Emergency Communications • Public Service • International Friendship

Worldradio

Year 26, Issue 3

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Mike Pilotti, W3IRZ, (left) and Nick Bortnik, UXØZZ, in Mike's shack. Mike is Nick's QSL manager. ***—Photo courtesy of Joan Fairman Kanes***

Red tape unraveled for UXØZZ

Bob Josuweit, WA3PZO

After a flurry of activity in late June, Nick Bortnick, UXØZZ, finally arrived in the Philadelphia area for medical evaluation and treatment. Bortnick, 32, the Ukrainian ham who has been attempting to come to the United States for medical assistance for the past year, finally got his visa, and landed in New York on 30 June. The next day Bortnick arrived at a Philadelphia-area hospital for medical evaluation.

Nick's QSL manager, Mike Pilotti, N3IRZ, of Phoenixville, Pennsylvania, who headed up the efforts of the Mid-Atlantic ARC and others to bring Nick to the United States, related that on Nick's ninth visit to the United States Embassy in Kiev, he was issued his visa. Nick was hesitant to make the 12-hour trip by train from his home near Nikolaev, to Kiev. He was ill and his requests had been turned down eight times before.

This time the visit was different — Nick had received a letter *inviting* him to the embassy. His other visits had been met with questions of his support, once in the U.S., and if he would return to his homeland. During those earlier attempts to obtain a visa his response of having to leave his wife, who is now expecting their second child, and 2-year-old son behind apparently were not sufficiently convincing to embassy officials to guarantee his return home. On this visit, Nick explained, he was asked his name and then handed his visa! What made this visit different? Pilotti feels that someone got to the right person. "We may never know who or what made the difference."

Pilotti had arranged for an August 5th flight to New York City. Tickets were hard to come by. Most seats were booked because of the Olympics starting in July. Then, over Field Day weekend, Pilotti received a phone call at 3 a.m. from Nick saying that he had had another seizure which caused him an eight-hour loss of memory. He asked if there were any other flights available. Pilotti was able to arrange for a flight via Dublin on 30 June.

A year of hard work was about to become a reality. "It's good news and bad news," Pilotti said. "The good news is that he is coming; the bad news is that he's had more medical setbacks. He is traveling a great distance at risk to his health, but he has no other choice but to get some answers."

The trip to New York was not an easy one. Because of his medical condition, Nick's mother had accompanied him to Kiev. Nick had to leave his home by train on Friday at 7 p.m., pick up his airline ticket in Kiev on Saturday morning, and board an 8 a.m. flight Sunday morning for New York! A total of 36 hours, just to get to the point of

(please turn to page 12)

The great Alaskan wildfire

Jim Strain, N7DF

The fire had been started by an arsonist on Sunday, 2 June, about 5 p.m. It was in an area where a fire a few days before had broken out and destroyed three homes before being brought under control. This second fire was believed contained, but Monday brought hot, dry winds which rapidly built to over 40 miles an hour. By 7:30 p.m. the fire was again out of control—over 500 people had been evacuated and 1,500 acres were burning.

Through the night the local fire fighters worked heroically attempting to keep evacuation routes open.

Move the evacuees

On Tuesday the situation worsened. The Red Cross evacuation center at Big Lake Elementary school had fire come within a half a mile of their location and the evacuees were moved 15 miles away to Wasilla High School. More than 10,000 acres had burned and over 2,000 people moved out of the way.

While it was impossible to fight the fire head-on, islands of birch forest within the perimeter burned more slowly and several interior areas surrounding commu-

(please turn to page 12)

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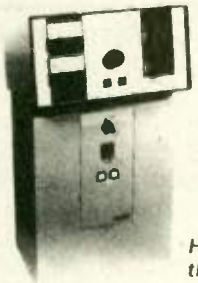

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NEWSFRONT

Worldradio

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

Hurricane Bertha hits North Carolina

Packing winds in excess of 100 miles per hour, Hurricane Bertha tore into the North Carolina coastline on Friday, 12 July. The storm made landfall near Cape Fear and then battered a string of coastal towns as it roared northward. Radio amateurs throughout the state went on full alert. As expected, their services proved to be valuable.

Greenville's Chuck Martin, KD6NUJ, was one of hundreds of amateurs who provided communications support during the hurricane. Some of that support included helping the Red Cross with operating shelters, which filled up with more than 14,000 thousand people.

Ray Mahorney, KB4EJK, is active with Onslow County's Amateur Radio Emergency Service. He says radio amateurs helped public safety officials who had been left in the dark after extensive power failures.

In the northern part of North Carolina, Gary Pearce, KN4AQ, reported that amateurs manned emergency operations centers and the state EOC in Raleigh. Hams also maintained a continuous HF net until after the main danger had passed. Ray Mahorney says North Carolina hams anxious to sharpen their emergency communications skills view Bertha as a learning experience. He said: "The hams performed well. However, as with any emergency communications, there is always room for improvement.

North Carolina Governor James Hunt thanked radio amateurs throughout the state for their efforts during Bertha's attack, praising their devotion to public service.

League to ask for suspensions

At its semiannual meeting held 18-20 July, the ARRL Board of Directors has directed the staff and counsel "to coordinate with the FCC and pursue in Congress" legislation that would allow the Commission to temporarily suspend an Amateur Radio operator's license. Such legislation would permit such a suspension "upon presentation of evidence sufficient to establish intentional violation of the Communications Act or Part 97." Under the proposal, a suspension would become effective immediately upon being issued by the Commission.

Other topics addressed at the Rocky Hill, Connecticut meeting included a request to the Membership Services Committee to have the DXAC study the rules concerning DXCC accreditation, the Contest Advisory Committee's plans to study ways to better incorporate 50 MHz into the existing ARRL contests, and authorization to continue the Ad Hoc Committee's discussions with the National Frequency Coordinators Council.—*tnx ARRL*

Toby Metz, KB7UIM wins young ham award

Toby Metz, KB7UIM, 16, has been named the 1996 "Young Ham of the Year." The award, which is jointly sponsored by Amateur Radio *Newsline*, Yaesu USA, and *CQ* Magazine, includes an all-expense-paid trip to the 1996 Huntsville Hamfest and a week at Spacecamp in Huntsville.

KB7UIM's selection was based upon his work in introducing Amateur Radio to the deaf in Meridian, Idaho, where he and his family resided until a recent move. In search of a worthwhile project for Eagle Scouts, Toby believed that packet radio would be an ideal Amateur Radio mode for the hearing impaired.

Enlisting the help of a lady from his church who worked with deaf people in Boise, a small, but enthusiastic class began. Soon family members of the group started attending too, and the class grew much larger. One of the students, Bill Blom, decided that he wanted to learn Morse code, and did so using a device that converts sound to vibrations.

Toby's Eagle Scout project was a great success, and drew praise from the handicapped community in Boise. In addition to his work with the deaf, Toby assisted in the creation of the Ham Radio Explorer Scout Post in Meridian, and spent more than a year hosting an on-air discussion group known as the "Discovery Net."

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Publisher's Microphone

What is class? Louis Armstrong, once was asked, "What is jazz?" He replied, "If you have to ask, you'll never know." To help some identify what is class, we present the latest to become ***Worldradio*** Superboosters (Lifetime Subscribers):

•Joe Willits, KE2XA, Medford, NJ

•Scott Riley, AE4VQ, Lexington, KY

•Bernard Broering, Jr., KD8TE, Cincinnati, OH

•Hans Hansen, KB8HQ, Ortonville, MI

•Charles Klawitter, W9VZR, Milwaukee, WI

•Thomas May, KC5DHE, Plano, TX

•David Howell, AB5WM, Dallas, TX

•J. B. Thompson, AA6IH, Redlands, CA

•A William Cook, K6ASA, Fresno, CA

•Edward Gilda, KC7BJC, Vancouver, WA

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There has been some talk about the idea of allowing all previously licensed amateurs (who allowed their license to lapse) to be relicensed WITHOUT having to take a test. A report I saw said that both the ARRL and the FCC were in favor of such a move.

I'm certainly against such a thing. These ex-amateurs knew the score. If they didn't renew their license, that was the end of it. If Amateur Radio wasn't worth to them the few cents for a postage stamp why should we care about them? They even ignored the grace period.

Such a program to let them all come back in sounds like what is happening in so many avenues of life. We are turning into a "mush" society.

There are schools where no child fails a course or has to repeat a grade. There are college instructors who give every student an "A" no matter what kind of work was done.

There was a time when the General Class amateur license material was considered the equivalent of a one-year college course. Now it can be obtained with a two-day weekend cram course.

Some wonder why the public schools are such an undisciplined mess. The answer is an easy one. There is no discipline. Many reading this remember when, if you misbehaved in school, it was a trip to the Boys Dean's office and the paddle. And the paddle had holes drilled in it so it would hurt even more. Remember the truant officer? Curfews?

During time in the service you really tried to avoid any trouble so you would be sure you received an Honorable Discharge. You knew that your potential employer would ask to see your discharge papers. Now, it is against the law for an employer to ask, in an interview, if the applicant was in the service. It is becoming a "mush" society.

Young people today say they won't do as well as their parents did. Their parents didn't whine and feel everything should be handed to them. They worked for it.

It is possible to have a society in which nobody fails (and thus nobody excels), it is called Albania.

We can have everybody pass everything, make licenses a yawn, and lower every standard and reference. Would that instill pride?

On the 3rd of July 1996, a news story moved from Austin, Texas. It related that two-thirds of Texas teenagers do not know that gasoline comes from crude oil.

(Texas produces one-fourth of U.S. oil.)

And maybe the other third happened to guess right.

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A great many amateurs, in their efforts to recruit others into Amateur Radio, invite the potential inductee into "the shack."

After looking at it for so long, the amateur has become blind to just what a mess the place is. The inductee wonders just what kind of hobby is this?

Every amateur should ask, does my shack look as nice as the rest of the house?

Would a non-ham visitor "gag" at the sight of it?

If we don't have any pride in the appearance of Amateur Radio to others, why should they take it seriously? Even if the equipment is in the corner of a garage or a basement, that corner could be spruced up a little. The corner could get a few sheets of paneling or sheetrock. Small pieces of carpet can be obtained quite inexpensively. A large ARRL World Map can go on a wall. (Not, as I saw one once, attached to the wall with huge nails, 90% of which were still protruding). Certificates add a nice touch. A Worked All Continents award is within the reach of most and will be a conversation piece when pointed out to a "civilian" visitor.

QSL cards are always a colorful decorative touch. So, let's all shape up our shacks. —*Armond, N6WR*

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- INTERACTIVE PROGRAMMING! Continual scrolling menu guides you through 50 settings—and won't let you forget the next step!
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"Smart-Search™ scans and stores active channels for quick access."

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- Frequency Coverage
  Wide Band Receive
  RX: 110-180 MHz,
  300-520 MHz,
  800-999 MHz*
  TX: 144-148 MHz
- AM Aircraft Receive
- MIL-STD 810 Rating
- Interactive Programming
- High Power Output:
  70 Watts, plus 50, 25 and 10 Watts
- Quick-Touch™ Dual Concentric Control Knob
- Twin Cooling Fans
- ADMS-2B Windows™ Programmable
- Digital Coded Squelch (DCS)
- 81 Memory Channels
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NEWSFRONT
(continued from p. 3)

LEO Filings continue

Opposition to an attempt by the Low Earth Orbiting satellite industry to gain a foothold on the 2-meter and 70-centimeter bands continues to grow. Hams from all over the world are ignoring a call by the FCC and ARRL to direct comments to a special central electronic mail address, and continue to address their comments to individual committee members instead.

The FCC's Cecily C. Holiday who directs the WRC-97 Preparatory Team has again expressed assurances to the Amateur Radio community that no amateur bands have been selected for reallocation.

In a letter to League Executive Vice President Dave Sumner, K1ZZ, Holiday said that the list of bands generated at the IWG-2A's 7 May meeting represents only the committee's initial efforts to study spectrum use below 1 GHz in order to assess the feasibility of proposing worldwide MSS allocations in that range.

Holiday said that before recommending preliminary proposals for consideration by the Commission, committee participants must first conduct "sharing studies" among a range of services using frequencies below 1 GHz, to find out if it's feasible to share among services and to recommend specific frequency bands.

Holiday says that all written and electronic comments from Amateur Radio operators received at the Commission have been included as part of the public record on WRC-97.

This assurance has not been enough to curb the huge number of electronic mail and faxes being received by every committee member. With word out, worldwide, there appears to be no way to turn off the flow of complaints to the individual LEO committee members. Each will probably be getting e-mail and faxes from frustrated hams for a very long time.

KB5AWP leaves astronaut corps

Shuttle astronaut Ken Cameron, KB5AWP, has left NASA to join Hughes Training, Inc., as Executive Director of its Houston Operations. Cameron first flew as pilot on STS-37 in 1991, and served as commander on two subsequent missions, STS-56, in 1993 and STS-74 in 1995. All three of his shuttle missions featured SAREX operations with all-ham crews, inspired by Cameron.

KB5AWP is an avid Amateur Radio operator. Many astronauts who have become licensed radio amateurs did so because of Ken's encouragement. In making the announcement of Cameron's departure, David Leetsma, director of Flight Crew Operations said that Ken Cameron's contributions to the astronaut office and to NASA have been invaluable. SAREX Working Group Chairman Roy Neal, K6DUE, said, "We are going to miss Ken in our SAREX operations. He was a real inspiration to his fellow astronauts and a tremendous help to all of us in putting SAREX together during its formative years."

Teen ham update

Greg Godsey, KF4BDY, is the teenager from Hopkinsville, Kentucky, who was arrested for "impersonating a public servant" and carrying a two-meter hand-held, which police appeared to believe could transmit on their bands. Greg says that his trial, originally set for 27 June, has been delayed.

The charge of impersonation of a public servant was lodged by the arresting officer, who refused to accept the validity of Godsey' ARES card which identified the 16-year-old as an Emergency Coordinator. When the police officer keyed Greg's 2M hand-held within inches of his own transceiver, the officer's police-band hand-held's squelch broke (!), so he concluded that the radio was transmitting on police frequencies. The radio was confiscated.

A charge of disorderly conduct, says Godsey, was added when he asked for a lawyer to be present during his questioning.

Paul Mitchell, N4DUE, the Section Emergency Coordinator, is prepared to testify to the fact that Godsey is in fact a public servant.

Godsey says the reports circulated on the Internet by well-meaning hams saying he had resigned as Emergency Coordinator of Christian County are incorrect. Instead, Greg appointed his assistant EC as Net Control during the time that he did not have a radio. Ultimately the hand-held was returned, but with a broken battery case.

Greg says that if other hams want to help him, they can write a letter in support of Amateur Radio and the ARES program, to both the judge and the County Attorney. The judge is Jim Adams, Christian County District Court, Juvenile Division, Hopkinsville, Kentucky 42240.

Letters to the County Attorney go to Dilissa G. Milburn, Assistant County Attorney, 209 East 14th Street, Post Office Box 24, Hopkinsville, KY 42241. If possible, have your letter notarized and also send a copy to KF4BDY at his *Callbook*™ address.

Worldradio QSO Party 7-8 June 1997

Dorothea M. Seaver, W4QBY, SK

One of the nation's oldest hams — Dorothea M. Seaver, W4QBY, of Ft. Lauderdale, Florida, died May 10, 1996. She was 99 years old. A native of Brooklyn, New York, she became interested in ham radio in 1945 when her son, William, then a ham, went off to college, and she wanted to stay in touch with him. She was active in several nets, earned DXCC, and was a member of QCWA.

Elmer honored

Francis Moy, W1SPG, of Worchester, Massachusetts, was honored 22 April at a surprise party by some of those he introduced to Amateur Radio and guided as Explorer Scouts. Mr. Moy, who is 75, was recognized at a testimonial gathering for his 45 years of service as a ham and Elmer and a leader of the local Explorer post. The members of Explorer Post 75 presented him with a new radio. He received certificates from the Central Massachusetts Amateur Radio Association, the ARRL, the City of Worchester and the Mohican Council of Scouts.

New DARA president elected

Michelle Ervin, KA9FUL, has been elected as the first woman president of the Dayton Amateur Radio Association. Ervin has served as the club's treasurer the last two years.

Fred C. Ralston, Jr., KF8SB, was elected as vice president, with Beverly Priest, K8VZV, the new treasurer. John A. Phillips, N8ZGT, is the new club secretary, and Ken Allen, KB8KE, who has served the past two years as general chairman of the Dayton Hamvention, has been elected as junior trustee.

VECs meet

The nation's Volunteer Examination Coordinators met in Gettysburg, Pennsylvania, with several items on the agenda. One matter discussed was the way that VE teams forward data to the VEC for processing. The ARRL believed the data on the paper Form 610 forwarded from the VEs should be prescreened before being sent to the FCC. The W5YI VEC argued that the amateur regulations do not specify the order in which screening of Form 610s must occur. W5YI stated that the actual paper copy of the Form 610 application may be screened after the data has been sent electronically to the Commission.

The FCC sided with the ARRL, that pre-screening the actual paper avoids costly and time-consuming mistakes.

Oklahoma Comm Center sold

In a 16 July announcement, Tucker Electronics disclosed its purchase of the Oklahoma Comm Center from D. Craig Boyer, AH9B.

Tucker will consolidate Oklahoma Comm center with its own retail and mail order operations in Garland, Texas. This acquisition makes the company one of the largest Amateur Radio dealers in a single location, according to company President Jim Tucker, WM5G.

KFØI hurt

Maureen Pranghofer, KFØI, and her husband Paul, were injured in an auto accident on Sunday, 30 June 30. The accident happened near Annandale, Minnesota, when the Pranghofers were returning home from a family reunion.

Both of Maureen's knees were injured, and she underwent surgery the next day. Paul broke his ankle and ribs. These injuries are not life-threatening. They are recovering at North Memorial Hospital, Robbinsdale, Minnesota.

Maureen had just rejoined the staff at HANDI-HAMS, filling in for Sister Alverna, WAØSGJ, who was injured in an auto accident in May. Maureen, active in blind and disabled issues, is also on the Advisory Board of the Morse 2000 project.

A little goes a long way

Sixteen-year-old Brian Mileshosky, N5ZGT, of Albuquerque, New Mexico, has qualified for the QRP-ARCI "1,000 miles per watt" certificate. Using a NorCal 49er transceiver into an inverted vee, he had a nice QSO with Bennie James, W7SQT, in Cheyenne, Wyoming. The CW contact was made on 40M. Brian was running 250 milliwatts.

What are "little LEOs?"

In mid-May the U.S. Amateur Radio community was startled by the news that the 2-meter and 70 centimeter amateur bands were on a candidate list of possible additional allocations for the mobile-satellite service; specifically for "little LEOs." This news has already generated reams of publicity, some of which is counterproductive, at least at this point in time. The complete little LEO story, which has been developing for the past five or six years, is as follows. U.S. proposals for the 1992 ITU World Administrative Radio Conference (WARC-92) circa July 1991, included the following:

Low Earth Orbiting Satellites below 1 GHz.

"Recent research and operational testing indicates that low earth orbit satellite systems can offer a number of radio services which can complement those provided by geostationary satellite operations. These newer technologies offer the potential to meet demands for data communication services using lightweight pocket-sized terminals. Low earth orbit systems offer the possibility of providing low-cost two-way data communications. A wide range of applications can be implemented to support economic development worldwide. To obtain efficiencies in the satellite and earth terminals, VHF bands are preferred. As these bands are used extensively, techniques have been developed to facilitate sharing with existing services.

"The United States proposes allocations for the mobile-satellite service to be added to three bands for use by low earth orbit systems. The bands proposed are 137-138 MHz (downlink), 148-149.9 MHz (uplink), and 400.15-401 MHz (downlink). In the 137-138 MHz band we propose an additional provision to protect the meteorological service."

Actions at the Conference relating to these proposals are summarized in the U.S. Delegation's Report on WARC-'92, viz:

Executive summary

"Mobile Satellite Services: Frequencies were allotted in response to a number of U.S. proposals to provide advanced mobile radio services using satellites. These include low earth orbit satellite (LEO) systems for data services using frequencies below 1 GHz and LEO systems operating above 1 GHz to support a full range of telecommunication services, including voice and data services. Allocations for the LEOs were considered by U.S. industry to be of vital importance at WARC-92.

"Little LEOs are non-voice, data-only, store-and-forward mobile satellite services. Data-only systems require little spectrum space and operate with very inexpensive mobile units. They are ideal systems where users are too few and far between to justify wire or fiber installation. This is especially attractive in remote areas or in developing countries which do not have resources for immediate comprehensive telecommunications infrastructure development. Estimates of the market potential for little LEO services are in the range of $1-2 billion per year, approximately one-half for domestic and one-half for international services.

"Big LEO systems will offer real time communications between any two points anywhere in the world, essentially creating the equivalent of a worldwide cellular communications capability. They will connect with the wireline system where feasible or directly from mobile terminal to satellite to mobile terminal where necessary. A number of U.S. companies are competing for use of these allocations which were a pre-

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 the first of July 1996.
For more information about the call 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 Am Extra	Group B Advanced	Group C Tech./Gen.	Group D Novice
Ø	ABØCI	KIØDP		KBØWWW
1	AA1QH	KE1FL	N1XPG	KB1BYU
2	AB2BO	KG2HR		KB2ZKI
3	AA3OP	KE3WW	N3XTT	KB3BPL
4	AE4VY	KT4SW		KF4KQM
5	AC5IX	KM5BR		KC5VEB
6	AC6WA	KQ6HP		KF6EWW
7	AB7RL	KJ7YY		KC7RTO
8	AA8XM	KG8XY		KC8EIA
9	AA9SS	KG9HD		KB9NZU
N. Mariana Is.	NHØA	AHØAW	KHØFA	WHØABF
Guam	WH2V	AH2DB	KH2QH	WH2ANP
Hawaii		AH6OQ		WH6DCB
Amer. Samoa	AH8O	AH8AH	KH8DA	WH8ABF
Alaska		AL7QM	KLØAA	WL7EKK
Virgin Is.	WP2X	KP2CJ	NP2JI	WP2AIE
Puerto Rico	KP3B	KP3AB	NP3CF	WP4NMF

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Thank you!

Worldradio is a two-way communication. Send in Amateur Radio information and news. Share your knowledge with your fellow amateur through ***Worldradio.*** We are most interested in your comments and suggestions. We would appreciate being placed on the mailing lists of radio club bulletins.

Subscriptions received by the 20th of the month will begin with the issue dated two months from the month of receipt, i.e., if we receive the subscription by April 20, your first issue will be June, which will be mailed to you in early May.

requisite for investment in further development and implementation of the technology. One estimate is for nearly 2 million big LEO system subscribers by the year 2001."

Later in the Report, details given concerning "little LEO" proceedings in the Allocations Committee indicate that primary allocations to the little LEO service were not adequate, and that future action would be necessary.

Apparently further consideration of this matter will take place at WRC-97, and U.S. commercial interests are looking at ALL frequencies below 1 GHz as potential targets for fully meeting the requirement. At some point in these proceedings a list of "druthers" was produced which included 144-148 MHz, and 420-450 MHz; which resulted in an unprecedented reaction in the amateur community — see, for example, Dave Sumner's editorial ("Write Now!") in the July issue of *QST*.

The U.S. Radio Amateur community is rightly concerned over possible loss of all or part of these bands; or some other arrangement whereby either or both bands become shared with the mobile satellite service However, comments to that effect should be reasoned, p - lite, and logical. As Dave Sumner says in his editorial, "Do comment. But be civil. Don't abuse people who are simply doing their jobs. We have to get across the point that casting covetous eyes on amateur bands is counterproductive, and contrary to the public interest. To accomplish this we need a lot of comments, including yours. Remember that the objective is to educate and persuade, not to intimidate."

If you do comment, please comply with the instructions in an FCC Public Notice:dated June 6, 1996, entitled "Procedures for Submitting Comments to the WRC-97 Advisory Committee," which reads as follows:

"On March 14, 1996, the Commission released Public Notice (No. 61997) (Streamlining Notice), that announced its new streamlined World Radiocommunication Conference (WRC) preparatory process. Under this new process, formal Notice of Inquiry (NOI) proceedings are eliminated in favor of developing WRC proposals in the Commission's WRC-97 Advisory Committee. This removes the redundancy that was inherent in our previous "NOI-WRC Advisory Committee" process and enables the United States to respond more effectively to the rapidly evolving international environment and to the ITU's new two-year WRC schedule.

"The Streamlining Notice included general guidelines for submission of public comments to the Advisory Committee. The Notice stated that procedures would be developed to ensure that members of the public continue to have full opportunity to participate in the development of WRC proposals under the new streamlined process, including those parties who do not attend meetings of the Advisory Committee and Industry Working Groups (IWGs).

"Since the release of the Streamlining Notice, we have gained experience with our new process. We now provide these procedures for submitting comments to the Advisory Committee.

"Comments on Ongoing Advisory Committee Matters: Parties that wish to comment on the ongoing deliberations of the Advisory Committee and its IWGs may do so at any time.

"Comments on Preliminary Proposals: As announced in the Streamlining Notice, preliminary WRC proposals developed by the Advisory Committee will be released by the Commission in periodic Public Notices. These Public Notices will allow an opportunity for public comment and will provide the appropriate procedures, such as filing deadlines, to be followed.

"In either case, parties wishing their comments to be considered directly by the appropriate Advisory Committee group and to become part of the Advisory Committee's public record should submit their comments in writing to Office of the Secretary, Federal Communications Commission, Washington, D.C. 20554, or by e-mail at wrc97 @fcc.gov. Commenters are requested to file an original plus one copy.

"The comment should reference the Advisory Committee public record file number, "Reference No. ISP-96-005" and the appropriate Advisory Committee Informal Working Group, if known, in which their submission should be considered. The FCC staff will ensure that comments filed are considered in the appropriate groups.

"For the most expeditious and efficient consideration of their comments, parties should refrain from filing comments directly with the Chair of the WRC-97 Advisory Committee, with the Chairs and Vice-Chairs of the Informal Working Groups, with individual FCC staff members or private sector participants in the Advisory Committee process.

"For additional information, contact Cecily C. Holiday, Federal Officer of the WRC-97 Advisory Committee, or Damon C. Ladson, Alternate Federal Officer at (202) 418-0749, or consult the WRC-97 Homepage on the Internet (http://www.fcc.gov/ib/wrc97/)."

Please note:

The listing of these amateur bands on a commercial "druthers" list does not necessarily mean that they are immediately in jeopardy. But they could remain on such a list, and eventually be considered either for reallocation for exclusive use by another service, or for sharing with another service.

We are not aware of any studies that have been conducted concerning sharing between the amateur service and the mobile satellite service. If such studies exist, what cri-

teria were used, for each service, to determine that sharing might be feasible?

If coequal sharing is contemplated, it would seem that the amateur community needs much more information on the technical characteristics of the systems, and their proposed deployment, before acceding to any sharing proposal... I spent many years in the Radio Consultative Committees of ITU, and saw sharing situations evolve which at first seemed insoluble; based on quantitative sharing criteria acceptable to both services. —W4ZC

FCC opens vanity call sign Gate 1A

The FCC has announced the opening of vanity call sign program Gate 1A, as of 22 July 1996. Under this gate applicants may make a request, for a club station, a call sign once held by a deceased former member. You may request the call sign even though it has been less than two years following death of the club member. Upon the death of the holder, the call sign is assignable immediately to an otherwise eligible club station. (However, the license grant first must be deleted from the FCC database; see below.)

If you are the license trustee for your club station, you may request in memoriam for your club station the call sign previously shown on the primary, secondary, repeater, auxiliary link, control, or space station license of a deceased person who was a member of the club. Here are the specific guidelines to request a call sign in memoriam for your club station under Gate 1A:

1. The club must have held a club station license grant on 25 March 1995.

2. You must have in your station records a written statement (do not send to FCC unless requested) from a spouse, child, grandchild, stepchild, parent, grandparent, stepparent, brother, sister, stepbrother, stepsister, aunt, uncle, niece, nephew, or in-law of the deceased confirming the deceased person's association with the club and showing consent of the relative to your request.

3. You must be an Amateur Extra Class operator to request a Group A call sign, at least an Advanced Class operator to request a Group B call sign and at least a Technician Class operator to request a Group C or D call sign.

4. Your mailing address does not have to be in the region designated in the sequential system for the call sign requested. A call sign requested in memoriam may be in any region.

5. You must enter the relationship to the deceased of the person giving consent exactly as listed in the instructions, i.e., child, niece or in-law.

6. The license grant of the former holder now deceased must have been deleted from the licensee database. To do this, a relative of the deceased should submit a signed request to have the license grant cancelled. This request should include copy of an obituary or the death certificate.

Submit requests for cancellation to the FCC, 1270 Fairfield Road, Gettysburg, PA 17325-7245 prior to filing the application for a vanity call sign.

A $30 fee is required with your FCC Form 610-V application. Payment of fees may be made by check (payable to "FCC"), bank draft, money order or credit card. Do not send cash. If paying by credit card, also complete and submit FCC Form 159 with your FCC Form 610-V. Send your application package to: Federal Communications Commission, Amateur Vanity Call Sign Request, PO Box 358924, Pittsburgh, PA 15251-5924.

The FCC has not announced when it plans to open the additional vanity call sign gates. Gate 1 opened 31 May for applicants seeking former personal or club station call signs and call signs once held by deceased close relatives. Gate 1 will remain open indefinitely. A reminder: The FCC returned Gate 1A applications it received before 22 July 1996. Applications that do not qualify under Gate 1 or Gate 1A eligibility standards, will be dismissed. A future public notice will announce Gate 2, which will have expanded eligibility standards affecting Amateur Extra class licensees.

Meanwhile, the flurry of vanity call sign application activity under Gate 1 seems to be tapering off. The FCC reports 269 applications for the period of 11-17 June 1996. Between 31 May and 10 June, the Commission got nearly 1,700 applications.

For more information, call the FCC's Consumer Assistance Branch at 800/322-1117. WR

Red tape

(continued from page 1)

take-off. Nick was able to pick up his airline tickets, but the Western Union office was closed, so the travel money that had been wired to him could not be picked up. Nick then began the first airplane ride of his life, one which lasted 13 hours.

Pilotti traveled to New York to meet Nick. Accompanying him were: Paul Yoder, WB3CEZ; Pilotti's cousin, Mark DiLucca; and myself, Bob Josuweit, WA3PZO. Pilotti was asked why he got involved with Nick. He explained that as well as being his friend and QSL manager, he would lend a helping hand if he could. If it had been someone here in the U.S., Mike would take the individual to then hospital for treatment.

Nick's diagnostic examinations began the morning after his arrival. Meeting Bortnick and Pilotti at the hospital was MARC member Dr. Gene Hoenig, WB3FTJ.

UXØZZ has a medical condition which had not been able to be diagnosed or treated in Ukraine. Pilotti and others have worked through a pile of red tape for the past year trying to bring Nick to the United States for evaluation and treatment. Shortly after Pilotti became aware of Nick's condition, he contacted several hospitals to ask for their assistance. A hospital immediately came forward and offered to help. No one ever expected that it would take a year to obtain a visa. Bortnick commented that he received his invitation to return to the U.S. embassy four years to the day of his first QSO with Pilotti.

Bortnick traces his illness to a skiing accident in 1978, when he hit his head on a rock. Over the years he has suffered numerous neurological symptoms. Bortnick is an industrial electrician and has worked in photography. Recently he has been unable to work because of his illness, and radio has became a major part of his life. He was anxious to obtain a diagnosis of his illness because "knowledge is way to good health."

Bortnick was overwhelmed by the attention his case has generated locally and in the news media. Naturally, Nick was concerned about his family back home, and during the weeks here, Nick made contact via Amateur Radio with friends of his in Ukraine.

The doctors have treated Nick's symptoms, and confirmed his suspicions that the blow to the head suffered in the skiing accident had caused damage that resulted in seizure disorder. A regime of anti-seizure medication was begun, and the seizures were brought under control. He was also fitted for eye glasses, which did much to relieve the visual problems he was also experiencing.

Bortnick tried to express how thankful he is to everyone who has helped him get to the U.S., and be treated. He feels obligated to pay back his hosts or those who have sent money. Mike and the others all explained that this is not necessary, and that they were just glad to have him here and see him so much better.

Pilotti and members of the Mid-Atlantic Amateur Radio Club would like to thank all who have helped on this project. Three Congressmen played a major role in getting Nick's visa. They are Congressmen Jon Fox and Curt Weldon of Pennsylvania, and David Funderburk, K4TPJ, of North Carolina. Pennsylvania's Senator Arlen Specter's office also wrote letters to Kiev.

Among the many people Nick and Mike wish to thank are ***Worldradio's*** readers. Mike explained the coverage, and showed Nick the copies of ***Worldradio*** which told you of Nick's illness and the difficult time he had encountered in obtaining a visitor's visa. You didn't stop at writing letters to try to convince the State Department to grant UXØZZ a visa. Mike reports that outside of the Mid-Atlantic Radio Club, the most donations they received were from ***Worldradio*** readers. Some were modest amounts, some were more than modest; but there were many, many of you who chipped in to help.

Nick flew home to his family on 19 July. His health is greatly improved, and he is looking forward to trying to return to work as soon as possible.

Our thanks to everyone who helped to make this another success story in the world of Amateur Radio. WR

Alaskan fire

(continued from page 1)

nity centers could be defended. This meant that the fire fighters were trapped inside the fire zone with few paths of escape. The Hatcher Pass road, which is normally closed by snow until mid-July was opened by bulldozers as an alternate escape route. The smoke was so dense in Anchorage, 60 miles away, that the city was in twilight.

The Salvation Army

Most of the fire fighters had not had any rest for two days as the sun rose Wednesday morning. The Salvation Army, led by Captains Mark and Martha Davey, had managed to get their field kitchen through on the Parks Highway to the Incident Command Post at Houston High School. They began providing meals and support to the 550 fire fighters, even as the fire fighters battled flames 50 feet from the school with ash and embers raining down on the roof. The field kitchen was only intended to serve 100 people, but they managed somehow to provide a hot breakfast for everyone.

How can we help?

My name is Jim Strain, N7DF. I had brought my handheld to work and listened to the activity throughout the day so I could be available if anyone asked for assistance, or the ARES Net was activated. By 3 p.m. it was evident that none of the relief agencies had thought to call for help from the radio amateurs. Finally I left my office and went to Red Cross Headquarters. It had been impossible to reach them by phone—their lines had been continuously busy.

Involving Amateur Radio

I met with Nancy Friemiller, the South Central Alaska Red Cross Director. We had previously become acquainted when the Anchorage Amateur Radio Club had raised $8,000 to replace communications gear the Red Cross had lost in a fire. As club president, I had had the pleasure of delivering the check to her. She was grateful to have the offer of help with communications from the Amateur Radio community.

A combination of fire damage to equipment, smoke interference with signals, and massive overload had taken out the cellular telephone system in the Valley. All other telephone circuits between Anchorage and Wasilla were jammed and there had been no communications with their evacuation center for 4 hours. It was extremely important that they talk to Joe Rudolph, the on-site director.

Who will volunteer?

A call on the KL7ION repeater asking for anyone in the vicinity of Wasilla brought an immediate response from Jerry Sandidge, WL7HE, who was on the Parks Highway in Wasilla. He went directly to the school and remained there until someone was able to relieve him. ARES coordinator Lil Marvin, NL7DL, was asked to send someone over to operate the Amateur Radio station which had been built at Red Cross Headquarters with the money from the club donation. Stephanie Larsen, WL7SV, immediately called in and volunteered to cover it.

My job was to go to Wasilla High School to direct operations there while Lil and her husband, Rick Marvin, KL7YF, managed the ARES from Anchorage. John Murray, NL7WW, volunteered additional equipment to be taken to Wasilla.

In the meantime Clarence Hauck, WL7SK, had arrived and soon Jerry Sandidge, WL7HE, was finally able to continue on his way. He kept in touch though, in case his help was needed later. The station at Wasilla was designated as the control station and permission was obtained from the Matanuska Amateur Radio Association to use their call, KL7JFU.

Helping the Red Cross — and many others

The Red Cross on-site director Joe Rudolph was contacted and he introduced Carol Gordon, the Disaster Services Manager to us and the Amateur Radio support for the Red Cross was planned out. At this point

This map shows the perimeter of the fire and where some of the shelters were set up.

the fire had crossed the Parks Highway in one more place, only 6 miles from Wasilla, and was advancing on the town from the north, west and south.

The wind had changed and now the smoke from the fire was blowing across Wasilla. The entire supply of protective filter masks was distributed in the shelter and the ventilators in the building were shut down. Everyone outside was called indoors, and the building was sealed with tape around the doors and windows. Preparations were made to evacuate children, elderly and infirm persons from the Wasilla shelter to the Palmer High School, 16 miles further east. Johnny Moore, KL7IRA, was alerted to be ready to come south to provide communications for the planned new Red Cross evacuation shelter, while Jerry, WL7HE, volunteered to set up at the Palmer High School. Fortunately, late that evening the winds shifted direction once again, and the evacuation to Palmer was canceled.

Evacuees were able to travel in convoy over the reopened Parks Highway to Wasilla, so it was not necessary to open another shelter.

Sign here for your cough drop

With smoke in the air a lot of people were getting raspy throats. It was an experience going to the Red Cross infirmary for some cough drops — after filling out a medical records form and signing it, they dispensed one cough drop. By contrast, at the Salvation Army site cough drops were readily available from the two gallon bucket-full they kept out on the table for anyone who needed them.

