really never worked W6C. I ended up with only 51 of the 52. Oh well, at least I earned the letter opener. WR





AERIALS

Kurt N. Sterba

I was perusing the April issue of the *Official Journal* and on page 22 saw an antenna advertisement. It asked you to, regarding their product, "Compare to ANY whip you have ever used — you'll be AMAZED!" I wondered just how many dB over that great Webster Bandspanner this whip would have to be before I would be AMAZED!

It also told me that this antenna system (for only $600) would be "providing an exceptional level of performance that will change forever the way you think about compact antennas." Obviously they must have discovered some new magic that has escaped all the research labs of the defense industry that are seeking a better compact antenna.

Again I quote directly from the manufacturer's advertisement: "Only 12 ft. tall!" And also "Exceptional performance — 10, 12, and 15 Meters are "5/8 wave."

Very interesting, and puzzling, too. Let's examine that "5/8 wave."

Using the formula for a quarter-wave antenna we see that: 234/21 MHz =11.142857 ft. (1/4 wave on 15M).

Dividing that in half we get: 5.5714286 ft. (1/8 wave on 15M).

Taking the 5.5714286 and multiplying it by five (as in 5/8) we get 27.857143 ft. But the advertisement said that with a 12-ft. antenna it would be "5/8 wave." I am puzzled indeed.

Let's try a different approach. Let's take 936 divided by 21. That comes to 44.571429. Now, divide that by eight and we see: 5.5714286 which then multiplied by five equals: 27.857143 ft. which is somewhat longer than 12 ft. What am I doing wrong?

At this point there are those who will start the process to communicate with me . . . to say that I am WRONG!

Back to basics, I guess. We take 300 and divide that by 21 MHz and the answer is 14.285714 meters. Let's multiply that by 39.37 inches and we see 562.42857 inches. Divide that by eight which equals: 70.303571 and multiply that by five and the new answer is: 351.51786 inches which divided by 12 is: 29.293155 ft. An antenna is about five percent shorter than the free space figure. (And, yes, I do know that instead of the oft-used 300 that it should really be 299.792458 as I have pointed out here.)

So where is this five-eighths wave antenna? Let's try 10M!

234/28 MHz = 8.3571429 (1/4 wave) then divided by two is 4.1785714 ft. Multiply that by five and the answer is: 20.892857 ft. Which is also somewhat over 12 feet.

Here's a way to check our work. Divide 28 by 21 and our answer is:

1.3333333. And here is why we ran the answer out so far on the antennas.

Take 27.857143 ft. and divide that by 20.892857 and the answer is 1.3333333.

How a 12 ft. antenna can be called "5/8 wave" for "10, 12, and 15 meters" is puzzling indeed and I would be grateful for an explanation. I wonder if the *Official Journal* was puzzled too.

New subject. If you've been wanting to build a vertical antenna and are puzzled as to how to keep the bottom off the ground, the glass containers that coffee comes in may be the answer for you.

Now, let's look at a serious issue. Based on past and similar set ups, I will predict the future.

Let's say there are four dummy loads. Into each of them a coax "T" connector is placed. Then, via alternate UHF plug and jack connectors the four dummy loads are hooked in parallel.

The four dummy loads of 62.9, 62.9, 58.4, and 52.2 ohms have a total measured DC resistance of 14.7 ohms. An Autek RF Analyst shows an impedance of 16 ohms and a 3.9:1 SWR.

At a frequency of 14.200 MHz, from the transmitter exactly 25W (as measured on a Bird model 43) is fed into the 52.2 ohm dummy load which reads 25W forward and 0W reflected.

Into the four dummy loads in parallel the Bird reads 26W forward and 8W reflected.

Utilizing a tuner the indication is now 31.5W forward and 9.5W reflected.

At this point there are those who will start the process to communicate with me or to the ***Worldradio*** offices to say that I am WRONG! They will say that it is impossible for the meter to read more power that there really is.

And here is the truly tragic part of this exercise. Absolutely none of the letter writers will set up a similar experiment to verify what I say or what they say. They will just say that I am WRONG! and not present any data either of their own or from any literature. The question remains: Is this the only "lack-of-logic" position they take? That is what they have to ask themselves. How much of everything else they think and do based on nothing?

A logical mind, if saying I (Kurt) am wrong, would replicate the set-

up, make and record the measurements. Then they would have something to discuss.

OK, if someone doesn't have four dummy loads, try this. Let's suppose that in the 75M band you put into a dummy load, 29W forward and 0W reflected.

Next, at your most resonant spot in the band you find that at 3.826 MHz you have 30W forward and 2W reflected.

Now let's look at 3.700 MHz. The meter read 30W forward and 13W reflected. With a tuner in the circuit (Note: The wattmeter here is AFTER the tuner) and it reads 49W forward and 20 reflected, as going into the feedline.) In the first situation 30W-13W=17W net power. Second situation (tuner) 49W-20W=29W net power, which was the original power level into the dummy load.

I know there are already those who are red in the face about how the meter can not read more power than is coming out of the transmitter and are starting to write their "WRONG!" letters or faxes. I have one question first. Have you ever performed the same, or similar experiment?

And then I ask, if you accept that the reflected power is sent back up to the antenna by the tuner, how is it that such power would not be read by the wattmeter? The key to it all is to measure the power forward and reflected AFTER the tuner. Subtract the reflected from the forward and that is the real power into the load. I find it just so incredible that people would speak against that without ever actually hooking it up themselves.

I don't wish to discuss this particular matter any more. I don't want the "WRONG!" letters from people who haven't the gumption to take but a very few minutes to attempt to PROVE me wrong. I'll just allow them to wander in the desert in this and probably many other (non-radio) matters.

Bob Niemeyer, K5RML, Carmel, CA, said that in using an Enigma machine he is closing in on my true identity. With the three-wheel configuration, STERBA comes out Margaret Thatcher *(which Lil would be highly pleased with)*. Adding the fourth wheel it comes out ZaZu Pitts, but he says that he is closing in.

On to other subjects. There are those who speak ill of vertical antennas. If verticals are so bad, why is it that WWV has chosen them for use?

One might answer, for all direction coverage. True. But, here comes the $64,000 question. Why can you hear WWV when you cannot hear any amateur station from the area of transmission when WWV is coming in well? Is it the power level of WWV? Not really, there isn't that many dB difference between WWV power and a high-power amateur station. So, it must be the antenna.

A quick makeshift antenna that will get you on the air is the upside down inverted V. Yes, just run a wire to the house and another to the garage or a tree. Feed in the middle as the usual dipole. The bottom of the V can be right at the ground, thus being a bit less conspicuous than a horizontal dipole. It should perform as well or better than a 1/4 wave vertical with one or two radials.

