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Worldradio

Year 26, Issue 7

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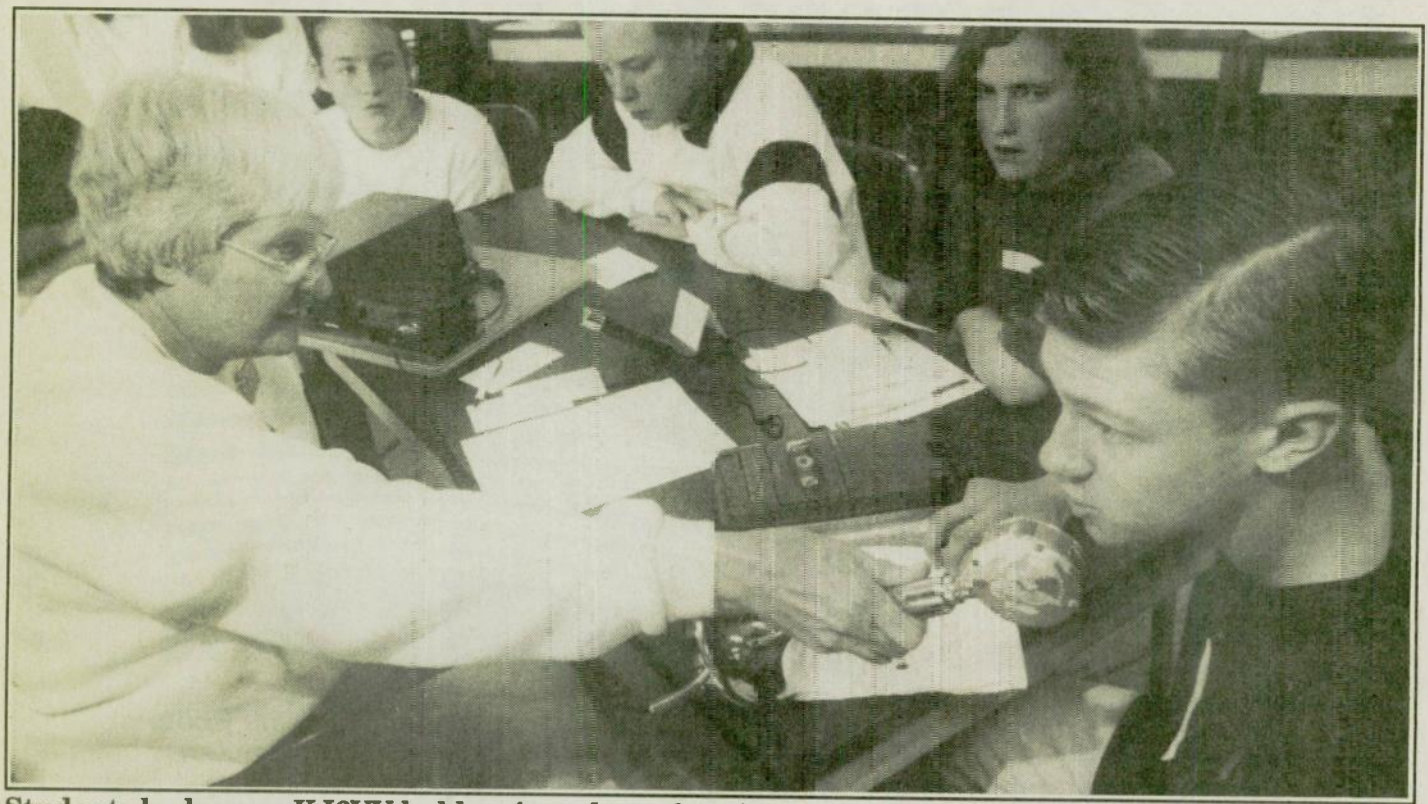

Students look on as KJ6VV holds microphone for Jim Taylor, 14, while he asks orbiting Astronaut Chuck Brady a question.
—photo courtesy of Skagit Valley Herald

SAREX: A once-in-a-lifetime experience

Julia R. Berry, AJ7VV (ex KJ6VV)

The room was very quiet. Suddenly a few scratchy sounds came from the 2-meter radio. "He's starting to come in!" Again, not a sound in the room where about 150 people were listening intently. After a few seconds there was more noise and then faintly, "W7UMX, this is the space shuttle *Columbia*." Navy Captain Charles E. "Chuck" Brady, Jr., N4BQW, was in range for a scheduled SAREX contact with Anacortes Middle School, in Anacortes, Washington.

It was the fulfillment of a lifelong dream for our friend, Chuck, who answered "yes" when a student named Micah asked him: "When you were a kid, was being an astronaut and going up in space what you wanted to do when you grew up?"

Licensed since about age 12, Chuck is an avid Amateur Radio operator. For him, making contacts from space was the ultimate in Amateur Radio operating.

For those of us at W7UMX, the MARS Station of the Naval Air Station Whidbey Island, the SAREX contact was an exhilarating culmination to months of hard work. Over 25 people, mostly hams, made up the team that organized the event. Student participants came from three schools and two countries, and students from Mt. Erie Elementary School in Anacortes came to listen. Chuck's home is in the nearby Oak Harbor area, so Anacortes Middle School invited Oak Harbor Middle School to join with them. One of Chuck's crewmates, Dr. Robert Thirsk, VA3SCA, is from British Columbia, so the Ft. Langley Elementary School in British Columbia was also invited.

We wanted everyone present to feel the program was worthwhile even if we were unsuccessful (heaven forbid!) in making the contact, so we provided a lot of extras.

There were several large freestanding bulletin boards covered with pictures and information about the space shuttle. Annette Haggard, KC7DVS, set up and monitored the display and answered questions.

Two large, linked television sets

(please turn to page 12)

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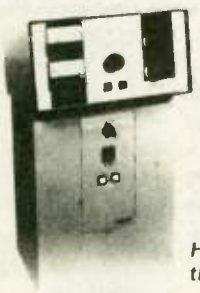

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NEWSFRONT

Worldradio

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

Gate 2 calls issued

The FCC has processed the vanity call sign program Gate 2 applications it received on 23 September. The logjam broke just before the end of business at the FCC's Gettysburg, Pennsylvania, office, where the amateur computer system had been down for more than a week. A spokesman at the FCC said the computer system was finally fixed Tuesday, 05 November, and the approximately 4,500 first-day vanity applications were successfully run.

The week-long computer problems had not only affected the vanity program but caused the FCC to rescind all call sign grants after 24 October, because of widespread errors. In some cases, the FCC's Gettysburg office had reissued call signs that had already been issued. An FCC spokesman said that the unspecified computer problems were not related to the vanity call sign program.

The FCC says it wants to see how the day-one processing fared before it attempts to process vanity call sign applications for subsequent days. This should happen within 'a few days,' a spokesman at Gettysburg said. Day-one applicants also can check the popular database programs on the Internet to find out if they got one of their call sign choices. The KI4HN web page lists vanity assignments at http://www.webbuild.com/~ki4hn/vanity.htm Other good choices include the AC6PN call sign server, http://www.rdatasys.com/~mdowning/fcc/callsign.html and the *Callbook*™ Server (CBS) Summary at http://www.lantz.com/htbin/cbs_today

The FCC will dismiss applications if it was unable to grant one of the call sign choices. Applicants who did not get one of their choices will have to apply in writing for a refund of the $30 filing fee.

The FCC has not yet announced opening dates for vanity Gates 3 and 4.

For late-breaking news on Gate 2 vanity calls, see back page.

K7UGA recovering

In November we reported that retired Senator Barry Goldwater, K7UGA, had suffered a minor stroke and was hospitalized in Phoenix. We are delighted to pass on the following note:

I thought I would let your readers know how very much I appreciated the QSLs and get well cards I have received after my illness was noted in your magazine. I send my thanks to all of the Hams that made each day a little brighter.

I am getting along just fine after my hospital stay, just sitting at my desk and watching the beautiful Arizona desert. 73

Barry Goldwater

Suspect arrested in ham family murder

The alleged killer of the family of a ham radio operator's family is in custody thanks to a television show.

Alan Eugene White, 26, KAØQNB, was arrested on 9 November, in Boston within minutes of his picture being broadcast on the America's Most Wanted television show. He was picked up at a homeless shelter by Boston police acting on a tip from someone who saw the show.

White was wanted for the July triple murder in Salina, Kansas of Silent Key Jim McKim, WØCY's widow, his daughter and a five-year-old greatgrandchild. Police say White will be brought back to Kansas to be charged in the triple murder.

White holds a Novice Class license which he obtained in December, 1992. He and the late WØCY were both members of the same Amateur Radio club in Salina.

Beacon net expands

The worldwide five-band HF beacon network continues to expand. The Madeira beacon has a new call sign, CS3B, and can be heard on 14.100, 18.110, 21.150, 24.930 and 28.200 MHz.

It transmits for 10 seconds on each frequency in turn in a three-minute cycle. KH6WO is also on the air in Hawaii on the 14, 21 and 28 MHz frequencies only and JA2IGY on 14.100 MHz only.

(more NEWSFRONT, page 18)

Worldradio

January 1996

Features

Departments

Worldradio

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

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Publisher's Microphone

And now, a standing ovation for the latest to join the ***Worldradio*** Superboosters (Lifetime Subscribers) and they are:

- **J.W. O'Daniel, Jr., KE4SOA, Panama City, FL**
- **Frank Loverti, Jr., WD8JBZ, Dayton, OH**
- **Robert Lang, K8ZKJ, White Lake , MI**
- **David Yarnes, W7AQK, Tucson AZ**
- **Charles Cunningham, Jackpot, NV**

*

And it gives me great pleasure to announce the name and call of the winner of the MFJ AL-1500 HF amplifier. As you may remember we auctioned off the amplifier, with the entire proceeds to go to the Handi-Hams for their work helping handicapped amateurs, and amateurs-to-be. The highest bid was that from Paul Lemson, W9PL, Woodinville, WA.

Some other good hearts deserve mention also. With bids just a smidge less than the winner were: (in no particular order) Robert Salem, W8VLD; John Kuras, KE7CU; Louis Parascondola, WA1GSO; and Bob Needleman, KD4ZN/3. They deserve recognition for their concern.

*

Amateurs in the Pittsburgh, PA tri-state area just had a 10 Meter ground wave contest lasting from 8 p.m. to midnight on Saturday, 08 November.

That reminded me that I had often thought that a good emergency drill would be (almost harking back to the origins of the ARRL) the relaying of messages on VHF without using repeaters. An exercise could be to get a message to the state capitol from any city in the state. To add to the realism, the contacts would have to be made without using commercial power.

*

In reading through a newsletter I came across the following: ". . . it is known that the League ham membership is less that 25% of the total, licensed, ham population of the nation! How can the League speak authoritavely *(sic)* for the 75% that aren't members?"

There is an easy answer to that. First, it is generally agreed that at least half of the amateurs listed in the FCC database do not have an amateur station. Their interest has diminished, they are not active and it is unlikely they will ever return.

Another group of licensees are the "get some bread on the way home, Dear" amateurs. They found a way for inter-family communication and ignore the entire gamut of other Amateur Radio activities.

Then there are those who say, "I don't join anything," no matter what it is or how beneficial it can be. There are the retired (on a fixed income) who sincerely believe that the expenditure of 50 cents a week will be injurious to their standard of living.

After a quarter century of looking closely at (and reporting on) Amateur Radio and its issues, I'd say that at the very least 75% of the active, on-air, truly interested and dedicated amateurs are ARRL members.

Leaving aside, for a moment, the many great benefits of League membership, let us just look at only one reason. If the ARRL were not in Washington, DC in their highly professional manner, there would be a void. Stepping into that void would be certain parties who desire to represent Amateur Radio, but after a few short minutes would be laughed out of the room.

*

There are DXpeditions (recent and in the near future) to countries that do not permit their own citizens the freedom of having amateur licenses. Burma (Myanmar) mowed down thousands of it own citizens. It also had a woman under house arrest for six years whose crime was that her party won a landslide election. North Korea is a country that Amnesty International calls the most oppressive country on the face of the earth. The argument is that if we all be nice to despotic dictators that they will smile and change their ways. To my knowledge, in all the history of mankind, that has never happened.

I feel that operations to countries that do not permit their own people to be on the air should not count for DXCC credit. I mentioned this idea to an influential amateur and he said, "Isn't the idea of Amateur Radio to make contacts?" True, but at what sacrifice in human decency?

There is a phrase in the travel field, "Don't take your holidays in another man's prison." Possibly the same should apply to DXpeditions.

—Armond, N6WR

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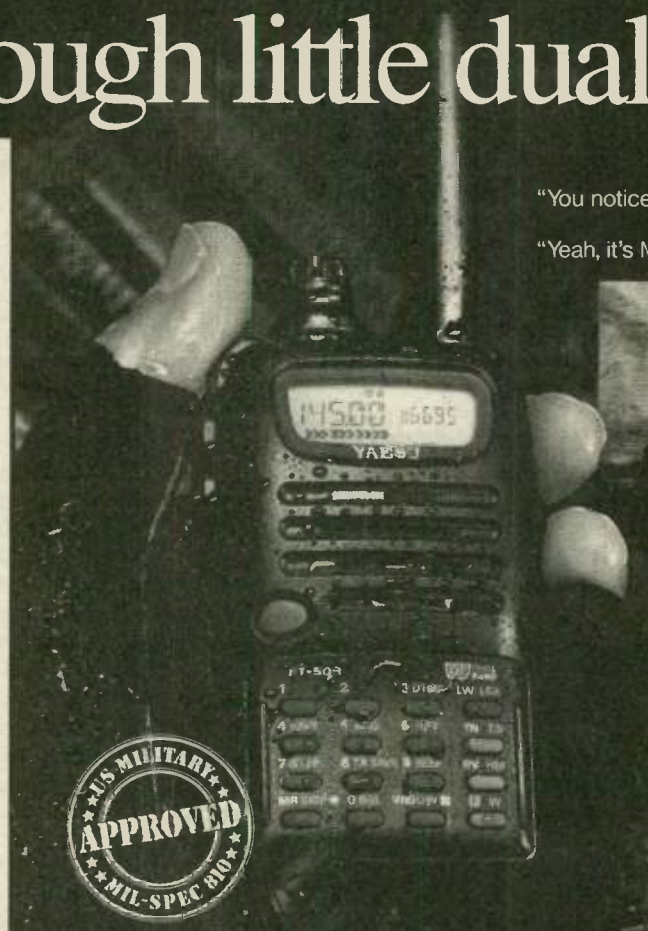

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A reliable companion where ever you go, the FT-50R is one tough little dual bander with all the features you want!