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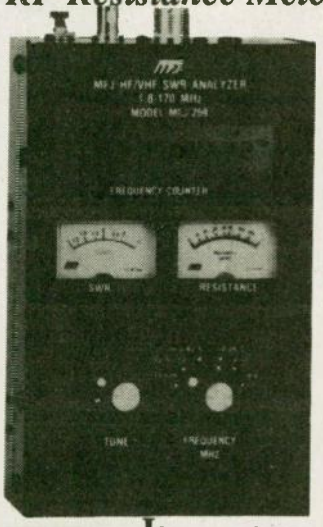

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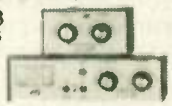
Don't leave home without this mobile tuner! The MFJ-945E extends your antenna bandwidth -- don't stop to go outside and adjust your mobile whip.

New MFJ-945E now includes 6-Meter operation and has tuner bypass switch.

Small 8x2x6 inches uses little room. Lighted Cross-Needle SWR/Wattmeter with lamp switch. 1.8-60 MHz. 300 watts PEP SSB. **Mobile mount**, MFJ-20, $4.95.

MFJ's *6 Meter* Tuners



The MFJ-906 has lighted cross-needle SWR/Wattmeter, bypass switch. Handles 100W FM, 200W SSB. For coax fed antennas. MFJ- 903, same as MFJ-906, less SWR/Wattmeter, bypass switch.

MFJ-903 **$49.95**

MFJ-906 **$79.95**

MFJ's *smallest* Versa Tuner

The MFJ-901B is our smallest --5x2x6 inches --(and most affordable) 200 watt PEP tuner --when both your space and your budget is limited. Great for matching solid state rigs to linear amps.

MFJ-901B **$69.95**

MFJ's *random* wire Tuner

Operate all bands anywhere with any transceiver with the MFJ-16010. It lets you turn a random wire into a transmitting antenna. 1.8-30 MHz. 200 watts PEP. Ultra small 2x3x4 inches.

MFJ-16010 **$39.95**

MFJ's VHF or UHF Tuners

MFJ-921 or MFJ-924 **$69.95**

MFJ-921 covers 2 Meters/220 MHz. **MFJ-924** covers 440 MHz. SWR/Wattmeter. 8x2½x3 in. Simple 2-knob tuning for mobile or base.

MFJ's *artificial* RF Ground

Creates artificial RF ground. Eliminates or reduces RF hot spots, RF feedback, TVI/RFI, weak signals caused by poor RF grounding. Also electrically places a far away RF ground directly at your rig by tuning out reactance of connecting wire.

MFJ-931 **$79.95**

76206.1763@compuserve.com FAX: (601) 323-6551

•1 year *unconditional* warranty •30 day money back guarantee(less s/h) on orders from MFJ •**Add s/h**

MFJ ENTERPRISES, INC.
P. O. Box 494, Miss. State, MS 39762
(601) 323-5869; 8-4:30 CST, Mon- Fri
Technical Help: (601) 323-0549

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

Not better, not worse

Refugees from the fire had continued to stream in all night until there were over 750 people in the shelter and it was nearing its capacity. Meanwhile local residents brought their campers and motorhomes to the parking lot to be used by the refugees, and a tent city had sprung up as well. Fortunately the fire had been turned back on itself by the changing winds, and while it was no longer heading toward Wasilla or Houston as rapidly as it had been, the boundaries on the west and to the south still raced on. By 6 a.m., Wasilla High School was a madhouse of activity. Hot meals were being provided for fire victims, Red Cross staff and volunteers. Many truckloads of Red Cross supplies had come in during the night from Anchorage and a steady stream of donated materials started to arrive. By 8 a.m. traffic control was total chaos and the halls of the building were being choked off by piles of food, clothing, toys, medical supplies and other relief material. Volunteers were arriving by the dozen along with more fire victims who had spent the night along the road.

Straighten out our communications — please

Carol Gordon and Joe Rudolph from the Red Cross had worked through the night. Carol asked that we coordinate with the MacTel people, Matanuska Telephone Association, Alascom and AT&T on getting the necessary telephone connections set up. Alascom/AT&T were installing an earth station but needed a 50 amp, 220-volt circuit run outside for it. Chris Brown, WL7CLA, stepped in to help them. Electricians from the school district added new circuits to power the earth station, which supplied 20 telephone circuits that would be unaffected by overloads on the local system. They were all given over to the disaster agencies and victims to use, free of charge.

As the State and National disaster management specialists began to arrive, things started to change.

Wayne Groomer, KL7HHO, lived in the direct path of the fire and it was getting nearer by the hour. In an attempt to protect his house he began cutting down all the spruce trees around his property. Earlier Chris Brown, WL7CLA, had come past and picked up Wayne's ham gear to take away to safety. Some of it ended up in use at the Wasilla command post. Wayne said he would be in to help as soon as he got the trees cut down and dragged away from his house.

"Saving" the Salvation Army

The Salvation Army was located at the Houston High School Incident Command Post. They were experiencing great difficulties feeding a quickly-expanding crowd of fire fighters and providing for their other logistical requirements.

They had been working the entire time with no communications at all, not even electricity. The entire power grid had been shut down on Wednesday as the fire burned through the primary feeder lines to the area. Billy Capers, AL7BB, arrived on the scene at 8:45 a.m. Thursday. As soon as he arrived he was inundated with requests for help in relaying messages. Even though supplies were arriving from Anchorage and Wasilla at regular intervals, they were starting to fall behind in meeting the needs of the exhausted crews of fire fighters who needed clean T-shirts and socks, and to have a quick meal, and, possibly, some sleep before returning to the lines.

The Salvation Army asked that 1,000 sandwiches be sent. Within the hour 4,000 were on the way. There were only 12 Salvation Army volunteers available but somehow they coped. We began to compile specific lists of what was needed. Toothbrushes, foot powder, insect repellent, boot insoles, bandannas, more insect repellent (Alaskan mosquitoes have to be seen to be believed!). The list went on and on.

There was no difficulty in obtaining the needed supplies. When the broadcast media announced what they needed, the people of Anchorage and its environs responded with overwhelming generosity. Supplies by the truckload began to arrive in both Houston and Wasilla, but there was no place to put them. A second Salvation Army canteen had been opened in the meantime, in Meadowood Mall, some two miles from the Houston High School and communications were also set up there.

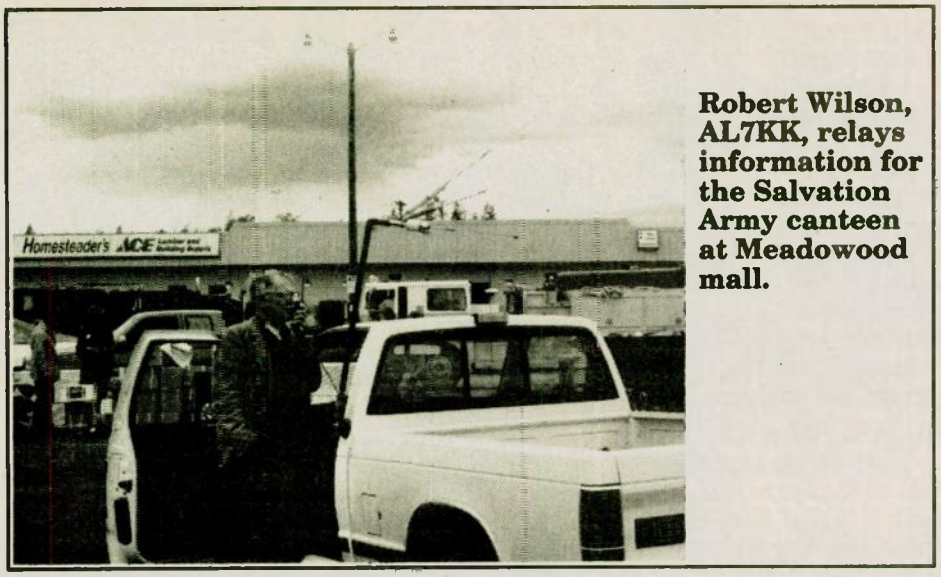
Where do we put this stuff?

The distribution of the supplies and the logistics of it all was solved with the help of the LDS and Lutheran churches which were next door to the school in Wasilla. They took charge of all of the sorting and distribution of all non-food items. The hallways were finally clear of incoming supplies! At this point there were nearly 1,500 people at the evacuation center — victims, staff, news media and volunteers.

The lines between victim and volunteer had blurred by now, as everyone was helping everyone else. Our communications people helped set up several video game systems donated by local video stores who also provided TVs, VCRs and an ample supply of video tapes. That helped keep the 200 or so kids out from underfoot. Nearly 125 people who had lost everything in the fire were accepted at Kings Lake Church Camp, giving them a safe place to stay for as long as was needed. David Riesz, N1OSN, was their Amateur Radio liaison, in order to communicate their needs to the Salvation Army, Red Cross and the churches.

Quiet heroes

Susan Woods, NL7NN, served her first shift at the Red Cross Headquarters in Anchorage. When she was relieved there she drove to



Robert Wilson, AL7KK, relays information for the Salvation Army canteen at Meadowood mall.

Wasilla to cover a shift at the control station. Then she went to the churches next door to coordinate getting supplies together for the Salvation Army. While there she helped sort clothes and household goods. Then she helped with food service and distribution at the shelter in the high school. Later she was at Houston helping the Salvation Army and then at Meadowood Mall. It was suspected that she was cloning herself since she seemed to be everywhere at once. She couldn't have gotten home before two a.m. any time during the week.

Feeding everyone

By late Thursday evening additional fire fighters had arrived from the lower 48 states bringing the number of people depending on the Salvation Army at Houston and Meadowood to over 2,000 people. Food service lasted until past 1 a.m. while restocking of supplies continued through the night.

Fortunately, at this time of year it never becomes completely dark at night in Alaska.

Fighting back

The fire was beginning to slow its advance, and no further homes had been lost in 24 hours. Satellite surveillance measured the fire damage at 35,000 acres by Thursday evening. There were over 1,400 houses inside the fire lines and it was estimated that nearly a third of them had been destroyed.

Fire crews were at last given the go-ahead to create definite fire lines and began to try to take control of the fire.

By now there were six bombers dropping fire retardant, and eight helicopters carrying water to pour on the fire from the sky.

Bureaucratic problems

Up until Thursday afternoon everything had been handled on a local basis. The local Red Cross Chapter, Salvation Army, and fire fighters were doing everything with limited help from the regional National Guard. As the State and National disaster management specialists began to arrive, things started to change. Fortunately it took until mid-morning Friday for the bureaucracy to start affecting activities.

The first time the effect of this was really felt was when we transmitted a list of badly needed supplies from the Houston Salvation Army post. Previously we had given the list to the local Red Cross volunteer at a desk in the operations center and the items were sent out on the next truck. This time the list was handed back with the instructions to go through the Fire Incident Command at Houston. They were informed that the fire fighters had to ask their captain to fill out the proper form; then he had to get it signed and turn it in at the proper office; the supplies would be requisitioned, and he could pick them up the next day. It took us about three hours, but we soon had a very effective smuggling operation going with the churches, Lions Club and Red Cross volunteers cooperating to restart the flow of supplies from the bulging Red Cross warehouses to the fire fighters, through the Salvation Army.

Give us all your fruit juice, and we won't charge you for it

By noon Friday, the contract caterers were beginning to set up at Houston to provide meals to the fire fighters. This allowed the Salvation

Army to concentrate on meeting their needs for such things as eye wash, dry socks and toothbrushes. Also, a selection of snacks, cold drinks and sandwiches were available 24 hours a day. When the caterer discovered that they didn't have any fruit juice for breakfast, they came over and took most of the juice that had been donated to the Salvation Army. They assured us that there wouldn't be a charge for the juice. . . .

"We don't do buckets"

One request relayed from the fire fighters at Houston was for several five-gallon buckets to use for washing things. When the request was taken to the Red Cross supply desk the friendly, local-girl volunteer with the makeshift ID tag had been replaced by a stern faced lady in a prim National Red Cross Disaster Assistance Team vest. After glancing at the request she handed it back saying. "We don't do buckets." Dave Reisz, N1OSN, got going and quickly located somebody who *did* do buckets, at Homesteader's Building Supply. Within a few minutes the donated buckets were on their way to the fire fighters.

Amateur Radio gets results

Alaska gets cold, even in the summer. The fire fighters from the "lower forty-eight" weren't prepared for it, so the Salvation Army's request for sweatshirts was met when Susan Woods, NL7NN, and I contacted the churches. Amazingly enough, within 45 minutes, 450 people were putting on warmer clothes!

The great Alaskan "fire sale"

As the commercial catering company took over providing food services for the fire fighters under contract with the State Forestry Division, the Salvation Army scaled back to providing snacks, drinks and personal items to the fire fighters. Ample supplies of almost everything continued to pour in from as far away as Fairbanks. Then, Sunday morning, a commercial company began setting up to sell the things that the Salvation Army had been providing for free. The Fire Command told the Salvation Army to pack up and move out.

When we were advised of this by Wayne Groomer, KL7HHO, in Houston, Susan, NL7NN and I went out and helped set up what we jokingly called a "fire sale." Most of the remaining goods that had been contributed for the fire fighters were unloaded from the storage units and passed out to them, in bulk.

Starting the shutdown

Gradual containment of the fire was becoming a reality, and the Adventist Relief Services began to assume the operations that the Red Cross had handled, so our traffic handling was greatly reduced. We realized that our services were becoming redundant. KL7JFU was officially closed at 10:30 p.m., on Sunday, 9 June.

The final statistics on the fire were sobering. The fire consumed 37,336 acres of forest land, and destroyed 344 homes and businesses. The Amateur Radio operations were served by 56 local amateurs who put in more than 450 hours during the six days of operation.

The best news of all was that no human life had been lost, and those injuries that were sustained had been minor ones.

One thing is certain — I don't think I can ever pass one of the Salvation Army Christmas bell ringers again without adding to that little red kettle. **WR**

W4KFC is heard again

Ken Clark, formerly K4OKZ, is now the proud holder of W4KFC, the call sign once held by his father, the late Vic Clark.

When Vic Clark died suddenly of a heart attack in November of 1983, he was the president of the American Radio Relay League — a much-loved, highly respected ambassador for Amateur Radio.

When the current vanity call sign system opened, allowing family members to obtain the call of a deceased family member, Ken was able to obtain his father's call.

Ken, a communications specialist with the National Weather Service, spends much of his time traveling, and offering technical assistance to other countries with their communications needs. He describes his work as part diplomatic, and part roll-up-the-sleeves, tear-into-the-gear sort of a job. He says that he owes his life's work to Amateur Radio and his dad's patience.

Ken, first licensed in the spring of 1957 as KN4OKZ, says that his only claim to fame was placing second in the Novice Roundup. But he and his father studied together— Ken for General, and Vic for Extra, and both succeeded in March of 1958. Vic most enjoyed the operating aspects of Amateur Radio, but young Ken's interest lay in what made the equipment tick. His dad would buy him big old boat anchors so Ken could take them apart and see how they worked. Of course, says Ken, his dad got all the useful parts, but still, he encouraged Ken to learn all he could in an admittedly grubby aspect of the hobby!

When Ken joined the Navy, naturally he worked in electronics maintenance. In 1963 he was stationed at the Treasure Island Naval Station in San Francisco Bay. He discovered he could get a whole day off, without it being charged against leave time, if he were to take a radio test at the FCC offices in San Francisco. Naturally, the prospect was quite appealing — so he took and passed the Amateur Extra exams, and had the balance of the day off!

Today, Ken reports that he is in the process of working on getting some additional HF antennas skyward, and is particularly interested in "warming the ether" on 40, later this fall.

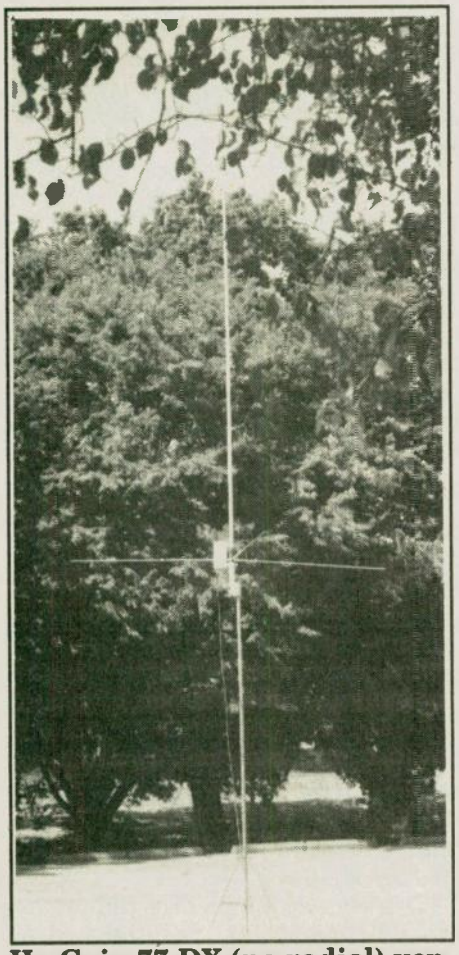
Ken wants everyone to know that his mother, Hester, WA4PAE, is doing well, and enjoys traveling to visit her children and grandchildren. He adds that his five brothers and sisters also agreed to his applying for their father's W4 call, and that one of his brothers is considering applying for one of Vic's earlier-held calls. **WR**

Field Day

Armond Noble, N6WR

Just what else could compare with Field Day? There is the great outdoors, good friends and Amateur Radio.

Worldradio receives hundreds of radio club bulletins and it's exciting to read about the members getting its of your favorite hobby.



Hy-Gain 77-DX (no radial) vertical used on 40-10M.

ready for it and then the reports afterwards.

Burt Jaffee, W9BJ, President of the Michiana ARC of South Bend, IN wrote about FD like this:

Field Day — An American Ham Tradition

Field Day\feeld day\noun: 1) Competitive event where Amateur Radio operators set up radio equipment in the field to compete for score. 2) An event to test the readiness of Amateur Radio Emergency Communications. 3) A chance to meet new friends and test the limits of your favorite hobby.

•

As it has been for the past quarter-century, the ***Worldradio*** Staff ARC was on Field Day from the Sacramento Valley (SV) section. Thanks to all who when working us (N6WR) said, "Hello, ***Worldradio;***" "My favorite magazine"; "I think it's great."

Our antennas were a Hy-Gain DX-77 (no radial) vertical for 40-10 and a Lakeview 7-foot Hamstick for 80. On 20 we received a "You have an incredible signal on the East Coast" at 1620Z Sunday. While the Lakeview Co. says their vertical has a 10 kHz bandwidth on 75 (remember it is a 1/36 wavelength antenna at 3.9 MHz) with an MFJ-949-C tuner we could roam up and down the entire band. Everyone we called on that band answered and we even received a "great signal" report which is, of course, nothing new to Yaesu owners.

On 40 SSB we hit one stretch of 24 contacts in 24 minutes with the K1EA logging program showing once a "Last 10 QSO" rate of 100 per hour. On 40 CW (two points per QSO) 38 points were made in 25 minutes. On 20M SSB, 11 QSOs were made in one 17-minute stretch.

The doughnuts taste especially good on Field Day. And ideas are already being kicked around on how to do better next year. It's a great event as friends gather in a mutual effort.

With today's lightweight gear that can run all weekend from a car battery we might pause for a moment and think of those in the past who had to haul out a gasoline-driven generator, a 100-pound transmitter and an 85-pound receiver.

All the club bulletins mention just how much fun FD is. And fun it is.

Let's take a look at an excerpt from another write-up:

Lakeview mobile antenna used on 80M.

"Old hands won't have to be told that the FD packs more solid fun and enjoyment into a weekend than any other event in the ARRL Activities Calendar. To newcomers we'd like to explain that this annual activity is a test of emergency-powered stations in the field operating under conditions often approximating those likely to be encountered in an actual emergency. Unlike most other amateur operating activities, this has grown to be largely one in which radio clubs and other organized groups function as teams in setting up and operating single or multi-transmitter stations independently of normal power facilities. It is a spectacular demonstration of Amateur Radio's ability to provide communications useful in times of emergency.

"But even if you can't arrange to participate as a member of a Field Day group, you're urged to get into the FD. If you're the proud possessor of a mobile rig, or if you have gear that can be set up a field, get out alone or with a friend and enjoy

the fun. You'll find hundreds of stations on the air manned by thousands of brother amateurs eager to hook up with you!"

Since that was written in a *QST* of 45 years ago (June 1951) the "hundreds of stations" has grown to thousands of stations.

Sunburn, bug bites, hoarse throats, lack-of-sleep grogginess — it's all part of the exhilarating Field Day experience! **WR**

VOMARC pioneer . . .

Darrel Jones, WD6BOR

The accompanying photograph of the gentleman with his arm around a woman is that of Sam Sullivan, W6WXU, and his daughter, Joan Brady, KE6UAW, during the Valley of the Moon ARC annual hamfest in April 1995. At the time the photograph was taken, Joan had just passed her Novice and Technician exams, as can be surmised by the beaming expression on her proud father's face.

Sam Sullivan was first licensed as W7BDI while attending school at the University of Idaho in Pocatello and living in the dorm in Kennedy Hall. After transferring to the U of I campus at Moscow in 1932, he traveled to Spokane, Washington, to upgrade his Class C license to Class B with an examiner who had come over from the Seattle office. Sam then joined the ARRL and started collecting his copies of *QST* that same year, as W7CMY. Always someone to recognize the value of good information, Sam still has his entire collection of *QST*s back to 1932.

Sam moved to Bellville, Illinois, after graduating as an electrical engineer and taught electronics at Scott Field for three years before joining the Navy in World War II. His call sign was changed to W9SAB in Illinois. In 1946, he moved to the

Sam Sullivan, W6WXU and his daughter, Joan Brady, KE6UAW.

San Francisco Bay area and began working at Mare Island Naval Shipyard, the career he followed until his retirement. His last call sign change came through as W6WXU, the call he holds today.

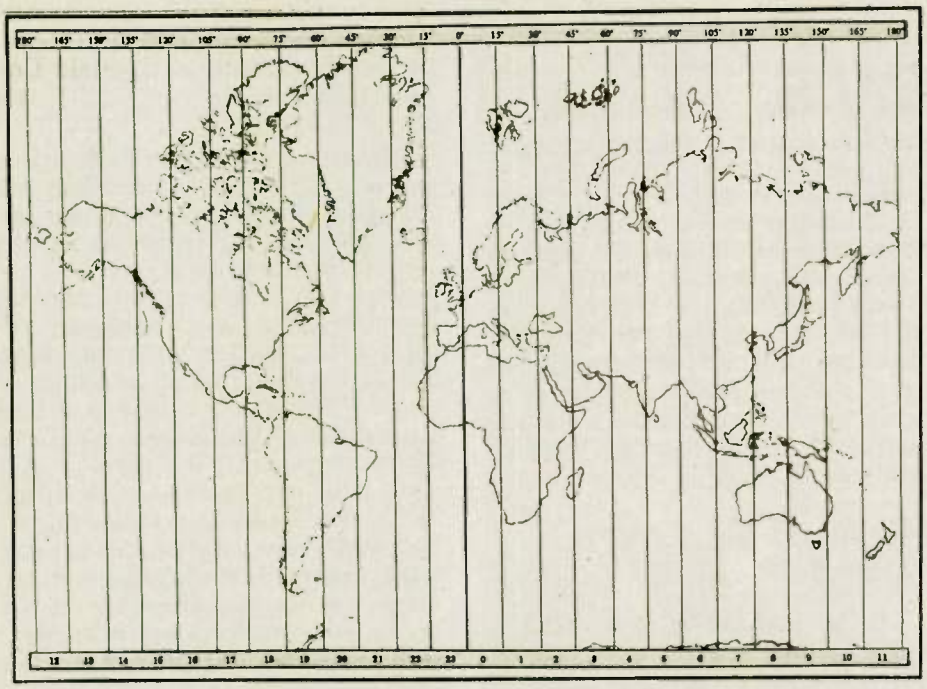
He joined the Old Old Timers Club, formed by Ray Meyers back in the 50s, and has maintained his membership ever since. When the licensing structure changed he was grandfathered to Advanced, and upgraded to Extra in the mid-60s at the FCC office in San Francisco.

Sam was one of the founding members of the Valley of the Moon Amateur Radio Club and has long supported the club by serving in many different capacities. He is always willing to answer questions and help other hams in the community, he has inspired newly licensed hams with his Tuna Can Transmitters, transistor radio receivers, CB conversions and many other wonderful projects that have come out of his cluttered but fascinating workshop.

Sam had built a code practice generator for Joan to use during her commute and helped her work toward her Tech Plus and General tickets. Joan successfully upgraded to General at this year's Valley of the Moon ARC hamfest. Both Joan and Sam seemed very pleased to be sharing one of Sam's lifelong interests.

The Valley of the Moon Amateur Radio Club (VOMARC) just finished their 1996 Field Day, setting up in the Sonoma Plaza directly in front of the historic Sonoma City Hall. VOMARC operated as N6S, November Six Sonoma, to commemorate the Sonoma Sesquicentennial, celebrating the 150th anniversary of the Bear Flag Revolt in old Sonoma that created the independent Republic of California from 14 June to 9 July 1846.

During the Field Day commemorative operation, Sam served as Public Information Liaison, answering questions of people stopping by and distributing information about Amateur Radio and the club. As always, Sam was ready and willing to serve the club he helped form and the hobby he has enjoyed for so many years. **WR**



Contact All Time Zones

Armond Noble, N6WR

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

RULES

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

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

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

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

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

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

APPLICATION

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

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

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

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

The application should be addressed to CATZ Award, ***Worldradio***, 2120 28th St., Sacramento, CA 95818.

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

We're still here

Dean Norris, K7NO

There really are DX PacketCluster nodes in Arizona. The listing in the *Repeater Directory* was inadvertently omitted, but we are still here. Nodes are simplex (with one exception) and run at 1200 baud.

Location	Call	Frequency
N.W. Phoenix	N7CIX	144.93*
S.E. Phoenix	K7NO	145.09*
N.E. Phoenix	K5VT	145.03
Tucson	AB7AA	144.93
Prescott	AA7MH	144.93
Heber/ Overgaard	WA7KPH	145.13(-)

*Sponsored by the Central Arizona DX Association.

All nodes are linked and occasionally we link to California nodes and through to an Internet port.

Come on in — the DX is fine!

Silent Keys

Oakley L. Stockton, KØROL

Lt. Colonel Oakley "Oak" Stockton, (USAF Ret.), passed away on 16 March 1996, after a long illness. He served throughout WWII and the Korean wars. He was awarded the Bronze Star Medal, the Air Force and Army Commendation Medals, and the Singhman Rhee Presidential Unit Citation among others. Stockton served 24 years in the USAF and 6 years with the Defense Communications Agency, as a communications specialist.

He was an FCC-licensed Amateur Radio operator for 60 years.

Oak was also an active member and past president of the Pikes Peak Chapter of the Society for the Preservation and Encouragement of Barber Shop Quartet Singing in America, Inc. (SPEBSQSA, Inc.) for 38 years and held many offices within the society.

He is survived by a brother, Paul M. Stockton of Winterhaven, CA; four children, Chip G. Stockton of Poway, CA, Scott L. Stockton of Castle Rock, CO, Lorrie D. Stockton of Los Angeles, CA, and Rand K. Stockton of Colorado Springs; six grandchildren and his loving companion Ora Marie Rose, of Colorado Springs. *—submitted by Scott L. Stockton*

Richard W. Fox, W7EFS

Lt. Col. Richard W. Fox, W7EFS, (USAF Ret.) passed away on 23 June in Lacomb, Oregon. He was born 19 October 1908, in Atchison, Kansas. As a child he lived in Atchison, in a homestead near Chugwater, Wyoming and in Denver, CO.

He worked as a county lineman in Denver and later was a police radio operator for station KGPX.

He married Agnes K. O'Brien on 17 October 1931, in Denver and they moved to Lacomb in 1967. She died 7 June 1988.

Mr. Fox was in the Naval Reserves from 1936-40, commissioned a 2nd lieutenant in the Army Air Corps during WWII and served in North Africa and Italy.

After WWII, he served in the Air Force Reserves, and was a point-to-point communicator on Wake Island for the Civil Aeronautics Administration. He was recalled to active duty during the Korean War, and served three years in Tokyo.

He later served in Oslo, Norway, and at the Central European Region Headquarters at Ramstein, Germany. He was last assigned to Adair Air Force Station, where he retired in 1967. He received a Bronze Star, a Commendation Ribbon and an Outstanding Unit Citation.

Mr. Fox enjoyed Amateur Radio for more than 60 years.

Surviving are daughter Rita Anne Fox of Lacomb; brother Walter Fox of Denver, CO; and two grandchildren. *—submitted by Keith Flanagan, W6RIR*

Special Events

Thomson Melon Days

The Palisades ARC and 90 West DX Association will operate KB9KGS, 1 September, from 1700-2100 UTC to celebrate Thomson Melon Days. Operation will be on the lower portion of the General 40 and 20 Meter bands. For a certificate, send QSL and 9 x 12 inch SASE to Bob Plumley, K9IEG, 1123 W. Main St., Thomson, IL 61285.

Marconi Station

WB1U will operate 28 September, from 1400 UTC to 29 September 2100 UTC to commemorate Marconi Station's 95th anniversary. Operation will be on the General portions of 15, 20, and 40 Meters, Novice portions of 10 and 80 Meters (CW and sideband). For certificate, send SASE to Ray Hilson, WB1U, 6 Sherman Place, Norwalk, CT 06851.

Salmon Festival '96

W7F will operate a special event station at the fish hatchery located at Ft. Leavenworth, WA 19-22 September. The first two days (19-20 Sept.) will be for area schools to talk with out-of-area schools. There will be contact only with ham school stations on these two days. W7F will make contact with hams on 21 and 22 September. Operation will be on 20 (14.252), 40(7.252) and 75 Meter (3.855) bands. A drawing for prizes will be held which will include a dual band handheld from ICOM, a C3-S beam from Force 12 Antenna Co. and many others. To be in the drawing, hams will first make contact with the special event station and then mail their QSL card to Fish, General Delivery, Leavenworth, WA 98826 (postmarked before 1 October). Drawing will be held on 5 October, 1996.

Elementary AR Day

The Liberty-Valley Elementary School will operate KC3HP, WC3A, N3IRN and N3LQS on 16 September from 1300-1900 UTC. Operation will be on the General portion of the 15, 20, 40 and 75 Meter bands. For certificate, send QSL to: N3POB, D. Miguelez Liberty-Valley School, 175 Liberty-Valley Rd., Danville, PA 17821.

Winesburg Fall Fair

The Clyde AR Society will operation, NF8E on 21 September from 1600-0000Z from the Winesburg Fall Fair. Frequencies: Phone — 7.250, 21.375, 144.750 FM; CW — 71.125 and 21.150. For certificate, send large SASE to NF8E, 302 Hamer St., Clyde, OH 43410.

AACS Roundup

Hams who served in the Army Airways Communications System (and subsequent name changes to July 1961) are encouraged to participate in this CW/Phone event. More than 875 hams served in this organization, and over 300 have checked into the AACS nets. This event provides a convenient way to locate other AACS hams and is a friendly get-together, not a contest. The event will take place on 9 September from 1400-2200 UTC (9 a.m. to 5 p.m. CDT). Frequencies (use either or both modes): SSB 7.230-7.240, 14.20-14.290 and CW 7.050-7.060, 14.050-14.060. Procedure: Answer, or call CQ AACS, then ragchew. The frequent mention of "AACS" during a QSO will aid in identifying former members. Send results or comments to W7LK, e-mail: TM5S06A@ prodigy.com

Alumni reunion

The Bagouland Emergency Amateur Radio Service (BEARS) will operate N5DVI on 1 September, 1300-2300 UTC aboard the offshore rig, "Mr. Charlie" to celebrate alumni reunion. Operation will be in the General portion of the 75, 40 and 20 Meter, Novice portion of the 80 and 40 Meter bands. QSL and SASE to Huey Ohmer, Box 874, Amelia, LA 70340.

Peshtigo Fire

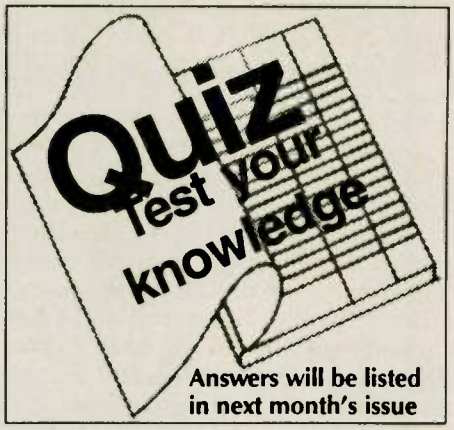
The Marinette/Menomine ARCs will operate KA9WAR on 21 September from 1500-2100 UTC to commemorate the 125th anniversary of the Peshtigo fire, America's most disastrous forest fire. Operation will be on SSB and CW 7.271, 14.271, 21.371, 28.371. For certificate, send QSL and SASE to: Arden Nelson, KA9WAR, 329 Brown Ave., Peshtigo, WI 54157.

Atwater Threshing Days

The Willmar Emergency ARC will operate WØSW, 7 and 8 September from 1500-0000 UTC from Atwater Threshing Days, an exposition of antique farm equipment. Operation will be on the lower portion of the General 40, and 20-meter phone bands. For a certificate, send your QSL card and an SASE to: Willmar EAR, P.O. Box 882, Willmar, MN 56201.

Thomas Wolfe Memorial and New Visitor's Center

The Western Carolina ARS will operate W4MOE on 28 September, 1600 UTC through 29 September, 1600 UTC to commemorate the Thomas Wolfe Memorial and New Visitor's Center in Asheville, North Carolina. Operation will center about 25 kHz up from the bottom of the General Class phone and CW bands as well as a special Novice-Tech station operating about 28.320 (also CW) and 2-meter FM contacts with club station W4MOE via the *Callbook™* address and an SASE. For more information, contact Charlie Ford, KD3CJG at 704/667-1035. WR



The answers to last month's quiz are as follows:
1.A; 2. B; 3. D; 4. D; 5. A; 6. D; 7. B; 8. A; 9. D; 10. A; 11. C; 12. D; 13. C; 14. A; 15. D; 16. A; 17. B; 18. A; 19. D

20. What is one use for a station in auxiliary operation?
A. Point-to-point radio communications within a system of cooperating amateur stations
B. Remote control of model craft
C. Passing of international third-party communications
D. The retransmission of NOAA weather broadcasts

21. A station in auxiliary operation may only communicate with which stations?
A. Stations in the public safety service
B. Other amateur stations within a system of cooperating amateur stations
C. Amateur radio stations in space satellite operation
D. Amateur radio stations other than those under manual control

22. What frequencies are authorized for stations in auxiliary operation?
A. All amateur frequency bands above 220.5 MHz, except 432-433 MHz and 436-438 MHz
B. All amateur frequency bands above 220.5 MHz, except 431-432 MHz and 435-437 MHz
C. All amateur frequency bands above 220.5 MHz, except 431-433 MHz and 435-438 MHz
D. All amateur frequency bands above 220.5 MHz, except 430-432 MHz and 434-437 MHz

23. What is meant by remote control of an Amateur Radio station?
A. Amateur communications conducted from a specific geographical location other than that shown on the station license
B. Automatic operation of a station from a control point located elsewhere than at the station transmitter
C. An Amateur Radio station operating under automatic control
D. A control operator indirectly manipulating the operating adjustments in the station through a control link

24. What is one responsibility of a control operator of a station under remote control?
A. Provisions must be made to limit transmissions to no more than 3 minutes if the control link malfunctions
B. Provisions must be made to limit transmissions to no more than 4 minutes if the control link malfunctions
C. Provisions must be made to limit transmissions to no more than 5 minutes if the control link malfunctions
D. Provisions must be made to limit transmissions to no more than 10 minutes if the control link malfunctions

25. If the control link for a station under remote control malfunctions, there must be a provision to limit transmission to what time length?
A. 5 seconds
B. 10 minutes
C. 3 minutes
D. 5 minutes

26. What frequencies are authorized for radio remote control of an Amateur Radio station?
A. All amateur frequency bands above 220.5 MHz, except 432-433 MHz and 436-438 MHz
B. All amateur frequency bands above 220.5 MHz, except 431-432 MHz and 435-437 MHz
C. All amateur frequency bands above 220.5 MHz, except 431-433 MHz and 435-438 MHz
D. All amateur frequency bands above 220.5 MHz, except 430-432 MHz and 434-437 MHz

27. What frequencies are authorized for radio remote control of a station in repeater operation?
A. All amateur frequency bands above 220.5 MHz, except 432-433 MHz and 436-438 MHz
B. All amateur frequency bands above 220.5 MHz, except 431-432 MHz and 435-437 MHz
C. All amateur frequency bands above 220.5 MHz, except 430-432 MHz and 434-437 MHz
D. All amateur frequency bands above 220.5 MHz, except 431-433 MHz and 435-438 MHz

28. What is meant by automatic control of an Amateur Radio station?
A. The use of devices and procedures for control so that a control operator does not have to be present at a control point
B. Radio communication for remotely controlling another Amateur Radio station
C. Remotely controlling a station such that a control operator does not have to be present at the control point at all times
D. The use of a control link between a control point and a remotely controlled station

29. How do the responsibilities of the control operator of a station under automatic control differ from one under local control?
A. Under local control, there is no control operator
B. Under automatic control, a control operator is not required to be present at a control point
C. Under automatic control, there is no control operator
D. Under local control, a control operator is not required to be present at the control point at all times

30. Which of the following amateur stations may be operated by automatic control?
A. Stations without a control operator
B. Stations in repeater operation
C. Stations under remote control
D. Stations controlling model craft

31. What is a control link?
A. The automatic-control devices at an unattended station
B. An automatically operated link
C. The remote control apparatus between a control point and a remotely controlled station
D. A transmission-limiting timing device

32. What is the term for apparatus to effect remote control between the control point and a remotely controlled station?
A. Tone link
B. Wire control
C. Remote control
D. Control link

33. What is meant by local control?
A. The use of a control operator who directly manipulates the operating adjustments
B. The OSCAR satellite transponder
C. A carrier operated relay system
D. The use of a portable handheld to turn on or off the repeater

34. Who may be the control operator of an auxiliary station?
A. Any amateur operator
B. Any Technician, General, Advanced or Amateur Extra class operator
C. Any General, Advanced or Amateur Extra class operator
D. Any Advanced or Amateur Extra class operator

Stay tuned for more questions and answers next month.