We'll have some interesting announcements shortly.

(KNS goes by his OSS cover so he can be wrapped in a cloak of invisibility at various gatherings of hams. Thus he can plunge the dagger into those deserving such treatment). **WR**

Contest Corner

Don Durk, KA1DWX
76226.1414@compuserve.com

New objectives?

So propagation is coming back, and if you haven't already noticed the improvement, watch the nice progress by November/December. What to do? Well for many of us on the east coast, and for many of you in the midwest or west, European or Asian 'tests have been difficult — if not impossible. Now's the time! Get ready to put in some modest effort or even go whole hog into those long distance contests two continents away! Perhaps you can plan to build a new low angle radiator (preferably with some gain) or improve the efficiency of an older one! Maybe the gods have smiled upon you and you are getting a refund check from your taxes. Can you squeeze out a bit for a better antenna topside or a taller tower? How about a small amplifier to help push around those ions for that extra few thousand miles?

Most contests require separate logs per band, check sheets for over 200 Qs, a summary sheet and a signed and dated affidavit attesting to observance of the rules of both the contest and your local regulating authority. A statement wherein you agree to be bound by the decisions of the contest committee is also needed. All times are in UTC.

Late May 'tests

(see May ***Worldradio*** for details)

•CQ WPX CW 'test

24 May 00:00-25 May 24:00 (RST+number)

•WTU LABRE(PY) 'test

CW-24 May 00:00-24:00 SSB-25 May 00:00-24:00

Pse re-ck LABRE for details! (RS(T)+number)

June 'tests

•ARU Region 1 (Not U.S.)Field Day CW

07 June 15:00-08 June 15:00 (RST+number)

EU stns work all others. 10-160m. Contest Manager c/o RSGB.

•WW So. America CW 'test

14 June 12:00-15 June 18:00 (RST+ 2 letter continent abbreviation [AF, AS, EU, NA, OC, SA] if QRP add /QRP)

Work all including own country 80-10M. Score- pts (for SA stns 2 pts for SA Qs including own country, 10 pts for Qs with other continents. For non-SA stns, 10 pts for ea SA Q, and 2 pts for other stns including own continent and country) x mults (for SA stns 2 multipliers for ea different prefix on other continent. For non- SA stns, 2 multipliers for ea different prefix on SA continent). Single op/single band. Single op/ multi band. Single op QRP(max 10W out) multi band. Certs. Logs for ea band. WWSA, P.O. Box 282, 20001-970 Rio de Janeiro, RJ, Brazil

•Portugal Day SSB 'test

14 June 00:00-24:00 (RS+regions(18)for CT stns or number for non CT stns)

Q 1x per band. Score- pts (3 for non CT stns, 6 pts for CT stns) xmults(CT regions+DXCC countries). Q within your own DXCC country for mult only, no points. Awards for 25 or more Qs. Plaques. REP contest manager P.O. Box 2483, 1112 Lisboa Codex,Portugal

•Cervantes (EA) SSB 'test

14 June 12:00-15 June 22:00 (RS+number)

World works EA stns,80-10M. Score- pts (1 pt for ea EA Q,2 pts with ED or EF stns in Alcal (birthplace of Cervantes) x mults(ea DXCC country and EA call area per band). URE, Cervantes 'test, P.O. Box 201, 28880 Alcala de Henares (Madrid), Spain

•Asia-Pacific SSB Sprint

14 June 12:30-14:30 (RST+number)

Power limit 150 watts.Asia Pacific stations Q non>Asia- Pacific stations on 14.250-14.280 and 7.060-7.080-no posted listen-up frequencies! Score-Qs x mults (prefixes perWPX rules — once only not per band. QSY rule- called station QSYs at least 6 kHz after ea Q. Asia Pacific countries for this 'test: 3D2 (all); 1S/9MO; 9M2; 9M6/8; 9V; BV; BV9 (Pratas); BY; BS (Scarborough); C2; DU; FK8; FW; H4; HL; HS; JA; JD1/Ogasawara; JD1 (Marcus); T8/Marcus; T8/KC6 (Belau); KH2; KH9; KHØ; P29; T2; T30; T33; UAO; V6; V7; V85; VK1-9; (all except VK9X+VK9Y); VS6; XU; XV/3W; XX9; YB; YJ; ZL (all except Chatham + Kermadec). Cool T-shirts for country and zone winners! Non JA logs to James Brooks, 26 Jalan Asas, Singapore 678787 or e-mail to 9v1yc@equator.lugs.org.sg

•ANARTS WW Digital/RTTY 'test

14 June 00:00-15 June 24:00 (RST+CQ zone+UTC time) RTTY, AMTOR, FEC, Packet and SWL. 80-10M. 30 hr. single op max. 48 hr ok for multi. Score- pts (use "Revised 1994 Exchange Points Table" DO NOT USE pre-1994 Exchange Points Tables) x mults (ARRL DXCC country+ea district in VK (1-8), JA, VE and W per band; Q w/ur own country OK for pts, but not a mult) x (up to 6 mults for 6 continents, 1 per continent). . . .then for non VK stns add for ea VK Q on 80-500 pts; for ea VK Q on 40-400 pts; for ea VK Q on 20-100 pts for ea VK Q on 15-200 pts; for ea VK Q on 10-300 pts. Awards. List time on/off on log.VK2BQS.

•ARRL VHF QSO Party

14 June 18:00-16 June 03:00 (Grid Locator see *QST* April, '94)

Q ea stn 1x per grid square per band 50 MHz and up keep 50. 100-50.125 for Intercontinental Qs. Scoring- pts (1 for 50 & 144 MHz; 2 for 222 and 432 MHz; 3 for 902 and 1296 MHz; 4 for 2.3 GHz or higher) x mults (grid square total for all bands-each different grid square counts as 1 mult on each band). Simplex only, no retransmission or repeaters. Single op, 1 band; single op, multi band. (Qs may be made on all bands without jeopardizing single band filing status); single op, QRP portable; rover; multi op; ltd multi op. Check *QST* for details. Awards. ARRL.

•SMIRK 6 Meters Voice/CW QSO Party

21 June 00:00-22 June 24:00 (Call sign, SMIRK number+grid square) Only FM simplex or CW. Above 50.125 Qs on voice between the 48 contiguous states and lower tier VE Qs. For CW above 50.125 or below 50.100. 50.100-50.125 is for DX Qs. Score- pts: For Qs made below 50.200 -2 for SMIRK member and 1 for non-SMIRK for Qs above 50.200, 4 for SMIRK member and 2 for nonmember) x mults (total grid squares worked). Certs. The old re-

quirement that you must be a paid-up member is discontinued. '96 Kudoos: KB5UIA-Questions? http://www.cswnet.com/~kaønno. Logs to W5OZI.

