

# Worldradio

Year 21, Issue 12

June 1992 • \$1.25



**Worldly amateurs  
had a grand  
time at the  
'92 DX Convention  
in Visalia.**



## FEATURES

- New Delhi, India — Fr. Moran, 9N1MM, Silent Key
- Loogootee, Indiana — The layman looks at the antenna tuner
- Los Altos, California — Operating 4U1ITU
- Macau, Asia — Colvins conclude their DX world tour
- Orland Park, Illinois — Amateur Radio Info-Line
- Patchogue, New York — A Field Day perspective
- Sebastopol, California — What makes a good CW QSO?
- Vancouver, Washington — The best darned antenna \$20 can buy
- Visalia, California — DX Convention highlights

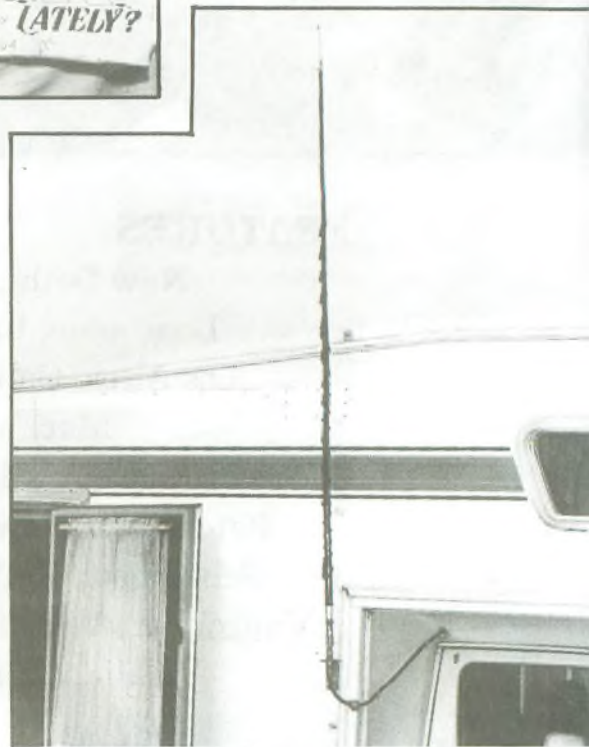
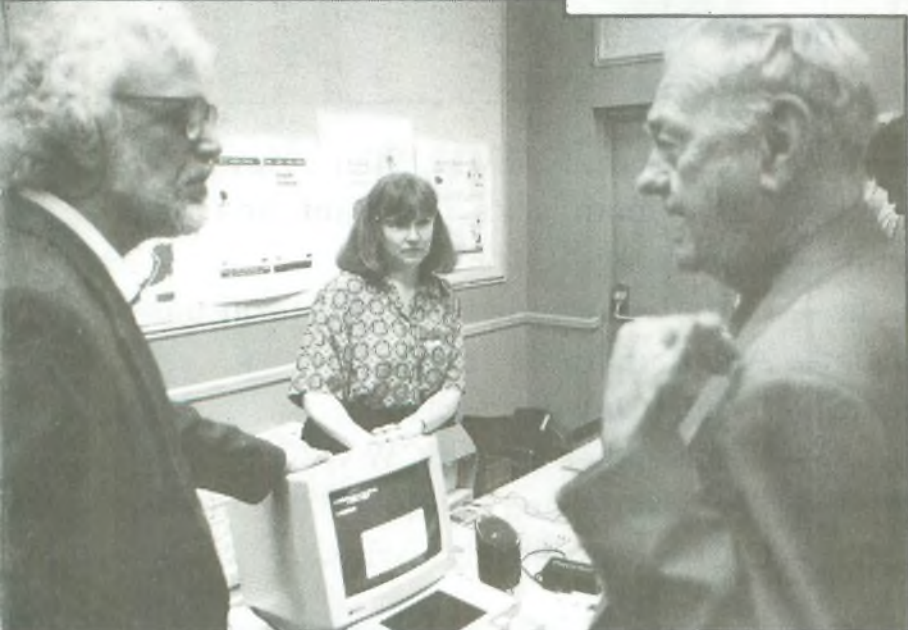




So, where are you off to next?



Everyone knows where these guys have been ...





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**Father Marshall D. Moran, 9N1MM, born May 29, 1906, became a Silent Key on April 15, 1992. Fr. Moran first arrived in India in 1929 and dedicated most of his life to the care and education of Nepali children.**

**Fr. Moran confirmed Nepal for many of us deserving DXers during his many years of service at**

**the Godavari boarding school just outside Kathmandu.**

**Fr. Moran's work here on earth is now complete. Although we may be saddened by his passing, let us remember him by his accomplishments and the joy he brought to others.**

*(For more information, see page 35)*

condition than it was when they got there. "There are several people at this convention who clearly fall into that category and who deserve the support and encouragement of the amateur community. It might result in having to make tradeoffs. Maybe you won't be able to make as many contacts as desired because you will have to spend some time with the local people. In the long run it's more important than the number of QSOs. For example, the March 1992 *Reader's Digest* ran an absolutely true story about people I know ('Rescue by Radio' about Ned Raub, W1RAN, and his successful efforts in bringing 'Seth' Keo, XU1SS, out of a refugee camp to a happy reunion with his family). There's the Albanian operation for another exam-



**Dave Sumner, W1ZZ, opened the '92 International DX Convention.**

## DXing in a new era

### **NORM BROOKS, K6FO**

Organizers of the 43rd Annual International DX Convention in Visalia, California, April 10, 11 and 12, 1992, were honored to have Dave Sumner, K1ZZ, ARRL Executive Vice President, as the opening speaker. In addition to reporting on the outcome of the WARC 1992 conference in Barcelona, Spain, Dave's remarks went on to declare a new era of amateur responsibility worldwide.

### **WARC '92**

"The good news is that we came through the 1992 World Amateur Radio Administrative Conference unscathed," Sumner said. "We came through with no changes in the amateur HF spectrum. There was not enough change in the allocation for HF broadcasting to justify any realignment in amateur frequencies.

Actually, only 50 kHz, from 7300 to 7350 kHz, was officially allocated to broadcasting. We all know that the broadcasters *already* use 7300 to 7350 and even more (even our own Voice of America), so it was just paper shuffling to legitimize what was already taking place.

"It appears that WARC scheduling may change. In the next three or four years we may see a WARC with a very limited agenda every two years. It doesn't mean we will have critical threats every two years, but it does mean we will have to pay close attention to what is on the agendas."

### **Socially responsible DXing**

In his speech's keynote theme, Sumner declared that we ought to be supporting activities and aiding people who, for example, visit a country and leave Amateur Radio in a better

ple. There are a lot of good things the DXers are doing, and I hope it will continue.

"That's the good news. The bad news is that we continue to have a lot of operating problems. We continue to have a disruptive element in our midst. This is something on which we can't take a 'nothing can be done' attitude. I believe something can be done, and will be done. One thing that is occurring, of which you will be seeing more evidence, is that the FCC will feel that something has to be done as well. The FCC is going to be issuing a lot more notices of apparent liability to violators of their rules, and not just amateur rules. They're doing the same *(please turn to page 3)*

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# New era

(continued from page 1)

thing across the board, but it will also affect Amateur Radio. We're not supposed to call them 'fines'—they are officially termed 'Notice of Apparent Liability for Monetary Forfeiture.'

"In the past these forfeitures have topped out at the level that will buy you a good transceiver. In the near future, they will be at the levels that will buy you a pretty good car. There's another factor. This raises the forfeiture level above the trigger point where the US Attorney's office gets interested in going out and actually collecting the money. We're going to see a lot more of that kind of enforcement action in the months to come. I know that the vast majority of the

Amateur Radio community will welcome all this with open arms.

"We should not look to the FCC to solve all our problems, because a lot of our problems have nothing to do with the violation of FCC rules. Intra-community problems ought to be solved among ourselves. Our clubs should take responsibility for making the amateur community aware of what activities are not to be tolerated.

"Another challenge is the use of technology. We know we have a lot more technology at our fingertips today than a few short years ago. Once we take the cloak of anonymity away from some of the disruptive elements in our midst, a lot of the problems will go away.

"Today, in many of the Asian and Pacific rim countries especially, Amateur Radio is held in far higher



Jim Knochenhauer, K6ITL, will be chairman for next year's DX Convention.

esteem than it was just a few years ago. This should be something of a beacon for us to see if we can accomplish a new, higher level of social responsibility for Amateur Radio." □

# Visalia '92 forums

JOHN F.W. MINKE, N6JM

The kickoff address by Dave Sumner, K1ZZ, of ARRL headquarters, was followed immediately by the DX Forum, moderated this year by Chip Margelli, K7JA, and a panel of DXers that included Wayne Mills, N7NG; Chuck Hutchinson, K8CH; Jim Maxwell, W6CF; Chod Harris, VP2ML; Rusty Epps, W6OAT; and Ellen White, W1YL. Wayne was one of the ZA1A DXpedition operators, and Chuck represented the DXCC program. DX editors Chod and Ellen represented CQ and QST, respectively,

and Jim represented the DXAC (DX Advisory Committee). Rusty represented the Northern California DX Foundation. Other recognized DXers included Garth Hamilton, VE3HO, the CRRL (Canadian Radio Relay League) representative to the DXAC; Fried Heyn, WA6WZO, and Chuck McConnell, W6DPD, the ARRL directors for the Southwestern and Pacific divisions; Brad Wyatt, K6WR, the Pacific division vice-director; and Bob White, W1CW, formerly of the DXCC desk.

Jim Maxwell, W6CF, expressed his concerns about the future of the DXCC

program and how it should be handled in a responsible manner. The ARRL board of directors is concerned about Amateur Radio in general and urges that we need to decide where DXing is going. Speaking for the DXAC, Jim noted that they need input, including both criticisms and ideas. Jim stressed (please turn to page 15)

The 1991 DXathon results will appear in the July issue.

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June 1992  
Vol. 21, No. 12

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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.

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## PUBLISHER'S MICROPHONE

Andy Warhol said that everybody would be famous for at least 15 minutes. However, here are some who stand out from the crowd. Here are some who will be famous forever! The latest to join the *Worldradio* Super-Booster Club are:

- Carol Duncan, Pennsburg, PA
- Charles MacKinnon, KA9STQ, Glenview, IL
- William J. Stopka, W9IA, Chicago, IL
- Scott V. Swanson, K6PYP, Benson, AZ
- Rex H. Strickland, N6YIX, San Clemente, CA
- Cliff Henderson, Sunnyvale, CA
- Clarence B. Jorgensen, KB6SQ, Oakland, CA
- Virgil R. Airola, W6RXX, Sacramento, CA
- Dennis Clark, K7JRA, Eugene, OR
- Charles H. Carr, W7ZQR, Richfield, WA
- Robert W. Morgan, Taipei 106, Taiwan

Like many states, California has a lottery. On March 28 I had four winning numbers 7-14-28-50. (Do those numbers look familiar?) I won \$83. If they had picked my 21, I would have won \$1,591 and would have a new transceiver now. If they had also picked my 4, I would have won four million dollars and this issue would have come to you with shiny slick pages and color pictures.

So, instead, here is the usual. Not flashy but just as good.

Occasionally we get letters from readers telling us not to get on the bandwagon as far as computer articles go. They are usually from amateurs of the age where "can't teach an old dog new tricks" is one of their utterances.

On the other hand, there are those of mature years who look forward to new challenges. I have a 75-year-old pal who goes to computer user groups, reads magazines and can toss out computer jargon with the best of them. His shack is alive with packet zipping by, OSCAR antennas being aimed, and contest contacts being logged. In a one-weekend contest, a few months

ago, he worked over 100 DXCC countries! (How many other licensed in 1935 have done that?) Is that what keeps his noodle nimble? Do the "new tricks" act as exercise for that big muscle between the ears?

For clubs that can never find anything to do, we present the following, which are just some of the activities of The Larkfield ARC, Huntington, Long Island, New York:

- Swap-n-shop Net, Mondays, 7:30 p.m. on 147.210—Net control: Ed, K2YAW. All amateurs are invited to list non-commercial ham radio items for sale or trade, or list items desired.
- Larkfield Club Net, Mondays, 8 p.m. on 147.210—Net control: Wayne, WB3CDL. Formal and informal traffic is welcome. Club news, upcoming events, ARRL bulletins and other traffic of interest to the membership will be passed.
- Technical Net, Mondays, 9 p.m. on 147.210—Net control: Ed K2YAW. Topics include information, technical and otherwise, of interest to all Amateur Radio operators.
- Mariner's Net, Tuesdays, 8 p.m. on 147.210—Net control: Gerry, K2AAW. Topics of interest to boaters include marine

electronics, Power Squadron, Coast Guard Auxiliary, etc.

• Digital Communications Net, Tuesdays, 9 p.m. on 147.210—Net control: Tom, KC2BG. Packet, RTTY, AMTOR, bits, bytes, ROMS, RAMS, PCs, MACs, DOS, UNIX—in short, all things digital are discussed here.

• Mechanical Net, Wednesdays, 8 p.m. on 145.430—Net control: Paul, KB2BPV. This is a roundtable discussion on design, operation and maintenance of automobiles, appliances and domestic machinery of all types.

• Emergency Preparation Net, Thursdays 7:30 p.m. on 147.210—Net control: George, W2CJN. Training in emergency operations is conducted in a roundtable for the LARC Emergency Preparedness Group and Huntington ARES. Tune in to find out what you can do for Amateur Radio.

• All-Mode Net, Thursdays, 8 p.m. on 145.590 simplex—Net control: George, W2CJN. Check-ins are welcome using CW, FM, SSB or AM. Point your beam towards Centerport.

• Scanner and SWL Net, Thursdays, 8:30 p.m. on 147.210—Net control: Art, N2AH. Covers items of interest to those involved in the radio monitoring hobby, including frequencies, equipment discussions, FCC rulemaking, etc.

• Hazeltine Club Net, Fridays, 7 p.m. on 147.210—Net control: Al, AA2GX. Focuses on topics of interest to Hazeltine employees, retirees and members of Hazeltine Radio Club; all amateurs welcome.

The club also has a bi-annual auction, four repeaters and a fine looking bulletin.

Last month we mentioned our "revamped ZIP code procedures on p.82." Some of the more attentive readers noticed that there was no such information on p.82. Here's the new "revamped" deal:

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—Armond, N6WR



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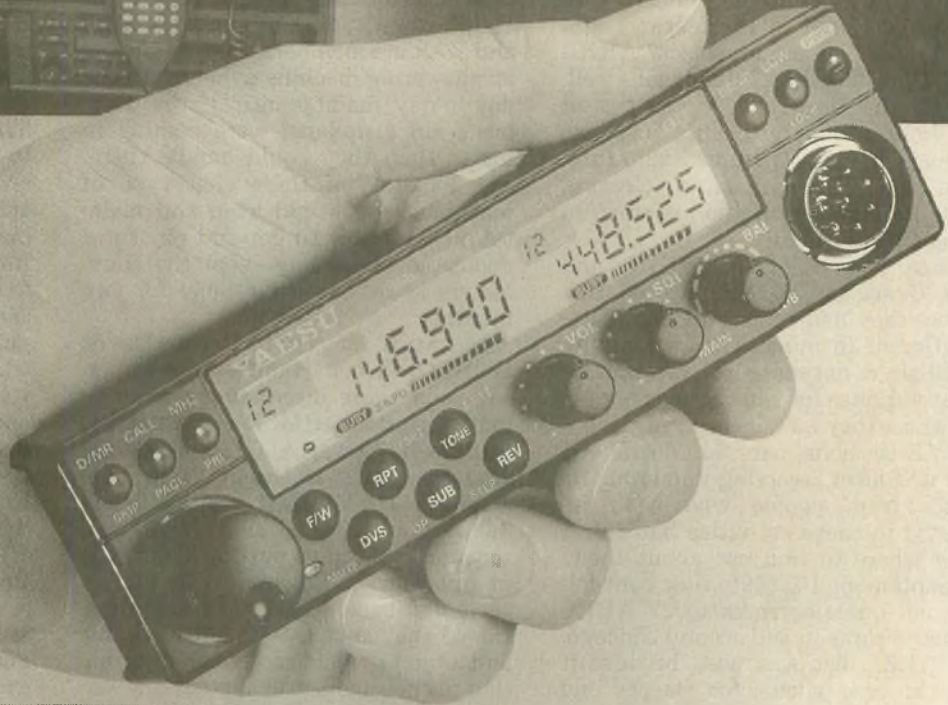


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# Amateur Radio Info-Line

**JIM RILEY, KB9CYL**

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When Bill Koltz, KA9HDN, and Walt Gesell, WD9DYR, started this project they had something completely different in mind. They set out to establish a database of information about various clubs in the area—when and where they met, if they ran classes and VE sessions, nets, hamfests, etc. This was after receiving numerous requests from people who were interested in these activities but didn't know where to find out about them. On September 10, 1990, they sent letters and questionnaires to 27 ARRL affiliated clubs in and around Chicago. The ARRL list was used because it was the best choice for classes and tests and, according to Walt, "It was the only list available." Two of the

clubs were inactive, but over 20 clubs responded and the database was created. On January 7, 1991, it was mailed back to the responding clubs.

At the January board meeting of Hamfesters Radio Club, of which Bill and Walt are members, they requested an answering machine to help with the day-to-day maintenance of the database, since updates were coming in faster than they could handle them. The logistics of this—what type of machine, who would keep and maintain it, and how to get and pay for a dedicated phone line—kept the Hamfesters board meetings busy for two months.

In April of 1991 Brian Davis, W9HLQ, also a Hamfester member, saw something interesting on his E-mail at work at IBM. It was an article by Bob Biekert, KA5GLX, about the Houston Amateur Radio Help Line (713/488-4HAM) which went on line in January of 1991. Using voice mail technology, it gave out the same type of information Bill and Walt had in their database. The article also mentioned that anyone who left his name and address would receive an information packet about the system.

Brian sent for the packet and told Hamfesters President Wayne Palm-

quist, KC9IC, about his discovery. Wayne recruited the engineering mind of Bob Wasilewski, KA9GTX, and they began researching voice mail boards. Part of this research was a letter to Jim Heil, KB5AWM, who had put together the Houston Help Line. He sent back a large packet of information and after studying it, Wayne and Bob said, "We can do this!"

After Hamfesters' 57th annual hamfest in August, which turned out to be very profitable for the club, the board and general membership authorized turning some of the profits back to the community and Amateur Radio. This included donating books to local schools and libraries, updating the club's packet radio system and purchasing the voice mail system, which the club did in November. This was after a meeting with Hamfesters and some of the other clubs in the database (Six Meter Club, Metro DX Club, DuPage, Commonwealth Edison, and STARS). The system was demonstrated by Jerry Celmer, KB9PY, and his wife, Brenda, of GAC Computers. Bob and Wayne spent several long weekends and late nights studying the manual, programming and testing. A simple version of the system went on line December 10, 1991.

In January of this year there was

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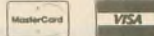
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another meeting with the clubs in the database. At this time Wayne said that while Hamfesters had purchased the system, he was suggesting that some of the other clubs help with the phone bill and have a voice in its operation, since it was obvious that the system was too important for one club to control. The phone bill was about \$20 per month and if each club could contribute that amount each year, the system could be self-supporting. As of this writing STARS, Metro DX Club, Fox River Radio League, Six Meter Club of Chicago, Radio Amateur Megacycle Society, ACLR, Kankakee Amateur Radio Society and Schaumburg Amateur Radio Club have pitched in.

At the Wheaton hamfest on January 26, 1992, Wayne and Bob met with a lot of people to talk up the Amateur Radio Info-Line. They passed out about 1,500 brochures that had been donated by Hamfester member Jim Watt, WG9Z. A donation jar netted \$27, covering more than a month's phone bill. Officers of four or five other clubs stopped by to gather information and offer encouragement.

The Wheaton hamfest was the official premier of the Amateur Radio Info-Line, although it's been on line since December 10, 1991. Updates are coming in from the 27 database clubs and are being put on line in a timely manner. Calls are coming in at the rate of more than 50 per week. Wayne

reports that callers are checking everything—north side clubs, south side clubs, hamfests, VE sessions, everything. There's a place for callers to leave a message if they wish, and Wayne says that he's recovered over 50 messages so far, all of them positive.

While Wayne has been doing the announcements himself, he's now encouraging the clubs to produce their own and send them on cassette. He's working on a way to interface his cassette player with the Info-Line computer so each club's announcements can be heard in the voice of a representative of that club. Wayne adds that, although only ARRL affiliated clubs were used in the initial database, the Info-Line is open to any club or individual with information that can be useful to hams or prospective hams.

What started out as an idea to get information to help people find clubs, classes, testing and other information concerning Amateur Radio has turned into the Amateur Radio Info-Line, a 24-hour service to the people of Chicagoland from the Amateur Radio community. Want to know what's happening in Amateur Radio in Chicago? Just dial 708/535-AHAM. That's 708/535-2426. □

## March 29, Macau, Asia

Dear friends,

We have just completed a six-month YASME DXpedition in the Far East.

We operated at HS0ZAP in Bangkok, Thailand—120 countries; as XU8KG in Phnom Penh, Cambodia—105 countries; as XW1QL in the Republic of Laos—115 countries; as V85KGP in Brunei—130 countries; and as XX9TQL in Macau—112 countries.

Our last stop was at XX9TQL in Macau, which is an unusual country because the city of Macau is the same as the country of Macau. If everything goes as planned, it will all become part of China in the next seven years.

We had no trouble obtaining our licenses as XX9TQL and XX9TKG. We were told before coming here that it would be very difficult to obtain licenses here. This was not the case.

We applied five months in advance and everything was ready and waiting for us when we arrived. The licensing people are very efficient and help was obtained from a local amateur, XX9AS.

Many new multi-story buildings are being built here, as well as new airports and bridges to China. It is getting hard to find a place to operate without TV sets nearby. We finally solved this problem when we found an automobile sales and rental business only one story high, and rented space there to operate.

We worked more than 100 different countries with no TVI complaints. We did have to walk from our hotel to the operating station, but it was worth it. 73 es 83, Lloyd, W6KG, and Iris, W6QL, Colvin. □

## Speak with CW

JOHN SWANCARA, WA6L0D

The use of Morse code by incapacitated people to communicate their requirements is being demonstrated more often than people realize.

WB6JJM underwent a double heart bypass operation, which nowadays is a common thing. However, following his surgery, while in the ICU (Intensive Care Unit) with tubes sticking out all over and his mouth occupied with a positive pressure breathing apparatus, he was essentially incommunicado. By using Morse code with hand squeezes, he was able to communicate to his son, N6PXB, that he was too hot and please have the nurse remove some of the covers. When N6PXB informed the nurse, her double-take was priceless.

Morse code does have a place in many situations as well as ham radio.

Hopefully other hams will take note and possibly teach a little CW to their family or friends getting ready for major surgery. □

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| G5RV JR | 40-10                                     | 51'    | \$29.95 PPD |
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### H.R. 73 and S.1372

H.R. 73, "The Amateur Radio Spectrum Protection Act of 1991," was introduced in the House of Representatives in January of 1991. Essentially the same bill has been introduced in the Senate as S.1372. We amateurs would be well-advised to consider carefully the cons as well as the pros of these bills, or the baby may be thrown away with the bath water.

H.R. 73 proposes adding a new paragraph to the Communications Act of 1934, as follows: "The Federal Communications Commission shall not diminish existing allocations of spectrum to the Amateur Radio Service after January 1, 1991. The Federal Communications Commission shall provide equivalent replacement spectrum to the Amateur Radio service for any frequency reallocation after January 1, 1991."

Amateurs in general have reacted favorably to H.R. 73 and S.1372; and why shouldn't they? Here seems to be a knight on a white horse, coming to protect them from further losses like

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220 - 222 MHz. Maybe—but the FCC doesn't think so.

In May 1991 FCC Chairman Sikes, responding to a letter from Representative Cooper, said in part: "This legislation, if enacted, will significantly restrict the Commission's ability to fulfill one of its primary functions—managing the radio spectrum. It would limit the Commission's ability to respond to the spectrum requirements of new technologies and thus make more difficult our ability to foster telecommunications competition in foreign markets. The effectiveness of the Commission's spectrum management program is dependent on the ability to alter dynamically the table of frequency allocations. To constrain, if not freeze, the Commission's ability to manage the spectrum for one service, inevitably, will constrain our ability to deal effectively with all services. Further, the Commission needs flexibility in its domestic spectrum allocations in order to respond in the best interest of the United States in international spectrum allocation negotiations to meet future requirements."

Mr. Sikes' concluding comment was, "Although I appreciate the concern of many for the continued well-being of the Amateur Radio Service—indeed, I share that concern—it is my belief that enactment of H.R. 73 will be ill-advised and counterproductive."

Chairman Sikes reiterated his position in a letter to Senator Alan K. Simpson (R-WY) concerning S.1372. Among other things, he said: "We are concerned that enactment of this legislation would encourage other interests with requirements just as legitimate as those of the Amateur Service (e.g., the broadcast community, the public safety community, the cellular community, satellite interests and land mobile interests) to insist that Congress provide similar 'favorite son' legislation."

This legislation's bad implications may equal or even outweigh the good it attempts to do. An abbreviated form of Newton's third law says that for every action there is an equal and opposite reaction. One possible adverse reaction to passage of these bills, protecting the bandwidth we amateurs now enjoy, is that it might make it difficult or impossible to add to that bandwidth in the future. In other words, "you've protected what you have—that's all you're going to get." Is that a price we would be willing to pay?

### 220-222 MHz pot still boiling

In FCC comments, the American Red Cross has strongly opposed the United Parcel Service in its bid to reduce the availability of 220-222 MHz frequencies. The Red Cross was critical of the FCC's decision to

## Amateur Radio Call Signs

Amateur Radio operators often ask the FCC what call signs have been assigned lately. This list shows the last call sign in each group to be assigned for each district, as of April 1, 1992.

For more information about the call sign assignment in the Amateur Radio Service, see Section 97.17(f) of the FCC Rules, or write to the FCC, Consumer Assistance Branch, Gettysburg, PA 17325-7245.

| Radio District    | Group A<br>Am. Extra | Group B<br>Advanced | Group C<br>Tech./Gen. | Group D<br>Novice |
|-------------------|----------------------|---------------------|-----------------------|-------------------|
| 0                 | AA0IF                | KF0XV               | N0RVA                 | KB0KCG            |
| 1                 | AA1BL                | KD1HQ               | N1LWR                 | KA1ZVR            |
| 2                 | AA2IM                | KF2HJ               | N2QDT                 | KB2OQN            |
| 3                 | WX3W                 | KE3CD               | N3BTJ*                | KA3ZXP            |
| 4                 | AC4PB                | KO4VA               |                       | KD4MGS            |
| 5                 | AB5ET                | KI5ZF               | N5ZXX                 | KB5RIB            |
| 6                 | AB6KG                | KM6SM               |                       | KD6HVC            |
| 7                 | AA7OF                | KI7BC               | N7XFW                 | KB7OVE            |
| 8                 | AA8GW                | KF8TO               | N8SVW                 | KB8NSU            |
| 9                 | AA9DV                | KF9IV               | N9OUN                 | KB9HQZ            |
| North Mariana Is. | AH0O                 | AH0AJ               | KH0AT                 | WH0AAR            |
| Guam              | KH2Y                 | AH2CN               | KH2FX                 | WH2AMW            |
| Johnston Is.      | AH3D                 | AH3AD               | KH3AG                 | WH3AAG            |
| Midway Is.        |                      | AH4AA               | KH4AG                 | WH4AAH            |
| Hawaii            |                      | AH6LU               | WH6FP                 | WH6CPC            |
| Kure Is.          |                      |                     | KH7AA                 |                   |
| American Samoa    | AH8D                 | AH8AE               | KH8AI                 | WH8ABA            |
| Wake Wilkes Peale | AH9B                 | AH9AD               | KH9AE                 | WH9AAI            |
| Alaska            |                      | AL7OE               | WL7CN                 | WL7CEV            |
| Virgin Is.        | NP2T                 | KP2BZ               | NP2FI                 | WP2AHP            |
| Puerto Rico       |                      | KP4TN               |                       | WP4LAC            |

\*The computer missed the following call signs and they are loaded in the following sequence: After N3LZZ is issued Group C Blocks N3BSA-N3BZZ will be issued.



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reallocate the 220-222 MHz band from amateur use to the commercial and government land mobile services. That reallocation was promoted effectively by the United Parcel Service; UPS declined to use already available spectrum for its nationwide network, as its competitor Federal Express had done.

After it became clear that the FCC would not return the 220-222 MHz band to hams, the Red Cross applied for licenses in the reallocated band on May 1, 1991. It viewed these licenses as necessary to modernize its disaster communications and to replace communications resources that had been provided by amateur volunteers.

The FCC has decided, in this case, to use comparative hearings rather than a lottery to determine which applicants will receive licenses. The Red Cross said that the FCC's proposal to use hearings when it already said it would use lotteries is "inexplicable, save for the apparent continued saturation lobbying effort of United Parcel Service." This turnabout, the Red Cross said, "... is a thinly-veiled effort to afford large, wealthy entities such as UPS the ability to use that wealth as a hammer to be wielded against those applicants (such as the Red Cross) with less capital in the inherently expensive, protracted, and totally unnecessary comparative hearing process." (*W5YI Report*, 3/15/92)

### Supreme Court refuses to hear appeal on "indecent" ruling

The US Supreme Court has refused to hear an appeal of a decision of a US Court of Appeals which held unconstitutional an around-the-clock ban on indecent broadcasts. The high court let stand a May 17, 1991, decision of the US Court of Appeals for the District of Columbia Circuit which held that broadcast material which is indecent but not obscene is protected by the First Amendment, and any restrictions on such broadcasts must be narrowly drawn. The appeals court instructed the FCC to determine the times at which indecent material may be broadcast. In doing so, the FCC must determine the times when there is a reasonable risk that children, who may properly be protected by the government from such broadcasts, are in the broadcast audience.

The decision of a three-judge appeals court panel unanimously concluded that a 24-hour-per-day FCC ban on indecent broadcasts, even though mandated by Congress, was unconstitutional. The Court of Appeals had earlier determined that the FCC must carve out a "safe harbor" for such broadcasts, but recognized that even constitutionally protected

speech can have a "strong negative impact on children." Thus, limitations on indecent broadcasts can be imposed, if carefully and narrowly crafted. The FCC was referred to that holding for further action. Obscene broadcasts are not protected and may be prohibited entirely. The FCC has continued to impose fines on broadcast stations for indecent broadcasts made during the times of day when children are clearly in the audience.

The implications of the court rulings for Amateur Radio are unclear at present, though the FCC has previously stated that its policies regarding broadcast indecency are equally applicable to Amateur Radio, noting similarities between the two services. FCC Chairman Sikes has recently stated that it is the FCC's intention to enforce its rules concerning indecent broadcasts to the extent permitted by law. (*The ARRL Letter*, 3/11/92)

### FCC steps up computer enforcement

According to reports, the FCC is seeing poor compliance with its certification rules by some vendors of personal computers. A survey last year found that more than half of the computers offered for sale did not have FCC certification.

The FCC's Baltimore field office has just mailed out 10,000 warning letters to computer builders and resellers in its region. Only three percent of 100 vendors at a Maryland computer show last January were selling equipment with the FCC label, and two of these vendors were later determined to have put phony information in the label.

While Amateur Radio operators may construct personal computers for their own use without going through the FCC's equipment authorization procedure, these computers may not be offered for sale to others, especially if they have capabilities exceeding those of Amateur Radio applications. (*W5YI Report*, 4/1/92)

### Throw away your radar detector?

On March 5 the FCC gave the green light to development of "undetected" police radars. Applied Concepts Inc. filed RM-7317, a petition to widen

the authorized bandwidths in the 24.05-24.25 and 33.4-36.0 GHz bands used by the Radiolocation Service. The Applied Concepts radar uses the wideband spread spectrum technique known as frequency-hopping, and requires more than the 50 MHz bandwidth currently permitted.

Several commentators opposed the change, one saying that legislatures should determine whether traffic radar should be undetectable. Radar detector maker Whistler Corp. said it and other companies have "repeatedly demonstrated the technical capability of developing systems that can track any radar technology." And possibly tipping its hand on future product interests, Whistler argued that wideband traffic radar may preclude vehicle collision avoidance systems. The FCC said that vehicle collision avoidance systems would be authorized under FCC Rules Part 15, and thus would not be protected from interference from authorized operations, such as police radar.

### FCC suspends amateur license of alleged pirate

On March 9 the FCC suspended the General Class license of Michael J. Labadia, N2IFY, and began proceedings to revoke his operator license. The FCC said that on several occasions last year and earlier this year, Labadia apparently "operated an unlicensed or 'pirate' radio station identified as 'Hope Radio International' on a frequency of 7.411 MHz, in apparent willful violation of Section 301 of the Communications Act of 1934, as amended."

On April 12, 1991, a Commission engineer warned Labadia against unlicensed operation. The engineer asked to inspect station N2IFY and any other radio transmitting apparatus at the Labadia residence. Labadia apparently refused to make his station available for inspection. (*W5YI Report*, 4/1/92) □

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# SPECIAL EVENTS

## Riverboat gambling

The Clinton ARC will operate W0CS on June 13 through 14 from the *Mississippi Belle II* floating casino to commemorate the first anniversary of riverboat gambling out of the port of Clinton, Iowa.

Operation will be from 0900 to 2100 CDT in the lower 50 kHz of the General subbands (phone), on 40, 20 and 15M and the Novice segment on 10M. Also 144.210 (±) phone for EN41 and EN42.

For QSL, send a #10 SASE to Darryl Petersen, KD0PY, 1344 400th Ave., Bryant, IA 52727. □

## Desert Storm monument

The Marion ARC will operate W8GVB on July 4 from Veterans Park to celebrate the dedication of the Desert Storm monument.

Operation will be from 0000 to 2400 UTC on CW 3.860, 7.130, 14.250 and 28.125 MHz. Phone will be on 3.870, 7.230, 14.250 and 28.450 MHz.

For certificate, send QSL and 9×12 SASE for non-folded or a #10 SASE for folded to Jack Fetter, KB8DP, 223 Homer St., Marion, OH 43302. □

## Fort Hamilton Army Post

The Kings County Repeater Association will operate WA2ZWP on June 14 from Ft. Hamilton, New York, to celebrate the 157th anniversary of Fort Hamilton Army Post, at the base of the Verrazano Bridge.

Operations will be in the General and Novice phone bands around 28.343, 21.343, 14.343 and 7.243 MHz from 1200Z to 2400Z.

For certificate, send QSL and SASE to Charles Quartana, N2JZA, 2175 East 8th St., Brooklyn, NY 11223. □

## Independence

The Mount Pleasant ARC will operate W0MME on July 3 from Mount Pleasant, Iowa, to celebrate Independence Weekend activities in the city's central park.

Operation will be in the bottom 50 kHz of the General 80, 40, 20, 15 and 10M phone subbands and the 40M Novice band from 1400 to 2000Z.

For QSL, send SASE to Dave Schneider, WD0ENR, RR3 Box 307A, Mount Pleasant, IA 52641-9803. □

## John Paul Jones' birthday

The USS Olympia RAC will operate WA3BAT on June 6 and 7, aboard the *USS Olympia* in conjunction with the US Naval Academy, W3ADO; *USS Yorktown*, W4USN; *USS Little Rock*, W2PE; *USS Pampanito*, WA6BXV; and the *USS Drum/Alabama*, K4RQQ, to commemorate the birthday of John Paul Jones.

Operations will be on phone on 3.895, 7.245, 14.245, 21.365 and 28.365 MHz, all frequencies ± 5 kHz.

For certificate, send QSL and 9×12 SASE to Olympia RAC, P.O. Box 928, Philadelphia, PA 19105. □

## Kentucky Bicentennial

The Western Kentucky DX Association will operate a special event station on June 6 from Simpson County, Kentucky, at the site of their Kentucky Bicentennial Celebration.

Look for N4HID near 28.350 or WA4QMQ near 7.250 MHz from 1400Z to 2200Z.

For QSL, send SASE to Western Kentucky DX Association, P.O. Box 73, Alvaton, KY 42122. □

## Scout Summer Camp

Boy Scout Camp Whitsett will operate N6PZA from June 28 through August 13 on a WTP (When Time Permits) basis.

Operation will be on the 40 and 17M bands Monday through Friday from 2100 to 2400 UTC, and 17 and 20M Monday through Thursday from 0100 to 0400 UTC, with occasional operation on 10M.

For QSL, send SASE to Chuck Smith, N6PZA, P.O. Box 1867, Lake Isabella, CA 93240-1867. □

## Support Center Kodiak

The Coast Guard ARC will operate special event station KL7HKX from July 1 through 31 to celebrate Support Center Kodiak Alaska's 20th anniversary of operation.

Operation will be in the General bands using phone, CW and RTTY. Contact with this station can also provide you with a 10-10 and IOTA number for Alaska.

For QSL, send QSL and SASE to United States Coast Guard, Amateur Radio Club, P.O. Box 190421 USCG, Kodiak, AK 99619-0421. □

## 10-10 Gateway chapter 20th anniversary

On June 13 and 14 the Gateway chapter of 10-10 International will commemorate its 20th anniversary. Special event station W0ERZ will operate on single-sideband on 28.650 MHz and 28.450 MHz starting at 0000Z on June 13 and ending at 2400Z on June 14.

The station will alternate between the two frequencies every two hours. On CW, KD0IR will operate on 28.100 MHz during the period.

Send your QSL and SASE to John Ellison, W0ERZ, 2 Douglass Lane, Kirkwood, MO 63122 for commemorative certificate and QSL. □



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## Golden Anniversary Vint Hill Farms anniversary

The Fauquier ARA will operate K4LLQ on June 13 and 14 from the US Army Communications and Electronics Command, Vint Hill Farms Station, Warrenton, Virginia, during their Golden Anniversary celebration.

Operations will be on SSB 7.232, 14.232, 21.322 and 28.432 MHz from 1300Z to 2200Z. Frequencies may move depending on band conditions. CW contacts on request.

For QSL, send SASE, or for multicolor certificate send 9×12 SASE and \$3 to Fauquier ARA, 500 Hunton St., Warrenton, VA 22186.

## Children's Festival

The Great Bay Radio Association will operate special event station WB1CAG on June 20 to celebrate the International Children's Festival in Somersworth, New Hampshire.

CW and SSB will be used in the Novice and General portions of all bands from 1200 through 2400Z.

For certificates, send QSL and SASE to GBRA, P.O. Box 911, Dover, NH 03820. □

## WB6RTO Reunion

A reunion is being planned for former students at Nathaniel Narbonne High School (ex WB6RTO) in Harbor City, California, who got their Novice licenses between 1965 and 1976.

Contact Marv Fagenson, K6HCJ, 2100 Sawtelle Blvd., Ste. 202, Los Angeles, CA 90025; 310/478-1777. □

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| 9117   | 17 meters |        |           |



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## A Field Day perspective

KEN NEUBECK, WB2AMU

In my 10-plus years of Field Day experience, I have been involved with both the large radio clubs and smaller independent operations. I have used many different rigs, different power levels, both battery and generator power, different field sites and operated at home using emergency power. I have acquired some strong opinions on what makes a successful Field Day operation that is both a learning and enjoyable experience to those who participate.

For several consecutive years, my Field Day activity was centered around being a part of organized radio clubs that ran from four to five transmitters, used beams and ran medium-to-high power off a gas generator. Initially, I learned quite a bit as I enjoyed the competition of contest operating using various antennas and different rigs. But after a few years of participating in a generally rigid format that did not allow for trying different things, such as low power or a different Field Day site, I felt something was missing.