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FT-10/40R
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Single Point of Contact — one year later

Bill Pasternak, WA6ITF

Late last October, the ARRL Board of Directors authorized League President Rod Stafford, KB6ZV, to sign a Memorandum of Understanding with the National Frequency Coordinators Council. The purpose of this "MoU" is to create a "single point of contact" between the FCC and the coordination community on matters relating to the coordination of repeaters in the Amateur Radio service.

The decision by the ARRL to proceed comes with the joint venture just slightly more than a year after the nation's frequency coordinators and several other interested parties met with ARRL officials at an open forum in St. Charles, Missouri, in October of 1995. For almost three decades the ARRL had largely ignored the coordination community and the coordinators had distanced themselves, at least politically, from the League.

About the only involvement in the world of the FMer had been the publication of the *ARRL Repeater Directory* and the occasional approval of an "official band plan" for a given spectrum parcel. In many cases, especially in the South West and several "key" South Central states, these "official band plans" were largely ignored by coordinators, repeater installers and system users.

A change of attitude

This began to change when the ARRL sponsored the day-long workshop. It became known as the "BOM" or "Big Old Meeting" (called the Big October Meeting by some) and was the first time that many of the nation's coordinators had a chance to meet face-to-face. Suspicion gave way to trust and a willingness to cooperate. The gathering led to better lines of communications between the ARRL, the FCC and the coordinators. Ultimately, it led to a draft Memorandum of Understanding sent for consideration by the ARRL's board.

Even so, there were many who believed that the American Radio Relay League would never involve itself in any "official" way with repeaters or repeater coordination. They pointed to the well-known ARRL "diamond logo" and said that any League involvement in FM and repeater coordination would be akin to painting a "giant bulls-eye in the middle." It might be a target for any disgruntled ham to go after in court, if he or she was refused a repeater channel pair by some local coordinator who was even remotely recognized by the ARRL.

Gary Hendrickson, W3DTN, of TMARC listens intently to the discussion.

But the Board surprised the doubters. At a special meeting of the ARRL Board of Directors held in Windsor Locks Connecticut 24 through 26 October, it accepted the Memorandum with only two minor changes in wording. The changes were to allow consultations between the two organizations more often than the proposed once a year and to establish that the National Frequency Coordination Office, or NFCO, was an ARRL administrative office acting on behalf of the NFCC.

The mechanics of passage

Not wanting to let the matter wait until the January, 1997 meeting, First Vice President Steve Mendelsohn, W2ML (formerly WA2DHF) telephoned the proposed changes to Dick Isley, WD9GIG. Isley is the Chairman of the NFCC Board of Directors. Isley then contacted his Board members and soon reported their acceptance. The NFCC Board having concurred on the changes, the ARRL Board then voted to accept the document, as amended, and authorized its signing by President Rod Stafford, KB6ZV.

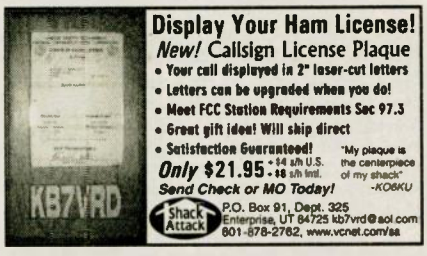
Following the formal signing, the ARRL and NFCC are to begin discussions on how best to implement the memorandum.

Not all are happy

But not everyone is happy with the agreement. In fact, as the ARRL Board of Directors was approving the Memorandum of Understanding, the Repeater Coordination Council serving Oklahoma gave notice that it wants no part of a single point of contact at this time. According to information supplied to Dallas, Texas, ham Tom Blackwell, N5GAR, by Oklahoma Repeater Society Inc. and relayed to this writer, that council has recently had a change in board members and management. The new managers have notified the FCC that its membership was not consulted prior to the old board giving its support to the single point of contact.

Because of this, the ORSI is withdrawing any support previously given to the proposal until the appropriate study is done. After that, the membership will be informed about the pros and cons of the proposal and then polled to see what the group's position will be.

Another region that will be interesting to watch is Indiana where the only words that come to mind to describe the coordination scene seem



NFCC Chairman Dick Isley, WD9GIG. ***—photos by WA6ITF***

to be: "...it's a mess. A complicated mess. So complicated that it would be impossible to explain in depth."

It is sufficient to say that some people who served with the long-established coordination body known as the Indiana Repeater Council, and who are no longer in power have formed another coordination body. Last July 13th, they announced that "...radio amateurs in the State of Indiana shall have the option of choice of Frequency Coordinators . . . Pursuant to 47 CFR, section 97.3(a)21, and all other applicable sections and subsections, The Indiana Repeater & Auxiliary Council, (TIRAC) is now coordinating FM repeater operations, auxiliary operations ("remote base-station, vehicular remote, remote control), amateur television repeaters, beacon stations, and any other relay-station operations within the boundaries of the State of Indiana."

A few months later, TRIAC was either renamed or dissolved. Information on this is not really clear. Either way, it evolved into the Midwest Spectrum Management Alliance, Inc. As of this writing, both sides seem to have at least half of the state's repeater owners in support. These are not the same repeaters supporting both, rather, it is a true schism and as such, it makes Indiana a state divided on political ground rather than geographic boundaries. It also makes for a situation that even King Solomon would have a problem solving.

The "Bible" of repeater coordinators

However, there is this caveat. The ARRL Repeater Directory appears to have become — at least for the moment — the de facto "bible" in deciding who is, and who is not, a recognized Amateur Radio repeater frequency coordinator. It lists the Indiana Repeater Council as the bona-fide coordinator in that state. As such, it will the I.R.C. rather than the new Midwest Spectrum Management Alliance Inc., that will be recognized by the NFCC and NFCO.

In the case of Indiana there is so much hostility that it is my guess is that there may be a court challenge. **WR**

Ham Radio & More

The *Ham Radio and More* Show, hosted by Len Winkler, KB7LPW is back on the shortwave bands live on WWCR. *Ham Radio and More* returned to WWCR shortwave on 03 November. The live broadcast airs at 6 p.m. EST Sundays, on 5.070 MHz.

The show lost its live slot when WWCR pre-sold all time on transmitter number four to a religious broadcaster. Delayed broadcasts did continue and still can be heard Monday at 10 p.m. on 3.210 MHz.

But hams around the world were not happy having to wait a day to hear the replay of a show that they normally telephone live. A letter-writing campaign to WWCR took root. It is believed that campaign helped WWCR to change its mind and find a new home for *Ham Radio and More* on another available transmitter.

Found guilty

Two men were found guilty of felony theft in Johnson County, Kansas, thanks to the help of an Amateur Radio operator. The two were arrested late in 1995 after Zac Cartright, KBØGMC, spotted a man haphazardly handling what looked to be new and expensive computer equipment just outside a CompUSA store. Another man was seated inside a pick-up truck. When Zac observed the truck had no license plate, he then followed it to another parking lot nearby where the driver got out and re-attached the license plate. At this point Cartright used his mobile rig to notify the police.

With the help of Beryl Masters, WBØEJJ, the Overland Park Police were contacted, arrived within minutes and took the two into custody. CompUSA confirmed the equipment had been stolen from them. A year later the case came to trial. Based on KBØGMC's testimony, the two men were convicted. **WR**

E-mail:
w4zc@cals.com

For the first time in history, the U.S. Congress has ordered that specific radio frequencies be re-allocated, including 5 MHz that Amateur Radio shares with government services between 2305 and 2310 MHz. Shortly before adjourning, members of the 104th Congress approved this provision as part of a larger appropriations bill.

The provision directs the FCC to take 30 MHz of spectrum from the 2.3-GHz region and auction it to the highest bidder to help balance the budget. In May of 1994, the National Telecommunications and Information Administration identified the amateur segments 2300-2310 MHz and 2390-2400 MHz for reallocation.

Last year hams scored a major victory by getting primary allocations on the 2390-2400 MHz and 2402-2417 MHz subbands. While many assumed that the government would then leave the entire band alone, lawmakers proved otherwise. The recent congressional action reallocates 2305 to 2320 MHz and 2345 to 2360 MHz to wireless services that are consistent with international agreement concerning spectrum allocations.

More bandwidth for hams?

Will there be more ham bands in the future for ham radio? Possibly, according to ARRL President Rod Stafford, KB6ZV. In answer to a question asked at the League's Southwestern Division Convention in Mesa, Arizona, Stafford said that with the move of many communications services to new communications technology in the UHF and microwave spectrum that more frequencies in the high frequency range could become available in the future. Stafford stressed that nothing is concrete and that the ARRL is not now actively pursuing new low band allocations, but that an eye is being kept on the situation to see what happens as we approach the next century.

FCC Expands toll-free phone service

The FCC says that residents of 26 states now can reach the FCC's National Call Center by simply dialing 1-888/CALL-FCC.

Arizona, Washington DC, Iowa, Maryland, Massachusetts, Missouri, New Hampshire, Oregon, Rhode Island, Texas and Washington state are the latest to join the growing list as the Commission phases in the toll-free information service. States added to the system earlier this year include Delaware, Florida, Georgia, Illinois, Kansas, Maine, Michigan, Minnesota, Montana, Nebraska, Oklahoma, South Carolina, Vermont, Virginia and Wyoming.

Plans call for the service to be available nationwide by early 1997. The Call Center, located in Gettysburg, Pennsylvania, operates between 8 a.m. and 5:30 p.m. Eastern Time.

FCC stops renewal reminders

As of 22 October, the FCC has ceased issuing Form 610R license expiration notices — reminders to hams that their tickets are going to expire within the next 90 days and that they must request renewal. The last notices sent by FCC covered into February, 1997, although the specific date was not available. A Form 610R for renewal must be returned by mail only to the FCC. An FCC Public Notice is expected within a few days.

The termination of the Form 610R means that hams, whose licenses are issued for ten-year periods, must take the initiative to remember the renewal date of their tickets and file a Form 610. An FCC spokesman in Gettysburg says the Commission hopes to have a Form 610 available soon on the World Wide Web to permit on-line renewals.

ARRL VEC offers free electronic filing

Effective immediately, the ARRL/VEC will electronically file with the

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 November, 1996.
For more information about the call assignment in the Amateur Radio Service, see Section 97.17(f) of the FCC Rules, or contact the FCC's Consumer Assistance Branch, 1270 Fairfield Road, Gettysburg, PA 17325-7245, toll free 800/322-1117.

Radio District	Group A Am Extra	Group B Advanced	Group C Tech./Gen.	Group D Novice
Ø	ABØDC	KIØFC		KBØYXI
1	AA1QU	KE1GI	N1YCR	KB1CAD
2	AB2CK	KG2JD		KC2ADQ
3	AA3PC	KE3YB	N3XTT	KB3BQZ
4	AE4YV	KT4XU		KF4NBG
5	AC5KH	KM5ER		KC5WVH
6	AC6YH	KQ6KI		KF6HGA
7	AB7TF	KK7CT		KC7THI
8	AA8YM	KG8ZL		KC8FFX
9	AA9TN	KG9IJ		KB9OWJ
N. Mariana Is.	NHØA	AHØAW	KHØFA	WHØABF
Guam	WH2Z	AH2DC	KH2QH	WH2ANR
Hawaii		AH6OV		WH6DCV
Amer. Samoa	AH8O	AH8AH	KH8DA	WH8ABF
Alaska		ALØBI	KLØAA	WL7CTY
Virgin Is.	WP2X	KP2CJ	NP2JI	WP2AIH
Puerto Rico	KP3V	KP3AN	NP3CF	WP4NMO

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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.

FCC Forms 610 for ARRL members. The ARRL/VEC can electronically file FCC Form 610 applications for amateur station license renewals, or for address, name or call sign changes. This service is FREE to current ARRL members.

What is required to use this ARRL member service?

ARRL members must send a correctly-completed, signed and dated original Form 610 to the ARRL/VEC. Members can send the Form 610 by US mail, by courier, or hand deliver to: ARRL/VEC, 225 Main St., Newington, CT 06111 (USA). Applications received by the ARRL/VEC must include an original signature. Forms 610 cannot be accepted via fax.

Any questions regarding Form 610 application processing for ARRL members can be directed to the ARRL/VEC by calling 860/594-0300 (weekdays and evenings, from 8 a.m. to 9 p.m. eastern time).

New FCC web searcher

The FCC has installed a new search engine for use on its World Wide Web site at http://www.fcc.gov. It supports both concept and keyword searches to help Web users find FCC documents quickly and easily. The search utility also supports Boolean operators (and, not, or, etc.). Details on how to use the new search tool are located on the search page, http://www.fcc.gov/search.

Antennas vs. local ordinances

Look for a major court challenge by city planners, community managers and homeowners associations to recent rulings by the FCC. Rulings that forbid states, cities, municipalities, homeowners associations, and even individual landlords from enacting rules forbidding the installation of those pizza sized satellite television dishes.

When it used its power and preempted local jurisdiction and land use regulations to permit anyone to install one of these mini satellite antennas, the FCC said it was doing do to insure that the general public had access to the latest in television transmission technology.

But according to recent news reports, some cities, states and many homeowners organizations disagree. A spokesmen for a coalition of urban planning groups say that the federal government has no right to dictate the aesthetic look of a community. That controlling satellite dishes and any antenna structures must be done on a community planning level.

With both sides now having their views firm, it will be up to the legal system to decide who has the final word. Urban planners say that they will be going to court in an all-or-nothing effort to wrestle the power of federal preemption away from the FCC. While it will be many years before any final determination is made, whatever the outcome, the future of many radio services that use visible antennas — including Amateur Radio — may well hang in the balance.

IARU Administrative Council meets in Israel

The Administrative Council of the International Amateur Radio Union met in Tel Aviv, Israel, 06-08 October, after the IARU Region 1 conference there. The council took the following actions:

• After consulting with the International Secretariat, the council identified the ITU meetings during the coming year that require IARU representation, and the president announced the appointment of representatives.

• The council agreed on instructions to be given to the IARU 1997 World Radiocommunication Conference (WRC-97) delegation. The International Secretariat will update this material as new information becomes available. The delegation will consist of IARU Vice President Michael Owen, VK3KI; Region 1 Vice Chairman Wojciech Nietyksza, SP5FM; and ARRL International Affairs Vice President and IARU Secretary Larry Price, W4RA.

• The council received a comprehensive report from the 7 MHz Strategy Committee, and updated the strategies guiding IARU preparations for the possible consideration of related allocations issues at WRC-99. The approved action plan will be distributed to member societies.

• The council updated the IARU Strategic Plan for the Development of Amateur Radio. In recognition of the special circumstances in Africa, the council created a special committee under the chairmanship of Hans van de Groenendaal, ZS5AKV, to develop a plan to marshal global re-

sources to enhance the position of Amateur Radio in Africa.

• The council reviewed and updated present and anticipated future requirements for radio spectrum allocations to the Amateur and Amateur Satellite Services, particularly with regard to the low-frequency (LF) range, the 7-MHz band, the lower VHF range, and the microwave allocations.