•TOEC WW SSB Grid 'test

14 June 12:00-15 June 12:00

(RS+ Maidenhead Grid ID [i.e.-two letters+ two figures]) Q all stns 1x per band 160-10M. Score-pts (for or with mobile stns 3 for ea Q; (ok to Q/m or/mm if it changes field for new field mult, but not for pts) for fixed stns: 3 if different continent; 1 for own continent; 3 for /m/mm) x total of per band mults (ea field, e.g.-JP, FN, EM etc). 1. single op unassisted; 1a. all band, 1b. single band, 1c. lowpower- 100W out. 2. multiop, 2a. single xmtr, 2b. multi xmtr. Certs. 3. Mobile or/mm. Certs. Logs per band. ASCII, CT, N6TR ok.

Name file using ur call sign N6TR. LOG e-mail to toec.pobox.comor TOEC, Box 2063, S-831 02 Ostersund, Sweden

•RSGB 1.8 MHz CW 'test

21 June 21:00-22 June 01:00

(RST+number; UK stns send RST+3 letter county code) Q UK stns only. Score- total pts (3 per UK Q + 5 pts for ea UK county worked). G3UFY.

•WV SSB/CW QSO Party

21 June 18:00- 22 June 18:00

(RS(T)+county(55) for WV stns, state/prov/DXCC country for others) Q 160-10M. Score-pts(1 for ea SSB Q, 2 for ea CW Q and a 25 pt bonus for working W8WVA) xmults (for WV stns 1 per st/prov/DXCC country per band for others one mult for ea WV county[max55]). CW-1810 an 35 kHz up; SSB-1855; 3860; 7260; 14260; 21360 and 28360. K8MBH.

•All Asian CW DX 'test

21 June 00:00- 22 June 24:00

(RST+ AGE or zero zero if you choose)

Asian stns Q non Asians, no Asian to Asian or nonAsian to nonAsian Qs. 160 -10 M. Single op single band; single op multi band; multi op multi band. Score- pts (1pt for ea Asian Q 7-28 MHz; 2 pts for 3.5 MHz and 3 pts for 1.8 MHz: For Asian stns same pts for Qs w/non Asians) x mults (Asian Prefixes Qd per WPX rules per band).

Asian countries:A4; A5; A6; A7; A9; AP-AS; BV; BY+BT; EK; EP+EQ; EX; EY; EZ; HL; HS; HZ; JA-JS; JD1 (Ogasawara i.e. Bonin and Volcano; JD1 Minamitori i.e. Marcus is Oceania not Asia); JT; JY; OD; S2; TA; RA-RZ and UA-UI 8,9,0; UJ+UM; UN+UQ; VS6+VR2; VU; VU (Andaman+Nicobar Is.); VU (Laccadive Is.); XU; XW, XX9; XY+XZ; YA; YI; YK; ZC4; 1S; 3W+XV, 4J+4K; 4L; 4P-4S; 4X+4Z; 5B; 7O; 8Q; 9K; 9M2; 9N; 9V; Abu Ail. Certs and medals. ASCII-CT/TRLOG/NA/ZLOG OK. Separate logs per band. JARL, AA Test CW, P.O. Box 377, Tokyo Central, Japan.

•SP QRP CW 'test

28 June 12:00-29 June 12:00

(RST+number+power class)

Q all stns 80-10M. Score-pts (6 pts VLP w/VLP or VLPw/QRP; 5 pts VLP w/LP; 4 pts VLPw/QRO or QRP w/QRP; 3 pts QRPw/LP or QRP w/QRO; 2 pts LPw/LP; 0 pts QRO w/QRO) x mults for Qs w/ VLP/LP/QRP 2 mults for ea DXCC country per band; for Qs w/others 1 mult per DXCC country per band. VLP = max 1watt; QRP = max 5 watts; LP = >5W<100W; QRO =>100W. SP5YQ.

•Marconi Memorial CW 'test

28 June 14:00- 29 June 14:00

(RST+number)

Work all! 160-10M. Score-pts (1 per Q) x mults (DXCC countries per band).Single op/low power (max 100W out). Single op QRP-max 5W out. Multi op. 10 Minute rule. Logs for ea band. A station description and pix would be appreciated! ASCII ok. For free logging software send a formatted diskette with SAE and 2IRCs to ARI sez di Fano, P.O. Box 35, 61032 Fano (PS), ITALY (Logs to this address also).

•ARRL Field Day

28 June 18:00- 29 June 21:00

(Operating Class [A-club or nonclub portable; B-1 or 2 person portable; C-mobile; D-home station, commercial power; E-home station, emergency power]+section) Q 1 x per band segment. Each phone and CW segment is considered a separate band. Class A and Class B stns who do not begin set up until 18:00 Saturday may op the entire 27 hrs. Others may not begin set up earlier than 18:00 Friday and can operate only 24 consecutive hrs. Scoring-CW/RTTY/ASCII 2 points, phone- 1 pt x various power multipliers and bonus points. Please review *QST* FD rules for complete details.

July 'tests

7/5 Weekend
- •YV CW 'test
- •Canada SSB/CW Day 'test
- •DARC Corona 28MHz Digital 'test
- •DIE SSB/CW Spanish Island 'test

7/12 Weekend
- •IARU SSB/CW 'test
- •RSGB CW Low Power FD
- •QRP ARCI CW Sprint

7/19 Weekend
- •NA RTTY Party
- •HK SSB/CW/RTTY'test
- •SEANET 'test
- •So. Pacific 160M SSB/CW 'test
- •AGCW-DL QRP 'test
- •RSGB 40/80 CW 'test

7/26 Weekend
- •IOTA SSB/CW 'test
- •YV SSB/CW 'test
- •Russian RTTY WW 'test

August 'tests

8/02 Weekend
- •ARRL UHF 'test
- •EU SSB/CW HF Championship
- •NA CW QSO Party
- •YO SSB/CW DX 'test

8/09 Weekend
- •WAE CW DX 'test
- •MD/DC SSB/CW QSO Party
- •Internet CW Sprint Party

8/16 Weekend
- •ARRL 10GHz Cumulative 'test
- •Keyman's Club of Japan CW 'test
- •SARTG RTTY 'test
- •SEANET SSB 'test
- •W/VE SSB/CW Islands 'test
- •NA SSB QSO Party
- •NJ SSB/CW QSO Party

8/23 Weekend
- •TOEC CW Grid 'test

WR

Contest committees

Do you need to publicize a contest for your group? We will be happy to help. Please send in dates, times, operating frequencies, and all other pertinent information. Please include the name and address of the person to contact for further information as well as your logging requirements, and all other information needed to successfully operate in the contest. The correct address and the format required for log submission needs to be clearly stated for the greatest number of people to be able to participate in your group's contest.