When I discussed my feelings with my long-time friend Joe, N11L, who had shared similar Field Day experiences with me, I found that he also felt the same way. We decided to do our own independent Field Day group operation where we would experiment with QRP using a 12V battery, and where we would try out different antennas such as dipoles and long-wires as opposed to beams. This was a whole new ballgame which we could never have experienced if we had stayed with the larger radio club operation. By roughing it with a smaller operation and low power, I found that this type of Field Day was much more enjoyable and meaningful to me. Why did it seem this way?

Looking at how the larger clubs in the United States and Canada do Field Day, it can be seen that it is the ideal club activity where club members share good times and a common goal for one weekend. It is an excellent setting for meeting old friends and meeting new friends; the bond between amateurs is particularly strong during Field Day, more so than at any other contest or Amateur Radio event. This is the same bond shared by amateurs during a real crisis or emergency. A properly organized Field Day operation headed by a capable Field Day chairman can make Field Day a great success.

All too often, though, organized radio clubs sometimes fall into a rut where they do the same thing year in and year out with very little deviation. They will run the same number of transmitters, the same antenna setup, and the same personnel assignments each year. Many of these clubs are unwilling to experiment with QRP and battery power, often feeling that it would be a difficulty rather than a challenge.

When these clubs stick to the same number of transmitters without taking into account the projected turnout, they run into the problem of having either too many or too few operators at certain times. I have seen lines of people waiting to operate during the daylight hours, while during the wee hours at night there would be an exhausted amateur running a station by himself for several hours. Clearly, it is difficult to achieve a proper balance of operators to transmitters, even when operating and logging assignments are planned out in advance. But when trends indicate otherwise, radio clubs should take note and adjust the number of transmitters accordingly.

Field Day scores published in *QST* show that the "B" category (greater than 5W and less than 150W output) is the most commonly used. Using lower than 5W output in the "A" category allows a higher QSO multiplier, where each contact is worth more. Though Field Day is not an awards contest, the purpose of the scores should be to show activity and to try to match or beat previous year's scores. It is surprising that more radio clubs do not try the challenge of QRP operation to change the pace. QRP operation brings out the importance of good antennas and forces amateurs to improve their operating skills. If a real emergency situation were to occur, it is likely that a low power source such as a battery might be all that is

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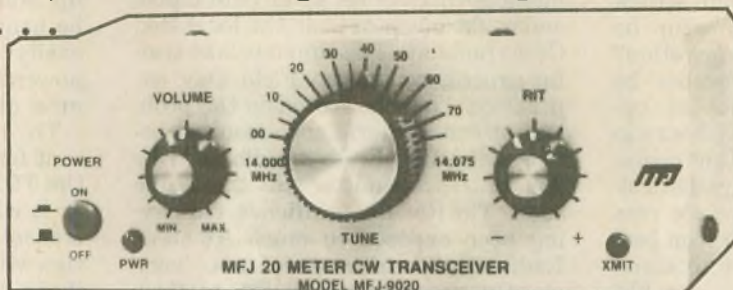
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available.

In theory, Field Day simulates emergency operating conditions, but some clubs stretch the principle when they do things that would be impossible to accomplish in a real emergency. If a severe storm or hurricane struck your area, would the radio setup be the same as the Field Day operation? Could equipment and operators be coordinated on short notice as opposed to setting up for many hours in advance, as in most Field Day operations? How high could you realistically raise your antenna in severe rain and wind conditions? I have seen people use climbing equipment to climb up 60-ft. light towers to mount 2M beams during Field Day. This could not be done in the severe winds of a hurricane.

Radio club officials who argue against change (because of various fears) will eventually deal with the effects of stagnation in their radio clubs, as some members will lose interest and not show up the next time around. Clubs require active participation for survival. A small-scale independent operation allows that participation. As more responsibilities are involved in such a format, each person becomes an important team player, experiencing the anticipation and excitement of new challenges and emerging with a fresh perspective on Field Day. The Field Day flame is rekindled.

Such an approach helps amateurs develop a more meaningful and realistic approach to Field Day and emergency operations in general. You learn to manage the limited amount of time that you have efficiently in order to set up the station properly. A two or three-man Field Day team requires each person to carry major duties and responsibilities, which requires more effort from each person.

Both large and small Field Day operations require proper logistical planning; in the larger operation several people have to be managed, and in a smaller operation duties have to be divided up among the few. The one drawback to the smaller operation is that it can be more exhausting for each person present.

With an emergency QRP type

operation, one can acquire common sense that would be valuable in a real emergency. I can recall several years ago, when hurricane Belle was just hours away from hitting the Long Island area, I helped a public service minded Amateur set up an 80M dipole and a 2M beam outside the local Red Cross building. This amateur had traffic experience but no Field Day experience. This showed when the problem of audio interference resulted between the Red Cross's radio and the Amateur transmitter in the same room. The Red Cross officials, not having been exposed to much Amateur Radio previously, were not very pleased about this intrusion to their existing setup. Later, all power went out at midnight and radio communications ceased also. No one in charge on either the Amateur or Red Cross end had planned ahead to make sure that either a generator or a spare battery was available to power the equipment. By getting involved with a real grassroots Field Day operation, these things are planned. You learn very quickly the value of a spare battery, DC cable adapters for your rig, gas lanterns and the best height for the antenna under adverse circumstances. One learns how to coordinate responsibility and how to be prepared for the worst.

With a low power operation, the CW mode becomes very important. Arguments on whether CW is a relevant mode are trivial when you are restricted in power and the other station has to pull you out of QRM and QSB. With phone operations using QRP, it is harder for other stations to make out the phonetics under adverse conditions. For NIIL and myself, CW accounts for greater than 50 percent of all of our Field Day contacts. Each CW contact is worth two phone contacts, so the incentive is there to encourage more groups to use CW. But the QRP operators already

know the value of the CW mode.

Antennas become very important with low power. Properly trimmed dipoles and verticals will work very well with low power. Beams are okay but require more people to set them up. Multi-band dipole antennas have to be handled with care, as the legs can easily get tangled. Even with low power, 80M is usually our best band for most of the US.

The right transceiver is also important for QRP operation. A rig such as the TS130V is ideal for 24 hours' use as it will just draw a few amps when transmitting low power. Conventional rigs will still draw a lot of current even if the drive is lowered to QRP power. Spare batteries for the 24-hour period are suggested, although we found that the highest rated car or marine battery works the best and will carry the load through Field Day. We have found battery powered operation more acceptable to the general public of non-hams who may be in adjacent areas or just wandering by. Noisy generators and a large operation can be too much for those seeing Amateur Radio for the first time. As one of the goals of Field Day is good public relations, it helps to provide a cohesive and pleasing image by running a smooth and quiet setup.

It was surprising that it took our little Field Day group less than two hours to tear down the station and antenna. This was mainly because of the straight-forward antenna and station setup, as well as the simplicity involved for the whole operation. As all amateurs know, the teardown operation is the most dreaded part of Field Day because everybody by that time is already dog-tired, and even more physical force has to be exerted before the operation is secured. A smaller operation makes this part a less demanding chore as compared to larger club operations who have more transmitters, tents, vehicles and antennas to move or take down. And, this part will go much faster as in the initial setup when each person has his own specific duties.

Another fun aspect of running an independent Field Day group of three or more hams is the tradition of picking a unique name for your organization. We have used different names each of the last several years, with classics like "Curly Shuffle FD Group" or "Surreal McCoy's FD Group." The contest results published in *QST* show many examples of amateur ingenuity with the colorful names.

If you are not happy with your current radio club Field Day setup, don't drop Field Day—form your own Field Day group and bring back the challenge of radio operating! □



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## DX Forums

(continued from page 3)

the importance of DXing, noting its educational value and, especially, its incentive for further technical improvement.

Wayne Mills, N7NG, addressed some of the confusion over ZA1A licensing. The documentation which DXers



Wayne Mills, N7NG, clarified ZA1A licensing.

receive for such operations is not always what they expect; a country such as Albania which is still in some turmoil will surely be somewhat disorganized. Apparently, there was some confusion over which organizations in Albania had the proper authority to issue operating licenses. Where one group of operators was recognized by the PTT (Post Telephone and Telegraph), others were granted operating licenses by the Sports Federation, and so on. There were actually three different licenses issued, and the forum audience was given the opportunity to view them.

Ellen White, W1YL, was asked what information she had received on the ZA1A operation. She responded that she had received very little; as the DX editor for *QST*, she is not responsible for DXCC matters. She recalled the earlier days when these DXpeditions were a matter of honor. If you said you were there, you *were there!*

Rusty Epps, W6OAT, reported on the QSL chores with the ZA1A QSL cards. His object was to get them out as quickly as possible, and he started getting them out within three weeks of the conclusion of the operation.

Chip Margelli, K7JA, asked for comments from the floor. Items covered included licensing recognition for Mount Athos, about which there were many conflicting statements. VE3HO suggested that on other operations DXers try not to "one up" each other for concurrent operations.

Also discussed was the split-up of Yugoslavia into Croatia and other

republics; there was some question as to when the DXCC program would recognize this. They are expected to make a decision on this shortly, reported Jim Maxwell, W6CF. There was also a question as to when the OK1IAI/YA operation was going to count. So far, no documentation has been received at the DXCC desk.

There was, as there is every year, some discussion about how many countries are necessary for DXCC. It was expressed that in order to be included on the DXCC countries list the country must allow Amateur Radio operations and have licensed citizens. However,



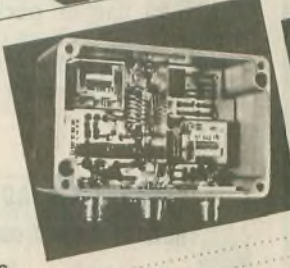
some countries have been on and off the air. China, for instance, was very active in Amateur Radio in the late 1940s, then went off the air after WWII, and returned some decades later. The general consensus was that the DX community is happy with the current countries recognition.

Chuck Hutchinson, K8CH, reported that the computer used at the DXCC desk is running out of available memory and they are making changes to handle the additional input. There was also talk of the removal of SMOM (Sovereign Military Order of Malta) from the DXCC countries list due to

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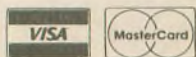
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**DXer panel (left to right): Wayne Mills, N7NG; Chuck Hutchinson, K8CH; Jim Maxwell, W6CF; Chod Harris, VP2ML; Rusty Epps, W6OAT; and Ellen White, W1YL.**

the elimination of Amateur Radio there, but this is only rumor.

At the conclusion of the DX Forum, Chip recognized Mr. Agim Muco, the Secretary General, General Directorate of the Albanian PTT. Mr. Muco, also an attorney and professor of social sciences, was a special guest of the '92 DX Convention.

### Contest Forum

The Contest Forum was moderated by Dick Norton, N6AA, and featured a panel of leading contest DXers including Tod Olson, K0TO, founder of the *National Contest Journal*; Tom Schiller, N6BT, of the Northern California Contest Club; Roger Western, G3SXW, of the RSGB Contest Committee; Rusty Epps, W6OAT, returning from last year's DX Contest Forum, and Phil Goetz, N6ZZ, of the Southern California Contest Club. Dick presented several topics for discussion, including the following:

1. The use of packet radio where amateurs get others on the air to help their friends score points or win. The general expression on this was that it is

fair and ethical, provided others could also benefit from this practice and the station does not work only selected friends in an exclusive manner.

2. The use of tape recorders during a contest. One contester made use of a tape recorder for logging purposes and transcribed the information later. Some contesters felt that this violated the spirit of the contest, but most agreed that this was not unfair.

3. Pre-contest letters. Some contesters have been known to send out letters to remote DX stations, correlating skeds to get on the air and work them during the contest. This method was accepted as agreeable and fair, provided that the DX station remain on the air and work other contesters too. Tom suggested that these letters should be generated by contest organizations rather than individuals.

4. Redefinition of contest ethics rules. There was some discussion as to whether contest ethics rules should be redefined and, if so, by whom or what organizations? Most felt that this process would be too complex and not worth the effort, especially since everyone agreed that the rules of each contest were explicit enough already and redefinition of contest ethics rules was not necessary.

This forum was concluded with the presentation of awards to members by the Northern and Southern California DX Clubs for DX contest accomplishments, as well as the Northern California Contest Club for the annual California QSO Party.

### Clipperton, FO0CI

Members of the recent '92 Clipperton DXpedition were present at this gathering. FO0CI operator Jay Kobelin, WA2FIJ, narrated while many slides of the island were shown. Planning for this operation was begun back in 1989, and the operation was to

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**Agim Muco, Secretary General of Albania's PTT**

take place in 1991. However, one of the members of the DXpedition team was on active duty with Operation Desert Storm, delaying the DXpedition until 1992.

This team was quite fortunate that the cook on the chartered vessel was able to bring over hot meals on a skiff during the operation. WA2FIJ reported that the island is rather barren except for about 300 trees scattered around the lagoon. The presentation also revealed equipment left on the island from the 1986 DXpedition, in-

cluding one of the Yagis with the traps still in good shape. Many times with DXpeditions to remote areas such as this there are many obstacles to overcome. It can be very treacherous getting in and out of these areas, and operators don't always have time or space to retrieve all the equipment used.



**Dick Norton, N6AA, moderated the Contest Forum.**

Two sleeping tents and two station tents with seven stations made up the operation. As team members from one

of the previous DXpeditions were constantly plagued by the crabs that overrun the island, the tents were surrounded with crab fences that appeared to be no more than six inches in height.

The DXpedition team made the first contact on March 6 at 1812 UTC with N4QH, Lyle Dysinger, on 10M. Disappointingly, N4QH was not a DXer and did not seem very impressed, nor did he know where Clipperton was.

The team solved the problem of refueling the generators by using a remote five-gallon can taped with fittings for fuel lines that ran directly to the carburetor, so it was not necessary to shut down the generator when refueling.

The team consisted of nine operators, six from the US and three from Europe. They were: Jay, WA2FIJ; Pete Meyer, N0AFW; Charlie Spetnagel, N7QQ; John Kennon, KA7CQQ; Ron Anderton, WA6FGV; Michael Goode, N9NS; A Nugteren, PA3DUU; ON6TT from Belgium, and Vincent Denecker, G0LMX/F1MBO. The team, operating as FO0CI, made about 48,000 contacts with about 35,000 on SSB and 11,000 on CW. On RTTY 730 contacts were made. □

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## Experts on antennas

### NORM BROOKS, K6FO

One of the characteristics that separates a DX station from an ordinary Amateur Radio station is the high quality and performance of the DX station antennas. So it is not surprising that a DX convention should hold a seminar on antennas.

This year the International DX Convention's antenna forum was moderated by Bruce Clark, K6JYO. The panel was comprised of five antenna authorities, both commercial and amateur: Pete Onnigian, W6QEU, founder of Ham-Pro antennas; Bill Sattler, N0XX, of DX Engineering; Kurt Adress, NI6W, programmer of "Yagistress"; Mike Staal, K6MYC of M<sup>2</sup>Engineering; and Glenn Rattmann, K6NA. The topic of discussion was "tradeoffs."

To start things rolling, Bruce put the first question to the panel: What are the tradeoffs in multi-band antennas? What's good and what's bad?

Pete Onnigian, W6QEU, fielded that one. "My choice would be five monobanders!" Pete's second choice would be three monobanders, plus a dual bander for the so-called WARC bands. He pointed out that there is little competitive activity on 17 and 12M. However, if he had to choose one antenna, it would be a log-periodic antenna.

Mike Staal favored two tribanders. There was general agreement that, when designing any multiband antenna, the manufacturer would probably compromise the WARC bands more than the older bands.

The next question had to do with stacking antennas. I'm reporting "stacking" to mean the use of two or more similar antennas at different heights on the tower. The feedlines to these antennas carefully provide the proper phase relationships to get the desired (usually low) angle or radiation.

All of the panel experts had opinions on this. The primary advantage to stacking is that you have two or more wave angles available at any par-

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DXers gather to check out Mike Staal's, K6MYC, M<sup>2</sup>Engineering antennas.

ticular time, so you can use the one that works best. Stacking heights above ground must be tailored to your particular site. When stacking to get a low radiation angle, check the polarity of the baluns if performance is not as good as expected. If your site allows a rapid drop-off in terrain in the desired direction, there is no advantage to stacking antennas. Ground conductivity is a minor factor in stacking. Stacking distances are nice to know, but in the real world you'll probably end up with too little spacing between stacks and the question of where the stack will fit within the guy wire system.

Speaking of guy wires prompted the next question: metallic or non-metallic guy wires? Computer modelling programs are showing that the effects of guy wires are a lot more important than we thought. Even when you break up your guy wires with insulators and you think you have non-resonant lengths near your antennas, there are some situations where such is not the case. There is at least one computer program that shows you how to model your own guy wires. It

shows the effects to be astounding. One inexpensive solution is to put short lengths of Philly-stran in the guy wires near the antennas. If you use Philly-stran, don't bring it down too close to the earth because a brush fire could melt it and your tower would come crashing down.

In discussing the placement of antennas for different bands on the same tower, we learned that the biggest problems are interactive coupling, VSWR changes and pattern changes. We learned that if the higher frequency beams are placed higher, you could create a "Christmas tree" effect. However, it would be more electrically correct to put the lower frequency beams above the high frequency beams, thus creating a "toadstool" effect (the audience laughed when this term was introduced).

Stay away from the toadstool configuration unless your tower and mast can handle the additional stress from the heavier antennas being higher on the mast. Carefully compute the wind loading on such installations. Don't skimp by using a piece of water pipe as a mast. Masts made of chrome-moly steel are a good, safe, lifetime investment.

Questioners wanted answers as to how close they could put different beams without getting objectionable interaction. The experts agreed that coupling between antennas is the biggest problem here. Coupling is a function of electrical spacing, polarization and resonance. Every antenna is different, and there are no set answers. The longer the boom on a Yagi, the more interaction will be experienced. If booms are kept parallel, there is a minimum of one antenna seeing the boom of the other antenna.

Forty meter and 15M beams don't like each other. The same can be said for 80 and 20M beams. This is due to the harmonic relationship of the bands. Avoid third harmonic relationships. If you are placing a 10M and a 15M beam on the same mast, put the 10M beam below the 15M beam. If the 10M beam is on top, some of its signal

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will reflect off the 10M director and be reflected straight up, where it will do no good at all. Generally, the rule is that a beam's energy should not be kept from going out toward the ground, where it can reflect properly toward the horizon. When pressed for an answer as to the minimum distance between 40 and 15M beams, one panelist said, "On separate towers, 150 feet apart!"

Kurt Adress, NI6W, warned about using non-conducting booms to reduce interaction between antennas. Before using any kind of fiberglass, be sure you know its physical characteristics

and resistance to the elements (weather). Paint it with a high-quality marine coating.

In experimenting with antennas, we sometimes have a discrepancy of standards. When Joe Ham says, "My antennas work real good," it's important to understand his definition of "real good." East Coast DXers experience entirely different operating conditions than those on the West Coast. East Coasters actually use antennas with a high angle of radiation to work the Caribbean. A good bit of "antenna wisdom" comes from the East Coast, so amateurs in the South

or the West must apply some of it with a grain of salt.

What about reducing antenna size? This is done either by linear loading or with traps. No matter how you do the loading, whether you are shortening metal beam elements or a wire antenna, the tradeoff is bandwidth.

I learned a lot from reporting on this forum. My overall impression is that a wealth of modern technological advances have been made in the field of antenna design. Many sophisticated computer modeling programs are available, and the knowledgeable DXers are using them. □

## A warm welcome for Agim Muco

LOU ANN KEOGH, KB6HP

The main topic of the '92 DX Convention Banquet centered on the historic and record-setting DXpedition to Albania. Dave Bell, W6AQ, master of ceremonies for the evening, introduced the evening's principle speakers, Wayne Mills, N7NG, and Chip Margelli, K7JA, who chronicled the return of Albania to the air. Both

reviewed the years of patient and persistent work of Martti Laine, OH2BH, in particular, which resulted in ZA being heard after decades of silence.

In past years the government of Albania had prided itself in being the last bastion of Stalinist communism. The then Soviet Union and even China were considered suspiciously liberal

and Amateur Radio was seen as a possible harbor of spies.

Against this background an announcement in Tokyo in August of 1991 was electrifying: Albania was going on the air. With the help of the IARU and affiliated societies in Finland, Japan, Italy, Germany and the United States, an international group would go to the capital city of Tirana to teach Albanian students the art and practice of Amateur Radio.



Dave Sumner, K1ZZ, presented Agim Muco with DXCC and WAS awards.

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have worried. All of them passed their course, with several making perfect scores.

Chip, K7JA, illustrated his account with a slide show of professional quality. It gave the audience an extraordinary feeling of truly being present at this history-making occasion.

**Agim Muco**

Secretary General of the Albanian Post, Telephone and Telegraph (PTT),



Chip Margelli, K7JA, delivered a slide show chronicling the ZA1A operation.

**Agim Muco happily accepts the ARRL WAS award.**



Mr. Agim Muco was met with standing applause. After being presented with the first ever field-checked (awarded on the spot by the ARRL, an unprecedented occurrence) DXCC for

sitory stage. Citing the need to stabilize the currency, he foresees his country's gradual return to the global family of nations as being vital.

Mr. Muco was a professor of Social Sciences before being chosen to head the PTT. He is self-taught in English, and he is a serious and thoughtful man. He knows that progress for Albania will be slow and difficult, but he



**Wayne Mills, N7NG**

ZA1A, Mr. Muco explained how Albania had been isolated and deprived. Years of pressure, fear of "agents of Imperialism," have been changed to a feeling of being freed from chains for the people of his country. He believes Albania is in a tran-



**Worldradio's Lou Ann Keogh, KB6HP, enjoyed talking with Mr. Muco.**

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pointed to the greeting given Secretary of State James Baker on his recent visit to Tirana. Huge crowds filled the streets of the city in an unprecedented display of warmth and affection for an American official.

A quote from DXpeditioner Pekka Kolehmainen, OH1RY, probably sums up the feelings of all involved. He said, "I've done things that were more fun in my life, but I've never done anything better than this." □



# CQ SOS!

(conclusion)

**DANIAL BEARD, KB7JZI, and  
CONNIE CRABB, KB7JZH**

*Last month we left Tony Fields stranded by the side of his totaled Toyota, desperately trying to transmit a CW SOS on his homebrew 20M rig and car batteries.*

Corrina Vasquez gave a final twitch to the cotton cloth and, putting her hands on her hips, gazed proudly at the freshly polished Japan Radio Company HF transceiver that had cost her six months savings. The brand new rig was the culmination of two years worth of studying and hamming that had earned her an Advanced Class license. After her tuition and living expenses had been paid, she had salted away and done freelance artwork to gather funds for her new rig. The almost invisible antenna hanging out of her dorm room window would have certainly earned the displeasure of the Resident Administrator, had she known it was there.

The happy laughter typical of college girls echoed through the hallway as Corrina sat in front of her new radio and began to slowly dial through the DX bands. She paid close attention to the CW portions of those bands because that's where the best DX tended to be. Although she felt she was not good at it, she had a fascination with the simplicity and musical quality of CW. She was interrupted by a knock on the door. She quickly threw the cloth over the rig and set her earphones on the bed. As she turned to open the door, Corrina's roommate poked her head in. "Jeannie's got a six-pack—come on! Let's party!"

"No thanks, Belinda, I've got some, uh, studying to do."

"Jeez, Corrie, you'd think that stupid radio was a boyfriend or something! I mean, the way you drool over it!"

"Shhh! Belinda! Put a lid on it. If the RA hears you, I'll have to take down my antenna."

"I don't see what's so special about a stupid piece of wire. I mean, it's not like a stereo or something."

"Never mind, just go have fun. I'll see you later."

Belinda rolled her eyes and headed off to Jeannie's room. Corrina sat down at the radio again and put her earphones back on. As she pulled the cloth off the rig and reached for the

dial she heard a very faint signal.

Fifteen hundred miles away, leaning against his mangled car, Tony called for help again, but he was beginning to get discouraged. He was fast running out of power and the kids were fast running out of time. The static crashes from the approaching storm were getting loud enough to cover any possible response. When he finished his call, he flipped the rig back to receive and slid down to sit on the ground with his back to the rear tire. He looked up and said, "Rosie, I don't think we're gonna win this one. These kids may be with you pretty soon."

Corrina wasn't sure she had copied correctly. Her skills were better developed than she believed, but she still doubted herself. If she had copied correctly, then somebody was in trouble. She was torn between the need to find out and the knowledge that her transmitter might bother someone's stereo or the TV in the rec. room if she used full power. After a moment's consideration, she turned the rig to full power and sent the call sign she had heard followed by her own. Hearing nothing, she repeated the procedure.

It took a moment for Tony to realize he had heard his call sign. When it did sink in, he scrambled to get back up and get to the rig. With a wet fingertip

he wrote the responding station's call sign into the dust and oxidized paint on the top of his car. He sent back RRR TNX UR CALL. HAVE BAD ACCIDENT HR. INJURIES. CAN'T GET HELP ON 2 MTRS. QTH IS NR WHITMAN, NEB. 20 MILES EAST OF WHITMAN, NEB. PSE CALL NEBRASKA STATE POLICE. HW CPY?

Corrina was doing fine until the station on the other end mentioned injuries. Then she panicked. While she fumbled for a pencil and paper, she missed his QTH. When he signed it back to her, she returned with SRI MISSED UR QTH. PSE RPT UR QTH BK. As she signed it back to him, she told herself to calm down. She wouldn't do anybody any good if she was a panicked mess.

Tony copied most of her transmission through the static crashes and sent back RRR QTH 20 MILES EAST WHITMAN, NEB. 20 MILES EAST WHITMAN, NEB. PSE CALL POLICE NOW RPT, CALL NOW BK.

Corrina sent RRR AS and grabbed the phone to dial information. She spent several moments trying to convince the college switchboard operator that this was not a prank. The operator was very reluctant to believe

## HTs, HTs, HTs ...



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# YAESU

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that a student could possibly be talking to someone in the middle of Nebraska on some silly radio. She told Corrina several times that such a radio was not allowed on campus. Corrina realized she was not going to get anywhere, so she hung up and ran for the payphone at the end of the hall. She decided not to mess with an operator and dialed 911. When she told the dispatcher the nature of the call and gave her FCC issued call sign, the dispatcher took her very seriously, aware that amateur operators have saved many lives for no compensation but the chance to be of service.

While the dispatcher made the necessary connections Corrina ran back to her room to get the pad she had copied the location on. When she got to the door she suffered a brief moment of panic while she looked for her keys. She found them in her back pocket and in a minute she was back on the phone giving the dispatcher all the information she had. Within minutes help was moving toward Tony and the kids.

Weak batteries and the noise from the approaching storm finally overcame the little rig's receiver and Tony was forced to hope he had gotten through. He checked the kids again and settled down by his car to wait. He wouldn't have to wait long.

Tony had never seen anything quite as beautiful as the search and rescue helicopter from North Platte (though in itself the big Sikorsky was one of the ugliest aircraft ever built). Very shortly the kids and Tony were on their way to the Trauma Center at 100 miles an hour.

Tony's makeshift antenna had fallen prey to the winds whipped up by the rotor blades, so he hadn't been able to tell the ham who helped from 1,500 miles away that they were all going to be okay. There probably wasn't enough power left in the batteries anyway. As the rain sheeted off the windshield of the helicopter Tony looked up and winked.

When Corrina got the note that she was to report to the Dean's office she knew she was about to lose her antenna and maybe get kicked out of school. She went to her room and got a copy of her license and log book and headed to

the Dean's office. When she went into his office there was another man already there smiling. She also noticed a wrapped package sitting on Dean Bernard's desk and a huge smile on his face. He introduced the other man as David Fields. Then he got to the point.

"I hear you have a radio set up in your dorm room."

"Yessir, I do. But it's perfectly legal. Here is my license to both have a station and also to operate it.

Dean Bernard accepted the piece of paper and gave it a quick look. He handed it to Mr. Fields and said, "I know all about an amateur license Ms. Vasquez. I've been an Extra Class operator for 10 years myself. Mr. Fields is the son of the man you helped last week on 20M. He has something for you."

She turned to the stranger and he handed her back her license and also a package. He added, "Dad wanted me to give this to you. He said you have a great fist. Thank you for all you've done."

She blushed at the heartfelt feeling this man had put into such a few short words. She stammered something that she would later not remember and turned back to the Dean. He handed her the other package she had seen on

his desk and said, "From what the RA tells me, you will be needing this. Keep your power to a minimum and make sure no one else can operate your rig. Now get out of here before I get to talking radio and waste a whole afternoon."

Back in her room she unwrapped the packages. The one from the Dean was a manual on radio and TV interference. The other was an antique Vibroplex bug very much like the one David had given Tony. □

## The amateurs

*There's something about them you've got to admire.*

*They work for the love of the task, not for hire*

*Every one of them's blessed with the heart of a boy!*

*What's a job to the drudge unto them is a joy.*

*While we our regular schedules are keeping,*

*The amateurs do without eating or sleeping.*

*They worry their wives — since so short is a day —*

*They don't get to bed when they should, but they stay*

*Sending calls on the air; catching call from afar —*

*And I think as I hear them how patient they are!*

*How much better we'd work here if only we knew it*

*In that amateur spirit of wanting to do it!*

*Professionals weary sometimes and they shirk.*

*Since they're paid to perform they look on it as work*

*They begin with reluctance; they're glad when through —*

*And they measure in money whatever they do;*

*But the amateur never begrudges a minute;*

*He goes to the job for the joy that is in it.*

*So here's to the amateurs — brave-hearted throng —*

*Though short be their waves, may their lives all be long.*

*May the wisdom they gain and the joys which they reap*

*Make up for the nights when they go without sleep;*

*And may we — in their spirit and deep understanding*

*Of work and its joy — keep our amateur standing!*

— Edgar A. Guest

—Des Moines RAA, IA □

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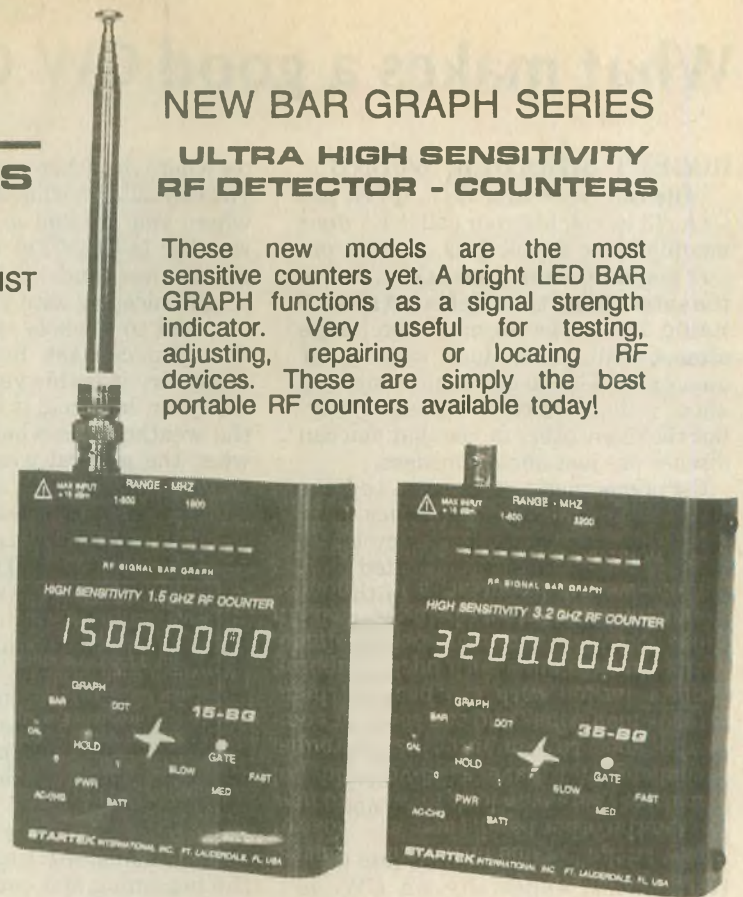
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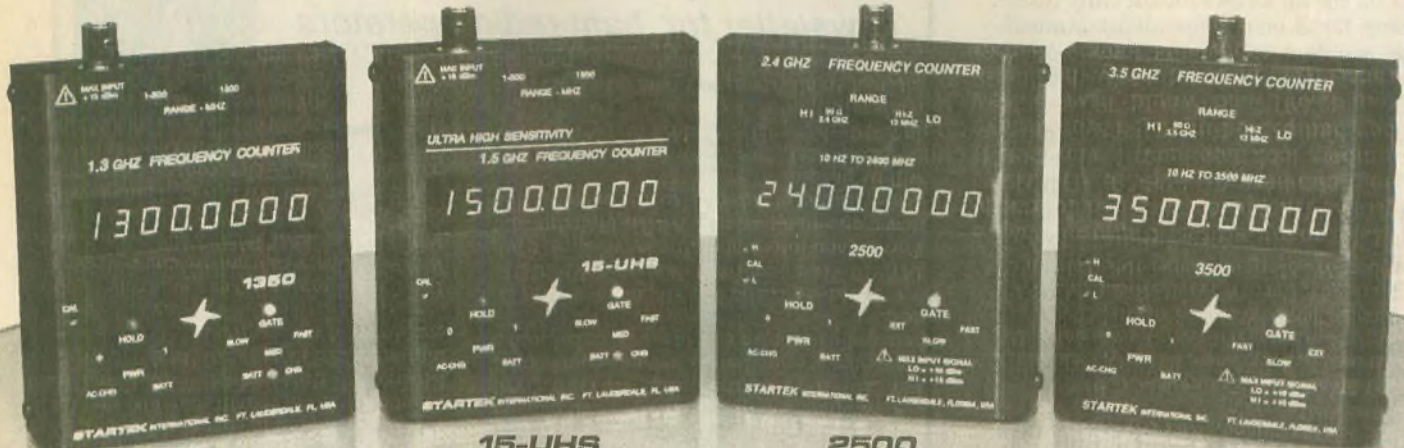
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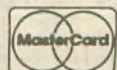
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# W1AW Schedule

April 5 - October 25, 1992

MTWThFSSn = Days of Week

Dy = Daily

W1AW code practice and bulletin transmissions are sent on the following schedule:

|     |                       |   |
|-----|-----------------------|---|
| UTC | Slow Code Practice    | MWF: 0200, 1300, 2300; TThSSn: 2000; Sn: 0200     |
|     | Fast Code Practice    | MWF: 2000; TTh: 0200, 1300; TThSSn: 2300; S: 0200 |
|     | CW Bulletins          | Dy: 0000, 0300, 2100; MTWThF: 1400                |
|     | Teleprinter Bulletins | Dy: 0100, 0400, 2200; MTWThF: 1500                |
|     | Voice Bulletins       | Dy: 0145, 0445                                    |
| EDT | Slow Code Practice    | MWF: 9 AM, 7 PM; TThSSn: 4 PM, 10 PM              |
|     | Fast Code Practice    | MWF: 4 PM, 10 PM; TTh: 9 AM; TThSSn: 7 PM         |
|     | CW Bulletins          | Dy: 5 PM, 8 PM, 11 PM; MTWThF: 10 AM              |
|     | Teleprinter Bulletins | Dy: 6 PM, 9 PM, 12 AM; MTWThF: 11 AM              |
|     | Voice Bulletins       | Dy: 9:45 PM, 12:45 AM                             |
| CDT | Slow Code Practice    | MWF: 8 AM, 6 PM; TThSSn: 3 PM, 9 PM               |
|     | Fast Code Practice    | MWF: 3 PM, 9 PM; TTh: 8 AM; TThSSn: 6 PM          |
|     | CW Bulletins          | Dy: 4 PM, 7 PM, 10 PM; MTWThF: 9 AM               |
|     | Teleprinter Bulletins | Dy: 5 PM, 8 PM, 11 PM; MTWThF: 10 AM              |
|     | Voice Bulletins       | Dy: 8:45 PM, 11:45 PM                             |
| MDT | Slow Code Practice    | MWF: 7 AM, 5 PM; TThSSn: 2 PM, 8 PM               |
|     | Fast Code Practice    | MWF: 2 PM, 8 PM; TTh: 7 AM; TThSSn: 5 PM          |
|     | CW Bulletins          | Dy: 3 PM, 6 PM, 9 PM; MTWThF: 8 AM                |
|     | Teleprinter Bulletins | Dy: 4 PM, 7 PM, 10 PM; MTWThF: 9 AM               |
|     | Voice Bulletins       | Dy: 7:45 PM, 10:45 PM                             |
| PDT | Slow Code Practice    | MWF: 6 AM, 4 PM; TThSSn: 1 PM, 7 PM               |
|     | Fast Code Practice    | MWF: 1 PM, 7 PM; TTh: 6 AM; TThSSn: 4 PM          |
|     | CW Bulletins          | Dy: 2 PM, 5 PM, 8 PM; MTWThF: 7 AM                |
|     | Teleprinter Bulletins | Dy: 3 PM, 6 PM, 9 PM; MTWThF: 8 AM                |
|     | Voice Bulletins       | Dy: 6:45 PM, 9:45 PM                              |

Code practice, Qualifying Run and CW bulletin frequencies: 1.818, 3.5815, 7.0475, 14.0475, 18.0975, 21.0675, 28.0675, 147.555 MHz.

Teleprinter bulletin frequencies: 3.625, 7.095, 14.095, 18.1025, 21.095, 28.095, 147.555 MHz.

Voice bulletin frequencies: 3.99, 7.29, 14.29, 18.16, 21.39, 28.59, 147.555 MHz.

Slow code practice is at 5, 7½, 10, 13 and 15 WPM.

Fast code practice is at 35, 30, 25, 20, 15, 13 and 10 WPM.

Code practice texts are from *QST*, and the source of each practice is given at the beginning of each practice and at the beginning of alternate speeds. For example, "Text is from February 1992 *QST*, pages 9 and 81" indicates that the main text is from the article on page 9 and the mixed number/letter groups are from page 81.

On Fridays, UTC, a DX bulletin replaces the regular bulletin transmissions.

On Tuesdays and Saturdays at 2230 UTC, Keplerian Elements for active amateur satellites will be sent on the regular teleprinter frequencies.

Teleprinter bulletins are 45.45-baud Baudot, 100-baud AMTOR, FEC mode and 110-baud ASCII.

CW bulletins are sent at 18 WPM.

W1AW is open for visitors Monday through Friday from 11 AM to 11 PM EDT and on Saturday and Sunday from 4:30 PM to 11 PM EDT.

W1AW is available for operation by visitors between 1 and 4 PM Monday through Friday. If you desire to operate W1AW, be sure to bring a copy of your license with you.

In a communications emergency, monitor W1AW for special bulletins as follows: voice on the hour, teleprinter at 15 minutes past the hour, and CW on the half hour.

—From *QST*, April 1992.



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## CW QSO

(continued from page 26)

If your CW isn't nearly perfect, a lot of abbreviations can be most confusing. Take a few more seconds and spell out more of your words to be sure your transmitted information is understood. Standard abbreviations are okay, but don't use too many of your own invention, particularly if there are lightning crashes which can wipe out one or two letters. If there are only three letters in an abbreviation and one is missed it usually means a lost word or perhaps the meaning of a whole sentence. When a mistake is made be sure to stop and send an error sign, such as eight dots, or one or two question marks, or perhaps SN, and then go back to the beginning of the word in which the error was made. If the error is made in the first letter of a word, after the error sign is sent, go back and repeat the last word correctly sent and continue from there. Poor operators often send a letter or two incorrectly and just go back and send those letters correctly, and the other operator is hard put to figure out what was sent.

If you tell the other operator your age and ask his (maybe not such a hot idea if the other operator is a YL), you may get an inkling of what group of subjects might be worthwhile to pursue. Telling him what kind of work you do or did for a living will usually produce a response about what he does or did. Ask him what he likes best about his work—how long has he been working at it, where else has he worked, what does he hope to work into—these are all good subjects to elicit interesting responses from the other operator. You might be able to compare his work with yours.