Off the air

Worldradio
2120 28th Street
Sacramento, CA

Endless code?

I enjoy your magazine very much. I am surprised I feel the need to complain but I feel an injustice has been committed by one of your readers.

In John Stewarts' . . . [letter] (June '96) in "Off the Air," he infers that New Yorkers are too dumb to ride horses, that the electrical engineer amateur, who earned his degree by 4 years of blood, sweat and tears, trade school graduates, armed forces technical school or otherwise professionally trained people are somehow not worthy of respect for having paid the price and put in the time necessary to earn their status!

I know of no school that stressed code 6 hours a day. I am a relative newcomer to Amateur Radio, having gotten my license in 1993. But I must confess that my Merchant Marine service during WWII helped my code comprehension. None of us were subjected to 6 hours a day! I am also aware that teaching a student to play a musical instrument (which I did for 32 years) is very close to learning code . . . Daily practice, one hour a day class, and a genuine desire to learn, code or music is needed! One hour a week for code class, and daily practice got my 14-year-old grandson his 13 wpm and General Class license.

AE4JM is a 15-year-old Extra Class licensee who sends code beautifully.

For those amateurs who write the books, design the hardware and make this hobby what it is, I give my everlasting respect and thanks. I am especially grateful for the geniuses who write the test books so explicitly that a 67 year old could comprehend enough to get his Extra Class license.

I know you can't please everybody but for this grateful amateur, the ones who write the articles for *Worldradio* are deserving of all the respect we can accord them. Keep up the good work!

James G. King, AD4NS
Panama City, FL

Vanity calls

I have been an Amateur Radio operator off and on for 41 years. My first call (as a Novice) was KN4ARS in 1955. If you remember, they were good for one year. Within that year, I achieved General status and the "N" was dropped from my call as they did in those days. Unfortunately, after my five years licensing period was over, I no longer had a base station in operation. At the time, that was a necessary evil to extend your licensing period. So — my call lapsed. That was in the year 1960. Over the years, I have checked on the call and I believe it was vacant the entire time until the FCC opened Gate 1 for requests of vanity call signs.

The July, 1996, edition of *Worldradio* spelled out the procedure and after reading the article I called the 800 number you listed.

I requested my original call sign from the 50s and in less than two weeks, the FCC answered.

Thanks for keeping up with the vanity call sign program. In my estimation, your magazine is the best amateur publication ever published.

George L. Kelley, K4ARS
Vero Beach, FL

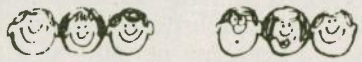
EZ Audio Amp

I read with interest the "EZ audio amp for in-car HT use" in *Worldradio's* "Wires and Pliers" column. I'll go one better — or at least one cheaper. I made the same setup out of a salvage junk box part. All that is needed is an 8-ohm ear plug with the right jack to fit your handheld.

Dismantle the ear piece housing while not disturbing the wire leads, voice coil and small pole piece (remove diaphram). Take a standard cassette with the 4 screw case and remove the tape, pressure pad, and end rollers. Glue coil and hole piece at the position where the pressure pad was taken out. Bring lead outside of case whereby it will come out the right direction of the radio slot. File notches in cassette case where the lead comes out. Refasten case together with original screws. This is a project for the "do it yourselfer" and it works great — even on small TVs.

Bob Simmons, K6YBB
Alamogordo, NM

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 montly AMATEUR "HI" contest. You could win a free year's subscription to **Worldradio**!*

Really? It won't work?

Robert Burchardt, AB5QH

During my Novice days and while awaiting the FCC to make their annual pilgrimage to Tulsa, I managed to scrounge up a new two-meter rig and would listen to my friends on it. I could hardly wait for the day that I could join them on the air.

Having no money for an outside antenna at the time I manufactured an inverted "V" and installed it in the attic of my single story home. All that was now required was a Technician Class license so that I could operate the rig.

Finally the big day arrived and I promptly presented myself before the FCC examiners and took the General Class written test. Soon I left the federal building with my temporary ticket in my pocket. Upon arrival at the car, I took the rig out of the trunk and placed it in the seat. I had cut down a CB whip that John, KA5KLS (now a silent key) had given me. I attached the coax and tuned in "our" frequency of 146.60 MHz and informed the listeners that KA5NFJ stroke KT mobile was monitoring. Instantly N5BOV answered and congratulated me on the upgrade.

Upon arrival at home, I put the rig on the PS and the "V" and waited until the others started home from work. We had a round-robin QSO that evening. We met daily and we had quite a following in the local ham community.

One day I was talking to KA5KLS on a repeater and he asked if I was still talking on the "V." Upon answering in the affirmative our QSO was broken by a two by one call who asked me to verify that I was using an inverted "V."

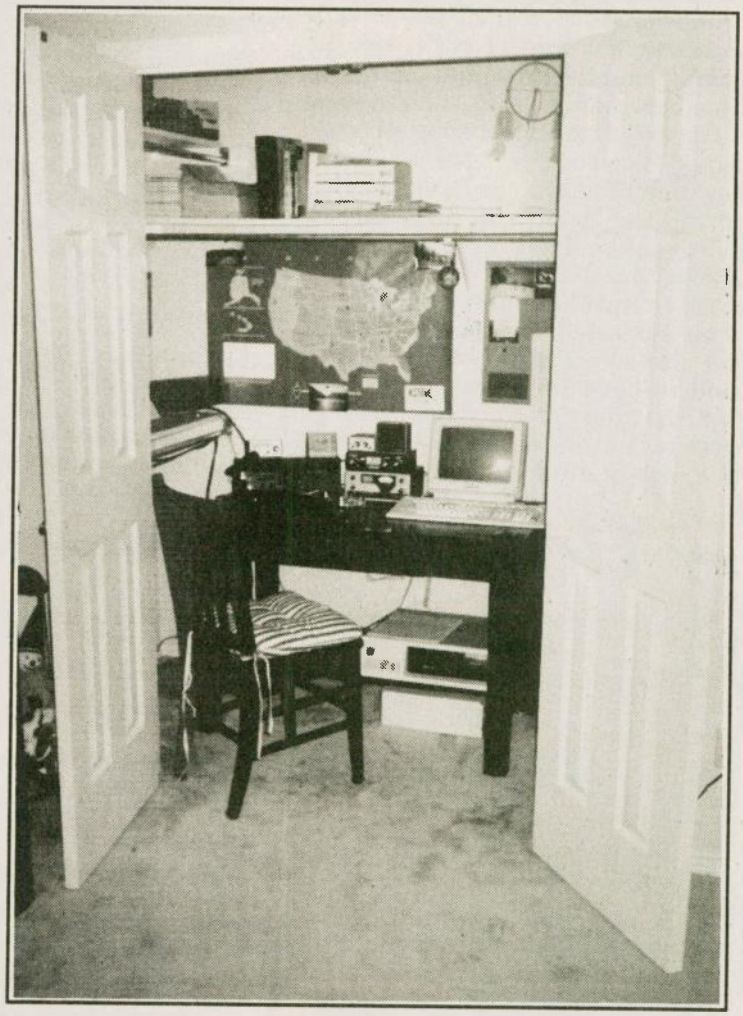
Upon assuring him that I was, he then informed me that he had written two books on antennas and that an inverted "V" simply would not work on VHF. Alas, despite my little three foot wire in the rafters and its 1.4:1 SWR, I was forced to shut down operations until I could get a proper antenna. After all, an Extra Class that had written two books on the subject *must* know more about antennas than we two Techs. Gosh, I sure was sorry to learn that it would not work, as it had performed admirably until then. WR

Station Appearance

Greg Becker
KC5EHE

*Send **Worldradio** a picture of your shack and the staff will choose a winner to receive a free one-year subscription to **Worldradio**!*

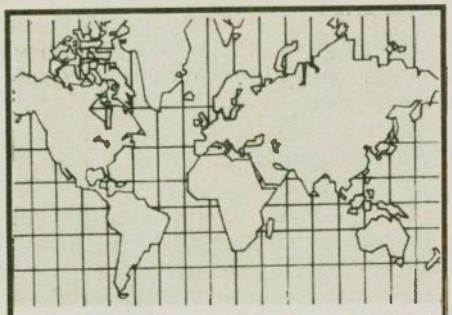
Stations will be judged by neatness (wires tucked away, etc.) and accessibility of equipment. Monetary value of equipment is not a consideration.



Pictured to the right is my station "coming out of the closet!"

This is my second time around after being licensed as a General Class call, WB5LXJ, in 1976. Unfortunately, I let my ticket lapse but now I'm back having more fun than ever. At first, I was very skeptical when my XYL moved me into the closet. But now it's the best idea yet. It's given me added security knowing I can close it up anytime. I recently upgraded to Advanced and I hope to upgrade to Extra Class soon. I operate primarily on CW mode with my Icom 737, Hustler GBTV and various wire antennas. I live in an area in which I must go "incognito" with my antenna arrays. I also operate QRP with my Heathkit HW8, MFJ antenna tuner and MFJ econo keyer. I use my IBM XT to log with Hyperlog and hope to get on packet soon.

I've finished my WAS, WAC and DXCC with my modest 100 watts. I hope to one day achieve SSB WAS and QRP WAS. I love to operate CW, primarily on 17 and 30 Meters. I'm glad to be back in the Amateur Radio "family" and my only regret is that I could have been doing this for the last 15 years, but instead, let my first ticket lapse. WR



DX WORLD

John F.W. Minke III, N6JM
P.O. Box 310, Carmichael, CA 95609-0310

W-100-N

There were no applications this month for ***Worldradio's*** *Worked 100 Nations Award.*

New Orleans convention

At this year's New Orleans International DX Convention which was held in August, Kan Mizoguchi, JA1BK was honored as the recipient of the NOIDXC's prestigious "DXer of the Year" award for 1996.

Kan is renowned for his activities as both a DXer and DXpeditioner and was chosen from several qualified candidates representing the DX World. Congratulations to a fine DXer.

SEANET convention

The 1996 SEANET Convention is slated for 22-24 November, in Madras, India. This convention is open to the world and all interested amateurs are invited. For further information, write to: VU2GJR, Gaja, P.O.Box 1127, Madras, India 600010 or, via e-mail to:

seanet96 @indiagate.com.

Macquarie (VKØM)

Worldradio's Bob Brown, NM7M, reports that Warren, VKØWH was doing some antenna work and was QRT for a time. He had to wait for favorable weather conditions on the island in order to do the job. Bob says that in the past few weeks, VKØWH has been appearing on 40 (7009+/-) on Sundays, Mondays, and Thursdays but has been more consistent with the Sunday schedule. He has some limitations, with equipment as well as his CW capabilities, which keeps his QSO rate down. When he appears on the air the pileups form immediately.

Warren is working hard with a commercial rig that lacks RIT and useful filters, but he does his best to give out as many contacts as he can.

There has been considerable activity by "Macquarie Slim." Be advised that The "real" VKØWH sends fairly slowly, with a fairly good fist and works split .He will be on Macquarie Island until December '96. QSL to VK9NS.

Malagasy Republic (5R8)

Gerard Jacot, F2JD/5R8EN is back at "mainland" 5R8 after a short stay on one of the area islands. Gerard's QSL manager Jean Michel, F6AJA reports that he currently has logs for Gerard up to 11 June and expects to have all direct requests mailed by press time.

Gerard has been fairly active 0400-0500 UTC on 20, both SSB and CW.

Tromelin Island (FR/T)

Henri Namaneco, FR5ZQ, expects to be operating from Tromelin beginning in July, staying for several weeks. He expects to work all bands, CW and SSB. He prefers 21300-21320 kHz after 1500 UTC, as well as 20-Meter CW.

Jan Mayan (JX)

Per Dahlen, LA7DFA, is now operating from Jan Mayan with the call JX7DFA, and will remain there for the next few months. He is primarily a CW operator. Per has antennas for 160-2M, and is particularly interested in operating special bands and modes, like 144 MHz meteor scatter and EME.

He has had a problem working North America due to a mountain blocking his path to the U.S., and compounding that, he has had trouble with his rotor which was stuck with the beam pointed at Europe. He does have a replacement rotor, and a new Icom rig, and should be back on the air as this goes to press. QSL to his home call.

Crozet Island (FT5W)

Sam, FT5WE is back on the air with limited activity reported so far since returning to the bands after having been off the air for the first three weeks of June. He had to work on a number of antenna problems. He has installed a new Cushcraft AP8A vertical, and received an Ameritron AL-80 amplifier in July. He reportedly plans to operate 75M SSB, but really prefers 7045 kHz on SSB, and does listen "up" for U.S. calls. Try to find him on CW about 5 kHz from the bottom edge of the band, about 3505 kHz around 1400Z. QSL via F5GTW.

Marion Island (ZS8)

Chris, ZS5IR is now active from Marion Island. *59(9)* quotes a report from Garry, NI6T: "ZS8IR has been showing once in a while on weekday mornings on 20 SSB at around 0700-0800Z." He can be worked long path from the U.S. west coast and has been also appearing at around 1145Z on the east coast of the U.S. on long path. He seems to prefer 14.195, listening at about14.200+.

Garry also related that because there have not been many callers, Chris has been very accommodating and will QSY or switch modes upon request. All QSL requests via Chris Burger, ZS6EZ.

Heard Island (VKØ)

The team for this year-end DXpedition has been finalized. *59(9)* reports that the team of 20 operators represents participation from 9 different countries. The group has

been given a grant of $20,000 from the Northern California DX Foundation for this much anticipated DXpedition.

Bouvet Island (3Y)

Future plans have been announced by the South Sandwich Island DX Group, for a full scale effort from Bouvet Island (3Y). A two-week operation is planned to take place in the time frame of December, 1997-January 1998. with four complete stations operating around the clock on CW, SSB, RTTY, and satellite. A fifth station and back up rig are also to be included.

The initial list of operators includes: XE1L, W6KMB, WA4JQS, ZS1FJ, W7KNT, HB9AHL, and AH9B. Additional members with plans to be a part of the operation are: V73C, VK3EET, KK6H, W5VSZ and DJ9ZB. An official video will be produced by WA4IUM. There will be a medical support team which will include: KO4RQ, WA5Y, and KD5M. QSL duties, as well as the collection of contributions will be handled by AA6BB.

Gary Jones, W5VSZ, has released an Internet address for the effort. The URL for the SSIDXG's Bouvet DXPedition web site is:

http://ocean.st.usm.edu/~gejones/ssidxghp.html

He advises frequent checks at the site to keep track of all updates.

Mauritius (3B8)

Jacky, 3B8CF, continues to be the major source for a contact from Mauritius Island. He is presently active in the WARC bands and can be found on 30 Meters between 10.102 and 10.108 MHz from 0300 to 0400 UTC. He was reported on both CW and SSB on 17 Meters and was worked on 18.074 MHz at 1445 UTC and 18.135 MHz at 1500 UTC.

Other calls from Mauritius include 3B8DB on 14.023 MHz at 1630 UTC and 3B8FG on 10.102 MHz at 0300 UTC.

Ethiopia (ET)

There seemed to be only two calls on from Ethiopia. ET3BN was found on 30 Meters near 10.108 MHz at 2030 UTC; on 20 Meters CW between 14.017 and 14.025 MHz after 1245 UTC; SSB on 14.220 MHz at 1600 UTC, and on 17 Meters near 18.069 MHz at 0915 UTC.

The second call, ET3BT, was reported mostly on 20 Meters SSB between 14.197 and 14.226 MHz at 1230 and 2000 UTC. He was also reported on 40 Meters SSB near 7.044 MHz working Europeans at 2000 UTC.

Minami Toroshima (JD1)

JG8NQJ/JD1 left Minami Torishina on or about 21 May and did a fine job of handing out this one. If you missed him don't fret as he should be back on the island by the time you read this, and will be there for three months.

Chad (TT)

Only two reports from TT8AM were found during this short period. On 23 May he was reported on 40 Meters near 7.043 MHz operating SSB with Europeans at 2230 UTC and on 20 Meters out of the American phone band on 14.148 MHz at 2000 UTC on 22 May.

Macedonia (Z3)

Several calls from Macedonia were reported in May and include the following:

Z3ØM	14.042 MHz	1215 UTC
Z31CN	14.006 MHz	2315 UTC
Z31ET	14.015 MHz	2045 UTC
Z31FK	14.005 MHz	2030 UTC
Z31VJ	14.009 MHz	2100 UTC
Z31VP	14.205 MHz	2030 UTC
Z32XA	14.028 MHz	2330 UTC
Z32XX	14.255 MHz	2230 UTC

During the recent *CQ* Worldwide WPX Contest Z3ØM was also very active.

The bands have begun to improve somewhat, as *DX News Sheet* reported several 6 Meter openings in Europe during the latter part of May.

Included in these reports was activity from Z32BU on 50.136 MHz at 1715 on 19 May, and on 50.133 MHz at 2015 UTC on 23 May.

Togo (5V)

Rodger, G3SXW says the VooDoo Contest Group is now optimistic that plans for Togo will succeed. They hope to operate multi/multi in *CQ* Worldwide CW Contest on 23-24 November. Their team took first place in the contest as 9G5AA (in 1994) and TY5A (in 1995) and their goal is for a third straight win. They have requested the call sign 5V5A. The team consists of AA7NO, G3SXW, G4FAM, GM3YTS, K5VT, K7GE, KC7V, N7BG, W6RGG and WB7SRW.

They plan to establish six stations and 17 antennas in Lome, the capital of Togo, with increased efforts on LF antennas. QSL Manager will be Bill Ferguson, GM4AGL. The trip will include road journeys to collect equipment stored in Abidjan (TU) and Accra (9G). They also hope to operate with personal call signs just before the contest on WARC bands and maybe 160 Meters. More details will follow, including the address of a remarkable page on the World Wide Web now being developed for the team by Warren Hill, KF7AY.

Maldives Islands (8Q)

Josep, EA3BT, and his wife Nuria, EA3AOK, will be active 22-31 October, using the call signs 8Q7OK and 8Q7BT, respectively. Their main goal is to take part in the CQ WW DX SSB Contest. They plan to be active on SSB, RTTY and do their best on CW (as the are not very experienced in this mode). Activity will be on all bands including the WARC bands. QSL via EA3BT, Josep Gibert, P.O. Box 366, 08800 Vilanova i la Geltru, Spain.

Namibia (V5)

Gary, C53HG/WA1JBB, reported to the *Ohio Penn DX Bulletin* that his three year operation as C53HG is now history and all his antennas are down. He will be moving on to Namibia (V51), as of 17 July. Gary expressed how much he enjoyed operating as C53HG and said that his QSL Manager Mac, W3HCW, has handed out over 20,000 QSL cards, but that QSOs were twice that. He hopes to be operational from Namibia by September.

Kermadec Islands (ZL8)

DX News Sheet reports that nearly 34,000 contacts were made with the Kermadec Island DXpedition of ZL8RI. Of those almost 18,500 (55 percent) were made using SSB, 14,000 (41 percent) on CW, and about 1,300 (4 percent) on RTTY. Over 10 percent of the contacts were with Europeans.

Auckland & Campbell Islands (ZL9)

With the ZL8MI DXpedition under their belt the same group hopes to activate Campbell Island within the next year or two.

IOTA

Anholt Island (EU-088) was expected between 14 and 19 August mostly on CW, with OZ5RM/A and

OZ/SM7KJH. This island is part of the Kattegat group. Check 20 and 80 Meters.

Here are some IOTA islands that were reported at the beginning of June:

EU-019	Franz Josef Land	R1FJZ
EU-037	Oland Island	SM7DLZ
NA-036	Vancouver Island	VE7IU
NA-055	Moose Island	AA1KS
NA-068	Lameque Island	VE3NSZVE9

Miniprop Plus

Sheldon C. Shallon, W6EL, has recently released Version 2.5 of his famous Miniprop Plus. Marketed under W6EL Software, Miniprop Plus is a computer program for predicting ionospheric propagation between any two locations on the earth on frequencies between 3 and 30 MHz. Such features include:

- Signal levels, signal-to-noise ratios, ionospheric modes, mode availabilities, and radiation angles
- Maximum usable frequencies (MUF), optionally adjusted for the geomagnetic K index, beam headings, path lengths, sunrise and sunset times, gray line directions
- A world map graphics display showing the great circle path between any two locations and the

DX Prediction — September 1996

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

The numbers listed in each section are the average maximum usable frequencies (MUF) in MHz for contacting five major areas of the world centered on Africa-Kenya/Nairobi, Asia-Japan/Tokyo, Oceania-Australia/Melbourne, Europe-Germany/Frankfurt, and South America-Brazil/Rio de Janeiro. Chance of contact as determined by path loss is indicated as bold *MUF for good, plain MUF for fair, and in parentheses for poor. UTC in hours.

CENTRAL USA

UTC	AFRI	ASIA	OCEA	EURO	SO AM
8	*(13)*	*(9)*	***16**	*(9)*	***13**
10	*(16)*	8	14	*(8)*	***14**
12	24	12	12	15	17
14	28	*(12)*	*(12)*	18	23
16	27	*(11)*	*(14)*	17	***27**
18	27	*(10)*	*(11)*	15	***28**
20	22	*(18)*	*(22)*	*(11)*	***28**
22	18	19	27	*(9)*	***29**
24	***16**	*(17)*	28	*(8)*	***24**
2	***14**	*(17)*	25	8	***20**
4	***14**	*(11)*	23	***10**	***17**
6	*(14)*	*(10)*	19	***9**	***15**

WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
10	*(10)*	12	***17**	*(8)*	***15**
12	*(14)*	11	***15**	*(12)*	*(12)*
14	*(20)*	***13**	12	16	21
16	*(22)*	*(12)*	*(14)*	17	25
18	23	*(11)*	*(12)*	15	28
20	22	17	*(21)*	*(12)*	28
22	*(18)*	22	26	*(9)*	***30**
24	*(16)*	***24**	29	*(8)*	***24**
2	14	22	29	8	***20**
4	***14**	18	26	***11**	***17**
6	*(12)*	16	24	*(10)*	***15**
8	*(11)*	13	***20**	*(9)*	***13**

EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
7	13	*(9)*	***16**	*(8)*	***14**
9	*(15)*	8	14	*(12)*	***14**
11	24	12	13	16	16
13	27	*(10)*	*(16)*	***18**	23
15	27	*(19)*	*(14)*	***18**	***26**
17	27	*(18)*	*(13)*	17	***28**
19	24	*(11)*	*(18*	14	***28**
21	20	*(16)*	*(25)*	*(10)*	***28**
23	***17**	*(17)*	28	9	***27**
1	***15**	*(14)*	*(25)*	8	***22**
3	***12**	*(11)*	23	8	***19**
5	***15**	*(10)*	19	***9**	***16**

Worldradio QSO Party, 7-8 June 1997

day-night terminator for any time and date

•A world map graphics display showing the frequency suggested for use from any location to each of several areas of the world

•A great circle map display showing great circle paths and the day-night terminator

•Printing of a great circle map centered on any location

•Printing a table of beam headings from any location to the several locations contained in the supplied atlas file

What's new in this version over that of earlier versions is the calculation of predicted signal-to-noise ratios. The MUF graph is now drawn in true graphics. Another new true graphics display shows predicted signal levels and signal-to-noise ratios for all your prediction frequencies at once. However, this feature is for color monitors only.

Miniprop Plus Version 2.5 will run on any IBM PC, XT, AT, PS/2, or true compatible and requires at least 525K of free conventional RAM, DOS 2.11 or greater, and CGA/EGA/VGA or Hercules graphics. A math co-processor is recommended, but not required.

For printing of the great circle maps the printer should be 24-pin, such as an Epson LQ-850, or a Hewlett-Packard LaserJet compatible printer.

The program is priced at US$60 in the United States and Canada. Elsewhere the cost is US$65. For further information please contact W6EL Software, 11058 Queensland Street, Los Angeles, CA 900-34-3029.

Miscellaneous

The Long Island DX Association (LIDXA) has elected new officers club for the 1996-1998 term: President — Frank Fallon, N2FF; Vice President —Marty Miller, NN2C; Secretary — Ed Whitman, K2MFY; Treasurer — Russ Lusterman, AA2LC; and Directors — Art Albert, K2ENT, Marv Fricklas, W2FGD, and John Reiser, KB2CB.

The following new DX web sites are now available on the Internet:

•Japanese DX Web Cluster: http://www.big.or.jp/ham/dx.html

•South Sandwich Island DX Group: http://ocean.st.usm.edu/gejones/ssidxghp.html

•Okahoma DX Associations (OKDXA WWW site): http://www.pcok.com/n5ogp/okdxa/

QSL Information

George Goldstone, W8AP, comments on the 3V8AS QSL card recently discussed. George worked this one last 27 Oct '95, and received a quick QSL for two green stamps. He assumed this to be a scam operation, like Don Miller and Romeo. Not exactly! It has been an accepted fact that the DXCC Desk will not accept this one for DXCC credit. It is also rumored that 3V8AS is somewhere in Italy. It could even be the QSL manager. Don't feel bad, George. I also have a 3V8AS card and had hoped it would count.

QSL routes

3CØA	—ZS6DX	GM6MD	—GM4FDM
3C1DX	—EA6BH	H44MS	—DL2GAC
3D2AM	—W6BSY	HA/WØYR	—AA9DX
3ZØWAW	—SP5PBE	HAM9RT	—HA9RT
4K3DF	—SM3DBU	HLØC/4	—HLØC
5R8EN	—F6AJA	IG9/IK4NYV	—IK4PLC
5WØAN	—DF8AN	IL7/IK6JOT	—IK6MWK
6W1/N2WCQ	—PA3BUD	IQ9IB	—IT9KDA
7X5AB	—F6BFH	IR9B	—IT9STX
8A5ITU	—YC5BLG	JD1/JG8NQJ	—JA8CJY
8J7ITU	—JH1CFE	KH4/NH6D	—LK7H
8R3ØK	—OHØXX	LA/DL2SWW	—DL2SWW
9G1BJ	—G4XTA	MXØADJ	—G3NYY
9H3SS	—DL6MDG	N6JM/VO1/2/VE1-2	—N6JM
9H3UD	—DL8OBC	OHØ/DL4FAN	—DL4RAN
9H3UF	—DL4OCL	OHØ/DL1ZBO	—DL1ZBO
9H3UT	—DL9GDB	OHØJWH	—DJ2PJ
9H3VS	—DL7VRO	OHØJWL	—DL5FF
9J2DI	—AA6BB	OIØJWH	—DJ2PJ
9M2TO	—JAØDMV	OT6A	—ON7LR
9U5CW	—EA1FFC	P29VH	—VK4FW/VK4CRR
BO1/JP1RIW	—BV2KI	PI4VPO/P	—PA2CNR
BV3BW	—AA7AN	R1FJZ	—DF7RX
C6AGN	—KA1DIG	RN3QN	—RA3QAK
C6AIE	—WZ8D	SV8/I3BQC	—I3BQC
CF6AFD	—VE6SRC	T94KW	—HAØHW
CO4OTA	—CT1ESO	T98PSR	—F1PSR
CU4S	—CU4AH	TI2SCG	—TI2ELC
CU7V	—CU7AA	TM1MA	—F5TKA
CU8L	—CU3EJ	TU2DP	—K4MQL
CU9L	—CU3EJ	UB3IDX	—N5FG
CYØAOE	—VE1AOE	US1I	—N5FG
ED7PRF	—EA7ESH	US1IDX	—N5FG
ED7SPI	—EA7PY	VK9GA	—PAØGIN
EG2ITU	—EA2CMW	VK9XM	—JA1BK
EG9IA	—EA4URE	VO7COP	—VO1COP
EG9IN	—EA4URE	VP5Z	—W5ASP
EJ7NET	—EI6FR	VP8CSA	—DL1SDN
EM1U	—9H3UP	WP2AHW	—W2SC
EM8W	—UY5XE	WP4NIB/HP1	—WP4KTF
EU3FT	—W3HCW	X5EDL	—YU1FW
F5PWT/OD5	—F5PRR	YS1ZV	—KB5IPQ
GJ3RTE/P	—G3SWH	ZF2PA	—W5ZPA
GJ3SWH/P	—G3SWH	ZK1AAU	—AA8U
GMØNES/P	—G7DKX	ZK1AGW	—AA8U
GM3USL/P	—GMØKVI	ZK1MJZ	—AA8U

QSL addresses

4J3M	—Yuri Frolov, P.O. Box 1, 374311 Mingechaur, AZERBAIJAN
6W1QU	—P.O. Box 2068, Dakar, SENEGAL
9A2AJ	—Tomislav Polak, P.O. Box 613, 41000 Zagreb, CROATIA
A61AN	—Naser, Fekri, P.O. Box 53656, Dubai, U.A.E.
C6AIC	—P.O. Box 30/154, Stella Maris, Long Island, BAHAMA ISLANDS
CN8TM	—Ali Sekkat, Avenue de Fes, Californie, 20150 Casablanca, MOROCCO
CT3DZ	—Jose, P.O. Box 4521, P-9057 Funchal, Madeira Islands, PORTUGAL
ET3BN	—P.O. Box 150194, Addis Ababa, ETHIOPIA
FS5HI	—P.O. Box 5012, F-97070 St Martin, FRANCE
LX2AA	—Paul Bavassano, P.O. Box 1888, L-1018 Luxembourg, LUXEMBOURG
OD5PI	—Jamal, P.O. Box 230, Zahle Bekaa, LEBANON
OK1TN	—OK-DX Foundation, P.O. Box 73, 293 Bradlec, CZECH REPUBLIC
TD9IGI	—Gerry, P.O. Box 1690, Guatemala City, GUATEMALA
TG9AOP	—P.O. Box 1I, 01907 Guatemala City, GUATEMALA
TT8AM	—Mario, P.O. Box 1089, Ndjamena, CHAD
TZ6VV	—Larry, P.O. Box 2786, Bamako, MALI
UA1MU	—Victor G. Topler, P.O. Box 38, 192241 St. Petersburg, RUSSIA
UR7LD	—P.O. Box 9909, 310070 Kharkov, UKRAINE
VK9CT	—Oceania DX Group, P.O. Box 929, Gympie, QLD 4570, AUSTRALIA
YC9COD	—Komang Yasa N, Pohsanten km 7, Negara 82261, Bali, INDONESIA
YS1JRG	—Juan, P.O. Box 32, San Salvador, EL SALVADOR
ZL8RI	—Kermadec Association, P.O. Box 56099, Tawa, Wellington, NEW ZEALAND

Many thanks to the following contributors: KD4YOT, W6KMI, N6WR, W8AP, Grupo DX do Portugal DX Group (CT1ENQ), Western Washington DX Club (WAØRJY), American Radio Relay League (K5FUV), *Island News* (W5LJU), *425 DX News* (I1JQJ), *DX News Letter* (DL9GOA), *The Ohio/Penn DX Bulletin* (KB8NW), *NPDXG Bulletin* (CT1ENQ), *The Low Band Monitor* (KØCS), *DX News Sheet* (G4BUE), *QRZ DX* (N4AA), *Inside DX* (N2AU), *The DX Bulletin* (VP2ML), and *59(9)*.

This month's column would have normally been submitted at the beginning of July. However, we are on another one of our extended trips (no more vacations as I am retired) and won't be home until late in the summer. You island hunters who have been working me during the trip will understand what is going on. Things will be normal again soon. 73 de John, N6JM. WR

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9L1PG	NW8F	FY7FJ	IK2HTW
9M2JJ	SMØOEK	H44MS	DL2GAC
9M6MH	DL3ABL	H5ANX	A22RS
9M8AD	DL3ABL	H5ANX/A25	ZS6EW
9M8CC	PBØALB	HAM5BWJ	HA5BWJ
9N1HP	JA1OEM	HAM8RJ	HA8RJ
9Q5GIN	F6GIN	HAM9CU	HA9CU
9Q5OWB	F6ITD	HC8/DL2BAY	KU9C
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9G1BS —P.O.Box 3248, Accra, Ghana

C6AIC —George, P.O.Box 30/154
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C91CB —P.O.Box 4161, Maputo,
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CE7PWE —Jorge, Maule 1137, Arica, Chile

CX7BL —Jene, P.O.Box 37, Montevideo,
Uruguay

DF5JR —H.D.Thrun, Weilburger Str.
38c, D-61250 Usingen, Germany

DL1SDN —Dieter Stumpp, Schlesierstr 97,
D-72622 Nuertingen, Germany

DL2GAC —Bernhard Stefan, Aachstr. 25,
D-88690 Uhldingeņ-Muehlhofen,
Germany

EA1KK —P.O.Box 709, 47080 Valladolid,
Spain

EA5WX —Juan Marti Salas, Apartado 151,
03610 Petrel, Alicante, Spain

ER3KAG —P.O.Box 9-4, Z79 700 Rybnitsa,
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F5RUQ —P.O.Box 104, 22650 Ploubalay,
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Bertrand, 10 Place des Trouba-
dours F-13200 Arles, France

FO5DV —Christian Marciniach,
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FR5DT —Trans, BP 386, 97410 Ile de
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G4ZVJ A. —Chadwick, 5 Thorpe Chase,
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JA3IG —Yuji Yoshitani, 1-17-29
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JA6CM —Takayoshl Koshi, 462-45,
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Kitamatsuura 857-04, Japan

JE1CKA —Tack Kumagai, Box 22,
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SP5ABL —W. Piesiewicz, U1. Pajdaka
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UD6DJ —Yuri Frolov, QTH is
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US5QRW —Vladimir, Box 4850, 330118
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YO7KFX —Radioclubul Judetean Gurj,
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KHØ/XE2T	JH1AJT	T77BL	T7ØA	V4ØZ	AA7VB	ZA1AJ	OK2ZV
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LZØA	LZ1KDP	TF3/ON4QR	ON4GO	V73NN	W3HVN	ZD7WRG	WA2JUN
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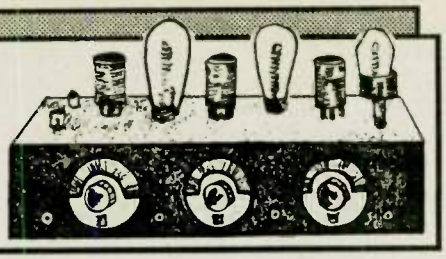
OI4JFN	OH4JFN	TJ6FIC	F5KEQ	VK8XY/9CR	DK7NP	ZF2VU	N5XIQ
O1ØRJ	OHØRJ	TR8VP	F6FNU	VP2EKM	VE3CME	ZF8/ZF2JC	NC8V
P4ØMR	VE3MR	TT8BP	IK5JAN	VP2EV	AA7VB	ZL7MV	ZL4MV

Old-time Radio



How hams are created

William R. (Bimo) Moore, KD6YNW

Actor hams are born with that desire to act, to reach out to audiences, and to add their particular interpretation to a role. My brother, a well-known veteran of movies, television, and radio is one who knew from the very earliest age that he was meant to be on stage.

Radio hams, on the other hand, are generally created by a wide range of circumstances: hearing a father, mother, uncle, aunt, brother, cousin, or friend as they made contact with another ham miles away.

Back in the 1930s, two of my youngest uncles lived with my mother, grandmother, my brother and me. The Depression was in full swing, and financial hardship brought many families closer together, or prevented the young adults from moving out on their own. Extended families were the norm, rather than the exception.

Radio was the big thing then, and our parlor, like so many others of the time, boasted a large console radio around which we would gather to hear Amos and Andy, Easy Aces, and the top radio personalities so popular then.

As the family retired, the two young uncles would wait until all was quiet, then they'd go into the parlor, take something out of the console, and disappear into the basement. After seeing this a half-dozen times, my curiosity, always at high pitch, became overwhelming. One night, I crept down the stairs into the basement and got comfortable where I could see — but not be seen.

My uncles had assembled some mysterious apparatus on a long table, and were both bending over the table engrossed in connecting wires and batteries. Another wire was attached to a bed spring hanging from the ceiling.

Suddenly, Uncle Deslonde (still active as a consultant to the nuclear power industry) straightened up, and in a hushed but excited whisper, said, "China! It's a missionary in China!"

"Quiet, you'll wake the house!" Uncle Elliot admonished. Now, a silent key, Uncle Elliot served as an engineer for Eastern Airlines, then as engineer for KTLA in Los Angeles.

China! Dear God! What were they up to? I edged down the stairs . . . and knocked over a box. It bounced down the wooden stairs — Deslonde had spotted me.

Under the most dire threats of death, or worse, I was sworn to secrecy and allowed to watch as Elliot created a series of chirps and other sounds. I listened intently.

"Got him! He answered me," Elliot said, a broad grin on his face. Deslonde was scampering around, barely able to hold back his elation.