Submissions may be e-mailed to KA1DWX at: 76226.1414@compuserve.com or mailed to our 28th Street office.

Hamfests

June

Do you have a hamfest coming up? Send your information to our 28th St. office at least 2 months in advance of your event. We'll send prizes!

California

The **Livermore ARK** will hold a swap meet on 01 June from 7 a.m. to noon at Las Positas College, 3033 Collier Canyon Rd., Livermore, CA (Airway Blvd., exit to north of 580 highway). Features include new, used, surplus ham, computer gear, miscellaneous electronics and testing equipment, refreshments available. Admission and parking are free; vendors $10 per space (equals two parking spaces). No VE exams. Contact Noel Anklam at 510/447-3857 (eves.) or 510/783-2803 (days). Talk-in on 145.350(-) PL 100 (receive and send), 147.045(+) PL 94.8, 147.120(+) PL 100.

Connecticut

The **Newington Amateur Radio League** will hold a flea market on 01 June from 9 a.m. (vendor setup 8 a.m.) to 1 p.m. at the Newington High School. Features include WEFAX, packet, ATV demos and VE exams (no walk-ins). Admission $4, tables $15/advance (make check payable to NARL and send with SASE to Ed Matthews, KC1JV, 69 Wildemere Ave., Waterbury, CT 06705), $20/door. For general information contact Bob Pratt, KD1LU at 860/675-1419. Talk-in on 145.45(-), 146.52(S), 224.85, 443.05.

Georgia

The **Atlanta Radio Club** will hold the '97 Atlanta HamFestival & Computer Expo (ARRL Georgia State Convention) on 21 June, 9 a.m. to 4 p.m. and 22 June, 9 a.m. to 3 p.m. at the City Hall East Exhibition Center, 675 Ponce de Leon, Atlanta. Vendor setup on the 20th from noon to 9 p.m. and 5 a.m. to 8:30 a.m. on the 21st. Features include over 150,000 square feet of space (indoors), including covered tailgating, hourly prizes, forums, free parking, food, security and electricity. VE exams will be given at 9 a.m. on the 21st (registration 8 a.m.). Admission is $6/advance, $8/door (before 05 June). Contact persons: Chairman and flea market, William Bass, W4LFC, phone/fax 770/493-6982 (e-mail Bill W4LFc@juno.com); Dick Bentley, K2UFT, e-mail dickb@akorn.net (exhibitors); or John Fearon, W4WKP, 770/466-0099 (liaison) or check our web site at: http://www.saf.com/arc. Talk-in on 146.82(-) no tones. Continuous bulletin on 145.35(-).

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The **Albany ARC, Inc.,** will hold their 15th annual Albany Hamfest & Computer Fair on 13 (5-9 p.m.) and 14 June (9 a.m. to 4 p.m.), at the Albany James H. Gray Civic Center. Features include VE testing Fri. at 6 p.m., outdoor flea market Sat. only ($10), forums and free parking. Admission $5. Contact Arthur Shipley, N4GPJ, c/o AARC, P.O. Box 70601, Albany, GA 31708; 912/439-7055; e-mail n4gpj@ isoa.net. Talk-in on 146.82(-).

Idaho

The **Kootenai Amateur Radio Society** will hold its 14th annual hamfest on 14 June from 7:30 a.m. to 4 p.m. at the Rathdrum Senior Citizens Center in Rathdrum, on highway 41 and Montana Street. Entry is free to all buyers and sellers, and there will be amateur license testing for all classes starting at 11 a.m. Hourly drawings will be held, with the grand prize drawn at 3 p.m. Food, flea market and much more. Contact Barry Burnett, KC7MPM, chairman, at 208/773-2903. Talk-in on 146.98(-).

Illinois

The **Six Meter Club of Chicago** will hold its 40th annual hamfest on 08 June from 8 a.m. (vendor setup 7 a.m.), at the DuPage Country Fairgrounds, 2015 Manchester Rd., (north of Roosevelt Rd. [Rte. 38], east of County Farm Rd.) in Wheaton. Features include an all-weather hamfest and large outdoor flea market, ARRL and dealer displays, food and refreshments, free parking (no extra charge for space in outdoor flea market), limited overnight RV parking. VE testing (all elements) 9 a.m. to 1 p.m. Admission $4/advance, $5/door. Tables $8 (8' with electricity), indoor flea market tables $10 (no electricity). Advance tickets available from: Joseph Gutwein, WA9RIJ, 7109 Blackburn Ave., Downers Grove, IL 60516. For general information call 708/442-4961. Talk-in on 146.97(-).

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The **Starved Rock Radio Club** will hold a hamfest on 01 June from 6 a.m. at the Bureau County Fairgrounds in Princeton. Admission is $5/advance, $6/door. Outdoor flea market area is free. Tables $10 (8'). Contact Bruce Burton, KU9A, or Debbie Burton, N9DRU, 1153 Union Street, Marseilles, IL 61341; 815/795-2201, e-mail brburton@mtco.com Talk-in on 146.95(-).

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The **Lake County ARC (Indiana)** will hold its annual "Dad's Day" hamfest on 15 June from 8 a.m. (vendor setup 6 a.m.). This year there will be computers, software and hardware vendors as well as Amateur Radio equipment. Food and beverages will be available. Admission is $5, tables $6. Contact Malcolm Lunsford, WN9L (*Callbook*™) for reservations or 72202.230@compuserve.com Talk-in on 147.00, 146.52(S) and 442.075.

Kentucky

The **Northern Kentucky ARC, Inc.** will hold "Ham-o-Rama '97" on 08 June from 8 a.m. (setup 6 a.m.) at the Erlanger, Kentucky Lions' Park. Directions: I-75 to Exit 184 (Route 236 East). Go one mile to Dixie Hwy. (U.S. Route 25&42). Turn right and go one mile to Sunset Ave. Right on Sunset to end of street. Features include prizes and forums and indoor exhibit area for major vendors. Extensive outside flea market. Food and refreshments at popular prices. Admission $4/advance, $5/gate (children under 13 admitted free). Flea market spaces $2 (tables not furnished). Indoor vendor space $15 per table (provided). For more information or advance registration, contact N8JMV, c/o NKARC, P.O. Box 1062, Covington, KY 41012 or call 513/797-7252 (evenings). Talk-in on 147.25(+) or 147.375(+) repeaters.