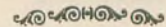
If the other operator tells you something out of the ordinary, be sure to tell him you found it interesting and try to follow up with something that you think he might like to hear. Weather, age, and types of work are only a few good starts for interesting QSOs. Another is sports—all kinds of them—those that interest you most, those that interest him most. Of course, one of the prime subjects can be antennas. What type is he using and how does it compare with others he has

used? Is he planning on trying others? You can always ask what rig he is using now. How does he like it? Is he getting new equipment? What bands does he like to work best? What is he constructing in the way of radio equipment? What are his hobbies other than ham radio?

At the end of a really good QSO you will find that you are truly sorry to have to break off the contact and you hope to contact this operator again. If you keep a log or a card file you might encircle this entry in red! Tell the other operator how interesting you found ragchewing with him in the hopes that he will continue generating similar good QSOs with other amateurs. Let's pass such happiness around!

A complete list of interesting subjects is impossible, but here are a few that will help you get started in generating your own interesting topics of conversation: receivers; transmitters; keyers; keyboards; sideswipers; antennas; beams; loops; good grounds; transmission lines; computers; printers; RTTY; AMTOR; packet, EME satellites; mobile operation; motor homes; boats; fishing; hunting; vacation plans (but try not to broadcast dates and times when your home will be vacant!); vacations taken; traveling experiences; sports; pets; your/his home (size, location, additions, painting, upkeep); gardening; schooling; special training; service experiences; spouse's activities; kids; grandkids; what you like or dislike about where you live; what your/his part of the country is known for; and so on, and on, and on.

You might find it handy to make a copy of some of the items listed above and keep it by your operating position. When a QSO seems to be going nowhere in a hurry, try out a couple of the items and see what response you get from the other person. If you still have trouble striking an interesting conversation and you hear me on the air, be sure to try some of these out on me! 73 de Bob, W6BNB.



## Remember?

You remember the Tunnel Diode, invented in the early 60s, which with a little bias would oscillate.

Didn't catch on.

Did you know that QST in 1920 published the schematic of a regenerative crystal receiver? Used a Zincite mineral crystal with which a small DC bias would oscillate.

Didn't catch on then either. —VOMARC, Sonoma, CA

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BART BRADY-CIAMPA,  
N7NJL

I figured I'd better begin with a title that would catch your attention. Yes, it's true—no hype, no exaggerated claims. Twenty bucks and it works like a charm! I think I've stumbled upon the simplest, cheapest, easiest-to-build, and best-performing "all-band" HF antenna that I know of. Let me tell you about it.

I have had my share of antennas. Manufactured tribanders and verticals, butterflies, dipoles, inverted Vs, etc.—you name it. Actually, I was looking for a good "listening" antenna so that I could dig the DX out of the mud and make the contact with the beam. Here's what I came up with.

While searching through the 1991

ARRL *Handbook*, I came across a diagram for the 75M "skywire" horizontal loop antenna (on page 33-6). The total length is 272 feet which gives a halfwave on 160M, a fullwave on 75M, two fullwaves on 40M, etc. It tunes up very well on every HF band and I've actually broken pileups with it on 17 and 12M. In addition, it tends to be a quieter "listener" than the tribander in some instances.

In the truest of ham traditions, we all have to make do with what we have available. As luck would have it, my house lot happens to have some well-spaced trees but, alas, they are only about 20 feet tall. Well, so much for the "skywire" which is supposed to be up at least 40 feet. I said, "What the heck!" and tried it anyway at 20

feet—to my surprise, with super results (I guess I'll call it the all-band low-wire!).

Now here's where the twenty bucks comes in. The book says to use insulated, 12 to 20 gauge wire and don't bother to use a balun. Just a center insulator is all that's required. Well, I went down to the local Radio Shack and bought 150 feet of insulated 16 gauge lamp cord in three 50 ft. rolls, separated it, soldered the pieces into 272 ft. length, tied the insulators at the four corners with bungie cords, and fed it with 50 ohm coax. BINGO!

It took me about \$20 and two hours to come up with a "true" all-band HF antenna. No bull about gain over a dipole, no baloney about out-performing my beam on 10, 15 or 20M. But let me tell you, it satisfies every ham's three basic needs: it's cheap, it's easy, and it works. This horizontal loop is a real performer on 75, 40, and the WARC bands! □

## Operating 4U1ITU

OMRI SERLIN, AA6TA

From queries I had sent on packet prior to a planned Europe trip in the summer of 1990, I knew that the 4U1ITU station in Geneva, Switzerland, welcomed visiting operators. As soon as I got to Geneva I called the International Telecommunications Union and managed to get one of the hams at the station. He would arrange for a visitor's pass on any day or night I wished to come. Happily and with eager anticipation I proceeded to my vacation destination, a small resort high up in the Swiss mountains about 100 kilometers northeast of Geneva, as the crow flies.

At the luxurious ITU tower my visitor's pass was indeed waiting and I headed for the ham station via the labyrinthine tunnel system underneath the complex. The station is actually located not in the tower itself but on the top floor of the nearby four-story office building, right next to the cafeteria (can't beat that for convenience when coffee is called for!)

After several tries I found the right elevator and located the right room. It was stacked full of unopened boxes of brand new ham gear. My kindly host, Mr. David Kaplan, explained that the International ARC which runs the station doesn't have enough manpower to open the boxes and test and install the donated gear. (Now that's a "problem" I wish I had!)

Dave, who is usually at the shack weekday mornings, gave me a brief introduction to the station. In addition to four fully equipped HF operating positions, the station also contains a very busy packet BBS and a number of VHF and UHF transceivers. The antenna farm includes a multiband,


multi-element beam on top of the four-story building, as well as several assorted smaller fry.

I selected the position most familiar to me—a Kenwood TS940S, identical to my own except much older and in some disrepair (e.g., non-functioning automatic antenna tuner). Dave explained again that there was no one available to fix the problem. In compensation, however, the setup did include a TL-922 kW linear. As I had never used a linear before, Dave was kind enough to show me how to turn it on (the trick is to keep the power outlet breaker depressed to prevent it from tripping on power-up!) and how to tune it.

The beam, Dave explained, was out of alignment due to a recent storm; so there was no way to tell which way it was pointing. In any case, the rotor control was way out of reach of this particular operating position, so I resolved to leave it where it was and hope for the best.

You do not need a Swiss reciprocal license to operate 4U1ITU. This is legally UN territory, and your US or any other valid license is just fine. However, if you plan to do any other operating elsewhere in Europe, you need a cross-license (in Switzerland, it will cost SF35, about \$30). Send an SASE to the ARRL and tell them which countries you plan to visit; they will send you the requirements and relevant official PTT addresses, as well as repeater frequencies and names of local hams prepared to help.

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To allow time for the PTT bureaucracy to run its course, do this at least three months before you plan to leave! If you plan to operate on 144 MHz and above, keep in mind that many European repeaters require a 1750 or 1800 Hz burst tone; few HTs marketed in the US have this feature.

After trying unsuccessfully to raise a Maryland ham who was booming into Europe 5X9+, I decided to strike out on my own. With some trepidation (after all, I had gotten my first permit less than a year previously, even though it was an Extra Class), I picked a relatively quiet spot on 20M and somehow managed to croak a "Hello CQ," finishing with the mighty-strange "This is Number 4 - United - Number 1 - India - Tango - Uniform." To my surprise and delight, the call was immediately answered by George, GM2CRV, in Glasgow. I had never before worked a G-station from my barefoot, vertical antenna setup in California, so this was an exciting new experience! George (licensed since 1937) and I had a nice 10-minute QSO.

Not realizing how valuable the 4U1ITU contact is even to many veteran European hams, I went on to tune up and down the band, catching more leisurely QSOs with what to me sounded like exotic call signs: SP

(Poland), Y23 (East Germany), SV (Greece), and, of course, a whole bunch more Gs. By the time I quit three hours and a mere nine QSOs later, I was enjoying myself tremendously. A return visit was clearly indicated. One other piece of lore I learned: some European HF hams are in the habit of saying "break" when they mean "over to you." It is certainly futile to try to break into such QSOs by saying "break"!

I arranged to spend an entire day and night in Geneva on my way back about two weeks later. My host this time was Erik Landberg, HB9BHD (ex-SM4CIV, ex-OD5HU), the club's QSL manager. This time I was prepared for being the object of a pileup (so nice to be on that end, instead of trying to break into one!) and acted accordingly. I picked a quiet spot and stuck to it, calling "QRZ" at the end of each contact. I did try to carry out at least a semblance of a QSO with each station, rather than merely giving out "you're 5X9, 73s, QRZ?"

Only one minor incident marred the operation. In the middle of the QSOs, a Spanish-speaking ham who evidently was not hearing me suddenly burst on the scene and demanded that everyone get off "his" frequency.

Rather than get into a brawl I asked everyone to move up a few kHz and then we had some peace.

When three hours had passed my log showed 33 contacts—hardly contest speed, but the fastest pace I had ever maintained! I continued to be fascinated by the strangeness of the call signs, virtually all new to me: CN8 (Tangier), YU (Yugoslavia), EA (Spain), 9H1 (Malta), LZ (Bulgaria), CT1 (Portugal), YO (Romania), DL (W.Germany), LA (Norway), OM (Czechoslovakia), and, of course, tons of Gs (UK), Is (Italy), and Us and Rs (USSR).

By now I was completely intoxicated with my new-found status as a desirable call sign! After a leisurely dinner in a cozy little restaurant just opposite Geneva's main train station, I returned to the shack later that evening. This time, my host was the club's president, Mr. Capitaine, who conveniently happened to work at the ITU. He explained that the club had run out of QSL cards, but that some would be sent to me as soon as they were available. (As it turned out, this promise wasn't kept, despite a number of reminders; I eventually printed my own 4U1ITU cards and sent them out via the ARRL outgoing bureau, knowing how anxious some of my contacts

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were to get this confirmation.)

That evening I was joined at the station by another visiting US ham. We tried to operate concurrently (luckily, I had brought my own earphones, as certainly you should if you plan on operating 4U1ITU), but it soon became clear that RF and audio interference would make this difficult, so we improvised a shift schedule to avoid conflict.

My one-hour operating session that evening yielded 15 contacts on 15M, including a couple of ZS1s (South Africa), a 5Z4 (Kenya), a 5B4 (Cyprus), and the "usual suspects," i.e. the run-of-the-mill continental Europeans.

Prompted by a not-so-subtle flyer on

the station's wall, I left several cash contributions in the donation box at the shack. I even went ahead and paid dues for a year's membership in the IARC.

Next morning, having a little time to spare before my next flight, I dropped in at the station again. Operating again on 20M, I worked eight contacts in one hour, including the "usual" Europeans and a couple of VKs (Australia) thrown in for good measure. I flew out of Geneva with a total of 65 QSOs under my belt and lots of exciting memories to sustain me during the remainder of the trip.

By the way, I don't know whether

it's due to improving band conditions, plain luck, or some other mysterious factor; but in the seven and a half months following my return from Europe I was able to work enough DX to log 180 countries worked and have 113 of those actually confirmed. Among the confirmations: 4U1ITU, as well as 4U1UN, the ham station at the UN headquarters building in New York City. The UN club, however, is definitely unenthusiastic about guest operators, citing security reasons.

For information about guest operating 4U1ITU write to International ARC, P.O. Box 6, CH-1211 Geneva 20, Switzerland. □

## Something for nothing—a scrounger's notebook (conclusion)

### THOMAS E. KING, VK2ATJ Down the block and up the alley

Many opportunities are right before your nose. Take a walk in your own neighborhood some nice afternoon, keeping an eye to roof level. Ask around if anyone has recently changed antennas. Some homeowners will replace an antenna and keep the old one around for no apparent reason, disposing of it to someone who is able to use it. You just might find an old television antenna or maybe even a tower for the taking down—who knows what else?

Check also for useable goodies from demolished houses. If you can strike up an acquaintance with the fellow tearing the place down, so much the better, as you might be able to obtain pipe, lumber, wire, carpet, doors (a nice solid operating table), etc.

Attend all the rummage, garage and yard sales you can find. It's really surprising what people sell (and are sometimes just happy to give away!). Yard sales are the number one thing in larger cities, and some newspapers even devote a special classified column to them. Remember, too, that most

festivals and rummage sales are heavily publicized as they are a chief fund raiser for churches. Check out these church sales and inexpensively cash in on old radios, books, and accessories for the shack such as carpet, desks, lamps, etc.

While you're checking out the local establishments you might try "ye olde carpet shops" for rug scraps (ever thought of carpeting your operating table? It really is nice) and bamboo (yes, some companies still ship rugs wrapped around bamboo poles. How about a free quad?). Try chemists and department stores for old display stands and cabinets. They make great storage bins for equipment and parts. Don't forget lumber yards for wood scraps, appliance repair shops for old appliances, drive-in theatres for speak-

ers (they make nice mobile speakers when rebuilt) and petrol stations for old car radios. Aside from strictly scrounging, bargain hunting can be used at surplus and pawn shops (radio gear, magazines and tools, etc., are often available at very fair prices).

And then there's the tip (dump)—that unique location where most everything ends up one way or another at some time or another. To some it might not be too appealing to wander among smouldering rubbish dodging rats and flies. However, not all tips burn their rubbish, as some are landfills, and so the task of retrieving treasure is not as difficult or hazardous. A number of radio beginners have gotten their start in the tip.

### The ol' ad game

Amateurs willing to invest a few dollars in advertising can often realize great benefits. Informal but attention getting notices can be posted in laundromats, those little corner grocery stores . . . anywhere there is a vacant spot. You might mention that you would be happy to take down towers and antennas no longer used, and haul away old TVs.

Classified advertising can also be effectively used. College newspapers are often a good place to inquire about various electronic articles (some colleges' newspapers have free classified advertising). Students have also been known to get pressed for money, offering various radio related goodies at greatly reduced prices.

Read the local newspaper—classifieds and all—noting advertisements in the wanted and for-sale sections. Some people actually advertise items that the amateur enthusiast can use. (A stylized ad in these weekly or biweekly papers can often bring considerable response.) Make note of auctions, farm sales, police auctions, going out of business sales, etc. Electronic gear, fix-

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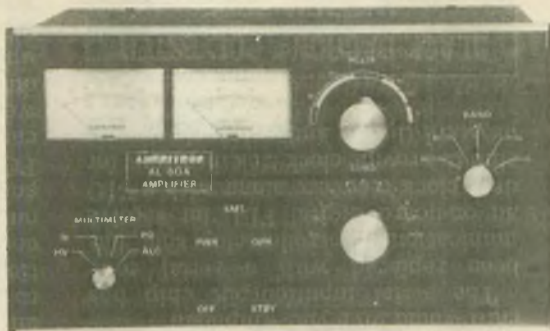
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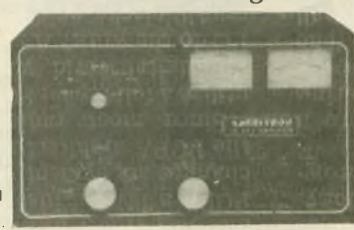
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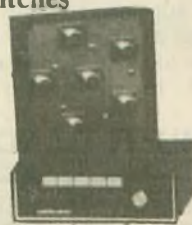
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# Silent Keys

## Father Moran, 9N1MM

Marshall Moran SJ, better known to the amateur community as Father Moran, 9N1MM, passed away in New Delhi, India, on April 15, 1992, of heart problems. He was 86 years old.

Father Moran's Amateur Radio career spanned the history of the hobby, from his first crystal radio in 1918, to his daily appearances on 20M to within days of his death. Although he never held a US amateur license, he was active on the bands from Chicago in the 1920s. His amateur career paused for a few years while he obtained his doctorate in languages from the Jesuit university in St. Louis, Missouri. His first missionary post in India put him in contact with World War II pilots and the Hallicrafters

SX28s they used for communications. This rekindled his interest in Amateur Radio. He was active from India in the late 1940s, where he met Gandhi, and drove Nehru around in a jeep.

In 1951, Father Moran moved to Nepal to establish the St. Xavier School in an abandoned maharajah's summer palace. He remained there for 40 years. In 1960, he teamed up with some visiting engineers from the US who were installing telecommunications equipment in Nepal. Along with Sam Maso, 9N1SM; Tom Bell, 9N1TB; and Fred Vocal, 9N1FV, Father Moran asked for, and received, the first Amateur Radio license in Nepal, for 9N1MM.

Father Moran made almost 300,000 contacts from Nepal and assisted essentially every visiting ham get on

the air. He helped found the Seonet on-the-air meeting, and he was the guest speaker at Seonet's first in-person convention. During his triennial trips to the US, Father Moran visited dozens of Amateur Radio clubs and "sang for his supper" with his positive and loving portrayal of Nepal and the Nepalese, especially the young students. Among other distinctions, Father Moran had regular contact with King Hussein, JY1, and he inspired Juan Carlos, King of Spain, to get on the air as EA0JC.

While not on the air, Father Moran ran the St. Xavier school with its 260 students. He held morning sick call, despite his lack of formal medical training, and he worked tirelessly to improve the education and spiritual well-being of two generations of Nepalese.

Rest in Peace, 9N1 Mickey Mouse.  
—The DX Bulletin, 4/24/92

## Roger Spaugh, W7FNJ

Retired broadcast engineer, station owner, and educator, Roger L. Spaugh, W7FNJ, became a Silent Key on April 3, 1992, in Coos Bay, Oregon.

Roger was born in Portland, Oregon, April 16, 1918. He grew up in Grants Pass, Oregon, and moved to Coos Bay (then Marshfield) at the age of 20 to assume duties as chief engineer and announcer for Radio Station KOOS (now KHSN). He married Sara Larson in Vancouver, Washington, in 1940. Sara survives Roger.

Roger served in the South Pacific as a Marine during World War II. He returned to KOOS in 1945 and later was an owner of KFIR. He was the first teacher of electronics at Southwestern Oregon Community College, Coos Bay. He retired to an electronics shop where he served the fishing and commercial fleets of the Port of Coos

Bay for many years.

Roger was active in the local Amateur Radio community, serving regularly in club events for local community activities and as an operator for Amateur Radio emergency response groups in Coos and Curry Counties. —Submitted by Everett Curry, Jr., K6VGL, Hillsboro, Oregon.

## Terry Richardson, WA4RYN

Terry Richardson, WA4RYN, died on February 2, 1992. Born in Asheville, North Carolina, he graduated from the University of South Carolina and came to own and operate Richy's Electronics of West Columbia.

Terry was the impulse of RACES for Lexington County, South Carolina. His honest friendship will be missed by many locally and nationally. He is survived by his wife, Deloris, WB4KUN.


Memorials may be sent to Richardson Memorial WA4RYN, c/o Our Savior Lutheran Church, 1500 Sunset Blvd., West Columbia, SC 29169.

Also, a Silent Key memorial QSL service has been established through December 1992. Its purpose is to confirm contacts from WA4RYN's logs. Valid log dates are March 1940 through November 1990. Send requests for SASE or sufficient return postage to K4CLA, 562 Oak Dr., Lexington, SC 29073-9059.

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
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
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# Product Review

## PC Packet Adapter System

RICHARD ARLAND, K7YHA

It's small, it's self-contained, it fits *inside* your IBM/PC (or clone) and allows you to enter the wild world of amateur digital communications. What is it? "It" is the Digital Radio Systems, Inc. PC Packet Adapter System. DRSI markets a half card TNC for the IBM/PC (or clone) which interfaces to the radio (HF and VHF) via a cable and provides the user with a tremendously powerful radio modem.

The PC Packet Adapter (PCPA) is an amazingly versatile piece of hardware that was engineered by DRSI to never become obsolete, irrespective of the advances in packet technology. This is a novel idea in today's "throw-away" world.

Comparing the DRSI PCPA to a stand-alone TNC-II is like comparing the starship *Enterprise* with an F-4 Phantom-II fighter aircraft. The run of the mill TAPR-II TNC is small potatoes compared to the PCPA. The entire idea behind the DRSI PCPA is to provide the digital ham with a high performance digital interface that uses all the capabilities of the PC. Software exists that allows everything from simple end-user functions and Radio Bulletin Board Systems up to and including a true computer-to-computer networking system. DRSI's PCPA system provides both the hardware and software to accomplish these tasks. In addition, the PCPA is an open-ended, well documented system that allows the experimenter and programmer to expand his or her horizons.

In order to gain an insight into the full spectrum of versatility of the DRSI PC Packet Adapter, a brief review of the current packet TNC technology is required. The TAPR TNC-II is the "standard" hardware model that all current manufacturers of stand-alone TNCs are using today. The TAPR design model uses a Z-80 CPU which clocks at about 2.5 MHz, adequate for 1200 baud communication but extremely slow for 9600 baud work. In addition, the Z-80 address space is restricted to only 64K, which is usually divided up into two 32K areas. The program is usually written in about 32K and "burned" into an EPROM. Finally, the serial input/output chip has only one channel

available for packet communications since the other one must be used for the terminal. When used with a PC, this ties up a serial port relegating the PC to becoming a "dumb" terminal. Hardly a desirable feature for upwards of \$3,000 worth of computer!

While the TAPR TNC-II design is well established and certainly adequate for end-user applications, it falls short when it comes to being versatile and expandable. Enhancements to the basic TNC operation are accomplished through buying upgraded EPROMS from the manufacturer. Even after upgrading, the user is still in possession of an "add-on" box that only has 64K of memory and makes the high priced computer connected to the terminal port function like a "dumb" terminal.

Evolutionary process is what the DRSI PC Packet Adapter is all about. DRSI has confronted all the major shortcomings of the TNC-II model and produced an outstanding digital interface (I shy away from calling the PCPA a TNC; it just isn't proper). The changes are evident when we examine the PCPA architecture in detail.

Since most radio amateurs will utilize a full-blown PC to interface into the digital world, why not make the PC do the work? A stock IBM PC XT or AT clocks at 4.7 MHz, and most run at least twice that using a turbo card. This is between two and four times faster than the pokey 2.5 MHz Z-80 CPU in a TAPR TNC-II. An 80386 CPU running a DRSI PCPA card would give you whiplash!

The serial input/output chip has been replaced with a serial communications controller chip that has an on-board digital PLL for receive data clock recovery along with a CIO chip to provide clock-tick interrupt for protocol timing and external support

functions for the SCC. The SCC also provides two communication paths for inter connection to radio equipment.

The PCPA software runs on the PC itself which makes for some expanded capabilities over and above the Z-80 based TNC-II controller. Faster speed means that the CPU can devote more time to focus on AX.25 protocol and user programs. The average PC memory is about 640K, ten times the size of the 64K available on the TAPR TNC-II model. This translates to more space to enhance functionality, increased memory buffering, etc. By moving the "TNC" inside the Disk Operating System (DOS), there is no need for a serial port connection between the terminal and the TNC. In addition, with the PCPA configured to operate within the PC, large, multi-connect BBS routines can be executed quickly and reliably. This all spells flexibility.

TNCTSR is the name of the program for the PCPA that furnishes the AX.25 protocol commands, much like the old TNC EPROM chip. TNCTSR is a terminate-and-stay-reside program that, once loaded, returns control of the TNC back to the user. The program lies dormant in the PC until it is tasked by an interrupt from the PCPA hardware or from the applications program in use. This combination of TNCTSR and the PCPA card are what puts the TNC *inside* your PC.

My review PCPA was a type 1 board with a single 1200 baud modem and a single serial port for connection to an external modem. This configuration allows the user to run simultaneous VHF and HF packet operations on a single board. Installation is a snap. Just pop the cover off of your PC and place the PC Packet Adapter card into a spare card slot. Follow the well-written start-up procedures outlined in the manual and you will be up on line in a few minutes. It is highly advisable to have a PC with a hard disk, as directories can be partitioned off for the various applications software that comes with the PCPA, which greatly enhances the functionality of the terminal. Additional minimum system requirements are: DOS version 3.1, 3.2, or 3.3; 348K RAM, and dual 360K floppy disk drives (if you don't have a hard disk).

Once all the software has been loaded in you are ready to begin having some fun on packet radio. After accessing the DRSI directory and typing "PACKET" (which starts up the THS host mode server for the PCPA) you will be in the "main screen" of the program. Here the receive and transmit windows are split with the receiver window taking up almost

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three quarters of the screen and the transmit window taking the bottom quarter of the screen.

A menu is available which will show you all the options available in this portion of the program. CNTL C brings up a connect menu where the call sign of the station you are trying to connect is typed in along with up to 10 digipeater links. F10 starts the correct sequence. This software is extremely easy to use and in a matter of minutes you are assured of being up on line with the PCPA. The ease with

which you can handle multi connects (up to four separate connects at one time) is amazing. Arrow keys allow you to move between five screens, four are used for connects and the fifth is for the UNPROTO mode. In the UNPROTO mode you can watch all the packets on the frequency zipping between stations.

Additional BBS software by AA4RE, node software by G8BPQ and a TCP/IP software package complete the additional software that comes with the PCPA board.

Documentation is superb and support via telephone is fast and friendly. DRSI really supports this product. Priced at about \$159, the DRSI PCPA digital radio interface board is an outstanding value for the money. Since the software can be easily upgraded to keep abreast of any changes in packet technology, it is difficult to conceive that the PCPA will ever become obsolete. Write DRSI at 2065 Range Road, Clearwater, FL 34625 and tell them you saw it in *Worldradio* magazine. □



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# Anna Enerson, NØIXY STATION APPEARANCE

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Winners will also receive a top quality, Laserjet-printed copy of the DXCC and WAS BeamHeadings list (a \$15.95 value) compliments of Jack Hurray, W8JBU.



The station entry featured here was submitted to us some time ago, in 1989, and has probably grown considerably since then. We feel it's a good example, though, of what can be done with just a little equipment and minimal space.

This is my own personal Window to the World. Let me take you through a tour of my little ham shack.

Everything started running in June of 1988 and centers around the TS 830, or the "big one" as people here put it. The essentials are included to ensure this rig runs smoothly.

Starting from far left are earphones for better reception, both for the operator and the disinterested non-ham. Hanging on the wall is the countries list to refer immediately to what country the contact is coming from. There's an accurate time keeping piece in Zulu for a clean log, and WAS map for encouragement and to find out "just where do I put my beam?" On the far wall is the all important piece

of paper, the hard earned license. Below that is the time zone world map to see why the DX station says he must QRT for a short nap before breakfast. A little fellow ham keeps me company when no one else seems to want to come back to my CQs. On the floor to the left is a treasure of friends' QSLs, which I've looked at many times, and address books to those new found friends. In the back is a homebrewed dummy load to keep from making enemies and to keep the airwaves free. On the top of the SWR bridge is a conversation piece when there is nothing else to talk about: the temperature in tenths of degrees! To the right of the TS 830 is a tape recorder for contact with the rare DX station (and the W1AW code practices). The antique to the right is a Cleg 27B 2M rig. It may run on batteries but it works. Since the 2M stays

off, the monitor comes in handy. It sits under the little fellow ham and serves as the scanner that the antique doesn't come with. A ham shack is not complete without the log book, and that's there also. Just outside the window across the lane is my 20M beam. It sits 50 feet up on a 2 in. pipe supported by a 30 ft. pole. What makes this beam so special to me is that it has an armstrong rotor, and just before a contact I get out there in the cold and turn it; every contact is then made more of a challenge and not just a fast and easy log entry.

This all sits on a sewing machine. And yes, when I sew it all gets torn down and moved over—so everything is clean and free of dust, as it does get moved frequently! □

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# ..... AWARDS .....

## San Benito ARC Scholarship Fund

The San Benito ARC is an American Radio Relay League affiliated (#2247) special service club. In addition to sponsoring the WA2VJL/R 146.660/.060 PL repeater, the club sponsors an annual award to be presented to a graduating senior of San Benito High School.

This award was started in 1990 and continues this year. The requirements for the award are as follows:

1. Must have been accepted to a college or technical school in electronics;

electrical or computer field.

2. Must be a student of San Benito Senior High School.

3. Cannot be a relative of a club member or club sponsor.

4. Preference given to Amateur Radio operators (any class).

Our award is a minimum of \$250 per year and is made payable to the school, not the student. It is presented during final award ceremonies in May.

The sole source of funds are fees collected for the class the club conducts in

## Jubilee Medal

In 1926 the first radio contact from the USSR to the USA was made by radio amateur Ivan Nikitin from the Kiev Province. He received signals from American Radio station WOC in Iowa and received official confirmation of it.

In celebration of this event's 65th anniversary, a big ceramic medal will be awarded for working 10 USSR stations and 10 US stations. One QSO with OBL 065 and Iowa must be represented. All stations in the OBL 065 use the following prefixes; UB5U,

UB4U, RB5U, RB4U, and special call sign for this celebration, UR0UCH. QSO valid for any time, mode and band.

Send only GCR list (no QSLs) with payment of \$5 US or 15 IRCs—registered mail only—to Award Manager Boris Grebenichenko, UB5UCH, P.O. Box 1, Obukhov-1, 255400, Ukraine, USSR. Stations located in the US send \$5 to Bill Aspin, WI8R, 188 N. Mieliens Rd., Munger MI 48747. □



## 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!

Nathan Gordon, KB9HEG, shares an embarrassing but instructive experience.

I was having a QSO on my newly acquired General voice privileges on the 15M band. I was talking to Ernie, N6EDL, in California, and after one transmission he asked, QSL?"

I had only heard "QSL" in reference to cards, so I responded, "Okay, I don't have the Callbook, so please give me your address and I will get a card out to you."

Ernie was very nice and kindly told me that when he asked "QSL?" he was asking if all was received correctly.

I have never made that mistake again! □

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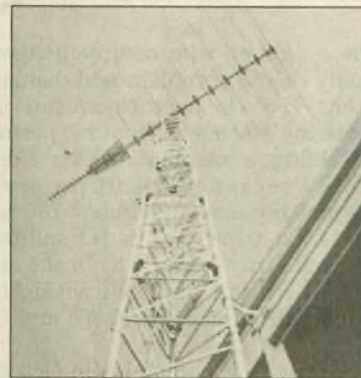
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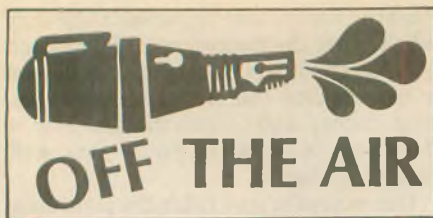
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## Obscenity off the air

I am writing in response to W6OSP's letter in February's Off The Air. I was first licensed in October of 1976 and have held all classes of license from Technician to Extra. I received my Extra in November of 1991. Upon the complaint of interference to a TV set, stereo and a telephone I realized that I had damage due to a near-miss lightning strike. I wish that was the end of it.

The neighbor who complained was the only one to complain and demanded that I cease operations and not operate my station without his permission. Being a member of Air Force MARS, I could not restrict my operations just because a neighbor 100 feet away had a gripe. On the HF military frequencies, my power was in the area of 600W DC out and well within the power limits of the Air Force and the FCC.

Since the first complaint in October of 1991, I have had to put up with sarcasm, verbal abuse and downright obscenities directed at me on the telephone. I cannot communicate with the neighbor or his wife. He has said that I am running too much power, among other things. I have even advised the neighbor to file a written complaint with the FCC and he has refused, preferring instead to pummel me with phone calls and verbal abuse. This conduct has put me in the position of no longer wanting or caring to cooperate with this neighbor.

He has stated that he has the power

to have my station taken off the air. I would welcome a complaint from the FCC and have even gone so far as to contact the FCC myself. The FCC has advised that this case is out of the jurisdiction of the Commission. I had to contact the Memphis Police Department and file a complaint for the harassing phone calls. The saga goes on.

I think that Bruce Butler, W6OSP, is correct in his letter, but there are some people who will not listen and cannot be reasoned with. As of this date, February 18, 1992, I am the only full-time member of Air Force MARS in West Tennessee handling message traffic, and my neighbor does not care that I cannot operate hours to suit him.

My hope is that all amateur operators will have neighbors who would be willing to listen and be cooperative without demanding that the ham "cease and desist" operations. I feel that I have been very cooperative to date, but the straw that broke the camel's back was the obscene language. Good luck to all in a similar situation.

MARILYN HARTLEY,  
KJ4GV/AFA2ZH  
Memphis, TN

## Police hams

We have many "police hams" in our area, and I don't mean amateurs who happen to be police officers. I mean hams of the type who always discuss the legality of different uses of ham radio. They always make it sound like their interpretation of the rules is the only one, and that they are speaking as official FCC representatives. Sometimes they don't even let you call the AAA for automobile emergencies, even though the *ARRL Handbook* says that the practice is okay.

We have many public service type

things that we do around here, and most are said to be "illegal" by these police hams. A proper reading of the rules and modifying the operations to conform with the rules is all that is needed in most cases.

We even had one of these police hams say that hurricane shelter operations were illegal, because we work under the Red Cross, and the "business" of the Red Cross is to provide emergency services, so our operators were helping their business...

I feel strongly that so many police hams have caused Amateur Radio to become degraded to the point where we can hardly do any public service work, because of people attaching "business interest" to what should be considered safety or health and welfare traffic. If what you are doing is a violation, the FCC will let you know that they want you to stop.

ART BYRNES, KA4WDK  
Austin ARC, TX

## Slopping on HF

I would like to register a gripe that to me has been the proverbial "fly in the ointment" ever since the code sending requirement was dropped. How can anyone believe that if a person can copy a code tape at a given speed, that sending ability at that same speed will come naturally? In order to send intelligible code at any speed, one must practice.

I will be the first to admit that I am not a champion CW operator, but after 20 years as a railroad telegrapher and 38 years as a ham (almost 100 percent CW), I am able to distinguish between Morse code and "slop." In my opinion, there is no excuse for sending sloppy code. All that one needs to do is tape his or her code transmissions and then try to copy it. Most all CW operators are

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far more impressed by the quality of the code than by the speed. After all, if the code is not intelligible, there is not much reason for sending it in the first place. It appears as though most of the sloppy sending is due to the inability of the sender to properly control the keying device, whether it is a straight key, semi-automatic or an electronic keyer and paddle. The two latter of the three seem to be the most common offenders.

I work the Novice CW bands quite a lot, and I enjoy working with our newcomers. When I hear a station sending K E G R, N N M A or some meaningless letters, followed by a jumble of other dits and dahs sent repeatedly, I presume that the person is attempting to call CQ and give a call sign. Needless to say, it is not practical to answer that station if it is impossible to decipher the call sign. So the operator eventually gives up in despair and says, "Heck with CW, VHF/UHF is the way to go anyhow."

I would like to urge all of you who are conducting upgrade code classes to attempt to convince your students that "it is more blessed to send than to receive good code." It is impossible to send perfect code with any manually operated keying device, but it doesn't hurt to try. Above all don't send faster than you can copy, because the other operator will probably come back to you at the same speed that you sent to him. Then you'll need an excuse for wanting a repeat of the transmission. Some good ones are "The XYL was screaming at me"; "The kids were fighting"; "Bottom fell out of the band"; "Tornado went through"; "Too much QRM"; "Had phone call"; and many more.

VERLE D. FRANCIS, W0SZF/5  
Brackettville, TX

## Favors

Several years ago, in a burst of friendliness then interpreted as an expression of long-standing agreeability, the radio amateurs of the US took over a chore which the Federal Communications Commission had done from the beginning: license examining. This has lifted a considerable burden from the FCC's shoulders, saving it untold thousands of dollars.

Is this favor appreciated by the FCC? Apparently not. First came the taking away of 220-222 MHz; recently has come a spate of power-audit inspections. Both of these unfriendly actions were not really needed.

If this is the sort of reciprocity we can expect from the FCC, perhaps it is time for us to re-think our willingness to do FCC chores.

LOUIS R. HUBER, W7UU  
Seattle, WA

## Observations

*Worldradio's* November '91 issue article, "Just dial '311'" by Bob Ward, K0SVZ, was interesting. The idea of a multiband common mobile frequency does seem to have merit, and further analysis has revealed some areas to note:

1. Many older radios have frequency resolution only down to .5 kHz without using vernier tuning.

2. 160, 17, 12, and 6M can also be

included if the designated frequency can be within the commonality range.

3. K0SVZ's 80 and 40M frequencies do not include the General Class.

4. Example 1 correlates to the television and movie industry's use of the "555" telephone prefix as a common non-number of which most of the general population has become aware and it is easy to remember.

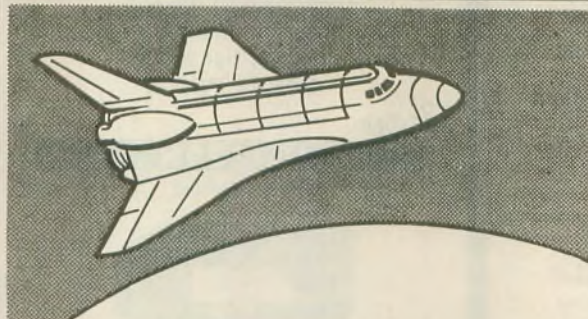
5. Alaska Emergency Net frequency has been included to show how it would line up with example 2.

| Phone Bands       | K0SVZ's Plan | Commonality Range | Example 1 | Example 2 |
|-------------------|--------------|-------------------|-----------|-----------|
| 160M 1.800- 2.000 |              | 1.850- 1.868      | 1.8555    | 1.8675    |
| 80M 3.850- 4.000  | 3.8311       | 3.850- 3.868      | 3.8555    | 3.8675    |
| 40M 7.225- 7.300  | 7.211        | 7.250- 7.268      | 7.2555    | 7.2675    |
| 20M 14.225-14.350 | 14.311       | 14.250-14.268     | 14.2555   | 14.2675   |
| 17M 18.110-18.168 |              | 18.150-18.168     | 18.1555   | 18.1675   |
| 15M 21.300-21.450 | 21.311       | 21.350-21.368     | 21.3555   | 21.3675   |
| 12M 24.930-24.990 |              | 24.950-24.968     | 24.9555   | 24.9675   |
| 10M 28.300-28.500 | 28.311       | 28.350-28.368     | 28.3555   | 28.3675   |
| 6M 50.100-54.000  |              | 50.150-50.168     | 50.1555   | 50.1675   |

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GARY L. ALTIG N7UVL  
Reno, NV

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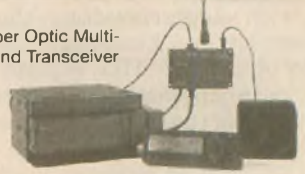


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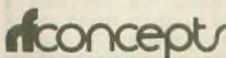


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# DX WORLD

John F.W. Minke III, N6JM

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## Activities Calendar

- May 16-17 Castles on the Air
- May 30-31 CQ Worldwide WPX Contest (CW)
- June 20-21 JARL All Asian DX Contest (CW)
- June 27-28 ARRL Field Day
- July 11-12 IARU HF World Championships

Refer to your favorite contest section in *QST* or *CQ* for details on the above contest activities. It is highly recommended that you drop everything and work N6WR and crew during Field Day.

## W100N

The following DXer was awarded *Worldradio's* Worked 100 Nations Award during this past period:

424) William W. McClellan, N6WK; Mar. 20, 1992

We have made up some log sheets that list the nations in prefix order to simplify applications. They were prepared on an IBM compatible PC using WordPerfect 5.1. You may wish to request a copy or, if you utilize this program on your own PC, you may submit a diskette. When using the

sheets just use the "typeover" (insert) feature. The list amounts to five pages and takes a long time to print, so you may wish to use diskette.

## Qatar (A71)

*QRZ DX* reports that A71BY seems to prefer the 20M band between 14.165 and 14.175 MHz around 0315 to 0400 UTC three or four times a week.

During the month of March several stations appeared on the bands from Qatar, such as the following reports:

|       |            |          |
|-------|------------|----------|
| A71AB | 14.207 MHz | 0245 UTC |
| A71BR | 21.286 MHz | 1345 UTC |
| A71BS | 14.244 MHz | 0345 UTC |
| A71BY | 14.185 MHz | 0230 UTC |
| A71CH | 14.236 MHz | 0300 UTC |
| A71DS | 18.113 MHz | 1930 UTC |
| A71KR | 14.190 MHz | 0145 UTC |

*The Long Island DX Bulletin* reports activity of A71AA, who keeps daily schedules on 10M near 28.530 MHz from 1230 UTC. However, we have seen no other reports of this one.