• The council began planning for IARU participation in the next world TELECOM (Geneva, 1999). The council also received reports from Regions 1 and 3 on their preparations for Amateur Radio participation in Asia TELECOM 97 in Singapore and Africa TELECOM 98 in South Africa, being organized by the respective regions in accordance with IARU policy.

• The council received a report from the Future of the Amateur Service Committee (FASC). The Committee has completed a review of comments on its initial discussion document and is preparing a further paper on the subject of possible revisions to Article S25 of the international radio regulations, which is expected to be considered at WRC-99.

• The Ad Hoc Communications Planning Committee submitted a detailed report, which recommended increased emphasis on explaining the work of the IARU. A Public Relations Committee will be appointed to carry out this work.

• The council reappointed to new terms the international coordinators and advisers who report to it on specialized areas of interest. They are: Robert E. Knowles, ZL1BAD, IARU Monitoring System; John G. Troster, W6ISQ, IARU Beacon Project; Hans van de Groenendaal, ZS5AKV, IARU Satellite Adviser; and Christian M. Verholt, OZ8CY, IARU EMC Adviser.

• The council reversed its previous decision to decouple its meetings from regional conferences, and decided that its next regular meeting would be held in Beijing, China, 13-15 eptember 1997, following the Region 3 conference.

• The council confirmed that theme for World Amateur Radio Day, 20 September 1997, will be "35 Years of Amateur Radio in Space."

• The International Secretariat reported on the status of the IARU Web site, http://www.iaru.org, which is now functionally independent of the ARRL Web site. The three regional organizations announced plans to establish Web sites of their own, linked to that of the IARU and of those member-societies in the respective regions that have established a Web presence.

The members of the Administrative Council are IARU President Richard Baldwin, W1RU; IARU Vice President Michael Owen, VK3KI; IARU Secretary Larry Price, W4RA, and regional representatives PAØLOU, SP5FM, VE3CDM, YV5BPG, 9M2SS, and HL1IFM. Additional regional observers invited to be present were 6W1KI, ZS5AKV, VP9IM and JJ1OEY. **WR**

Lightning precautions

From the KB6CYS WX BBS via packet.

1. Stay indoors, and don't venture outside unless absolutely necessary.
2. Stay away from open doors and windows, fireplaces, radiators, stoves, metal pipes, sinks, and plug-in appliances.
3. Don't use plug-in electrical equipment like hair dryers, electric toothbrushes, or electric razors during the storm.
4. Don't use the telephone or radio equipment that is connected to outside antennas during the storm.
5. Don't work on fences, telephone or power lines, pipelines, or structural steel fabrication.
6. Don't use metal objects like fishing rods, golf clubs. Golfers that wear cleated shoes are favorite targets of lightning.
7. Don't handle flammable materials in open containers.
8. Get out of water and off small boats.
9. Stay in your car if traveling, they offer excellent protection.
10. When there is no shelter, avoid the highest object in the area. If only isolated trees are nearby, our best protection is to crouch in the open, keeping twice as far away from isolated trees as the trees are high. Do not seek shelter under a tree!
11. Avoid hill tops, open spaces, wire fences, metal clothes lines, exposed sheds, and any conductive elevated objects.
12. When you feel the electrical charge — if your hair stands on end or your skin tingles lightning may be about to strike you. Drop to the ground immediately.

Also, do not take a shower during a thunderstorm. If lightning strikes near a water main or sewage main, the charge may try to equalize itself through the other ground source (water to sewage or sewage to water). There have been several deaths related to this in the past.

Navy Captain Charles "Chuck" E. Brady, Jr., N4BQW, spoke with children from the Space Shuttle *Columbia*. ***—photo by NASA***

SAREX

(continued from page 1)

showed tapes which we had recorded from NASA Select TV during earlier parts of the mission so that the crew could be seen floating around and working.

A big-screen television was linked to a computer. The screen displayed the live position of the shuttle on a large map, as the *Columbia* moved across the country. We used InstantTrack for this, and everyone could see where the shuttle was, and the shuttle's "footprint" (area that was within Amateur Radio range).

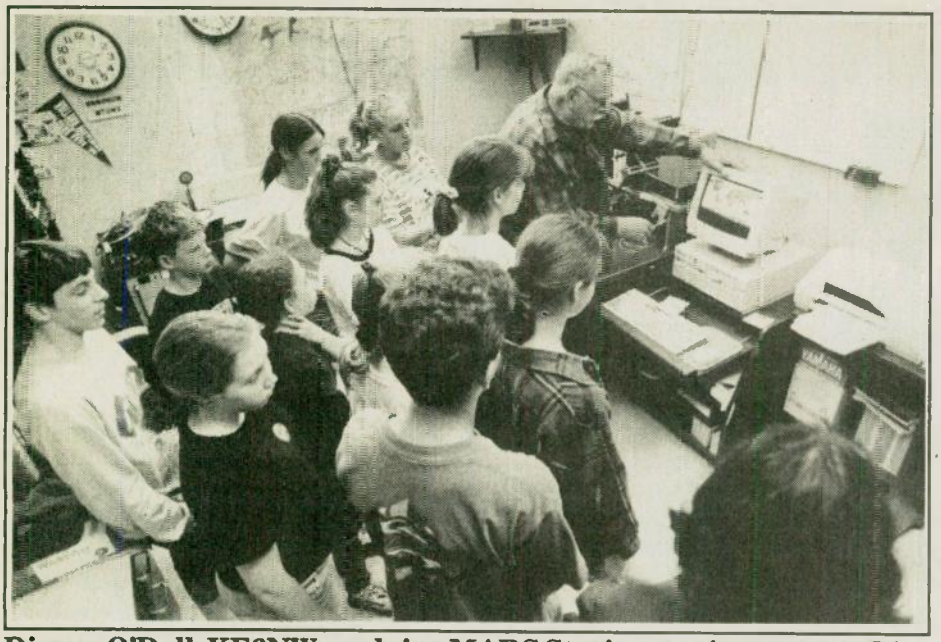
Before the actual contact, there was a formal program with introductions and explanations of what would be happening. After the contact the audience and media had time to ask questions. When the students and take additional pictures.

Saturday morning, 29 June, 0958 local time (1558 UTC), during orbit 146, the first SAREX contact with Chuck began. It was a direct 2-meter contact, and in about five and a half minutes, eleven students from the three schools were able to hear Chuck answer their questions before he asked to stop and switch over to telebridge.

While the switch was being made from our direct contact to telebridge via Florida, we moved five students out and five alternates in around the table. On board *Columbia,* Chuck was moving his antenna from the commander's window, facing north, to the pilot's window which faced south. Three more students talked with Chuck via the telebridge. For the telebridge contact the students were on the telephone to Florida where an Amateur Radio operator used a phone patch to connect them to his 2-meter radio.

Success! It was a wonderfully exciting morning for all involved. The formal program was completed after answering questions, thanking people, and handing out certificates to everyone present. More pictures were taken and the media conducted interviews. There were lots of very happy people. However, Ben, about age 8 or 9, from Ft. Langley had not been able to ask his question. He asked me, the Radio Contact Coordinator, to mail it to Chuck, which I promised to do, and he thanked me with a number of bear hugs.

But the morning wasn't over yet. On the next orbit, number 147, the *Columbia* would be barely within



Digger O'Dell, KF6NW explains MARS Station equipment used for tracking the shuttle. *—photo courstesy of Whidbey News-Times*

radio range. We had told the working crew and the teachers that we would try for an unofficial contact on this pass so that maybe others could talk with Chuck.

At 1031 local time (1731 UTC) Steve Pitts, KJ7NR, was again operating the antenna and I was at the radio. I was flipping back and forth between frequencies, when Chuck and I found each other on 145.550 MHz downlink, and 144.950 MHz uplink. After he answered my call I turned around and there were eight more students seated and ready to go.

First in line was Ben and then Melissa, the alternates who'd missed out on the last orbit. The other six at the table included four new students who hadn't been on my list, but all were prepared with questions and were just as professional as those we'd rehearsed for our first contact. During Chuck's answer to the eighth question he faded away amid a chorus of sighs from everyone in the room. We had managed another five and a half minutes of direct contact until *Columbia* was only 0.25 degrees above our horizon.

Ben was ecstatic, jumping up and down in excitement. "This was the best day of my life and I will never forget it", he said. Other students echoed his statement. I was euphoric and thought to myself that getting married and having babies would have to rank in there with the best days of my life, but certainly this was a day I would never forget and neither would many of the others who were present. WR

For information on how your school may participate in a SAREX mission, contact: The American Radio Relay League, Educational Activities Department, 225 Main Street, Newington, CT 06111-1494. Telephone: 860/594-0301, fax 860/594-0259. E-mail: sarex@ arrl.org.

The Crew at Earth Station

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Julia Berry, KJ6VV
A. M. "Tony" Craig, VE7XQ
Dwight Galbraith
Dick Joslin, N7RJ
Ernie Haakenson, W7ZJB
Annette Haggard, KC7DVS
Bradley Hampton, KC7MR
Linda "Lin" Hampton
Jerry Henrichsen, W7KCI
Dave Hunter, KC7CEX
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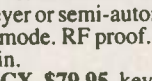

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The seminars (left) drew rapt attention.

It doesn't get much better than this, Ray Lewallen, W7EL, on antennas.

ARRL Division Convention, PACIFICON

Armond Noble, N6WR

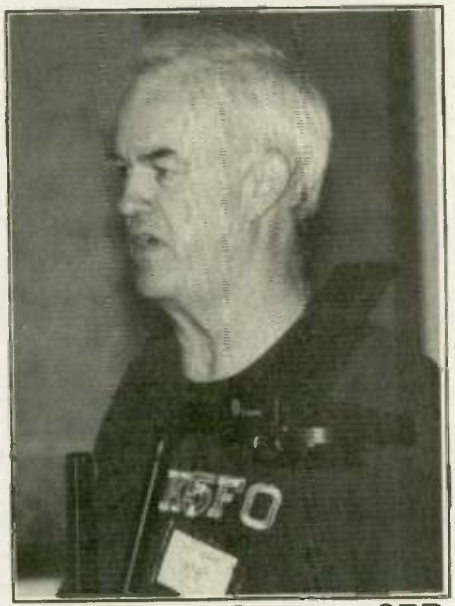
What's the best value in Amateur Radio information?

How about two full days of an ARRL Division Convention for only a $5 admission fee? Running from Friday to Sunday (18-20 Oct.) the Pacific Division get-together at the Hilton Hotel in Concord, CA, was a three-ring circus of informative seminars, manufacturer displays and a flea market.

A partial list of the seminars include HF DX, VHF Contesting, Antennas, Mobile Antennas, QRP-CW and SSB and Building, Amateur TV, Satellite-with an operating station at the convention, CW, Transmitter Hunting, Beginning Packet, Advanced Packet, YL Forum, and on and on with over 50 seminars to choose from. Peter Onnigian, W6QEU, writes the following assessment:

Talks devoted to antennas

The Friday talks at this year's Pacific Division ARRL Convention were devoted to antennas which were no surprise. As one author said, "antennas are a ham's favorite subject now-a-days, simply because you can get your hands on it and make some measurements of its performance."



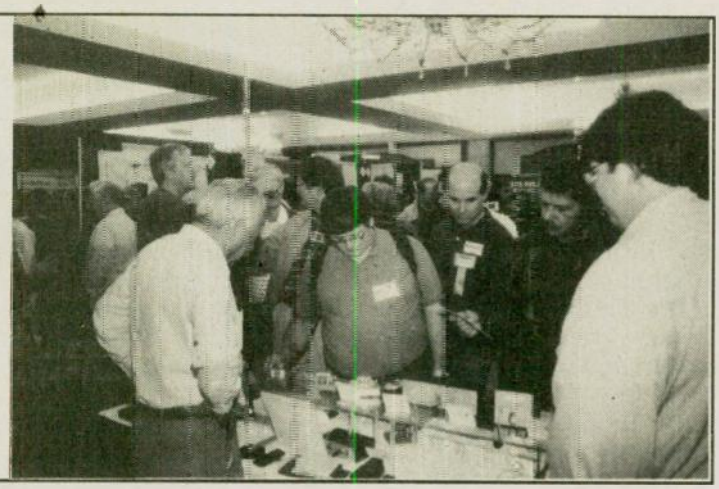
A QRO guy who runs QRP, Chuck Adams, K5FO.

Ed Farmer, PE, is AA6ZM, who delivered a paper about transmission lines and gave the audience a better understanding of what the line connecting the radio to the antenna is, what it does, and how it does it!

Roy Lewallen, W7EL, developer of the popular ELNEC and EZNEC computer analysis programs, discussed antenna basics, and computer modeling. Roy is a very humorous fellow and presented his material in like manner. To the question: "What is gain, and where does it come from?" Roy stated that he didn't know! But if enough is good, then too much must be better, he added.

In a more serious vein he stated that gain is not a property which a single antenna can have. For example, Roy said that an isotropic radiator radiates equally in all directions — its pattern is a sphere, and you simply can't buy one for love or money!

Gain is a measure of the relative field strengths of two antennas, and must be referenced to either an isotropic or a free-space dipole. Roy continued by explaining that gain comes from concentrating on the signal in some directions at the expense of other directions, using field reinforcement and cancellations.



As usual, there's a big crowd at the Palomar Engineers booth.

Ah, the sting of nostalgia.

The efficiency of a dipole (or antenna) is limited by its radiation resistance plus RF losses. For example Roy said, "a resonant 72-ohm dipole with 100 watts input power would have a current of about 1.18 amperes flowing through its center. However, a dipole one-tenth wavelength long would have a peak current which is 59 times greater! Its radiation resistance would be much smaller as would the RF loss resistance, but the higher current would result in greater loss. But the radiation efficiency (power in versus power out) would be comparable! That is *if* you could get the RF power in to this much smaller electrical length dipole with its very low resistance and high reactance."

Most of those in the audience agreed with Roy that VSWR is talked about often, simply because it may be measured in various ways albeit not very accurately, unless one has equipment with good directivity.

Patch antennas

One of the most interesting speakers we have heard at any ham convention was Rob Hill. A well educated young enthusiastic engineer with 15 years of antenna engineering experience with such firms as Loral Rantron, ESL, and now with Wireless Access. Rob presented his material without anyone in the standing-room-only audience nodding off. He has an excellent way with antenna words.

Rob presented basic patch antenna equations for easy construction. The only unknown is the dielectric constant of the sandwich material, but this can readily be obtained from the board manufacturer, or measured by making a quarter-wave transmission line on the dielectric. Because of the cost, the most popular sandwich material for 432 or 925 MHz is FR4 printed circuit board, or where weather proofing is not a problem, Styrofoam may be used. A 432 MHz patch antenna, 36" x 48" in size was described without any dielectric, using plastic standoff insulators!