"It worked — told you so! We're putting out about fifty watts," Elliot said. It turned out most of the project had been his, with the younger Deslonde providing some of the bits and pieces to bring the project to life.

All this happened when I was about eight, so the details are hazy. Was the ham seed planted then? Maybe.

Along came WWII, and I enlisted in the Coast Guard, and ended up guarding a fuel tank outside Mayaguez, Puerto Rico. In my off-time, I began hanging around our base radio shack, making friends with the Chief Radio Technician, who was also our radio shack boss. I began teaching myself Morse code.

Chief Scott went to the base commander one day because he needed another operator and felt I had demonstrated an interest. I was released to join the radio shack crew. I was not a radio school graduate, so I was limited to radiotelephone until one night, when things got sticky. A tanker took two German torpedoes and was sinking 500 miles southwest of the Virgin Islands. The CW signals were very clear at my station, but several SOS calls were ignored. I called NMR, Coast Guard Headquarters in San Juan and informed the operator of the distress signals. He asked if I could work the ship, and I told him that while I *could* work CW, I was not authorized to. He asked me to call him on CW, I did, and he asked me to copy a couple of questions in code. I answered them and he told me to work the traffic. I called the ship to get the position and condition. It was a grim situation — the ship was sinking, and for the next fifteen minutes or so I kept in contact. Then a chilling silence.

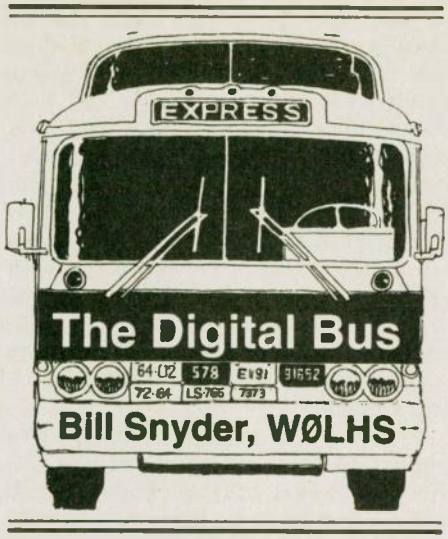
Two days later, I was ordered to report to the Communications Officer at NMR and all the way, 96 twisting miles over mountain roads, the Bosun's Mate driving, needled me — gleefully telling me how much trouble I had gotten in to. I stood at attention in the lieutenant's office, knees knocking, hands shaking, perspiration streaming, and almost gasping for breath. I was asked four questions for the ONC-5, the Navy's communications bible, and I answered. Suddenly, a large grin came across the officer's face — he stood up — leaned across the desk and extended his hand.

"Congratulations, Radioman Third Moore. You've earned that rating the hard way. Good job!" Three days later, I was ordered to report to San Juan, and went to work at NMR.

Fast forward to 1953. Now on duty in the Air Force, fresh out of pilot training, I was standing duty as Deputy Base Operations officer when several small towns in Arkansas, including Warren, were hit by tornadoes. I stopped by the base ham station, and pitched in to help with health and welfare traffic. It was a fascinating experience. Military radio was one thing — ham radio was another.

I finished my tour of duty in 1954, went back to work at radio station KVSA in McGehee, Arkansas, and met local hams. During this time, I received my Novice license, and then Conditional (given if the applicant lived too far away from an examining center).

Looking back over the years, I have to give credit to a series of events that led me, slowly but surely, to the ranks of ham radio operators. Now, at the age of 71, and living in California I find my enthusiasm still as fresh and fascinating as it was that night so many years ago when I heard China come chirping into our basement. WR



In the July issue of ***Worldradio,*** I had an "eavesdropping" which asked the burning question, "We are wondering who gave 73 its first use?" Well, having been raised by a telegrapher father, I thought I might know the origin, but I now know I would be wrong if I tried to spell it out for the masses. The real answer came in a packet message from Charlie Cotterman, KA8OQF, in the Dayton, Ohio area.

Before I get to the answer, I would like to say that the packet message from Charlie was somewhat of a record for packet messages to me. I came in less than one day and only five relays, the last of which was a two-mile hop from our club station BBS. It went from W8BI in Dayton, Ohio, to N8GTC in Indiana, to VE3JJV in Ontario, to KØLAL in Minnesota and to WØILO in Fargo. Now that's the way it should be!

Back to the 73 question. The answer, according to Charlie, was found in a 35-year-old newsletter published by the Dayton, Ohio, Amateur Radio Association. It's from the September 18, 1961 issue. Here's the extract: "Back around 1909, the Order of Railroad Telegraphers was making great inroads among the railroad telegraphers. The railroads, of course, wanted no part of the union and they were quick to fire anyone suspected of belonging to it. Naturally union men kept their activities hush-hush. But a union man's message to another telegrapher usually stopped with 73. If the telegrapher on the other end of the wire was a union man, he messaged a 73 right back.

"How did the ORT come to pick 73 as their sign-off? In frontier days, there was a saying that a man needed three things to survive in the west: a good horse, a good wife and a Winchester 73, the last item being a lever-action highly accurate rifle. If you wished a man 73, therefor you were wishing him the very best!"

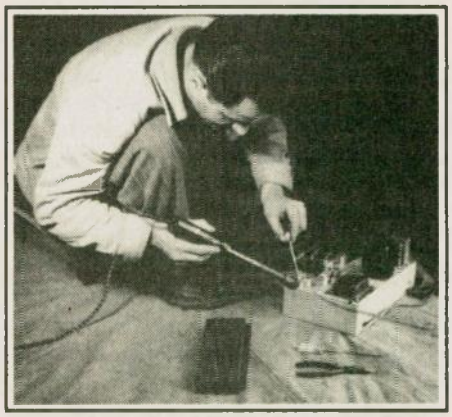
My father, a member of the ORT for most of his working life, was number one on the relay division of the Northern Pacific Railway seniority list for many years. I used to look at the union magazine that came to our house when I was a kid, but it all seemed Greek to me. When the telegraphers in his office left after a day of work, they would usually say, instead of "good-bye" or "so long," the words "Toot, toot." That was a verbal translation of the whistle signals the railway engineer would use to indicate he was moving the engine forward after standing still. It was sort of a "good-bye" signal to the next shift in the telegraph office.

I've been asked why I usually sign off all my packet messages with either "DIT DIT" or "TOOT TOOT." The "DIT DIT" started, I guess, with CW hams on ARRL traffic nets. When I was a member of the Region Ten CW net in the early 1950s, some of the guys when they signed off would make a "Shave and a haircut" sound by rattling their bug with a DIT DITTY DIT DIT and the other guy would reply with the DIT DIT for the "Six bits" part of the musical exchange. You hear that a lot on the CW bands today.

When I think of those days in the Region Ten net, I remember how good some of those operators were. I would transmit a string of messages to another station on 80 Meters and all I would get for an acknowledgement from the other guy was one single DIT. Then I would start the next one. It was rare that a station would break me for a repeat. They were that good! That was no place to try and "burn-out" the other guy with fast sending; those guys could hang with you, and did! CW was an art in those days, and still is for that matter.

Field Day memories

I am writing this column on this year's Field Day weekend, and when I listen to the jumble on the phone bands, my thoughts go back to the 1940s and '50s when I was an active participant in our local club's Field Day activities. It was always a weekend to enjoy ham radio, collect mosquito bites and, most importantly, keep yourself from being electrocuted accidentally. Luckily we chose a site which was an old farmer's pasture right on the shore of one of the many "Turtle Lakes" in

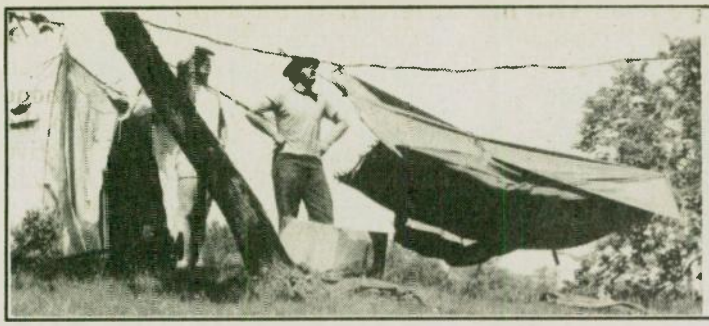


The late John Mickelson, WØYSJ, does a little quick hot solder repair job on his home-built VHF rig during the 1947 Field Day weekend at Turtle Lake, near Hawley, Minnesota.

west central Minnesota. The site was loaned to us by Harley Softing's uncle. Harley, WØJNP, was a radio repairman in civilian life, and he made the arrangements to use the pasture on the then pristine Minnesota lake. Today the lake is bordered by a ring of cottages and the pasture spot is gone.

Field Day was more of a social event than a radio contest in those days. No one had campers or RVs for luxurious living; our club, the Red River Radio Amateurs, gathered there with various tentage for shelter and a borrowed and balky generator for power supply. We mostly had home-built transmitters and commercial receivers, no transceiver in those days. There were no OSCAR satellites in 1947, so no OSCAR rigs were required to aim at outer space. It was mainly CW and, of course, nothing but amplitude modulated phone; SSB had yet to be allowed on the ham bands.

My sleeping arrangement (yes, I did do a little of that during the weekend) was a war surplus "jungle



The jungle hammock belonging to WØLHS hangs empty as then WØPVS and then WØGHN survey the Minnesota morning sky.

hammock." I had spent three years in the Southwest Pacific theater of war during WWII, and I had experienced quite a few months of living in one of those jungle hammocks, so I went to the local army surplus store, a commercial venture that was in every town of any size, and bought a hammock for the Field Day trip. I had the only one of its kind at the Turtle Lake campsite.

The late John Mickelson, WØYSJ, scans the bands looking for Field Day contacts in 1947. This was one of the operating positions for multiple band operation.

The hammock was a really good arrangement for use in the jungle. It had a mosquito bar and waterproof rain roof that was suspended by twine above the hammock itself. The basic hammock had two layers of fabric separated by air to keep mosquitoes from drilling through the canvas and sampling the blood in one's hind-end while asleep. It also had canvas straps that would hold a carbine or rifle suspended below the hammock and hopefully keep it out of any rain that might fall. One of the problems with the hammock was in hot climates, a sleeper could put his knees against the mosquito bar and wind up with a batch of bites through the holes in the netting.

The army jungle hammock could be suspended between two trees, in a combat area, or in a fox hole in the ground — which was the case in some areas of New Guinea and the Philippines. The rubberized cover was large enough to keep rain from going into the fox hole if a little engineered ditching was done to carry away the run off from the cover. I must have spent a least four or five months during the war sleeping in the jungle hammock, so I knew how to use it.

When I arrived at Turtle Lake that first year, I picked out two nice trees and slung the hammock between them. The other guys had surplus pup tents, wall tents, and some just brought sleeping bags to stretch out on the ground, the least satisfactory type of night time arrangement — due mainly to a plethora of hungry mosquitoes. My hammock was the center of attention while I was hanging it. "You ain't gonna sleep in that flimsy little thing, are you Bill?" one old timer asked. "You bet," was my answer.

One of our antennas for Field Day was a very long wire stretched between two trees that were situated so that the antenna would be across part of the lake itself. We had great ideas that the lake would be a great counterpoise for the antenna and it would work on great on the lower frequency bands; boy, did it! But during the night the wire sagged down from its own weight and luckily there was no boat traffic on the little lake or our antenna might have decapitated someone going under it by boat.

Of course the generator gave us a bunch of trouble. I think the first year it was down more than up, but in later years, it worked pretty well. We took turns operating on the various rigs and bands. I worked CW, my first love, while the others hammered away on AM phone. The late John Mickelson, WØYSJ, was the only VHF man in our club. If John had collected QSL cards like most DXers do, he would have probably been the first WAS on six- and two-meters, but being first didn't seem to excite him.

I climbed into my jungle hammock about midnight to catch a few winks. I awoke with a thump just after dawn broke over the Minnesota countryside. One of the jokers in the club had untied one of the ropes on my hammock and I dropped to the ground like a rock. Luckily I didn't have a carbine hanging under the hammock to jab me in the back when I fell. Oh, yes, I had experienced that trick a few times in the army; especially after we liberated a bunch of Japanese sake when we invaded Hollandia in Dutch New Guinea, and the liberating troops celebrated a little too much.

Yes, Field Day nearly 50 years ago was fun!

EAVESDROPPINGS

I DON'T KNOW ABOUT THE VIEW, BUT THE VIEW FROM THE INSIDE OF THE CABINET WAS NOT TOO GOOD. . . HE HASN'T SET THE CLOCK IN HIS COMPUTER FOR MANY YEARS BECAUSE HE SAYS HE DOESN'T KNOW HOW. . . THE THUNDERSTORM SEASON WILL SOON BE OVER AND THE SNOW SHOVELING SEASON BEGUN, THEN I CAN LEAVE MY ANTENNA HOOKED UP FOR THE WINTER. . . .

Thanks to WA6LIE, and KA8OQF, for help with this column. Write me:Bill Snyder, WØLHS, 1514 12th St. S,, Fargo ND,. 58103-4134. My packet address is WØLHS@ WØLHS .#SEND.ND.USA.NOAM 73 and DIT DIT. WR

FM & REPEATERS REPEATERS REPEATERS REPEATERS

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Repeater pioneer Arthur M. Gentry, W6MEP, SK

The ham who gave each and every one of us the ability to communicate over repeaters has died at age 89. Inventor, engineer and writer Arthur M. Gentry, W6MEP, passed away early in June in Beaver, Oregon. Only a month earlier he and his wife Millie, K6JJN, had moved to Oregon to be with their grandchildren.

Art Gentry developed the first practical voice repeater system in the early 1950s while working as a broadcast engineer for Don Lee Broadcasting Company in Los Angeles. Using World War II surplus parts, Gentry fashioned a 2-meter receiver that would still hear other signals on the band even though a high power transmitter was retransmitting what the receiver heard on a frequency nearby. By the end of the '50s, Gentry had assembled and put on the air K6MYK — an AM repeater that was to be the granddaddy of every FM repeater on the air today. Gentry's designs were adopted by both the Amateur and Commercial Land Mobile services and led to a revolution in voice relay communications that prospers to this day.

Gentry was also involved in the political side of FM and repeaters for many years. He was involved in the original California Amateur Relay Council — an organization that is credited as being the "pioneer" on which every one of the nation's modern day frequency coordination entities is based. He was also present in 1971 at the formation of the Southern California Repeater Association, where he became a vocal representative for the interests of simplex and other non-relay users.

In addition to his developments in repeater technology, W6MEP also helped to pioneer the technical side of covering breaking news stories. One of his most significant contributions was assisting in the design of the "KTLA Telecopter" for Golden West Broadcasters. This was the first remote broadcast facility ever installed on-board a helicopter and is the forerunner to the modern Westcam equipped "news choppers" of today.

Art Gentry's repeater — using his "W6MEP" call sign is still on the air. Since the late '60s it has been an FM machine operating on the frequency pair of 147.24(+) MHz. A few years ago, Art turned the day-to-day operation of the repeater over to Bill Arens, N6NMC. Arens, who has operated the repeater for the past six years says that he has submitted a request to the FCC to grant him special dispensation so that Art Gentry's call sign W6MEP can remain in perpetuity on what is the oldest continuously operating repeater in the world.

Arthur M. Gentry, W6MEP, is survived by his wife Millie, K6JJN, children, grandchildren, great-grandchildren and a worldwide community of radio amateurs who make use of his greatest contribution to the service, in thousands of places, around the clock, each and every day.

Hams may have to fight spectrum plan

Amateur Radio may soon be fighting to retain some of its primary microwave spectrum as well as the 2-meter and 70 centimeter bands. This is the result of FCC approval of a plan to reallocate 185 MHz of spectrum transferred from the Federal Government to the private sector. The Commission also established the scope and timing of future rule-making proceedings to assign the reallocated spectrum.

According to reports in several communications industry publications, the Secretary of Commerce identified 235 MHz of Federal Government spectrum for private-sector use. Hams will have to fight to protect 2300-2310 MHz from being reallocated and auctioned off.

The Commission says it intends to consider all options for the appropriate use of the remaining 185 MHz, including, but not limited to, those addressed in allocating the first fifty megahertz. Public safety radio is a prime candidate for some of the reallocated spectrum. The Budget Act requires that the FCC study public safety spectrum needs and develop a plan to ensure adequate spectrum through the year 2010.

Fifty megahertz of that spectrum space has already been allocated to general, commercial fixed and mobile uses and unlicensed services. The remaining 185 MHz is to be allocated and assigned gradually over a 10-year period with a significant portion to be held in reserve.

The text of this rule-making procedure is not yet out, but you can expect all timetables to be very short. Because of this, all hams interested in saving this spectrum will have to unite and move very swiftly.

Across the pond

Planning a visit to the United Kingdom? The Radio Society of Great Britain reports that it has started yet another new GB2RS news broadcast covering the Telford area of the United Kingdom. The news reader (anchorman) is G3JKX, and the broadcast is at 1200 UTC via the GB3TF 70-cm repeater on European ham radio repeater channel RB8.

An additional note to travelers in Britain, the Bristol Channel 2-meter repeater, GB3BC, which operates on channel R6, has returned to service. It had been off the air due to receiver and transmitter problems.

Cork repeaters

Ireland has some new repeaters. Following the decision taken at the Cork Repeater Group meeting on 22 March, a new 70 centimeter repeater has been purchased and installed on a site near Cork Airport

overlooking the city. The repeater is on the European RB 10 channel pair with an output frequency of 433.250 MHz. Reports say that it is providing much improved coverage in the greater Cork area.

Our readers speak out

Don't be surprised to see ham radio equipment — especially VHF and UHF "entry level" radio gear showing up in such diverse places as Marine Radio shops, CB and hobby radio specialty stores, retail appliance stores, mass merchandisers and even on the Home Shopping Club. This is a direct response to Radio Shack having cornered the lion's share of the burgeoning no-code entry level market.

With few exceptions, companies — both foreign and domestic — say that they cannot remain in the United States Amateur Radio market place without getting a share of the multi-million dollar, no-code pie. Without it there will be no way to continue providing equipment to the upscale high frequency and experimental VHF and UHF markets.

Until now, no company other than Radio Shack has had an aggressive marketing program to the general public. That is now changing as company after company takes its radios, accessories, antennas and training aids to the American masses using the same targeted marketing techniques used to sell other consumer products.

For those of you who think it is illegal to sell ham gear to people not licensed to use it, that is not the case. In fact, it is actually a violation of federal trade law not to sell equipment to someone who wants it, unless they willingly say that it will be used for illegal purposes. The government says that it is not up to the manufacturer or retailer to police the market. That is the responsibility of the end user and nobody else.

With this in mind, we present the following essay by Dave Fordham, KD9LA. Dave worked for Sears Roebuck and Company during the time it last ventured into retail sales of ham radio gear. With rumors rampant that most mass merchandisers may soon have at least entry level radios for sale, KD9LA attempts to put the issue in perspective:

Mass market sales of ham gear

Dave Fordham, KD9LA

Hams in and around Virginia's Shenandoah Valley have been plagued with unlicensed operation on the 2-meter ham band coming from hunters and poachers in the George Washington National Forest and Shenandoah National Park. Every fall, these people can be heard for miles on many ham frequencies, including repeater inputs, as they coordinate their activities. These unlicensed operators admit having obtained their radios through mass-marketing channels. One of them even bragged that he had read the licensing requirement, and was advised of the requirement by the store salesperson. But, in his words, "it was there and fit my purposes, so I bought it. Heck, I even got one for my wife. The only one who cares if you get a license is that jerk who comes on and asks for our call sign."

According to David Fordham, KD9LA, editor of the Massanutten and Valley Amateur Radio Associations newsletter, *The Monitor*, these hunters (and several other unlicensed operators in the area) are not the kind who frequent Ham Radio Outlet or would go to the trouble of ordering from Amateur Electronic Supply. No, these fellows bought the radios because they were readily available, with no hard questions, such as "can I have your call sign?" coming from the sales people.

Fordham is convinced that if these operators had not seen the radios sitting on the shelf of the mass-merchandising outlets, they would never have thought of using the 2-meter band for their communications needs. They didn't go to the trouble of contacting Motorola to get their radios — why would they go to the trouble of contacting a ham dealer?

In the late 1970s Sears sold a 2M ham radio through its general catalog. Fordham, who worked at the Sears catalog distribution center at the time, reported that a spot check of seven orders for the radio indicated that buyers of the rigs were not hams, in spite of boldfaced warnings in the catalog that the radio required a license involving an FCC test.

Not one of the seven orders had been placed by a ham. One had even been placed by a business owner intending to use them to keep in touch with his employees. Several of the buyers indicated, honestly or not, that they believed the "application" for the license would come in the box with the radio. They had apparently overlooked or ignored the wording about the examination.

Fordham points out that the CB radio service was, in his words, "a half-way decent radio service" requiring a license, back before you could get a CB from almost any electronics store. He points out that mass availability of the transmitters eventually overwhelmed the FCC's ability to police the service, resulting in the demise of what had been a useful communications service. Can the sale of thousands (or hundreds of thousands) of ham radios be good for an already overcrowded band, especially making them easily (the operative word is "easily") available to persons who have not demonstrated knowledge of the rules and regulations?

• • •

The preceding essay was a public posting by Dave Fordham, KD9LA. Realizing that it would make an excellent opening to an interactive discussion on the subject of ham manufacturers going to mass marketing of their products, Dave was contacted to ask his permission to reprint it in ***Worldradio***. Not only did he grant this request, but he also took the time to rewrite the material into a form more suitable for magazine publication. ***Worldradio*** wishes to express its gratitude to him for this extra effort. We also hope that some of you will take the time to express your opinion — be it pro or con. **WR**

Search And Rescue Communications

Jerry Wellman, WB7ULH
P.O. Box 11445
Salt Lake City, UT 84147

Little annoyances just ruin my day. You know what I mean, those little things that aren't going to create great discomfort, just the little annoyance. You shut your coat in the car door, or get to the office and discover your access card is buried deep in your pocket — just where you can almost reach it before dropping everything you're carrying.

Coming to work this morning there was this nifty looking black truck. The owner had taken great care to polish it and make it look spiffy and I was thinking good thoughts. Then the driver pitched a smoldering cigarette butt out the window. Soon after, he lit up another and pitched a used match out the window.

Now, I'm pretty liberal and not many things bother me. But unabashed littering, changing lanes without signaling, and loud stereo systems (the ones you hear a half-mile away) seem to ruin my day. These actions just grate on my mood similar to fingernails across a chalkboard. I'm not sure why these things bother me, but they do. And they seem to cloud my perceptions a little as well. I know a lot of fine people that smoke, but I cannot help thinking that they all pitch cigarette butts out windows or clean ashtrays along other people's curbs. I know it is a generalization, but it's human and we all do it.

You and I are watched!

In your next meeting point out that it's a good idea to discover those little things that annoy the people we work for. I've worked events where the agency chief expected a clean work area. He was impressed with the Amateur Radio operators who carefully bundled the temporary cables safely out of the way and didn't leave scraps of paper all over the operating desk. There have been search directors who have appreciated that radio people set up antennas out of the traffic pattern and checked with him before just setting up.

Before you launch a verbal tirade in public during an event, or squeal your tires leaving the parking lot, or crank up the radio volume in the emergency center, think of what impact you'll have. It's often little things that get noticed.

Speaking of safety

The Mercury Amateur Radio Association did their annual setup in support of the Varsity Scout Big Event last weekend and ran over 1,500 youth through their station over the course of three days. My hat is off to people like N7JID, KC7AW, NY7E, N7QLJ, and others who spend their time in the mountains (on battery power) and allow hundreds of kids to experience the fun of radio. These folks also provide a safety net for the 2,800 or so people in attendance. The camp is about 30 miles from the nearest town and Amateur Radio is important enough to have their tent near the headquarters area.

It was also neat to see KC7GKE, KC7EWN, N7QLI, N7HUU, and other operators teach wilderness survival, survival kits, water finding, and direction finding (with maps and compasses) to Varsity Scout teams.

It was exciting for the HF operators when a lightning storm passed through one afternoon. Although the strikes were several miles away, there was enough electricity in the air to cause arcing across coax connectors. The wind also caused me some concern as I tried to remember if the tower support stakes were in secure ground!

These camping events remind us that we must be aware of what is happening around us. Ground rods, guy wires with safety flagging, lightning storms, high wind, batteries, and all the associated support material (generators, fuel, campfires, vehicles, heavy tents) require us to be safe! It's not worth it to cut corners or ignore what's happening around us. Even though the lightning wasn't near, that could have changed quickly. Be safe and teach those watching you correct safety practices.

Concern for others

I received a nice letter from a California operator with some valid concerns for volunteer training. He points out that much of our training is held on Saturdays which is the Sabbath day for some religions. I know I balk at having to attend training sessions that invade my Sunday because of my religious affiliation.

This reader points out, for example, that there are a large number of Amateur Radio operators who are members of the Seventh-day Adventist Church. These operators have many years of experience and are willing to operate in support of events. He pointed out the church's involvement during the Northridge earthquake and the operators who helped with that task.

If the disaster happens on our Sabbath, be it Saturday or Sunday, there is no question that helping those in need is in keeping with religious beliefs. On the other hand, regular training on the Sabbath makes it a little different as many of us have church responsibilities that we feel strongly about and choose to spend our Sabbath in church. I must admit that I'd not given this much thought and I'm grateful to be reminded that not everyone shares the same Sabbath day.

I would encourage your training and operations people to be aware of member needs and schedule events to allow everyone to participate. I know it's not possible to find a regular day that doesn't conflict with someone's meeting or schedule, but you can schedule some of your meetings on varied days. Along this line be aware of others' beliefs which include dietary needs as well.

Too many warnings

During a technical user group meeting a month ago, there was a systems administrator who kept getting digital pages. My curiosity got the best of me and I asked him why he was so popular. He said his staff paged him whenever something happened. He showed me some of the pages which told him some computer jobs were late or that data records were incorrect.

He then said that most of the time he simply ignored the messages or turned his pager off. About a week later at a similar meeting his pager went off and he immediately went and called in. I chided him about having to call in and asked what happened. It turned out that while ignoring messages he had missed a critical one and his system was down for

hours while he was at a meeting.

We must be aware that too many "non-alerts" cause us to ignore the pager or radio and possibly miss the real thing. It's great to have pagers and radios and tell people to monitor the repeater during the day at work or at night. If non-emergency traffic keeps the "alert" channel or repeater busy or someone decides to chat at 2 a.m., I know my radio doesn't get left on as much and I suspect many of you feel the same way.

If you cannot have a clear channel to monitor (and it's tough when you have lots of operators or only one repeater) explore some ways to send alert tones to your people. It's great to have everyone on pagers but that's expensive. One group uses a discrete simplex channel (yes it does get used once in a while by people unfamiliar with the prevailing use), and a remote base to put out the call. Operators can either monitor the remote base frequency (also a repeater) and chat or monitor a mostly-quiet simplex channel. The remote base is in a good location and most can hear it when the call-out comes.

Pecking order

I overheard an experienced operator tell a newbie that to be a "real" Amateur Radio operator she should learn the Morse code and upgrade. Some derogatory comments were also made concerning the Citizens Radio Service.

Let's clear up a misconception. A "real" radio operator is one who operates a radio. Skill and quality have nothing to do with the radio service or the class of license. There are fine operators who hold a Novice Class license, a General Mobile Radio Service (GMRS) license or operate with a "handle" on Citizens Band.

I admire those who spend hours monitoring CB channel 9 and provide communications for REACT or other such groups across the country. There have been times that these people have provided me a link in time of need and I am not ashamed to admit that my shack includes a CB radio that sits on channel 9 as well.

We've all heard some pretty crummy operators on just about every service and you'll note that the FCC has, over the years, cited operators without regard to license or service. Let's get beyond the mentality that one license is better or worse than another or that one service is somehow better or worse than another. Not only is it unprofessional it is just silly. We are volunteer professionals! If we observe operator skill, recognize it for what it is — operator skill. Operator skill happens with training, dedication, desire, interest, and time.

If you hear people making the statement about becoming a "real" operator, please challenge them. Ask them to explain why passing a test makes someone a better operator. If you discover the answer, please let me know!

And, while I'm on the subject, I do hear comments concerning Morse code and why it is a requirement for certain license classes. When I went to school many years ago, a large number of classes were required that, to this day, I've never needed. I suppose it was good to study gothic poetry and learn about early civilizations but I'll be darned if I can remember much about either the poets or the Crusades. It's been about 20 years since I was asked about these topics and I'd certainly not recommend them (based on my opinion, of course).

Yet there are those who spend a lifetime studying these topics and find them of value. One can argue the value simply in learning about the world we live in, or the value in just learning for the sake of learning. It certainly didn't hurt me and I've no deviant behavior that I can claim as coming from studying these topics. I can't say it was fun to learn the Morse code either and my log book lists maybe an annual CW contact when Scouts come over for the Jamboree.

Whether or not we like the code is immaterial. It is a requirement and until it gets changed, it remains. We can lobby for changes and perhaps suggest that operator skill testing is more important than Morse code. Until it changes, it remains as one of those learning challenges. If motivated, you and I can learn it to pass the test. Think of it simply as one of those hurdles that, once passed, you can move beyond.

I will say that the increased frequency privileges were worth the effort. Clearing the hurdle allowed me to enjoy other facets of the hobby but I would be hard pressed to say I enjoy it more than those who are only on the world above 50 MHz. It's all relative folks! Sometimes we meet challenges simply for the sake of challenge. There are those who live and die by CW and my hat is off to them for their skill and the enjoyment they derive. Poking fun at Morse code won't make it go away and it doesn't make it easier to learn.

We're going to encounter lots of things we can find no personal value in (like one reader who could not understand why he had to attend net control class). Sometimes the value is in the collective whole — like having some code pounders get messages through during poor band conditions or to avoid listening ears.

Bugging out

Before we leave you this month, I would encourage you (if you are so connected) to surf the Internet. I did a quick search for Amateur Radio and emergency service and found a number of super sites with a lot of ideas and suggestions. There are training materials, survival kit contents, and many ideas to be found. It would take pages to list every site and they will possibly be changed by the time you read this.

One site listed items you might consider for a "bug out" kit and I added a number of items to my gear as a result. The Internet has great potential for information exchange. It's a great resource that has yet to be tapped for anything close to full potential. If you get the chance to surf, look around for emergency services topics. If you find great sites, let me know (e-mail to jw@desnews.com), and have a great summer! WR

Quarter Century Wireless Association, Inc.

John G. Troster, W6ISQ

Thanks and 98, Lew

By the time you DOGs (Distinguished Old Goats) read this piece, Lew McCoy, W1ICP, will be in the penultimate two weeks of his presidency. Lew's been a dynamic, to say nothing of fearless, leader and it's been elucidating and happifying to serve on the Board during his tenure. We are all happy campers.

Says our energetic General Manager, "BJ" Walsh, W7LVN, "Working with Lew McCoy is a great experience. There is never a dull moment and his exploration of topics is far flung and oriented to develop new areas and improve operation. The past few years have brought a number of important improvements and most all of them have been the result of brainstorming between Lew and Jack Kelleher, W4ZC, (our about-to-be President). QCWA has outgrown the image of just a club and entered its own domain as a full-fledged Amateur Radio Organization largely because of Lew and Jack. QCWA is very lucky to have had these two individuals at this point in its history. We're also fortunate to have Gary Harrison, WAØRWS, as our new veep, and he's going to be a great addition."

Lew slides over the Presidential Hand Key to erstwhile veep, Jack Kelleher, W4ZC, September first and starts his term officially by presiding at our October National Convention in Ottawa. Lew, we thank you for your dedication, good humor, and ability to get things done — fast! Jack and Gary, smooth sailing.

Bill Tynan, W3XO/5, One Of Us

Bill Tynan, W3XO/5, likes challenges. Why else would a 6-meter enthusiast move from Maryland to almost West Texas? I'll tell you why. It got too easy to work Europe on 6 from Maryland; so, he went where the challenge was, fighting through the east coast aluminum curtain QRM, and searching through all those ionospheric sporadic D, E, F, and sometimes G ions, to prove that he can work Europe on 6 on a routine basis. It also makes working the Far East and Oceania easier. He hasn't got the solution just yet, nor the time either. He's too busy chasing off to meetings around the world as President of AMSAT.

As you all know, Bill was named the Dayton Hamvention's "Ham of the Year" for 1996. He began honing those skills that led to this prestigious award at an early age. At about age 4, in St. Paul, Minnesota, his dad bought one of the first superhet receivers on the market. Young Bill learned that this was a radio. It consisted of two boxes: a box on the table with lights, and a box on the floor behind dad's chair where the noise came from. Bill was on his way.

A few years later he built his first crystal set. It worked poorly, until one day, when dad was away, Bill, the budding experimenter, discovered that if he hooked dad's aerial to his crystal set, he got several stations very loud. Of course, they were all at exactly the same spot where the cat's whisker touched the crystal, but that didn't mar the results. He heard all those stations simultaneously on his very own radio creation. These astute observations of discovery and excitement were the blossoming of his ultimate career as a scientist at the prestigious Johns Hopkins University Applied Physics Laboratory (APL).

He followed the zig-zag yellow brick road from crystal set to the Tomahawk missile and outer space.

His family moved to Chevy Chase, Maryland, near Washington, D.C., when he was around ten. His father, still a Philco fan, brought home another set that received police calls and, the 160-meter ham band. That was neat since Bill had heard about the ham bands and from that beginning, he wanted more. So his dad swapped for a Philco that had more ham bands, and Bill became an avid SWL. He bought an Echophone EC-1 for $19.95, followed later by a Hallicrafter Skybuddy which had a real transformer and tubes. He took particular interest in learning the lingo of Amateur Radio by looking up new words and phrases he heard over the air in his handbooks. He also began to learn the code. The problem was, he learned the code out of a Boy Scout handbook by saying "dot dash," so when he copied it down he wrote dots and dashes, a procedure that had limited him to a speed of about two words per minute. But he didn't know any better because he had no Elmer.

WWII started about the time Bill entered high school. He joined the War Emergency Radio Service and obtained a Third Class Radio telephone license, the kind issued to police, pilots, etc., and became active in the local WERS unit for the duration. After the war, Bill decided to get serious and rented an Instructograph for a month to learn the required 13 wpm, all the time studying theory from the handbooks he had picked up from his WERS days. In late 1945, he passed the amateur operator's exam and received a

Bill Tynan, W3XO/5 in his shack in the Texas Hill country.

LSPH — "Licensed Since Pearl Harbor" — license, because the FCC had not yet resumed assigning station licenses. In early 1946, he got the call W3KMV for his Class B license. He quickly upgraded to Class A and earned Extra Class in 1974.

By now, Bill was at Rensselaer Polytechnic Institute (RPI) in upstate New York majoring in Management Engineering, with a minor in Electrical Engineering. Of course, he became an active member of the W2SZ Radio Club, then and still today, dedicated to VHF/UHF contesting, a mammoth exposure to VHF.

The first HF rig Bill put together was a 6V6 crystal oscillator on 80 Meters feeding an 80-meter dipole. It didn't work up to expectations (read: Didn't get out past the Adirondacks) so he retreated from the HF regions, and bought a McMurdo Silver with plug-in coils from 160-6, the 6-meter set up being a doubler which drove his home brew final to about 100 watts. On the receive end he acquired a NC-100 with a Gonset converter to give him 6 Meter reception. This lash-up fed his 6-meter, 4-element Yagi on the roof which was mounted on a 2x2 wooden pole stuck into a roof pipe. VHF at last. To rotate the beam, he ran up three flights of stairs, opened an overhead door, climbed out onto the roof, rotated the thing and then sprinted back down to see if the station was still there.

After graduating from RPI in 1950, Bill headed back to Minnesota to work for Honeywell's Gyro plant. He was a "Production Expediter," the lowest form of management he explains, and trying to push the old timers to build faster and better, he confesses was not always successful. By 1951, he was back in D.C. with Johns Hopkins Applied Physics Laboratory where he spent his career working on Naval guided missiles, the last 10 years of which was on the Tomahawk missile program. However, he wasted no time getting on the air. Settling in Rockville, Maryland, he put up a 56-foot tower sporting a 5 over 5 antenna on 6 Meters and worked a few countries. Then two things happened which took him off the air for about eight years: First, he met Mattie LeNoir of Kilgore, Texas, and his thoughts of 6-meter DX waned. Second his power supply blew up! Taking that as a definitive sign, he pulled the switch, and, married Mattie!

In 1960, while still working for APL, he and Bob Carpenter W3OTC, started the first FM stereo station in the Washington area, WHFS, on 102.3. They sold the station in 1963, but it's still on the air — albeit with changed format and owners.

The ham bug still nibbled and after he joined Potomac Valley Radio Club in 1964, he was reincarnated as a contester and DXer! He bought a Drake Line, added the big antennas and amplifier and settled into what PVC does best, contesting. In 1970, he went on a contest DXpedition with W1FJ to PJ9AF for the CQWW phone contest and won the multi-single category for the world!

But VHF beckoned again, and he retired from HF while he was undisputed world champ to return to his first love — VHF/UHF. He added a 6-meter transverter and converter to his Drake line and began his notable career on 6 Meters and above. He went big time on 50 - 144 - 220-432 MHz, and of course, began DXing and contesting in these higher regions. While Bill owned the radio station, one of the announcers was a fellow who went on to publish a program guide for all FM stations in the area, titled *Forecast FM*, and he asked Bill to write a column for it. Thus began Bill's writing career, a column "Technically Speaking," for this FM magazine.