Maine

The **Pine State ARC** will hold their Bangor Hamfest on 14 June from 8 a.m. to 1 p.m. at Hermon High School (I-95 to Exit 44 [Cold Brook Rd.] to U.S. #2. U.S. #2 west one mile). From the Village, take U.S. #2 east 1/2 mile to the school. Features include demonstrations (frequency calibration, QSL card displays, old ham gear, key collections, home brew equipment, etc.), food, dealers, VE exams, ARRL and section forum. Admission is $3 per person (under 12 free). Contact Roger W. Dole, RR#2 Box 730, Bangor, ME 04401; 207/848-3846. Talk-in on 146.34(+) or 146.52(S).

Massachusetts

The **MIT Electronics Research Society, MIT Radio Society and Harvard Wireless Club** will hold a tailgate electronics, computer and Amateur Radio flea market on 15 June from 9 a.m. (vendor setup 7 a.m.) to 2 p.m. at Albany and Main Street in Cambridge. Admission $4. Free off-street parking for buyers. Seller spaces $9/advance, $10/gate (includes one

admission). For space reservations or more information call 617/253-3776. Mail advance reservations to W1GSL, P.O. Box 397082 MIT BR., Cambridge, MA 02139. Talk-in on 146.52(S) and 449.725/44.725 (PL 2A) W1XM repeater.

Michigan

The **Chelsea ARC, Inc.** will hold their 20th annual Chelsea Swap 'n Shop on 01 June from 8 a.m. (6 a.m. for vendors) at the Chelsea Fairgrounds. Food available, plenty of parking, special handicap parking. Admission $5 (YLs, XYLs and kids under 12 are free). Table space $10 per 8 feet, trunk sales $5 per space. Trunk sales rear entrance only! For more information, contact Mr. Alan Robbins at 3800 Hooker Rd., Pickney, MI; 313/878-0363. Talk-in on 146.980 Chelsea repeater.

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The **Independent Repeater Association** will hold their annually sponsored Hamfestival, West — Michigan's largest — on 07 June from 8 a.m. (setup on the 6th after 7 p.m. or on the 7th at 6:30 a.m.) at the Hudsonville Fairgrounds near Grand Rapids. Overnight camping is available. Bring your equipment, etc., to sell or trade. VE exams at 8:30 a.m. Admission is $5 at the gate. Tables $8, trunk spaces $6. Book your reservations early to reserve the best spots. Contact the IRA voice mail information line at 616/534-6803 or Contact Tom, KA8YSM, or Kathy, KB8KZH at 616/698-6627.

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The **Midland ARC** will hold their 22nd annual hamfest on 14 June from 8 a.m. to 1 p.m. at the Midland County Fairgrounds in Midland. The show features amateur electronics and equipment (both new and used), Amateur Radio license exams, and door prizes. Admission is $4, advanced reserved tables $6 each, trunk sale space $5. Food is available. For information, write MARC Hamfest, P.O. Box 1049, Midland, MI 48641. Please SASE, or call evenings/weekends 517/839-9371 or 517/496-2999. Talk-in on 147.00(+).

New Hampshire

The **Connecticut Valley FM Association** will hold its 7th annual hamfest on 07 June from 8 a.m. to 3 p.m. at the Goshen-Lempster Coop School, Rte. 10, ten miles south of Newport, New Hampshire, 25 miles north of Keene, NH. Features include demonstrations, refreshments and test session. Admission is $1, tables/spaces $6 (includes 1 admission). Contact Conrad Ekstrom, WB1GXM, P.O. Box 1076, Claremont, NH 03743; 603/543-1389, e-mail goshlem@srnet.com Talk-in on 146.76(-).

New Jersey

The **Raritan Valley Radio Club** will hold their '97 hamfest on 21 June from 7 a.m. (sellers 6 a.m.) to 2 p.m. at Columbia Park, near intersection of route 529 and 28. Admission $5, sellers $10 ($5 each additional space). Information: Bob Pearson, WB2CVL, 908/846-2056 (RWPEARSONWB2CVL @WORLDNET.ATT.NET) or John Manna, WA2F, 908/722-9045. Pre-registration — Chuck Fainsbert, KC2NB, 908/873-2198 (FAINSBERT@WORLDNET.ATT.NET), calls before 8 p.m. Talk-in on 146.625(-) and 447.250(+) tone 141.3 repeaters or 146.52(S).

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The **Bergen ARA** will hold its hamfest on 07 June at Fairleigh Dickinson University. Take route 4 east/west to the River Road exit. Follow the signs into the hamfest area. Special features include VE testing, plenty of parking, food and restrooms. Buyer admission $3 with XYLs and harmonics free. Sellers $10. For information, contact Jim Joyce, K2ZO at 201/664-6725 (please, no calls after 10 p.m.). Talk-in on 146.790(-).

New York

The **Hall of Science ARC** will hold their annual hamfest on 01 June from 9 a.m. (vendor setup 7:30 a.m.) at the New York Hall of Science parking lot, Flushing Meadow Park, 47-01 111th Street in Queens. Free parking, door prizes, food and refreshments. Admission by donation, buyers $5, sellers $10 per space. Contact Arnie Schiffman, WB2YXB (evenings only) at 718/343-0172. Talk-in on 444.200 WB2ZZO repeater, 146.52(S).

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The **11th annual Chaverim International Convention** will be held 06-09 June (Friday dinner through Monday lunch) at the Fallsview Hotel in Ellenville, New York. All reservations include three Kosher meals per day, shows, dancing, private party, varied program of social and athletic activities, VE testing. All reservations must be received by 01 May. Contact Arnold Halpern, W2GDS, 450 Brighton Ave., Long Branch, NJ 07740; 908/222-3009, e-mail w2gds@juno.com. Telephone Sonny Gutin, WB2DXB, at 609/853-7889 for Chaverim nearest you or e-mail him at wb2dxb@juno.com or packet wb2dxb@k2aa.nj.usa.na

North Carolina

The **Charlotte ARC** will hold their 5th annual hamfest and computer show on 08 June from 8 a.m. (setup 6-8 a.m.) to 4 p.m. at the Roll-A-Round Skating Center at 8830 East Harris Boulevard in Charlotte. Features include computer and radio dealers as well as flea market tables. There will be a very limited amount of tailgating. Tailgating is $5 per space. Admission tickets are included with the purchase of two or more spaces, and are available for $2 for tailgaters requesting only one space. Flea market tables are $8/advance, $10/door. Chairs are $1 each. Pre-registration requests should be sent with SASE (those received without SASEs or after 01 June will be held at the door) to: Charlotte ARC, P.O. Box 33582, Charlotte, NC 28233. For information, call Daryl Sampson, KM4GO, 704/522-4971, x3330 or send Internet e-mail to w4cq@callsign.net.