Rob called this his Home Depot special, since all the materials (except an N flange connector which you may have in your junk box) came from there. This antenna has a 1.5:1 VSWR bandwidth of over 8 MHz, a 3 dB bandpass of 11 MHz with a gain of 6 dBd. The antenna polarization depends on the feed location, somewhat like a quad.

There will certainly be technical articles in the amateur literature very soon for the 432 and higher

A new concept draws interest. ***—photos by N6WR***

band antennas. Rob has done an excellent job of simplifying the design of a rather complicated and not too well understood radiator. He has taken the mystery out of patch antenna, making it possible for amateurs to easily make them. Pacificon was very fortunate to have him as a guest speaker, as were all the amateurs who heard his talk. —W6QEU

•••

Peter Onnigian, W6QEU, has authored three engineering text books on patch antennas which came into use about 10 years ago when the need for antennas above 900 MHz became widespread for the many different commercial services authorized by the FCC. None of his books give a simple step-by-step formula for designing a patch antenna.

The Saturday night banquet attendees were entertained by the author of *Night Signals*, *Hostage in the Woods*, *Firewatch*, *Easy Target*, *Disappearing Act* (all Amateur Radio-related adventure fiction books published by the ARRL), Cynthia Wall, KA7ITT, and her brother, Steve Jensen, W6RHM.

Besides getting the straight scoop from the "heavy-hitters" in DX and professional-level technical experts there is something else, as heard on the air after the convention — a comment about the "comradeship of conventions." **WR**

NEWSFRONT
(continued from p. 3)

610s filed electronically

The FCC has discontinued its form 610-R mail-in renewal notices because hams already have two other options available to them. Licenses are renewable through a Volunteer Examination Coordinator or by mail to the FCC.

Back in July, the FCC' s Office of Operations of the Wireless Telecommunications Bureau issued an Order to permit Volunteer-Examiner Coordinators to electronically submit applications for license renewals and modifications. This procedure has resulted in license modification and renewals being granted in one or two days after the Commission receives the data. This, says the FCC, is significantly faster than would result from submitting these requests in document form.

Now there are some caveats to the new system. The first is that not every VEC is providing a license modification or renewal service. Those who are, have been given the right to charge the applicant a fee for this service. The amount charged is up to the discretion of a given VEC. Hams who do not want to pay a service charge can continue to submit their application document directly to the Commission.

For either procedure, a regular FCC Form 610 must be used. This form is available for downloading from the FCC's Internet home page or by from the fax-on-demand system by calling area code 202/418-0177 from the handset of a fax machine, or from the FCC's forms contractor by calling 800/418-3676

For further information on renewing your ham license, please contact the FCC's Wireless Telecommunications Bureau Consumer Assistance Branch toll free at 800/322-1117.

Police jammer goes to jail

A ham who jammed police communications is now sitting behind prison bars.

Bobby Lee Aguero, KE6VNU, who interfered with police communications, was sentenced to jail for 120 days and fined over $1,400 by a Placer County California Municipal Court on 01 November.

Aguero is a Sacramento area radio amateur who admitted in a plea bargain to having interfered with Roseville, California police communications. He also allegedly interfered with police communication at a ham radio convention in Seaside, Oregon on 02 June.

In the California plea bargain agreement, Aguero plead guilty to three misdemeanor counts of the Placer County Penal Code on 26 August. These included interfering with communications, delaying a police officer, and destroying evidence.

In sentencing Aguero, the judge considered the Parole Department's concerns that Aguero showed little or no remorse regarding his offenses. The judge dismissed a defense request for electronic ankle bracelet monitoring of the defendant citing Aguero's ability to utilize and alter electronic equipment. Despite a defense counsel request, the judge ordered that the time served be immediate and continuous. He also denied Friday through Sunday jail time in spite of the defendant's current school schedule.

Aguero was also ordered to continue rehabilitation by the probation department; he is prohibited from owning a radio transmitter or scanner or having one in his presence. He is also prohibited from being within fifty feet of any radio capable of transmitting signals. Failure to comply with the probationary terms would subject Aguero to an additional year in jail.

Local hams familiar with the case were present at the sentencing. Some had presented the judge with background information regarding the defendant's behavior in the Amateur Radio community. One ham detailed Aguero's attitude and activity exhibited on the local VHF amateur frequencies to the court. Observers say that Aguero left the courtroom with a grimace and in tears to began his 68 days in jail.

Aguero's sentence of 120 days in county jail was reduced by 52 days by time served.

MIR QSL cards

Dave Larsen, N6JLH, is the US MIR QSL manager for contacts made with crew members aboard MIR. QSL cards must include date, time, and mode of contact. Cards for SWL reports are not be handled by Dave. If a contact is made with the MIR packet radio personal message system, then the message number issued should be included on the QSL card.

QSLs must also be accompanied by a business-sized SASE and sent to David Larsen, N6JLH, P.O. Box 1501 Pine Grove, CA 95665.

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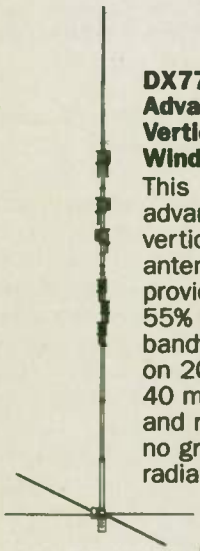
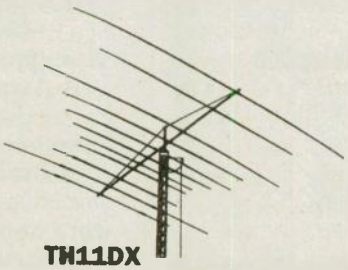
Highlighted here is just a sampling of innovative products from Hy-Gain. For detailed information about these and many more Hy-Gain products and accessories, write, phone or FAX today.



DX77 Advanced Vertical Windom
This advanced vertical antenna provides 55% greater bandwidth on 20 and 40 meters, and requires no ground radials.

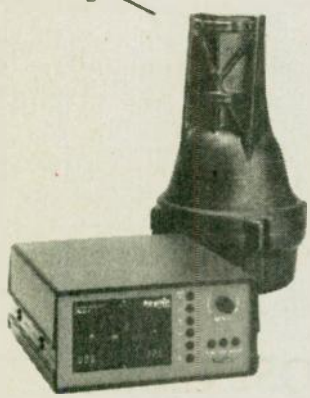


TH11DX
This uniquely designed antenna provides the frequency coverage of a log periodic, **plus** the performance of a monobander.

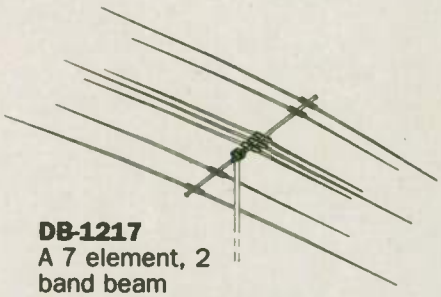
V2R
A rugged antenna for 2 meters, the V2R delivers 3 dBd gain with a wide coverage pattern.

TH3 Mk4
A classic tribander, the TH3 Mk4 is an ideal choice for home stations and DXpeditions.

DX88
If you want 80 meters in a vertical, this is your antenna. Better bandwidth than found in add-on kits.

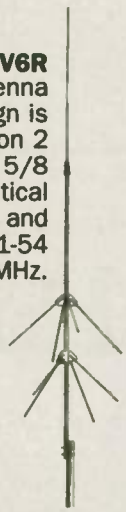


Ham V with DCU-1 Digital Control System
The Ham V is designed for medium communications antenna arrays of up to 15 sq. ft. (1.4 m2) wind load area. The **DCU-1** features digital and analog displays with six presets, automatic brake delay, motor slow down, automatic calibration and programmable center of rotation.

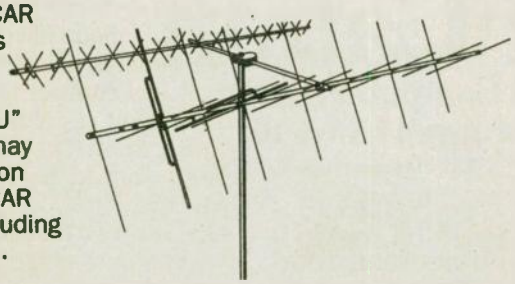


DB-1217
A 7 element, 2 band beam antenna designed for operation on the 12 and 17 meter amateur bands, and packaged for DXpeditions.

V6R
This antenna design is based on 2 collinear 5/8 wave vertical radiators and covers 51-54 MHz.



OSCAR LINK
Hy-Gain's OSCAR LINK antennas are ready for Phase 3D on the "V" and "U" bands. They may also be used on the other OSCAR satellites, including the new JAS-2.



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Awards

JARL celebrates its 70th Anniversary

The following information was taken from The JARL News:

The Japan Amateur Radio League (JARL) was established in 1926 by a group of 37 radio communication enthusiasts. In those days there was an ardent and earnest desire to promote and develop the utilization of radio wave technology in Japan which resulted in those amateurs to establish a national Amateur Radio organization, the current JARL.

Thanks to their continued efforts, Amateur Radio developed slowly but surely until finally the number of Amateur Radio stations in Japan came to about 1,370,000 which number can be regarded as being almost half of the total amateur stations in the world — an accomplishment to be admired.

Needless to say, until we reached the present-day growth of Amateur Radio in Japan, there were countless obstacles to overcome — too many to mention here.

On the other hand, there were several events which merit mention. One such being the launching in August this year of JAS-2. This new star, now named "Fuji-3" is providing services to radio amateurs living in many parts of the world. This goes to show JARL's continued contribution towards promotion of scientific experimentation. It must not be forgotten that the growth and development and rapid technological changes seen in recent years must be assumed to continue into the 21st century and we amateurs must be well prepared to meet all ongoing challenges.

To celebrate the achievements of 70 years of hard work, cooperation and understanding, JARL will hold a ceremony at the Hotel Okura, on 23 November 1996, and issue commemorative awards. JARL is looking forward to receiving logs from around the world.

Rules

J Award

•Contact at least seven Japanese prefixes.

A Award

•Contact seven different countries (not including JA/JD)

R Award

•Contact at least seven JARL commemorative stations

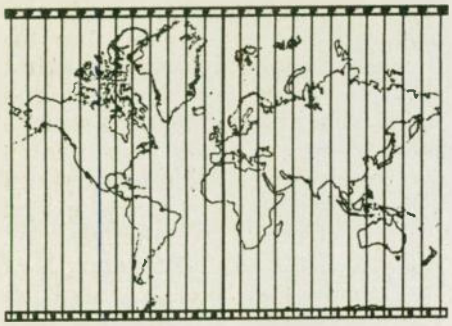
L Award

•Contact at least seven Japanese stations in different grid squares (4 figures: The first 2 characters and 2 numbers)

70 Award

•Contact 70 stations on one band or mode. In case of 2400 MHz or above, the number of stations are: 2400 MHz, 35; 5600 MHz, 10; 10 GHz, 7; 24 GHz, 2.

Contacts must be made between 1 June 1996, and 31 May 1997. Applications will be accepted until 31 December 1997. The awards are also available to SWL. Please send a log (GCR is not needed) and 6 IRCs to: JARL Award Desk
14-5, Sugamo 1-chome,
Toshima-ku, Tokyo 170-73,
Japan



100 Nations Award

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

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

The W-100-N is not a radio sport award as such, but a token of achievement in communication. At the same time, it offers all Amateur Radio enthusiasts several features not found in other awards.

1. W-100-N virtually eliminates the need to work geographic areas heard only during DXpeditions. Almost all national entities have amateur stations consistently on the air.

2. W-100-N, then, will be of perennial interest. The advantage to those stations having worked a national entity long absent from the air will be minimal.

3. W-100-N is difficult to achieve, yet is within reach of all moderately well-equipped stations whose operators utilize good communication skills.

Rules

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

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

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

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

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

6. The application shall include the following:

a. Letter requesting W-100-N.

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

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

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

7. All applications and requests shall be addressed to:

W-100-N Award Manager
Worldradio
2120 28th Street
Sacramento, CA 95818

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

Upon approval of an application for W-100-N, a certificate will be issued and the issuance of the award will be noted in a future issue of *Worldradio.*

W-100-N nations list criteria

1. In all cases each "nation" will be both a political and geographical entity at the same time.

2. In all cases each "nation" will be a geographical and political entity independent enough to issue distinctive postage stamps acceptable in international mail.

3. In all cases each "nation" will be a geographical and political entity whose amateur stations are

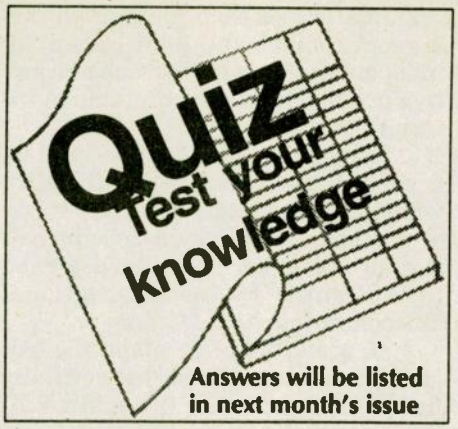
a. identifiable by a specific call sign prefix series allocation assigned to that entity by the International Telecommunications Union, or

b. identifiable by a specific call sign prefix or suffix series normally used in the issuance of amateur licenses to new amateur licensees under ITU prefix allocations by the sovereign government of the entity.

4. No geographical or political entity lacking a permanent, native population will be considered for status as a nation.

5. Geographical and political entities which do not issue distinctive postage stamps but have permanent, native populations will be considered to be part of the same entity that issues postage stamps for use in that area.

6. Geographical and political entities which issue postage stamps but do not have permanent, native populations will not be considered "nations" for the purposes of this award. WR



The answers to last month's quiz questions 68-87 are as follows:

68. C; 69. D; 70. A; 71. B; 72. B; 73. C; 74. D; 75. B; 76. C; 77. C; 78. D; 79. C; 80. D; 81. A; 82. B; 83. A; 84. B; 85. C; 86. D; 87. B

88. How does the bandwidth of the transmitted signal affect selective fading?

A. It is more pronounced at wide bandwidths

B. It is more pronounced at narrow bandwidths

C. It is equally pronounced at both narrow and wide bandwidths

D. The receiver bandwidth determines the selective fading effect

89. What effect does auroral activity have upon radio communications?

A. The readability of SSB signals increases

B. FM communications are clearer

C. CW signals have a clearer tone

D. CW signals have a fluttery tone

90. What is the cause of auroral activity?

A. A high sunspot level

B. A low sunspot level

C. The emission of charged particles from the sun

D. Meteor showers concentrated in the northern latitudes

91. In the northern hemisphere, in which direction should a directional antenna be pointed to take maximum advantage of auroral propagation?