In the early seventies, the west coast Project Oscar group, which had launched the first four amateur satellites, began to taper off their activities. A group in the Washington, D.C. area formed AMSAT and picked up where Project Oscar left off. The development and growth of AMSAT is another interesting story, and as you may guess, Bill became involved. Bill's reputation as an authoritative writer on VHF/UHF subjects continued to grow, and in 1974, he was asked to be the VHF/UHF editor for *QST*. He accepted and wrote the "World Above 50 MHz" column in *QST* for 18 years! He also authored some interesting, groundbreaking proposals. Early-on he submitted a request on behalf of the Applied Physics Laboratory Radio Club to the FCC, requesting authorization to operate an unattended 2-meter beacon. This was a true first, and today we accept the operation as commonplace. Also, through his *QST* columns, he urged adoption of a VHF/UHF grid square system for North America, which was popular in Europe, for contesting and DXing purposes. He also wrote a proposal, signed by ARRL and AMSAT, suggesting that astronauts with amateur licenses be allowed to operate from space. This is also routine now.

Largely due to Bill's efforts, the AMSAT Phase 3-Project got off the ground. He helped raise half of the total $4 million needed and was largely responsible for gathering over 200 volunteers from 13 countries to work on the project.

In 1988, Bill retired from APL and moved to the hill country of Texas. Apparently this was the first uninhabited hilltop he could locate without a ham tower as he journeyed westward. His amateur activities increased, as usual after retirement, and in 1991, he was elected President of AMSAT. He is still chasing the elusive grid squares he did so much to popularize, and is always looking for VHF/UHF DX, and, of course, always ready for the next contest. He's now active on all VHF bands 50-1296, but his favorite is 6 Meters where he sports a 500-watt rig driven by various transceivers feeding an 11-element Yagi on a 50-foot boom at 70 feet. That's big even for Texas hills. He's worked a total of about 115 countries on 6 Meters and about 100 from West Texas. And he's fixin' to improve them figures, podner!

From the foregoing you can easily see why Bill was named Dayton Hamvention's "Ham of the Year" for 1996! He's just about done it all! Besides being President and Life Member of AMSAT, as well as a Life Member of ARRL, a member of Radio Club of America, IEEE, National Space Society and the Hill Country Amateur Radio Club.

We are indeed proud and happy to count "Ham of the Year" Bill Tynan, W3XO, President of AMSAT, and longtime *QST* author as One Of Us, the Many, the Proud, the Elite, the QCWA.

See you next round. 98, Jack, W6ISQ WR

Lorraine S. Matthew, N4ZCF
MARS call AAA9PR

"First I want to sincerely thank those who responded to the many unique challenges that GF96 provided to MARS. You have done an outstanding job. It is well recognized, and you should be justly proud." So said Chief Army MARS, Robert L. Sutton in his Chief's Net notes for 21 June 96.

Grecian Firebolt 96 (GF96) was the largest and most complex emergency communications exercise in which any MARS service has participated at any time. Army MARS has, for the past few years, had minor roles and adjunct roles to play in the annual USAISC world-wide exercise. In 1996, however, USAISC offered the opportunity for Army MARS, and, through an interoperability agreement, all of MARS to show what MARS could do with its collection of volunteer member operators.

Since the primary mission of Army MARS has always been to provide emergency communications support at all levels, and since all training has been geared to support this mission, why did we need participation in Grecian Firebolt 96? Why did Army MARS take on an exercise mission that was the largest and the most complex in its entire history? Why did the volunteer membership embrace these challenges so wholeheartedly?

Army MARS has been written into the Federal Emergency Response Plan and has attracted the curiosity of several of the Federal Emergency Agencies. We had proven our worth to the Director of Military Support (DOMS) over the last couple of years with our Essential Elements of Information (EEI) reports. They have been a most valuable source of information and basis of planning for that agency and the agencies with whom the information is shared. It was time to show other interested agencies that Army MARS could also support them and support them well. It has been said that the days of HF communication being of value are coming to an end. Part of the scenario for GF96 called for all telephones and the major gateway station to be rendered inoperable for a period of time. That meant no e-mail and no FAX capability for the rapid transmittal of information. With an emergency going full force, people had to communicate with each other. HF radio enabled well-trained MARS operators to do the job.

Even with the poorest propagation plaguing the operations, traffic was relayed and passed in a most timely manner. I heard one relay travel from North Carolina to Hawaii to Fort Huachuca. It took only a few minutes with people talking to each other. The point is that even if all stations could not contact each other, there were enough stations in enough geographic areas who could relay and get the job done. That was a big point — we were there trained, ready, and on the air in numbers that far exceed any other civilian entity. Thus MARS (and this was, by invitation, turned into a tri-service operation) proved itself capable of serving every agency who cared to work with us. For this exercise, that included DOMS, FEMA, SHARES, NDMS, and Army MARS sponsor, the United States Army Information Systems Command (USAISC).

Why is there a need for such complex practice involving hundreds of volunteers collectively giving thousands of hours of service? GF96 enabled MARS operators to keep up with the fast-changing arena of emergency communications. Working directly with a military command involved types of reporting never before seen by most MARS members. Working with several agencies involved types of communication techniques and message formats never before seen by most MARS members. Working on a nationwide support basis involved a CONUS network which was almost an after-thought and was staffed and coordinated by volunteers in the Western and Central Areas. This CONUS support network had never been done before. There were minimal guidelines. The entire structure of this net was left to the initiative of the MARS members themselves. It was an outstanding success. It was staffed continuously and traffic flowed freely and the support was always there for whomever needed it. Region networks were also set up for the first time.

These were more formally structured and these, too, were a resounding success. The only really familiar part of the entire scenario were the State Emergency Nets which have usually been the only level of organized support.

With closer work with other agencies, a blend of technologies also becomes mandatory. This planned use of many blends of technology such as radio-wire integration was also a first-time challenge. MARS members met that challenge as well.

At the same time as all of this activity was occupying most MARS members, Alaska was having real emergencies of its own. MARS members were able to handle these real life crises (fire and earthquake) without even a ripple appearing in the fabric of GF96. The Alaska State MARS Director sent an amazing set of EEI reports containing the most detailed information that I have ever seen. These reports were relayed by Western Area MARS members who had direct contact with him to DOMS. Meanwhile, the director at DOMS, was sending a message to Fort Huachuca asking for information from Alaska. When he returned to his desk, the report was waiting for him. That's service!

"I firmly believe that everyone is capable of achieving the goals of MARS . . . GF96 once again proves that MARS members, working together hand-in-hand as a winning team, can 'capture the gold.' I suggest to you that the success of GF96, based upon your dedication and interoperability between the services, is only the beginning of a new MARS . . . a MARS that we have been working towards . . . one that will exceed our own imaginations. GF96 has opened the door to a new frontier, one that will keep MARS . . . proud, professional, and ready . . . far into the future." —Chief Army MARS, Robert L. Sutton WR

Visit Your Local RADIO CLUB

ALASKA

South Central Radio Club. 8023 E. 11th Ct., Anchorage, AK. Meets 2nd Fri./monthly, 7 p.m., UAA Business Ed. Bldg., Rm. 220. KL7CC, (907) 338-0662 for info. Club rptr: KL7CC/R 146.97(-) PL 103.5 Hz. 2/97

ARIZONA

Arizona Repeater Association. P.O. Box 35758, Phoenix, AZ 85069-5758. Operates 20 VHF & UHF rptrs. in AZ. Meets 4th Thurs./monthly, 7:30 p.m., 1515 E. Osborne, Phoenix. Info: (602) 631-4879. 9/96

Cochise Amateur Radio Assn., (CARA). Meets 1st Mon./monthly, 7:30 p.m. at club facility on Moson Rd., Sierra Vista, AZ. WA7KYT/R 146.76(-) rptr. 5/97

Old Pueblo Radio Club, (OPRC). P.O. Box 42601, Tucson, AZ 85733. Meets 2nd Wed./monthly, 7:15 p.m., Northwest Neighborhood Center, 2160 N. 6th Ave. (South of Grant). 2/97

Tucson Repeater Assoc., P.O. Box 40371, Tucson, AZ 85717-0371. Meets 2nd Sat./monthly, 7:15 p.m., Dept. of Emergency Mgmt., 130 W. Congress. Net Thurs. 7:30 p.m. 146.82(-), 146.88(-), 147.08(+), 448.550(-) & 145.15 Packet. 3/97

CALIFORNIA

Amador County Amateur Radio Club. P.O. Box 1094, Pine Grove, CA 95665. Meets 1st Thurs./monthly, 7:30 p.m., Jackson Sr. Cntr., 229 New York Ranch Rd., Jackson, CA. Info: call 146.835(-). 5/97

Amateur Radio Club of Anderson, (ARCA). Meets 2nd Thurs./monthly, 7:30 p.m. Amer. Legion Post #746, 1709 Bruce Dr., Anderson, CA. Net every Tue., 7:30 p.m. on 146.64. 4/97

Clovis Amateur Radio Pioneers, (CARP). P.O. Box 514, Clovis, CA 93613. Meets 1st Fri./monthly, 7:30 p.m., Clovis Sr. Cntr., 840 4th St. Info: (209) 298-7707, KE6TCY 147.675(-) PL 141.3 net Thur. 7 p.m. ARRL SSC 3/97

Contra Costa Communications Club, Inc., WD6EZC/R. P.O. Box 20661, El Sobrante, CA 94803-0661. Meets 2nd Sun./monthly (except May & Dec.), 7 a.m., Baker's Square Restaurant in Richmond, CA. Info: Ed Caine, KA6OFR, (707) 996-0962. 1/97

Downey Amateur Radio Club Inc., W6TOI. Meets 1st Thurs./monthly, 7:30 p.m., So. Middle Sch. cafetorium, 12500 S. Birchdale, Downey, CA. (Summer exception: contact Doug, N6WZI, (310) 929-1441). VHF net W6GNS rptr. 146.175(+) Thurs., 7:30 p.m. 5/97

East Bay Amateur Radio Club, Inc. Meets 2nd Fri./monthly, 7:30 p.m., Albany Sr. Cntr., 846 Masonic Ave., Albany, CA. Info: S. Primbsch, (510) 741-8227. 145.110 MHz. 6/97

Fresno Amateur Radio Club. Meets 2nd Fri./monthly, 7:30 p.m., Ernie Pyle School, 4140 N. Augusta, Fresno, CA. 146.94(-) 223.94(-). 11/96

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

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

Golden Empire Amateur Radio Society, (VEC). P.O. Box 508, Chico, CA 95927. Club call W6RHC, rptr. 146.85(-). Meets: 3rd Fri./monthly, 8 p.m. at 1528 Esplanade, Rm. 110B, Chico. 9/96

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

Livermore Amateur Radio Klub, (LARK). Meets 3rd Sat./monthly, 9:30 a.m., City Council Chamber, 3575 Pacific Ave., Livermore, CA. Net Mon. 1900 on 147.12(+). For info: LARK Secretary, P.O. Box 3190, Livermore, CA 94551-3190. (510) 846-6513. 12/96

Motorcycling Amateur Radio Club. Meets 2nd Sat./monthly, 8 a.m., Lake View Cafe, 2099 E. Orangethorpe, Placentia, CA, at 91 Fwy/Lakeview. Info: Ray Davis, KD6FHN, (714) 551-2010 or (714) 551-1036. 2/97

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(+) 100Hz PL. Info: (510) 932-6125. 7/97

North Hills Radio Club. Meets 3rd Tue./monthly, 7:30 p.m., Carmichael Elks Lodge, 5631 Cypress, Carmichael, CA. Nets 8 p.m. Tue., Wed., Thur., 145.190(-)(162.2) and 224.400(-). Contact: Bob, WA6ULL (916) 983-2776. http://www.ns.net/~NHRC 3/97

North Shores ARC. Meets 1st Tues./monthly, 7:30 p.m., So. Clairemont Rec. Cntr., 3605 Clairemont Dr., San Diego, CA. Info: (619) 274-8468. 9/96

Orange County Amateur Radio Club. Meets 3rd Fri./monthly, 7:30 p.m., Orange County Red Cross, 601 N. Golden Circle, Santa Ana, CA. 146.550. Contact Bob Buss, KD6BWH, (714) 534-2995. 1/97

Palos Verdes ARC. Meets 3rd Wed./monthly, 7:30 p.m., Community Rm., "Shops at Palos Verdes," 550 Deep Valley Dr., Rolling Hills Estates, CA. Info. Herb Clarkson, KM6DD, (310) 377-6342. Rptr. 145.38(-) PL 100. 11/96

River City A.R.C.S. Meets 1st Tues./monthly, 7 p.m., SMUD Bldg., Don Julio at Elkhorn, Sacramento, CA. License classes offered. For info contact Lyle, AA6DJ, (916) 483-3293. 9/96

Sacramento Amateur Radio Club. Meets 2nd Wed./monthly, 7 p.m. Sac. Blood Ctr., 32nd St. & Stockton Blvd., Sacramento, CA. Info net at noon on rptr. W6AKR 146.91(-). Steve Cates, KC6TEV, (916) 391-7341 or Les Ballinger, WA6EQQ, (916) 393-4775. 10/96

Sacramento "Old Timers" Amateur Radio Society and Sacramento Valley Chapter #169 QCWA (Quarter Century Wireless Assn.). Meets 2nd Wed./monthly, 8 a.m., Lyon's Restaurant, 1000 Howe Ave. For info contact Paul Wolf, W6RLP (916) 331-1830. 10/96

San Gabriel Valley Radio Club, Inc. P.O. Box 88, Monrovia, CA 91017-0088. Meets 1st Tue./monthly, 7:00 p.m., Arcadia County Park, 405 So. Santa Anita Ave., Arcadia, CA. 147.765(-) PL 131.8. Info: (818) 285-9281. 12/96

Santa Clara County Amateur Radio Assoc., (SCCARA) W6UW & W6UU. P.O. Box 6, San Jose, CA 95103-0006. (408) 249-6909. Meets 2nd Mon./monthly, 7:30 p.m., United Way, 1922 The Alameda, San Jose. Net all other Mon., 7:30 p.m. W6UU/R 146.385(+), 442.425(+) PL 107.2. 5/97

Sierra Foothills ARC. P.O. 3262, Auburn, CA 95604. Meets 2nd Fri./monthly, 7:30 p.m., Firehouse, 226 Sacramento St. Auburn. 28.415, 2/220m, Thurs. 7:30 p.m., 145.430(-) (PL 94.8) & 223.86(-). 3/97

Simi Settlers Amateur Radio Club (SSARC). P.O. Box 3035, Simi Valley, CA 93093. Meets 2nd Thurs./monthly (except Dec.), 7:30 p.m., Seventh Day Adventist Church Hospitality Rm., 1636 Sinaloa St., Simi Valley. Contact Ron, KD6VLM, (805)584-6737, 147.930(-) (PL 127.3). 11/96

Siskiyou County Amateur Radio Assoc. Meets 1st Sat./monthly, 10 a.m., rotates between Bob's Ranch House in Etna, CA and The Tree House in Mt. Shasta. For info: Al, WA6IHK, (916) 467-3255. 10/96

So. Sierra ARS. Meets 2nd Thurs./monthly, 7:30 p.m., Veteran's Hall, 125 East F St., Tehachapi, CA. Contact: Caroline, KD6KMN, (805) 822-5995. 147.06/224.42. 12/96

South Bay ARC. P.O. Box 536, Torrance, CA 90508. Meets 3rd Thurs./monthly, 7:30 p.m., Torrance Memorial Hosp., 3330 Lomita Blvd., Torrance, CA. Talk-in on WB6MYD rpt. 244.38(-). Info: (310) 328-0817. 7/97

Southern California Six Meter Club. P.O. Box 10441, Fullerton, CA 92635. USB Net Tue., 8 p.m., 50.150. FM Rpt. Net Thurs., 8 p.m., 52.86/52.36 tx. FM Smplx, call freq. 50.300. Net Sun., 10 a.m. 50.40. 4/97

Southern Humboldt ARC, (SHARC). Meets 4th Tues./monthly, 7 p.m., Best Western Humboldt House Inn, Garberville, CA. Talk-in on 146.79(-). 4/97

Stanislaus Amateur Radio Assoc., Inc. (SARA). P.O. Box 4601, Modesto, CA 95352. Meets 3rd Tues./monthly, 7:30 p.m., Stanislaus Co. Admin Bldg. 145.39(-) (PL 136.5), 224.14, 440.225 (PL 136.5). 3/97

Tri-County Amateur Radio Assoc. P.O. Box 142, Pomona, CA 91769. Meets: 2nd Mon./monthly, 7:30 p.m., Covenant United Methodist Church, corner of Towne Ave. & San Bernardino Rd. in Pomona, CA. 11/96

Trinity Country ARC. P.O. Box 2283, Weaverville, CA 96093. Meets 2nd Wed./monthly, CD Hall in Weaverville, 7:30 p.m., Rptrs: WA6BXN 146.73(-) PL 85.4, W6HOR 146.925(-) PL 85.4. 10/96

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

Vaca Valley Radio Club. Meets 2nd Wed./monthly, 7:30 p.m. (Board mtg., 7 p.m.) Vaca Fire Dist. Stn., Vine St. in Vacaville, CA. Rptr. WD6BUS 145.47(-) PL 127.3. Alan McCarthy. (707) 446-0200. 5/97

Victor Valley Amateur Radio Club. P.O. Box 869, Victorville, CA 92392. Meets 2nd Tues./monthly, 7:00 p.m., Presidio Recreation Cntr., 11100 Apple Valley Rd., Apple Valley, CA. Talk-in 146.94(-), PL 91.5. Net Sun. 7 p.m. 146.94(-). 12/96

West Coast Amateur Radio Club, (WCARC). P.O. Box 2617, Costa Mesa, CA 92628. Meets 3rd Thurs./monthly, 7 p.m., Fountain Valley Sch. Dist. office, 17210 Oak St., Fountain Valley, CA. 145.440(-) PL 136.5. For info: Joe, KA6LPZ, (714) 963-4426. 9/96

Westside Amateur Radio Club. P.O. Box 11092, Marina del Rey, CA 90295. Meets 3rd Thurs./monthly, 7:30 p.m., Red Cross Bldg., 1450 11th St., Santa Monica, CA. Net every Tues., 8 p.m., 146.67(-). Voice mail: (310) 917-1100. 5/97

West Valley Amateur Radio Assoc. P.O. Box 6544, San Jose, CA 95150-6544. Meets: 3rd Wed./monthly, 7:30 p.m. (except Dec.) Cambrian Sch. Dist. Office, 4115 Jacksol Dr., San Jose, CA. W6PIY/R. Net Tue., 8:30 p.m. 147.39(+), 223.96(-). 10/96

Yolo Amateur Radio Society. Meets 1st Tues./monthly, 7:30 p.m., Training Rm. of the Davis PD, 226 F St., Davis, CA. Contact Dave Nishikawa, KC6YFG, (916) 756-6375/Talk-in 144.430. 10/96

Yuba-Sutter Amateur Radio Club, (YSARC). P.O. Box 1169, Yuba City, CA 95991. Meets 2nd Tue./monthly, 7:30 p.m., Yuba City Police Bldg., 1545 Poole Blvd., Yuba City. 12/96

CONNECTICUT

Middlesex A.R.S., (W1EDH). Meets Tuesdays, 7 p.m., Adult Day Care Cntr., 32 Miner St., Middletown, CT. VE classes/exams; ARRL Service Club. Ctc: M. Harper, W1FYM (860) 633-6295, P.O. Box 5, S. Glastonbury, CT 06073. 3/97

FLORIDA

Indian River ARC, Inc., (IRARC). 597 Capri Rd., Cocoa Beach, FL 32931-3011. Meets 1st Thurs./monthly, 7:30 p.m., Community Church of the Nazarene, 400 Crockett Blvd., Merritt Island, FL. 3/97

Port St. Lucie ARA. Meets 1st Fri./monthly, 7:30 p.m., St. Andrews Church, Prima Vista Blvd., Port St. Lucie, FL. Contact: Roy Cox, KE4QJG, (407) 340-4319. Call in 146.955(-). 9/96

Saint Petersburg Amateur Radio Club. Meets 1st Fri./monthly, 7:30 p.m., Red Cross Bldg., 818 Fourth St. North, St. Petersburg, FL. Nightly net 6:30 p.m., 147.06(+). Rptrs. 147.06(+), 224.66(-), 444.475(+). Info: C. Wagner, KE4EYI, (813) 894-6710. 1/97

South Brevard Amateur Radio Club. P.O. Box 2205, Melbourne, FL 32902. Meets 1st Tue./monthly, 7 p.m., Public Library, 540 Fee Ave., Melbourne, FL. 6/97

Vero Beach ARC, W4OT. P.O. Box 2082, Vero Beach, FL 32961. Meets 2nd Thurs./monthly, 8 p.m., Emerg. Mgmt., Indian River County Adm. Bldg., 1840 25th St. Net Mon., 7:30 p.m. 146.64. 12/96

GEORGIA

Dalton Amateur Radio Club, Inc., (DARC). P.O. Box 143, Dalton, GA 30722-0143. Meets 4th Mon./monthly, 7:30 p.m., Magistrate Court Bldg., corner of Waugh St. & Thornton Ave., Dalton, GA. Info: Harold Jones, N4OTC, 706/673-2291. 3/97

HAWAII

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

Koolau Amateur Radio Club, (KARC). 45-145 Mikihilina St., Kaneohe, HI 96744. Meets 2nd Sat./monthly, 9:30 a.m., Hoomaluhia Pk., Kaneohe, HI 4/97

ILLINOIS

Chicago FM Club Inc., (CFMC). P.O. Box 1532, Evanston, IL 60204. 146.76(-)(PL 107.2)/224.10/224.18/443.75 (PL 114.8). Ham help line: (312) 262-6773. Info net Tues., 9 p.m. on 146.76(-). Meets 3rd Wed./monthly, 8 p.m. 7/97

CHI-NET Amateur Radio Club. North & Northwest Chicagoland & Suburbs. Specializing in PACKET Radio and 220 Phone to further the fulfillment of Amateur Radio. Meets last Thurs./even mos. Info: (708) 307-8198 or Packet on 144.99 MHz or Voice on 224.24 MHz. 11/96

Dupage Amateur Radio Club. (DARC). P.O. Box 71, Clarendon Hills, IL 60514. Meets 4th Mon./monthly, 7:30 p.m., Holy Trinity Church, SE corner of Cass & Richmond, Westmont, IL. Net Sun., 9 p.m. on 145.25. W9DUP repeaters 145.25(-) (107.2PL), 442.55(+) (114.8PL), 224.68(-). 11/96

Fox River Radio League. P.O. Box 673, Batavia, IL 60510-0673. Meets 2nd Tue./monthly, 7:30 p.m., Old Bank Bldg., 900 No. Lake St., lower level, Northgate Shopping Ctr. & Rt. 31, Aurora, IL. 7/97

Hamfesters Radio Club, W9AA. P.O. Box 42792, Evergreen Park, IL 60805. Meets 1st Fri./monthly, 8 p.m., Crestwood Clv. Ctr., 139th & Kostner, Crestwood, IL. Nets: Sun. (local) 0100 UTC, 28.410 MHz; Mon. 9 p.m. 146.43 S., Packet Mailbox 145.65 MHz. Info: (312) 974-3291. 1/97

Peoria Area Amateur Radio Club, (PAARC). Meets 2nd Fri./monthly, 7 p.m., 1401 N. Knoxville Ave. Info: (309) 685-6698. Rptrs: 146.85(-) & 147.075(+). 5/97

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

The Starved Rock Radio Club, W9MKS. P.O. Box 198, Tabor St., Leonore, IL 61332. Meets 1st Mon./monthly, 7:30 p.m. Rptr. net 7 p.m. Wed./wkly., 147.12(+). 11/96

IOWA

Sooland Amateur Radio Assoc., (SARA). Meets 3rd Tues./monthly, 7:30 p.m., American Red Cross Bldg., 1512 Pierce St., Sioux City, IA. Contact: Glenn Holder, KØTFT. (712) 239-1749. Call-in 146.97(-). 11/96

MAINE

Androscoggin Amateur Radio Club. Meets 1st Wed./monthly, 7:00 p.m., Auburn Police Station, 1 Minot Ave., Auburn, ME. 11/96

MASSACHUSETTS

Quannapowitt Radio Assoc., Inc. 6 Savin St., Burlington, MA 01803. Meets 4th Fr./monthly, 8:00 p.m., (May & Nov. meets 3rd Fri.), at Lynnfield-Wakefield Methodist Church, Wakefield. Info: Jim Chamberlain, N1AKG, (617) 944-5098. 1/97

Wellesley Amateur Radio Soc., & Babson Wireless Club. Meets 1st & 3rd Thurs./monthly, 7:30 p.m., Tomasso Hall, Babson College Forest St., Wellesley, MA (Sept.- June) Talk-in 147.03(+). Info: J. Driscoll, NV1T, (617)444-2686. 12/96

MICHIGAN

Adrian Amateur Radio Club, W8TQE. Box 26, Adrian, MI 49221. Meets 1st Fri./ monthly, 8 p.m., Civil Air Patrol Bldg., Lenawee Co. Airport, Cadmus Rd., Adrian. ARES net Sun., 9 p.m. 145.37(-). Info: Tom Parsons, N8QEW, (517) 263-5568. 3/97

Chelsea Amateur Radio Club, Inc. Meets 4th Tue./monthly, 7 p.m., Society Bank, 1478 Chelsea-Manchester Rd., Chelsea, MI 48118. 12/96

Eastern Michigan Amateur Radio Club, (EMARC). Meets 1st Tue./monthly, 8:30 p.m., Woodland Developmental Cntr., Kimball Township (Range @ Smiths Creek Rd.). Contact Frank Forsyth, N8XTO, (810) 987-3540. Talk-in: 147.30(+). 9/96

Edison Radio Amateurs Assoc. Meets 2nd Fri./monthly (Sept.-June), 7 p.m., Edison Western Wayne Div. HQ, 8001 Haggerty, Belleville, MI (So. of Ecorse Rd.). Net each Thurs., 8 p.m. on 145.33(-) and 442.80(+) rptrs. 3/97

Genesee County Radio Club, Inc. Meets 3rd Tues./monthly, 7:30 p.m., Genesee Area Skill Center, Torrey Rd., Flint, MI. (810) 634-6077. 2/97

MINNESOTA

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

MISSISSIPPI

Jackson Amateur Radio Club, Inc. Meets 3rd Thurs./monthly, 7 p.m., Am. Red Cross Bldg., Riverside Dr., Jackson, MS 39202. 10/96

MISSOURI

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. 2/97

NEVADA

Frontier Amateur Radio Society, (FARS). Meets: 2nd Sat./monthly, bkfst. 8 a.m. & mtg. 8:30 a.m., Country Inn, SE cor. W. Sunset, Valley Verde. Club info: Jim Frye, NW7O, (702) 456-5396 or Leona Wallace, WA6OHB, (702) 247-6450. 7/97

Wide Area Data Group, Inc. P.O. Box 3132, Sparks, NV 89432. Meets 1st Sat./ monthly, 9 a.m., Jack's of Reno, 5485 Equity Ave., Reno. Info: (702) 356-8200. Call in on 147.30(+) MHz. 5/97

Sierra Intermountain Emergency Radio Assoc., (SIERA). Meets 2nd Tues./ monthly, 7:30 p.m., Douglas County Lib., Minden. Contact: George Uebele, WW7E, (702) 265-4278, 147.330. 11/96

NEW HAMPSHIRE

Great Bay Radio Assn., WB1CAG. P.O. Box 911, Dover, NH 03820. (603) 755-2600/ 335-6643. Meets 2nd Sun./monthly, 7 p.m., Rochester Fire Dept. Training Rm. Talk-in: 147.57. 11/96

NEW JERSEY

10-70 Repeater Assn., Inc. 235 Van Emburgh Ave., Ridgewood, NJ 07450. Meets 1st Wed./monthly (except July & Aug.), 8 p.m., VFW, Valley Rd., Clifton, NJ. Rptrs.: 146.70(-), 224.84(-), 444.15(+). 10/96

Bergen Amateur Radio Assoc., (BARA). P.O. Box 304, Hackensack, NJ 07601. Meets 1st Sun./monthly, New Milford Elks Lodge, Patrolman Ray Woods Dr., New Milford, NJ 07646. Nets: 28.350 Mon. 9 p.m., 144.40 9 p.m. Wed. 5/97

South Jersey Radio Assoc., (SJRA). Pennsauken Sr. Hi Sch. at Hylton Rd. & Remmington Ave., Pennsauken, NJ 08109. Meets Jan.-Oct., 4th Wed./monthly, 7:30 p.m. (Nov.-Dec. 3rd Wed.). Talk-in: 145.29(-) rptr. Club call K2AA. 8/97

NEW YORK

Amateur Radio Assoc. of the Tonawandas, (ARATS). P.O. Box 430, No. Tonawanda, NY 14120. Meets 3rd Tues./ monthly (except July & Aug.), 7:30 p.m., Sweeney Hose Co., 499 Zimmerman St., No. Tonawanda, NY. Talk-in: 146.955(-) rptr. W2PVL. 10/96

Genesee Radio Amateurs, (GRAM). N.Y.S. Civil Defense Ctr., State St., Batavia, NY 14020. Meets 3rd Fri./monthly, 7:30 p.m. 147.285(+) W2RCX. 12/96

Hall of Science Amateur Radio Club. P.O. Box 131, Jamaica, NY 11415. HOSARC, 2nd Tue./monthly, Hall of Science Bldg., 47-01 111 St., Flushing Meadow Park, 7:30 p.m. Info: Amie, WB2YXB, (718) 343-0172. 2/97

Orleans County Amateur Radio Club, (WA2DQL). Meets at Emergency Management Office, West County House Rd., Albion, NY 14411, 2nd Mon./monthly, 7:30 p.m. 145.27(-) — WA2DQL. 12/96

PROS, Pioneer Radio Operators Society. Meets 1st Wed./monthly (except July/ Aug.), 7 p.m., Sardinia Town Hall, Savage Rd., Sardinia, NY. Net 9 a.m. Thurs. 3853 kHz. 3/97

The Radio Club of J.H.S. 22, N.Y.C., Inc. WB2JKJ. P.O. Box 1052, New York, NY 10002. 24-hr. hotline: (516) 674-4072. Fax: (516) 674-9600. Non-profit org. using Ham Radio to enhance the education of youngsters, nationwide. Join us — "Classroom Net", 7.238 MHz, 7 a.m. E.S.T. PSE QSL! 9/96

Suffolk County Radio Club, (SCRC). Meets 3rd Tues./monthly, 8 p.m., Bohemia Rec. Ctr., Ruzicka Way, Bohemia, NY. Talk-in: 145.21(-) rpt. Morten Eriksen, KA2UIU, (516) 929-6911. 4/97

Westchester Amateur Radio Assoc., (WARA). Meets 1st Wed./monthly, 7:30 p.m., Am. Red Cross Bldg., 106 N. Bway, White Plains, NY. Club net: 145.495(-) rpt. Tues., 7:30 p.m. Info: Dan Grabel, N2FLR, (914) 723-8625. 2/97

Westchester Emergency Comm. Assoc., (WECA). Meets 2nd Mon./monthly, 7:30 p.m., Westchester County Ctr., White Plains, NY. Contact WB2VUK (914) 631-7424 or WECA INFO LINE (914) 741-6606 for details. Talk-in WB2ZII/R 147.06(+) PL 114.8/2A. 10/96

Yonkers Amateur Radio Club, (YARC). Meets 2nd Sun./monthly, 10 a.m., 1st Pct., Yonkers Police Station, E. Grassy Sprain Rd., Yonkers, NY. Info: P.O. Box 378, Centuck Sta., Yonkers, NY 10710. (914) 963-1021. 146.865(-), 440.15(+). 10/96

NORTH CAROLINA

Stanly County Amateur Radio Club. Stanfield, NC. Meets 4th Thurs./monthly, 7 p.m. Talk-in 146.985(-) for location. Wed. net 9 p.m. 146.985(-). Fri. tech net 9 p.m. 147.390(+). Phone: (704) 888-4815. 5/97

OHIO

Ashtabula County ARC. Ken Stenback, AI8S (964-7316). County Justice Ctr, Jefferson, OH. Meets 3rd Tue./monthly, 7:30 p.m. County rptr., 146.715(-). 9/96

Clyde Amateur Radio Society (CARS). Meets 2nd Tue./monthly, 7 p.m., Municipal Bldg., Clyde, OH 43410. NF8E rptr. 145.35(-) and 442.625(+) MHz. Net Sun. 9 p.m. Info: E. Remaley, KA8CAS. 3/97

Firelands Area Rptr. Assn., (FARA). Meets 4th Tue./monthly, 7 p.m., Erie County Admin. Bldg., Sandusky, OH. WB8LLY rptr. 146.805(-). Net Sundays, 8 p.m. Info: FARA, P.O. Box 442, Huron, OH 44839. 11/96

Greater Cincinnati Amateur Radio Assn., (GCARA). Meets 4th Wed./monthly, 7:45 p.m., Brusman's Hall, 4813 Vine St., St. Bernard. ARRL SCC, Net Thur. 9 p.m. EST. 1.936 MHz. TI 147.15(+). Info: WA8STX or (513) 772-7378. 11/96

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. 10/96

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. Contact: Brenda, KB8IUP, 866-5928. 11/96

Van Wert Amateur Radio Club, Inc. P.O. Box 602, 1220 Lincoln Hwy., Van Wert, OH 45891. Meets 1st & 3rd Sat./monthly, 8 p.m. Call-in: 146.85(-). 2/97

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

OREGON

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

Keno Amateur Radio Club. P.O. Box 653, Keno, OR 97627. Meets 3rd Thurs./ monthly, 7 p.m., Keno Fire Stn. Rptr. 147.32(+) W7UFM. Info: Tom Hamilton, WD6EAW, (503) 883-2736. 11/96

Central Oregon Coast ARC. P.O. Box 254, Florence, OR 97439. Meets 3rd Sat./ monthly, 9 a.m. for brkfst. Net, Wed. 7 p.m., 146.80(-). Info: 997-2323 or 997-4074. 1/97

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

Valley Radio Club of Oregon. Meets 1st Fri./monthly, 7:00 p.m., Lane County Red Cross chapter house in Eugene. Info: (541) 683-0987 or write: VRC, c/o 159 E. 16th Ave., Eugene, OR 97401. 12/96

PENNSYLVANIA

Butler County Amateur Radio Assn. P.O. Box 1787, Butler, PA 16001-1787. Meets 1st Tues./monthly, 7:30 p.m., Boy Scout Cntr., 830 Morton Rd., Butler, PA. Call-in W3UDX/ R 147.36(+). Net 10:10 p.m. nightly. 10/96

Mercer County Amateur Radio Club, W3LIF. P.O. Box 996, Sharon, PA 16146. Meets 4th Tue./monthly, 7:30 p.m., Shenango Valley Med. Ctr, Farrell, PA. Net, Thurs. 9 p.m. on 145.35(-) W3LIF, Digi. 145.01. 3/97

Mid-Atlantic ARC. Box 352, Villanova, PA 19085. Meets 3rd Thurs./monthly, 8:00 p.m., Radnor Mem. Libraray, Wayne, PA. Call Bob Haase, W3SA, (610) 293-1919. 147.06(+) WB3JOE PBBS 145.09. 1/97

Warminster Amateur Radio Club, WA3DFU. P.O. Box 113, Warminster, PA 18974. (215) 672-9985. Meets 1st Thurs./ monthly, 7:30 p.m., Benjamin Wilson Sr. Cntr., Warminster, PA. Net on 147.69(-), 147.09(+), Wed. 8:30 p.m. and 28.450 Sun. 9 p.m. 5/97

RHODE ISLAND

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

TEXAS

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

Brownsville ARC (CHARRO). Meets 2nd Tue./monthly, 7:00 p.m., Confederate Air Force Hangar, Brownsville Airport in TX. Talk-in on 147.040(+). 12/96

VIRGINIA

Southern Peninsula Amateur Radio Klub, (SPARK). Meets 1st Tue./monthly Salvation Army Community Bldg., Hampton, VA. Repeaters 146.73(-), 449.55(-). VE Exam Info: (804) 898-8031, W4RTZ. 2/97

Virginia Beach ARC. Meets 1st Thurs./ monthly (except July), 7:30 p.m., St. Andrews United Methodist Church, Tucson & Princess Anne Rds., Virginia Beach, VA 23462. 2/97

WASHINGTON

The Mike & Key Amateur Radio Club. Meets 3rd Sat./monthly, 10 a.m., Salvation Army Renton HQ., 720 Tobin St., Renton, WA. Talk-in on 146.82(-) rptr. Doors open at 9:30 a.m. 5/97

Skyvalley Amateur Radio Club, KC7LOC. Meets 3rd Sat./monthly, 8 a.m., Dutch Cup restaurant off Rt. 2 in Sultan, WA. Info: (360) 793-3433. 4/97

WEST VIRGINIA

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

Tri-State Amateur Radio Assn. Meets 3rd Tues./monthly, 7 p.m., The American Red Cross, 111 Veteran's Memorial Blvd., Huntington, WV. 5/97

For information on how to get your club listed in "Visit Your Radio Club," plus receive many other benefits, write to Club Liaison,

Worldradio

2120 28th St., Sacramento, CA 95818.

The Youth Forum

Sammy Garrett, AAØCR
#8 Willow Ct., Florissant, MO 63031

By the time this column is read, I'll have started my freshman year of college at American University in Washington, D.C. For me, this event is the culmination of many years of hard work, new experiences, good and bad times, and all the other things that go along with growing up. While leaving behind most of what is familiar to me is intimidating, there is also a feeling of excitement and anticipation about what, in many ways, is the start of a new life.