## Clipperton Island (FO0CI)

The recent DXpedition team to Clipperton Island collected some 48,000 contacts with the deserving DXer, according to *The DX Bulletin*. This is reported to have been the most ever made from there. Please include a donation to the team when you send your QSL card, as the financing of this DXpedition was supported almost entirely by the operators. The chartering of a vessel to take DXers to these remote, isolated spots is very expensive.

## Sao Thome (S92)

Erik, SM0AGD, showed as expected on the bands in early April, signing S0AGD. We were following his actions one evening and he was moving about between 30, 40 and

20M, operating both modes. Many of the deserving DXers got themselves a brand new one and many more with new band/mode contacts.

Two other calls were reported earlier in the season: S92IJ and S92LB.

## South Sudan (ST0)

According to *DX News Sheet*, PA3CXC made some 12,700 contacts during his recent South Sudan operation, most of them with Japan and the western United States. The future status of South Sudan is presently under study with the DXAC.

## South Sandwich Islands (VP8)

The South Sandwich DXpedition arrived on schedule and was busy giving out contacts to the deserving DXer. Unfortunately, the operation was plagued with the deliberate QRMers. This is beyond the comprehension of this DX editor; I cannot understand why a fellow radio amateur would do this. I guess we can gather that these interfering types just have no business in Amateur Radio.

Anyway, with the two weeks of operation, many DXers will have added a new one to their count.

## Nicaragua (YN)

Fairly active from this Central American country is YN/SM0OIG, who has been reported on 7.005 MHz at 1100 UTC, and 14.007 MHz around 2230 UTC.

Three other calls were reported during this period and include:

|        |            |          |
|--------|------------|----------|
| YN1CC  | 21.003 MHz | 1345 UTC |
| YN1MNC | 21.273 MHz | 2315 UTC |
| YN9BJ  | 21.239 MHz | 2030 UTC |

## Cyprus—British Bases (ZC4)

If you need a 15M contact from this one try these:

|       |            |          |
|-------|------------|----------|
| ZC4AB | 21.089 MHz | 1245 UTC |
| ZC4CZ | 21.003 MHz | 1530 UTC |
| ZC4ST | 21.335 MHz | 1515 UTC |

Other band activity was represented by ZC4CZ, who was found on 3.502 MHz at 0130 UTC, 24.895 MHz at 1315 UTC and 28.025 MHz 1230 UTC.

## Guinea (3X)

Very active on the bands recently from Guinea is 3X0HNU; 40M is a choice spot for this one. Try between 7.002 and 7.009 MHz after 0700 UTC. Some CW spots include 14.011 MHz around 1800 UTC and between 21.011 and 21.020 MHz from 1400 UTC.

Although he has been reported on 10M CW, you phone types might take a look between 28.469 and 28.480 MHz after 1500 UTC. On one of our newer bands—WARC bands to some of you—he has been worked on 24.900 MHz around 1400 UTC.

## "Where Do We Go Next?"

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time first or major DXpedition to exclusive places such as Annobon Island, Western Sahara, Market Reef, Southern Sudan, Revillagigedo and M-V Island — the island that brought East and West together for their first-ever joint DX operation.

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Maybe the author is also able to pinpoint the real causes of malicious interference always experienced on the DXpedition frequencies as was the case with the 3Y5X operation, and much more. "Where Do We Go Next?" is a must on the bookshelf of every deserving DXer and anyone who would like to become one.

Price: US\$ \$22.95 plus postage. USA add \$3; Canada add \$5; others, add \$7. CA residents, add sales tax.

## KTE Publications

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Following a one-year stint in the United States, Martti Laine is introducing his first work in the field of DX literature. Tentatively entitled "Where Do We Go Next?", this new publication comes in response to public demand for a presentation in book form of the author's spectacular DXploits over the past quarter-century.

Running to almost 300 pages, the book is richly illustrated with pictures from the author's personal archives and it tells you the story of what it is like to be a super-DXer, why anyone should want to become one and how a globetrotting DXer finds life in moments of triumph and everyday toil. Everything told the way only OH2BH can relate it to the amateur fraternity.

Read all about how these DX countries were born and embark on an armchair trip for an all-



## Sri Lanka (4S7)

Twenty meters CW has produced some contacts from Sri Lanka recently. 4S7WP has been worked often between 14.003 and 14.029 MHz. Look for this one several times a day, around 0200, 1200 and 2300 UTC. Also on the same band is 4S7CF, found between 14.006 and 14.034 MHz, usually about the same times as 4S7WP. Other active calls from Sri Lanka include the following:

|        |            |          |
|--------|------------|----------|
| 4S7AVR | 14.193 MHz | 0145 UTC |
| 4S7EA  | 14.010 MHz | 0030 UTC |
| 4S7EF  | 28.446 MHz | 1045 UTC |
| 4S7NE  | 18.074 MHz | 0045 UTC |
| 4S7PR  | 14.010 MHz | 1300 UTC |

## Algeria (7X)

If you need Algeria try scanning the bands for the following:

|        |            |          |
|--------|------------|----------|
| 7X2AB  | 24.960 MHz | 0000 UTC |
| 7X2ARA | 24.933 MHz | 1645 UTC |
| 7X2DG  | 18.155 MHz | 1215 UTC |
| 7X2DS  | 14.213 MHz | 0215 UTC |
| 7X2VZK | 21.300 MHz | 1615 UTC |
| 7X2WAK | 21.335 MHz | 1545 UTC |

## IOTA

Island hunters might want to check this out. And, if you have worked any of the following, this is what you just happened to work:

|        |                     |           |
|--------|---------------------|-----------|
| AS-056 | Danjo Island        | J16KVR/6  |
|        | 21.425 MHz          | 0700 UTC  |
| AS-063 | Andreya Island      | 4K4BAZ/A  |
|        | 14.010 MHz          | 0045 UTC  |
| NA-075 | Saltspring Island   | VE7FEI    |
|        | 21.260 MHz          | 2045 UTC  |
| NA-112 | North Carolina West | W8JGU/100 |
|        | 14.021 MHz          | 2345 UTC  |
| OC-006 | Tasmania            | VK7CM     |
|        | 14.027 MHz          | 1245 UTC  |
| OC-046 | Moorea Island       | FO0PT     |
|        | 10.103 MHz          | 0630 UTC  |
| OC-065 | Reef Island         | H44MS     |
|        | 28.481 MHz          | 1100 UTC  |
| OC-070 | Ambon Island        | YF8WM     |
|        | 21.260 MHz          | 1400 UTC  |
| OC-136 | Phillip Island      | VK3VO     |
|        | 21.202 MHz          | 0500 UTC  |
| OC-137 | Bribie Island       | VK4WUU    |
|        | 14.257 MHz          | 0915 UTC  |
| OC-150 | Lombok Island       | YB9KP     |
|        | 21.260 MHz          | 1400 UTC  |

Perhaps you worked some of the above not knowing the IOTA status. Don't be confused with that appended 100. It is reported to be perfectly legal, as there is no official ITU prefix in that series. Personally, I think it is a lot of nonsense and feel an appended call with a P or the applicable district designator is more appropriate. The 100 is not valid for WPX either.

If you worked ZY0P during the WPX Contest you worked Sao Sebastiao (SA-028). QSL cards for this one go via PP5SZ. If you were one of the lucky DXers to work VP8SSI, you worked AN-009.

## IOTA Honor Roll

The following is a list of calls of those IOTA types on the Spring 1992 Honor Roll. To save space, only North Americans are listed here.

|       |     |       |     |
|-------|-----|-------|-----|
| VE3XN | 622 | KC8PG | 427 |
| W9DWQ | 602 | WT2O  | 415 |
| VE7IG | 601 | N6BOI | 405 |
| W9DC  | 601 | K5MK  | 388 |
| W4BAA | 600 | K6DT  | 386 |
| K9PPY | 559 | W1ENE | 376 |
| K2VV  | 542 | N3CWP | 371 |
| K2EYJ | 499 | K8DYZ | 348 |
| KD7SO | 492 | K5FNR | 341 |
| KE4I  | 459 |       |     |

The cutoff on the above list was that of K5FNR. Previously, all were listed in the Honor Roll (or Honour Roll if you are a Brit or Canadian). However,

the interest has increased too much in this program. The rest of the active members involved in the IOTA program numbered twice the above. Many thanks to *DX News Sheet* for the above information.

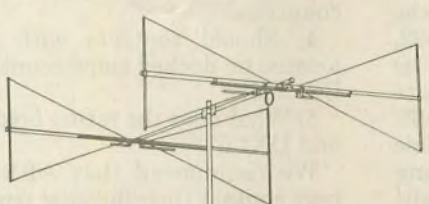
As a matter of interest, Garry Hammond, VE3XN, is number three overall on the list (the number one and number two spots were F9RM with 647 and I1ZL with 639, respectively). So, what else is new? Garry works anything that moves!

## DXCC matters

The DXCC desk reports that the operations by VP8CIZ of South Georgia Island this past March, and

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that of EP/HA5BUS in December, will be accepted for DXCC credit.

Concerning the criteria for operating from Mount Athos, the League states the following:

"The first requirement for operating from the Athos region of Greece (Mount Athos) is an Amateur Radio license issued by, or recognized under treaty by, the government of Greece.

"All visitors to Mount Athos must have an official written permission (called diamonitirion) to enter the region. In addition to this, DXpeditioners must have written permission to transmit from Athos. Entry and Amateur Radio operation permission must both come from the Holy Community of Mount Athos. Authority for administration of the Community lies in the hands of the Superiors of the Common Congregation of the twenty Holy Monasteries of Mount Athos.

"DXCC accreditation for DXpeditions to Mount Athos will be given only to those who have met these requirements."

The ARRL DXCC desk has announced a new program for those who reach the top of the Honor Roll for the first time. Beginning on April 1, 1992, DXCC members who have reached the top of the heap on or after that date will have their calls recognized in QST each month. They will also be eligible to order a plaque commemorating their achievement after their calls have been published. Plaque order forms are available from the ARRL DXCC desk, and will be automatically sent to DXCC members when they first reach the top spot.

The ARRL is presently advertising a position, DXCC Specialist. Interested parties should contact Tom Hogerty, KC1J, at 203/661-1541 (ext. 285). Please call weekdays between 0800 and 1700 EST. You must be willing to travel, have strong interpersonal and communications skills, and have PC skills.

### DXCC applications

The ARRL DXCC desk no longer requires that data from the QSL cards be listed on the rear side of DXCC application forms when cards are being sent to ARRL headquarters. However, for field checking purposes this information must still be included.

The DXCC desk requests the latest version of the application form. A copy of this form is included in recent editions of the ARRL DXCC countries list.

### DXAC matters

At the end of March there were several DXAC (DX Advisory Committee) actions, which included the following:

1) The unanimous (15 to 0) rejection of Vatican Enclave of the Holy House (HV0HH) for new DXCC country status.

2) The proposal to add Pratas Island (21N 117E), awaiting further information and a formal application.

3) The proposal to make Ceuta and Melilla (EA9) two separate countries based on Rule 3, separation by another DXCC country.

4) The proposal to delete Spratley Islands (1S), based on no longer meeting criteria.

5) The proposal to delete South Sudan (ST0), based on no longer meeting criteria.

Of the above, of course, the only confirmed action was that of HV0HH. The DXAC is further considering the following:

1) Should electronic confirmation be acceptable for DXCC credit?

2) Should separate DXCC country status for the Vienna International Center (4U1VIC) be reconsidered?

3) What are the appropriate guidelines and procedures for DX operations, particularly DXpeditions to rare countries?

4) Should contacts with stations located on docked ships count for DXCC credit?

5) What does the future hold for DX and DXCC?

We recommend that ARRL members contact their division representative in the DXAC regarding the above matters. If you don't know who your representative is, contact the chairman, Ted Pauck, K8NA.

### Those lists again

We received some feedback on our remarks concerning lists. Mark, WU8A, says that he too will get on a list if he can work a new one. He has worked 264 countries and has only worked three new ones via the list method. This, of course, is the way most of us would go about it. However, there are those who would not work a new one at all rather than get on a list. This to me is cutting off your nose to spite your face!

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### Pitcairn Island Award

Jim Yex, WB3CQA, informs us that on March 21 he received a note from Dr. O'Toole, KB6ISL, stating that "it won't be much longer now." Jim feels that WB6ISL's approach should have been to write a short letter to some key publications explaining the delay.

Many of our readers have expressed concern about the legitimacy of this award. As of this date, April 22, we have not heard anything further (since 1/9/92) from Dr. O'Toole. We know of non one, as yet, who has received either a certificate or a refund, though Dr. O'Toole has distributed considerable correspondence. We are not in a position to advise *Worldradio* readers whether this is or is not a legitimate award.

We do encourage Pitcairn Bicentennial participants to have patience; certificates such as this can present a difficult and time-consuming process. If, however, you have sent money for this award and your patience has run out, you may file a case with your local US Postmaster.

### Antique QSLs

The following old-time QSL card is from the collection of Al Miller, VE7KC. Al worked ZT5P of South Africa way back on September 29, 1937. Al, then VE5KC, worked operator Warby on 20M CW.

|   |   |  |
|---|---|--|
| QSL No. 643   |   | 14 MC. Contest   |
| SARRL — SOUTH AFRICA — ARRL   |   |  |
| AMATEUR RADIO STATION   |   |  |
| RECEPTION   | <b>ZT5P</b>   | TRANSMISSION   |
| Confirming out of QSO<br>of the 2945 0611 1937<br>At 1745 hrs. LAST<br>Ur. Cr. 310 AST 579<br>Re. National City<br>We. 10/24/37<br>Qrn. 441<br>Qrm. 441<br>TEMP 66° FAH | TO RADIO<br><br><b>VE5 KC</b><br><br>CHERHO EN 73<br>H. G. WARBURTON<br>P.O. Box 288<br>MARYBURG, NATAL | XMTA Co. Buff. 14<br>Tubes 33, 45, 46, 47<br>Plate Valves 300<br>Input Watts 100<br>Xtal Free, Audio AC<br>Ant. Centre-fed, 44' legs<br>Sp. Amp. 27 at 16<br>Mod. Valves Two 704<br>Plate Modulation |
| MINI TNX QSO, PSE   |   | QSL by post to make. 441 Encl. 73. 10/24/37  |

### QSL information

The QSL bureaus at Seychelles (S79), Belize (V31) and Rwanda (9X5) are no longer served by the ARRL Outgoing QSL Service. These bureaus are no longer in operation, according to the ARRL. QSL cards to DXers in these countries should be sent direct or via their QSL managers, if any.

### QSL help

Mike Gauthier, K6ICS, is looking for some help in collecting QSL cards from KC4USN (1958) and 9L1EK. Mike also listed many other calls and after looking them over, much of them appear to be from activity in the last DX contest. Such calls will be printed when received. We also recommend that many be sent via the bureau. If you are a member of the League you can use the outgoing bureau. Garden variety calls such as OG1AJ, OG2HE



and OG30J are the same as OH calls with the same suffixes. They are in the *Callbook*.

Earl Gosnell, N7NZ, is looking for an address for FG5BG, who is not in his copy of the *Callbook*. Earl, try FG4BG, his former call.

Earl also offers advice on filling out reports for QSL cards, especially with the Russians. He recommends that the "6" and "9" have feet that bend over. Also, add the cross-hatch to the "7" and "Z." This is common procedure for the rest of the world anyway. In that way, one can tell the difference between the figure "1" and "7" and not confuse a "Z" with a "2." In addition, a pronounced tail should be part of the figure "1." Many thanks, Earl, for your suggestions.

Last month we noted AI6V as a possible QSL route for KX6DX. However, we've been notified since then by AI6V that he is *not* the QSL manager for KX6DX. You can send QSLs to AI6V for contacts made with P49V.

Our QSL routes come from many sources, such as DX newsletters and readers. However, we sure would appreciate QSL routes to be submitted in alphabetical order. It saves time and gives N6JM more time to work DX. Thanks!

### QSL Routes

|           |         |             |         |
|-----------|---------|-------------|---------|
| AH0K      | -JF2PZH | KP5/K0BJ    | -K0BJ   |
| AZ9F      | -LU9FHF | KP5/N1DX    | -N1DX   |
| C50A      | -F1MXH  | L2Q         | -LU2QC  |
| CK7K      | -VE7EY  | LO3F        | -LU6FAZ |
| CT6E      | -CT1EAT | OD5MM       | -HB9CYH |
| CU20T     | -CU2CE  | P20A        | -P29DX  |
| CZ7Z      | -VE7ZZZ | P29DK       | -N4EDF  |
| D2ACA     | -RT5UA  | P29WK       | -N3ART  |
| D2/KC7QU  | -K8JP   | P40Z        | -K6URI  |
| D2/WA9PQX | -K8JP   | P49V        | -A16V   |
| D73DX     | -HL5BUV | PA6WPX      | -PA3CAL |
| DX2VOA    | -W7KNT  | PJ9Y        | -OH6YX  |
| EG7ABW    | -EA7AB  | PR0R        | -PP5JR  |
| EX9X      | -UA9XC  | PU4B        | -PY4BA  |
| EZ6L      | -UZ6LWZ | PW2A        | -PY2NY  |
| EZ9MA     | -UA9MA  | PY0FZ       | -PY7ZZ  |
| FJ5BL     | -F6AJA  | RH0E        | -W6BWA  |
| FM5BH     | -F6HEQ  | RN3KDX      | -UA1NEJ |
| FO0PT     | -DJ0FX  | RU6B/RZ4HXX | -OH7AB  |
| FS4PL     | -FG4BG  | RU0Y        | -K8YSE  |
| GW3KGV    | -G3KGV  | RW9C        | -UW9CYA |
| H44MS     | -DL2GAC | RY2I        | -NA3O   |
| HC1XF/8   | -W4XT   | RY0F        | -DF8BK  |
| HD0T      | -HC1OT  | S79KMB      | -KN2N   |
| HG73DX    | -HA5ML  | S92AGD      | -SM0AGD |
| H1500A    | -JA5DQH | S92IJ       | -DJ510  |
| HK00EP    | -HK0NZY | S92SM       | -SM0AGD |
| HR2BDC    | -AA5ET  | SV0DV       | -WB4TDB |
| HS1BV     | -W3HCW  | SV0HN       | -WB4TDB |
| HU1FT     | -DL7FT  | T32BW       | -HA8XX  |
| HU0PAX    | -YS1OD  | T10HE       | -T12VVR |
| I109QV    | -I0YQV  | TK6A        | -F6AJA  |
| I10NU     | -I0KHP  | TK5C        | -F6AJA  |
| IJ1A      | -I1RBJ  | TM2P        | -F6BFH  |
| IR2ARI    | -IK2FEO | TM2V        | -FF6KRC |
| IR3BQC    | -I3BQC  | TM4V        | -F6DZU  |
| IR8A      | -I8QLS  | TM9R        | -F9RM   |
| IR0C      | -IK0AZG | TX4B        | -F6A0J  |
| IU2M      | -IK2SFZ | UD6DR       | -GW3CDP |
| IU9A      | -IT9GSF | UF6FJ       | -OZ1HPS |
| IU9S      | -IT9BLB | UF6VM       | -WF2S   |
| J37M      | -W9VW   | UI9BWF      | -UA3TT  |
| J42MAC    | -SV2BEL | UJ8KA       | -UJ8JMM |
| J47MAC    | -SV7QI  | UM8FZ       | -FD10JO |
| J68AX     | -OH3VV  | UX6B        | -OH7AB  |
| J73WA     | -KC4DWI | V29PI       | -DJ5KX  |
| JX3P      | -LA3DH  | V31DX       | -KA6V   |
| KC4AAA    | -NC6J   | V31TI       | -V31SW  |
| KC4USV    | -KG5GH  | V31VOA      | -V31SW  |
| KG4DD     | -N5FTR  | V32SW       | -V31SW  |

# DX Prediction — June 1992

Maximum Useable 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 Useable 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.

## CENTRAL USA

| UTC | AFRI | ASIA | OCEA | EURO | SO AM |
|-----|------|------|------|------|-------|
| 8   | (26) | 23   | *24  | 19   | *20   |
| 10  | 30   | *19  | *22  | 19   | *22   |
| 12  | 36   | 21   | *20  | 24   | 27    |
| 14  | 40   | 25   | (19) | 27   | *34   |
| 16  | 43   | 25   | (18) | *29  | *38   |
| 18  | *45  | (22) | (18) | *29  | *42   |
| 20  | *37  | 28   | 34   | 27   | *43   |
| 22  | 30   | 31   | 41   | *25  | *39   |
| 24  | 26   | 31   | 44   | 20   | *32   |
| 2   | *23  | 30   | 44   | 17   | *27   |
| 4   | *25  | 28   | *42  | *21  | *24   |
| 6   | 33   | *27  | *35  | *25  | *21   |

## WEST COAST

| UTC | AFRI | ASIA | OCEA | EURO | SO AM |
|-----|------|------|------|------|-------|
| 10  | (23) | *28  | *22  | 19   | *26   |
| 12  | (26) | *22  | *20  | 20   | 24    |
| 14  | (30) | *25  | *19  | 24   | 31    |
| 16  | 33   | *25  | (18) | 27   | 37    |
| 18  | 35   | 21   | (18) | 29   | *40   |
| 20  | *37  | 27   | 34   | 26   | *43   |
| 22  | 31   | *31  | 42   | 22   | *38   |
| 24  | 26   | *35  | 44   | 19   | *34   |
| 2   | 23   | *37  | 44   | 16   | *28   |
| 4   | *25  | *38  | 42   | 21   | *25   |
| 6   | 33   | *36  | *35  | 26   | *22   |
| 8   | 27   | *34  | *24  | *25  | *20   |

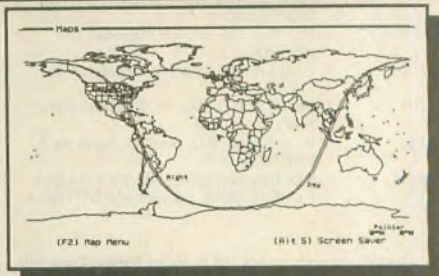
## EAST COAST

| UTC | AFRI | ASIA | OCEA | EURO | SO AM |
|-----|------|------|------|------|-------|
| 7   | 25   | 23   | *27  | 19   | *21   |
| 9   | 28   | (20) | *23  | 21   | *22   |
| 11  | 35   | (22) | *21  | *25  | 27    |
| 13  | *39  | 26   | (19) | *28  | *33   |
| 15  | *43  | 22   | (19) | *29  | *38   |
| 17  | *44  | (18) | (18) | *30  | *41   |
| 19  | *40  | (21) | (23) | *29  | *43   |
| 21  | *33  | 25   | 38   | *26  | *40   |
| 23  | *28  | 27   | 43   | *24  | *36   |
| 1   | *24  | 29   | 44   | *20  | *30   |
| 3   | *20  | 28   | 43   | *17  | *26   |
| 5   | *29  | *28  | 38   | *22  | *23   |

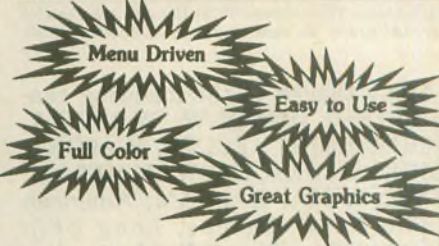
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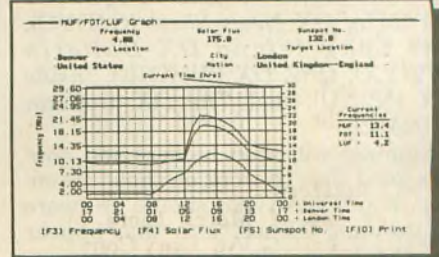
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|            |               |            |         |
|------------|---------------|------------|---------|
| V32YL      | -V31SW        | ZS9/DL3ECK | -DH8EAF |
| V5/DF2ZQ   | -DH8EAF       | ZW1Z       | -PY1NEZ |
| V5/DH8EAF  | -DH8EAF       | ZW5B       | -PY5EG  |
| V85KX      | -G3JKX        | ZY5Z       | -PY5NW  |
| VK9CK      | -F61MS        | ZY0P       | -PP5SZ  |
| VK9CL      | -F61MS        | ZZ9A       | -PY5CC  |
| VP2EOH     | -K8BL         | 3DQ2B      | -SM3CER |
| VP8BZL     | -AA6BB        | 4D1P       | -10WDX  |
| VP8CEH     | -G0NWY        | 4D9RG      | -DU9RG  |
| VP8SSI     | -(see note 1) | 4E0DBT     | -DX1DBT |
| VR6FM      | -K16YN        | 4K2MAL     | -UA4RC  |
| XA5T       | -XE2KB        | 4N2Y       | -YU2CCY |
| XB9Z       | -KF7SH        | 4N4AA      | -YU4TN  |
| XE21       | -KF7NR        | 4N4EK      | -YU3RO  |
| XJ1SF      | -VO1SF        | 4T4DX      | -OA8DX  |
| XT2FU      | -K3ZO         | 4U1UN      | -W8CZN  |
| XX9TQL     | -YASME        | 4X4VF      | -K1FJ   |
| YB2UDH     | -YB2CTW       | 5B4ADR     | -YU2AJ  |
| Y11RJ      | -G0MM1        | 5B5E       | -5B4ES  |
| YN/SM0OIG  | -SM0KCR       | 5H3CM      | -K0LST  |
| YQ4A       | -YO4KCA       | 5Y4FO      | -KB4EKY |
| YT9A       | -YT3AA        | 7Q7BR      | -JK3GAD |
| YW5N       | -YV5ARV       | 7Q7BW      | -N5MHZ  |
| ZA1TAB     | -I2QMF        | 7Q7XX      | -JH3RRA |
| ZD8EB      | -N4WQB        | 8A2DX      | -YB2FRR |
| ZD8D       | -W6MKB        | 8Q7PJ      | -PA0CRA |
| ZF2NE/ZF9  | -W5ASP        | 8Q7YF      | -14FYF  |
| ZF2RT/ZF8  | -WA0PUJ       | 9H1EU      | -WA4JTK |
| ZL8RS      | -ZL4DO        | 9J2BO      | -W6ORD  |
| ZS9/DF2ZQ  | -DH8EAF       | 9L/ZR6REV  | -ZR6PRO |
| ZS9/DH8EAF | -DH8EAF       | 9M2NA      | -VE3CHZ |

|             |  |
|-------------|--|
| A45ZX       | -P.O. Box 123, Muscat, OMAN  |
| BY4AOH      | -P.O. Box 052-206, Shanghai, PEOPLE'S<br>REPUBLIC OF CHINA   |
| CM6WD       | -P.O. Box 516, Sancti Spiritus 60100,<br>CUBA  |
| HL5BPF      | -P.O. Box 12, Pusan, KOREA   |
| KC6MM       | -OKDXA, P.O. Box 88, Wellston, OK<br>74881   |
| KC6OO       | -OKDXA, P.O. Box 88, Wellston, OK<br>74881   |
| R3K         | -P.O. Box 308, Kaliningrad 141070,<br>RUSSIA   |
| RK3B        | -P.O. Box 132, Moscow 107005, RUSSIA   |
| RY0Y/UA9USK | -Yuri Sudakov, P.O. Box 24, Kiselevsk<br>652700, RUSSIA  |
| RY0Y/UV9UMP | -Yuri Sudakov, P.O. Box 24, Kiselevsk<br>652700, RUSSIA  |
| RV9UAX      | -P.O. Box 6, 652606 Belowo, RUSSIA   |
| SV3BEJ      | -P.O. Box 54, Tripolis 22100, GREECE   |
| TL8NG       | -P.O. Box 872, Bouca Rural<br>Development Project, c/o United<br>Nations Banqui, CENTRAL AFRICAN<br>REPUBLIC |
| UZ0KWA      | -P.O. Box 225, 685030 Magadan 30,<br>RUSSIA  |
| V73DG       | -OKDXA, P.O. Box 88, Wellston, OK<br>74881   |
| V73DH       | -OKDXA, P.O. Box 88, Wellston, OK<br>74881   |
| V85PB       | -Peter Bacon, P.O. Box 715, Seria 7082,<br>BRUNEI  |
| YA5MM       | -P.O. Box 321, Sofia 1000, BULGARIA  |
| 8RIUN       | -P.O. Box 10960, Georgetown, GUYANA  |

Notes:  
1. All QSL requests go via the Branson family. Joan will handle the CW and RTTY contacts and Jerry will handle the SSB contacts. Their address: 93787 Dorsey Lane, Junction City, OR 97448. Be sure to include a separate SASE.

Many thanks to the following contributors: UO5OLW, WB3CQA, K6ICS, K6JG, KE6LT/0, WA6OET, K6URI, N6UXB, KA6WRF, KF7AM, N7NZ, WU8A, KA8RAM, American Radio Relay League, Long Skip (VE3IPR), The DX Magazine (VP2ML), DX News Sheet (G4DYO), The Long Island DX Bulletin (W2IYX), QRZ DX (W5KNE), Inside DX (N2AU), and The DX Bulletin (VP2ML).

Summer will soon be here and now is a good time to work on those antennas. You IOTA types should be aware of the mini-DXpeditions that appear on the bands during the summer. Anyway, have a good summer. 73 de John N6JM. □

# NCJ's 20th anniversary

## NORM BROOKS, K6FO

"The *National Contest Journal* was introduced at the International DX Convention in Fresno in 1973. This was appropriate, as contesting has always been a big part of the DX convention. Since it was introduced here over 20 years ago, it is only fitting that we acknowledge the past and future of the *NCJ*."

These were the words of Dave Bell, W6AQ, MC of the International DX Convention, as he introduced Tom Taormina, K5RC, the current editor of *NCJ*.

"I have never been able to explain this synergism between DXers and contesters," Tom remarked, "but it has always been that way. Perhaps the DXers enjoy the multipliers that are on during the contests, and the contesters appreciate all the DX stations that are on."

"*NCJ* just published Volume 20, Number 1, in January. That makes this the beginning of the 20th year of the *NCJ*. There was a nice story in the January *QST* about it."

"The *NCJ* was the brainchild of Tod Olson, K0TO, Tom Schiller, N6BT, and the Minnesota Wireless Association. In the last 19 years we have had six other editors besides Tod: Pete Grillo, AH3C; Dave Pruett, K8CC; Randy Thompson, K5ZD; John Crovelli, W2GD; and Rick Niswander, K7GM. And this is my second time as editor."

"Please join me now in a little time travel, backward and forward through the last 19 years of the *NCJ*. When the *NCJ* was born all the radios had tubes in them; today none of them do. Collins, Drake and Heath were the names; today it's Kenwood, Icom and Yaesu. We had D-104 microphones and TO keyers. Today we have Heil headsets

and serial ports. Most of us had a TA-6 or a TA-33, and 40M beams were a novelty. Today, the old TA-6 or TA-33 is the backup antenna pointed at the Caribbean. Back then, 2M repeaters were just becoming popular and DX spotting nets were just forming in the bigger cities. Today we have packet spotting networks connected virtually nationally—we've come full circle. In Houston we have a voice synthesizer that reads the packet spots in voice to our DX repeater. We call it



Dave Bell, W6AQ, served as MC for the convention.

"Ygor McMurphy." I remember when you had to keep a log book, and you could have a call sign in every call area. Today, instead of a log book, we keep a computer database and we have one call sign.

"The Minnesota Wireless Association came up with the idea of a national contest journal, and it started out on a shoestring. It had 16 pages, folded 8½ × 11, it was hand-typed with hand-drawn diagrams, and it was hand-folded, stapled and labeled—all of those things which those of you who ever put out a newsletter will remember. It was a pretty radical idea at the time. It was a struggle the first few years. The circulation got up to about 300 of the hard-core contesters. Today, we average about 40 pages, still 8½ × 11 inches. The anniversary issue was 80 pages. We have pictures, graphs and over 20 regular contributors. My job is relatively easy

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because I have such a talented staff of individuals sending material in regularly. The May-June 1992 issue will be the first to have a press run of 3,000. We have readers in over 44 countries. These are pretty exciting times.

"We haven't lost the basis of *NCJ*. We still exchange information, and we still publish claimed scores and contest results. We now have a VHF column and a DX contesting column.

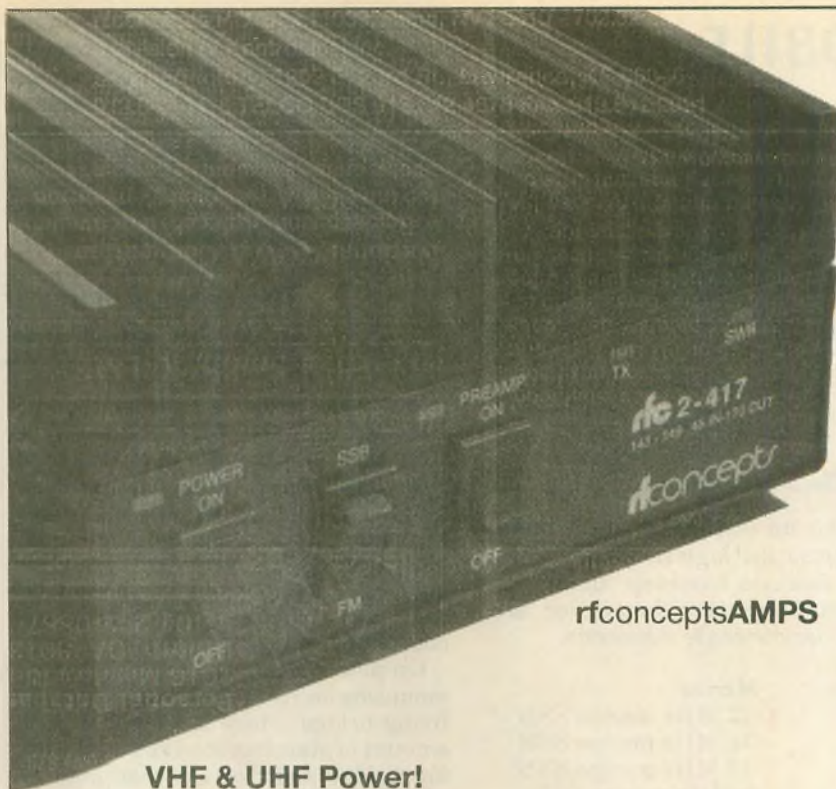
"As we researched the 20th anniversary issue we thought we'd find a lot of deep memorabilia. To our surprise, very little of what was going on back in the 70s had much bearing on what is going on today. Back then we were talking about such things as tape loops, the Octopus, making an 'S' line transceiver, hired guns, rubber clocking, band-countries—things that have very little meaning today.

"Technology has absolutely driven contesting and DXing. In our issues today, we cover such things as math co-processors for modeling four high Yagi stacks, cable TV interfering with packet radio, super-check partial, normalized distribution curves for band changing times and digital signal processing. QSO parties have given way to Sprint. We don't seem to have the time to commit to DX anymore. The DX contest used to be 96 hours and now there is pressure to reduce it to 36. Today 50 MHz computers are more prevalent than 50 MHz radios.



**Tom Taormina, K5RC, editor of the *National Contest Journal***

"The 20th anniversary issue of the *NCJ* was fun to do. I thought it would be a good springboard to point toward the future of contesting and DXing. K1EA just announced version 8.0 of the *CT* logging program. He also just announced the DVP (digital voice processing) board that plugs into your PC. Here's a scenario for what the CQWW contest might be like this coming fall: You program the DVP board with the phonetic alphabet in (please turn to page 82)



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 rfc 2-117    10w in = 170w out  
 rfc 2-317    30w in = 170w out  
 rfc 2-417    45w in = 170w out

#### 220 MHz Amps

rfc 3-22      2w in = 20w out  
 rfc 3-211    2w in = 110w out  
 rfc 3-112    10w in = 120w out  
 rfc 3-312    30w in = 120w out

#### 440 MHz Amps

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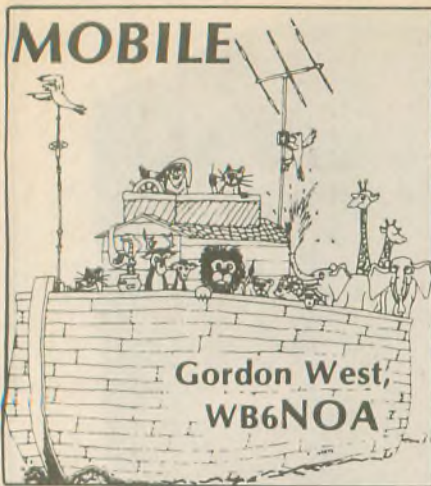
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### Installing an outbacker on a boat

The Outbacker high frequency whip antenna features band-tap tuning for all popular amateur bands, or all popular marine single sidebands.

| Amateur | Marine                        |
|---------|-------------------------------|
| 10M     | 22 MHz marine SSB             |
| 12M     | 16 MHz marine SSB             |
| 15M     | 12 MHz marine SSB             |
| 17M     | 8 MHz marine SSB              |
| 20M     | 4 MHz marine SSB              |
| 40M     | 2.182 MHz marine SSB distress |
| 75/80M  |                               |

There is also an Outbacker available for marine hams that incorporates ham bands as well as marine bands. Simply choose the band of your choice, insert the wonder-lead tap into the band tap point, and you're tuned up.

The nice thing about the Outbacker is that no antenna tuner is required to make this system work. It matches perfectly to any ham rig or to any marine single sideband transceiver. The 4 ft. or 6 ft. antenna features 3/8 x 24 threads and screws into a Valor stainless steel marine rail-mount (model SS100AD, available from Ham Radio Outlet stores, 800/854-6046).

The Outbacker high frequency whip

antenna is a 50 ohm impedance system. In other words, it is designed to work directly from your HF transceiver or your marine worldwide SSB transceiver without any need for a matching device. The mariner simply plugs into the band tap of choice, and the quarter-wavelength antenna is perfectly pre-tuned for that particular frequency.

mounting point for the HF whip is on the horizontal stainless steel rail, aft. Keep the antenna at least 12 inches away from any other antennas. Also, keep the antenna at least two feet away from the horizontal section of the self-steering vane. The antenna may be angled back at 45 degrees for appearance. This normally won't affect

### The ground plane of a bumper rail channel must be within one inch of the whip base

But wait—there is another requirement for any type of HF quarter-wave whip to work aboard a boat, and that consideration is the horizontal ground-plane that must be beneath the whip's feedpoint. This means the whip must be placed over a horizontal stainless steel rail or stanchion. The horizontal rail and/or lifelines will act as the counter-poise ground system.

On power boats, the rail suitable for mounting an HF whip may be up on the flying bridge. There is usually a good amount of stainless steel rail on the flying bridge sides or aft that may be used for the ground counterpoise. The whip with its stainless steel mount is clamped over the horizontal rail, and that's it.

On very small power boats, the stainless steel rail may be the rail up forward. Just a few feet of rail is all that's necessary to obtain good performance on the middle to top end of the HF bands. If there are absolutely no horizontal rails available, even the little aluminum channel for the rubber bumper rail could be used as the horizontal groundplane. But the whip must be placed within an inch of this groundplane in order to properly resonate. In other words, you can't mount the whip over something fiberglass and then connect a little wire over to a horizontal groundplane and expect it to work.

On sailboats, the most convenient

performance. But the antenna and its stainless steel mount must be clamped directly to a horizontal rail. It must be on the top part of the rail, too.

You cannot expect performance from the HF whip if it's mounted on fiberglass and interconnected via a small wire over to a horizontal rail. Won't work. The antenna must be placed on the horizontal portion of the rail in order to achieve a 50 ohm match (typically, closer to 30 ohms).

On very small boats, the horizontal rail may only extend a couple feet in each direction. This should give reasonable efficiency for the higher frequencies, but may not be enough ground counterpoise for 40M and 75M, or marine bands 8 MHz, 4 MHz, and 2182 kHz. This may require an additional ground plane.