A. South C. East
B. North D. West

92. Where in the ionosphere does auroral activity occur?

A. At F-layer height

B. In the equatorial band

C. At D-layer height

D. At E-layer height

93. Which emission modes are best for auroral propagation?

A. CW and SSB C. FM and CW
B. SSB and FM D. RTTY and AM

94. Why does the radio-path horizon distance exceed the geometric horizon?

A. E-layer skip

B. D-layer skip

C. Auroral skip

D. Radio waves may be bent

95. How much farther does the radio-path horizon distance exceed the geometric horizon?

A. By approximately 15% of the distance

B. By approximately twice the distance

C. By approximately one-half the distance

D. By approximately four times the distance

96. To what distance is VHF propagation ordinarily limited?

A. Approximately 1,000 miles

B. Approximately 500 miles

C. Approximately 1,500 miles

D. Approximately 2,000 miles

97. What propagation condition is usually indicated when a VHF signal is received from a station over 500 miles away?

A. D-layer absorption

B. Faraday rotation

C. Tropospheric ducting

D. Moonbounce

98. What happens to a radio wave as it travels in space and collides with other particles?

A. Kinetic energy is given up by the radio wave

B. Kinetic energy is gained by the radio wave

C. Aurora is created

D. Nothing happens since radio waves have no physical substance

99. What is a frequency standard?

A. A net frequency

B. A device used to produce a highly accurate reference frequency

C. A device for accurately measuring frequency to within 1 Hz

D. A device used to generate wideband random frequencies

100. What is a frequency-marker generator?

A. A device used to produce a highly accurate reference frequency

B. A sweep generator

C. A broadband white noise generator

D. A device used to generate wideband random frequencies

101. How is a frequency-marker generator used?

A. In conjunction with a grid-dip meter

B. To provide reference points on a receiver dial

C. As the basic frequency element of a transmitter

D. To directly measure wavelength

102. What is a frequency counter?

A. A frequency measuring device

B. A frequency marker generator

C. A device that determines whether or not a given frequency is in use before automatic transmissions are made

D. A broadband white noise generator

103. How is a frequency counter used?

A. To provide reference points on an analog receiver dial

B. To generate a frequency standard

C. To measure the deviation in an FM transmitter

D. To measure frequency

104. What is the most the actual transmitter frequency could differ from a reading of 146,520,000-Hertz on a frequency counter with a time base accuracy of +/- 1.0 ppm?

A. 165.2 Hz C. 146.52 Hz
B. 14.652 kHz D. 1.4652 MHz

105. What is the most the actual transmitter frequency could differ from a reading of 146,520,000-Hertz on a frequency counter with a time base accuracy of +/- 0.1 ppm?

A. 14.652 Hz C. 1.4652 Hz
B. 0.1 MHz D. 1.4652 kHz

106. What is the most the actual transmitter frequency could differ from a reading of 146,520,000-Hertz on a frequency counter with a time base accuracy of +/- 10 ppm?

A. 146.52 Hz C. 146.52 kHz
B. 10 Hz D. 1465.20 Hz

107. What is the most the actual transmitter frequency could differ from a reading of 432,100,000-Hertz on a frequency counter with a time base accuracy of +/- 1.0 ppm?

A. 43.21 MHz C. 1.0 MHz
B. 10 Hz D. 432.1 Hz

108. What is the most the actual transmit frequency could differ from a reading of 432,100,000-Hertz on a frequency counter with a time base accuracy of +/- 0.1 ppm?

A. 43.21 Hz C. 432.1 Hz
B. 0.1 MHz D. 0.2 MHz

Friends writing about friends.

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DAYTON hamvention® 97

May 16, 17, 18, 1997 ■ Hara Arena, Dayton Ohio

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- Advanced registration orders must be postmarked no later than May 2 (USA) or April 25 (Canada). Tickets will be mailed after January 15,1997.
- Ticket requests that are received **AFTER** the deadline will be processed and **HELD** for pick-up at the Hamvention Office at the Conference Center entrance beginning Thursday, May 15 at 8:00 a.m.

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See our Web site for more information.

- **Inside Exhibit Booths**
  For an application, please Fax (937) 376-4648 or E-mail to exhibits@hamvention.org
- **Outdoor Flea Market Space**
  For an application, please Fax (937) 253-1289 or E-mail to fleamkt@hamvention.org
  Flea market spaces are sold IN ADVANCE ONLY. No spaces sold at gate!

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To be listed in our Program and on our Web site, please Fax (937) 274-8369 or E-mail to info@hamvention.org

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ACTIVITIES FOR THE NON-HAM

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- License Exam are by appointment only.

Details are available via FAXMail or the Web.

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Bus service will be provided between Hamvention, Air Force Museum, Salem Mall and Forest Park Mall parking areas. Check our Web site for additional parking areas.

COMMUNICATIONS

MAIL: Hamvention, Box 964, Dayton, Ohio 45401-0964

FAX (incoming): (937) 274-8369

E-Mail: info@hamvention.org

WWW: http://www.hamvention.org

FAXMail: (Outgoing) You must have a touch tone phone and call *from your Fax machine*. Set your Fax to manual send/receive, then call (937) 276-6934 and listen for voice instructions.

PHONE: (937) 276-6930. Chairman Voice Mail box numbers are available via FAXMail or the Web.

General Chairman: Dick Miller, N8CBU

Asst. General Chairman: Jim Graver, KB8PSO

ADVANCE REGISTRATION

FOR CHECK ORDERS:

Make checks payable to: Dayton HAMVENTION
Enclose the amount indicated in U.S. dollars and type or print your name and address clearly. *A $25 service charge will be assessed on all returned checks.* Do not send credit card orders to this address!

Mail to: Dayton Hamvention Box 1446, Dayton, OH 45401-1446

FOR CREDIT CARD ORDERS:

Add $1.25/ticket service charge FAX to (937) 278-4633 or mail to: Dayton Hara Arena • 1001 Shiloh Springs Rd. • Dayton, OH 45415. *Do not send checks to this address!*

	Quantity		
Admission (valid all 3 days)	_____	@ $13.00*	= $ _____
Grand Banquet	_____	@ $25.00**	= $ _____
Alternate Activities			
Saturday Luncheon	_____	@ $10.00	= $ _____
Sunday Luncheon	_____	@ $10.00	= $ _____
Credit Card Service Charge	_____	@ $1.25/ticket	= $ _____

* $15.00 at door **$30.00 at door, if available

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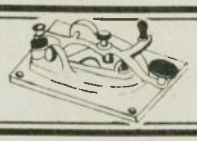


Harold W. Fischer, W6OLV

Harold Fischer was a man "who never met a car, a radio, or a television set that he couldn't get to work as if it were new," according to family members.

Mr. Fisher died 25 October 1996, at the age of 77, of congestive heart failure. A native of Sacramento, California, he was a graduate of Sacramento High School. In high school he played trombone in the orchestra, and spent World War II as a trombonist with the 554th Army Air Forces Band.

After the war, he turned his boyhood interest in Amateur Radio into a job in electronics at McClellan Air Force Base, where he was employed until forced to retire due to ill health.

"But he kept up his ham radio activities," said his wife, Mary. "He had friends all over the world." In addition to his wife, W6OLV is survived by a son, Gary, of Sacramento, and eight grandchildren. *—contributed by Paul Wolf, W6RLP*

Benjamin Szabo, KD6WPI

Benjamin A Szabo, KD6WPI, was born in Houston, Texas, 19 January 1915, and passed away on 20 October 1996, in Lake Isabella, California.

Ben started playing the violin at the age of seven, and by age nine was playing with the Ziegfield Follies, and later appeared on many stages in Europe.

Ben and Jean, his beloved wife of 53 years, devoted their time to performing at many functions for seniors all the way from San Diego to Tacoma. KD6WPI had been honored recently by the Kern Valley Exchange Club as their Senior of the Month, in recognition of his many contributions to the Kern Valley Community. Ben was a member of the Lake Isabella Amateur Radio Club, a thirty year member of the Musician's Union, and a member of the Seventh Day Adventist Church.

Benjamin C. Szabo, is survived by his step-daughter, Betty Brooks, of Lake Isabella, brother Walter, three grandchildren and many grandchildren and great-grandchildren. *—contributed by Betty Brooks*

Robert J. Slagle, K4GR

I regret to inform the ham community of the death in September of former Virginia Section Manager, K4GR. "Bob" had served as section manager between 1969-1975, and had been active on the Virginia SSB Net and Virginia CW nets over the years.

Bob was a graduate of the US Naval Academy in 1939, and attended US Naval Flight School in Pensacola, Florida. During the second World War, he earned two combat Air Medals. Bob received one of the few Air Medals given for combat in the American Theater of Operations when his plane, while on patrol off the East Coast, sunk a German submarine.

Bob also served extensively in the Antarctic as a naval pilot in the late 1950s, and in the 1960s helped to develop submarine sonar systems that are still in use today. Upon his retirement from the Navy, Bob worked for Elgin Watch Company developing timing equipment for the Apollo series of space vehicles.

Bob was born on Christmas day, 1916 in Jonesboro, Arkansas. He was first licensed in 1929 in Arkansas as W5OU. In 1948, his call was changed to W1OU. He held the call K4GR since 1966. Bob had held an Extra class ticket since 1934. He is survived by three daughters and a son. *—contributed by Phil Sager, WB4FDT*

Emery C. Boring, W6IIF

Emery C. Boring died November first, 1996, in Klamath Falls, Oregon at the age of 84. W6IIF was born in Phoenix, Arizona, the son of George and Rosa Boring, and graduated from Phoenix Union High School. He obtained a degree from Capital Radio Electrical Institute.

After marriage to the former Florence Lister in 1936, they moved to Cleveland, Ohio, where Mr. Boring eventually helped to develop radar equipment for use in World War II. He worked for Hickok Electrical Instrument Company for 31 years as an engineer, and then as a sales representative.

Relocating to Castro Valley, California, he worked for Purdy Distributing Company as a sales engineer until retirement in 1986, and then moved to Klamath Falls, Oregon.

At his death, Emery C. Boring was a sixty-year member of the American Radio Relay League. He was also a member of the Klamath Basin Amateur Radio Association, and the Bible Baptist Church.

Survivors include his wife, Florence, a brother and sister, three sons, nine grandchildren and one great-grandchild. He was preceeded in death by daughter Joyce Leonard, in 1987. *—contributed by Tom Hamilton, WD6EAW* WR

Off the air

Worldradio
2120 28th Street
Sacramento, CA

A true language

I have read quite a lot about whether or not to abolish the Morse code requirement for amateur licenses. I don't pretend to have the last word on this, but I would like to make a few points:

1. The code is a language. It is the oldest form of communication over the airwaves.

2. The code has been a very reliable form of communication through the years. Often a CW message will be heard when no other form of transmission can get through. (It offers more "punch-per-watt!").

3. The code uses the narrowest bandwidth of any form of emission.

4. Equipment required for CW communications can be far less complicated to build, service and operate, and can be more effective at lower power levels.

I am sympathetic toward those who profess to have trouble learning the code, but the mental block can be overcome. It is merely a matter of training the ear. It is certainly not a reason for abolishing a still viable, efficient and practical (not to mention historical) form of communication. It is also just plain fun. And, is it my imagination that the better ops tend to be CW buffs?

In closing, I am reminded of the story I read while studying for my Tech Plus ticket. It was something about a ham who was able to save himself from freezing to death after an accident during a snowstorm. Unable to speak, he was able to attract attention by clicking a Morse code message on the PTT button of his mic. What if he didn't have that skill?

David T. Powers, KB8RVS
Parma Heights, OH

Do you have an opinion that you would like to share? Is there something on your mind that you would really like to see discussed? Write to:

Off the Air
Worldradio
2120 28th Street
Sacramento, CA 95818
or
kb6hp@ns.net

While we can't print everything we receive, and may have to condense something for you, Off the Air is a forum for your opinions.WR

Special Events

The union of Amateur Radio

The Lake Monroe Amateur Radio Society (LMARS) will operate KE4ZFY from 1300 UTCX, 11 January to 2100 UTC 12 January. This is a special event to honor the union of volunteer radio amateur instructors with professional school teachers in introducing Amateur Radio into school systems.

Operation will be SSB on 3.850, 7.240, 14.250, 21.350 FM on 2 Meters CW on random frequencies. The goal is to establish a precedent for a similar international special event by the year 2001. For certificate, send SASE to LMARS, P.O. Box 151353, Altimonte Springs, FL 32715.

Station Appearance

Horace (Duke) Evans, WB3JYR

*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.

From the age of about 10 years, I had been interested in radio. I built many shortwave receivers (battery operated) and would stay up until the wee hours of the mornings listening to whatever I could hear.

I had a brother-in-law who had a radio repair shop and later I got a job with him repairing radios and then, televisions. In my last year of high school I was ready to go to the court house in Philadelphia and take my test for my ham license, however could not find transportation so I just gave up.

However, in 1978, I went down I took and passed the General Class exam.

My station is shown above. On the far left is a computer and typewriter. On the desk from left to right, first shelf: Antenna rotator controller for 2 Meters, a Dentron MT-3000A antenna tuner for HF with an Astron 35A power supply on top; a Heath SB-220 amplifier, D-104 Golden Eagle Mic in front, with an AD-4 antenna switch for dipoles with an HF beam on top; a rotor control box for HF antennas; Kenwood TS-850AT HF rig.

Second shelf (left to right): Antenna switch for 2-meter antennas; Kenwood TM-221A; Heil sound amplifier and speaker for 2-meter rig; Heath HD-15 phone patch; tape recorder, Kenwood HS-4 headphones; Radio Shack scanner; above the scanner is a Kenwood HT-2600A.

Third shelf (left to right): Watt meter and SWR bridge for 2-meter radio. For reference are two wall maps. WR

Amateur "Hi"

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

Who's listening?

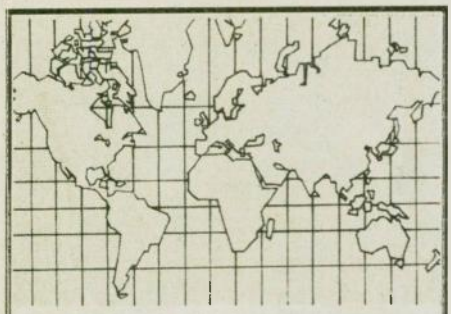
Jack McKenzie, N5MFG

I was in my trailer in an RV park in Big Spring, Texas, when there was a knock on the door and a fellow handed me a jug of bottled water and apologized "for the poor quality of our city water."