This new beginning would not be possible without an enormous amount of help and encouragement from my family, friends, teachers, and organizations and experiences of all kinds. Amateur Radio has played no small part in my successes thus far. I am certain that this truly invaluable service will continue to be an invaluable resource, even if only indirectly, throughout my life.

I chose to attend American University because of my interests in journalism and public and international affairs. I was first fascinated by these avenues through Amateur Radio. Without this service, my writing might very well still be limited to occasional term papers and other homework. Without Amateur Radio, my only knowledge of European affairs might be that obtained from the evening news.

The lessons gleaned from the amateur service extend far beyond QSL cards and contest certificates. I can truly say that Amateur Radio has taught me more about people and creating opportunities than any other experience in my life. I consider myself to be among the most fortunate of amateurs for the countless experiences and opportunities afforded me through this service.

That's the wonderful thing about this hobby. Amateur Radio truly holds something for everyone. Individual interests are just that — individual, to be explored to whatever extent one wishes. Amateur Radio allows its followers to reach the farthest corners of globe or simply make a friend through the common interest of communication and public service.

Amateur Radio and its numerous opportunities and facets cannot continue, however, without its young people. As in all endeavors, young people are the future. Continued growth and success depends on new ideas, enthusiasm and creativity, as well as a knowledge of what works and what does not which has been passed form one generation to the next. Without young people, much of that creativity, innovation, and the resource of students of past successes will be lost. It is vitally important that amateurs of all ages realize the impact which young people have on the amateur service. It is clear that without that influence, both independently and in cooperation with established practices and ideas, Amateur Radio will not continue to enjoy the growth it has known in recent years.

Judging from my work with my fellow young amateurs over the past six years, the future of our service is in very good hands. Every day, young amateurs across the country are doing great work on nearly every scale. Our older, but nonetheless valuable counterparts are also working regularly to continue and increase the recent growth of Amateur Radio.

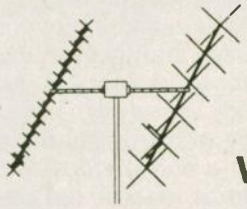
Just as leadership within the amateur service is passed from one generation to the next over time, it is now time for me to pass on the duties of "The Youth Forum." As this issue goes to press, the identity of that new columnist has not been made public. It is my hope that "The Youth Forum" will continue to be a source of information and a voice for young people which I have tried to make the column over the past four years. The real direction for and success of the column depends largely on you, the readers. Let your opinions be known and let ***Worldradio*** know what you're doing in your own community, as well as what you'd like to see in future columns.

The decision to end my duties as a columnist comes with mixed emotions. Amateur Radio has afforded me more opportunities than I could have ever imagined possible as I nervously made my first contact in January, 1990. It is hard to leave a position which has at times been frustrating, but has also taught me a tremendous amount about writing, Amateur Radio, and most importantly, about myself. Amateur Radio has given me some of my closest friends, none of whom will be forgotten. At the same time, I know leaving behind my duties as a regular columnist is the right decision for the readers, the magazine, and most of all, for myself. There are countless more opportunities ahead on the horizon. I wouldn't be telling the truth if I said I weren't looking forward to trying each of them with the new freedom, challenge, and responsibility college will afford me.

I would be remiss if I didn't pause to thank ***Worldradio*** editor Lou Ann Keogh, KB6HP, who has almost single-handedly made my experience as a columnist possible. She has taught me more than she could ever realize, for which I leave my most sincere thanks. I must also thank my parents, Walter and Martha Ann Garrett, NØMAL, and NØOZF respectively, for their constant encouragement and feedback. Most of all, I'd like to thank the readers for their support and ideas over the past few years. I wish you all the best of luck.

I am not yet sure what the future holds for me in terms of Amateur Radio. I am certain, however, that the amateur service will always be a vital companion and resource in one form or another. As always, if I may ever return the favor of your readership, don't hesitate to let me know. My address for the 1996-97 school year will be: Sam Garrett, AAØCR, American University, Anderson Hall, Room 0213, 4400 Massachusetts Avenue, N.W., Washington, DC 20016-8101. 73 and see you on the bands. WR

Amateur Satellites



Terry Douds, WB8CKI

344 E. Fifth Ave., Lancaster, OH 43130
e-mail: wb8cki@amsat.org

Hello everyone! I thought that this month I should discuss a couple of topics that are of some concern to those considering satellite operation. Since I am attempting to keep this column at a beginners level, I want to try and dispel any rumors that may be floating about.

First I would like to address Phase 3D. As many of you may know, AMSAT organizations all over the world are in mid-construction of the largest amateur satellite ever designed. Phase 3D will be a satellite with capabilities never before seen in the Amateur Satellite service. It will be in a Molniya, or DX orbit, where it will have an operating time of from 10 to 12 hours per day in most locations. The satellite will allow BOTH analog and digital communications simultaneously, and will be an extremely high powered bird, allowing smaller antennas at our ground stations! Many hope that it will allow many new operators to begin delving into satellite operation once it goes into orbit. When that will occur is the situation I want to talk about.

You may be aware of the fact that our current big DX bird, Oscar 13, is about to have a close encounter with our atmosphere — in other words, it will burn up in December 1996. Loss of use of the bird is expected in the October/November time frame, and many of us will be making as much use of it as we can as it approaches the end so that we can gain some research into what happens at or near the end.

Originally Phase 3D was hoped to fill the void that will be felt when Oscar 13 sends its final "HI." It was scheduled to go up on the second flight of the new Ariane 5 booster from the European Space Agency. This is an experimental new booster, and because of that the worldwide AMSAT groups were offered a special " bargain" rate to go up on the previously untested rocket. It was originally scheduled to be launched just prior to the 1996 Dayton Hamvention; however, there was a problem noticed in the booster in the fall of 1995, so all launches were delayed. Consequently the first launch, known as Ariane 501, was moved back to the end of May, and 502 was to go in the fall of 1996. As you may have seen on CNN, 501 was destroyed by the range officer a few seconds after launch. Two directional engine nozzles apparently moved after launch, causing the booster to go out of control, and it was destroyed to keep damage down range to minimum.

Obviously, this setback for ESA will move the 502 launch date back somewhat. There was talk previous to the 501 launch that P3D might be bumped from 502 if a higher paying customer wanted their satellite up quickly. If that were to come true, ESA promised a launch on an older Ariane 4 booster sometime in mid- 1997.

The aborted launch attempt obviously has raised concerns by many of the AMSAT members. Since P3D has been funded by all of those who have contributed to the various fund raising efforts, the concern has been very intense. Many think the $1 million price tag is high; others think that AMSAT should purchase insurance for the flight. As AMSAT-NA President Bill Tynan, W3XO, has pointed out, insurance would have cost about as much as the flight itself. Due to our redundancy of many of the parts, the costs to rebuild the bird in case of a tragedy like this would not be the 3 to 4 million dollars of the original bird; it

Announcement

The OH-KY-IN Amateur Radio Club will hold an 8-week course (every Thursday evening) for upgrading of licenses, (Novice thru Advanced theory, including the No-Code Technician class), from 26 September to 14 November. Also offered are classes in 5, 13 and 20 wpm code. The sessions will be held at the Salem Presbyterian Church in Western Hills, Ohio. For more information, contact Carol Hugentober, K8DHK, 661-5323 or Bruce Vanselow, N8FWA, 251-1555.

would be more on the order of $500,000 for replacement of the solar panels, which are very large! Consequently, it is almost better for AMSAT to "self-insure" the flight. Additionally, it may be nearly impossible to purchase insurance now due to the loss of 501. We will have to see how things develop this fall, but hopefully we'll have a new bird in the air sometime within the next year.

Another issue that has come to my attention recently is one of "who is really allowed to operate on the satellite?" I have found out that many people have a great misconception concerning this. To bring this to focus, here is the excerpt from Part 97 of the FCC rules concerning the every day amateur satellite operator:

S 97.209 Earth station.

(a) Any amateur station may be an Earth station. A holder of any class operator license may be the control operator of an Earth station, subject to the privileges of the class of operator license held by the control operator.

(b) The following frequency bands and segments are authorized to Earth stations:

(1) The 17m-, 15 m-, 12 m- and 10 m- bands, 6 mm-, 4 mm-, 2 mm- and 1 mm- bands; and

(2) The 7.0-7.1 MHz, 14.00-14.25 MHz, 144-146 MHz, 435-438-MHz, 1260-1270 MHz and 2400-2450 MHz, 3.40-3.41 GHz, 5.65-5.67 GHz, 10.45-10.50 GHz and 24.00-24.05 GHz segments.

What this says is that ANY class of operator can operate a satellite station! Yes, all you Codeless Techs out there . . . using the DX satellites, you can work DX WITHOUT PASSING YOUR CW EXAMS AND GOING ON TO HF!!! Many people have Satellite DXCC . . . and have done a large part of this work on SSB. The excerpt does say that the operation of the station is limited "to the privileges of the class of operator license held by the control operator." This is the phrase that usually brings out lots of questions. What is being discussed here is where you are allowed to TRANSMIT — not where you are RETRANSMITTED! As an example, let's look at one of our easier to use satellites, RS-10/11. RS-10 has an uplink frequency range from 145.860 to 145.900 MHz, and has a downlink range on 10 Meters from 29.360 to 29.4 MHz. A Technician licensee MAY utilize this satellite; you just need a 10-meter receiver (or that new HF rig for the moment when you pass the 5 wpm test!). The only bird I am aware of that will cause an amateur in the U.S. problems in terms of license class is RS-12/13. This bird has an uplink on 15 Meters which is in the Extra and Advanced Class phone band; therefore, only those operator classes can utilize it on the main transponder. One exception here is that there is a CW robot aboard with an input at 21.127 MHz; this is in the Novice band, where everyone except Codeless Techs can utilize it!

Hopefully this information will cause a few more of you to "take the plunge" and begin to investigate satellite operation. It really is not any more expensive to get into than a standard HF station; in fact, with 2-meter FM equipment, you may be able to still work MIR on a pass across the U.S. — keep your rig on 145.550 MHz and listen — when you hear a voice saying "RØMIR," get ready to make a contact! See you on the birds! WR

County Hunter

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Ashburn, VA 20147
e-mail or internet: sjansen@aol.com

I have a question for you to start this month's column. Is county hunting the pursuit of a radio contact with a new county or the pursuit of a piece of paper confirming radio contact with a new county? The answer: "Yes," " no," and "it depends!" If your desire is to simply make radio contact with counties in a particular state or counties in the entire U.S., then you don't care much for the piece of paper. The hunt is over when you make the contact. If you care about an award on your wall, though, the hunt for you involves not only that elusive radio signal, but also that needed paper confirmation.

I've written a lot lately about the county hunters nets (14.336 MHz and 14.0565 MHz) as a means of bagging that rare county contact, but this time, I'll tackle the wanted paper confirmation; the QSL!

3,076 Cards??? We have tricks!

Not only does the thought of contacting 3,076 counties keep many amateurs from joining the hunt, but the thought of sending and receiving 3,076 cards — and the stamps, envelopes, and SASEs to go along with those cards — is equally daunting. Fortunately, county hunters have tricks up their QSL-writing sleeves and a few shared tips should provide a better return rate.

Ken, KB4BCC, sent me an e-mail recently and told me he's hunted counties for sometime, but lately he hasn't been receiving any QSL responses even after sending an SASE. That's not an easy problem to solve, because the amateur on the other end and their likelihood of returning a QSL card is somewhat out of our control.

A few suggestions are in order. If you are sending a QSL card and an SASE, write somewhere on your card, "COUNTY HUNTER: I need your card for worked all counties." You might also give your current statistics, 2,450 contacted counties, 2,200 confirmed counties. Although this is no guarantee, at least you'll get their attention if they see why you need their QSL card so much. Of course, this also assumes they even open your envelope.

Here's another thought. Plenty of amateurs do not have QSL cards, nor do they have a desire to exchange them. In that case, a solution may be to send an SASE and a card for them to send back. You could use a mobile reply card (MRC), also known as an exchange card. MRCs are typically used to confirm multiple contacts on one card from a mobile operator. The requesting station fills out the card with call signs as if it's being sent by the mobile operator. The mobile operator confirms all contacts by signing and returning the MRC. Although you had only one contact with a fixed station, you could mark the block for fixed operation and write only one contact's worth of information on the card. All the other station has to do is sign your card and drop it in the mail (with your postcard stamp already affixed). They don't have to have QSLs, and it's a simple process (putting instructions in your envelope will help).

I've never used the following techniques, but it occurs to me that these techniques work for other people, maybe they'd work for you too. 1) On the outside of your envelope, write "You may have won the 10 million dollar sweepstakes! Details inside." Then you could have them return their card as an entry. Think that's too mischievous? How about, 2) write on the envelope, "Open immediately, dated material! Return receipt requested" What? That's not a lie . . . the card has dates on it and you do want a return receipt, sort of. Okay, my final creative attempt; 3) write on the envelope, "Help! Help! I'm inside the envelop and I can't get out!" Then when they open your envelope, write on your card, "Thanks for setting me free, and that's how much it cost you to put your QSL card in my return envelope . . . FREE!"

Okay, back to reality. My best advice to any county hunter or potential county hunter is to make your contacts on the county hunter nets with mobile operators. That way you can have multiple contacts on a card (saving cards) and use one of the two MRC processing organizations to send and receive your cards (saving postage, envelopes, and time). The Mobile QSL Bureau and the Amateur Confirmation Exchange Service (ACES) receive your MRCs for multiple stations, combine them with other county hunter requests and send the cards to the mobile operators. When the mobile operator returns the cards, the MRC processor returns them to you. This method is much cheaper and saves a lot of time compared to doing all the work yourself.

Making county contacts on the CH net, using MRCs and MRC processors should increase your QSL return rate to close to 100%.

Electronic help

In the old days when I walked barefoot to school 10 miles in the snow, uphill (both ways), we had to fill out our QSL cards, MRCs, and envelops by hand. Now days, com-

puter software does that all for you. Several county hunter programs are available which not only log contacts, but also print MRCs (the entire card) with a little serial number in the corner. When you receive the returned card, simply typing the serial number confirms all the contacts listed on the card. Boom, all county statistics are updated, simply and quickly.

More electronic help

For those of you who are fluent in computer electronic mail (e-mail), help may be on the way. MARAC (the Mobile Amateur Radio Awards Club) and *CQ* Magazine, like the ARRL, are studying the option of allowing electronic QSL exchanges (e-mail, packet, fax or other electronic methods). One of the MARAC directors requested the MARAC board of directors discuss this issue at the MARAC national convention in Phoenix in July. *CQ* Magazine will most likely wait and see the ARRL's position before adopting their own policy. Stay tuned...

Help those Down Under

I received a nice note from Charles Carpenter, N6CFQ, a ***Worldradio***-lifer) alerting me to the Down Under County Hunter's Net, DUCHN. This group meets every Friday, Saturday, and Sunday (U.S.) evenings at 0330Z on 14.255 MHz to help Australian and New Zealand county hunters contacts U.S. counties. It was formed because of poor propagation during the normal operating times of the U.S. county hunters' nets. It's been in operation now for over a year. Regular county hunters are VK1PJ, VK3ATZ, VK4AAR, VK4BS, VK4SJ, VK5AQZ, ZL1DU, ZL2SM, ZL3DAC, and ZL3KR. So, if you get a chance, tune into 14.255 MHz and help the group contact some new counties. Tell your friends in neighboring counties too!

Mail bag

I received a nice e-mail from Chuck Adams, K5FO, with a few questions and comments. Chuck has operated QRP using less than 1 watt for the last 3 years and has almost achieved 3-band WAS using 0.95W. First he asked about the digital traffic sliding down the band and affecting the CH net frequency (14.0565 MHz) and the QRP calling frequency (14.060 MHz). Yes, the CH net was on 14.0665 years ago, but moved down 10 kHz to get away from RTTY and AMTOR. Even down 10 kHz, we are still bothered by digital noise once in awhile. His second comment was on the *CQ Magazine* county pamphlet being cumbersome. Unfortunately, *CQ* Magazine requires log information for the USA-CA on their own record book. It's something we've learned to like; however, there are software programs and other record books available for your own tracking.

His third question was a ZIP code to county conversion routine. Although this is a good start to determine the county, ZIP codes are not foolproof. ZIP codes can even lead a person to the wrong state (some people live just over the state line, but their closest post office is in another state). Having said all that, there is a program called "Zip" from Hardy Data Systems that does the conversion and Buckmaster now has a CD with longitude, latitude and county for all US amateurs.

Lastly, Chuck asked what was the lowest power used for contacting all counties and achieving USA-CA. Well, others might correct me, but I think, that honor goes to W2QHH (now a silent key). I know Howie operated QRP and I believe using 5 watts. Anyone know other county hunter QRPers? Well, Chuck, welcome to county hunting . . . hope you can work all 3,076 with 0.95W!

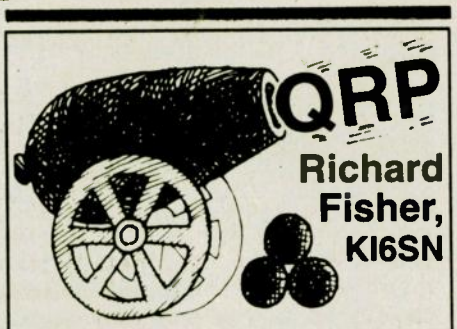
WWW siting

For you web surfers, K3IMC has developed a web page for county hunters. I have not checked it out yet. I'll check it out and report back to you in the next column. If you're on the web, the www address for the county hunter web page is http://www.delve.com/ch/ Have fun surfer dudes and dudettes!

A special prize

To all you faithful readers who have reached this point in the column, a special surprise. Send a QSL card or post card to the address at the head of this column, and it will be entered in a special drawing to be held 30 October. The prize is a 500-watt, mobile amplifier! An MFJ, ALS-500M, in fact. So send your card in right away (please, only one per person) and you may be the winner. WR

Christmas is just around the corner. Need ideas for gifts? Check out New Products on page 64. A ***Worldradio*** hat or mug would make a great gift too!



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QRP and 'Fiasco Day'

Bill Jones, KD7S, of Sanger, California, is a veteran QRPer, excellent home-brewer and seasoned camper. But even a pro such as he is not immune to the curse of Murphy, who it seems, stowed-away in his backpack on a Field Day trip to Kings Canyon National Park in the California Sierras:

"For me, FD stands for Fiasco Day, not Field Day. Everything started out just fine but didn't stay that way very long.

"I arrived at my normal Field Day site and was pleased to find my favorite campsite vacant. There are two giant Sequoia trees there exactly 150 feet apart and well over a hundred feet high.

"I have used these in the past to hang my 140 foot dipole fed with 450-ohm ladder line. With my trusty slingshot and fishing reel combination I shot a line over a limb at the 100 foot level on the second try.

"As I was pulling a length of nylon cord back over the limb I lost my footing and fell backwards. I landed on the base of my spine, fully prone, on a cement traffic barrier. I think God likes QRPers because no bones were broken but the pain was substantial.

"After a short recovery period I struggled to get the second end of the dipole in the other tree and finally got a good shot at 90 feet.

"Just as I was beginning to feel a little better I saw two armed Park Rangers approaching from the road. "What's going on here?" one asked.

"It seems someone reported that I was shooting at birds with a slingshot in the park. It took 15 minutes of talking, showing them my equipment and finally my license before they bought my story.

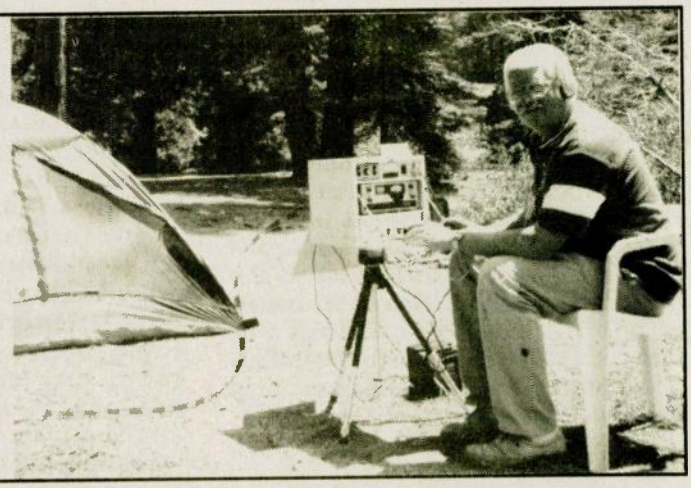
"The word spread around the campground that I was there. The result was a steady stream of visitors and curiosity seekers. Each time I started logging contacts I would get another question.

"The most delightful visitors I had were two young children. Mindy, age 10, and her brother, Casey, age 8, stuck to me like glue.

"Mindy thought CW was 'way cool' and begged me to teach her how to send her name. Within 15 minutes she had M-I-N-D-Y down pat. Then she wanted to learn the alphabet.

"The weather was really hot dur ing the daylight hours and really cold at night. I didn't sleep well. I worked almost everyone I called but only ended up with 76 contacts. My nose is sunburned.

"Next year I'm going somewhere else for 'Fiasco Day.'"



Bill Jones, KD7S, operates from his favorite campsite in Kings Canyon National Park.

CQC's new officers

The Colorado QRP Club has announced its newest slate of officers. Rich High, WØHEP, is president; Marshall Emm, AAØXI, vice president; Dick Schneider, KBØSRY, secretary and membership chairman; and Roger Wendell, WBØJNR, treasurer.

In addition, the CQC has changed its U.S. Postal address. It's now: Colorado QRP Club, POB 371883, Denver, CO 80237-1883. Via e-mail: CQC@aol.com

The mailing address for the club's periodical, however, remains: *The Low Down,* c/o Rich High, WØHEP, 740 Galena St., Aurora, CO 80010.

Regens from 'The Rock'

C.F. Rockey, W9SCH, veteran QRPer from Albany, Wisc., has written a comprehensive tutorial on a receiving system dating to the early days of Amateur Radio.

Secrets of Homebuilt Regenerative Receivers, published by Lindsay Publications, was copyrighted in January, 1996. To obtain a copy, write: Paul Washa, WØTOK, 4916 Three Points Blvd., Mound, MN 55364-1245. Call 612/472-3010. The book is $8, plus $3 shipping.

Rockey was inducted into QRP Amateur Radio Club International's QRP Hall of Fame at the Dayton Hamvention in May.

New rig from Ten-Tec

Scott Robbins, KY2P, of Ten-Tec's sales department, has announced that the company's T-KIT division is producing a 40-meter CW QRP transceiver kit in the $100 to $150 price range.

Specific features had not been finalized, other than a commitment to full break-in CW operation.

The kit is expected to be available this year. Ten-Tec is one of the oldest developers of commercially-produced QRP equipment.

Robbins says Ten-Tec is very interested in hearing suggestions about how the company can further serve the QRP community.

Ten-Tec's mailing address is: 1185 Dolly Parton Pkwy., Sevierville, TN 37862. Telephone: 423/453-7172; fax: 423/428-4483.

Canadian QRP awards

A series of awards is being offered for QRP contacts with operators in Canadian provinces and territories.

The Canadian QRP Award, sponsored by Jeff Hetherington, VA3JFF, of Niagara Falls, Ontario, "is designed to encourage QRP operations by recognizing the accomplishment of completing two-way, low-power communications with all 12 prov-

inces and territories of Canada."

Contacts do not need to be confirmed by QSL card. "If the contact was made then it may be counted for this award," Hetherington says.

To receive the certificate, send basic log data for the 12 contacts to: Canadian QRP Award, c/o Jeff Hetherington, VA3JFF, 3399 Cardinal Dr., Niagara Falls, Ontario, Canada L2H 3A6.

Include $2 or 2 IRCs for each certificate requested.

There are no date or time restrictions on the award. Contacts made prior to the award program's announcement are valid.

Certificates are numbered sequentially as well as being numbered by country and province/state/call area.

Provinces and territories include: Nova Scotia (VE1, CYØ, CY9), Quebec (VE2, VA2), Ontario (VE3, VA3), Manitoba (VE4), Saskatchewan (VE5), Alberta (VE6), British Columbia (VE7,VA7), North West Territories (VE8), New Brunswick (VE9, VE1) Yukon Territory (VY1), Prince Edward Island (VY2, VE1) Newfoundland (VO1, VO2).

FDIM QRP Papers readied

Technical papers presented during the "Four Days in May" QRP symposium at the 1996 Dayton Hamvention are now available in one package from QRP Amateur Radio Club International.

The FDIM Technical Papers book features 11 presentations, including "Considerations in Receiver Design," by Dick Szakonyi, KA3ZOW; "Coils, Linear Loads and Capacity Hats: An Overview of Small Loaded Yagis," by L.B. Cebik, W4RNL; and "Direct Conversion Receivers," by Bill Kelsey, N8ET.

To order, send $20 to Bruce Muscolino, W6TOY, P.O. Box 9333, Silver Spring, MD 20916-9333.

QRP ARCI dues hike

QRP Amateur Radio Club International, the largest QRP organization in the United States, has announced a dues increase — the first such hike in almost 10 years.

On 1 July, membership increased to $15 per year for U.S. radio amateurs, $18 for Canadian operators and $25 for DX.

The hike was precipitated by rising postal costs for the club's popular journal *QRP Quarterly*.

If you'd like to join QRP ARCI, or for more information, write membership chairman Mike Bryce, WB8VGE, 2225 Mayflower, NW, Massillon, OH 44647.

Checks and money orders should be made payable to: QRP-ARCI.

QRP Quarterly is published in January, April, July and October.

The Forty-9er (continued)

The Northern California QRP Club's popular Forty-9er milliwatt QRP transceiver (reviewed in May's ***Worldradio*** QRP column) is the focus of many, many improvements and modifications.

Details have been compiled in a spot for anyone with access to the Internet's World Wide Web. More than 20 articles featuring Forty-9er updates and changes can be found at: http://www.fix.net/~jparker/norcal.html

NorCal's Doug Hendricks, KI6DS, reports that more than 1,000 Forty-9er boards are in the hands of QRP builders.

New OHR QRP transceiver

Dick Witzke, KE8KL, who owns Big Rapids, Michigan-based Oak Hills Research, has introduced a new single-band QRP transceiver called the OHR-100.

Available for either the 40-, 30-, 20-, 17- or 15-meter bands, the unit will replace Oak Hills' popular Explorer II transceiver.

Witzke says the '100 will be the same size as the Explorer and Explorer II, but will be markedly different inside the cabinet:

Features include:

- Very stable varactor-tuned VFO covering 70 kHz using a high quality potentiometer;
- RIT with on/off switch;
- Pre-mixed local oscillator system with high-side injection on all bands except 15 Meters;
- Transmitter output that can be varied from 0-5 watts with a rear-panel control;
- Double-tuned bandpass filter in the receiver front-end;
- New true sine-wave sidetone oscillator with adjustable frequency and level;
- Local oscillator signal available via a rear panel jack for use with new DD-1 Digital Dial;
- PC board wiring terminated with pre-assembled Molex 3 circuit connectors;
- 4-pole Cohn crystal filter in the receiver IF that is variable from 1,600 to 300 Hz using a front panel control.

The kit requires the builder to wind 11 toroidal coils and comes complete with a punched, painted and silkscreened cabinet. Witzke says the OHR100 manual features plenty of drawings and instructions.

The OHR100 is $159.95.

For information, write: Oak Hills Research, 20879 Madison St., Big Rapids, MI 49307. Telephone: 616/796-0920.

Via e-mail: ohrqrp@netonecom.net

QRPer's site for CCW

QRPer John McClun, N3REY, has developed an Internet home page for operators interested in learning more about Coherent CW — a mode of transmission that has enjoyed a renaissance of interest by QRPers in the last couple of years.

The URL is: http://www.clark.net/pub/mcclun

There are also schematics, magazine article reprints, copies of newsletters and links to other QRP sites.

"If you are interested in CCW, QRP methods, keyer mods, rig mods for filtering, etc,, there is a lot of that in here," McClun writes.

McClun can be reached via e-mail at: mcclun@clark.net

A milliwatter's story

Charles Lofgren, W6JJZ, of Claremont, California, had great success with his newly-completed, Forty-9er 500-milliwatt transceiver on 40M — but at a power level he'd never intended.

He had made a few QSOs late one evening and had finished another contact the next morning when he was startled by an observation.

"I discovered that all the time I had left the absorptive SWR bridge in the 'tune' position — attenuating both transmitted and received signals by about 12 dB.

"When W7ZOI (veteran QRPer Wes Hayward) called me about midnight from the Portland, OR area — responding to my unintended low 70 mw CQ — no wonder I didn't hear him very well.

"Truth is, I don't know how long the bridge had been in that position, because the associated tuner was in the tuner-bypass position, and I wasn't paying any attention to it. On 40 Meters, the feedline feedpoint is about 1.2:1 SWR into 50 ohms without the tuner." WR

Traffic

Geri Sweeney, N4GHI

Coming attractions

August:

- CNE (Canadian National Exposition, Toronto, ON)

September:

- Norwalk Oyster Festival (CT)
- Big E (Exposition in Springfield, MA)
- Carolina Fair (Asheville, NC)
- Atlantic City Pageant (NJ)
- Western Washington Fair (Puyallup)
- Ontario Science Center (Don Mills)

Field Day

As I write this column, I'm waiting for the Eastern Area Net to start. Field Day started an hour and a half ago, and 40 Meters (where EAN meets on Saturday afternoon — CW) is full. There is not a half kilohertz left where someone is not calling. Each year my thought is the same . . . Why not cancel nets for Field Day? Of course, this seems to be a contradiction of purpose.

Field Day is a chance to simulate an emergency and get messages through. But, in a real emergency, most amateurs don't interfere with those trying to pass traffic into and out of the emergency area. In a real emergency, everyone is not trying to work everyone else. It's almost like — well, the ultimate contest. Anyone who has tried to work a net during Field Day has probably noted that folks are so busy calling FD that many don't realize anything else might be happening. It's particularly bad on CW since few listen even a second or two before they call. It takes about 8.5 seconds, at 21 wpm, to announce, "Eastern Area Net" (for those who might not understand EAN). Either folks don't care, or can't wait 8.5 seconds to start calling FD. And, yet, it seems like everyone using a key on FD is sending on or about 50 wpm. The two methods (interchanged) of finding contacts are: 1) Move the dial with one hand and when you hear a FD call, immediately use the other hand to reply. 2) With one hand on the dial, and one hand on the key, call FD yourself. If no reply in 5 seconds, move the dial and call again. And, for all that abandonment to get contacts, most find that long before the 24 hours have expired, there is nobody left you haven't worked. For those working without computers, you were duped a lot.

SSB went better. One delightful experience follows. As I readied myself (listened early) for calling the 4RN (Fourth Region Net), on 7243 at 1:45, I found a fellow amateur calling CQ FD. I asked him if we could borrow the frequency for a few minutes. He said he understood how difficult calling a net during FD was and vacated the frequency.

As with all Field Days, the nets I worked didn't clear much traffic. Nets on 75/80 Meters ran the best. 40-meter nets are just about hopeless. Even though each FD station gets extra points for sending a message to the Section Manager, it can be sent and delivered after FD. Why not just cancel nets for 24 hours? Those at home can then spend more time at FD; those at FD don't have to use precious minutes trying to check into a net, when they could be making points, and, lest you think I'm against FD, my husband John and I take the 10 p.m. to 6 a.m. shift each year with our radio club. I particularly like this shift as there are no nets with which to impede my making contacts . . . hi.

FISTS

Information for another slow speed CW traffic net was sent to me by FISTS. I've relayed many messages from and to FISTS, and it was fascinating to get a copy of their fine newsletter and learn more about their organization. Certainly the name implies the function. The only requisite for membership is "a love of Morse." They have nearly 1,000 members throughout the world and their objectives are: 1) To further the use of Morse code. 2) To encourage newcomers to the mode. 3) To engender friendships within the membership. They feel one way to do this is for veterans to take Novice operators under their wing. I enjoyed reading "Who Is Gerke?," about the fellow who devised the improved Morse alphabet. For more information on FISTS CW Club, write P.O. Box 47, Hadley, MI 48440-0047; and/or check into the slow speed traffic net on Tuesday and Thursday at 9 p.m. EDT on 3682.

Olympics

Our adventure working Amateur Radio at the Olympic trials was wonderful, as expected. Each morning we attended a short meeting before manning a power boat (signal and finish). By 10:45 the support power boat fleet paraded down the Savannah River and just off shore. There were six classes of sailboats. John and I were assigned the 470s (about 14 feet, with a two person crew). As a race started, the Amateur Radio operator on the signal boat let folks on shore know via net control and a computer network. While commercial boats were at hand with people viewing the races, it's hard to see sail numbers. With a computer network, the public and news media were able to get immediate results. As the race ended, the winner was immediately announced from the finish boat. On board race judges also used mobile phones to call in the stats. We were told this data went to another outlet. After four races, with favorable weather, (2 men and 2 women), we were back on shore by 5 p.m. for a swim in the pool. What a life!

As I write this, we are gearing up to return to the Olympics. There will be 40 countries represented in the races and we should be very busy. This week, the Olympic torch was bicycled by, within a mile of our house. Many of our neighbors were there to cheer. The cavalcade (about a quarter of a mile long) was a rousing sight. It's exciting being even a small part in such a grand idea.

Correspondence

Harvey, W4TG, wrote to shed

some light on why we use 'T' for zero and 'es' for and. He says they were the old American Morse or Landline Morse. In that code, zero was a long dash (equaling 6 dots or more in length). Modern keyers can't do that — thus, substituted 'T.' It's still extremely confusing to hear a T in numbers. CW is a language of rhythm, and T really throws the rhythm off. Es was code for the ampersand. Then came Gerke.

Harvey's letter was fascinating. Wouldn't it be great if the FISTS, perhaps with some backing from other radio organizations, would produce a well written (must have humor) book on the history of Morse code. It could include how the traffic system got started. Perhaps Doc Gmelin, W6ZRJ, could be interviewed. He authored a series of articles about the NTS called, "The Gray Papers." We need to do it before all the folks who know the history become silent keys.

Harvey goes on to say: "Another character we use all the time and borrowed from the landline code was '30,' which in that code was dit dit dit dah dit and it has been distorted to dit dit dit dah dit dah (SK). Incidentally, one of the reasons the 30s were skipped in the ARRL radiogram messages was the connotation that 30 meant 'end of item,' or 'end of work.'"

Harvey wonders if ARRL makes another change in forms, perhaps they could add HX__ with the meaning, "This is a dummy (test) message. Do not deliver." I'm not sure why we wouldn't want to deliver a test message; but would guess Harvey's thinking along the lines of the SET (simulated emergency test) sponsored by ARRL each fall. Amateurs send all sorts of emergency messages (some quite imaginative and funny) to friends and served agencies (Red Cross — generally without needed phone numbers). If, and when you deliver such messages, of course, you tell the person it's a simulated test message and try and get a response. For any refinement and/or improvement, the station sending the message should know: 1) how long it took, and 2) if there were any problems delivering the message. My experience with genuine Red Cross messages is that they arrive on Saturdays with no phone number. These usually can't be delivered until Monday. One would think that after 48 hours, it's a moot point.

Harvey, are you interested in writing a book?

Ken, WB8KQJ, in Hinckley, Ohio, sent info on more slow speed traffic nets. He says that Ohio is a hotbed for CW traffic handlers. Ken is the Net Manager of the Ohio Slow Net (6:10 p.m. EST on 3708), and he says they handle a lot of traffic. In each of the past 3 years traffic and checkins have increased. He's proud to say the OSN turned 38 years of age this summer. It makes you wonder why traffic nets thrive in Ohio and die in California . . . .

Mike, N9JIY, also wrote to let us know about several slow speed traffic nets in his area. The Wisconsin Novice Net meets daily at 6 p.m. (local) on 3.723 (about 10 wpm). The Wisconsin Slow Speed Net meets daily at 6:30 p.m. (local) on 3.645 (about 13 wpm). The Illinois Training Net meets daily at 7 p.m. (local) on 3.680 (about 12 wpm). Mike also mentioned the FISTS net, and says it runs about 8 wpm.

Note the break down in the list of slow speed traffic nets, as compiled by reader response information shows:

Eastern area: 8
Central area: 3
Pacific area: 0

Are there any CW slow speed nets in the Pacific area?

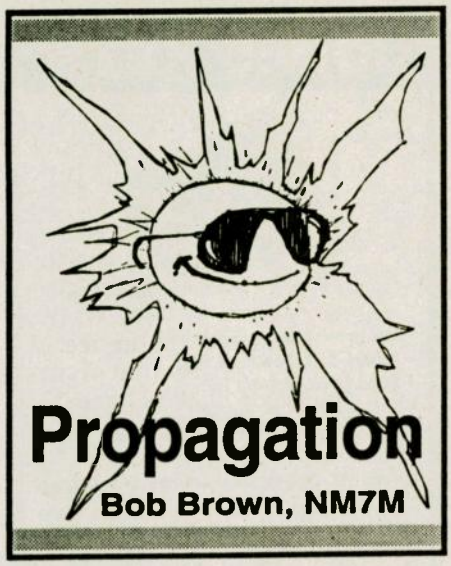
CW slow speed traffic nets

FSN (FL)	8 p.m.	3715
ITN (IL)	7 p.m.	3680
MSN (MD)	7 p.m.	3717
MSSN (ME)	6/10 p.m.	3685
CSN (NC/SC)	6 p.m.	3715
ES (NY)	6 p.m.	3590
OSN (OH)	6:10 p.m.	3708
PTTN (PA)	6:30 p.m.	3610
WNN (WI)	6 p.m.	3723
WSSN (WI)	6:30 p.m.	3645
FISTS(MI)	9 p.m.	3682

FISTS Tues/Thurs. Others daily in local time.