The Outbacker marine antenna system is easily moved from car to boat.

To enhance the ground characteristics of your horizontal rail, you could tie in 3 in. copper foil to your rail's deck connection point and run that foil down to your underwater bonded bronze through-hulls. It takes foil in order to convey the ground plane effect. Wire won't work.

You could hose-clamp or double-nut

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Model B for FT-23/33/73/411E/811/470/911 (slide on).  
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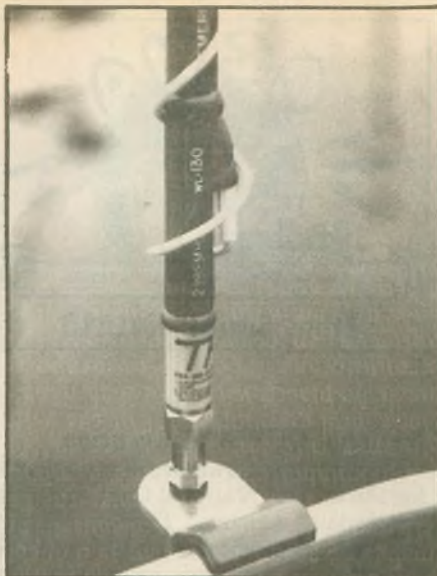
the foil onto the below-deck mounting of the stanchion that holds the rail in place. Sometimes this is a corroded connection, so a wire brush and a hose clamp will do the trick nicely. Run the foil from this rail connection below decks down to your green wire bonded metallic through-hulls. You must make contact with the sea water in order for this to work. On a temporary installation, you could just throw the foil into the water, with the other end connected to the outside of the PL-259 connector at the base of the antenna. Looks weird, but it works great for a temporary at-anchor basis.

If your vessel has no underwater bonded metallic through-hulls, you might consider an external porous grounding plate. Ground plates are available from all marine supply companies, including West Marine (800/538-0775). Different sized ground plates are available, and you would choose a size that corresponds with your size of vessel. For small boats, a little 12 in. plate is fine. For very large yachts, you might go for a number of 1 ft. square plates. The ground plates are porous and offer terrific ground plane characteristics at radio frequencies for their relatively small size.

The coax that interconnects from the base of the antenna and rail system to the transceiver may be marine grade RG-8X. This is larger cable than RG58U, but not monster cable like RG8U. RG-8X marine grade features a white PVC jacket, a non-foam dielectric, and silver-tinned copper braid and stranded center conductors. A weatherproof boot goes on the antenna end of the connection in order to seal out moisture from getting into the PL-259 where it meets the Valor stainless steel mount. If you have an extremely wet mounting spot, you may wish to add Coax Seal, the wonderful goo product from Universal Electronics (4555 Groves Road, Suite 13, Columbus, OH 43232, and available from Ham Radio Outlet and other leading ham radio dealers).

The coax is routed through the deck using a waterproof plastic or nylon deck fitting. These fittings are available from West Marine, too. Just be sure to specify that this through-deck waterproof assembly is going to fit RG-8X coax cable. This little plastic widget clamps around the coax and effectively seals out any water that is sloshing around the deck. It is an essential component any time you are going through fiberglass with wires.

The other end of the coaxial cable simply plugs into the antenna SO-239 connections on your HF transceiver, or on your marine SSB rig. Your HF equipment should also have a good foil ground from its chassis to any large amount of ground material below your



The whip *must* be mounted directly over a metal rail.

navigation station. This might be your stainless steel water tank, a single bronze through-hull, or even your sailboat's keel bolt. On power boats, a good ground might be your automatic pilot hydraulic lines, stainless steel tanks, or any bonded through-hull.

The Outbacker antenna is covered with a flexible polyurethane coating. This prevents anyone onboard from getting a painful RF burn if they should touch the antenna; except for

the corona ball at the tip, the Outbacker antenna is RF safe. The antenna is also strong enough to serve as an emergency hand-hold if someone is getting out of a dingy and grabs the base of the antenna to get onboard. Its sturdy inside fiberglass takes this type of punishment.

The performance of a quarter-wavelength helical-loaded whip over a horizontal ground plane, out on the water, is next to miraculous. You will have a signal much stronger than most vehicles have with a similar type of antenna. This is because you are not only coupling into your horizontal rail counterpoise, but that counterpoise has a capacitive coupling to the sea water. The lower your ground resistance, the higher your radiation resistance, and the better the efficiency of your antenna system. This is why broadcast stations locate their transmitting towers in marshes—they need that horizontal ground counterpoise to give them better efficiency.

Get set for some very-long-range SSB marine radio contacts and exciting DX worldwide when you properly mount your high frequency whip over a horizontal ground plane on your power boat or sailboat.

For a free technical specifications sheet about Outbacker high frequency ham and marine whips, write Don Arnold, WD4FSY, 330 Cedar Glen Circle, Chattanooga, TN 37412. □

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## National QCWA Convention

Registration forms are now available for the QCWA National Convention in Scottsdale, Arizona. The convention will be held October 9 and 10 and the cut-off date for room reservations is September 8. This is a convention you won't want to miss. Send in your registration right away. For more information, see the *QCWA Journal* or write to Gerald Higgins, W9INP, 8602 Dogleg Drive, Box 5345, Carefree, AZ 85377.

At this convention you can participate in planning the future of QCWA and enjoy the fine fellowship of QCWA members and their families. Enjoy the Wild West atmosphere of Old Scottsdale and the glamour of the elegant new Fashion Square mall. Visit the famous Camplin fighter aircraft museum and tour the beautiful foothills of Scottsdale. You will find the two days (or more) packed with interesting activities and they promise the weather is always ideal in October. We are looking forward to a great turnout at the convention and hope you will be among those present.

## Cast your ballot

Ballots for the election of five directors should have been received in the mail in the past few weeks. Be sure to cast your vote.

## QSO parties

There was good participation in the CW portion of the QSO Party this year, but the phone portion ran into some difficulties when it collided with the ARRL Worldwide DX contest! A few valiant members tried to give out reports in both activities, but many were discouraged by the QRM. Next year we hope to avoid such a conflict!

## Good philosophy

In the spring issue of the *Journal* President Harry Dannals, W2HD, commented that he is looking ahead for the good old days, and he pointed out a number of reasons why he feels this is an accurate statement. He went on to say, "Let us not only look for the good old days to come, but give an assist wherever it is possible." I like his philosophy!

## Help wanted

Comments and input for this column are eagerly solicited. We want to make it an interesting and informative column that will spark interest and bring new members into QCWA. We can use all the help we can get. Please let us hear from you.



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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 Street, Sacramento, CA 95818.

### ALABAMA

**Montgomery Amateur Radio Club (W4AP).** P.O. Box 3141, Montgomery, AL 36109. Meets 3rd Mon./monthly, 7 p.m., State Trooper Dist. Office, Coliseum Blvd. & Federal Dr. Nets Sun. 8:30 p.m. 146.84- and Thurs. 8:15 p.m. 147.18+. Info: Fred, K8AJX, (205) 270-0909.

### ALASKA

**Arctic Amateur Radio Club.** Geophysical Institute West Ridge U of A, P.O. Box 81389, College, AK 99708. 1st Fri./monthly, 7:30 p.m.

### ARIZONA

**Cochise Amateur Radio Assn. (CARA).** Meets 1st Mon./monthly, 7:30 p.m. at club facility on Moson Rd., Sierra Vista, AZ. WA7KYT/R 146.16/76 rptr.

**Scottsdale Amateur Club.** Meets 1st Wed./monthly, 7:30 p.m., Scottsdale Sr. Cntr., 7375 E. 2nd St., Scottsdale, AZ. Net Tues., 7 p.m., 147.18 rptr. Info: Barney Fagan, KB7KOE, (602) 861-2817.

**Tucson Repeater Assoc., P.O. Box 40371, Tucson, AZ 85717-0371.** 2nd Sat./monthly, 7:15 p.m., Pima Co. Sheriff Bldg., 1750 E. Benson Hwy. Net Thurs. 7:30 p.m. 146.22/82 (146.88-, 147.08-, 448.550-, & 145.15 Packet).

### ARKANSAS

**Central Arkansas Radio Emergency Net, (CAREN).** Meets 1st Thurs./monthly, 7 p.m., 1111 West Capitol Ave., Little Rock, AR. Thurs. night net, 8 p.m., 146.940, swap net afterward. Severe WX net anytime 146.940. Code 8 theory classes continuously. Info, KB5IDB, Bob Hancock, (501) 771-2617.

### CALIFORNIA

**Amador County Amateur Radio Club.** P.O. Box 1094, Pine Grove, CA 95665. Meets 1st Tues./monthly, 8 p.m., Jackson Sr. Cntr., 229 New York Ranch Rd., Jackson, CA. Info: call 146.835.

**Amateur Radio Club of El Cajon.** WA6BGS. P.O. Box 50, El Cajon, CA 92022. Meets 2nd Thurs./monthly, 7 p.m., La Mesa Church of Christ, 5150 Jackson Dr., La Mesa, CA. Rptrs. 147.675(-), 224.080(-). PL 107.2. Nets 147.570 Wed./Sat., 7 p.m. info (619) 697-2700.

**Associated Radio Amateurs of Long Beach, W6RO.** P.O. Box 7493, Long Beach, CA 90807. Meets: 1st Fri./monthly, 7:00 p.m. Signal Hill Recreation Hall, 1708 E. Hill St., Signal Hill, CA.

**Conejo Valley Amateur Radio Club (CVAARC).** P.O. Box 2093, Thousand Oaks, CA 91358-0917. Meets 1st Thur./monthly at King of Glory Lutheran Church, 2500 Borchard Rd. Newbury Park, CA, 7:30 p.m. Info on 147.885/285 and 445.925/0.925 (PL 123) or call N6LQ Ernest (805) 499-5398.

**Corona Norco ARC, (CNARC).** Meets 1st Mon./monthly, 7:30 p.m., The Pizza Palace, 1197 Magnolia Ave., Corona, CA 91719. Talk-in 146.535 S.

**Downey Amateur Radio Club.** Meets 1st Thur./monthly, 7:30 p.m., So. Middle Sch., 12500 S. Birchdale, Downey, CA. Wky nets—Thur., 7:30 p.m. 146.595 (S). For info: P.O. Box 207, Downey, CA 90241-0207.

**East Bay Amateur Radio Club, Inc.** Meets 2nd Fri./monthly, 8 p.m.-10 p.m., Northbrae Community Church, 941 The Alameda, Berkeley, CA. Info: Gordon Firestein, (415) 527-9382.

**Escondido Amateur Radio Society (E.A.R.S.).** Meets 4th Mon./monthly, 7:30 p.m., North County Blind Activities Center, 157 E. Valley Pkwy., Ste. 1B, Escondido, CA 92025. Info Net Sundays, 8 p.m. 146.88(-) or 743-4212.

**Fullerton Radio Club, Inc. W6ULI.** P.O. Box 545, Fullerton, CA 92632. Meets: 3rd Wed./monthly, 7:30 p.m., Sr. Citizens Center, 340 W. Commonwealth, Fullerton. Net ea. Tue., 8 p.m. 147.975 (-600). Info, Bob Hastings, K6PHE (714) 990-9203.

**Gabilan Amateur Radio Club GARC.** P.O. Box 2178, Gilroy, CA 95020-2178. Meets: First Interstate Bank, 751 First St., Gilroy, CA, 2nd Thur./monthly, 7:30 p.m. Talk-in 145.47/144.87.

**Golden Empire Amateur Radio Society (VEC).** P.O. Box 508, Chico, CA 95927. Club call W6RHC, Repeater 146.25/85 Meets: 3rd Fri./monthly, 8 p.m. at 1528 Esplanade, Room 110B, Chico.

**Hercules Amateur Radio Club.** P.O. Box 5043 Hercules, CA 94547. Meets 3rd Sun./monthly, 6 p.m. at Ohlone Community Center, 190 Turquoise Dr., Hercules, CA. Info: Noel, AB6AC, (510) 799-4458.

**Hilltop Amateur Mastertie System (HAMS).** Informal mtgs. weekly/Mon. 5 p.m. at Shakey's Pizza, 12924 Washington Blvd., Mar Vista, CA, except 3rd Mon. Call for location. Info, N6FD 213/823-0767.

**Livermore Amateur Radio Club, (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: Rosalie Powers, KC6RUK, c/o LARK, P.O. Box 3190, Livermore, CA 94551-3190. (510) 447-3815.

**Marin Amateur Radio Club (MARC) W6SG.** Box 151231, San Rafael, CA 94915-1231. Meets 1st Fri./8 p.m.; MARC Clubhouse Bldg. 549, HAFB, Novato, CA (415) 883-9789 (Summer exceptions; contact Pete N6IUV, 924-1578). Sun. AM Club at Red Cross, San Rafael.

**Monterey Park Amateur Radio Club (MPARC), K6GIP.** P.O. Box 403, Monterey Park, CA 91754-0403. Meets 2nd Thurs./monthly, 7:30 p.m., Community Rm.—City Hall, 320 W. Newmark, Monterey Park. Nets: Tues. 7 p.m. 147.48 Simplex — 7:30 p.m. 28.385 MHz. Info: John Duce, N6EDX (818) 280-7052.

**Moreno Valley Amateur Radio Assoc. P.O. Box 7642 Moreno Valley, CA 92303.** Meets 4th Mon./monthly, 7 p.m., City Council Chambers—City Hall, corner of Cottonwood & Frederick Sts. Net Tues. 8 p.m. 146.655- (PL 1A). Info, Larry Marcum, KA6GND, (714) 656-1643.

**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(+). Info, George K6YK, (510) 837-9316.

**North Hills Radio Club.** Meets 3rd Tue./monthly, 7:30 p.m., Elks Lodge, on Cypress at Hackberry in Carmichael, CA. (PL 162.2) Net K6IS Thurs., 8:00 p.m. 145.190. 220 Net, Tue. 8:00 p.m. 224.40(-).

**North Shores ARC.** Meets 1st Thurs./monthly, 7:30 p.m., So. Clairemont Rec. Cntr., 3605 Clairemont Dr., San Diego, CA. Info: (619) 224-1294.

**Orange County Amateur Radio Club.** Meets 3rd Fri./monthly, 7:30 p.m. at Republic Fed. Savings Bldg.—corner of Seventeenth St. and I-55 Freeway in Tustin. Call in on 146.55 simplex. Contact Ken Koehechy W6HHC at (714) 541-6249.

**River City A.R.C.S.** Meets: 1st Tue./monthly, 7 p.m. SMUD Bldg., Room B & C, Elkhorn & Don Julio, Sacramento, CA. For info: (916) 483-3293.

**Sacramento Amateur Radio Club.** Contact: Gary Bryant, KB6KZZ, (916) 646-1171. Meets Sacramento Blood Bank, 32nd St. & Stockton Blvd., Sacramento, CA, 2nd Wednesday/monthly, 7 p.m. Info net every noon on Rptr. W6AK/R 146.910.

**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, W6RPL (916) 331-1830.

**San Fernando Valley ARC.** Meets 3rd Fri./monthly, 7:30 p.m., Red Cross, 14717 Sherman Wy., Van Nuys, CA. Net every Thur., 8:00 p.m. KB6C/R 147.735(-).

**San Gabriel Valley ARC.** P.O. Box 88, Monrovia, CA 91017-0033. Meets 1st Tues./monthly, 7:30 p.m. (except Dec.) at Bowling Green Clubhouse, 405 S. Santa Anita Ave., Arcadia, CA 91006. W6QFK, Rptr. 147.165/765.

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

**Santa Clara Valley Rptr. Society (SCVRS).** P.O. Box 2085, Sunnyvale, CA 94087. (408) 247-2877. 146.76 (-600 kHz), 224.26 (-1.6 MHz), 444.60 (+5 MHz), 2 meter/220 net Mon. 9 p.m. Mtgs.-3rd Fri.

**Santa Cruz County Amateur Radio Club, Inc.** Meets last Friday/monthly at Dominican Hosp. Ed. Bldg., Soquel Dr., Santa Cruz, 7:30 p.m. Net K6BJ 146.79 Mondays at 7:30 p.m.

**Santa Monica—Westside Amateur Radio Club.** Meets 3rd Thurs./monthly, 7:30 p.m., Santa Monica Red Cross, 1450 11th St., Santa Monica, CA. Info Net every Tues., 8 p.m., 146.670, -600.

**Shasta Cascade Amateur Radio Society (SCARS) P.O. Box 664, Anderson, CA 96007.** Meets: 3rd Wed./monthly, 7 p.m. at the C.D.F. Conf. Rm., Grape St., near Parkway Ave., Redding, CA. Net 146.64, Wed., 8 p.m.

**Southern California Six Meter Club.** P.O. Box 10441, Fullerton, CA 92635. USB Net Tue., 8 p.m., 50.150. FM Rpt. Net Thur., 8 p.m., 51.80/51.30 tx. FM Smplx, call freq. 50.300.

**Southern Humboldt Amateur Radio Club.** P.O. Box 701, Redway, CA 95560-0701. Meets 4th Wed./monthly, 7 p.m., SHARC Clubhouse, Garberville, CA. Rptr. 146.19/79. Info: (707) 923-2373.

**Stanislaus Amateur Radio Assoc. (SARA).** P.O. Box 4601, Modesto, CA 95352. Stanislaus Co. Administration Bldg., 12th & H Streets, 3rd Tues./monthly, 7:30 p.m. 145.39 MHz W6DEJF, 224.14 MHz.

**Tehama County ARC.** Meets 1st Fri./monthly, 7 p.m., Sept.-June, CA Div. Forestry Training Rm., Antelope Blvd., Red Bluff, CA. For info: 145.850/145.50 W6SYY/R.

**The Trinity County ARC.** P.O. Box 2283, Weaverville, CA 96093. Meets 2nd Wed./monthly, at the CD Hall in Weaverville, 7:30 p.m. WA6BXN Rptr. 146.13/73.

**Tri-County Amateur Radio Assoc. P.O. Box 142, Pomona, CA 91769.** Meets: 2nd Mon./monthly, 7:30 p.m., 703 N. College Way, "The Faculty House," (lower level), Claremont, CA.

**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., 7:30 p.m. Monitors 145.52 Simplex 10 a.m.-5 p.m..

**Vaca Valley Radio Club.** Meets 2nd Wed./monthly, 7 p.m. Vaca Fire Dist. Stn. on Vine St. in Vacaville, CA. Repeater: WX6F 147.475 (-1 Meg) PL 127.3. Ph: (707) 447-2680.

**Victor Valley Amateur Radio Club.** P.O. Box 869, Victorville, CA 92393. Meets 2nd Tues./monthly, 7:30 p.m., Yucca Loma Elementary School, Yucca Loma Rd., Apple Valley, CA. Talk-in 146.940/340, info net Sun. 7 p.m. 146.940/340.

**West Coast Amateur Radio Club.** Serving the Greater LA/Org. Co. area and beyond on 145.44-/4zpl. Meets 3rd Thurs./monthly, nets ea. Mon. at 01715 pst/dst & on 144.33S.

**West Valley Amateur Radio Assoc.** P.O. Box 6544, San Jose, CA 95150-6544. Meets: 3rd Wed./monthly, 7:30 p.m. (except Dec.) W6PIY/R. Net Tue., 8:30 p.m. 147.39+, 223.96.

### COLORADO

**Denver Radio Club.** Meets 3rd Wed./monthly, 7:30 p.m., Denver Red Cross, 444 Sherman at Speer. Club net: Sundays, 8:30 p.m. 147.33 MHz.

### CONNECTICUT

**Middlesex Amateur Radio Society, (MARS).** 5 North Rd., Cromwell, CT 06416. Meets Tues./weekly 7 p.m., Portland Methodist Church, Main St., Portland, CT. Novice classes, VE sessions monthly. Contact Jack, WA1K, (203) 347-8754. Rptr. 147.090 +.

**Tri-City Amateur Radio Club.** P.O. Box 686, Groton, CT 06340. Meets 2nd Tue./monthly, 7:30 p.m. St. Lukes Lutheran Church at Rt. 12. Novice classes. Info, contact Bob, KA1BB, (203) 739-8016.

### DELAWARE/PENNSYLVANIA

**Penn-Del Amateur Radio Club.** P.O. Box 1964, Boothwyn, PA 19061. Sponsor of KA3TWG/Rptr. on 224.220 covering Delaware & Tri-state area. Info/net Thurs/wkly, 20:00 hrs. or call Hal Frantz, (302) 798-7270.

### FLORIDA

**Gulf Coast ARC, Inc. P.O. Box 595, New Port Richey, FL 34656.** Meets 4th Mon./monthly, 7:30 p.m., 3852 Prime Place, New Port Richey. WA4GDN Rptr. 146.67/07.

**Indian River ARC, Inc. (IRARC).** 597 Capri Rd., Cocoa Beach, FL 32931. Martin Andersen Senior Center, 1025 S. Florida Ave., Rockledge, FL. Meets: 1st Thur./monthly, 7:30 p.m.

**Platinum Coast Amateur Radio Society, (PCARS).** Meets 2nd Mon./monthly, 7:30 p.m., Red Cross Bldg., 1150 S. Hickory St., Melbourne, FL 32901.

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

**Suncoast Amateur Radio Club.** P.O. Box 7373, Hudson, FL 34676. Meets 2nd Mon./monthly, 7:30 p.m., First Lutheran Church, corner of Polk & Delaware, New Port Richey, FL. Sponsor of WC2G/Rptr. on 145.35, serving west Pasco County.

### GEORGIA

**Dalton Amateur Radio Club, Inc. (DARC).** Meets 4th Mon./monthly, 7:30 p.m., Old City Park Sch. Bldg., corner of Waugh St. and Thornton Ave., Dalton, GA. Info, Bill Jourdain, N4XOG, (404) 226-3793.

**Metro Atlanta Telephone Pioneer Amateur Radio Club.** Meets 1st Tues./monthly alternately between 12 p.m. at 675 W. Peachtree St. and 6:30 p.m. at Morrisons on Jimmy Carter Blvd., Atlanta, GA.

### HAWAII

**Big Island Amateur Radio Club.** P.O. Box 1938, Hilo, HI 96721-1938. Meets: 2nd Tue./monthly, 7:00 p.m., Helco Auditorium, 1200 Kilauaea Ave., Hilo. Talk-in on 146.760(-), 146.880(-) and 147.040(+).



## ILLINOIS

**Amateur Cross Link Repeater Club.** 29.680, 52.825, 147.225, 224.480, 921.225, 1292.10 and ATV on 916.25. Meets 1st Fri./monthly, 7:30 p.m. For info call (312) 594-1628. KD9FA Repeater/Chicago.

**Fox River Radio League.** Old Bank Bldg., 590 No. Lake St., lower level, Northgate Shopping Ctr. & Rt. 31, Aurora, IL. Meets 2nd Tue./monthly, 7:30 p.m. VEC Xams 3rd Tue./monthly, 7:30 p.m.

**Hamfesters Radio Club, W9AA.** P.O. Box 42792, Chicago, IL 60642. 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 145.07. Info: (708) 535-3496.

**Schaumburg ARC (SARC).** Meets: 3rd Thurs./monthly, 7:30 p.m., Schaumburg Park Dist. Community Rec. Cntr. at Bode & Springinguth Rds., Schaumburg, IL. Net 145.23, 8 p.m. Thurs. Info: (708) 213-0910.

**Tri-Town Radio Amateur Club.** P.O. Box 302, Hazel Crest, IL 60429. Meets 1st & 3rd Fri. (Sept.-June), Hazel Crest Village Hall, 3000 W. 170th Pl. Net Wed. 146.49, 8 p.m. Info: (708) 335-9572.

**Wheaton Community Radio Amateurs, (WCRA),** P.O. Box QSL, Wheaton, IL 60189. Meets 7:30 p.m., 1st Fri./monthly, College of DuPage, Glen Ellyn, IL. Nets Sun. & Tue. 8:00 p.m., 145.39 MHz.

**York Radio Club.** Meets: 3rd Fri./monthly, 8 p.m., Elmhurst College (Science Bldg.) Elmhurst, IL. Net Mon., 8 p.m. W9PCS/147.42 simplex. Rptr. 442.875

## IOWA

**Central Iowa Radio Amateur Society (CIRAS).** Marshalltown, IA. Meets 3rd Sun./monthly, 6:30 p.m., Community College, Rm. 612, (except July & Aug.) Sun. Net 8 p.m. local 146.88. For more info: WB0ZKG, (515) 484-4837.

## LOUISIANA

**Baton Rouge Amateur Radio Club.** P.O. Box 4004, Baton Rouge, LA 70821. Meets last Tues./monthly, 7 p.m., Catholic H.S. cafeteria, 855 Hearthstone Dr. Rptr. 146.19/79 & 28/88. Net Sun., 8:30 p.m., 146.19/79.

**Southwest LA Amateur Rptr. Club, Inc. (SWLARC).** Meets 4th Tues./monthly, 7 p.m. in the Parish EOC Rm. W5BII/R 146.073/146.013. Net MWF, 7:30.

## MARYLAND

**Peninsula Radio Operators Society, Inc. (P.R.O.S.)** Salisbury, MD. Quarterly dinner mtgs. & VE Test sessions. Spring & fall classes. Rptr. K3SVA 146.325/146.925; KC3UV 449.05/444.05. Info: (410) 749-7444.

## MICHIGAN

**Hazel Park Amateur Radio Club.** Hoover Elementary School-Hazel Park, P.O. Box 368, Hazel Park, MI 48030. 2nd Wed./monthly, 7:30 p.m. Sept. thru May. 147.51 Simplex Call-In. WBXJU Club Call.

**Oak Park Amateur Radio Club.** Oak Park Community Center. 14300 Oak Park Blvd. (same as 9½ Mile Rd., west of Coolidge). Oak Park, MI 48237. 2nd Mon./monthly, 7:45 p.m. Talk-in on our 224.36 MHz or 146.64 MHz.

## MISSOURI

**Gateway To Ham Radio Club, N0DN.** Young hams of all ages. Meets 1st & 3rd Sat./monthly, 1-3 p.m., Sacred Heart Sch., 10 Ann Ave., Valley Park, MO 63088 (St. Louis) Net Sun., 8:30 p.m. 146.94 rptr. Beginners classes, VE exams, Club station & mtgs. Info: Rev. Dave Novak—Fax (314) 225-1952.

**PHD Amateur Radio Assn. Inc.** P.O. Box 11, Liberty, MO 64068. Meets last Tue./monthly, 7 p.m. Gladstone Comm. Bldg. (816) 781-7313, Volunteer Examiner Coordinator.

## NEBRASKA

**The Ak-Sar-Ben ARC of Omaha, NE.** Meets 2nd Fri., 7:30 p.m. at Omaha Red Cross near 38th and Dewey Streets. Main 2M Net Sunday night 0200Z on 146.94R.

**Pioneer Amateur Radio Club, (PARC).** Meets 4th Fri./monthly, 7:30 p.m., Fremont Police Station, Fremont, NE. ARES net 146.67 19:30 CDT/19:00 CST. Info: Dick Klebe, KB0HEC (402) 721-1326.

## NEVADA

**Frontier Amateur Radio Society, (FARS).** Meets: 3rd Mon./monthly, 7 p.m. Denny's Restaurant across from Nevada Palace, 5318 Boulder Hwy, Las Vegas, NV. Net Mon. 7:30 p.m., 145.39 Rptr. on Black Mountain. Club info, Jim Frye, NW70, 456-5396.

**Sierra Intermountain Emergency Radio Assoc. (SIERA).** P.O. Box 2348, Minden, NV 89423. (702) 882-0451. Meets: 2nd Tue./monthly, 7:30 p.m., Douglas County Lib., Minden, NV. Talk-in: 147.330.

## NEW HAMPSHIRE

**Great Bay Radio Assn., WB1CAG.** P.O. Box 911, Dover NH 03820. (603) 332-9137/332-7343. Meets 2nd Sun./monthly, 7 p.m., Rochester Court House/City Hall. Talk-in 147.57.

## NEW JERSEY

**Bayonne Emergency Mgt. ARC (BEMARC),** 16th St. & Ave. A Firehouse, Bayonne, NJ 07002. Meets 2nd Tue./monthly, 7:30 p.m. Tri-Band linked repeaters: 145-430/224.280/445.575 MHz.

**Bergen Amateur Radio Assoc. (BARA).** P.O. Box 304, Hackensack, NJ 07601. Meets 1st Sun./monthly, VFW Post #6699, E6 Winslow Pl., Paramus, NJ. Nets 28.350 Mon. 9 p.m., 144.400 9 p.m. Wed.

**South Jersey Radio Assoc. (SJRA).** Pennsauken Sr. Hi Sch. at Hylton Rd. & Remington Ave., Pennsauken, NJ 08109. Jan.-Oct. 4th Wed./monthly, 7:30 p.m. Nov.-Dec. 3rd Wed. due to Thanksgiving and Christmas. Talk-in 145.290 rptr. Club call K2AA.

## NEW YORK

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

**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 at 7:30 p.m. For info call Arnie, WB2YXB, (718) 343-0172.

**Orleans County Amateur Radio Club (WA2DQL).** Meets: Office of Disaster Preparedness (CD), West County House Rd., Albion, NY 14411, 4th Wed./monthly, 7:30 p.m., 145.270 - WA2DQL.

**PROS, Pioneer Radio Operators Society.** Meets: 1st Wed./monthly (except July/Aug.) 7 p.m., Masonic Temple, Rt. 78, Java Village, NY. Other Wed., 8 p.m. 145.170/144.57- Repeater KC2JY.

**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!

**Suffolk County Radio Club.** 3rd Tue./monthly, 7:30 p.m. Bohemia Rec. Ctr., Ruzicka Wy. W2DQ/R 144.610/145.210, 223.080/224.680, 441.625/446.625 rptrs. Info call Jim Heacock (516) 473-7529.

**Westchester Amateur Radio Assoc. (WARA).** Scarsdale Village Hall, Scarsdale, New York. Meets: 1st Wed./monthly, 8:00 p.m. For info call Dan Grabel, N2FLR, Pres. (914) 723-8625.

**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) 963-8995. 146.265/865, 445.150/440.150.

## NORTH CAROLINA

**North Carolina Chapter TSRAC.** Meets: Mondays, 28.350 on the air, 8:30 p.m. local time, Sat. 10 a.m. on 7240 and Wed. 9 p.m. on 7259. "The Alligators" - all mouth, no ears.

**Stanly County Amateur Radio Club.** P.O. Box 188, Stanfield, N.C. 28163. Meets 4th Thur./monthly, 7 p.m. at Stanly Community College, Albemarle, N.C.

## OHIO

**Amateur Radio Fellowship, (ARF).** Peggie Hough, Sec., 3888 Stow Rd., Stow, OH 44224. Meets 1st Sat./monthly, 10 a.m., Country Manor Restaurant, 1225 W. Main St., Kent. K8YKT rptr., 147.075.

**Ashtabula County ARC.** Ken Stenback, A1BS (964-7316). County Justice Center, Jefferson, OH. 3rd Tue./monthly. 7:30 p.m. County Rptr., 146.715.

**Clyde Amateur Radio Society (C.A.R.S.)** Meets 2nd Tue./monthly, 7:30 p.m., Municipal Bldg., Clyde, OH 44811. NF8E Rptr. 447.625/442.625. 444.60 (+5 MHz). Net Sun. 9 p.m.

**Firelands Area Repeater Assoc. Inc.** Meets 3rd Sat./monthly at First Federal Savings of Toledo, Huron, OH. Freq. of Rptr. 146.805/205. Info: Eugene Hutchins, AA8DL, 45 Welton Ave., Norwalk, OH 44857.

**Lancaster & Fairfield County A.R.C.** Meets 1st Thur./monthly, 7:30 p.m., City Hall, Basement Club Rm., Broad & Main. Info Net every Mon., 8 p.m. K8QIK/R 147.63/03 Rptr.

**North Coast A.R.C.** P.O. Box 30529, Cleveland, OH 44130. Meets 2nd Thurs./monthly, 7:30 p.m. at North Olmsted Middle Sch. cafeteria, 27351 Butternut Ridge Rd., North Olmsted, OH.

**Northern Ohio Amateur Radio Society (NOARS).** Meets 3rd Mon./monthly, 7:30 p.m., Gargus Hall, Rt. 254, Lorain, OH. Info: Rptr. K8KRG 146.70, DX Alert Rptr. 145.15. "Ohio's Largest General Interest Club"

**Silvercreek Amateur Radio Assn. (SARA)** Meets 3rd Thur./monthly, 7:30 p.m., Doylestown Village Hall, Doylestown OH. WD8PNF/R 147.99/39 rptr. For info call (216) 745-2573.

**Springfield Independent Radio Assoc., (SIRA).** Call-in 145.45-224.26. Meets 2nd Tues./monthly, 7:30 p.m., Mercy Hosp. and 4th Tues./monthly, 7:30 p.m., Am. Red Cross. Info: Rodney Myers, KB8WV, (513) 399-1022.

**Toledo Mobile Radio Association.** P.O. Box 273, Toledo, OH 43697. Meets 2nd Wed./monthly, 7:30 p.m., Luke's Barn, Lucas County Rec. Ctr., 2901 Key St., Maumee, OH. W8HHF 147.87/27 Rptr. Rptr. info/swap & shop, Sundays, wkly - 8:30 p.m.

**Triple States Radio Amateur Club.** Meets Wed./weekly on 28.480 at 8:30 p.m.; 7260 at 9 p.m. Rptrs. 146.31/91 and 146.115/715. P.O. Box 240, Rd. #1, Adena, OH 43901. (614) 546-3930.

## OREGON

**Central Oregon Radio Amateurs, (CORA).** P.O. Box 723, Bend, OR 97709. Meets last Thur./monthly, 7 p.m., Bend Senior Cntr., 1036 NE 5th, Bend, OR. Net Sun. 7:30 p.m. 147.06+ MHz. Info call: (503) 382-1685.

**Keno Amateur Radio Club.** P.O. Box 678, Keno, OR 97627. Meets 3rd Thur./monthly, 7 p.m., Keno Fire Station. Rptr. 147.32 + W7UFM. Info: Tom Hamilton, WD6EAW, (503) 883-2736.

## PENNSYLVANIA

**Butler County Amateur Radio Assn. P.O.** Box 1787, Butler, PA 16003-1787. Meets 1st Tue./monthly, 7:30 p.m., Boy Scout Cntr., 850 Morton Ave., Butler, PA. Call-in W3UDX 147.96/36. Net 10:10 p.m. nightly.

**Mercer County Amateur Radio Club W3LIF.** P.O. Box 996, Sharon, PA 16146. Meets 4th Tue./monthly at 7:30 p.m., Shenango Valley Med. Center, Farrell, PA. Net, Thur. 9 p.m. on 147.75/15 W3LIF, Digi. 145.010.

**Warminster Amateur Radio Club, WA3DFU.** P.O. Box 113, Warminster, PA 18974. (215) 672-9985. Meets 1st Thurs./monthly, 7:30 p.m., Neshaminy-Warwick Presbyterian Church, Warminster, PA. Net on 147.690/147.090 Wed. 8:30 p.m. and 28.450 Sun. 9 p.m.

## TEXAS

**Brazos Valley Amateur Radio Club (B-VAZC).** P.O. Box 1630, Missouri City, TX 77459. Meets 2nd Thur./monthly, 7:30 p.m., Sugar Land Community Cntr., 226 Matlage Wy., 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.

**Sun City Amateur Radio Club.** Meets 1st and 3rd Fri./monthly, 7:30 p.m., 3709 Wickham Ave., El Paso, TX. K5WPH 147.240, 443.4 with remote operation on 6M and 10M.

## VIRGINIA

**Southern Peninsula Amateur Radio Club (SPARK).** Meets: 1st and 3rd Tue., Salvation Army Community Bldg., Hampton, VA. Rptrs: 146.13/73 & 449.55/(-5) T.V.E Exam Info: (804) 898-8031, WARTZ.

**Virginia Beach Amateur Radio Club, Inc. (VBARC).** Open Door Chapel, 3177 Virginia Beach Blvd., Va. Beach, VA. Meets First Thur./monthly, 7:30 p.m. Info on WA4KXV rptr, 146.97/37.

## WASHINGTON

**The Mike & Key Amateur Radio Club.** Meets 3rd Sat./monthly, 10 a.m. United Good Neighbors Cntr., 305 S. 43rd, Renton, WA. Talk-in on 146.82 rptr.

**North Seattle Amateur Radio Club, (NSARC).** Meets 3rd Tues./monthly (except July, Aug., Dec.) at First Interstate Bank, 2825 N.E. 125th St.

## WEST VIRGINIA

**Jackson County Amateur Radio Club.** Clark Stewart, W8TN, Pres., 104 Henrietta St., Ravenswood, WV 26164. Meets 1st Thur./monthly, 7:30 p.m., United National Bank of Ripley. Net Mon. 9 p.m. on 146.67/07 W8DJNU/R.

**Tri-state Amateur Radio Assn.** Meets: 3rd Tue./monthly, 7 p.m., Green Valley Vol. Fire Dept., Norwood Rd. & 16th Street Rd., Huntington, WV. ARES net Thur. 9 p.m. on 146.76(-) W8VA/R. Info Bud Cyr, KB8KMH (304) 522-1294.

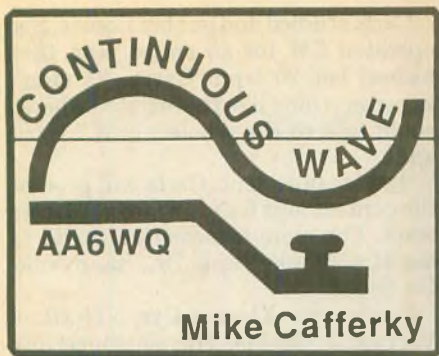
## WYOMING

**Sheridan Radio Amateur League, 146.82.** 926 La Clede, Sheridan, WY 82801. Meets 4th Thur./monthly, 7 p.m., Sheridan College Tech. Cntr.; Saturdays, 8 a.m. at J.B.'s. Info: (307) 674-6666, WA7B.

## PUERTO RICO

**Puerto Rico Amateur Radio Club.** P.O. Box 360693, San Juan, Puerto Rico, 00936.





## Promoting CW

Now that the new no-code license is available, some more thought should be given to how CW can be promoted among radio amateurs. Even before the FCC change in licenses came along, this need was part of the debate over the codeless license. What is your club doing about it?

Promotion of this form of radio communicating can be facilitated at the national, regional and local levels. At the national level there are currently several means for promoting, or at least recognizing, the use of CW. These include Straight Key Night, the Code Proficiency Testing, the on-the-air code practice sessions, the ARRL awards programs which make provision for recognizing CW contacts, and special events or contests which allocate awards for CW contacts.

It is my opinion that a little more could be done to raise the visibility of CW among radio amateurs, especially the new communicators who have not yet learned code to upgrade. For example, what happened to the national speed contest concept? There are still many high-speed operators out there who can mystify and amaze the rest of us. I, for one, would like to see who really is the best now. I think it's time.

At the regional or local level we are left up to our own devices, although regionally there are a few code practice sessions on the air. I have come up with a few ideas to consider. Some may be a bit strange, but these wacky ideas for promoting the continuous wave mode of operating in your club may add a little spice, laughter and interest in CW. So don't knock it until you've tried it.

1. *Tongue-twister contest.* CW enthusiasts gather for a sending party. Each is given a CW tongue twister. As each contestant sends, the message is timed with a stopwatch (or a computer). Points are deducted for errors. The operator with the most points is declared winner. Here the incentive is to be able to send at higher speeds with fewer errors.

2. *Regional speed copying championship.* Each participating club sponsors a speed copying champ-

ionship annually. Contestants are grouped by license class. Each license class contests to see who copies the fastest with the fewest errors. Hams who are the winners in their license class can compete with the next higher class of contestants. Winners in one club may wish to compete against operators from other clubs from other cities in the area. Rules for speed contests may be received from the ARRL offices. Let the rivalries begin.