Nothing was unusual about that, as we have traveled about the country in Airstream Caravans and have frequently been visited by chamber of commerce types or even the welcome wagon lady .

But this fellow knew me — he really did. It seems he is an SWL (short wave listener) and he had heard me say on the air that morning that I was in Big Spring and in what trailer park I was staying. It turned out that he had been listening to our bunch on 3.860 every morning for the past three years. He even bought a *Callbook*™ so he would know our names and where we were from! He of course had heard all of our stories ten times over and was just a joy to talk and visit with.

Now every morning, when I reflect back on this story, I say, "and good morning to John Robertson in Big Spring Texas!" WR



DX WORLD

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

W-100-N

The following applications for ***Worldradio***'s *Worked 100 Nations Award* were received this period.

512. Serafin A. Nepomuceno, DU1SAN (All 20M SSB), 25 Sep 96

513. DX1A, 508 Amateur Radio Group, 25 Sep 96

514. Richard A. Perkins, WA7SNY (All CW), 11 Nov 96

515. Martin De Craemer, ON4BCM, 11 Nov 96

Boysan, DU1SAN, (as he signs himself), applied for not only himself, but for his local radio club, DX1A. Both were separate applications with separate contacts with different stations. It was not this "a QSO for the club call" fiasco often heard on some nets. DX1A is an active contest station many of us have worked.

Angola (D2)

425 DX News notes that Alex, PA3DZN, has been operating from Angola for since early October, although he has not been very active. He had been using equipment on loan from the Portuguese army as his own equipment had not arrived. His equipment arrived on 8 November and he has relocated to the southeast portion of the country. He should be on all bands, 10 through 160, mainly CW. Some RTTY and SSB activity may be in the works. He signs with the call D25L and should be there for six months. Alex could have received the shorter D2L call but said he "fancied" the five in the call.

Amsterdam Island (FT5Z)

FT5ZG left Reunion Island on 5 November for Amsterdam Island. He will pass through Crozet and Kerguelen islands and arrive on or about 20 November. He plans operating with a TS-450SAT with an R5 antenna and is presently looking for a sponsor to provide an amplifier. His length of stay on Amsterdam Island is one year and is employed there as a Transmission Officer and postman.

Heard Island (VKØ)

On 10 October the second of two 20-foot containers of gear was shipped from Oakland to Reunion Island, the departure point for the Heard Island DXpedition. The gear includes complete life support for 20 persons for the three-week stay on Heard Island, plus all the equipment for five complete radio stations for all HF bands, RTTY and Amateur satellite. As reported in *425 DX News* the team will assemble on Reunion Island during the last week of December.

On 3 January 1997, they will depart aboard the *Marion Dufresne* for a ten-day sail to Crozet Island and then to Heard Island. The stations will come on the air on or before 15 January, using the call VKØIR.

The operating crew for this year end DXpedition, according to *59(9) DXReport* has been finalized. The complete team of 20 operators represents participation from 9 different countries. Additionally, the group has announced an authorized grant of $20,000 from the Northern California DX Foundation has been given in support of this much anticipated DXpedition.

The total cash budget for this DXpedition is $320,000 (U.S. dollars). Two-thirds of this amount is the cost of transportation to Heard Island. As of mid-October about $260,000 has been raised or is guaranteed. Donations are greatly appreciated and are not at risk. The DXpedition team is taking all financial responsibility until the DXpedition is completed. Should the project fail due to other than an Act of God, the donors monies will be returned. Donations are gratefully accepted via on of the following addresses:

- Heard Island DXpedition, c/o Bob Allphin, K4UEE, 4235 Blackland Drive, Marietta, GA 30067 USA
- Heard Island DXpedition, c/o Peter Casier, ON6TT, Oude Heerbaan, 30B-9230 Wetteren, BELGIUM
- NCDXF, P.O. Box 2368, Stanford, CA 94309-2368 USA.

South Orkney Islands (VP8)

59(9) DXReport notes that the cards for LU6Z have been slow in arriving. QSL manager LU6EF says he has been sending out requests from the 23,000 QSOs. You may also make inquiries about your card by e-mail at uranito@impsat1.com.ar if you have not received it. The QSL address is GACW, P.O. Box 9-Wilde, Buenos Aires, ARGENTINA.

IOTA

Ulli, DL2HEB, should be active from Roemoe Island (EU-125) from 22 December through 03 January signing with OZ/DL2HEB/P. Mostly a CW operation, Ulli plans activity 10 through 80 Meters. Check 14.040 and 14.060 MHz.

DXCC Applications

The DXCC Desk reports that the number of unprocessed applications at the end of October was 604 (46,284 QSL cards).

During the month of October 340 applications (25,602 QSL cards) were received for endorsements and new awards.

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

This amount was considerably less than that of the end of September where the unprocessed applications amounted to 929 (55,598 QSL cards) with 1,013 applications (53,385 QSL cards) being received during the month.

NCDXC Celebration

The Northern California DX Club (NCDXC), one of the best known and most respected DX clubs in the world, is celebrating its 50th anniversary on 10 October 10.. To commemorate this milestone, the club is sponsoring activities for its members and for DX stations throughout the year. The anniversary period starts on 10 October 1996, and continues through 9 October 1997. Follow the links below for details on the awards and to find out more about the club.

The activities have been structured so that club members will be actively working DX stations throughout the year and DX stations will be looking for club members. To request information on becoming a member of the NCDXC send E-mail to Peter Gerba-KN6BI: <pgerba@crl.com>.

Activities and Awards for DX stations only

There will be an award given to any DX station who submits a log showing contacts with 50 different NCDXC members during the anniversary year. QSL cards will not be required. A contact with the NCDXC club call sign, W6TI, will count as ten QSOs towards the 50 required. A certificate commemorating the NCDXC 50th Anniversary will be sent to those stations qualifying. To help identify club members from other W6 stations, there is a club roster showing the call signs and names of members. Some members have also included a picture of their station —check their web page.

The usual log information (Date, Time, Station worked and Band) should be included with the submission. Submissions should be sent to the club address as follows. Northern California DX Club P.O. Box 608 Menlo Park, CA 94026-0608 USA. If you edit a DX Bulletin or club newsletter in your country please include information about the award in your publication. The club urges members of any non-US radio club to spread the word of our 50th Anniversary Award for DX stations to members of their clubs. QSL cards for contacts with the W6TI club call sign should be sent to the address above or via the bureau. QSLs for contacts with NCDXC members should be sent via the regular channels, direct to their home address or via the bureau to their call sign. Please do not send member QSLs to the club address.

Icelandic Awards

Islenskir Radíóamatörar (IRA) sponsors several awards involving Amateur Radio from Iceland. Some are rather difficult and some require less to achieve. Therefore, after reviewing the list of awards, I found one that is reachable for all DXers. This one is the Worked All Nordic Countries Award (IRA-WANC).

The award is available to all licenced Amateur Radio operators and Short Wave Listeners (SWL).

There are no time restrictions and all bands count. All contacts must be made on the same mode as there are no mixed modes. In other words, if your first contact used in your application is on SSB, then all the rest must be of that mode. Single band applications will be endorsed as such upon request. The award is also available in three classes:

- Class A: One confirmed contact with each of the 11 countries.
- Class B: One confirmed contact with 8 of the 11 countries, of which 2 must be in *CQ* Zone 40.
- Class C: One confirmed contact with 5 of the 11 countries, of which 1 must be in *CQ* Zone 40.

Stations signing with appended calls, except OJØ, are not valid for this award. At least one contact with Iceland is mandatory in all classes.

To apply please prepare a list of contacts, certified by two licensed Amateur Radio operators, or local club officials. The list must include the station worked, date, time, band, report and mode. QSL cards need not be submitted, but must be in your possession. Submit your application with a fee of $5 (U.S.) or 8 IRCs to: IRA Awards Manager, Brynjólfur Johnson, P.O. Box 121, IS-602 Akureyri, ICELAND.

The eleven Nordic countries are: Swalbard (JW), Jan Mayen (JX), Norway (LA), Finland (OH), Aland Islands (OHØ), Market Reef (OJ0), Greenland (OX), Faroe Islands (OY), Denmark (OZ), Sweden (SM), and Iceland (TF).

The award is printed in four colors on half-matt paper, 297 by 210 millimeters in size.

DX Prediction — January 1997

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.

WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
10	*(9)*	10	*12	*(8)*	12
12	*(9)*	10	12	*(8)*	*(12)*
14	*(9)*	10	12	*(8)*	23
16	*(18)*	10	*18	*(12)*	27
18	20	*(10)*	*(14)*	*(9)*	28
20	21	*(10)*	*(18)*	*(8)*	29
22	*(18)*	20	22	*(8)*	27
24	*(16)*	21	25	*(8)*	23
2	12	18	23	8	*16
4	11	12	16	8	*14
6	*(10)*	*(11)*	*(14)*	8	*13
8	*(10)*	*11	*(13)*	8	*12

CENTRAL USA

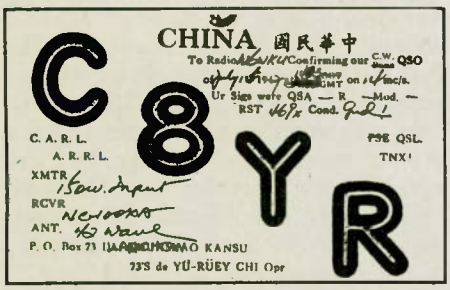
UTC	AFRI	ASIA	OCEA	EURO	SO AM
8	*(12)*	8	*(12)*	*8	*12
10	*(12)*	8	12	*(8)*	*12
12	*(11)*	8	12	*(8)*	17
14	23	10	*22	*(15)*	24
16	26	*(10)*	18	*(13)*	*27
18	26	*(10)*	*(15)*	*(9)*	*28
20	22	*(9)*	*(18)*	*(9)*	*29
22	18	*(16)*	22	*(8)*	*26
24	*15	*(13)*	23	8	*19
2	*14	*(10)*	*(16)*	8	*15
4	*13	*(9)*	*(14)*	8	*14
6	*(12)*	*(8)*	*(13)*	8	*13

EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
7	*(12)*	8	*(12)*	8	*12
9	*(12)*	8	12	*8	*12
11	21	8	12	13	17
13	26	8	*22	16	*24
15	27	*(8)*	20	15	*27
17	*27	*(8)*	*(17)*	13	*28
19	24	*(8)*	*(16)*	*(10)*	*29
21	*20	*(13)*	*(21)*	9	*26
23	*15	*(13)*	*(23)*	8	*20
1	*14	*(10)*	*(16)*	8	*16
3	*13	*(9)*	*(14)*	8	*14
5	*12	*(8)*	*(13)*	8	*13

Antique QSL Department

This month's selection of QSL cards comes from Dewitt Jones, W4BAA, who now resides in Lacey, Washington. Dewitt worked C8YR in China in 1947, while residing in California. His call at the time was W6WKU. Says Dewitt, " Boy, this was the card I waited for with bated breath. He was in Zone 23 and gave a lot of the W6 gang WAZ." The contact was on 20 Meters CW. A card from this station was included in a 1992 issue and was provided by Al Miller, VE7KC.



The second card from Dewitt, was one for Spanish Guinea. EAØAB was the call used by A. Margallo for this 1953 contact. By that time Dewitt had left California and was residing in the mid-west operating as W9WKU.

Martti Laine, OH2BH

Martti Laine, OH2BH, is returning to Finland at the end of November after his 3-year tour in Hong Kong. Martti's extensive contributions to the DX community from this part of the world include BV9P, BS7H, P5 and the upcoming XZ1N operation. Although he was not very active from VR2BH due to work commitments, Martti has been acitve from virtually every corner of the DXCC list in his 30 years of operating.

Miscellaneous

Written on a QSL card to HA1UF from ZK1DG: "Sorry for delay in reply. We had a massive cyclone late 89 your card ended up inside my fridge in the lagoon. Found the fridge last week while fishing." The date of the contact was 15 September 1989.

QSL Information

Dick Tesar, WA4WIP, advises that he is no longer the QSL manager for the following stations: J69AI, J88AR, J88BD, J88BS, J88I, KP2N, KP4CD, NP2E, NP2GM, and V31AB.

59(9) DXReport notes that there has been much Internet activity regarding QSLs for EM1KA being received from the QSL Manager 9H3UP, "Roy Rogers." It has become apparent 9H3UP is really Romeo Stepanenko. Since he has been disqualified from the DXCC program, these cards would not be acceptable. Carl Smith, N4AA, of *QRZ DX*, has confirmed this with Bill Kennamer, K5FUV of the DXCC Desk. No cards verified by 9H3UP after 23 August 1996 will be accepted but cards via JA2JPA will be OK.