Let me know of any *slow* speed traffic nets in your area. It will be great when there are so many listings, we can only list one area per column! WR

NEW GUY MOVED IN NEXT DOOR IS A BAKER---- AND HE'S GOT A TV SET WITH A WIDE OPEN FRONT END!!



As we get older, we seem to start thinking about our "roots," family and the like. In that regard, I recently took up studying Norwegian. But as you might expect, I tried to use radio to my advantage by listening to Radio Norway, in hopes of improving my knowledge of the language. It exactly didn't work out that way; I discovered that the HF station, NRK, was transmitting on two different frequencies, one to me via short-path and the other via long-path. So next thing you know, my "roots" were quickly forgotten and, instead, I focused on propagation questions. That figures, but I must say the propagation from Norway proved very interesting.

Okay, I'm starting the "roots" routine again but admitting defeat at the outset, I am going right to my "radio roots," the 160-meter-band. That was where I learned my CW over fifty years ago, listening to code practice of Mondays, Wednesdays and Fridays and The Lone Ranger on Tuesdays and Thursdays. In spite of having my priorities slightly skewed, I did manage to learn the code and even got a license, W6PDN. So now I'm back, worrying about propagation on 160 Meters, a medium-frequency (MF) band. You might find that curious as I've stayed away from MF bands previously. Let me tell you why.

Signals on 160 are more at the mercy of ionospheric electrons than any other band in our spectrum. For one thing, signals around 1.8 MHz suffer more absorption per electron than any other amateur frequency. To see what I mean, go back to my March '96 column and look at the figure there; just add another curve, equally-spaced above the others and peaking around 65 km, and you will see what I mean.

In addition, the 1.8 MHz frequency is close to the critical frequency of the E-layer around 100 km altitude so questions of path cutoff to short, lossy E-hops instead of long F-hops become important. Finally, 1.8 MHz is close to the gyrofrequency of electrons in their motion around the geomagnetic field. That means if we want to look at ray paths, in principle the calculations should include not only the ordinary wave we're used to thinking about at the HF end of the spectrum but also the extraordinary wave that shows up in ionosonde records due to electrons interacting with the earth's field.

For 160 Meters, there is one saving grace, the extraordinary wave is heavily absorbed, seldom showing up on ionosonde recordings at frequencies below 3-4 MHz. So, as they say, we "luck out" in that respect but otherwise, Top Band, as spoken of by its loyal followers, is a tough place to operate. But it's interesting in surprising ways; let me show you how.

First, I said 1.8 MHz is close to the critical frequency for the E-layer. But absorption being so great, Top Band DXers work in the dark of night. So what's the story about E-layer critical frequencies then? Figure 1 shows foE as a function of solar zenith angle, 90 degrees corresponding to when the sun is on the horizon. The International Reference Ionosphere (IRI) indicates that E-layer ionization does not disappear at night, at least not completely, and there's enough ionization at places where the sun is 30 degrees below the horizon to have a foE value of 0.5 MHz.

Leaving aside the question of how that sort of measurement is made, especially since it implies that an ionosonde was working down in the range of broadcast band frequencies, let's ask: "where does the ionization come from?" In that regard, there are three sources, with one close by and the other two out there in our galaxy.

The source that's close at hand is the sun, giving off intense UV emissions from hydrogen in its atmosphere. Those emissions, termed the Lyman Series, can be scattered, i.e., absorbed and re-emitted, by hydrogen atoms high in the earth's atmosphere, the geo corona, and give rise to ionization in the dark atmosphere at E-region heights. Of course, that source of ionization will vary with the 11-year solar cycle and even with 27-day solar rotation if there's a "hot spot" on the solar disk during times of high activity.

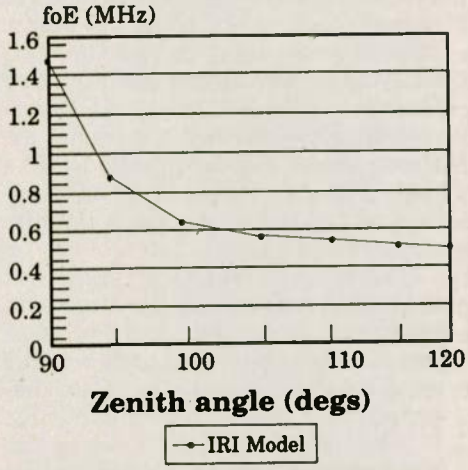


Figure 1. foE vs. Zenith angle

The more distant source of ionization is the stars in our galaxy, sending us a weak flux of x-rays and UV radiation, both capable of ionizing nitrogen and oxygen molecules in the E-region. And finally, there's galactic cosmic radiation, extremely energetic protons that rattle around in galactic magnetic fields and able to pass through the earth's magnetic field and reach the atmosphere. The flux of those particles, unlike the starlight and galactic x-rays, will vary with solar activity as the sun's magnetic field will deflect some away from the earth, more so during times of high solar activity when the solar magnetic field is stronger.

As an "aside," let me say that as a youngster, learning my CW from code practice sessions on 160 Meters, I never dreamed that 160 Meter propagation could be all that complicated. Of course, I was listening to a station

across town in San Francisco, not DX across continents or oceans. But I think you get the idea; it all looked so simple at the time and now I see all that's involved. Interesting to think about, but I digress.

So now we have ionization on the dark side of the earth, a rather weak E-region. But it will still refract 1.8 MHz waves, sending some back toward ground if their angle of incidence on the ionosphere is too low; others, with greater angles of incidence, can penetrate the region and go on into the F-region where they will be refracted downward, back toward ground. But the critical frequency foF2 of the F-region is well above 1.8 MHz so even high-angle waves will finally be returned to ground level. The question then becomes just how far the two types of paths progress before striking ground again.

One can work out answers to those questions using ray-tracing methods and they show that the F-hops are roughly twice as long as the E-hops, 2,000 km as compared to about 1,000 km, and have one less ground reflection for the same distance. That serves to cut down on reflection losses from the ground. The question then becomes "What are the ground losses like on 1.8 MHz?" See Figure 2 for the answers — covering reflections off of sea water, ground and polar ice. A quick look at that figure tells you that polar paths are going to be very lossy, say W7 to Europe or W1 to Japan, especially at high angles, while paths over sea water, W7 to Japan or W1 to Europe, would be very good no matter what the radiation angle at reflection. Of course, those ideas are borne out in practice but further complicated by polar paths going across the auroral zone. In that region, auroral activity can either absorb signals or skew them off in other directions.

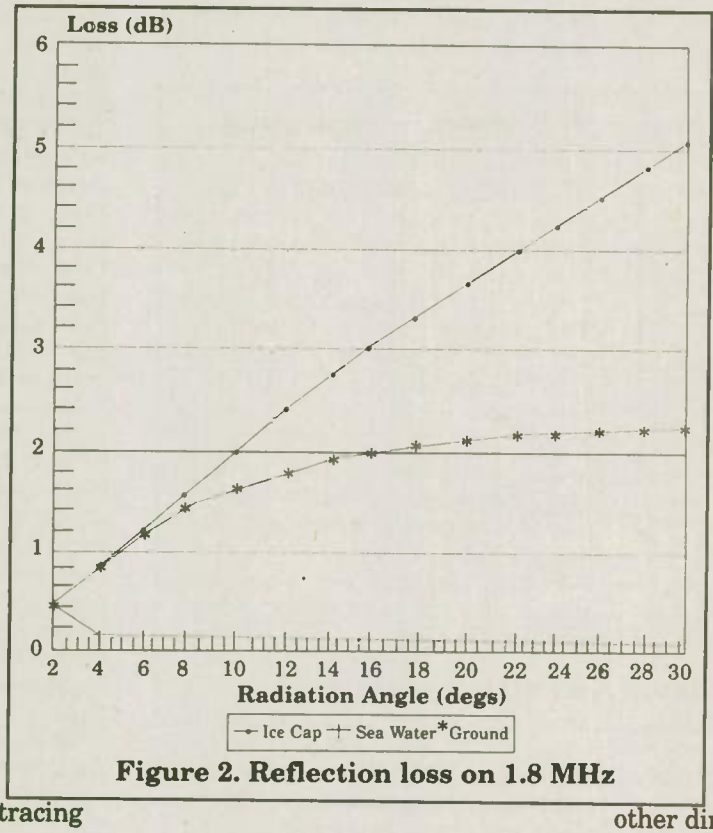


Figure 2. Reflection loss on 1.8 MHz

It would seem to be something like "You pay your money and take your chances" when it comes to DXing against chances of auroral activity or those reflection losses. The idea then would be to think about one's antenna and find a way to at least minimize the losses, say using a low-angle radiator like a vertical antenna. But that's easier said than done, ground losses close to the radiator affecting the far-zone radiation pattern.

But wait, there's another complication we haven't dealt with yet, the electron density profile that goes with low critical frequencies in the night-time E-region. I've got news for you; there's a BIG surprise there, a valley in the electron density profile just above the E-region peak. That's right, the electron density above the 100 km level is lower than at the peak of the E-region, as shown in Figure 3. For that particular case the value of foE at the E-peak is 0.5 MHz while the value at the bottom of the valley is 0.3 MHz. So where did that valley come from and how does it, or can it, affect our signals, adversely or otherwise? Let's take the questions in order.

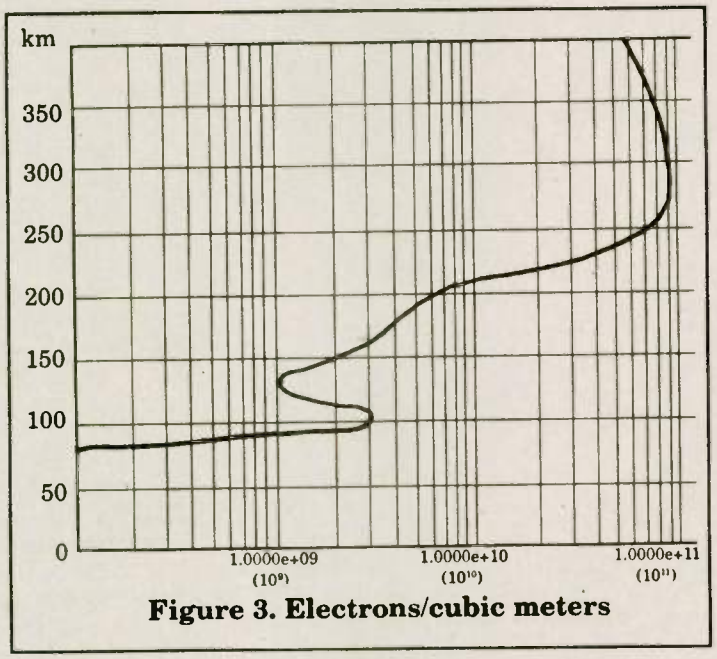


Figure 3. Electrons/cubic meters

Where did it come from? Well I can say it was not seen in ionosonde records; those records show locations where ionization levels off or peaks, the E-, F1- and F2 regions, not any dips in ionization or valleys. The ionosonde method uses pulses of RF sent vertically upward, the transmitter frequency varying from some low value, say 0.5- 1.0 MHz, up to about 20 MHz and the RF is reflected from the height where the RF frequency corresponds to what is called the "local plasma frequency." The height of reflection is obtained by the time of flight of the RF pulse, up and down.

Actually, a "virtual height" is calculated by assuming that RF travels with the speed of light in a vacuum, certainly not the case in a real ionosphere, and a "true height" only calculated when the profile of the ionosphere is known. But the point of all this is that the valley is "hidden" from the ionosonde technique, vertical RF pulses being reflected at heights below about 100 km when the QRG is *below* the critical frequency foE and then from F-region heights above 160 km when the QRG is above foE. In short, RF does not get to the valley as the frequency of the ionosonde is swept, pulse by pulse, from the low to high frequency limit. So how do we know there's a valley there?

Well it was guessed at more than thirty years ago, aeronomers knowing that the F-region lasts well into the night while the E-region decays with sunset. The argument was that some ionization had to remain above the E-region as F-region processes would take over at some point and keep the electron density from vanishing in a catastrophic manner. But how much ionization remained? Good question and it could be argued from many standpoints. But why do that? Another technique came on the scene, incoherent scatter radars (ISR), that could pick up signals from individual electrons (!), not echos sent back by hordes of electrons and the ionospheric refraction process.

And that's the source of data for Figure 3, from studies with ISRs at Arecibo, Puerto Rico and other locations, even at high latitudes. So that valley at night, above the E-region peak, is for real. Once it was known, it became a prime candidate as a means for ducting signals over great distances. The idea was to get signals in the valley region and then they'd be reflected from the bottom of the F-region and the top of the E-region, thus allowing them to go great distances along the valley without those lossy ground reflections. But it seemed to be hard to get signals in there. That's another story, a bit involved, and we'll get to it next time. Stay tuned. WR

Wires & Pliers

EZ-Cheapo all-band HF dipole antenna

Mike Greenfield, N9JIY

You need a tuner to use this antenna; preferrably one with connections for balanced line (like the old MFJ 945C or current 901B). If your tuner doesn't have these connections, you'll need a 4:1 balun. An SWR meter (cross needle?) is a help, but when your solid state rig is willing to put full power into the antenna, you know you're close enough. My antenna tunes from the bottom of 160 Meters to the top of 10 Meters with no SWR over 1.2:1! However, it is narrow-banded.

Here's the shopping list:

- 100' of antenna wire. I use 17ga aluminum electric fence wire at ¼ mile for $8, a deal! Cut the 100' into two 50' lengths.
- 3 Plastic "dogbone" insulators.
- 300-ohm TV twinlead, . . . enough to get from the center of the antenna to the twinlead connectors on your tuner, or your 4:1 balun. Radio Shack outdoor type 15-1174 or 15-1175 is what I used.
- Twinlead standoffs, nylon wire ties, electrical tape.
- Rope or similar to hang the antenna, and a place to hang it.

Basic assembly is in a line: Rope, end insulator, 50' wire, center insulator, 50' wire, end insulator, rope. Put the wire through the insulator holes just once! Keep wire twists close to the insulators.

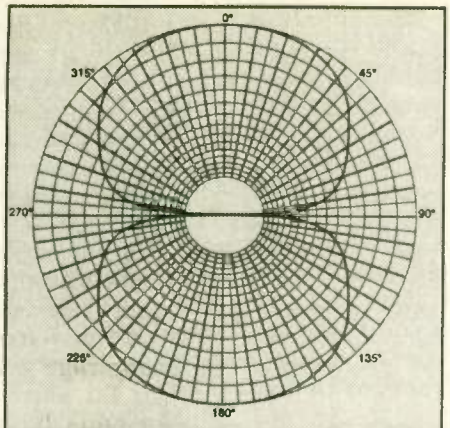
Then split about 6" of one end of your twinlead. Trim the insulation on these 6" pigtails until one will push through each hole in the center insulator. A snug fit is fine. Push the pigtails through the insulator holes all the way. Don't cross them. Fasten them tight with tape and wire ties. Strip insulation off ¾" of the ends.

If you're using copper antenna wire, you can solder the twin lead ends to the antenna wires where they meet. To bond copper twin lead to aluminum wire, I smear both with electricians' anti-oxidant paste and clamp them together with small electricians' split clamping bolts.

Hang the antenna with the ropes. I use a "halyard" setup on my pole so I can lower the antenna anytime, . . . like during ice storms! You'll need over 100' to hang it in. I've got 27' of it "doglegged" from my chimney across the roof, and 73' strung to a pole in the back yard. This also puts the feedpoint just 20-some feet from my house.

Use twinlead standoffs and creativity to run the twinlead to the back of your tuner if yours has twinlead connections. Or run it to a 4:1 balun of yours doesn't. Run coax (10 feet max??) from the balun to your tuner. Keep the twinlead away from conducting materials. Let the twinlead drop loosely straight down from the antenna.

And that's it! Find tuner settings that reduce your SWR to nearly 1:1, and go. Some frequencies take more fiddling than others. WR



AERIALS

Kurt N. Sterba

Some hams have SWR meters which do not visually explain about the actual watts situation. Others have wattmeters which do not read out in SWR. So, here we are adding the two together. In addition is the dB loss that would occur if it were not the case that the reflected power is sent back up the feedline. The situation is a 100W output transmitter.

SWR#	Pwr Reflected	dB Loss
1.1	0.24W	-0.010
1.2	0.80W	-0.034
1.3	1.70W	-0.074
1.4	2.80W	-0.123
1.5	4.00W	-0.177
1.6	5.30W	-0.236
1.7	6.70W	-0.301
1.8	8.10W	-0.366
1.9	9.60W	-0.438
2.0	11.10W	-0.510
2.1	12.60W	-0.584
2.2	14.00W	-0.655
2.3	15.50W	-0.731
2.4	17.00W	-0.809
2.5	18.40W	-0.883
2.6	19.80W	-0.958
2.7	21.10W	-1.029
2.8	22.50W	-1.107
2.9	23.70W	-1.174
3.0	25.00W	-1.249

This may be the first time you have seen this information presented in this manner. Thus you can see the fallacy when you read such fear-inducing hysterical articles about your precious transmitter losing most of its signal from moderate SWR levels.

It should be mentioned that the SWR measured at the transmitter end will always be less that the actual SWR at the antenna terminals. That is because some of the reflected power (that would indicate on the meter) does not make it all the way down because of the loss in the cable.

For example, assuming a 100 ft. cable with a loss of 0.5 dB, an SWR of 3.0 at the antenna feedline junction would instead read 2.6 at the transmitter.

While on this topic would be a good place to give a tip of the Kurt chapeau to Jack Althouse, K6NY, of Palomar Engineers, Escondido, Calif. I'll explain. In order to add some authoritative voices to what seems to be a controversial subject, the editor of ***Worldradio*** (upon my request) wrote letters (addressed to Chief Engineer) to several manufacturers of wattmeters. They were asked what happened to the forward power readings under SWR conditions. Did the reading go down, being fought by the power returning?

Did the power go up, reading the power being reflected back up to the antenna? Did the reading stay the same? Or something else?

The manufacturers were told they could be quoted by name and company or if they preferred the material would be used without attribution. The letters to Bird, Coaxial Dynamics and Teledyne were not answered.

Palomar Engineers was the only one that answered!!! (See ***Worldradio***, June, 1966, Page 14.)

I shall now attempt to calm and soothe those who are concerned because their SWR is higher than they wish. If the following can be spread around it may end that "I don't get out as well in this part of the band because my SWR is higher." And it may end that "My antenna is cut for the phone portion of the band and doesn't work well in the CW portion."

The following is from a great antenna book privately printed and distributed in 1969 by the late Frederick von Hayek.

If your feedline, of 100 feet, at a particular frequency has a loss of 0.5dB here is what the additional loss caused by indicated SWR will amount to, in dB.

SWR	Loss
2:1	0.12
3:1	0.27
4:1	0.47
5:1	0.72
7:1	1.00
10:1	1.50
15:1	2.50
20:1	3.00

So, as you can see, one does have to go a long way until there is half an "S" unit loss. But now comes a warning that you most likely have not seen anywhere else, and others have been remiss by not printing it so I must do so periodically. The power handling capacity of your cable decreases as the SWR climbs. A 2:1 SWR has cut it in half. A 3:1 has reduced it to one-third. A 10:1 SWR reduces it down to one-tenth, etc.

We now turn to the "What were they thinking?" department, also known as "That's not writing, that's typing."

A well-known antenna author, in a book published by a respected organization wrote this: "The good news about vertical antennas is that they require very little real estate, and they produce a low radiation angle." Well, first, in order to really have a low angle with a vertical you MUST have a quality ground screen.

Next, let us examine a quality ground screen, conveniently described by the famous author on but just the previous page, and that is 120 radials, each a quarter-wave long. For 3.5 MHz each wire would be in the neighborhood of 70 ft. long. That comes to a diameter of 140 feet, and a circumference of (using 3.141592654 which will deliver acceptable accuracy for the level of work in this exercise) 440 ft. That 140-foot wire would take up just about all the diagonal space of a lot 75x125 feet. So much for "very little real estate."

And, if I may ask, why are we in the Amateur Radio literature always being told to put in 120 radials? I'll bet that 119 would be just as good. And probably 118, too. Without looking up the charts, I'm sure that 60 would produce a signal to the degree that the difference between that and a 120-radial setup could not be seen on an "S" meter, even with a big magnifying glass.

And, of course, could not be discerned by ear.

While a discussion of an antenna for Ten Meters, while at the bottom of the sunspot cycle may seem a bit bizarre, those who are on the band (for better or for worse) may find something that will help them here.

First, a review (for some, and for others: "Gee, I didn't know that!")

Let's look at the quarter-wave vertical.

Some have them with magnetic mounts on their cars for the VHF bands. Others, having heard that the angle of radiation is lower, have obtained five-eighths wave antennas. Five-eighths is a smidge over four-eighths which many (but not all) will recognize as being the same as one-half.

As a vertical antenna is lengthened from a quarter-wave, the angle of radiation lowers. This reciprocal action continues to occur until the antenna reaches five-eighths (0.625) wavelength. That is the lowest angle of radiation. After that, if the antenna is further lengthened, the angle of radiation would start to rise back up.

So now let's transfer all that from the car and VHF to the home and 28 MHz. First we find one-eighth, which will then lead to five-eighths. Taking the famous, tried-and-true, 234/28.4, we find the answer to be 8.239 ft., which is one-quarter wave. Dividing that in two, the answer is 4.119 ft., that being one-eighth wave, and multiplying that by five, we see 20.598 ft.

So, we are going to scale up that 5/8-wave antenna for VHF up to 10M. But wait! Where is the car that makes up the other half of the antenna while mobiling around on VHF?

Right here! We get another wire which is also 20.598 feet long and make a vertical (center-fed) dipole which is 41.197 feet long. Get the end up a bit off the ground. It shouldn't take much effort to hammer together a light, small-diameter 42-foot wooden pole which could be held up vertically with some prudent and non-conductive guying. The antenna would, of course, have to be fed with open-wire line as the impedance is high.

A tuner or other matching devices would have to be used.

Let's check our work. We have now, two five-eighths wave wires. Five-eighths and five-eighths equal ten-eighths which is the same as five-fourths. Going back to 234/28.4 and the answer being 8.239 we then multiply that by five and get 41.197 ft., the same as the answer above.

Try to run the feedline parallel to the ground (at a 90-degree angle to the antenna) for as far as possible before bending it (in a gradual curve) heading to the station.

For those who, when they came into Amateur Radio, found Two Meter repeaters in all their glory already, a short history lesson. Prior to the days of the hams utilizing the hand-me-down commercial gear retuned to the 2M ham band, 10 Meters was the local ragchew band.

That made a lot of sense. You could run low power for a decent ground-wave coverage. For mobile, a quarter-wave whip was far more efficient than a 75M whip. A full size whip for 10M was about 99 inches (8¼ feet). Whips were unobtrusively mounted at homes without drawing a lot of attention. And, a local ragchew on 10M (unlike 75 Phone) didn't take up spectrum space over thousands of square miles.

Moving from a 42-foot antenna, now let's try to help those who live in neighborhoods where the slightest glimmer of aluminum will have the nearby residents frothing at the mouth.

Should you have a six-foot fence, at one of the posts you are going to put up a 20M wire vertical (16.5 ft.) BUT bend it at the six-foot, or so, level and run it horizontally along the fence. Yes, it is up and out. Of course, all the usual standard operating practice regarding radials still applies, as close to standard as you can get it. Obviously all of your radials will be in your yard and none in your neighbors'. Don't worry about it, performance will not suffer all that much. So, there is six feet vertical and 10.5 feet horizontal all hidden away. You could experiment with adding another horizontal run in the opposite direction, creating something such as the top-loaded vertical.

Let's say you want to get on 40 Meters. A half-wave dipole is around 65 feet. You could probably run a dipole along the back and side fence. A dipole hidden in the garage will work. Go horizontal as far as you can and then let the ends hang down vertically. Don't worry about it. Only about 2/3 of the dipole is really important anyway.

These "screwdriver" antennas with the control box are becoming quite popular, not just only as mobile antennas, but for home use as well.

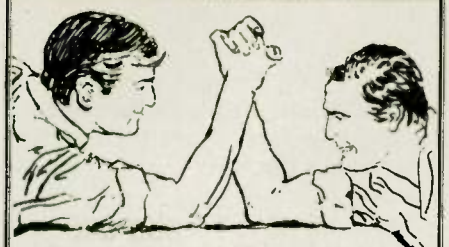
(KNS says his next three columns will have all the other antenna article and book writers saying, "I wish I had written that.") **WR**

Probe launched into Ariane 5 failure

The European Space Agency and the French space agency have set up an independent board of inquiry to look into the causes of the failure of the first Ariane 5 launch vehicle. The rocket had to be destroyed following its launch on June 4th from the ESA Space Center in Kourou, French Guiana.

The AMSAT News Service says that investigators are looking closely at the launcher's electrical and software systems. The Ariane 5 was carrying the European Space Agency's four cluster satellites on a science mission to study earth-sun interactions. The vehicle veered off course after nearly 40 seconds of flight and was destroyed by an "onboard neutralization system." Preliminary analysis of the telemetry data confirms that the propulsion stages functioned correctly.

AMSAT's Phase 3-D ham radio satellite is scheduled to be launched in October using the same type of rocket. In the wake of the 4 June failure, AMSAT officials have not ruled out a delay in that schedule.



Contest Corner

Don Durk, KA1DWX
76226.1414@compuserve.com

Surf's up!

'Contesting' on the web

If you haven't tried it you should. The Internet truly has something for everyone and it's the next best thing to instant coffee.

You can browse all kinds of neat contest material with convenient 'Links' from one page to another. On-line, you'll find National Radio Associations (ARRL, NRRL, DARC, ARI etc.), magazines (, NCJ, etc.), local radio clubs, Regional Contest Clubs (PVRC, YCCC, NCCC, etc.) and individual contester's web pages (KA9FOX, etc.)

If you haven't already poked around you may want to start with the *CQ* page (http://www.access.digex.net/~cqmag. Here you'll find the following sub divisions: Radio Clubs; DX Info (DXpeditions/ Travel Abroad/ Solar Info/ Prop and Skycom); Other useful sites(Latitude/ Longitude info/ Programs/FCC Regs/FTPs); Commercial sites — manufacturers et. al; Organizations-FCC, RSGB, ARRL, WIA; Hamfests; Space/ Sats; WX; Call signs; Packet/ RTTY.

Link over to KA9FOX (http://www.QTH.com/ KA9FOX) with available sub divisions to: QSL Info; Callbooks; contest calendars; DX bulletins and clubs.

Perhaps you'd like to join AD1C — check out Jim's site (http://www.tiac.net/users/ ad1c/internet-dxcc.html) where he's got 142 Internet listed hams in 142 countries (WWWCC). Jim is probably tops on the WWWCC honor roll!

Late August 'tests

(see August ***Worldradio*** magazine for details)

- **SEANET SSB 'test**
  24 August 00:00-25 August 24:00
  (RST+NUMBER)
- **UTAH CW/PHONE QSO Party**
  24 August 15:00-25 August 21:00
  (RS(T) + NAME + NUMBER + ST/PROV/DXCC COUNTRY or COUNTY (29) for UT stns
- **TOEC WW CW Grid 'test**
  24 August 12:00-25 August 12:00
  (RST+GRID)

September 'tests

- **LZ CWDX 'test**
  7 Sept. 12:00-8 Sept. 12:00
  (RST + ITU ZONE not CQ ZONE)
  Q any station in test. 80-10 Meters. 10 min rule. Score— pts(6 for LZ; 3 for other continent; 1 for same continent) x mults (ITU zones on each band). single op, single band//single op, multi band//multi op, multi band, 1 transmitter//SWL. Awards. BFRA, P.O. Box 830, 1000 Sofia, Bulgaria.
- **ALL ASIAN SSB 'test**
  7 September 00:00-8 September 24:00
  (RS+ AGE or zero if you chose)
  160 -10 m. Single op single band; single op multi band; multi op multi band 1 tx; multi op multi band multi tx. Score — pts(1 pt for ea Asian Q 7-28 MHz; 2 pts for 3.5 MHz and 3 pts for 1.8 MHz) x mults (For Asian stns — 1 mult for ea DXCC country per band. For non-Asians Asian prefixes on each band per WPX rules). Separate logs per band. JARL,PO Box 377, Tokyo Central, Japan
- **IARU REG 1 SSB FD 'test**
  7 Sept. 15:00-8 Sept. 15:00
  (RS+ NUMBER)
  Q 1x per band 80-10 Meters. G3UFY.
- **NA CW Sprint**
  8 September 00:00-03:59
  (Calls+NUMBER+NAME+ST/PROV/DXCC COUNTRY)
  Q 1x per band, 80, 40 and 20 Meters only. 40 kHz up. NA stns Q all. QSY rule: If you call CQ, QRZ, etc. you can only work one stn in response to that call. You then must move at least 1 kHz to work another stn or 5 kHz before calling CQ, QRZ, etc. Once you QSY, you may not make a new QSO on the earlier frequency until you have made a contact at least 1 kHz or 5 kHz away. Score pts(Qs)x (Total states{not KH6}+VE provs(8 possible—{VE1 or VO1 or VO2},VE2-VE7, {VY1 or VE8}+NA countries {excluding USA and Canada}. Non North American countries and KH6 are ok for QSO pts but not mults. Team competition by pre-registration w/N6TR. N6TR/NCJ.
- **DARC Digital Corona 'test**
  8 September 11:00-17:00
  (RST+NUMBER)
  Q 1x per mode—RTTY, AMTOR,

CLOVER and PACTOR. 28 MHz only. Score—pts(1 per Q) x mults (DXCC country/ WAE country list and each call district in JA,W and VE). Single op// SWL.DF5BX.

•YLRL SSB/CW Howdy Days

9/11 Wednesday 14:00-9/13 Friday 02:00

(RS(T)+NUMBER+YLRL member or non member) Q 1x per band not each mode. 80-10 Meters. CW— up 40 to 70 and 21.120-21.150 and 28.150-28.200; SSB — 3.940-70, 7.240-70, 14.250-280, 21.380-21.410 and 28.300-28.610. Power limit 750W out CW; 1500W PEP SSB. Score — pts(2 for ea YLRL member Qd; 1 for non member). Awards. K8DHK.

•ARRL Sept. VHF 'test

14 September 18:00-16 September 03:00 (Grid Locator)

Q ea stn 1x per grid square per band. Keep 50.100-125 open for Intercontinental Qs. Scoring—pts(1 for 50+144 MHz; 2 for 222 +432 MHz; 3 for 1296 MHz; 4 for 2.3 GHz or higher) x mults (grid square total for all bands—ea different grid square counts as 1 mult on each band). No repeaters. Single op, 1 band // single op, multi band//single op, QRP portable//Rover// multi op//Ltd multi op. Awards. ARRL

•WAE SSB 'test

14 September 00:00-15 September 24:00 (599+NUMBER)

Q 1x/band. 3.5-28 MHz NO WARC BANDS. 36 hour max for single ops. World Qs EU only. EU Qs outside EU. Non-EU may send QTCs (but not more than 10) to each EU stn (It's ok to send the 10 spread out in 2 groups of 5; 3 groups of three and 1 group of 1, etc.) A QTC is info on a prior Q with an EU stn.

The format is Grp 1/10, 2/10, 3/5, 4/5 etc. this means your first group having ten exchanges, your fourth group having 5 exchanges etc. You then send time/stn/nr for example 0001/DJ6QT/020 0002/DL1IAO/034 0004/DJ6RB/023 etc. EU stns receive no more than ten QTC from each station outside EU. Score - Number of QSO'S + QTCs x multipliers (Non-EU = Nr of EU countries per band {WAE country List} x2 for 14/21/28; x3 for 7 MHz; x4 for 3.5 MHz. EU stns= 1 mult per band for each non EU country per DXCC list.) Single op all bands/ multi op single transmitter/ SWL. Club Competition. WAEDC, PO Box 1126, D- 74370 Sersheim, Germany.

•NA SSB Sprint

15 September 00:00-03:59

See 8 September NA CW SPRINT.

3.850;7.225 and 14.275 Team competition by pre registration w/K7GM. K7GM/NCJ.

•SAC CW

21 September 15:00-22 September 18:00

(RST+NUMBER)

Q 1x per band. Q JW, JX, LA-LJ, OF-OZ, 7S, 8S, SI-SM and TF. 80-10 Meters.Score — pts (EU stn — 1pt/ Scandinavian stn; Non-EU stn-1 pt 14-28 MHz, 3 pts 3.5 and 7 MHz) x mults (SAC call areas (0-9) per band. /p=0. Multipliers are each call area number NOT prefix. If you Q SI3, SM3, 7S3 and SK3 on one band it is one mult for S_3. Areas are: JW1-0; JX1-0; LA/LB/LG/LJ1-0; OF/OG/OH/OI1 -9; OJ; OX 3-5; OY1-0; OZ1-0; 7S/8S/SI/SJ/SK/SL/SM1-7 & 9& 0; TF1-0. 10 minute rule. Single op, multi band 1 Tx// single op multi band 1Tx QRP <5 W//multi op, multi band 1 Tx/ / SWL. Awards, Plaques. Show dups in log. SM3CER.

•ARRL 10 GHz 'test

21 September 8 a.m.-8p.m. Local

22 September 8a.m.-8p.m. Local

This is the second weekend of a two weekend test. (See the August column of ***Worldradio***) (Send six character maidenhead locator — see *QST* April '94 p.86; Signal rpt optional) 2 categories: A) 10 GHz; B) 10 GHz and up. Q 1x per location per band. A different location means a move of at least 16 km (10 Miles). Pre-scheduling of Qs is recommended. Try 7 p.m. or later on 3.818 the Tue, Wed + Thur before the test or 144.230 + 146.550 MHz. Ck *QST* for details.*QST*.

•SAC SSB 'test

28 September 15:00- 29 September 18:00

See 21 September SAC CW 'test (RS+NUMBER) SM3CER.

*CQWW/ADRS JOURNAL

•Digital 'test

28 September 00:00-29 September 24:00

(US/VE-send RST+ST/VE area+CQ Zone; Others send RST+CQ Zone) RTTY, ASCII, AMTOR (FEC and ARQ) and PACKET. Q 1x per band not mode. 80-10 Meters. 48 hours ok. 10 minute rule. Score-pts(1 for own country; 2 pts in ur continent but not ur country; 3 pts outside ur continent) x mults (For each band-ea US state {48 max}+ VE area {13 max-VO1; VO2; VE1, PEI; VE1, NB; VE1, NS; VE2; VE3; VE4; VE5; VE6, VE7; VE8, NWT; VY}+ DXCC country or WAE country {KH6 and KL7 are counted as country mults not state mults}. High Power>150W class and low power class<150W. Single op all band//single op 1 band//single op assisted all band only//multi op 1 tx all band only//multi op multi tx all band only. Certificates KT1N.

October-December 'tests

10/5 Weekend
- •VK/ZL SSB 'test
- •EU SSB Sprint
- •RSGB 21/28 MHz SSB 'test
- •F9AA 'test
- •CA QSO Party
- •RAC VHF/UHF 50 MHz Sprint

10/9-10/11 Midweek
- •YLRL CW 'test

10/12 Weekend
- •EU CW Sprint
- •VK/ZL CW 'test

10/19 Weekend
- •JARTS WW RTTY 'test
- •ASIA/PAC Sprint
- •German WAG 'test
- •RSGB 21/28 MHz CW 'test
- •ARCI QRP CW 'test
- •IL CW/SSB QSO Party
- •IBEROAMERICANO SSB 'test

10/23-10/25 Midweek
- •YLRL SSB 'test

10/26 Weekend
- •CQWWSSB
- •ALL ASIAN SSB

11/2 Weekend
- •High Speed CW 'test
- •ARRL CW SS

11/9 Weekend
- •JA INT'L DX SSB 'test
- •WAE RTTY

11/16 Weekend
- •OK/OM DX 'test
- •RSGB 1.8 MHz CW
- •ARRL SSB SS

11/23 Weekend
- •CQWW CW

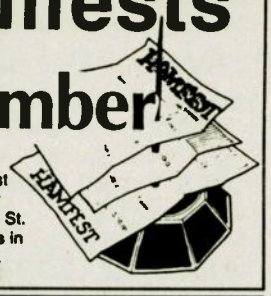
Not Thanksgiving!

12/7 Weekend
- •ARRL 160 'test

12/14 Weekend
- •ARRL 10 Meter 'test
- •TARA RTTY Sprint

WR

Hamfests September



Do you have a hamfest coming up? Send your information to our 28th St. office at least 2 months in advance of your event. We'll send prizes!

Canada

The **Manitoba Amateur Radio Museum (MARM)** will hold a hamfest 7-8 September on the grounds of the Manitoba Agricultural Museum at Austin, Manitoba. Features include huge flea market, commercial displays (all under one roof, drive to your table), ladies and kids activities, full course supper, excellent camping. Admission is $5, tables and tailgaters $5, supper $8, dance $10, camping $7 (no electricity) or $9 (with electricity) per night. For further information, contact Dave Snydal, VE4XN, 25 Queens Crescent, Brandon, Manitoba, Canada R7B IGI or Packet VE4BBS @ VE4BBS #HWD.MB.CAN.NA. Talk-in on repeater 146.91(-).