3. *Live group QSO.* Club members are given code oscillators and keys as they arrive for club meetings. The club president or secretary starts the meeting out by calling for another member to inform members about club activities. Other members can break in to ask questions. This whole activity is done in CW only for the first five or ten minutes. At the end, the leader asks questions of the newer operators to determine how well they copied. A variation is to conduct roll call in CW at the beginning of the meeting.

4. *CW relay race.* Club members are divided into two relay teams. Each team member has a turn at sending for one minute and receiving for one minute. The teams send and receive to each other and to the audience. Code practice oscillators are used so the whole room can monitor the process. Contests can be set for speed, accuracy and equipment. For instance, relay contests can be divided into speed categories such as below 10 wpm, 11 to 15 wpm, 15 to 20 wpm, and 21 and over wpm. Also, contests can be held using different types of equipment such as straight keys, electronic keyers, or mechanical keyers.

5. *Joke of the day.* At each club meeting one experienced operator or instructor takes a regularly scheduled part of the club program telling a joke in Morse code. The joke is first told at a higher speed and then retold at progressively lower speeds until the final "telling" is accomplished at 10 wpm.

6. *The good, the bad, and the ugly.* Club members or code students are asked to bring audio cassette tapes of actual QSOs they monitor which are examples of very good operating or code which is very difficult to copy. A discussion will follow analyzing the different fists which were heard on the air. The instructor can help club members

draw conclusions about what makes for a smooth operator.

7. *Wacky code key construction contest.* Once a year club members construct wacky, weird code "keys" to bring to the club to demonstrate. A judging contest is held to determine the keys which should receive awards (printed certificates with Polaroid pictures are sufficient) for being the weirdest, funniest, most difficult to use, etc. and over-all winner. Keys which are entered must be used to send at least 25 words of a pre-arranged text. These twilight zone keys can make an interesting story for the local newspaper, complete with photographs. Keys may be made any size and out of any material. The sky is the limit.

8. *Gossip game.* Here is a CW variation on the old gossip game. The gossip starts by one of the club members who sends a very short message (phrase or sentence only) to just one other person. Head phones are used by both the sender and the receiver so no one else can hear what is being sent. The key then passes to the one who heard the gossip and that individual sends what he heard to the next person. For this game no paper and pencil is allowed. All copying must be done in the head. After the gossip goes around the room the last person to hear it is the one who started it all. That person confirms the accuracy of the message as it was relayed. Note: Each participant gets just one chance to send and one chance to receive the message. If the one receiving the message doesn't copy it completely, he must send what he thinks the gossip is. Rules on the speed of sending may be established to match the skill level of the operators.

Maybe you have some ideas which have been sparked by reading these. Try them at your next club meeting and let me know the results. If you have a wackier idea which has worked in your area, drop me a note in the mail so I can enjoy it, too. □

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# YL Roundup



Connie  
Dunn  
KB5LES

As spring boldly pokes its way into 1992, YLs around the country and around the world have begun to notice many new calls and names. Although a large number of these YLs are recently licensed and operating with their no-code tickets, it is the newly elected officers for the Young Ladies Radio League (YLRL) who are highlighted here. YLRL elects new officers every two years.

The ladies who serve as officers give untold hours to the organization and to the promotion of YLs in the hobby. Those who are leaving office deserve a large hand for their efforts, and congratulations are due the newly elected. These are the ladies who will help bring YLRL and YL issues into the 1990s.

President for 1992-93 is Dana Tramba, N0FYQ, of Peck, Kansas. When asked why she took on the presidency, she responds, "I have been a member of YLRL for several years. I decided it was time to give something back to our organization and to my hobby. I consider it a privilege to be the YLRL president for the next two years. I look forward to the challenge."

Dana lives in the middle of a wheat field in Kansas. She doesn't mention a dog named Toto. But she says, "I am the only female in an all-ham family." Norm, her OM, has been an Amateur Radio operator for 30 years, owns a Radio Shack store and also sells amateur equipment. Troy, 15, attends St. John's Military School in Salina, Kan-

sas. Todd, 13, is a people-oriented person like his mom. "We like to have parties and leave the technical stuff to Norm and Troy," quips Dana.

About seven years ago, Dana says she saw an article in *QST* about YLRL. She was so excited to find out there was an organization for women, she was motivated to upgrade to get on the nets. "I made friends from all around the world."

Dana lists having eyelash QSOs at Amateur Radio conventions as one of her most fun experiences. She adds, "I think the most meaningful thing YLRL does is our adoption program and hosting YLs during their visits to the United States. As I read the daily news, YLs from all around the world come to my mind. I think of each YL member as family and hold them gently in my heart."

Carla Watson, W06X, of Sunnyvale, California, will be the 1992-93 vice president. She got into the hobby through her husband. "He wasn't even a ham," says Carla. "Nine years ago at Christmas, I got a little package. It was a CB (Citizens Band) radio. I could talk on it. It lasted two or three months. I didn't like the language, but I learned more about radio while listening. So I asked around and got books on Amateur Radio."

Carla studied and got her license. She operated CW for an entire year, then passed her 20 wpm Extra. "I didn't know anything like this existed where I could talk to the whole world," Carla adds.

As vice president, Carla will process the contest logs for each of the YL contests. For more information, write to her at 473 Palo Verde Dr., Sunnyvale, CA 94086.

Secretary is Eleanor Cyr, N1FJR, of Yarmouth, Maine. Her entrance into Amateur Radio was through shortwave listening. While living in New York, she heard Maine, her home state. She also heard about a radio gathering and learned that she and her husband could attend.

"My husband and I went, and I met a couple YLs. I didn't know math, but I studied for the Technician license, which I got in 1987. Then we moved back to Maine, and I've been active ever since. My husband got his General last year," Eleanor says.

When asked why she chose to run for secretary, she answers, "I made up my mind, if I feel I can do the job and someone asks me, then I'll do it. Of course, it needs to be a worthwhile organization."

Eleanor also belongs to YLISSB (Young Ladies International Single Sideband), a DX single-sideband system that meets daily. YLISSB meets on 14.332 or 21.373 every day when the band opens (which is about 1200 or 1300 UTC) until about 2400 UTC, Wednesdays on 28.673 at 2200 UTC (when band opens), and Saturdays at 0330 UTC on 14.332.

"I am control operator with that," says Eleanor. "I also try to get down to the YL Roses Net (10M net, which meets on Mondays at 1800 UTC on 28.433), and many of the other YL nets. I love to work YLs. I have WASYL and 100 YLs. I'm trying to get more seals. I received DXCC last year from the ARRL. And I'm working for 5BWAS."

Joan Gibson, KG1F, of Waterbury, Vermont, is the disbursing treasurer, which means that she pays all the organization's bills. She took the job, she says, "because they asked me, and I like working with finances and computers."

When she was about eight years old, she saw an Amateur Radio station. "I've been interested in radio and TV all my life. And I worked in it as well," says Joan.

"Kay Eyman, WA0WOF, introduced me to YLRL about 11 years ago. We met around a YL contest, which got me interested in YLRL. I think it's a great organization, because women—still a minority in ham radio—can find an oasis. It also encourages world friendship," adds Joan.

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Esther Sooter, N5NHY, of Dallas, Texas, has taken on a new role as the new member editor for *YL Harmonics*. She will be talking to new members and writing up articles for the *YL Harmonics*. She says she took on this role, "because I wanted to do something to contribute to the organization. And I was asked to do it."

As a little girl, Esther always wanted to be an Amateur Radio operator, but couldn't. "When I was growing up, girls didn't do this sort of thing. So I had to wait 'til I grew up. First I did CB, and then I got into Amateur Radio. My OM was out on the road, and I could talk to him."

Esther works a lot of DX and is working for DXCC. She also enjoys packet radio and 10M phone. She can be heard most weeks on the YL Roses Net, where she often takes the helm assisting net control with stations that can only be heard from her position in the south-central portion of the country.

Kay Eyman, WA0WOF, of Garnett, Kansas, holds the position of *YL Harmonics* editor. Her introduction to the hobby came from her husband, Mike, before they were married. "He'd show me a station in England, then in Germany. I immediately started to work toward my license. I tested in 1968 and got my license in 1969. I've had so many exciting times on the radio. Our whole lives are centered around Amateur Radio," she says.

Kay and Mike will have gone to Ireland and back to celebrate the 60th anniversary of the Irish Radio Transmitters on April 11 and 12 by the time you read this. If you worked EI7HQ from Ireland, you worked Kay.

"I took on the editor job because Dana called and I had a new computer and software," she states. "Also, I had so many friends within YLRL, I want to participate. You just get to know so many people. I think the publication is very important. The *YL Harmonics* brings us all together." □



IT'S A SCALE MODEL OF GEORGE'S HAM SHACK INSIDE -- IT'S THE ONLY WAY I CAN GET HIM TO TAKE ME OUT!

# Kantronics Technical Seminars

Presents

## "Packet/Digital Communications"

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Karl will focus on how to make packet work for you.

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### 1 Overview of Packet Radio - 9:00am-10:30am

This session introduces Packet Radio, explains how packet works and defines what is required to set up and operate your own packet station.

### 2 Connecting your Equipment - 11:00am-12:30pm

The mysteries of connecting your computer to your TNC and your TNC to your radio are revealed. Detailed examples using state of the art computer and radio equipment, make it easy for you to get your station up and running fast.

### 3 Getting on the Air - 1:30pm-3:00pm

Included here are the basics of your first connect, digipeating and the meaning of the indicators on your packet TNC. Additional topics such as gateway operation, networks and packet bulletin boards will be discussed.

### 4 Open Forum - 3:30pm-5:00pm

The signaling techniques and operating practices of the "other" modes of operation including WEFAX, RTTY, ASCII, AMTOR, NAVTEX/AMTEX and CW are discussed.

### Kantronics Technical Seminar Schedule

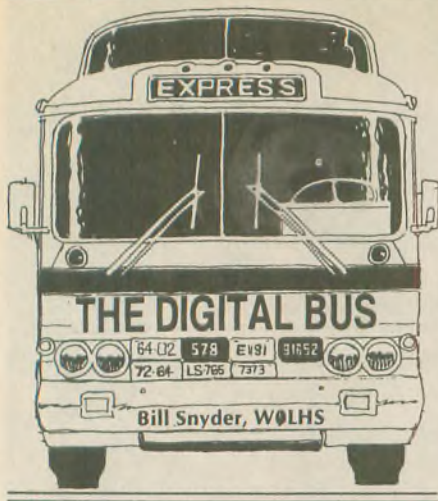
|               |         |         |
|---------------|---------|---------|
| Gaithersburg  | MD      | Sep 91  |
| Los Angeles   | CA      | Oct 91  |
| Oklahoma City | OK      | Dec 91  |
| Orlando       | FL      | Jan 92  |
| Minneapolis   | MN      | Mar 92  |
| Denver        | CO      | May 92  |
| Birmingham    | England | May 92  |
| Louisville    | KY      | Jul 92  |
| Columbus      | OH      | Sept 92 |

*please call for exact date & location 30 days prior to the scheduled seminar date shown above.*

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I think I have discovered a pitfall in the W0RLI software that runs my BBS. I'm not sure that it has been corrected in later editions because I am behind a few versions of the software. The problem is this: When you use the SR command to answer a message, and if there is a blank line anywhere in the multi-line heading which lists all the BBS stations that relayed the message (an audit trail, so to speak), the SR command doesn't work properly.

The SR command means "send reply," and when you use it to answer a message that you receive, it automatically strips in the home BBS address of the incoming message sender. In other words, it addresses your message without any help from you. Works great. I use it all the time.

There is a big "however," however. If there is a blank line in the heading (use the RH command to see the heading when you read a message) the SR command uses the last BBS before the first blank line as the "home BBS," so the message can easily be misdirected to the wrong BBS where it will probably die for lack of forwarding information.

When you find a message for you on your local BBS I suggest you do this: Read the message with the RH command instead of just the plain vanilla R. If you get a blank line in the heading list, then don't use the SR command. Put the home BBS address in manually.

This brings up another suggestion: Always put your home address in the text part of every message. If some of the overhead gets corrupted there will be an address for the relaying BBS operators to advise you about the problem. I've mentioned this before, but I still get messages that never list the home packet address in the message. It helps a BBS SYSOP when trouble hits a message in his box.

I also like to see messages that are spaced out, that is, paragraphed and not all run together. It costs nothing to put a few extra lines in your messages, so please do. I think many newcomers to packet are thinking of the old "10-word Western Union Telegram" and are trying to save money by jamming all the text together in "telegraphic style."

I used to copy a lot of CW press when I was overseas in WW II. The airwaves were loaded with wartime propaganda broadcasts from all participant countries. English seemed to be the propaganda language so there was plenty of CW for me to copy.

In the early days of telegraph jargon the word for jamming words together was "cablese." It meant that words had been combined to shrink the toll count in press messages. Telegrams were billed by the word, so chopping the wordcount was money in the bank. I read that the toll charges collected in the Bismarck, North Dakota, telegraph office for relaying the news of the Custer Massacre to the world totaled nearly \$3,000. In those days that was a lot of "scratch."

Here's an example of cablese: "From San Francisco" would be sent as "EX-

FRISCO" thereby saving the cost of two words. The Japanese propaganda CW stations always sent "shot down" as "downshot." I'm not sure about all the rules of combining words; it had something to do with the number of characters, etc. I wish someone could educate me further on this.

Well, you don't need to use cablese in packet messages. You don't have to economize; spell it out and space it out. Keep the line length down to below 50 characters by actually putting carriage returns as you enter the message. Don't let the BBS software do it for you. Space is cheap—keep your paragraphs and line lengths short, and add blank lines between paragraphs. Your messages will be easier to transmit and read.

During World War II in New Guinea, I spent many hours copying Japanese propaganda broadcasts to perfect my ability to copy Morse code on a typewriter. Not only did the text of the broadcasts feature war communiques, with items like how many Allied planes were "downshot" in combat, but they also transmitted reams of feature stories about the Japanese homefront. I remember copying one Japanese press message which went something like this:

TOKYO UNIVERSITY PROFESSOR YAMAGUCHI ANNOUNCED BREAKTHRU DEVELOPMENT DEHYDRATED BEER FOR SHIPMENT IMPERIAL TROOPS SERVING OVERSEAS IN GREATER EAST ASIA COPROSPERITY SPHERE. TROOPS JUST ADD WATER TO GET FIRST CLASS BEER.

The next paragraphs went on to explain how this dehydrated beer would be a great morale booster for the Japanese soldiers scattered all over the Pacific theater of operations. It would also save thousands of tons of ocean shipping space on vessels supplying the Japanese troops in the Pacific area.

Dehydrated beer sounded like a really great invention... until I copied the last paragraph which said: ONLY PROBLEM COMMA ACCORDING YAMAGUCHI COMMA DEHYDRATED BEER WILL NEED FURTHER SCIENTIFIC WORK PERIOD WHEN WATER ADDED IT NOTASTE LIKE BEER.

### Gatti-Hallicrafters DX

Bob Leo, W7LR, and I were the two ham operators on the Gatti-Hallicrafters African Expedition in 1947-48. From time to time I have recounted some of our adventures on these pages. Being a DXpedition operator is a lot of fun and the Gatti-Hallicrafters was one of the first after WWII.

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In those years there were not many hams around the world. In fact, the *Callbook* was only about half an inch thick and it included every licensed operator in the world. Besides that, the print was large enough to read with ease. Although every station on the 10M band seemed to be calling us, Bob and I were never so rushed that we could not spend a few minutes ragchewing with our contacts. No "59 QSL?" contacts. It was real fun! We described our activities and our environment as we toured Kenya and Tanganyika. Bob later operated from Uganda.

Recently I got a phone call from Mike O'Brien, N0NLQ, of Springfield, Missouri. He asked me if I was the Bill Snyder on the G-H expedition. When I said I was the same, he explained that he was writing an article on the DX-pedition for a little magazine called *Electric Radio*. So, for an hour Mike interviewed me about our adventures. He also called Bob and did the same. The ensuing article Mike wrote about our African travels and DXing was great fun to read. I think he did an excellent job with the facts and I was pleased to be introduced to the neat little magazine published by Barry Wiseman, N6CSW/0, of Durango, CO.

The thrust of *Electric Radio* is "for Amateur Radio operators and others who appreciate the older tube-type equipment." The editorial pages are filled with information on collection, modification, and repair of yesterday's ham equipment. If you are interested in that part of our hobby, the address is *Electric Radio*, Box 57, Hesperus, CO 81326.

### County hunting

Roy Crosier, KE0UQ, was disappointed in the return he received when he asked through this column for county hunters to contact him by packet. He expected hundreds and only received a few. Roy still has hopes that county hunting by packet could catch on, if and when a coordinator would step forth and take the responsibility for the record keeping and award giving operations which would be necessary to keep the hobby going.

Roy sees packet as the ideal method for chasing counties. The QSL could be in the packet message itself. Like he says, "I believe that a well-worded packet message, when printed with the header, serves as a QSL. Only on packet can the QSO be magically transformed into the QSL." I agree. So, is there someone out there in packetland who would like to volunteer

*Incandescent: What submariners do  
—Yakima ARC, WA*

to start a county hunters headquarters? If there is, let me know.

If you want to try it, send Roy a packet message. His packet address: KE9UQ @ WBOAEX.#EKS.KS. USA.NOAM. I'm sure he would like to swap packet messages with you so don't forget to put your county name in the message.

### Eavesdroppings

"I THINK THE CONCEPT OF SPLIT OPERATION AND LISTENING UP SHOULD BE IN THE NOVICE TEST AND ON EVERY RIG WARRANTY CARD ... DX ALERT; DJ6ASZ IS QUICK BROWN FOXING ... WELL, I'VE NEVER HAD A QSO WITH ANYONE ON RTTY WHO WANTS TO RAG CHEW WITH A MACHINE ... DID YOU KNOW THERE IS A COMPUTER THAT OPERATES AT TERAFLIPS (WHATEVER THEY ARE) I THINK IT COMES FROM TERA, THE GREEK LOG FOR TRILLION, AND FLOPS, SHORTHAND FOR LATERAL OPERATIONS PER SECOND—THAT'S FAST, IT WOULD PROBABLY GIVE YOU THE ANSWER 15 SECONDS BEFORE YOU ASKED THE QUESTION ... DID YOU CLIP THE CLIPPERTON GUYS? ... I HAVE A MULTIMEDIA COMPUTER THAT DOESN'T TALK TO ME ANYMORE ... MY WIFE PUT TRIDENTS IN OUR NEW CAR ... I WAS WEARY OF THE PRESIDENTIAL ELECTION IN FEBRUARY AND IT STILL HAS FIVE MONTHS TO GO

... WHEN JOHNNY CARSON RETIRES WHOSE RE-RUNS ARE WE GOING TO WATCH? ... I UNDERSTAND THEY CAUGHT THAT CEREAL KILLER THEY WERE LOOKING FOR ... HIS RTTY MACHINE HAS AN UNLIMITED AMOUNT OF RYRYRYRS STORED IN IT—HE POPS THEM OUT LIKE A POPCORN FIELD IN A PRAIRIE FIRE ... I SPENT HALF AN HOUR WAITING IN A CW DX HOG PILE FOR THE DX GUY TO SIGN HIS CALL AND THEN FOUND OUT I HAD HIM ... HIS VERY WEAK SIGNAL WAS LOST IN A GALLIMAUFRY OF CLICKS, POPS, BUZZES AND WHISTLES—THE BAND SOUNDED LIKE A STEW OF ASSORTED SIGNALS TO THESE AGING EARS ... I WENT TO LUNCH AND MISSED THE SOUSED SANDWICH STATION ... SEMPTY TREE FROM OUR HOUSE TO YOURS."

My thanks to W0HAH, WA6YOO, WA7QCC, AE0Q, KM6CK, N00QS, W0ML, NQ7Q, W8HYG and those I eavesdropped on. My address is 1514 South 12th Street, Fargo, ND 58103, or packet: W0LHS @ W0LHS.#FARGO.ND.U.S.A.N.A. 73 and DIT DIT. □

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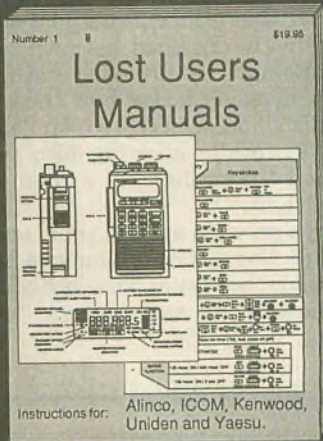
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**Handi-Hams Silver Jubilee: 25 years of hams helping hams**

**PATRICK W. TICE, WA0TDA**

What do a wild notion about helping the disabled, a Civil Defense shelter, and a bill collector have in common? Read on . . .

Teenager Ned Carmen's best friend had an older brother who was a ham. Whenever Ned visited his friend, he was fascinated by all of that "neat" radio equipment. And Ott Miller, W0EQO, was always ready to show his kid brother's friend how the radio worked. The fact that Ott was handicapped by polio but still enjoyed communicating with other amateurs all over the world was not lost on Ned! He quickly obtained his own license, and though he loved operating the radio, he never forgot how those glowing dials had been Ott's own "window to the world," allowing him to soar beyond the confines of a room and a wheelchair.

Boys grow up and get jobs, and that is what Ned did. Working as a bill collector for the Mayo Clinic in Rochester, Minnesota, he was always "on the



"Voice of Assisi," Assisi Heights station, 1970. Standing: Sister Clara Marie and Sister Berard; seated: Sister Alena (now a SK) and Sister Alverna.

road," a circumstance that meant he was always meeting handicapped people. "What if . . .," thought Ned . . . "What if ham radio were available to all handicapped people? Then they could roam the world from their homes, as Ott had done." The idea was born.

As it happened, Rochester was also home to a community of nuns, the Franciscans, and their home was an imposing structure located on a hill. This was an ideal spot for a Civil Defense shelter (remember those things with the yellow and black signs?) When a shelter was established there, Ned pounced on the idea of educating the Sisters of the community in the finer points of Amateur Radio. That way, he maintained, they could staff a station at the Civil Defense shelter during weather emergencies. But he had other plans as well.

Seven of the Sisters from the Rochester area got their licenses, and a station was set up in the shelter! Then Ned played his card: He called a meeting of a small group of the disabled from the area and invited the Sisters to attend. Would they help him form an organization to help the handicapped to learn Amateur Radio?

They did, and the Handi-Ham System was born! It was 1967, 25 years ago. What Handi-Ham founder Ned Carmen conceived as a wild idea had finally become a reality, thanks to his caring attitude and his dogged persistence! Since those early days, Handi-Hams has helped thousands of disabled persons to learn Amateur Radio through the efforts of hundreds of dedicated volunteers, generous donors, and a tiny paid staff. The headquarters station at Courage Center now bears Ned's callsign, W0ZSW, in his memory.

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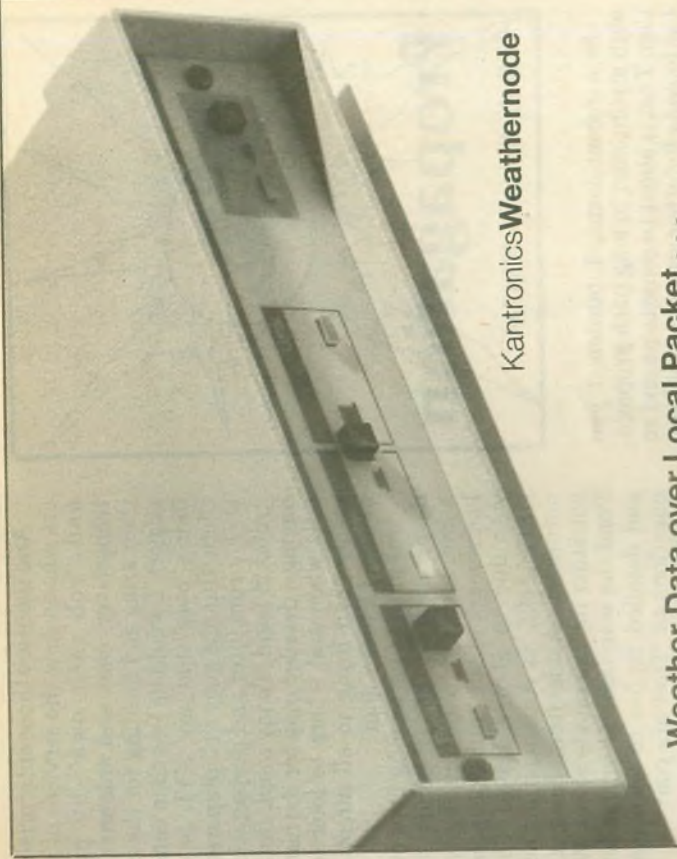
**Handi-Ham System founder Ned Carmen, W0ZSW, circa 1969.**

Twenty-five years of hams helping other hams—that's why the Handi-Ham System is celebrating and sponsoring a Jubilee Contest throughout 1992. Join us in celebrating the Courage Handi-Ham System's Silver Jubilee! Work 25 Handi-Ham members and receive a handsome Jubilee commemorative certificate. The award period lasts throughout 1992, ending January 1, 1993 at 0000 UTC. Any QSO during the contest year with a member, regardless of the band or mode, counts as a valid contact.

Handi-Ham members will affix a special Silver Jubilee seal to each of their QSL cards during the contest period. The commemorative certificate will be issued to any Amateur Radio operator who verifies the contacts by sending 25 QSL cards with affixed seals to Handi-Ham headquarters. Please include \$1 to cover handling. We will supply the return envelope.

Any licensed Amateur Radio operator may participate and obtain the commemorative certificate. Only Handi-Ham members will be issued Jubilee seals. If you are not a Handi-Ham member and wish to receive information or become one, write to: Handi-Hams, Courage Center, 3915 Golden Valley Road, Golden Valley, MN 55422. Membership is open to all Amateurs interested in supporting Courage Center and its goals.

*Turn a friend on to ham radio!*



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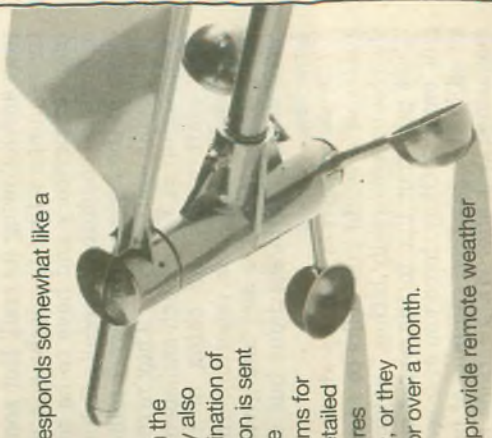
The Weathernode is not a TNC. It is a data gathering device that attaches to your TNC and station computer. The internal program is set to gather data from several types of sensors: internal and external temperature, wind speed, wind direction and rainfall. The temperature sensors come with the unit. The anemometer, for wind measurements, and the rainfall gauge are optional and are available from your favorite dealer or the factory.

If you are the SYSOP for the Weathernode, you'll have control over how often the sensors are sampled and stored, and you'll be able to change your preferences remotely, by password.

If you are a user, a Weathernode responds somewhat like a packet BBS. You may connect to the node, get a listing of commands, and then indicate what you would like dumped from the Weathernode's memory. You may also specify a range of time and combination of sensors. The requested information is sent back in tabular form which may be imported into spreadsheet programs for graphing. Users may look at a detailed record, for example, of temperatures taken every five minutes for a day, or they may wish to scan daily weather for over a month.

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In a recent issue, I burdened you with my interest in long path propagation. That is about to come to an end so I'm looking for other areas to dabble in. The problem is that for one who thrives on "the hunt," it's hard to focus on another area to go into, especially with exciting areas in every direction.

"The hunt," in my estimation, is the deep psychological motivation behind all who call themselves DXers. The interesting thing in Amateur Radio is that "hunters" can outfit themselves in many different ways—on SSB, RTTY, CW, QRO or even QRP. Myself, I plead guilty to a few of those—CW, QRO and QRP. I've been a CW operator since '37 and probably will never change but I have played both sides of the street when it comes to power, QRO right now at about 250W output, and QRP earlier down at the 5W level.

If on their own, successful hunters have to be good trackers, reading the signs that show the presence of the prey and following its trail. But sometimes hunters find themselves in unfamiliar territory and have to be told about local conditions. I recall a fishing camp in the Sierras, the owner telling all the folks who came in, "They're really biting up at Lake Such-and-such!" Now shift gears and think of the various DX bulletins reporting that "Mt. Athos is on the air" and giving more details. Different hunt but the same idea.

The same Sierras had its share of guides who would take folks to where the trout were "really biting," saying, "Just put your line in the water and pull 'em in!" Okay, have you ever seen an ad in the classified columns of our magazines that offer DX locations for rent? True, the owner didn't offer to load your gear on his pack mule but there was the implication that DXing was great from his QTH and, "Just drop your call and pull 'em in!"

And there are those enterprising DXers who eschew the services of a guide and "roll their own" by putting transceiver, coax and antennas under their arms and heading for the nearest airport. I would be less than candid if I didn't note that my XYL is one of them. But she goes well prepared, even with a computer and propagation programs in hand. To my mind, that's like having a detailed map for the hunt that tells when and where to look for DX rather than firing in all directions in hopes of a lucky shot.

But most of us, leading lives of quiet desperation on the HF bands, stay at home and try to do our best. That last remark about "quiet desperation" was due to Henry David Thoreau (1817-1862), an American author and naturalist. Aside from being the inspiration for the movie about Walden Pond, he was famous for his lengthy and detailed replies to such innocent questions as "How are you?"

A Thoreau-type DXer would literally swamp you with information if you offered the usual greeting, "How's DX?" I can hear him now, "I worked Fiji the other morning, 579 both ways, and I lost out on the pileup for Aves Island." There's more but you get the idea. From my standpoint, a Thoreau-like DXer would be remiss if he didn't also give you some details of the current propagation conditions. He may say, "To my mind, long path was terrible this morning with only VKs to be heard!" or "Trans-equatorial propagation was great to Ascension Island just after dinner time!"

On the other hand, our Thoreau-like DXer could also "read the mail" that's available on the NOAA BBS, complete with six-hour forecasts of propagation on all sorts of paths: polar, auroral, mid-latitude, low-latitude and equatorial. No matter how you get it, such information helps "the hunt" and brings it to a successful conclusion.

Let's go on to other challenges and think about the WARC bands, sort of

like opening a new territory for the DX hunter. All the tried and true methods work there; it's just that you have to outfit yourself a bit differently. Antennas, for example.

When I got curious about the 18 and 24 MHz bands, I took my tri-bander by the scruff of its neck and tried "force-feeding" it. The transmatch was able to handle the job as far as the rig was concerned but I didn't set the world on fire, working a few Europeans and getting poor reports to show for my efforts. Clearly, a more appropriate antenna system was called for.

I read the magazines like you do and see all the add-ons that are advertised for existing antennas, starting down on 40 and 30M. There, the idea is sort of simple, just adding tips and traps to existing antennas. For the WARC bands, it would seem to be more difficult, albeit possible. Myself, I'd prefer to have an antenna with elements cut for the bands. The problem is that I just don't have room for another tower. So I'll probably make the compromise and grumble my way along.

All this talk of hunting and I haven't said a word about the weapons used. I think that's the right term, "weapons." And there are obvious parallels that can be drawn between what operators use and military artillery pieces. Thus, "blunderbuss" comes to mind at once. If you go to your dictionary, you'll find that's an "obsolete firearm with a large bore, a flaring muzzle and capable of holding many balls." That reminds me of some operators who run kilowatts and call "CQ DX" incessantly.

But there's one weapon that you don't hear much about unless you travel in the right circles; I'm talking about QRP, something akin to hunting with bow and arrow. There, operators armed with nothing but 5W, a lot of spit and desire, go out on the DX trail and make a mark for themselves. Those folks are the real "hunter-trackers" of Amateur Radio. You'll never hear them calling "CQ DX"; they just spin the dial back and forth, listening for DX on a clear channel. That's the old "hunt and pounce" method of working DX.

I used to be a dedicated QRPer, though I'm sorry to say that I've been guilty of back-sliding lately. But I've served my time with QRP, hanging WAS/QRP, WAC/QRP and DX-CC/QRP on my wall. And it was during those formative years that I really came to appreciate the importance of antenna systems and understanding the essentials of HF propagation.

Without those tools, even the most talented QRP operator can end up working nothing beyond his own state.

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But if you're fully equipped and have your wits about you, the limit for QRP is about the same as for QRO. It just takes more time and patience. For example, there's Dan Walker, WG5G; he's made WAZ on QRP and is close to being on the DXCC Honor Roll. Now that's impressive!

Whether using a blunderbuss or a bow and arrow, as a hunter you still have to traipse across hill and dale, forest and field. Thus, you have your ups and downs and as an Amateur Radio operator, your RF has the same problem, going through the ionospheric jungle that's out there.

When your RF leaves the antenna, it goes off toward the DX but its intensity is spread out according to a pattern, both vertically and horizontally. That pattern is set by the type of antenna and its surroundings, say nearby objects and distance above ground, expressed in wavelengths. But what is it heading toward? Good question!

As you know, the ionosphere is up there, anywhere from 70 to 500 km above ground. At the lower level is the D-region, sort of a sticky morass one would hope to avoid. Thus, it's above the ground or the sea off which one's RF is reflected. In daylight, the D-region eats up one's signals, above and beyond what's lost on reflection.

At the top is the F-region, the "canopy" of our jungle which contains our RF, at least if we're lucky enough to approach it at the right angle or with a frequency which is low enough. You know the game; if the frequency is too high or the angle of one's RF is too steep, it penetrates the F-region and goes off to infinity.

But what about the F-region; how high is it and what does that mean to our DXing? Well, we don't have space to deal with that on a month by month basis, but let's take a time that it illustrates the whole story, say the peak of summer. Thus, in Figure 1, you see just how high the peak ionization of the F-region is above the earth in the month of June.

Between the regions bounded by the limits in that figure, 225 km and 475 km, there's a lot of real estate to talk about. But being the scientific type in this discussion, I would like to point you in the right direction and focus your attention on the important aspect of that figure. So let's look at the axes and the curves.

Probably the most important aspect of that figure is the axis found at the bottom, showing the local time. Thus, the figure is centered on local noon. That's point one.

Point two: The figure is for the month of June, our summer in the Northern Hemisphere. At the peak of summer, the sun is 23.5 degrees above the

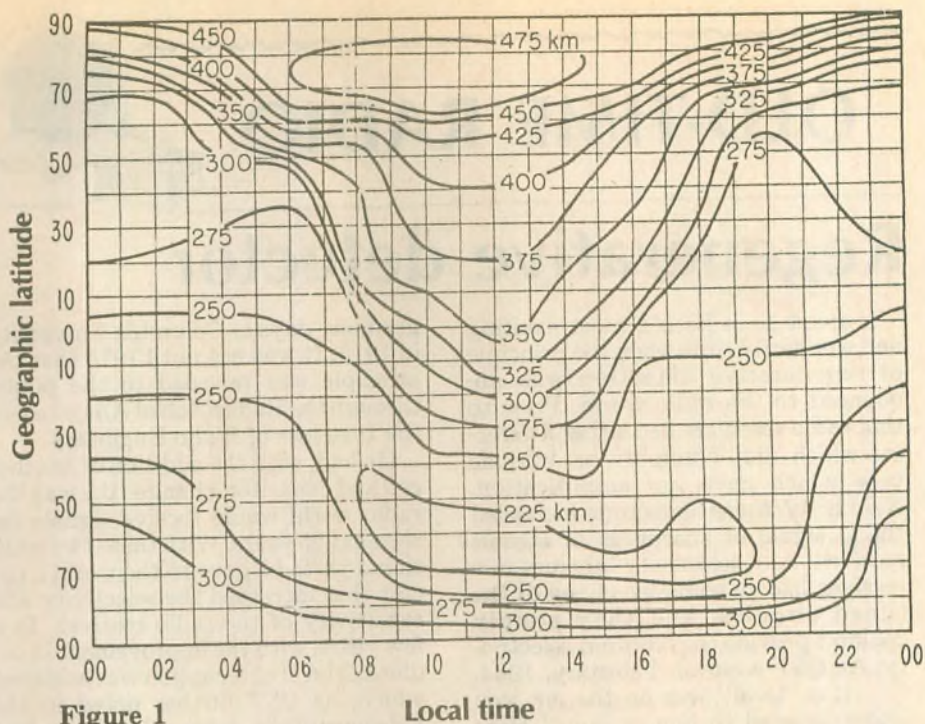


Figure 1

earth's equator.

Point three: At local noon in June, the sun illuminates the portion of the earth that is inside the terminator's position centered at 23.5 degrees north. Indeed, its rays even reach 66.5 degrees south latitude but its reach in longitude is limited, being the greatest in the northern polar cap.

Now if you can conjure up in your mind the trace of the terminator, say from your experience with *The DX Edge*, and superimpose it on Figure 1, you can see that the highest reach of the F-region is within the part illuminated by the sun, and the altitude drops in the dark regions. That's the canopy over your head in June. The problem is to keep one's RF contained within it.

Part of your RF that goes off at low angles may make it through the D-region swamp and, if the frequency is low enough, not even penetrate the F-region canopy. On reflection from the F-region, the distances per hop depend on the direction relative to the heights shown in that map. So that's something of the "hill and dale" aspect of DX hunting.

But the most interesting feature of Figure 1 is that it represents a pattern that is fixed on the earth/sun line; everything considered, all we do is rotate underneath it at our latitude, from left to right in the course of a day. The same is true for the pattern of critical frequencies of the ionosphere, which really set the limits on everything we attempt.

Now, I submit those ideas may be news, I mean *real news*, if you haven't already taken a more global view of

these matters. Indeed, it is a very important aspect of everything we do in HF radio as well as DXing and is worth some deep thought. As they say on TV, that is the "big picture" for HF radio propagation. □

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Edwin H. Armstrong had developed the regenerative detector in his under-

graduate days at Columbia University in 1913. It was not until 1915 that the principle was revealed to the public through the Radio Club of America and the Institute of Radio Engineers.

He had, with the addition of another coil and capacitor, changed the way the radio world would receive signals for the next 25 years. With these two additional parts he gave to the world a circuit that increased the selectivity and sensitivity of the radio receiver. In a few years, with the improvement in audions, a level of reception was achieved which, as *QST* further noted in the February, 1964, issue, "Receiving had reached a peak of effectiveness, for the frequencies and type of signals then in use, that could hardly be exceeded by the equipment we have today."

This fabulous invention made it

possible for those lacking money to put together a receiver which served them well. This was most fortunate since the years when the regenerative receiver was in use were years when the nation was in the throes of the Great Depression. A ham could build a receiver using the parts from a discarded broadcast receiver. Often, nothing had to be purchased from a radio store. Transmitters, too, could be built with a minimum of purchased parts for those who lacked the money to buy components.

We live in an age of sophisticated radio equipment, and most hams can buy the equipment of which they dream. That doesn't mean that the ham of the 1920s and 1930s enjoyed their hobby less; maybe they enjoyed it more. We can't imagine the thrill that was experienced by the early hams and shortwave listeners.

Armstrong also developed the superhetrodyne and the FM system that we use for broadcasting. These two inventions are of such importance that we might tend to think of the early regenerative receiver principle as a poor orphan but, orphan or not, it was an important interim step in the development of radio. □

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# 10-10 INTERNATIONAL News

Chuck Imsande, W6YLJ  
10-10 19636

5H3CC, 10-10 #62214, from  
Tanzania

Father Camillo Calliari, 5H3CC, of Kipengere, Njombe Province, Tanzania, has just recently received his 10-10 #62214. Father Calliari is 52 years old and is a priest of the Order of La Consolana Missions of Torino, Italy. He has been a ham for many years with the Italian call, IN35BN. He has been a priest for about 25 years and was stationed at the Makambako Mission prior to being sent to Kipengere near the Liwigston Mountains, at an altitude of 2,400 meters.