Ohio

The **Goodyear ARC** will hold a hamfest on 08 June from 8 a.m. to 4 p.m. at Goodyear's Wingfoot Lake Park, near Suffield, Ohio, 10 miles east of Akron. Entrance is from State Route 43, 1 mile south of State Route 224. VE exams at 10 a.m. (walk-ins okay). Bring license and copy and photo ID. Admission $4/advance, $5/door (one ticket admits the ham, spouse and children). One flea market space free with admission, extra spaces $5. Inside space with table, chair and electricity, $10. Contact Ken Phillips, K8CHE, 351 Hillman Rd., Akron, OH 44312; 330/733-5795 or e-mail kenphillips@juno.com or aa635@acorn.net. Talk-in on 146.52(S).

Wisconsin

The **Central Wisconsin Radio Amateurs** will hold a swapfest and auction on 08 June from 8 a.m. at the Village Park in Junction City. Features include QCWA meeting, WNA and others, lots of tailgate sales, beautiful park for families to enjoy, VE exams (9 a.m. sharp!). Swap tables $4/advance (before 15 May), $7/door. Tailgaters $2.50 (free parking, all other). Contact John Feltz, WA9LWJ, 973 E. First St., Junction City, WI 54443; 715/457-2506. Talk-in on WB9QFW repeater 146.67(-). WR

You are *Worldradio.*

Information in "New Products" is supplied by the manufacturers to acquaint *Worldradio* readers with new products on the market.

DK-S11T Two-meter "Pocket size" HT

Alinco announces the introduction of the DJ-S11T. The new HT, only slightly larger than most pagers, runs on 3 AA cells. The DJ-S11T is expected to be available for less than $150 at most Amateur Radio retail locations that carry Alinco products.

The unit features 21 non-volatile memories, CTCSS encoder, offset capability up to 15.995 MHz using 3 AA batteries as its power source, with an output of 340 milliwatts.

"This is an affordable radio that can be easily carried in a pocket or purse," said Doug Wynn, Sales Manager for the company's North American operations. "This radio can be carried by persons wearing business attire and it will be all but inconspicuous, hidden until needed. The AA battery power means that replaceable power sources are available almost anywhere. In addition, the low cost will make it popular with multi-ham families and folks looking for an economical way to acquire a 2-meter radio."

The DJ-S11T is a near-twin to the DJ-S41T introduced in late 1996. Hams at shows have indicated a strong desire for a 2M version of that radio. A unique feature of the DJ-S11T is its pivoting "swing up" telescoping antenna. The flexible design allows the radio to remain compact in pocket or purse without detaching the antenna. It also does away with the risk of misplacing a detached antenna. The telescoping feature allows the radio to achieve better transmit and receive performance than a smaller "flex" antenna.

Technically the radio is impressive in its user simplicity. One of the features that should prove popular is the ample audio that can be generated from the speaker. Among its features are CTCSS encoder (50 tones), large illuminated display, adjustable offset, adjustable tuning steps, pager "alert" alarm, hi/low (340 mW/50mW using AA cells) transmit power setting, programmable auto power-off feature, MARS/CAP capability, packet radio capability and more. The radio comes with a belt clip and carry strap.

The DJ-S11T has a lengthy list of options which include a speaker mic, cigar-lighter external power converter cord (12V DC to 5.5V DC), a vox-operated tie-pin microphone, vox-operated headset, a NiCd battery pack and charger, and a soft case.

The DJ-S11T is already type-approved by the FCC and should be available at your nearest Alinco dealer.

For more information, contact Alinco at 438 Amapola Ave., Suite 130, Torrance, CA 90501; 310/618-8758.

Rainbow Kits

Milestone Technologies announces that it is now a distributor for the popular Rainbow Kits from Electronic Rainbow, Inc. Milestone will stock kits that have a direct relationship to Amateur Radio, as well as some others "just for fun." According to Marshall Emm, Operations Manager at Milestone, the Rainbow Kits "round out our line of affordable, well-designed kits for Amateur Radio accessories and test equipment, as well as complementing our Amateur Radio software products."

Examples of the Rainbow kits are a 5/8/12V DC voltage monitor, which uses 7 LEDs to indicate voltage in increments of .25, .5 or 1V (VM-1, $7.95); a similar kit for AC line voltage monitoring (VM-110, $10.95); a board kit for Morse code practice oscillator, (OSC-1, $6.95); and a complete Morse code practice kit including oscillator, enclosure and telegraph key (COD-K1, $24.95).

VHF/UHF enthusiasts are sure to be interested in "The Searcher," a radio direction-finding system including a pair of vertical dipoles on a 24" boom (SDF-1, $44.95).

Credit card orders ($10 minimum) can be placed by calling Milestone Technologies toll-free at 800/238-8205. For more information about the kits, M*LOG, CODEMASTER V, or Milestone's other products, contact Marshall, AAØXI, on 303/752-3382 or write to him at Milestone Technologies, 3140 S. Peoria St., Unit K-156, Auroa, CO 80014-3155.

E-mail can be addressed to Marshall via CompuServe (75230, 1405), or Internet: aaØxi@mtechnologies.com or visit our web site (including on-line ordering and images of the kits): http://www.mtechnologies.com/mthome.

Ham Gallery

Shack Attack has added another great, exclusive product for ham operators! Hams will want to display their favorite ham photograph or QSL card with the Ham Gallery. The radio amateur can select his or her own work of art, (i.e., personal photo, shack photo, QSL card, etc.) and display it with a touch of class and their own call sign. Pictures can be easily changed to add a fun, new look to the owner's shack. It makes a great gift for the ham who has everything or for the new Technician.

Below the large 6" x 4" photo/QSL display area, a call sign of the ham's choice is laser etched in large, one-inch tall letters. The Ham Gallery is made of a sturdy, clear acrylic. The easel frame design stands anywhere and has small foot print area to easily fit any size shack. Overall dimensions are 6"W x 5.5"H x 2"D.