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The **Quarter Century Wireless Association Convention** will be held 4-5 October in beautiful OTTAWA, about a 2½ hour drive west of Montreal; 4½-6 hours east of Toronto and Niagara Falls. The Citadel Inn Hotel will be the scene of activity with Amateur Radio sessions on Packet radio, the moving of a radio broadcast station, moonbounce at the Algonquin Observatory, etc. For convention info, contact Keith Bedal via packet at VE3GFI @ VE3FD. #econ.on.can.noam or 613/828-1870. For registration, contact Carl Everson, P.O. Box 4, Osgoode, Ontario Canada KØA 2WO.Telephone 613/826-2426 e-mail boØ75@freenet.carleton.ca

Alaska

The **Anchorage ARC** will hold its Silver Anniversary Hamfest on 21 and 22 September at the Kincaid Park outdoor center in Anchorage. This ARRL-sanctioned event is the largest Amateur Radio event in the state of Alaska and is attended by hams from across the state, Canada and the Pacific Northwest. Features include amateur license exams, FCC commercial radio license exams, the Alaska QSL Bureau, demos, guest speakers, and door prizes. For information, contact Robert Wilson, AL7KK at P.O. Box 110955, Anchorage, AK 99511; 907/248-0976 (home), 907/271-5304 (work).

Arkansas

The **Twin Lakes ARC** will hold a hamfest on 21 September from 9 a.m. (setup 6 a.m.) to 3 p.m. at the National Guard Armory on Highway 62SW. Admission is $3, tables $5 (includes one admission). Contact either Phil Waters at 501/425-7406 or Miles Waldron at 501/492-4466.

California

The **Sonoma County Radio Amateurs, Inc.** will hold a swapmeet on 21 September from 7:30 a.m. (vendors 6:30 a.m.) at the Holy Ghost Hall, one mile north of Sebastopol at the corner of Hwy 116 and Mill Station Roads. Breakfast and lunch will be available. There will be an auction and VE testing session. Seller spaces are $10/indoors or out, tables are provided for indoor spaces only. For information, contact Rick Reiner, K6ZWB, at 2120 Slater St., Santa Rosa, CA 95404; 707/575-4455 or c/o Sonoma County Radio Amateurs, Inc., P.O. Box 116, Santa Rosa, CA 95402.

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The **Livermore ARK** will hold a swap meet on 1 September, 7 a.m. to 12 noon at Las Positas College, 3033 Collier Canyon Rd. (Airway Blvd. exit to north of 580 highway) in Livermore. Features include new, used, surplus ham, computer gear, misc. electronics and testing equipment, refreshments. Admission and parking is free. No VE exams. Sellers pay $10 space fee. Contact Noel Anklam, KC6QZK, at 510/447-3857 eves. or leave message days at 510/783-2803. Talk-in on 147.045(+) (PL 94.8) and 145.350(-).

Connecticut

The **Candlewood ARA** will hold the Western CT Hamfest on 15 September from 9 a.m. (setup 7 a.m.) to 2 p.m. at the Edmond Town Hall, Route 6 in Newtown. Exit 10 on I-84. New equipment dealers, flea market, tailgating, electronics, computers, refreshments. Admission is $4 (under 12 free), tables $10, tailgating $6 (each includes one admission). Reservations and information to: John Ahle, N2DVX, Box 3441, Danbury, CT 06813; 203/438-6782. Talk-in on 147.12(+).

Illinois

The **Bolingbrook ARS** will hold its 12th annual hamfest on 8 September from 8 a.m. (setup 6 a.m.) at the Inwood Recreation Center, 3000 W. Jefferson St. (Route 52) in Joliet. Features include an air-conditioned facility for dealers, an outdoor flea market, and VE testing from 9 a.m. to noon. Admission is $4/advance, $5/gate. Tables $12 and $8. Overnight parking is available (no hook-ups or services on site). For information, call the BARS hotline at 708/759-7005 (6-8 a.m.) or tune into the BARS net, Thursdays at 8 p.m. on 147.33(+) or 224.54(-). Advanced tickets: SASE to BARS, P.O. Box 1009, Bolingbrook, IL 60440.

Indiana

The **Fort Wayne Radio Club** will hold a hamfest on 7 September from 8 a.m. to 2 p.m. at the Allen County Fairgrounds, exit 111B — 4 miles north, turn left on Carroll Road (½ mile). Features include vendors, electronics, computers, software, refreshments, free parking, and VE session. Admission is $4/advance, $5/door, tables $12 (inside) $9 (pavilion), $5/tailgate. For information, contact FWRC Hamfest, 4801 Honey Oak Run, Fort Wayne, IN; 219/471-5657, e-mail WESTOCK @CONCENTRIC.NET. Talk-in on 146.76(-).

Iowa

The **Great River ARC, Iowa Antique RC and Historical Society, and the Tri-State Computer Users Group** will sponsor a hamfest/radiofest/computer expo on 8 September from 8 a.m. to 2 p.m. at the Dubuque County Fairgrounds on Old Highway Road. Features include free parking, refreshments, dealers, flea market, tailgating and VE exams at 10 a.m. Admission is $3/advance, $4/door (12 and under are free). Tables are $8. Contact Loren Heber, NØYHZ, 319/556-5755 or Jerry Lange, KBØVIK, 319/556-3050 or Jerry Ehlers, NØNLU, 319/583-1016. Write G.R.A.R.C., P.O. Box 546, Dubuque, IA 52004. Talk-in on 147.84(-).

Louisiana

The Ascension ARC will hold its annual Gonzalez Hamfest on 14 September from 8 a.m. (setup 7a.m.) at the Gourmet Catering Inc. building on Highway 73 in Prairieville. VE testing, fox hunt. Dealer and swap tables available. Contact AARC, c/o Shane Dugas, KK5LC, 37150 Swamp Road, Prairieville, LA 70769; 504/673-8369.

Massachusetts

The **Framingham ARA** will hold a hamfest on 29 September from 9 a.m. (setup 7:30 a.m.) to 1 p.m. at the Framingham High School off Concord Street (Rt. 126). Features include Amateur Radio equipment, electronics and computer hardware/software. Admission is $3, tables $10/advance, $14/door; limited tailgate space $10. VE exams start at 11 a.m. (preregister by mail only, $6.05 to ARRL/VEC via Dick Marshall, WA1KUG, 37 Lyman Rd., Framingham, MA 01701; 508/877-0563, no later than 20 Sept.). For table information call Martin, AA1ON 508/435-0564. Talk-in on 147.15(+).

Michigan

The **Adrian ARC** will hold a hamfest and computer show on 22 September from 8 a.m. to 2 p.m. at the Lenawee County Fairgrounds. Admission is $4/advance, $5/door, trunk sales/$3, tables $1 per ft. 4 ft. minimum. Contact Brian Sarkisian, KG8CO, 517/265-1537 or write the Adrian ARC, P.O. Box 26, Adrian, MI 49221. Talk-in on 145.37(-).

Missouri

The **St. Peters ARC** will hold a swapfest on 22 September from 7 a.m. to 1 p.m. at the St. Charles County Community College Campus, 4601 Mid Rivers Mall Dr. in Cottleville. Take I-70 or MR 94 to Mid Rivers Mall Drive. Large indoor vendor area and exams. Admission is $2, flea market space $3 (includes one admission). Food and drink available. Contact Jay Underdown, WØOGS, 58 Judy Dr., St. Charles, MO 63301; 314/723-4200. Talk-in on 145.41(-) or 444.275(+).

Nebraska

The **AK-SAR-BEN ARC** will hold its annual ham radio flea market on 15 September from 8 a.m. to noon at the Millard Social Hall in Omaha. Take I-80 to exit 440 and then three blocks south on Highway 50. Admission and coffee are free! Tables are $5/advance, $7/door. Reserve your tables early! Dealer inquiries welcome. Contact: Dave Kline, WJØZ, 5055 South 87th St., Omaha, NE 68127; 402/592-4930, Gerry, WA6POZ, 402/895-7367 or Todd, KGØEJ at 402/397-7465. Talk-in on 146.94(-).

New Jersey

The **Delaware Valley Radio Association** willhold a hamfest on 15 September from 8 a.m. (vendors 7 a.m.) at Tall Cedars of Lebanaon picnic grove, Sawmill Road, in Hamilton, NJ. Take I-295 to I-195 Exit 1, South Broad St. bear right at Yardville Bank, past the "Barrel" to yield — first right past yield to Sawmill Rd., 1.1 miles on right. Admission is $5 (non-ham spouse and children are free), tailgating $10, limited covered space $15 (includes admission and table). No advance registration required. For more information, call 609/882-2240. Talk-in on 146.67(-).

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The **South Jersey Radio Association** will hold a hamfest on 22 September from 8 a.m. to 3 p.m. (vendor setup 5:30 a.m., no overnighters), rain or shine at the Mt. Holly Armory on Rt 38 in Mt. Holly. Features include ham dealers, free parking, tailgate sales, VEC license testing (all classes), seminars, computer dealers, gigantic swap shop, refreshments and food and eyeball QSOs. Admission is $4/advance, $5/gate, outdoor tailgate $10, Indoor 8' table $20 ($25 with electricity). Make checks payable and mail an SASE to South Jersey Radio Association, Inc., c/o Paul Hayden, KF2YX, 519 N. Elmwood Rd., Marlton, NJ 08053; 609/596-7749.

New York

The **Metro 70cm Network** will hold an electronic flea market on 29 September, from 9 a.m. to 3 p.m. at Lincoln High School in Yonkers. Free parking, no tailgating; indoor flea market only! New and used equipment for Amateur Radio operators, commercial two-way radios, computers, electronic parts and kits, etc. Unlimited free coffee will be served and food will be available for sale. Admission is $6, (kids under 12 are free when accompanied by an adult). Sellers $19 first table, $15 each additional. Bring your own table $14 for a 6' space. Table setup 7 a.m. No paid reservations for space will be held past 9 a.m. For registration, call Otto Supliski, WB2SLQ, 914/969-1053. Talk-in on 443.350 PL 156.7.

Pennsylvania

The **Butler County ARA** will hold its 19th annual hamfest and computer show on 8 September from 8 a.m. to 3 p.m. at the Butler Farm Show Grounds on Route 68, west of Butler. Admission is $5 (under 12 free). Flea market $1 per setup. Indoor vendors $10 per 8' table. Plenty of free parking. Contact K3LL, 1080 N. Boundry Rd., #C, Cranberry Twp. PA 16066 or call 412/538-9491, e-mail cliff@nauticom.net

Virginia

The **1996 Virginia Beach Hamfest** will be held 21-22 September at the Virginia Beach Pavilion Convention Center in Virginia Beach. Show hours are 9 a.m. to 5 p.m. on the 21st and 9 a.m. to 4 p.m. on the 22nd. Load-in and setup is Friday after 1 p.m. No smoking in the Pavilion. No breakdowns until after 3 p.m. on Sunday. For more information, contact Lewis Steingold, W4BLO, 1008 Crabbers Cove Lane, Virginia Beach, VA 23452; 804/486-3800, fax 804/486-0757.

Washington

The **Walla Walla Valley ARC** will hold their 50th annual hamfest and ARRL SE Washington Section Convention on 27-29 September at the Washington National Guard Armory, 113 S. Colville (on the corner of Colville and Poplar Streets) in Walla Walla. Features include vendors, Bunny Hunt, SKYWARN seminar, National Weather Service. Admission is free (with sign-in). Talk-in on 146.96(-).

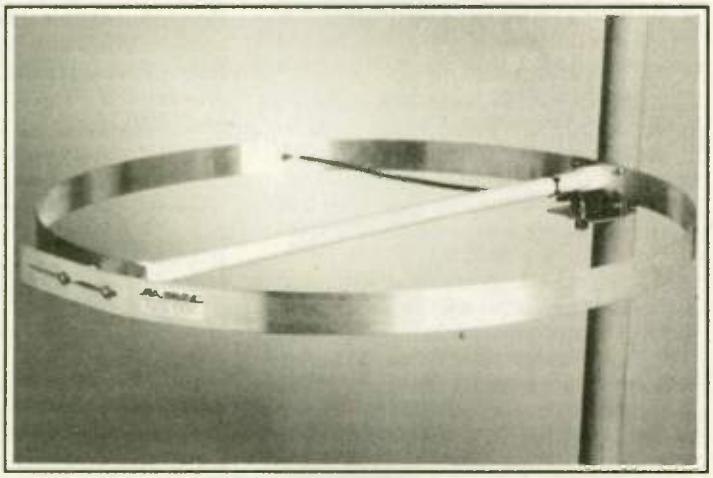
West Virginia

The **Tri-States RAC** will hold a hamfest on 15 September, 8 a.m. to 3 p.m. at Wheeling Park, in Wheeling. Features include Amateur Radio gear, computers, antennas and other related equipment. Self-contained RVs and all free parking; food and refreshments available. Eight acres of flea market, $5 per car (includes admission). Setup time 6 a.m. Admission is $2/advance, $3/door (women/youths 17 and under are free). For information and advanced tickets contact; The Triple States Radio Amateur Radio Club (TSARC), Box 240, RR #1, Adena, OH 43901; telephone/fax 614/546-3930. **WR**

Information in "New Products" is supplied by the manufacturers to acquaint *Worldradio* readers with new products on the market.

Halo-6™ Six Meter Antenna

Advanced Electronic Applications, Inc. (AEA) is now shipping the new HALO-6™ 6-meter antenna. The AEA HALO-6 is designed for the new Technician code-free licensee who wants the experience of working real ionospheric skip DX on six meters. It will also allow the long-time radio amateur the opportunity to use that new multiband transceiver (i.e., IC-706) on 6 Meters at the lowest possible cost.

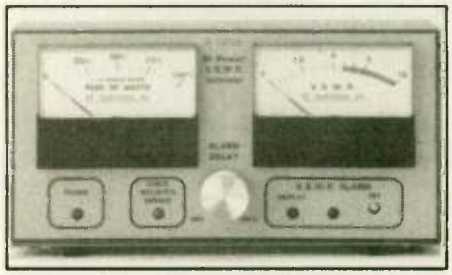


The HALO-6 comes in an easy-to-assemble kit and by assembling it, you save money and learn more about our antenna's design. Total assembly time is about 30 minutes.

Operate 6M from areas with restrictive zoning ordinances! The HALO's 27" loop is flexible, so it can squeeze through attic openings and other tight spaces. The HALO-6 is the perfect band-opening spotting antenna for the "Big Gun" 6-meter operator having a Yagi or big array system. Side mount the HALO off your tower or on the top or middle of a TV mast. You can even support the antenna with fishing line in your attic.

The higher you mount the HALO-6, the higher performance you will realize. The minimum mounting height is 6 feet — and is great for mobile users or antenna restricted operators. No matter how you mount the HALO-6, you will benefit from its omni-directional radiation pattern and its low angle of radiation.

Suggested list price is $69. See your favorite Amateur Radio equipment dealer for best price and availability. Call AEA's 24-hour Literature Request Line at 800/432-8873 or visit us on the Internet at: http://www.aeainc.com



P-100A HF Digital Wattmeter

RF Applications, Inc., introduces the availability of the P-100A RF Power/VSWR Indicator. The P-100A provides digitally-driven analog meters for indication of peak RF power and VSWR. Using line sections and elements (such as those made by Bird Electronics® and Coaxial Dynamics®), the P-100A provides immediate, no adjustment display of these station parameters. Programmable forward/reflected element ratios of 2:1, 4:1, 5:1 and 10:1 allow a wide range of element combinations to be used.

Best VSWR accuracy is obtained using the 10:1 ratio. Using these sensors, operators can cover a wide operating frequency range (HF through UHF). An adjustable VSWR alarm, including a control relay, is provided. The alarm can be set from 1.1:1 to 10:1 using a small screwdriver. In addition, a front panel control is provided to adjust the VSWR alarm delay time from immediate to approximately ten seconds.

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1656 Nevada Hwy.
Boulder City, NV 89005
(702) 294-2666

NEW YORK
B.C. Communications, Inc.
211 Depot Road
Huntington Station,
NY 11746
(516) 549-8833
(800) 924-9884

NEW HAMPSHIRE
Ham Radio Outlet
224 N. Broadway
Salem, NH 03079
(603) 898-3750
(800) 444-0047

NEW JERSEY
Advanced Specialties Inc.
114 Essex Street
Lodi, NJ 07644
(201) VHF-2067

OHIO
Universal Radio, Inc.
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Reynoldsburg, OH 43068

OREGON
Ham Radio Outlet
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Portland, OR 97223
(503) 598-0555
(800) 854-6046

TEXAS
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Garland, TX 75042
(800) 559-7388

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323 Mill Street, N.E.
Vienna, VA 22180
(703) 938-3350
(800) 368-3270

Ham Radio Outlet
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Woodbridge, VA 22191
(703) 643-1063
(800) 444-4799

WASHINGTON
Amateur Radio Supply Co.
5963 Corson Ave. S Ste. 140
Seattle, WA 98108-2646
(206) 767-3222
(800) 457-2277

The P-100A is available from stock and the list price is $239.95.

RF Applications, Inc. is a developer, manufacturer and marketer of RF power monitoring equipment. For further information, write: RF Applications, Inc., 9310 Little Mountain Rd., Mentor, OH 44060; 800/423-7252 (international 1/216/974-1961), or fax 216/974/9506.

DSP-599zx noise filter

Timewave Technology is now shipping the DSP-599zx all-mode noise filter and test instrument. Fast running, at 36.6 MHz (with mips also at 36.8 MHz) the DSP-599zx is the first true software- controlled digital signal processor and test instrument. A 2MB EEPROM allows 16 data filters to be stored. It features a new RTTY modem, using a special dual filter, 60 Hz wide at the mark and space. This improves the signal-to- noise ratio 5 to 7 dB over other DSP filters.

Features include a manual notch on CW, and CW tone-pitch conversion. There are independent low pass, and high pass filters. The audio can be opened up to a width of 5 kHz for short wave listening, the first to offer this feature. Real-time listening can be accomplished with the noise reduction "on," with no delays. Adjustable line output, for different modems requiring differing levels, is also featured in this unit.

Test equipment features include a two-tone generator for SSB testing, audio sinewave generator from 20 Hz to 10 kHz, an audio millivolt meter (4 mV to 2000 mV) with peak, true RMS, CTCSS encoder and decoder, and squelch to start recorder. The DSP-599zx meets FCC and new European standards, and is field upgradable.

For more information, technical data and comparison sheet, see: http://www.timewave.cor or write Timewave Technology, Inc., 2401 Pilot Knob Road, St Paul, MN 55120. Phone 612/452- 5939, or fax 612/452-4571.

Mirage BD-35 144/440 MHz Amplifier

Amplify your dual band handheld to 45 watts on 2 Meters or 35 watts on 440 MHz for only $199 with the new Mirage BD-35. It features auto band selection, single connector for dual band radios/antennas, full duplex operation, reverse output on polarity protection and more.

A free mobile mounting bracket is included. Measuring in at just 5" x ¾" x 5," this little amplifier works with all FM handhelds up to 7 watts input.

A power curve chart shows typical output power for input power; for example 3 watts in gives you 32 watts out on 440 MHz and 45 watts out on 2 Meters. The Mirage BD-35 lets you talk on one band and listen on the other band at the same time with a compatible handheld.

Automatic frequency band selection, single input connector and single output connector for both bands makes it easy to use with dual band radios and antennas, first class strip-line techniques gives you RF performance and reliability that can't be matched. The custom wrap-around heatsink provides excellent heat distribution. It also features reverse polarity protection should the power input be reversed.

Mirage includes an automatic RF sense transmit/receive switch and low input SWR will keep your handheld safe from overheating and make operation extremely easy. Call your dealer for your best price or call Mirage Communications at 800/647-1800 to find a dealer nearest you.

Computer-aided Instruction

Ameco Corporation now offers learning software for IBM computers and all IBM compatibles. Using this new software, anyone can prepare for the FCC ham radio license written exam on their own computer.

All possible exam questions are covered word for word as they will appear on the actual exam. The software includes: User-friendly interface; mouse support; colorful graphs and all required schematic diagrams; full time on-line help; sample VEC tests available to the screen or printer; quizzes on every topic; complete easy-to-understand explanations for every question.

An Ameco FCC Test Manual is included as part of every test package. The test packages start at $24.95. For further information, please contact: Donna L. Bates/Customer Service, Ameco Corporation, 224 E. Second St., Mineola, NY 11501; 516/741-5030, fax 516/741-5031.

Amateur license certificates

License Certification Service is proud to introduce the Radio Operator license certificate, which has been meticulously recreated from the Amateur Extra Class certificate formerly issued by the FCC. These certificates use the original borders, fonts and wording in a design that has not been available for more than ten years.

This design is a part of Amateur Radio's heritage, and was the official recognition of the amateur's achievement.

The certificate, which is available to all classes of license, are printed on high-quality, heavy blue color paper stock, the same color as the original. All applicants are checked against the FCC database for authenticity.

General Radiotelegragh certificate, on the original buff color paper, is also available.

The certificate is available for $19.95, sent First Class in protective packaging, or may be purchased mounted in a solid oak frame for $24.95, plus $3 for shipping and handling, via Priority Mail. Visa and MasterCard are accepted.


The United States of America

AMATEUR EXTRA CLASS

RADIO OPERATOR LICENSE CERTIFICATE

This certifies that Armond M. Noble N6WR

is a licensed amateur radio operator authorized subject to any special endorsement noted hereon to operate the classes of licensed radio stations for which this class of license is valid under the orders, rules and regulations of the Federal Communications Commission, any statute of the United States and any treaty to which the United States is a party.

Licenses are granted under the authority of the Communications Act of 1934, as amended, and the terms and conditions thereof and of all legislative acts, executive orders, and treaties to which the United States is signatory, and all orders, rules and regulations of the Federal Communications Commission which are binding upon radio operators, are made a part thereof as though specifically set out in full therein.

Neither the license nor the rights certified to therein shall be assigned or otherwise transferred to any other person.

Each license is valid for the period of time and to the extent provided by any valid amateur radio license card (FCC Form No. 660) held by the same licensee, including any renewal or modification thereof, and endorsed to show amateur extra class operator privileges.

DATE OF ISSUANCE August 18, 1987

(LICENSEE)

Federal Communications Commission records were used to verify eligibility for this certificate.

For more information or to order contact License Certification Service, P.O. Box 211, Fair Oaks, CA 95628-0211. Call us at 800/792-3787, or 916/863-5625. Visit us on the web:http://quiknet.com/certs

Pager Handbook

This blue and gold covered, perfect bound, 124-page text introduces paging — like that used in commercial paging — to Amateur Radio. Paging is ideal for those involved in emergency communications of any kind and is useful and practical for other applications as well. This "tell it all" text lays out completely for an amateur or amateur club how paging works and how to set up a station and pagers for 2-meter or 70-cm use.

The Pager Handbook is also useful as a training resource for technicians and sales personnel working in the personal communications industry.

The text contains eight chapters and five appendices. It describes the Radiopaging Code No. 1, also known as POCSAG; outlines what's needed to complete a two-way POCSAG QSO; lists what's needed to monitor paging; investigates the inner workings of a typical pager — both the FM receiver board and the decoder board; suggests where to purchase pagers for amateur use; outlines procedures for recrystalling pagers for 2-meters and 70-cm use; describes how to set up an amateur station for paging; and describes the paging commands and paging capability added to the Kantronics KPC-9612 series packet modems.

The appendices include a glossary, frequency tables, a typical pager specification, enlarged figures for transparencies for overhead presentation, and a bibliography.

Suggested retail price is $14.95. For information, contact Kantronics at 1202 E. 23rdSt., Lawrence, KS 66046; 913-842-7745, fax 913-842-2021.

E-mail sales@kantronics.com, web page — http://www.kantronics.com WR

VE exam schedules

As a service to our readers, ***Worldradio*** presents a feature listing those VE exams, times and locations which are sent to us.

Please remember that our deadline for publication is three months in advance. For example, if your VE group is scheduling an exam for October, please have the information to us by mid-July.

p/r pref. = pre-register preferred but w/i OK
p/r = pre-register only — no w/i

Worldradio, 2120 28th St., Sacramento, CA 95818. Please mark the envelope "VE Exams."

List the location (City), any information examinees should have (advance registration, etc.) and the name and telephone number of a person to contact for further information.

w/i pref. = w/i preferred to p/r
w/i = walk-in only

State	City	Contact	Notes
Arizona			
10/12/96	Tucson	Joe, K7OPX 520/886-7217	
Arkansas			
10/19/96	Gassville	Phil, AB5ZU 501/425-7406	p/r pref.
10/12/96	Siloam Sprgs	Mike, KJ5OP 501/524-8090	p/r pref.
California			
10/06/96	Chico	Jackie, W6YKU 916/342-1180	p/r pref.
10/24/96	Colton	Harold, AB6RN 909/825-7136 days or 909/685-6073 eves	
10/06/96	Concord	Gene, WW6H 510/254-5090	w/i only
10/12/96	Culver City	Clive, AA6TZ 310/827-2538	p/r pref.
10/26/96	Culver City	Scott, K6PYP 310/459-0337 or Dave N3BKV 818/559-2572	p/r pref.
10/19/96	Cupertino	Emmett, AE6Z 408/243-8349	p/r
10/26/96	Escondido	Harry, WA6YOO 619/743-4212	p/r
10/26/96	Fairfield	Dick, AB6EY 916/791-0268	w/i pref.
10/08/96	Fremont	Greg, KJ6EP 510/791-6818	w/i only
10/06/96	Hanford	Carleton, AA6GZ 209/924-4221	w/i only
10/05/96	Lancaster	Adrienne, WA6YEO 805/948-1865	p/r
10/02/96	Lake Isabella	Tom, KN6TS 619/379-2947 or KD6YNX 619/379-5236	p/r pref.
10/19/96	Petaluma	Dale, 707/762-9414	p/r pref.
10/26/96	Pomona	Don, WA6HNC 909/949-0059	p/r
10/19/96	Redwood City	Joe, KB6OWG 408/255-9000	w/i only
10/19/96	Sacramento	Lyle, AA6DJ 916/483-3293 or Phil, N6ZVA 916/338-3223	w/i
10/02/96	Sacramento	Larry, KD6OLN 916/361-2476	p/r pref.
10/12/96	San Pedro	Elvin, N6DYZ 310/325-2965	p/r pref.
10/09/96	Santa Ana	Red Cross, 714/835-5381 x140	w/i
10/19/96	Stockton	Mark, W6DKI 209/465-7496	w/i
10/12/96	Sunnyvale	John, KG6XF 408/255-9000	w/i only
10/19/96	Tehachapi	Bill, N6GLO 805/822-1473	
10/12/96	Torrance	Joe, WB6MYD 310/328-0817	p/r pref.
Colorado			
10/12/96	Denver	Glenn, WØIJR 303/366-9689	p/r pref.
10/96	All Colorado	Exam recording 303/360-7293	
10/05/96	Sterling	Blaine, WAØJTB 970/522-5787	p/r pref.
Florida			
10/19/96	Melbourne	Bill, WB9IVR 407/724-6183	p/r pref.
Georgia			
10/19/96	Marietta	Joanne, AC4JQ 770/955-3171	w/i
10/07/96	Marietta	Delaine, KM4FV 770/993-9758	w/i
Idaho			
10/02/96	Athol	Bob, N7GHV 208/683-2094	p/r
10/12/96	Boise	Lem, W7JMH 208/343-9153	p/r pref.
10/12/96	Priest River	Russ, AA7XM or Chris, AA7XN 208/264-4534	p/r
Illinois			
10/15/96	Aurora	James, N9UZC 708/879-3042	w/i
10/19/96	Loves Park	Dennis, W9SS 815/877-6768	p/r pref.
10/19/96	Morton	James, NT9C 309/266-6756	p/r pref.
10/12/96	Oak Forest	David, NF9N 708/448-0580	p/r pref.
10/24/96	Villa Park	Lyle, WB7EED 708/325-5694	w/i pref.

State	City	Contact	Notes
Indiana			
10/06/96	Terre Haute	Fred, K9EBK 812/466-2122	p/r pref.
Iowa			
10/19/96	Mt. Pleasant	Fred, WCØA 319/385-7458	p/r pref.
10/26/96	Council Bluffs	Lorraine, AAØBS 712/322-1454	p/r pref.
Maryland			
10/29/96	Annapolis	Lois, KA3VVQ 410/647-4178	p/r pref.
Massachusetts			
10/25/96	Holyoke	Dave, N1MHP 413/592-4978	w/i
10/19/96	Melrose	Scott, WB1F 617/665-7654	p/r pref.
Minnesota			
10/05/96	St. Paul	Jay, KØQBE 612/222-7253	p/r pref.
Missouri			
10/05/96	Kimberling	Jim, NQØG 417/739-2888	p/r pref.
New Jersey			
10/17/96	Bellmawr	Bill, NT2N 609/933-1500	w/i pref.
10/12/96	Cranford	24 hour hot-line 201/377-4790	w/i pref.
10/26/96	Dennisville	John, AA2TZ 609/884-8117	w/i
10/09/96	Ft. Monmouth	Gerry, WB2GYS 908/532-5354	p/r pref.
New York			
10/19/96	Long Island	Les, AA2FJ 516/364-0030 or 516/922-0947	p/r pref.
10/08/96	Long Island	Bob, W2ILP 516/499-2214	w/i pref.
10/06/96	Yonkers	Emily, AC2V 914/237-5589	p/r pref.
10/27/96	N.Lindenhurst	Walter, KA2RGI 516/957-0218	p/r pref.
Ohio			
10/05/96	Cincinnati	Herb, WA8PBW 513/891-7556	p/r pref.
10/12/96	Van Wert	Robert, KA8IAF 419/795-5763	p/r pref.
Oregon			
10/26/96	Keno	Tom, WD6EAW	w/i pref.
10/19/96	Medford	Paul, KE7VO 541/878-3433 or Rick, KG7PX 541/779-3404	p/r pref.
10/09/96	Roseburg	Dick, AA7GC 541/672-7564	p/r pref.
Pennsylvania			
10/05/96	Erie	Norma, W3CG 814/665-9124	p/r pref.
10/19/96	Mercer	Dennis, WM3H 412/347-5960	w/i
Rhode Island			
10/10/96	Providence	Al, NN1U 401/454-6848 or Judy, KC1RI 401/231-9156	w/i pref.
Texas			
10/19/96	Austin	Jim, AB5EK 512/327-6184	w/i pref.
10/08/96	Houston	Harold, ND5F 713/464-9044	p/r pref.
Virginia			
10/26/96	Glouster	Harry, N4THN 804/642-3517	p/r pref.
10/05/96	Williamsburg	Mike, KD4HYT 804/566-8015	w/i only
Wisconsin			
10/05/96	Racine	Bob, WØWLN 414/886-8551	p/r pref.

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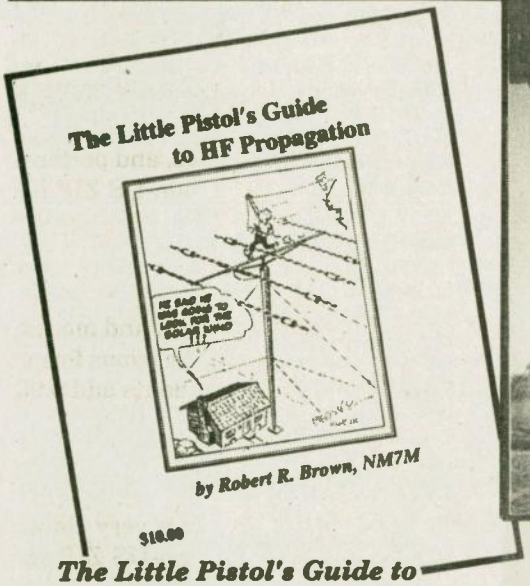

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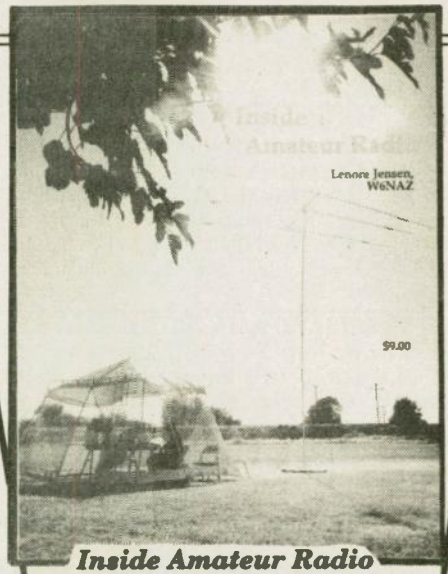

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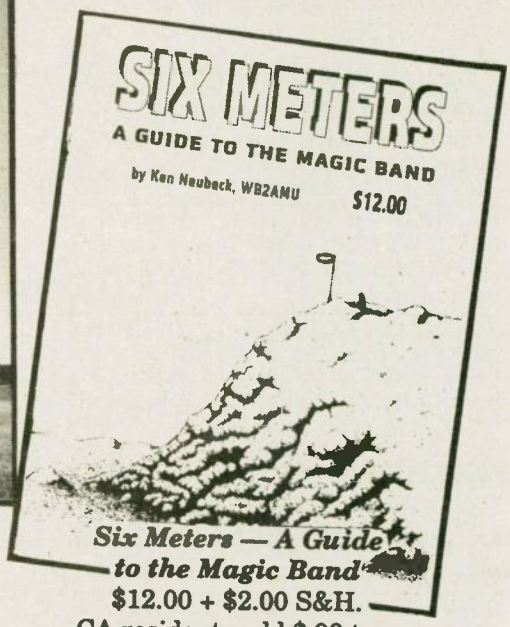

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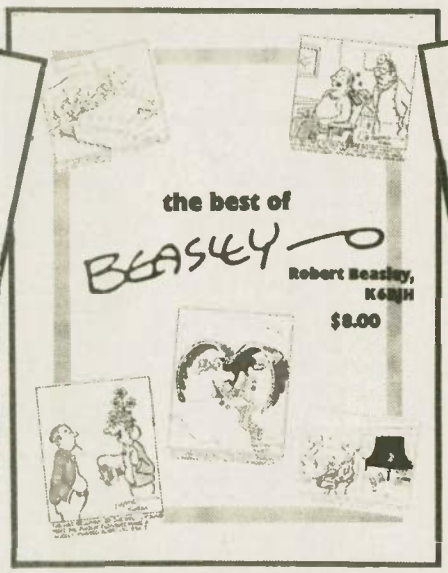

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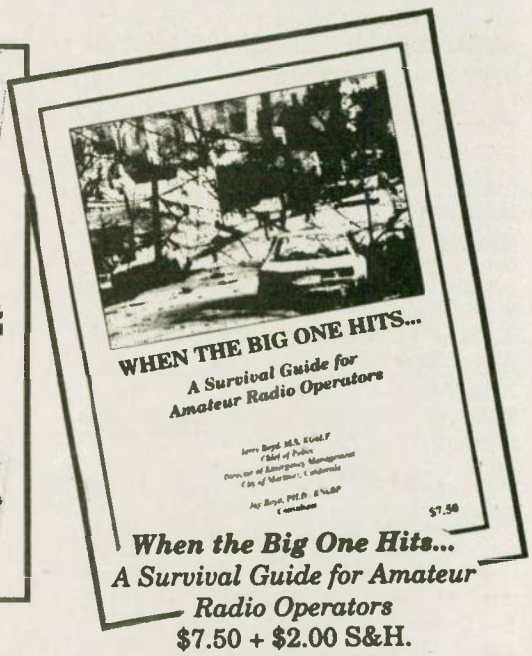

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Late Flash

Amateur Radio helps at TWA crash site

The ARRL reports that Amateur Radio operations will continue for as long as necessary at the scene of recovery operations for TWA flight 800, off Long Island, New York. ARES spokesman Mario Maltese, WF2T, was quoted as saying that the ARES member's beepers went off, and the Red Cross in Suffolk and Nassau counties went on alert only minutes after the plane exploded and crashed.

The Red Cross in New York City requested communications to Suffolk and Nassau counties, and the ARES group established a UHF link for them.

The local telephone company, NYNEX, donated the use of cell phones, but with some 3,000 rescue people and large numbers of press present, they were nearly useless — the cell site was severely overloaded. Even after the installation of a high-capacity site the following day, problems continued.

Amateur Radio worked, though. WF2T reported that ARES kept various Red Cross officials in contact with one another, with coverage later extended to providing "shadows" to accompany other officials. Additional radios were provided through the generous support of Sid Wolin, K2IJH, of Azden Radio. —*tnx* ARRL

Widow and family of WØCY found slain

Police in Salina, Kansas, are searching for the killers of Delores McKim, widow of AMSAT pioneer Jim McKim, WØCY, her daughter and greatgrandson. Friends notified police, and asked them to investigate when they were unable to raise the 80-year-old Mrs. McKim. The bodies of Mrs. McKim, her daughter Carol Abercrombie, 56, and Mrs. Abercrombie's five-year-old grandson, Christopher, both of Chattanooga, Tennessee, were found in the McKim home.

Lieutenant Michael Sweeney of the Salina Police department told ***Worldradio*** that all of the victims had been beaten to death, and that all three were found inside the home. There was no sign of forced entry, contrary to earlier reports.

Jim McKim's car with its "WØCY" license plates was taken from the residence, and was recovered by police about a mile from the scene. Inside, police discovered two empty purses which they assume had been taken from the victims. A reward of more than $15,000 is being offered for information leading to the arrest and conviction of those responsible for the crime.

WØCY was a life member of AMSAT, QCWA, and the ARRL, and had served as 75-meter AMSAT net control station until a short time before his death on February 14, 1996. WR

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