Kipengere is 900 km from Dar-Es-Salam Airport. It is a two-day trip to travel 70 km to Njombe where the nearest telephone and post office are located. The Kipengere Mission has a territory of about 140 square km with approximately 35,000 people, of whom about 13,000 are Catholic. Father Camillo says that before each time they wish to speak to God, it is necessary to fill the stomachs of the African people. In order for the Mission to obtain day-to-day operating expenses, Father Camillo has established a school for woodworkers and a secondary school for the breeding of cows to produce milk and cheese. A special factory was opened to experiment with grain cultivation and a baker's oven was installed last year to produce the same bread as they have in Italy.

During the month of August, 1992, three of our 10-10 members will visit Kipengere and operate 5H3CC especially for 10-10 members with the antenna set for the US direction. Activity will be from July 30 through August 31, 1992. CW will be at or near 28.020, calling "CQ TEN-TEN," and SSB will be at or near 28.495, as well as some activity at or near 28.850. The antenna will be a TH5 5-element beam for 10M. The 10-10 DX group will be on the air every day about 1700Z with the beam in the direction of the US.

The Italian 10-10 members of the Turin North Western DX Club Chapter of 10-10 scheduled for the DX trip are: Luciano, I1LNU, 10-10 #42994; Mike, I1XPQ, 10-10 #42079; and Luca, IK1OWC, 10-10 #42082.

QSL manager will be I1HAG, Fredy Gabba, Bia Donizzitti 16b, 10126 Torino, Italy. All money sent along with QSL requests will be donated as a gift to further the activities of Father Camillo and the Kipengere Mission. (We thank Julian, I1GMF, #55552, for the information relative to Father Camillo and the Mission at Kipengere. Julian's English is 1000 percent better than my Italian! I hope that I have translated Julian's letter properly; if not, I apologize in advance. I for one will be looking for 5H3CC and with a little luck, maybe we all will be blessed with good propagation and a contact.

VP5JM, #52729

YL Jody Millsbaugh, VP5JM, 10-10 #52729, is an active 10-10er on the Turks & Caicos Islands, British West Indies. She will QSL 100 percent via W3HMK, POB 73, Edgemont, PA 19028. Enclose an SASE for the return of your confirming QSL card.

A new award

The new 10-10 Worked all State Capitals Award is ready for the first 10-10 member who can produce QSL cards showing confirmed contacts with state capitals in the United States. The basic award is for confirming contact with 20 state capitals. There is a silver seal for confirmed contacts with 40 state capitals and a gold seal for contact with all 50 state capitals. A beautiful two-color 8½ x 11 in. certificate is the reward for achieving the basic requirement of 20 confirmed contacts.

The award was suggested by 10-10 member Paul Johnson, N4JII, 10-10

#37708, who will also be the certificate manager. The rules are quite simple. Work each state capital and obtain a QSL card confirmation. The contact may be made from either a fixed, portable or mobile station. The cost of the Certificate is \$2 which includes return postage. QSL cards from any contact date are acceptable, so start going through your QSL card file and find those state capitals. Remember, the 10-10 number *must* be shown on the card. For complete rules and an application send a #10 SASE to Paul G. Johnson, N4JII, 2311 CCC Road, Dickson, TN 37055.

A new roster

A new 10-10 roster will be available by the time you read this. The April 1992 roster will include those new members and call changes, etc. through the end of April, 1992, and will contain about 152 pages. The cost of the 1992 Roster will be \$9 for addresses with a US ZIP code and \$12 for DX addresses. The price includes first-class postage for US and air mail postage for DX. Send your check, made out to 10-10 International Net to Dee Gilbert, KA6JQJ, Roster Manager, P.O. Box 503, Madera, PA 16661.

Seattle is the place; August 8 is the date

The 1992 Board of Directors Meeting will be held in Seattle, Washington, on August 8, 1992, at the Executive Inn Hotel, 200 Taylor Street.

The board will meet on Saturday the 8th and an open house will be held on Sunday the 9th for all 10-10 members who wish to attend. The open house is scheduled from 8:30 a.m. to 1 p.m. and is open for all to attend. If you are in the Seattle area, plan to attend the open house and meet your officers and directors.

Finally

If you are interested in obtaining an information pack and application form to learn more about the 10-10 organization and how you can get your own 10-10 number, send me a buck (\$1), two first-class stamps and an address label. You will receive the 10-10 Information Manual and the latest issue of *10-10 International News*. My address is 18130 Bromley Street, Tarzana, CA 91356-1701.

If you are looking for your lost 10-10 number, please enclose a list of all your previous calls as well as your current call. If you want the latest copy of *10-10 NEWS* enclose \$1, two first-class stamps and an address label (no SASE required). Previous address information is not required. 73, es cu in the August issue. □

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It's always frustrating to volunteer and have the search coordinator, sheriff or police chief scoot you off to a non-critical corner of the emergency response. A number of you have sent me letters (and even newspaper clippings) regarding the use of volunteers.

The issue really boils down to your documented qualifications. In many, if not most, jurisdictions the sheriff (or federal or state agency chief) becomes liable for your actions under state "volunteer" statutes. When, for example, an Amateur Radio Emergency Service group is activated, the agency or incident commander does so because he or she knows the ARES unit can perform and trusts their quality of response.

Fred McClain, N5DRZ, stated that "lots of times amateurs (boaters, fliers, climbers, communicators) could offer some worthwhile assistance." And he's correct. But it's a big dilem-

ma! In a small county the sheriff may know that you are a qualified mountain person and may let you help on a rescue. In a larger area such as metropolitan Denver, the rescuers are not going to know that you're qualified unless you're on an SAR team.

### Local rescue groups

From my own personal contact and your letters I know there are rescue groups all over. I'd bet there is a sheriff or police SAR group in your area. There is an ARRL structure that allows you to get an ARES group going if there isn't one already in your area.

I can sympathize with those of you who want to get involved. Having been on the volunteer side and the search coordinator side, I can understand what happens. However, the SAR community is moving toward documented training. You're going to see various groups (CAP, Mountain Rescue, National Ski Patrol, National Park Service, OSHA, FEMA, etc.) working toward common certifications. This will make it easier for a volunteer communicator from one group to be accepted and called upon when another group is coordinating a search.

### Incident command system

Several weeks ago I was honored to be able to attend a training class for the Lincoln County (Wyoming) SAR team. My thanks to Sheriff Lynn Clark for this opportunity.

Rick Goodman, W5ALR, an SAR coordinator and trainer, conducted a 16-hour class on incident command system. Rick has been around the SAR circles for 30 years or so and coordinates searches in New Mexico under state police certification. He's been a key player in the direction SAR

has taken in the past 20 years.

I was impressed by the dedication of the Lincoln County group! Bright and early the room was filled with SAR volunteers and sheriff deputies—along with Sheriff Clark. And what an SAR facility! Their SAR building is well equipped and ready for response. From boats to snow machines it was all prepped and ready to roll. Bob Wood, KA7SHX, also welcomed me to his super-coverage Amateur Radio repeater and packet node.

Lincoln County is moving in state-of-the-art circles and learning ICS. This system has been around fire fighting efforts for a decade and is fast gaining attention in the SAR community. Many of you may be familiar with ICS, as it is also used in hazardous materials emergencies. (You can order an ICS handbook from Fire Protection Publications, Oklahoma State University, Stillwater, OK 74068. The book will cost you \$15.) ICS is a management system. It looks at large or small events and covers responses by single or multiple agencies in single or multiple jurisdictions.

### Effective response

After devastating California fires in the 1970s, agencies looked into finding a more effective way to respond. ICS evolved as a way of managing emergency response, not changing how a particular agency does its job.

Major components of ICS include common terminology, modular organization, distinctive titles, an integrated command structure, consolidated action plan, manageable span of control, predesignated facilities and comprehensive management of resources.

ICS looks at an emergency from a "function" point of view, irrespective of people or agencies. For example, an incident commander may need a communicator. If that communicator is trained in ICS, it doesn't matter if the operator is a police or fire dispatcher, a BLM communicator or an Amateur Radio operator. The function of communicator is filled with a qualified person.

There are five major functions in ICS. The incident commander (IC) provides the direction and control, making the minute-to-minute decisions; the IC coordinates the event and delegates as needed. The operations

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chief is responsible for directing the on-scene activities; this is your tactics person.

A planning chief provides the emergency response strategy with information on what has happened, what is happening and what resources are available. This function briefs and debriefs crews to measure effectiveness. The logistics chief is responsible for providing communications support and all other service activities in support of the incident. The final major function is organizing financial support. While this is important in fire disasters, it may not be activated in less major SAR events.

A key part of ICS is that it expands (and contracts) in a logical manner. In the "good old SAR days" we would have a manning chart that, once filled, meant a staff of 50 supporting four or five teams in the field. The "standard" manning chart was overwhelming. ICS manning (and command staff) expands as needed, as long as functions are handled. ICS also handles the event from start to finish.

For example, if you are alerted that an emergency locator transmitter is running and you're in charge as IC you would handle command, operations, planning, logistics and finance. You'd plan where to go, how to get there, how to pay for your response and what to do on the scene.

If the direction finding gear points to a crash and you discover that a plane is lost off radar, a logistics chief can be appointed to get you search planes and an operations chief appointed to direct their effort. As IC you would still handle planning and finance. As the event grows the operations chief may need a ground operations director and an air operations director. You may become busy enough to designate a planning chief.

The event directs what functions are covered. We no longer "automatically" staff all functions. This means that those trained in IC understand how it works and when staff members are needed; it does not mean your IC does it all!

There's no way I could explain all of ICS in this column (although I'll explore other aspects in coming months). See if you can find fire department or SAR ICS training sessions in your area. If ICS follows the National Fire Academy or National Interagency Incident Management System, those are the standards to learn (they're both almost the same).

#### Watch the weather

Include weather data in your planning; weather is often overlooked but it plays an important part of your SAR response.

Part of ICS is having an action plan. This is your "legal" coverage. Here you prepare your standard of care and provide for qualified responders. Implied in having an action plan is having trained responders and not using untrained or unqualified people. This plan also means each of your teams is contributing to the whole effort and the IC knows what is happening. It prevents one team from doing their own thing "over here" while another team is doing something else "over there."

Rick emphasizes that your best people should be used in the critical areas of planning and operations. Often, he says, planning is overlooked until late in the search. Planning happens from the beginning and becomes critically important if your missing person or plane isn't found in the first four to eight hours. Each participating team, as well as the command staff, keeps logs of what actions were taken.

If an SAR team spends more than 30 minutes in a staging area, it's a

poorly run mission! Planning must happen quickly and assignments must be ready when your requested teams arrive. It does the victim no good to have a highly-trained search team spend "search hours" at the incident base.

Future columns will include ICS information. Please write and share your comments concerning ICS and how it works in your area. Many CAP members will find ICS references in the new emergency services regulations.

Finally, a caution: Your group should fit into ICS—you should not try to change ICS to fit your operation. ICS is a standard. Groups using ICS are singing from the same sheet of music and each group understands what functions are being accomplished. To borrow an idea from Rick, you could choose to modify ICS to fit your operation and thus become part of the National Emergency Response Data System—NERDS. Until next month, 73. □

## Tweaking the tuner

It's Monday night around 8 p.m. and I'm getting ready for the net on 10M. I punch in 28.400 and listen for a bit and hear a couple of guys talking far away. I figure they won't hear me and I tap the tune button and tweak the tuner for max power out.

When I go back to receive, a strong station from Alaska comes on and says, "You was covered that time, Joe.

Some lid tuned up on top of ya."

Oops, I think, that's embarrassing. Then he says, "From Six-Land, sounds like." Ouch. "Probably an Extra."

I'm not about to identify now, so I tiptoe out of the shack and watch TV with the wife until net time.

73 de Jack Bankson, WA6JXG  
—Ventura County ARC □

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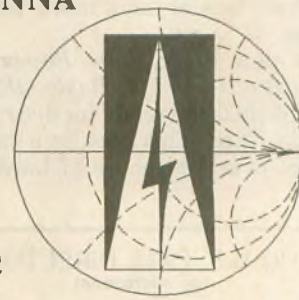
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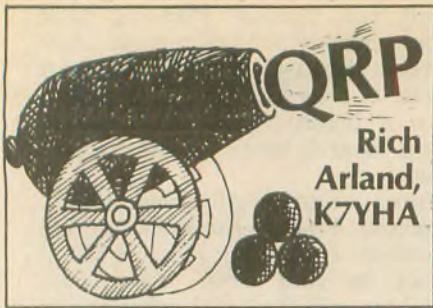
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Spring has sprung and that means it's antenna time! No time like the present to put up that "death-ray" antenna you've been dreaming about. The new *ARRL Antenna Book* is a prime source of solid antenna information for the newcomer or old-timer. This 15th edition is absolutely indispensable for anyone interested in antenna theory, construction and propagation theory. Don't wait, get a copy today. It will make life on the old antenna farm a whole lot easier.

Speaking of making life on the antenna farm easier, MFJ Enterprises, Inc. (P.O. Box 454, Mississippi State, MS) has unveiled a new piece of antenna test equipment. Their model 247 is a combination of their model 207 HF Antenna SWR Analyzer and a 500 MHz digital counter. The MFJ-247 is a portable and highly versatile piece of test gear. It can be used to check resonant frequency, antenna bandwidth, lowest SWR, antenna tuner alignment and much more either directly at the antenna or inside the shack. The counter can be accessed directly via a BNC connector on the top of the box or it can be coupled to the internal oscillator in the 247 to directly read frequency of the antenna analyzer. The MFJ-247 is priced about \$189 (retail) and is a good value for the money. About the only thing I would change is the size of the RF tuning knob on the oscillator; it needs to be about three times the diameter of the stock knob to facilitate easier and more accurate tuning.

My new book, *Low Power Communications—Vol. 1, Basic QRP*, will be published and ready for distribution by mid-April. This book is a culmination of over 700 hours of hard work,

research and writing. Vol. I is an entry level book, designed to get the inexperienced low power communicator off on the right foot. There will be no construction projects in Vol. I. Unfortunately, construction projects are the focus of most books about QRP, and little or no attention is paid to the operating end of things. This gives the impression that QRP is *only* home-brewing cutsie little receivers and transmitters, which tends to drive many prospective radio amateurs away from the low power side of the hobby.

Many times information on how to develop successful strategies for basic low power operation, DXing, contesting and milliwattage are left to the reader's imagination. Well, not any more, pal! *Basic QRP* provides the new QRPer with the necessary knowledge to become successful in the low power arena. While I have targeted this book for the QRP newcomer, it contains tidbits that the seasoned QRPer will find interesting. Retail price is \$14.95 (plus shipping) from Tiare Publications, P.O. Box 493, Lake Geneva, WI 53147. However, I will be offering a limited number of copies (autographed, of course) for \$12.50 including shipping, if you would like a copy send check or money order for \$12.50 to me at P.O. Box 1691, Wilkes-Barre, PA 18703-1691.

*Low Power Communications—Vol. II, Advanced QRP Techniques*, is well underway. This book will be guest authored by some of the top names in the QRP world who will share their secrets of success to help you become a better QRP operator. All the contributors to Vol. II are well known, currently active amateurs who have achieved a very high degree of success

in their chosen area of expertise. Vol. II will be sent to the publisher late this fall with a release date just prior to Christmas. Yes, there is a possibility of a Vol. III. This would be a collection of QRP construction articles (new stuff... not a re-hash of previously published circuits and projects). WA8MCQ, K3TKS and K7IRK have already pledged support for Vol. III, so stay tuned.

Recently Bob Moody, K7IRK, in Palestine, Texas, called to tell me that he had just broken the four *billion* miles per watt barrier by contacting a station in New Hampshire while running only 700 *picowatts*! This smashes the old record held by KL7YU and W7BVV who, in 1970, set a record of 1.6 billion miles per watt. (Now, however, there seems to be some debate regarding the validity of this record due to inconsistencies in RF measurements done by KL7YU.)

RF power measurements at extremely low output levels is a topic that we will explore in detail in a subsequent column. Mike, WA8MCQ has consented to provide some much needed insight into this area. Now is the time to buy that new 60 MHz scope!

If you haven't already begun thinking about Field Day 1992, you better start. FD is rapidly approaching and this is *the* contest for the QRP crowd. Low power communicators hit the bush every year and have a barrel of fun in the process. FD '92 will most likely find Fran, KA3WTF, Tom, WB3FYU, and me (and maybe a couple other QRPer) beatin' the bush up in Wayne County on the Pennsylvania Northern Tier. I cannot think of a bet-

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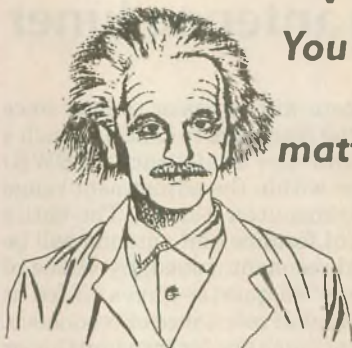
ter way to spend the last weekend in June. Field Day is fun, challenging and very addictive. Once you have experienced a QRP Field Day you will be hooked.

One of my late Christmas gifts was a copy of KB1T's 1992 Ham Photo Calendar. This is one of those low-cost items that is perfect for every Amateur Radio operator. I am constantly referring to the calendar to check on the latest contest dates for the upcoming month, ARRL CW qualifying runs, and much more. The calendar is chock full of tidbits of information on radio history, meteor shower data, various operating events, contests, etc. In addition to 12 large pictures depicting various DXpeditions, world famous radio amateurs and their stations, there is an outstanding 1992 propagation forecast and tutorial by Chod Harris, VP2ML, and a historical article by Tom Lewis about the development of early radio. (How many of you watched the PBS special "Empire of the Air"?) The back sections of the calendar are stuffed with reference material that is very easy to use. In all, John has done a terrific job of cramming a lot of very interesting and important information into his 1992 calendar. Cost of the Ham Photo Calendar is \$11.95 plus shipping. For more information contact John David, KB1T, at KB1T Radio Specialties, P.O. Box 1015W, Amherst, NH 03031.

Lately, my interests have been centered on space communications. Traditionally, communications with the OSCAR series of satellites, SAREX missions on the Space Shuttle and MIR (Soviet space station) are not accomplished with QRP power levels. Space Comm is one area that has always intrigued me and, until recently, I have not been able to devote the time and attention necessary to accomplishing my goals. This is all changing slowly now that I have a Yaesu FT-726R transceiver. (Hey, if you're gonna do it, do it right!) I have managed several contacts with U5MIR. Dove downlink telemetry is not particularly challenging but it does serve to demonstrate basic orbital mechanics and current packet technology. In all, Space Comm is really technology and hardware intensive and requires some "book learnin'." The ARRL publishes two outstanding books on the subject: *The Satellite Experimenter's Handbook* and *The ARRL Satellite Anthology* which are must reading for anyone desiring to become familiar with Space Comm. As I become more conversant in space communications I'll pass along some ideas and information in this column.

Next month, QRP RF power measurements. 'Til then, 73!

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# CONSTRUCTION

## The layman looks at the antenna tuner

GORDON BEEMAN, W9RCS

A good place to start toward understanding the antenna tuner or transmatch is page 104 of *The ARRL Antenna Book*, 13th edition, in the section entitled "Tuned and Untuned Lines." From this section it can be deduced that starting at either end of a center-fed antenna having a mismatched two-conductor feedline and proceeding to the center and down the feedline, every electrical quarter-wave point on the antenna and on the feedline is a point of resistance and, therefore, resonance.

If the antenna is resonant the first such feedline point will be at the antenna; if the antenna is not resonant the first such feedline point will be less than a quarter-wave from the antenna. In either case all the rest will be quarter-wave intervals from this first feedline point on down the line. The resistance at these points will alternate between high and low depending upon the SWR and the resistance (high or low) of the point at or nearest the antenna.

If the feedline is cut (pruned) such that the input is at one of these points,

the system will be easier to feed since there is no reactance to cancel at such a point and the resistance (VSWR) might be within the adjustment range of the transmitter output. The entire system of feedline and antenna will be rendered resonant (tuned) by virtue of becoming "all quarter-waves" if fed at such a point of resistance or resonance.

To be of much use for transmitting or receiving, any antenna feedline system must be brought to resonance. Pruning not being practical, some other form of tuning is necessary. A little thought will reveal that the input of a feedline is always at or less than a quarter-wave from a point of resonance—regardless of antenna length, feedline length, frequency, type of line or multi-band use. It is thus logical that an antenna tuner at the line input, if not at a point of resonance, need only to cancel the reactance at the line input to become a point of resistance equivalent to another quarter-wave point of resonance. Thus the system becomes "all quarter-waves" and therefore resonant.

The "tuner," in any case, must also transform the resistance to suit the transmitter output line, usually 50 ohms. This transforming of the resistance is more complicated than simply canceling the reactance. Within its adjustment range a transmitter tank circuit functions the same as an antenna tuner, canceling the reactance and adjusting the transmitter output resistance to suit the feedline resistance in this case. The antenna load resistance and reactance is transformed to the feedline input quarter-wave by quarter-wave. As seen by the simple expedient of pruning the line no power or connection to any device is needed to affect resonance and simultaneous transforming of antenna load to the line input.<sup>2</sup> Of course something is needed to indicate that the tuning is correct—perhaps a receiv-

ed signal, SWR indicator, RF wattmeter, etc.

It should now be apparent that the antenna tuner does not tune the antenna. An antenna can only be made resonant (tuned) by altering its length either actually or by loading.

An antenna tuner does not tune the feedline. A feedline cannot be tuned; the inductance of one conductor cancels the inductance of the other conductor and vice versa. Otherwise it would not function as a transmission line.

The tuner merely terminates the feedline as another quarter-wave point of resistance and resonance, thus permitting the system of tuner, feedline and antenna to tune itself by virtue of becoming "all quarter-waves" and therefore resonant.<sup>3</sup>

These quarter-wave points are the standing waves. Contrary to the "books," standing waves are not caused by reflected power. Obviously, standing waves are caused by the current and voltage in the feedline and on the antenna being 90 degrees out of phase.<sup>4</sup>

There are many versions of an antenna tuner, but all simply cancel the reactance at the transmission line input and transform the resistance, thus remaining to suit the transmitter output.<sup>5</sup>

### Notes

<sup>1</sup>The 14th edition of *The ARRL Antenna Book* apparently does not include this section.

<sup>2</sup>Atmospherics and random radiation can induce many voltages, frequencies and resonances in an antenna feedline installation, whether connected to anything or not. Constant electron movement in conductors creates potentials. Such facts may have something to do with the load appearing at the feed end, simultaneous with the selection of a resonance with or without any power. However, an author in one text has no intention of relying on such vague phenomena to get his rig going; his rig feeds current into the transmission line, not knowing how much current the load at the end of the line will take and with Ohm's law held in suspension until the current reaches said load at the end of the line.

<sup>3</sup>The old-timers no doubt knew the function of a so-called antenna tuner—they called it a feedline stretcher.

<sup>4</sup>In the case of a pure reactance such as an antenna or a feedline the current and voltage are either in phase or they are 90 degrees out of phase.

<sup>5</sup>Compare this tuner theory with the complicated, confusing and inaccurate descriptions of reflections, conjugate matches, antenna resonance etc. that have been given as an explanation of how a tuner or transmatch operates. □

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
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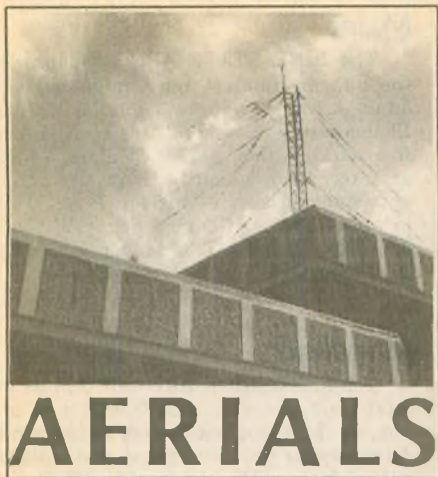
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## KURT N. STERBA

Okay, okay, okay! Y'all have been asking over and over again, so here it is.

I've come out with a BOOK! It's titled *Aerials*. This one (there will be others) is a collection of the earliest columns. We've made the type a little larger so it will be easier to read (important for me and others of my generation).

The price is only \$10. Add \$2 for postage and handling to US ZIPs; \$3 elsewhere. For those living in the land of the big amplifiers (W6), the office tells me you have to add 75¢. Send your book orders to *Aerials*, *Worldradio*, 2120 28th St., Sacramento, CA 95818. When you buy the book, you will make an old man happy.

I was looking at a catalog from one of the antenna companies. They sell a three-element Yagi for which is claimed 8dBd gain. They also have a four-element Yagi for which is claimed 8.9dBd gain.

Why anybody would spend more money for less than 1dB gain is beyond me. A 2L over a dipole makes real sense. A 3L over a 2L is indeed worthwhile. A 5L over a 3L can make a difference, but the 4L makes no sense at all.

I see a half-wave vertical rated at 3.75dB gain. Pray tell please, 3.75dB

over what?

I see a 22 ft. tall vertical for use on 40 through 10M advertised as having "pileup breaking power."

I'll tell you what "pileup" you'll break with that. You know that pile of beer cans in your garage? The ones you've been saving up for that 5/8 wave vertical for 160M? That's the pileup you'll radiate into.

I was glancing through an issue of *Radio Fungus*. An article on S-meters caught my eye. It was written as if everything were an absolute. HA! Man, on the average transceiver, although the voltage ratios to make an S-meter go from 2 up to 3, or from 8 to 9 should be the same, they actually wander all over the place. You can't do any serious measurements with an S-meter! There are instruments that can be quite accurate, but you are looking at the big bucks.

Now let's move into some real experimentation. I can call it that because there has been practically nothing written about this in the amateur press. You can be a pioneer! So that it will be truly experimental on your part, I'm not going to give you the dimensions. You work them out. Then you can write a famous paper on it.

First you put up the everyday quarter-wave vertical for the band of your choice, with radials. Then, on the backside, at the measured distance that the reflector should go (as in a Yagi) put up another quarter-wave vertical, making it a bit longer than the driven element, the same as with a Yagi's reflector. Don't break this one in half as you did the first one so you could feed it.

Run radials out. This is one con-

tinuous half-wave in an "L" shape—one quarter-wavelength up, the other quarter-wavelength along the ground. Do not overlap any of the reflector radials and the driven element radials. Do not feed the reflector in any way. It is a parasitic element.

Then in the opposite direction of the reflector vertical, put another vertical element, this one a bit shorter, the same ratio shorter than the DE, as the director in the Yagi. Again, lay out radials without overlapping.

What do you have? A three-element Yagi instead in the vertical mode. It is, of course, non-rotatable. But, with not too much expense or a great deal of effort, you will put some extra poop in a given direction. If you wish, more elements could be added, just as in a Yagi.

You will not be spewing power every which way as with the regular vertical, and the F/B and F/S will be much better on receive also. A field strength meter would, of course, be quite helpful for fine pruning.

Send in the results you obtain with this plan. Share your experimentation with others. We'll print what you've found.

*(KNS, famous book author, goes by his masked-man name so as not to be besieged at conventions by those wanting autographed copies of his book. His quest for anonymity has even led him to turn down invitations to be on The Today Show. No matter how many times Gene Shalit begs, the answer will still be the same.)*

Editor's note: Yes, seriously, there is such a book. Send for your first volume now. □

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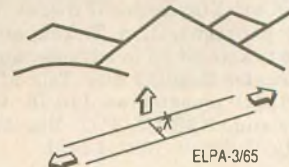
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## California

The CATALINA ARA will hold Hamfest '92 on June 20 from 9 a.m. to 4 p.m. at Cypress College. Features will include speakers, license exams starting at 9 a.m., contests, food and exhibits of major equipment manufacturers and local vendors. Admission is \$10 and includes hamburger luncheon. Contact CARA, P.O. Box 425, Garden Grove, CA 92642-0425.

The SATELLITE ARC will hold its annual Santa Maria Radio Swapfest on June 21 at Unocal's Newlove Picnic Grounds. Features will include swap tables, contests, games, major prizes and a Santa Maria style barbecue dinner. Swap space is \$5. Admission is \$8 for adults and \$4 for children. Gates open at 9 a.m. Talk-in on 146.34/94 WB6IY. For more information contact Santa Maria Swapfest, P.O. Box 2067, Orcutt, CA 93457-2067 or call Rick Laird, KB5OO at 805/734-8232.

## Illinois

The SIX METER CLUB OF CHICAGO will hold their 35th Annual Hamfest on June 14 from 6 a.m. at Santa Fe Park, Willow Springs, IL. Features include a large swappers row, door prizes, free parking and refreshments. Admission is \$5 or \$4 in advance. Talk-in on K9ONA on 146.52 or K9ONA/R 37-97. Contact Mike Corbet, K9ENZ, 606 South Fenton Ave., Romeoville, IL 60441.

The EGYPTIAN RADIO CLUB will conduct its annual Egyptianfest on June 14 from 6 a.m. to 2 p.m. at the club grounds on Chouteau Place Road in Granite City. Features include prize drawings, refreshments, overnight camping and license testing at Sanford Brown Business College. Contact Eric Koch, NFØQ, at 314/946-0948 for pre-registration. Tickets are \$1 each or six tickets for \$5 in advance, and \$2 each or three for \$5 at the door. Talk-in on the ERC-W9AIU repeater on 146.76. Contact Jim Cleland, K9RKU, P.O. Box 562, Granite City, IL 62040; 618/344-2401.

The STARVED ROCK RADIO CLUB will sponsor a hamfest on June 7 from 6 a.m. at the Bureau County Fairgrounds in Princeton. Features include outdoor flea market and camping. Admission is \$5. Eight ft. tables indoors are \$10 each. Talk-in on 146.355/955. Contact Bruce Burton, KU9A, or Debbie Burton, N9DRU, 1153 Union St., Marseilles, IL 61341-1710; 815/795-2201.

## Iowa

The DES MOINES RADIO AMATEUR ASSOCIATION will sponsor a hamfest on June 20 at the Sacred Heart School gym in West Des Moines. Features include food, free outdoor tailgating, and VE testing with registration at 7:15, testing at 8. Walk-ins okay. Admission is \$5. Indoor table \$10; additional tables \$7 each. Talk-in on 146.34/94 WØAK. Contact Mark Chappelle, NØKLK, 636 40th St., Des Moines, IA 50312; 515/266-6930.

## Kansas

The CENTRAL KANSAS ARC is having a hamfest on June 7. Call 913/827-9063 after 4 p.m. for information.

## Kentucky

The NORTHERN KENTUCKY ARC is holding Ham-O-Rama '92 on June 14 from 8 a.m. at the Erlanger Lions Park in Covington. Features include prizes, packet and RFI forums, indoor exhibit area and outdoor flea market. Admission is \$5 or \$4 in advance, and children under 13 enter free. Indoor vendor space is \$15 per table (provided) and flea market spaces are \$2 each. Vendor set-up time is 6 a.m. Talk-in on 147.855 or 147.375(+) repeaters. Contact KC4FET c/o NKARC, P.O. Box 1062, Covington, KY 41012; 606/341-1213.

## Maine

The PINE STATE ARC is sponsoring the Bangor Hamfest and Computerfest on June 13 from 8 a.m. to 2 p.m. at Harmon Elementary School. Features include food, free parking, flea market, dealers, VE exams, technical demonstrations, CW contest and many prizes. Admission is \$2. Talk-in on 146.34/94. Contact Roger W. Dole, KA1TKS, RR 2 Box 730, Bangor, ME 04401; 207/848-3846.

## Maryland

The FREDERICK ARC will hold its annual hamfest on June 21 from 8 a.m. to 4 p.m. at the Frederick County Fairgrounds. Admission is \$4 with spouse and children enter free with one paid admission. Tailgaters \$5 for each 10 ft. space. Exhibitor indoor tables are \$10. Contact Frederick Hamfest, P.O. Box 1260, Frederick, MD 21701.

## Michigan

The CENTRAL MICHIGAN ARA is holding their 18th annual hamfest on June 20 from 8 a.m. to 1 p.m. at the Community Center in Midland. Features include food, door prizes and VE exams. Admission is \$3 and tables are \$9. Set-up at 7 a.m. Talk-in on the Midland repeater on 147.60/00. Contact CMARA Hamfest, P.O. Box 67, Midland, MI 48640. Please send SASE or call Joe, WD9GUF, at 517/631-8818 evenings and weekends.

## New Hampshire

The CONTOOCOOK VALLEY RADIO CLUB is holding their annual Spring Flea Market on June 7 from 8 a.m. to 3 p.m. in Contoocook. Features include tailgate flea market, adjacent conventional flea market and refreshments. Admission is \$1. Vendors \$6. Talk-in on K1BKE repeater on 146.895. Contact Rob Fair, KA1AUA, at 603/224-3899.

## New Jersey

The RARITAN VALLEY RADIO CLUB is holding their 30th annual hamfest on June 13 from 8 a.m. to 2 p.m. at the Watchung Hills High School in Warren. Features include free parking, food, door prizes and VE exams (pre-registration must be postmarked by May 30th). Admission is \$5 with XYLS and kids under 14 free. Indoor tables are \$12 and outdoor spaces are \$7. Talk-in on RVRC repeater WA2UDT on 146.025-146.625 and 146.520 simplex. Contact John, WA2F, at 908/722-9045, or Walt, W2FLB, at 908/968-5993.

## New York

The CHAVERIM, 6TH INTERNATIONAL CONVENTION will be held from June 12 through 15 at the Fallsview Hotel in Ellenville, NY (an association of Jewish amateurs and their friends). For details, contact Arnold L. Halpern, W2GDS, 450 Brighton Ave., Long Branch, NJ 07740; 908/222-3009.

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The SKYLINE ARC is holding their 10th annual Cortland International Hamfest on June 20 from 7 a.m. to 3 p.m. at the Cortland County Fairgrounds. Features include prizes, food, outdoor flea market space and VE testing (reservations required). Admission is \$5 or \$4 in advance. Indoor tables are \$8 and outdoor spaces are \$2. Talk-in on 147.825/225 and 147.780/180. Contact Skyline ARC, P.O. Box 5241, Cortland, NY 13045.

The LANCASTER ARC is sponsoring the Lancaster New York Hamfest on June 14 at the Elks Club Hall in Lancaster. Features include flea market space and door prizes. Admission is \$5 which includes eight-foot outdoor flea market space. Talk-in on 146.550 simplex or 224.640 repeater. Contact Nick, WA2CJJ, 5645 Genesee St., Lancaster, NY 14086; 716/681-6410.

The RADIO CENTRAL ARC is having a Summerfest on June 14 from 8 a.m. to 3 p.m. at the Cultural Center at Bald Hill, Long Island. Admission is \$5. Vendors set up at 7 a.m. Talk-in on 144.55/145.15-4Z or 444.525/449.525-2A. Contact John Mark, KB2QQ, 516/689-6336, or JoAnne Colletti, N2IME, 516/399-1877.

## Ohio

The CUYAHOGA ARS is holding a Pre-field Day No Frills Hamfest on June 21 from 8 a.m. to 2 p.m. at Longwood Park in Macedonia. Features include a tailgate flea market and prize drawings. Admission is \$3. Tailgate flea market

space is \$2. Vendor set-up is at 6 a.m. Talk-in on 146.82 repeater. Contact Rich LaCroix, N8HQS, 216/467-7567.

The GOODYEAR ARC is holding their 25 annual hamfest and family picnic on June 14 from 8 a.m. to 4 p.m. at Wingfoot Lake Park near Akron. Features include an outside flea market and a picnic. Family admission is \$5 or \$4 in advance. Outside flea market space is \$3. Inside dealer area is \$6 per table. Contact William F. Dunn, W8IFM, 4730 Nottingham Lane, Stow, OH 44224; 216/673-8502.

## Pennsylvania

The HARRISBURG RAC is holding a hamfest on July 4 from 8 a.m. to 2 p.m. at the Bressler Picnic Grounds in Harrisburg. Admission is \$4. Tailgating is \$6 per space. Tables are \$15 or \$10 in advance. Vendor set-up at 6 a.m. Talk-in on 146.76R or 146.52S Contact Steve Gobat, KA3PDQ, at 717/938-6943.

The SVARC and MILTON ARC are sponsoring a hamfest on June 14 from 8 a.m. to 4 p.m. at the Winfield Fireman's Grounds in Winfield. Features include refreshments and VE exams (must pre-register). Admission is \$4. Outside table/tailgate space at \$1 per six feet. Talk-in on 145.18/78 and 146.82/22. Contact SVARC, Box 73, Hummels Wharf, PA 17831; 717/473-7050.

## Vermont

The RADIO AMATEURS OF NORTHERN VERMONT are sponsoring the Northern Vermont Summer Hamfest and Computer Technology Fair on June 6 from 8 a.m. to 3 p.m. at the South Burlington Middle School Complex. Features include indoor and outdoor flea markets, dealers, forums, exhibits and refreshments. VE exams will be given at 2 p.m. Admission is \$3, under 18 free. No charge for flea market spaces, tables available. Talk-in on 146.25/85. Contact N1DMP at 802/893-6458 (fest) or WB2JSJ at 802/879-6589 (exams).

## Washington

The APPLE CITY RADIO CLUB is having Hamfest '92 on June 6-7 at Rocky Reach Dam, Wenatchee. Features include prizes, free RV hookups, Saturday breakfast and evening banquet, Sunday noon potluck and VE testing at noon on Saturday. Admission is \$5 or \$1 for non-ham. Talk-in on 146.680/R and 146.520/S. Contact Rich Cole, 4141 Leubber Lane, Malaga, WA 98828.

## Wisconsin

The CENTRAL WISCONSIN RADIO AMATEURS is holding its 15th annual Swapfest on June 14 at the University Center on the UW-Stevens Point campus in Stevens Point. Features include food, on-site restrooms, handicap accessible and free parking. VE exams offered. Contact Art Wysocki, N9BCA, 3356 April Lane, Stevens Point, WI 54481; 715/344-2984.

# Amateurs have more hair loss

**CARL HOHENBERGER,  
WB0BZP**

After reading an article recently in the newspaper about a supposed study about cancer and Amateur Radio, I decided to do a study of my own. My neighbor W0BWD told me that the same type of article about cancer and Amateur Radio has surfaced many times since 1940. Therefore, I decided to add my ideas for science.

After much time and study (at least 5 minutes), here are my conclusions. When an Amateur keys his transmitter, thousands of little electrons jump through the air and zap the hair follicles. Over a period of years, these waves produce hair loss.

How do I come to this conclusion, you ask? When I started in Amateur Radio in 1970, I had a full head of hair. Now years later, a lot of hair is gone, but not forgotten. At the auctions, hamfests and meetings, I've noticed that I'm not the only one with this condition. Many of us are in the same boat.

One might ask about those who have

full heads of hair. Why aren't they bald? Something tells me they wear a special lead lined hat when they operate their radios.


I have come up with a great idea for all Amateurs. A hat in the shape of a pyramid could be sold and worn. This hat would deflect the electrons back to the transceiver and give an extra 5dB of signal strength.

We must hurry with this idea. Who knows, maybe we can get on cable TV to sell our outstanding product! It could be on 40 times a week! This could be another moneymaker as great as the ADMIRAL.

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# CONTESTS

## ARRL VHF Contest

On the morning of September 14, 1991, Ron Hammel, KC6WLC, started out the ARRL VHF QSO Party in grid square DM17 on Hwy. 168, 29 miles east of Big Pine, California, on the California/Nevada border. He towed his Jeep with his radios and antennas there from Lancaster, California, for the contest. Looking forward to some challenging four-wheel driving and operations from some rare-contact grid squares, he started the contest in DM17 with the objective of getting to DM07.