QSL addresses

5R8FK —P.O. Box 620, Antananarivo 101, MALAGASY

5Z4BZ —P.O. Box 41784, Nairobi, KENYA

QSL Routes

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

3E1DX	—KFØUI	C6/K3TEJ	—K3TEJ	IR8L	—IK8FLW	SV5/K7AR	—AA6BB
3V8BB	—(*1)	CS5P	—CT1AXS	IUØPAW	—IKØSHF	TA3DD	—TA1KA
4F3CV	—HB9CXZ	CU7S	—CU7AA	IY1EY	—IK1QBT	TL8MS	—DL6NW
4U1ITU	—I1YRL (*3)	CY9AOE	—VE1AOE	J3A	—WA8LOW	TL8/F5JKK	—F5JKK
5NØ/AA5YQ	—WA5RQP	D2/UR5TY	—UR5TY	J3/WJ2O	—WJ2O	TM5CW	—F5SJB
5N3ALE	—DJØKN	D2FIB	—SMØFIB	J38DF	—DL7DF	TM5TEL	—F5KAI
5N4ALE	—DJØKN	D25L	—PA3DMH	J38GU	—DL7VOG	TM6CLO	—F5WA
5R8EL	—FR5EL	DX1RVN	—JA1HGY	J59KX	—DK9KX	TT8SP	—F5OIJ
5R8FI	—F6AJA	EA5CCD/4	—EA5CCD	J59ON	—DJ9ON	US8OBL	—UR4BYU
5V7A	—GM4AGL	EA6ZXO	—EA6ZX	J68AE	—WB8ENR	V26AK	—WB2P
5V7BG	—N7BG	ED2LFC	—EA2MQ	J68AG	—WD8IXE	V26B	—WT3Q
5V7FA	—G4FAM	ED9IA	—EA7ESH	J68AH	—ACØS	V26DX	—KK3S
5V7JL	—K7GE	EG1NTP	—EA1MK	J68AK	—W8QID	V26E	—AB2E
5V7MB	—AA7NO	EG7NCO	—EA7BB	J68AR	—K9BQL	V26R	—KA2AEV
5V7MF	—KC7V	EL/K4YT	—K4YT	J68ER	—W9UI	V26RN	—KR2J
5V7PN	—WB7SRW	EL2RR	—KF0UI	J79BP	—PA3ERC	V26T	—K3MQH
5V7RF	—GM3YTS	FT5ZG	—F5RQQ	J87GU	—DL7VOG	V26TS	—KF3P
5V7VT	—K5VT	FW2EH	—DJ2EH	JG8NQJ/JD1	—JA8CJY	V26U	—WA2UDT
5X1T	—ON5KT	FW2OI	—DJ4OI	JJ3SRU/6Y5	—JR4PMX	V26Z	—WF2S
5X4DLI	—KE4EW	GB2STW	—G3JNJ	JW2EGA	—LA2EGA	V63AO	—JA8LNR
5X4F	—K3SW	GD4UOL	—G4UOL	KC6/N5OK	—N5OK	V63CO	—DJ9HX
9G5AA	—G3SXW	GM6X	—GM4FDM	KE6DI/KH0	—JA1BRK	V63YI	—JA3IG
9H3WD	—OK1AD	HA/W0YR	—AA9DX	KG4AU	—N5FTR	V85HG	—JH7FQK
9H3WM	—OK1AD	HC2/F5LGQ	—F5LGQ	KG4GC	—KQ4GC	VK9XB	—JJ1TBB
9J2TF	—JA2BOV	HC2/F6AOI	—F6AOI	KG4QD	—WA4VQD	VP5DX	—K4UTE
9M2TO	—JAØDMV	HC2/F6AUS	—F6AUS	KH4/N1VXT	—JA3IG	VQ9WM	—K7IOO
9M2/G3OZF	—G3OZF	HC2/F6BFH	—F6BFH	KHØ/JA1HGY	—JA1HGY	WH2U	—KG6JHC
9M6AG	—JA9AG	HC2/F9IE	—F9IE	KHØ/JA4DND	—JA4DND	WHØ/WH2Q	—JI1DLZ
A35RK	—W7TSQ	HG8SDS	—HA8PH	KHØ/JR1MLU	—JR1MRU	WK3D/WH0	—JF2KOZ
A45ZZ	—G3LNP	HP1XVH	—KFØUI	L75AA	—LU4AA	XE1/W6EFR	—KFØUI
AH0AV	—JH6RTO	IK8TWP/IC8	—IK8VRH	LX1RQ	—KGØUI	XE2DV	—AA7CM
BV4MU	—KA6SPQ	IMØ/IS0NHT	—ISØNHT	OX3IPA	—OZ5AAH	XT2DP	—WB2YQH
				OZ/DJ9RR	—DJ9RR	XZ1N	—W1XT
				OZ/DL8HCO	—DL8HCO	YK1B	—DL8HCZ
				P29DK	—KE4EW	ZD8Z	—VE3HO
				P49T	—W3BTX	ZF2RF	—K4UVT (*4)
				PJ8/WB2GAI	—WB2GAI	ZL1FX	—JA8LNR
				PYØFF	—W9VA	ZVØMB/MV	—PT2GTI

Notes:

*1. The route for 3V8BB often depends on the operator. For the period of 21 September through 01 October 1996 use OK1CZ. Otherwise, QSL all others to YT1AD.

*2. This route applies for Worldwide DX Contest in November. For the period 11 and 12 October QSL via 7L1MFS.

*3. Applies for the period 09-10 Nov 96.

*4. Please use P.O. Box 231240, Montgomery, AL 36123-1240, as all other addresses are no longer valid. Please include SASE. Bureau cards are accepted.

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EY8MM	—Nodir M. Tursoon-Zadeh, P.O. Box 303, Dushanbe, 734001 TAJIKISTAN
TZ6LL	—P.O. Box 100, Bamako, MALI
XMØYAF	—P.O. Box 4, Easter Island, CHILE

Many thanks to the following contributors: K1TN, WA4WIP, W7CF, Western Washington DX Club (WAØRJY), American Radio Relay League (K5FUV), *Island News* (W5IJU), *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), and *The DX Bulletin* (AE4AP).

This month's column was a rush job put together at during the middle of November as I spent the month of October on a 21-day repositioning cruise on the m.s. *Statendam* (Holland America Line). We sailed from Vancouver to Fort Lauderdale, plus another 10 days cruising the Caribbean. My daughter had been with the entertainment on board as the lead female vocalist from early July for a six-month contract. If you happened to take a cruise on the ship at that time perhaps you saw her. We will be on board again soon. With the lousy band conditions it is as good a time to take a cruise anyway. We met Edwin Osberg, VE7AXJ, who was also on for the 31 days. 73 de John N6JM. WR

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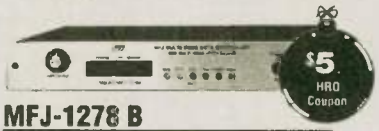

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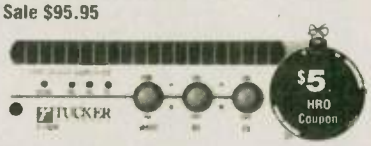

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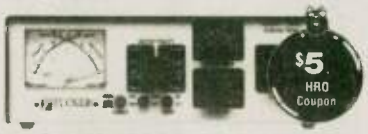

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9A7A	YU2HDE	ED5WPX	EA5YJ
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EF3CIL	EC3CIL	IU2X	IK2GSN
EK4JJ	GW4CDP	IU4U	I4AUM
EK6LF	N7RO	IU6F	IK6BOB
EL2PP	N2CYL	IU9A	IT9BCC
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EM2I	NA3O	IUØA	IKØHWI
EMØF	RB5FF	J31K	W8KKF
EN6Q	RB5QF	J87BZ	DL7FT
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ER3ED	UØ5OE	KC6KT	JJR6IQI
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ES1J	ES1WW	KP4/AH6MM	KC6CEX
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EU5R	EU1FC	L3D	LU6DTS
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IO7G	IK7NXU	OL3A	OK1AYP
IQ1A	I1JQJ	OL5A	OK1FYA
IQ2A	I2UIY	OL5A	OK1HKL
IQ2H	IK2ILH	OL5PLZ	OK1DRQ
IQ4A	IK4QJH	OM2I	OM3CTA
IQ4ARI	IK4BWC	OM5A	OM3LA
IR1A	IK1GPG	OM5M	OM3KFF
IR1T	IK1NAO	OM5R	OM3TGT
IR2W	I2EOW	OM7M	OM3LA
IR3DX	IK3STG	OM7V	OM3YCL
IR3O	IK3ORD	OM8A	OM3RM
IR4G	I4GHW	OMØW	OM3CGN
IR4T	IK4IEE	OT4A	ON7LR
IR6L	I6FLD	OT4V	ON6NL
IU1R	I1ZQD	OX3GX	WA3KSN
IU2MM	IK2WAD	P29VH	VK4CRR
P39P	5B4ES	TZ6FIC	F6KEQ
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RX4ASK	UZ4AWE	V85CQ	JH1QQN
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S5ØC	S53CAB	VE9ST	VE1ANJ
S5ØE	S59AB	VP2EC	N5AU
S5ØK	S57EK	VP2EEE	KK3K
SKØHB	SMØTHN	VP2EOH	K8BL
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SO8IF/8	DJØIF	VQ9BB	KO4A
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T33CS	G4WFZ	VR2/DL5XX	DL5XX
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TM3UN	F5PGP/PYI	ZS6MG	YU5FU
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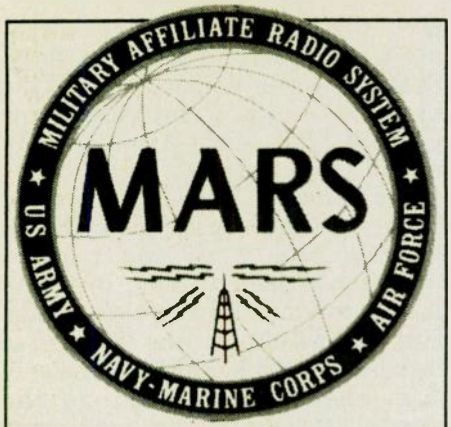


Lorraine S. Matthew, N4ZCF
MARS call AAA9PR

January 1997 opens another new year for Army MARS with a look at the rapidly approaching twenty-first century. Even as the new century approaches Army MARS, the Army itself continues to undergo changes appropriate to meeting the challenges of this new era. The United States Army Information Systems Command has become the United States Army Signal Command for the newly structured Army FORSCOM (U.S. Army Forces Command).

Chief Army MARS, Robert L. Sutton expressed the value of change at the beginning of 1995 when he said, ". . .without change there cannot be progress, . . . without progress, there is no growth, . . . and without growth, there is no future."

Major General Charles G. Sutten, Jr. spoke at the 136th Anniversary Signal Corps Ball and noted that there have been people who were involved in developing the technological wonders of their time who did not see the potential of their work. He provided a number of quotations that appeared in the July issue of *Time* Magazine from these talented people.

" - In 1876, a Western Union internal memo stated: 'This telephone has too many shortcomings to be seriously considered as a means of communications. The device is inherently of no use to us.'"

" - In 1920, David Sarnoff's associates decried his call to invest in the radio. They said, 'The wireless music box has no imaginable commercial value. Who would pay for a message being sent to nobody in particular?'"

" - In 1943, Thomas Watson, the chairman of IBM, said, 'I think there is a world market for maybe five computers.'"

" - As late as 1977, Ken Olson, president, chairman, and founder of Digital Equipment Corporation, said, 'There is no reason for any individual to have a computer in their home.'"

Army MARS sees the potential of its work and of what it has to offer. Army MARS intends to grow with that potential and to develop far beyond the potential that it sees today. Development beyond its potential requires change and an open minded acceptance of change by each MARS member.

1996 was, indeed, a year of great changes and a year of growth. Excitement came with both entities.

The new region networks have been established and the members are undergoing training in the use of this new operational mode. Already, greatly improved direct communications has been the result. The use of region nets had proved most valuable during such exercises as the Grecian Firebolt 96 and during a number of emergency operations which followed. It was decided, therefore, to make this operational mode a permanent part of Army MARS operations. There are ten region networks which correspond to the ten Army MARS regions. These region networks are further interlocked in order to have the maximum effectiveness in all types of propagation conditions and in all types of circumstances. The nationwide Army MARS National Emergency Coordination Net continues to operate as well.

Army MARS has realigned its Areas. Until 30 September 1996, Army MARS had three distinct Areas. With the retirement of Billy Bateman as Western Area Director, the Central and Western Areas were merged into one Western Area.

In terms of numbers of MARS members, the two Areas are almost equal. This realignment effectively created a much better support mechanism for both former areas — again gaining the advantage of widely spaced stations for better direct communications. Uniformity in training and operations has been much improved and this is an advantage to Army MARS and to the customers whom we serve.

Looking ahead into the months to come in this new year, Army MARS members can anticipate new modes of operation, new customers to serve, and the breaking down of old barriers that used to limit the member's service to his own state. Chief Sutton has often stated his desire to break down those walls created by state boundaries in the past. Army MARS serves Federal customers whose needs transcend state boundaries and, at times, continental boundaries.

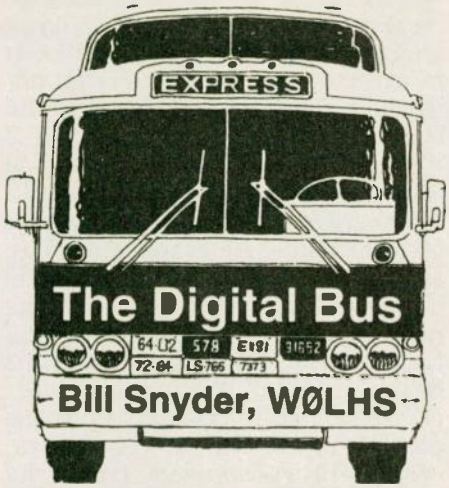
Army MARS operations need to expand in order to better serve these customers. 1997 is the year of that expansion even beyond the scope created in 1996.

Interoperability between the MARS services and other federal agencies will also be expanded greatly during 1997. Several operations during 1996 proved the desirability and the effectiveness of greater latitude in this operational mode. There are geographic areas in which one MARS organization has greater representation than the others. If MARS members are limited to serving exclusively within their own service branch, then holes in communications coverage occur. This problem was partially addressed by the TEXN (Traffic Exchange Network) agreements among the three services. 1997 will see this system greatly expanded as well. The nation and its people will be well served as this ability to interoperate expands throughout the coming months.

The three MARS chiefs have been very diligent in developing common grounds of operations and have presented their agreements to their respective sponsoring services and to the Department of Defense for ratification. MARS members of all three services look forward to the joint Chiefs' Messages which will launch a new age of cooperation.

1997 is only three years away from a new century — a new century to be marked by a new and vibrant Army MARS in partnership with Air Force MARS and Navy-Marine Corps MARS.

1997 will find all of the MARS services — proud, professional, and ready. WR



When I passed my 80th birthday recently, I did a lot of thinking about ham radio as a hobby. It's been part of my life for 63 years, and it has had a lot of effect on my life style, too. When I was a volunteer examiner for the ARRL, I learned a lot of interesting facts on how and why people join our hobby. I recently received the following letter from Jerry Hill, KH6HU, in Hanapepe, Hawaii. I would like to share it with our readers because it tells a story of how our hobby can help a person after he retires from the working world. Here it is:

"I have been reading your column in ***Worldradio*** for the last few years and enjoy hearing about the good old days before transistors and ICs. I was first licensed in 1976, just getting in on the end of the tube era, so I have an appreciation for radios that glow, but am thankful for all the bells and whistles that come with the new rigs.

"My purpose in writing is not to celebrate the old, but to share with you the thrill and excitement that Amateur Radio provided my dad in the last years of his life. My mother too, although never licensed, participated in Amateur Radio by drilling my father in both code and test questions.

"It all started back in the summer of 1987. My wife had acquired enough air miles for a free round-trip-to-anywhere on the US mainland. She, being the generous type, decided to give the trip to me as a birthday present. I packed up my old Santec hand-held to keep in touch with some of the local hams in the Detroit Lakes, Minnesota area (I grew up a few miles from there in Frazee). So in June of '87, I was in Frazee with my 14-year-old son, Mike, enjoying the beautiful Minnesota weather in the lake region.

"While there, I talked to my dad, Bob Hill, about going to Field Day at Fort Abercrombie, on the North Dakota side of the Red River. Dad said he would go, but my son Mike declined. It took us a little over an hour to drive over there. The local ham club had two stations set up, one SSB and one CW. There were about 15 hams standing around, so I introduced myself and my dad. They welcomed us and showed us around. We spent about two hours talking to hams and listening to Field Day activity on the radio. On the way back to Frazee I actually heard my father say something like, 'If those old geezers can do it, I think I can.'