The Ham Gallery is a great way to enhance the looks of your shack and a great idea for club appreciation awards (just use your club's call and club photo). A Ham Gallery can be purchased for $14.95 plus $5 S&H. Club quantity discounts are available. When ordering by mail, call signs should be clearly printed. Shack Attack is happy to announce that they now accept credit cards. Call 800/573-7388, fax 801/878-2100, e-mail for info: kb7vrd @aol.com, Internet: www.vcnet.com/sa or write Shack Attack, P.O. Box 91, Dept D, Enterprise, UT 84725-0091. **WR**

VE exam schedules

As a service to our readers, ***Worldradio*** presents a feature listing 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 October, please have the information to us by mid-July.

p/r pref. = pre-register preferred but w/i OK
p/r = pre-register only — no w/i

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.

w/i pref. = w/i preferred to p/r
w/i = walk-in only

State	City	Contact	Notes
Alabama			
7/01/97	Mobile	David, WA4VAC 205/649-5229	
Arizona			
7/12/97	Tucson	Joe, K7OPX 520/886-7217	w/i
Arkansas			
7/12/97	Siloam Sprgs	Mike, KJ5OP 501/524-8090	p/r
California			
7/30/97	Anaheim	Robert, AC6JM 310/429-8275	p/r pref.
7/24/97	Colton	Harold, AB6RN 909/825-7136 days or 909/685-6073 eves	p/r pref.
7/12/97	Culver City	Clive, AA6TZ 310/827-2538	p/r pref.
7/26/97	Culver City	Scott, K6PYP 310/459-0337 or Dave N3BKV 818/559-2572	w/i
7/5,19/97	Cupertino	Emmett, AE6Z 408/243-8349	w/i only
7/26/97	Escondido	Harry, WA6YOO 760/743-4212	p/r
7/17/97	Ftn. Valley	Allan, AB6UB 714/531-6707	p/r pref.
7/01/97	Fremont	Dennis, K6DF 510/791-0954	w/i only
7/06/97	Hanford	Carleton, AA6GZ 209/924-4221	w/i only
7/05/97	Hesperia	Jim 619/244-1396	w/i only
7/11/97	Irvine	Jack, WD6AEI 714/856-0802	
7/12/97	Jackson	Ray, AA6EW 209/296-3412	p/r pref.
7/05/97	Lake Isabella	Ham Radio HOTLINE 619/379-2947	p/r pref.
7/18/97	Lake Isabella	Rex, 619/379-3011	p/r pref.
7/21/97	Mission Viejo	Louis, 714/951-0336	p/r
7/06/97	Oakland	Vern, AA6YE 510/233-4504	p/r pref.
7/05/97	Ontario	Gary & Pamona 818/810-0442	
7/19/97	Orange	Richard, AA6NA 310/598-0086	p/r pref.
7/26/97	Pomona	Don, WA6HNC 909/949-0059	p/r pref.
7/19/97	Redwood City	Joe, KB6OWG 408/255-9000	w/i only
7/13/97	Sacramento	Dick, N6DK 916/383-2113	p/r pref.
7/12/97	San Pedro	Elvin, N6DYZ 310/325-2965	p/r pref.
7/09/97	Santa Ana	Red Cross 714/835-5381 x140	w/i
7/12/97	Santa Rosa	Claude, 707/527-8593	p/r pref.
7/19/97	Signal Hill	Donald, NN6Q 310/420-9480	p/r pref.
7/19/97	Stockton	Mark, W6DKI 209/465-7496	w/i
7/12,27/97	Sunnyvale	John, KG6XF or Gordon, W6NW 408/255-9000	w/i only
7/19/97	Westminster	Terry, 714/638-4057	
Colorado			
	All Colorado	Exam recording 303/360-7293	
7/12/97	Denver	Glenn, WØIJR 303/366-0155	w/i pref.
7/05/97	Littleton	Dave, NØHEQ 303/795-5718	w/i pref.
Connecticut			
7/17/97	Trumbull	Kevin, N1KGM 203/268-5015 or Bob, KA1ZMF 203/933-9587	
Florida			
7/10/97	Ft. Myers	Norm, AF4AZ 941/694-2505	w/i
7/19/97	Melbourne	Bill, WB9IVR 407/724-6183	p/r pref.
7/19/97	Orange Park	John, W5HUQ 904/264-5587	p/r pref.
7/12/97	Panama City	Al, NZ5W 904/235-0186 or Charles, N4DPU 904/785-0449	
7/24/97	Pensacola	Steve, KO4TT 904/968-1092	
7/12/97	Valparaiso	Bill, W4WIJ 904/243-9720 or Hud, KF4BU 904/862-2566	p/r pref.
7/17/97	Vero Beach	Roger, K4RS 561/567-3979	w/i
Idaho			
7/12/97	Boise	Lem, W7JMH 208/343-9153	w/i pref.
Illinois			
7/12/97	Oak Forest	David, NF9N 708/448-0580	p/r pref.
Indiana			
7/12/97	Chesterton	Bill, N9SLQ 219/762-2887	w/i pref.
Maine			
7/02/97	Brunswick	Steve, WZ1J 207/725-5155	p/r pref.
Maryland			
7/19/97	Manchester	Ed, 410/239-8488	p/r pref.
Massachusetts			
7/19/97	Melrose	Scott, WB1F 617/665-7654	p/r pref.
Michigan			
7/12/97	Houghton	George, W8FWG, 906/337-2542	p/r pref.
Nevada			
7/19/97	Minden	George, WW7E 702/265-4278	w/i pref.
7/12/97	Reno	Don, W7FD 702/851-1176	p/r
New Jersey			
7/17/97	Bellmawr	Diane, N2LCQ 609/227-6281	w/i
7/12/97	Cranford	24-hour hotline 201/377-4790	w/i pref.
7/09/97	Ft. Monmouth	Jerry, WB2GYS 908/532-5354	p/r pref.
7/19/97	Pennington	Don, AA2F 609/737-1723	p/r pref.
7/07/97	Sayreville	Larry, N2ELW 908/390-5857	w/i pref.
New York			
7/08/97	Bethpage	Bob, W2ILP 516/499-2214	w/i pref.
7/06/97	Yonkers	Emily, AC2V 914/237-5589	p/r pref.
North Carolina			
7/24/97	Washington	Kirk, N5NC 919/946-7498	w/i pref.
Ohio			
7/05/97	Cincinnati	Herb, WA8PBW 513/891-7556	p/r pref.
7/20/97	Van Wert	Robert, KA8IAF 419/795-5763	p/r pref.
Oregon			
7/09/97	Roseburg	Dick, AA7GC 541/672-7564	p/r pref.
Pennsylvania			
7/05/97	Erie	Norma, W3CG 814/665-9124	w/i only
7/03/97	Philadelphia	Dusty, ND3Q 215/879-0505, 215/482-0386, 215/448-1139(tape)	p/r pref.
Rhode Island			
7/10/97	Providence	Judy, KC1RI 401/231-9156 Al, NN1U 401/454-6848	w/i pref.
Texas			
7/24/97	Ft. Worth	Ted, AB5QU 817/293-6745	p/r
7/08/97	Houston	Harold, ND5F 713/464-9044	p/r pref.
Vermont			
7/25/97	Essex Jct.	Mitch, W1SJ 802/879-6589	p/r pref.