Being a rover in the contest took a lot of driving time because the terrain was so rough. He ended up 45 miles from his starting point, in the White Mountains at 12,900 feet. He ran out of time at 2100 UTC in order to get

back to DM17 before nightfall, but he got a lot of QSO time on the return. He'd accomplished his objective of starting the ARRL VHF QSO Party in DM17 at 1800 UTC at 7,400 feet and operating in the contest throughout the climb to 12,900 feet.

During this contest Ron was testing antennas using 144.200 USB and 223.500 FM. He worked 41 stations in 16 different grids—not a record, he says. The Jeep has a GM 6V diesel powered engine set up for high altitude work and a 10,000 rpm clutch and flywheel. Equipment used in this contest: H-144-5 Ham Pro; MLM 2M antennas for 2M and a Cushcraft SN 220 vertical for 223.500; RF Concepts 2M amp, 150 amps; 2-417-2M; Kenwood 751 all-mode radio.

Ron Hammel will be participating once again in the June ARRL VHF QSO Party. He plans to start out at 1900 UTC on the first day of the contest, June 13, in grid square DM07 on the California/Nevada border in the White Mountains of California, and operate through DM17, DM16, DM05 and DM04.



Ron Hammel, KC6WLC, contests from grid square DM07 at 11,900 feet on the way to White Mountain Peak.

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Ron plans to operate on 144.190 USB and 144.200; 144.210 USB and 223.500 FM; and 50.125 MHz. The second day of the contest he plans to start out at 1700 UTC.

More information about this contest, grid locations and the ARRL VHF/UHF Century Club Awards (based on contacting 100 grid squares), as well as an ARRL Grid Locator map, based on the worldwide "Maidenhead" system, may be obtained from the ARRL, 225 Main Street, Newington, CT 06111. □





**Information in "New Products" is supplied by the manufacturers to acquaint *Worldradio* readers with new products on the market.**

## Books on cassette

The exciting new Amateur Radio adventure books, *Night Signals* and *Hostage in the Woods*, by Cynthia Wall, KA7ITT, are now available on cassette through the Talking Books Division of the Oregon State Library.

Persons wishing to borrow the cassettes should contact their nearest Regional Library for the Blind. □

## Optoelectronics self-tuning test radio

Optoelectronics, Inc. announces a breakthrough in self-tuning radios for testing voice and signal-tone FM transmitters. The new model R-10 communications test receiver is used to test the modulation quality of mobile voice transmitters and to verify the accuracy of audio signaling tones such as DTMF (dual tone multi-frequency) and CTCSS (continuous tone-coded squelch systems). R-10 is quick and easy to use; it provides a simple, inexpensive alternative to modulation meters costing 300 percent more.



R-10 automatically determines and locks on to whatever carrier signal is the strongest within a 100 ft. range. Once it's locked in, it demodulates whatever FM audio is present on the carrier and outputs that audio to an internal power amplifier/speaker and the BNC output jack.

For DTMF and CTCSS testing, the audio output is evaluated on a frequency counter or scope. For counter-surveillance applications, you just listen to the demodulated audio to determine if a surreptitious transmitter is nearby.

R-10 features two modes of operation. In the search mode, a swept comb-generator

serves as the local oscillator. When the LO mixes with a carrier that produces a 10.7 MHz intermediate frequency, it stops sweeping, locks on to the carrier with an automatic frequency control feature, and indicates *lock*. Audio demodulation is then by conventional FM discriminator.

Other R-10 features include a squelch capability that serves as a sensitivity control, *audio gain*, *power* and *low batt* indicators. Antenna input impedance is 50 ohms. Rear connector provides output to external frequency counters and various other instruments. Power is supplied by an internal 9V battery.

Opto's model R-10 communications test receiver is priced at \$359 each. Available options include rechargeable NiCd battery pack for \$75, and a telescoping whip antenna with swivel base for bench and field use for \$14. Contact Optoelectronics, Inc., 5821 NE 14th Avenue, Ft. Lauderdale, FL 33334; 800/327-5912 or 305/771-2050; FAX 305/771-2052. □

## Communications Specialists wire harnesses

Communications Specialists, Inc. has recently added another wire harness for direct plug-in of their popular TS-32P CTCSS encoder-decoder. Use of these plug-in wiring sets can save a radio technician considerable time when adding CTCSS encode-decode.

The newest wire harness is for the GE Delta radio, part #01-1032. This wire harness is simply plugged in to the radio on one end, and to the TS-32P encoder-decoder on the other end. The 01-1032 is priced at \$2 and can be added to the TS-32P encoder-decoder at the time of purchase, or retrofitted to existing TS-32Ps.

Other direct plug-in adaptations of Communications Specialists tone products include applications for many popular radios. For information on what's available and pricing, contact Communications Specialists, Inc., 426 West Taft Avenue, Orange, CA 92665-4296; 800/854-0547 or 714/998-3021; 24 hour FAX 714/974-3420. □

## JCom invisible antenna

Last year JCom made carriers magically disappear with their Magic Notch filter. Now they have reached into their magic hat and pulled out a new series of almost invisible antennas for VHF and UHF.

The Stealth Antenna is a tiny 3½ in. square of 0.003 in. thick copper-clad polyimide coated with a non-corrosive graphite colored coating which adheres to the inside of a car wind-



shield. It looks so much like a decal that it is even available with an optional printed warning symbol to deter would-be thieves and vandals. Without a highly visible external antenna, thieves are less likely to be attracted to a vehicle in search of an expensive transceiver to steal.

Despite its incredible small size, the tiny Stealth Antenna outperforms a quarterwave whip under many circumstances. The etched copper antenna is multipolarized to reduce QSB caused by the varying polarization of signals received in a moving vehicle. The antenna presents a low SWR over the entire band and requires no adjustments or tuning.

Best of all, the Stealth Antenna can be installed without drilling holes or risking paint scratches from magnets or suction cups. Once installed, it is inside the vehicle, protected

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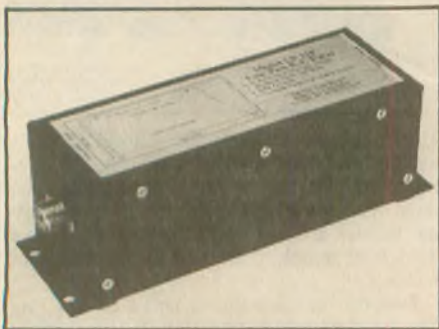
from the elements, and never in the way in a car wash or low garage.

The Stealth Antenna is available in models for 146 MHz, 220 MHz and 440 MHz. The standard model can handle 50W of input power and costs \$59.95 including shipping in the continental US. A high-power version capable of handling 110W costs \$69.95; 16 feet of RG-58/U coax is included in the price.

For further information, contact your local dealer or JCom, Box 194, Ben Lomond, CA 95005; 408/335-9120; FAX 408/335-9121. □

## Oak Bay filter

The Model LP-11P commercial grade low-pass filter from Oak Bay Technologies signals an end to TVI complaints from neighbors. The filter provides an upper cutoff frequency at 41 MHz and an ultimate attenuation of 150dB is realized at 51 MHz.



The Model LP-11P incorporates an 11-pole inverse Chebyshev design. Its operating frequency, rated at 1.8 MHz through 30 MHz, results in insertion loss that's incredibly low at less than .5dB. SWR is less than 1.7:1 and power handling is 1kW.

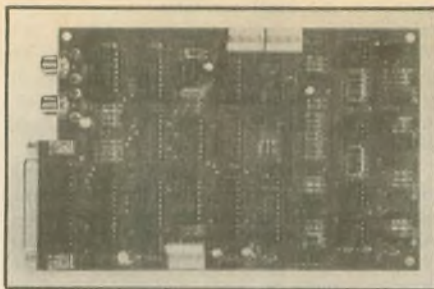
The Model LP-11P is 7.6 × 2.9 × 2.7 inches. It's available through your Amateur Radio dealers for a suggested list price of \$69.95. The filter is manufactured by Oak Bay Technologies of Redmond, Washington. For further information call 206/881-1088 or contact Evelyn Garrison and Associates, 21704 SE 34th St., Issaquah, WA 98027; 206/557-9611. □

## A & A color SSTV

ViewPort VGA is a software based color SSTV system for the PC/Clones that does not require an expensive scan converter. The software is shareware and was created by John Montalbano, KA2PYJ. This software enables your computer to send and receive most of the popular SSTV formats. Program updates will add new formats in the future.

The software requires an interface between your transceiver and the computer parallel port, LPT1 or LPT2. The A & A interface connects to a standard 25-pin parallel port. An optional 6 ft. 25-pin male-to-male D cable is available. The microphone and PTT are routed through the circuit. Power required is +12, -12 and +5VDC. A triple output power supply kit is included with every SSTV kit.

The SSTV circuit board is 6 × 3.95 inches and features a crystal controlled tone generator; no adjustments to this generator are required. The receiver portion of the circuit requires a zero and gain adjustment. This is easily accomplished with PC mounted 15-turn pots and a special loopback adjustment feature of the program. No test equipment is required for alignment.



A & A Engineering offers blank boards, kit of parts, and assembled and tested units. The main circuit board is double sided, plated through, fully solder masked and silk screened. The board features a 25-pin female D computer I/O connector, board mount phono connectors for *tape out* and *SSTV (audio) in* and power and transmit LEDs.

Each kit or assembly includes a free copy of ViewPort VGA software. The software is "one-touch" menu driven and sends: 8, 12, 24 and 36 BW and 36 or 72 color. It receives 8, 12, 24, 36 BW and 72, M1, M2, S1 and S2 color. Pictures are sent and received using 32,000 colors. They are displayed on your VGA in real time using 256 colors. Software that displays all 32K colors is available from the author.

Hardware required: PC or 100 percent compatible running at any speed, VGA with 320 × 200 × 256 color, at least 640K and printer port LPT1 or LPT2.

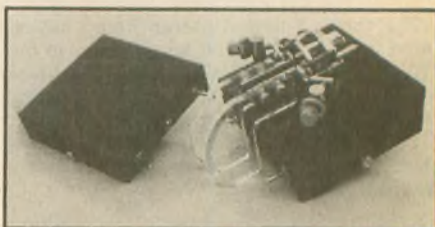
Price for board level kits, both SSTV and power supply kits, (no enclosure) is \$129.95; order #189-KIT. Price for a full kit including enclosure is \$169.95; order #189-ENC. A fully assembled and tested unit, #189-ASY is only

\$229.95. California residents must add 7.75 percent sales tax. Shipping in the US is \$5 per unit. For foreign shipping please inquire. Contact A & A Engineering, 2521 W. LaPalma #K, Anaheim, CA 92801; 714/952-2114; FAX 714/952-3280. □

## G4ZPY Combo Keyer

New to the G4ZPY Paddle Keys International collection is a miniature iambic electronic keyer designed to fit under our Twin Paddle Keys to make them into combos. This little Gem is fitted with our own new dedicated micro-processor.

The unit is contained in a small RF-proof black vinyl covered steel cabinet measuring just 3/4 × 3/4 × 3/4 inches and mounted on four small rubber feet. On the Combo we fit larger feet and it is a real "desk hugger." Only heavy pressure will move it. The unit as a Combo has our newly designed Perspex paddles which fit snugly between the thumb and forefinger, making them suitable to all users.



All units are supplied with the necessary matching plugs. A unit uses an external power source of 6 to 15VDC and is polarity protected; it is capable of keying transceivers up to 150V, 500mA non-inductive load at speeds of 8 to 60 wpm. We can even program it to go faster if you wish, but you may lose a little of the slower speeds. It features a class B iambic (dot and dash memories); switchable (in/out) auto intercharacter spacing (no weight control needed with this; it makes you send good CW); and switchable (loud/off/soft) side tone (power consumption using this is approximately 4mA).

Because of its versatility and size, it is an ideal accessory for the mobile operator. For further information contact G4ZPY Paddle Keys International, 41 Mill Dam Lane, Burscough, Ormskirk, L40 7TG, England. □

## IIX tower accessories

In celebration of 10 years service to the Amateur Radio fraternity, IIX Equipment Ltd. announces three more additions to its ever expanding line of tower accessories and vehicle radio mounting systems.

The SO-4 is an adjustable tower standoff bracket that mounts on tapered tower sections or masting and will adjust up to 30 degrees off the vertical.

A new addition to the six and 9 ft. quad-pods, the TT-3 quadpod will stand three feet in height and mount a vertical antenna or mast up to two in. Od. diameter.

The last item is a tower coax standoff designated CA-1 which will hold multiple coax cables 14 inches off the tower face.

All items feature rugged IIX construction and hot dipped galvanized finish. A free 10th anniversary catalog and price list covering all IIX products is available from IIX Equipment Ltd., P.O. Box 9, Oaklawn, IL 60454; 708/423-0605. □

## Portable Power/Charger Only \$ 79.95\*

- Multi Output at 3, 6, 9 or 12VDC
- Charge from AC or 12vdc source
- Automatic shutoff at full charge (12v recharge less than 3 hrs)
- Built-in Voltage - Charge Meter
- Sealed lead acid 6.5 AH battery
- Supplied with 12 VDC cigarette plug and UL listed AC adapter
- Weight: 8 lbs. LWH: 7" x 4" x 8"
- Great power for Field Day, Contests, Mobile, HTs, TV, RV, cellular, camcorder, 12v vehicle/boat starter, and all of your indoor/ outdoor portable power needs!



## Window Mount BWM-1 Only \$ 13.95\*



Get your rubber duck outside with the BWM-1 Window Mount. This handy mount clips over your car's window and lets your antenna get out and above the car roof giving you better range into your local or distant repeater. High quality BNC to BNC connector can be used on your own coax or with optional 6'

50 ohm, Model BC 6-174 Cable, priced at only \$ 10.95\*  
You can buy both the mount and the 6' cable for \$ 23.00\*  
(cable and antenna shown in photo are extra cost options)

\* prices do not include CA sales tax or shipping & handling  
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Rancho Cordova, CA 95741  
Phone/ fax: (916) 366-7408







# 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 September, please have the information to us by mid June.

Worldradio, 2120 28th St., Sacramento, CA 95818.

Please mark the envelope "VE Exams."

List the location, any information examinees should have (advance registration, etc.) and the name and telephone number of a person to contact for further information.

p/r=pre-register

w/i=walk-in

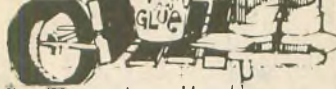
| Date                  | City                | Contact  | Notes                         | Date                  | City                | Contact  | Notes               |
|-----------------------|---------------------|--|-------------------------------|-----------------------|---------------------|--|---------------------|
| <b>Alabama</b>        |                     |  |                               |                       |                     |  |                     |
| July 18               | Tuscaloosa          | Kelly Bruce, WD4DAT<br>205/339-7882                    | w/i OK                        | July 18               | Chicago             | 312/929-8500, ext. 2221                            | w/i                 |
| <b>Arizona</b>        |                     |  |                               |                       |                     |  |                     |
| July 4                | Tucson              | K7OPX 602/886-7217                                     | w/i only                      | July 25               | Chicago             | KE9X 312/233-0605                                  | w/i                 |
| July 18               | Tucson              | Robert Olson, WV7P<br>602/577-1050                     | w/i OK                        | July 3                | Elgin               | K9WMP 708/888-8333                                 | w/i                 |
| <b>Arkansas</b>       |                     |  |                               |                       |                     |  |                     |
| July 18               | Little Rock         | Chuck 501/888-7517                                     | w/i OK                        | July 17               | Elmhurst            | WK9U 708/833-7371                                  | p/r                 |
| July 11               | West Memphis        | Gene Bagley, AB5BL<br>501/739-4029                     | w/i OK                        | July 18               | Godfrey             | KF9F 618/466-2306                                  | p/r no-code         |
| <b>California</b>     |                     |  |                               |                       |                     |  |                     |
| July 11               | Burbank             | KE6AR 818/349-0927                                     | w/i OK                        | July 4                | Hoffman Estates     | NO9A 708/593-8658                                  | w/i                 |
| July 5                | Clearlake           | Art, 707/994-0646                                      | w/i only                      | July 23               | Lombard             | KD9I 708/495-0498                                  | w/i                 |
| July 7                | Fremont             | KJ6EP 510/791-6818                                     | w/i only                      | July 18               | Loves Park          | Paul, WB9HGZ 815/987-6754                          | p/r; w/i            |
| July 12               | Hanford             | Carleton, 209/924-4221                                 | w/i only                      | July 11               | Mt. Prospect        | WA9DLI 708/437-1464                                | w/i                 |
| July 18               | Hesperia            | NF6I 619/241-4732                                      |                               | July 2                | Mundelein           | K9IW 708/367-6303                                  | w/i                 |
| July 18               | Jackson             | K6BET 619/244-6080<br>WZ6Y, 209/295-7947               | w/i OK<br>p/r pref;<br>w/i OK | July 11               | Oak Forest          | KA9HDN 312/247-0650                                | w/i OK              |
| July 30               | Long Beach          | KA6HOQ, 714/897-6331                                   | w/i OK                        | July 25               |                     | WG9R 708/687-0511                                  | w/i                 |
| July 4                | Los Angeles         | Ali Hassan, AA6WC<br>213/778-6226                      | w/i OK                        | <b>Indiana</b>        |                     |  |                     |
| July 4                | Ontario             | Harry J. Kozlowski, KM6LO<br>818/810-0442              | w/i OK                        | July 11               | Hammond             | WO9H 219/738-2728                                  | w/i                 |
| July 18               | Pasadena            | 818/585-7038   | w/i limited                   | July 4                | Portage             | KE9I 219/762-0580                                  | w/i                 |
| July 18               | Redwood City        | Dudley, WB6WAU<br>408/245-4801                         | w/i only                      | July 11               | South Bend          | NI9Y 219/259-9445                                  | w/i OK              |
| July 18               | San Francisco       | Dan, K6GOW 415/753-5368                                | p/r or w/i                    | <b>Iowa</b>           |                     |  |                     |
| July 18               | Signal Hill         | NN6Q, 213/420-9480                                     | p/r pref; w/i                 | July 31               | Sioux City          | K0TFT 712/239-1749                                 | w/i OK              |
| July 18               | Stockton            | N6XMA 209/952-5996                                     | w/i only                      | <b>Kansas</b>         |                     |  |                     |
| July 11               | Sunnyvale           | AA6IY 408/255-9000                                     | w/i only                      | July 28               | Emporia             | K0JDB 913/343-2158                                 | w/i OK              |
| <b>Colorado</b>       |                     |  |                               |                       |                     |  |                     |
| July 11               | Denver              | Glenn Schultz, W01JR<br>303/360-7293, 24-hr. voicemail | w/i OK                        | July 31               | Kansas City         | NC0M 913/262-0631                                  | w/i OK              |
| July 11               | Pueblo              | 719/948-2291   | w/i OK                        | <b>Maine</b>          |                     |  |                     |
| July 18               | Westminster         | N0BLU 303/650-6826;<br>N0HNR 303/278-4280              | p/r or w/i                    | July 11               | Bucksport           | N1FPP 207/374-2184                                 | w/i OK              |
| <b>Connecticut</b>    |                     |  |                               |                       |                     |  |                     |
| July 26               | Milford             | NB1M 203/933-5125;<br>W1YQE 203/874-1014               | w/i                           | July 8                | Farmington          | KI1B 207/778-2417                                  | w/i OK              |
| July 22               | Shelton             | WJ1T 203/736-0488                                      | w/i pref                      | <b>Maryland</b>       |                     |  |                     |
| <b>Florida</b>        |                     |  |                               |                       |                     |  |                     |
| July 6                | Dunedin             | Marv, WC2G 813/938-7810                                | p/r or w/i                    | July 11               | Davidsonville       | NT3Z or NS3V 410/761-7115;<br>or WC31 301/262-5083 | w/i OK              |
| July 25               | Fort Pierce         | Fred Newmann, W2EUX<br>407/340-1069                    | w/i OK                        | July 18               | Laurel              | WB3GXW 301/572-5124                                | p/r pref            |
| July 18               | Melbourne           | WB9IVR 407/724-6183                                    | w/i OK                        | July 24               | Springfield/Holyoke | WA1ZUH 413/245-3228                                | w/i OK              |
| July 23               | Miami               | Norm Ward, K4RBR<br>305/823-5437                       | w/i only                      | <b>Michigan</b>       |                     |  |                     |
| July 28               | New Port Richey     | Marv, WC2G 813/938-7810                                | p/r or w/i                    | July 11               | Dearborn            | 313/676-6248                                       |                     |
| <b>Georgia</b>        |                     |  |                               |                       |                     |  |                     |
| July 26               | Atlanta             | Dale Gaudier, N4REE<br>404/396-1332                    | w/i OK                        | <b>Missouri</b>       |                     |  |                     |
| July 11               | Augusta             | Jim Abercrombie, N4JA,<br>404/790-7802                 | w/i                           | July 11               | Independence        | K0IXC 816/373-8976                                 | w/i OK              |
| <b>Hawaii</b>         |                     |  |                               |                       |                     |  |                     |
| July 18               | Hilo                | AH6P, 808/959-8893                                     | w/i                           | July 18               | St. Louis           | N0IS 314/892-4434                                  | w/i OK              |
| <b>Idaho</b>          |                     |  |                               |                       |                     |  |                     |
| July 11               | Boise               | W7JMH 208/343-9153                                     | w/i                           | July 19               | Washington          | NF0Q 314/946-0948                                  | p/r pref;<br>w/i OK |
| <b>Illinois</b>       |                     |  |                               |                       |                     |  |                     |
| July 21               | Aurora              | N9AKE 708/892-1252                                     | w/i pref                      | <b>Montana</b>        |                     |  |                     |
| July 25               | Bloomington         | NX9M, 309/662-3910                                     | w/i OK                        | July 11               | Billings            | WB7H 406/656-6987                                  | w/i OK              |
| July 18               | Bolingbrook         | NM9J 708/442-7100                                      |                               | <b>Nevada</b>         |                     |  |                     |
| July 18               |                     | Bob Stevens, WR9M<br>708/739-6015                      | w/i OK                        | July 18               | Minden              | W7QO 702/265-3430                                  | w/i                 |
| <b>Indiana</b>        |                     |  |                               |                       |                     |  |                     |
| July 11               | Hammond             | WO9H 219/738-2728                                      | w/i                           | <b>New Jersey</b>     |                     |  |                     |
| July 4                | Portage             | KE9I 219/762-0580                                      | w/i                           | July 18               | Bayonne             | WA2QYX 201/451-9471                                | w/i OK              |
| July 11               | South Bend          | NI9Y 219/259-9445                                      | w/i OK                        | July 16               | Bellmawr            | WA2VQG 609/546-7710                                | w/i                 |
| <b>Iowa</b>           |                     |  |                               |                       |                     |  |                     |
| July 31               | Sioux City          | K0TFT 712/239-1749                                     | w/i OK                        | July 11               | Cranford            | 24-hr hotline: 201/377-4790                        |                     |
| <b>Kansas</b>         |                     |  |                               |                       |                     |  |                     |
| July 28               | Emporia             | K0JDB 913/343-2158                                     | w/i OK                        | July 8                | Fort Monmouth       | WB2GYS 908/532-5354                                | w/i                 |
| July 31               | Kansas City         | NC0M 913/262-0631                                      | w/i OK                        | July 18               | Pennington          | AA2F 609/737-1723                                  | p/r pref;<br>w/i OK |
| <b>Maine</b>          |                     |  |                               |                       |                     |  |                     |
| July 11               | Bucksport           | N1FPP 207/374-2184                                     | w/i OK                        | <b>New York</b>       |                     |  |                     |
| July 8                | Farmington          | KI1B 207/778-2417                                      | w/i OK                        | July 11               | Greenvale           | WA2BGE 516/921-0085                                | w/i OK              |
| <b>Maryland</b>       |                     |  |                               |                       |                     |  |                     |
| July 11               | Davidsonville       | NT3Z or NS3V 410/761-7115;<br>or WC31 301/262-5083     | w/i OK                        | July 18               | Massena             | Ted, N4TW 315/322-4133                             | w/i                 |
| July 18               | Laurel              | WB3GXW 301/572-5124                                    | p/r pref                      | July 5                | Yonkers             | AC2V 914/237-5589                                  | w/i OK              |
| July 24               | Springfield/Holyoke | WA1ZUH 413/245-3228                                    | w/i OK                        | <b>North Carolina</b> |                     |  |                     |
| <b>Michigan</b>       |                     |  |                               |                       |                     |  |                     |
| July 11               | Dearborn            | 313/676-6248   |                               | July 25               | Asheville           | Norman, N4NH 704/253-1192                          | w/i OK              |
| <b>Missouri</b>       |                     |  |                               |                       |                     |  |                     |
| July 11               | Independence        | K0IXC 816/373-8976                                     | w/i OK                        | July 18               | Rutherford County   | A.B. Brackett, KO4BJ<br>704/245-6334               |                     |
| July 18               | St. Louis           | N0IS 314/892-4434                                      | w/i OK                        | July 12               | Salisbury           | Isabelle, AB4UX 704/284-2414                       | w/i OK              |
| July 19               | Washington          | NF0Q 314/946-0948                                      | p/r pref;<br>w/i OK           | <b>Ohio</b>           |                     |  |                     |
| <b>Montana</b>        |                     |  |                               |                       |                     |  |                     |
| July 11               | Billings            | WB7H 406/656-6987                                      | w/i OK                        | July 16               | Youngstown          | Lou, 216/788-1618                                  | w/i limited         |
| <b>Nevada</b>         |                     |  |                               |                       |                     |  |                     |
| July 18               | Minden              | W7QO 702/265-3430                                      | w/i                           | <b>Oregon</b>         |                     |  |                     |
| <b>New Jersey</b>     |                     |  |                               |                       |                     |  |                     |
| July 18               | Bayonne             | WA2QYX 201/451-9471                                    | w/i OK                        | July 8                | Glide               | AA7GC 503/672-7564;<br>W6OFF 503/673-0558          | w/i OK              |
| July 16               | Bellmawr            | WA2VQG 609/546-7710                                    | w/i                           |                       |                     |  |                     |
| July 11               | Cranford            | 24-hr hotline: 201/377-4790                            |                               |                       |                     |  |                     |
| July 8                | Fort Monmouth       | WB2GYS 908/532-5354                                    | w/i                           |                       |                     |  |                     |
| July 18               | Pennington          | AA2F 609/737-1723                                      | p/r pref;<br>w/i OK           |                       |                     |  |                     |
| <b>New York</b>       |                     |  |                               |                       |                     |  |                     |
| July 11               | Greenvale           | WA2BGE 516/921-0085                                    | w/i OK                        |                       |                     |  |                     |
| July 18               | Massena             | Ted, N4TW 315/322-4133                                 | w/i                           |                       |                     |  |                     |
| July 5                | Yonkers             | AC2V 914/237-5589                                      | w/i OK                        |                       |                     |  |                     |
| <b>North Carolina</b> |                     |  |                               |                       |                     |  |                     |
| July 25               | Asheville           | Norman, N4NH 704/253-1192                              | w/i OK                        |                       |                     |  |                     |
| July 18               | Rutherford County   | A.B. Brackett, KO4BJ<br>704/245-6334                   |                               |                       |                     |  |                     |
| July 12               | Salisbury           | Isabelle, AB4UX 704/284-2414                           | w/i OK                        |                       |                     |  |                     |
| <b>Ohio</b>           |                     |  |                               |                       |                     |  |                     |
| July 16               | Youngstown          | Lou, 216/788-1618                                      | w/i limited                   |                       |                     |  |                     |
| <b>Oregon</b>         |                     |  |                               |                       |                     |  |                     |
| July 8                | Glide               | AA7GC 503/672-7564;<br>W6OFF 503/673-0558              | w/i OK                        |                       |                     |  |                     |



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**ATTENTION AMATEURS!!** Military type ID dog tags, stainless steel, customized, name, call, QTH, etc. Five seventeen-space lines—\$4.29 postpaid, neck chain included. JPW ENTERPRISES, P.O. Box 353, Logan, UT 84321.

**WANTED: HAM EQUIPMENT AND OTHER PROPERTY.** The Radio Club of Junior High School 22 NYC, Inc. is a non-profit organization, granted 501(C)(3) status by the IRS, incorporated with the goal of using the theme of Ham Radio to further and enhance the education of young people nationwide. Your property donation or financial support would be greatly appreciated and acknowledged with a receipt for your tax deductible contribution. Please look over whatever unwanted equipment you may have, and call us. We will pick up or arrange shipping. You will receive the tax deduction, but most important, the privilege of knowing that your gift really made a difference in the education and upbringing of a child. You are invited to check into the WB2JKJ "22 Crew" Classroom Net, 7 a.m. est on 7.238 MHz. or on 21.395 throughout the day. Hope to meet all of our friends at the home of KA2DDK, host of the third annual Classroom Net Eyeball on July 6, RSVP to us or Joe by June 15. Write us at: The RC of JHS 22 NYC, Inc., P.O. Box 1052, New York, NY 10002. 'Round-the-clock hotlines: Voice 516/674-4072, FAX 516/674-9600.

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**HEATHKIT AMATEUR RADIO REPAIR** by RTO Electronics, 4166 Maple Street, Berrien Springs, MI 49103; ph. 616/473-3201.

**CLEANING SHACK**—Send for list. LEWAL-SKI, 3512 Moraga Blvd. #4102, Lafayette, CA 94549.

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**C64/128 P.D. HAM, UTILITY, BUSINESS PROGRAMS.** SASE for list. WB1FOL, 77 Wentworth St., Malden, MA 02148.

**SCHEMATIC AND/OR MANUAL** needed for Macrotronics RTTY/CW computer interface w/Magill Engr. RSD-1 demodulator (1980). Also need XT and 286 motherboard repair manual/schematics. DON SMITH, KB6GQA, P.O. Box 2005, Diamond Springs, CA 95619.

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| July 4                | Erie            | W3CG 814/665-9124                     | w/i                 | July 25         | Greeneville   | Jack Creed, K4EPC<br>615/638-7056       | w/i OK              |
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| July 18               | Pittsburgh      | Ben, W3DJW 412/795-2775               | w/i OK              | July 12         | Jasper        | Charles Wooten, KD4XX<br>615/942-5116   | p/r pref            |
| July 29               | Warminster      | WA3TQJ 215/343-3494                   |                     | July 18         | Knoxville     | Ray Adams, N4BAQ<br>615/688-7771        | w/i OK              |
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| July 18               | Charleston      | Pat Foster, AC4IH<br>803/553-3871     | w/i                 | <b>Texas</b>    |               |   |                     |
| July 11               | Greenville      | John E. Chism, ND4N<br>803/288-0136   | w/i OK              | July 14         | Houston       | ND5F 713/464-9044                       | p/r pref;<br>w/i OK |
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## NCJ

(continued from page 49)

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doing." □

## The letter 'E'

STEPHEN LUISSER, Sr.,  
W3HFT

Someone has advanced the opinion  
that the letter 'E' is the most unfor-  
tunate character in the English alpha-  
bet, because it is always out of cash,  
forever in debt, never out of danger, in  
hell all the time and has never been in  
God's country. But we call attention to  
the fact that 'E' had doubled up on

freedom and is never in war and always  
in peace.

It is the beginning of existence, the  
commencement of ease and the end of  
trouble.

Without it there would be no meat,  
no life, no Heaven. It is the center of  
honesty, makes love perfect and  
without it there would be no editors  
and no news.

And, after all of that, it is the easiest  
letter to learn in Morse code, just one  
"dit." —*The Delaware-Lehigh ARC  
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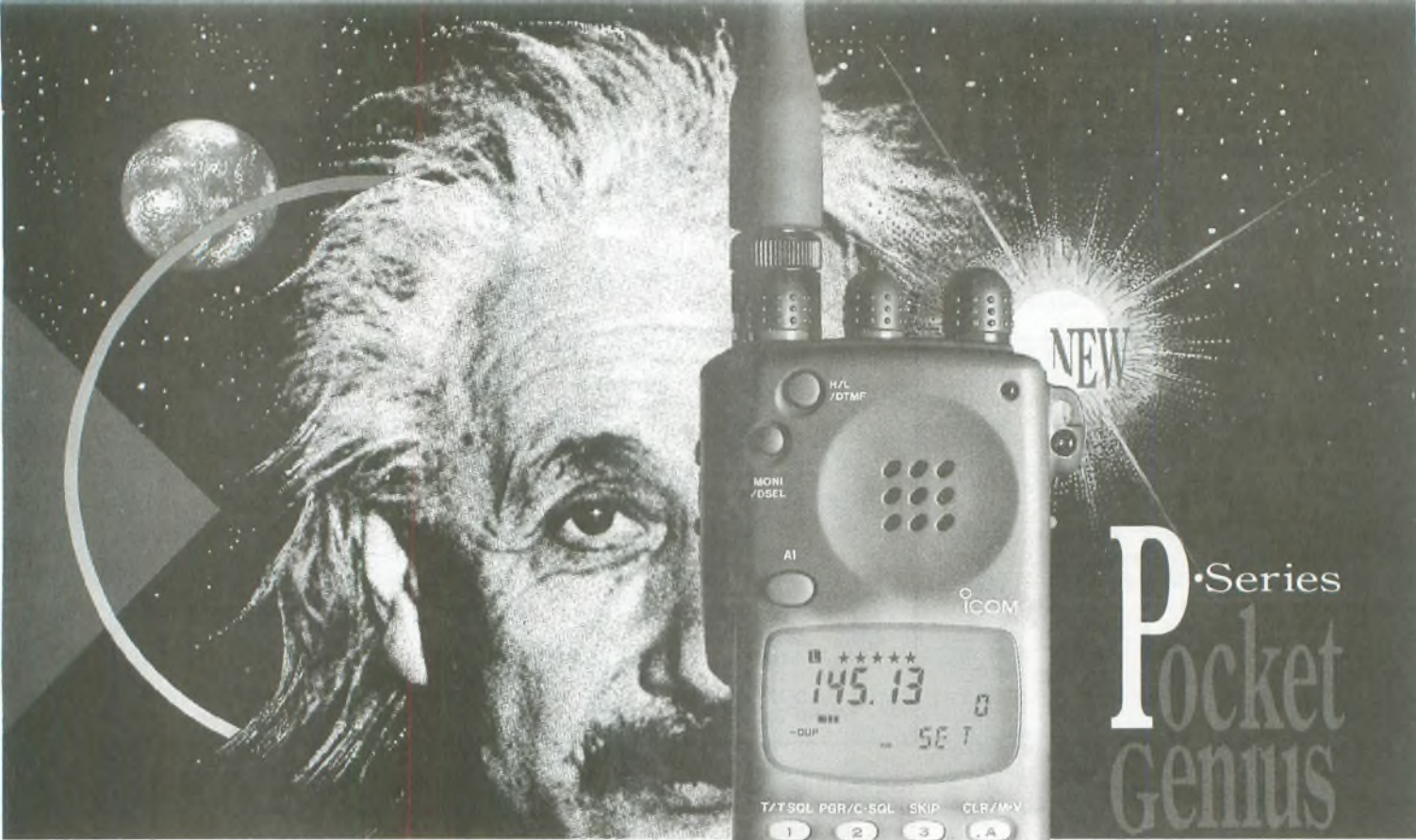
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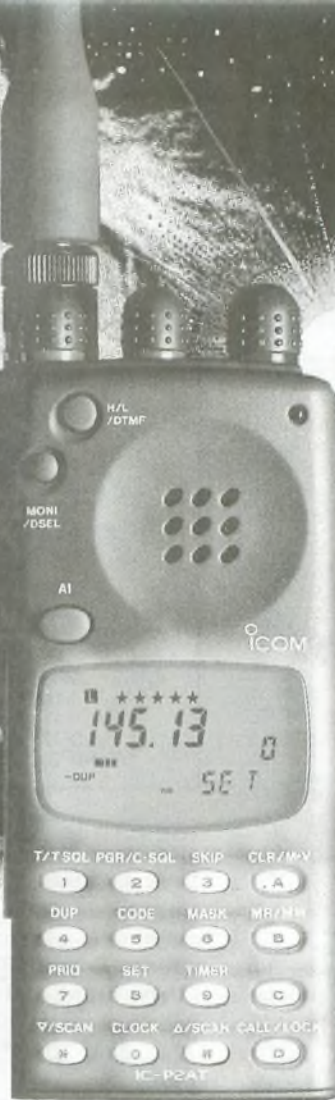
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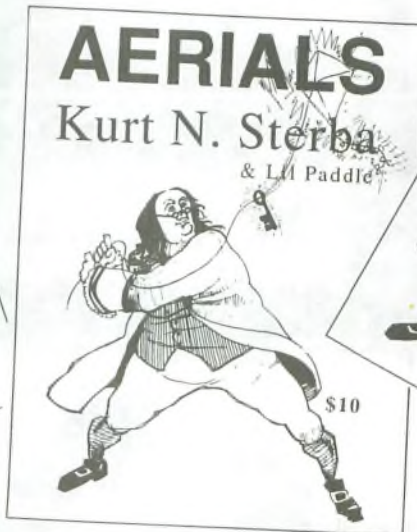


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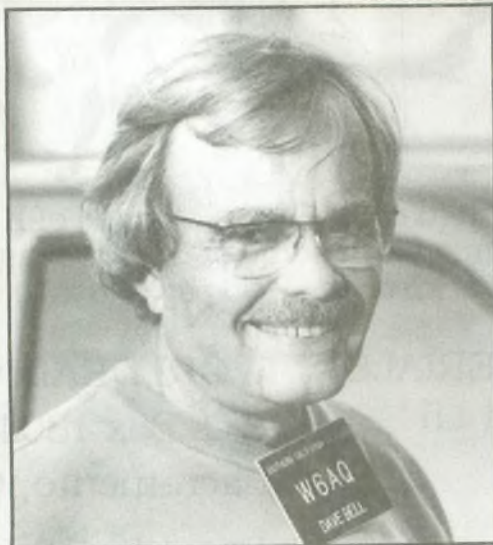
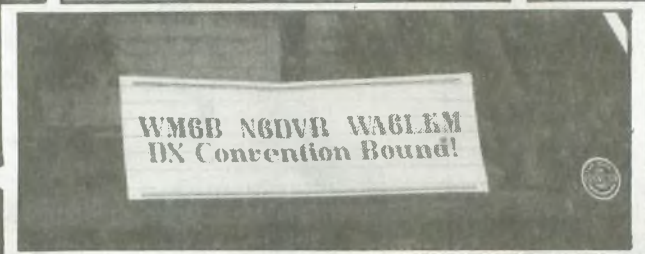
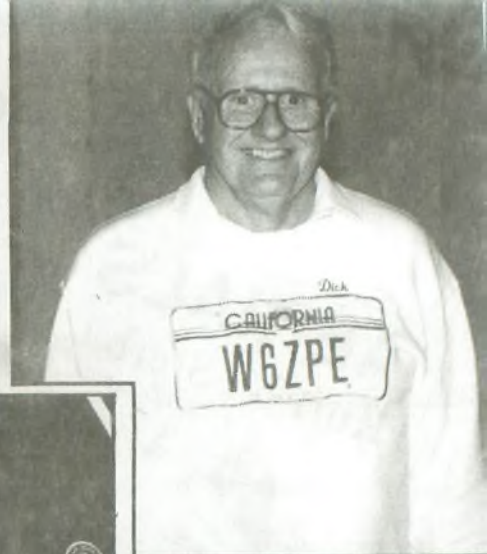
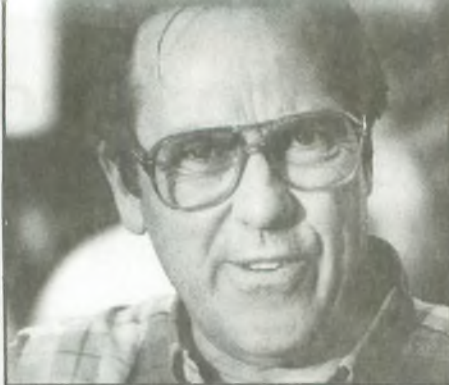
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