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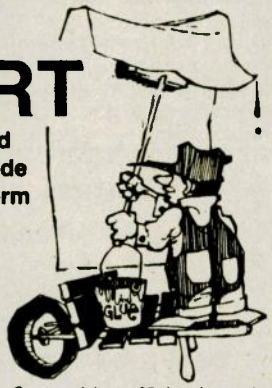

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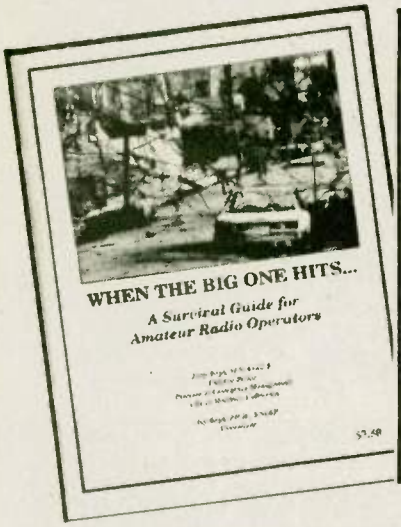

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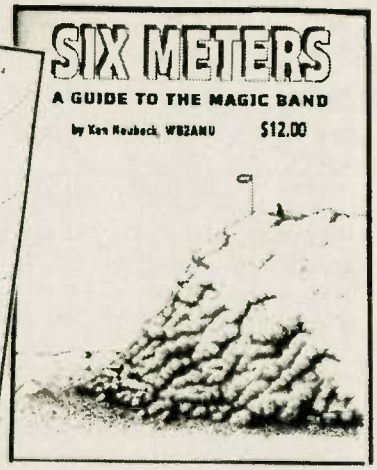

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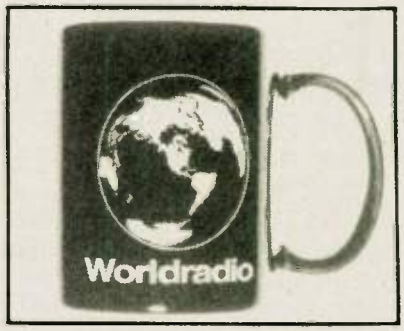

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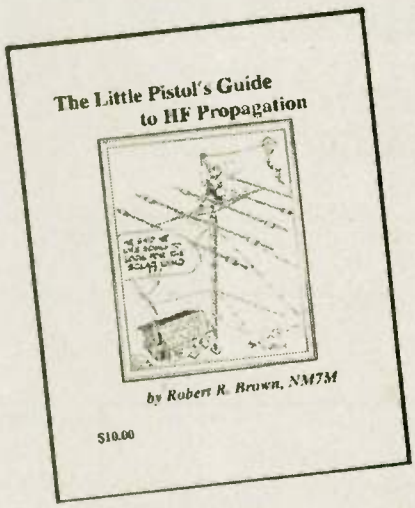

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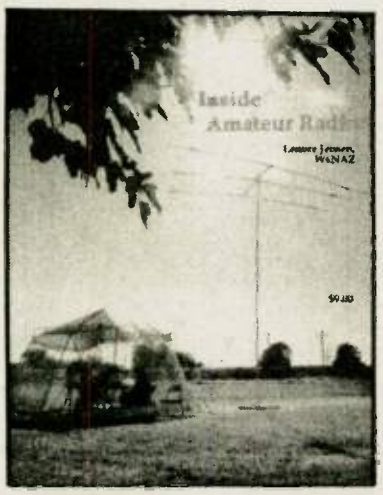

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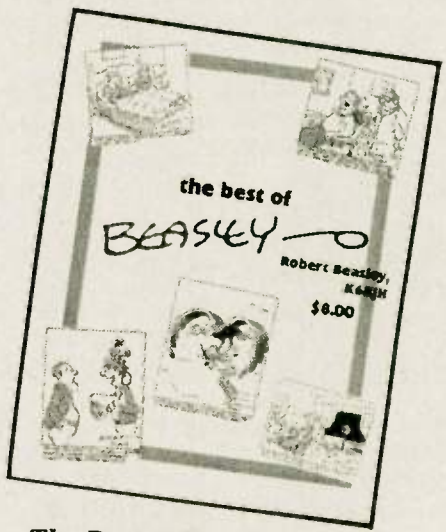

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Current third-party agreement list

We have received requests from our readers recently for an updated list of countries with whom the United States has third-party agreements.

Remember to check the list to make certain that you may pass on messages to relatives or friends for DX stations or conduct phone patches for a DX station. If the third person is another licensed amateur who is eligible to be a control operator, you may pass messages without regard to third party agreement. The traffic must meet the legal requirement of being "noncommercial and of a personal, unimportant nature."

U.S. Amateurs may handle third-party traffic with the following countries:

C5	The Gambia
CE	Chile
CO	Cuba
CP	Bolivia
CX	Uruguay
D6	Federal Islamic Republic of the Comoros
DU	Philippines
EL	Liberia
GB *	United Kingdom
HC	Ecuador
HH	Haiti
HI	Dominican Republic
HK	Colombia
HP	Panama
HR	Honduras
J3	Grenada
J6	St. Lucia
J7	Dominica
J8	St. Vincent and the Grenadines
JY	Jordan
LU	Argentina
OA	Peru
PY	Brazil
TG	Guatemala
TI	Costa Rica
T9	Bosnia-Herzegovina
V2	Antigua and Barbuda
V3	Belize
V4	St. Christopher and Nevis
V6	Federated States of Micronesia
V7	Marshall Islands
VE	Canada
VK	Australia
VR6**	Pitcairn Island
XE	Mexico
YN	Nicaragua
YS	El Salvador
YV	Venezuela
ZP	Paraguay
3DAØ	Swaziland
4U1ITU	ITU Geneva
4U1VIC	VIC, Vienna
4X	Israel
6Y	Jamaica
8R	Guyana
9G	Ghana
9L	Sierra Leone
9Y	Trinidad and Tobago

Notes:

* Third-party traffic permitted between U.S. amateurs and special-events stations in the United Kingdom having the prefix GB only, with the exception that GB3 stations are not included in this agreement.

** Since 1970, there has been an informal agreement between the United Kingdom and the U.S., permitting Pitcairn and U.S. amateurs to exchange messages concerning medical emergencies, urgent need for equipment or supplies, and private or personal matters of island residents.

Region 2 Division of the International Amateur Radio Union (IARU) has recommended that international traffic on 20M and 15M be conducted on the following frequencies:

14.100-14.150 MHz
14.250-14.350 MHz
21.150-21.200 MHz
21.300-21.450 MHz

— via FCC, IARU

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