"You have to know some history; I had been trying for ten years to get my father interested in ham radio, but in only two hours of Field Day, he was ready. That evening after dinner, I sent away for the *Tune In The World*, including code tapes, for him.

"About two or three weeks after returning home to Kauai, I got a phone call from him telling me he had received the material and was starting to study for his Novice license. He was getting ready to retire after 35 years of truck driving for a big livestock truck line based in Frazee, and needed something to keep him going.

"It seems to me it took him about a year and a half to get his ham license, during which time he underwent the removal of one of his kidneys due to cancer.

"I sent him my old trusty Heath HW-101 to practice copying on-the-air QSOs but it didn't last long. Something went wrong with it, so he went out and bought a new Kenwood TS-440S! Although she never took the test, my mother could answer any of the Novice questions and copied code just as well as Dad. They spent hours working together, going over the test questions and practicing code. Her goal was to get him licensed so he would 'leave her alone.' She said that she had other things she wanted to do. All the hard work paid off for on June 20, 1989, he received his Novice ticket with the call KBØEWJ.

"We made several attempts to contact each other before finally having success. We set up regular skeds on Saturdays and had varying degrees of success, but usually got our messages across. When conditions were bad, there was still the old land-line.

"In the summer of 1990, my wife and I took our daughter up to Alfred, New York, for college. Dad had just been told that the cancer had spread and he had to start treatment, so we decided to stop and spend a little time in Minnesota on the way to New York. I brought a 10M monoband beam antenna for Dad to use to improve our communications.

"It was, as you can imagine, a rather emotional reunion filled with good food, fond memories and lots of good DX. We spent about six days in Frazee but didn't get the beam up until the fifth day. We pointed it towards Hawaii and cemented it in place. Wow, what a difference! KBØEWJ's eyes lit up when the signals started coming in. Needless to say, the quality of the QSOs improved dramatically.

"We kept regular skeds twice a week after that. I would call him from my classroom (I was then teaching electronics and drafting at Waimea High School on the island of Kauai) about lunch time and spend my lunch hour with him. We talked more in the next two years than we had in the previous 45.

"In July of '93, less than a year after Hurricane Iniki, my wife and I had the opportunity to come to the mainland on sabbatical leave for one year. We elected to go to Syracuse, New York, where our son Mike was a student at Syracuse University, and within 150 miles of

our daughter who was a senior at Alfred University. We both managed to earn a second master's degree within the one year, while harassing our two kids.

"I stopped in and spent three weeks with Dad on the way to Syracuse. We had an opportunity to get very close during this time and it proved to be the best time we ever shared. Mother had passed away suddenly in April of '92. I was able to return in April to spend one week with him and help him move into an assisted living situation at a care home less than a block from his own house. Then again in July, I spent a few days there before returning to Hawaii. It was a short visit and we both knew it would be our last. It was about two weeks later that we made our last HF contact.

"KBØEWJ became a Silent Key in October of '94. In his room at the Frazee Retirement Center, there were three 2-meter mobile rigs (one on packet), one hand-held and a Kenwood TS-440S HF rig. He stayed active up to the end, keeping in touch with the 'boys' in Detroit Lakes and Wadena. He was so fascinated with Amateur Radio and he took great pride in showing off his equipment to all his friends, demonstrating Amateur Radio's capabilities and just hamming it up.

"Amateur Radio enriched KBØEWJ's life, and gave him direction and purpose after his retirement. There is no doubt in my mind that it also extended his life beyond what it might have been. It brought us closer together and allowed us to share his last years together, even though we were separated by some 5,000 miles.

"So, although I have an appreciation for the old days, KBØEWJ's Amateur Radio career spanned only about five years. In those five short years he went from a couch potato with a TV remote, to building power supplies, antennas, talking on two meters, and communicating to people all over the world on CW, SSB and packet.

"I've taken the time to write you to let you know your column represents a trip home for me each month (especially when you talk about the Fargo area). I will always be linked to the Fargo area through KBØEWJ. My parents are now buried in a little cemetery just outside Arthur, North Dakota, where they grew up.

"I hope to get back to that part of the country in the next few years. If I do, I'll look for you on the local repeater, and possibly have an eyeball QSO.

73 Bill, de Jerry, KH6HU"

I've seen the above scenario many times during my lifetime. I always think of how ham radio helped my California friend, the late Ray Donald, N6VQX, after he lost his eyesight and struggled through the golden years. Ray had wanted to become a ham since we palled around during the years I worked for Technicolor in Hollywood during the 1930s.

I had a 5M transceiver and Ray accompanied me many times when I tried to work from mountain top to mountain top in the Southern California area. Although we worked quite a ways, we never really did establish any kind of five meter record for line of sight transmissions. But it was fun trying. Ray was always interested in the hobby, but it took retirement to get him to really buckle down, learn the code, and get a license. And I know he enjoyed the hobby in those golden years.

Ray was also helped by Courage Center in the Minneapolis area. They produce a ham radio program to help disabled people become hams. It is a worthy charity for all hams to help.

EAVESDROPPINGS

JUST THINK, IT WILL BE FOUR YEARS BEFORE THE POLITICAL HACKS WILL HACK UP OUR TELEVISION-WATCHING WITH ALL THOSE BLITZKRIEG COMMERCIALS THAT SLANDER WHILE WE GANDER . . . I HAVEN'T BEEN ABLE TO FIGURE OUT HOW TO USE THOSE NEW ENVELOPES THAT UNFOLD WHEN YOU GET A BILL TO PAY AND YOU FOLD THEM A DIFFERENT WAY WHEN YOU SEND BACK THE MONEY; I USUALLY SLIT OPEN THE WRONG EDGES EVEN WHEN IT SAYS RIGHT ON THE PAPER NOT TO SLIT THEM OPEN.

Write: Bill Snyder, 1514 12th ST S, Fargo, ND 58103-4134. Packet: WØLHS@WØLHS.#SEND.ND.USA. NOAM. 73 DIT P. **WR**

Pearls of wisdom . . .

A narrow mind is usually connected to a very wide mouth.

If it weren't for the last minute, nothing would ever get done. —*Feedback,* Johnson County ARC

FM & REPEATERS REPEATERS REPEATERS

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For the latest word on SPOC, the repeater coordination agreement, see page 6.

FEMA to FCC: No sharing of 2 Meters and 70 cm

The fight to keep 2 Meters and 70 cm as "all amateur" continues, and it looks as if we now have a politically powerful friend standing with us. The Federal Emergency Management Agency, better known as FEMA, is saying "no" to sharing or reallocating the 2 Meters and 70 centimeter ham bands to Low Earth Orbiting satellites. In a letter to the FCC task force currently evaluating new spectrum for use by LEO satellites, FEMA Manager Paul Reed, tells the committee that his agency opposes any such change.

Reed says that Amateur Radio operators have a history of supporting state and local government emergency operations by providing needed communications. He says that many local communities served by ham radio have extremely limited resources and would be without any form of backup communications without Amateur Radio.

Reed says that FEMA has been in contact with its state and local emergency management partners across the nation. It is their belief that authorizing access to the mobile satellite service in the 2 M and 70 centimeter bands will seriously degrade the ability of these groups to support their public service requirements.

The FEMA Manager ends his letter by strongly urging the FCC task force to remove both of these ham bands from any further consideration as a new home for Low Earth Orbiting Satellites. He says to leave them for use by ham radio and its emergency service partners, nationwide.

SAFEX II - an FM repeater in space is on the air!

Last year we wrote about an FM repeater that was to become active from the Russian MIR space station. The equipment was delivered to MIR in 1995, and the cosmonauts have finally debugged it and have it in operation. SAFEX II is on the air and you can use it.

Recently I received an in-depth update on SAFEX II from those responsible for its design, transport to space and coming on-line. Here is the first part of that story:

What is SAFEX II?

SAFEX II, the Space Amateur Funk EXperiment, is an Amateur Radio repeater which has recently been activated aboard the Russian MIR Space Station Complex. It is a project of the German Amateur Radio Club (DARC), and managed by the Ham Radio Group, DFØVR, at the German Aerospace Research Establishment (DLR) in Oberpfaffenhofen. The project is supported by DARC, DLR, NPO Energia (Russia's equivalent of NASA) and the radio amateur community of Russian.

First contacts

The equipment has been powered up since 12 July 1996. The first hardware tests involved the station's digital speech recorder. Pre-recorded messages from the MIR crew were copied by many ground stations on 437.925 MHz. The messages have even been received with simple 70 cm hand-held radios.

Joerg Hahn, DL3LUM, the SAFEX-International Coordinator, reported that the repeater was operational on July 19. A short contact was achieved by Matt Bordelon, KC5BTL, operating as W5RRR (the call sign of the NASA Johnson Space Center ARC) with one of the MIR cosmonauts. The first use of the repeater to establish a ground-to-ground QSO was performed between DFØVR, IV3WLQ, and LY3BH. Dave Larsen, N6JLH, performed the first ground-to-ground QSO in North America with Scott Avery, WA6LIE.

About the SAFEX gear

The equipment was built by SAFEX Principal Investigator, Thomas Kieselbach, DL2MDE. Installation on MIR began during the EuroMir 95 mission. That crew included German astronaut Thomas Reiter, DF4TR (European Space Agency) and Russians Sergei Avdeev and Yuri Gidzenko. The three arrived at MIR on September 5, 1995, and remained aboard the space complex for 180 days. Reiter operated as DPØMIR throughout his stay, but SAFEX equipment problems and a power supply failure kept the repeater off the air.

The SAFEX team installed new equipment in the Priroda module, which was launched to become part of the MIR Space Station complex on April 23, 1996. The new equipment was powered up by the MIR-21 crew, which included Shannon Lucid, and cosmonauts Yuri Onufrienko, and Yuri Usachev. The current (MIR-22) crew includes Valery Korzun (Commander), Aleksandr Kaleri (Flight Engineer), and John E. Blaha, KC5TZQ (Mission Specialist).

The mission of SAFEX II

SAFEX II expands the existing 2-meter operations that have taken place from MIR for the past couple of years. SAFEX II is primarily an FM repeater with 70 cm uplinks and downlinks. The 30 kilogram payload is supported by three external antennas. The new capabilities address the busy work schedule of

the cosmonauts by permitting Amateur Radio activity from MIR without active crew operation. SAFEX II also addresses the team's commitment to future technologies. There are plans to improve the station by adding a 23 cm to 13 cm transponder capable of broad-bandwidth modes (such as amateur television).

The repeater operates under the call sign RRØDL. CTCSS tones are required to communicate through the SAFEX II experiment. After the repeater has been activated by someone with CTCSS, other stations without CTCSS can also work through the repeater. It is even possible to use the repeater to contact the MIR crew if one of them is at the microphone.

How to make a contact

In order to involve the largest numbers of amateurs, SAFEX contacts should be kept as short as possible. During a QSO, operators should be ready to adjust their frequency to account for the plus or minus 10 kHz doppler shift in a normal pass.

The following are the SAFEX 70 cm frequencies for the three SAFEX operating modes.

Mode 1: FM repeater with CTCSS (PL) 141.3 Hz. Downlink 437.950 MHz, uplink 435.750 MHz

Mode 2: 9600 Baud (G3RUH compatible) Packet Operation. Downlink 437.975 MHz, uplink 435.775 MHz (No CTCSS)

Mode 3: Pre-recorded digital voice beacon, also may be used for contacts with the MIR crew.

Downlink 437.925

Uplink 435.725

CTCSS 141.3

The 2-meter frequencies used for MIR (preferably in split- mode operation) are 145.800 MHz (uplink), 145.200 MHz (downlink), and 145.550 MHz (up/downlink). These frequencies were adopted for MIR and Shuttle activities at the IARU session of the 1995 AMSAT- UK Colloquium.

Special thanks goes to DL3LUM, DL2MDE, DB2OS, DF5DP, N6JLH, WF1F, AMSAT and AMSAT News Service Bulletins, and *SpaceNews* published by John Magliacane, KD2BD, for information used to assemble this report.

The best repeater in town

KC8CGX of Amherst, Ohio, tells us that the most friendly repeater in his part of the state (Sandusky, Cedarpoint, OH) is found on 146.805 MHz. This repeater is open and operated by Firelands Amateur Repeater Association. This repeater can be used for at least a 30 mile stretch of I-90 and US-2, between Toledo and Cleveland.

Of the *Chronicles of .76* and *RPT magazine*

Thanks to a lot of you out there, we now have what appears to be a complete set of *The Chronicles of .76*. This is Ken Sessions ex-K6MVH, multi-part story of the earliest days of FM in the pre-repeater era. As it turns out, the full set of the *Chronicles* was published in the long defunct *FM Magazine* during starting in September of 1967 and continuing through 1968. That puts the time-line just prior to Sessions moving east to take on the editorship of *73 Magazine*.

FM magazine was published in by Michael J. Van Den Braden, WA8UTB. A mint copy of the April, 1979, issue sent to me by Bob Wheaton, W5XW, shows Ken Sessions listed on the masthead as Editor.

FM Magazine eventually gave way to *RPT Magazine*. It was also published by Michael J. Van Den Braden, but eventually went to the hands of Bud Martin, KV4FR. This occurred somewhere between May and July of 1973. Bob Wheaton sent me several issues of *RPT*, but the ones for the transition period between Van Den Braden and Martin were not in the package.

Under Martins' editorship, *RPT* became a very "tell it like it is" publication. It took a hard line stand against the restrictive repeater regulations enacted in the early '70s. *RPT* was also not averse to giving unbiased and highly accurate equipment reviews. Good or bad, you always got an accurate report.

I do not know when *RPT* ceased publication. The last issue I have is dated July, 1973. Regardless of when it went away, suffice to say that *RPT* was the last attempt at a national magazines totally dedicated to the "Fun Mode." As far as I can tell, my "Looking West" column in *73* was the only thing left after the demise of *RPT*.

In addition to Bob Wheaton, I also wish to thank ARRL Southeastern Division Director Frank Butler, W4RH, Milton Bramer, N6MB, Ken Bobel, WA8YJW, and several others for sending and faxing me their pieces of the *Chronicles*. It looks as if I now have a full set. If I can get permission from whomever is the current copyright holder, I might re-serialize them for you here in ***Worldradio***.

My thanks also to Stan Miln, K6RMR, and Paul Signorelli, WØRW for their assistance in my futile attempt to locate the author of the *Chronicles of .76*.

North to Alaska!

Alaska has to be the most beautiful place that I have visited in my 54 years on this planet. As mentioned in my November column, Sharon and I celebrated our 25th anniversary together by spending a week in what many call "the frozen North."

North yes, but by no means frozen. We hit it just right; the week that constituted this year's fall season in Southern Alaska. It was in the 60s when we arrived. It was snowing and in the low 30s when the Delta 767 aimed its nose skyward and started its trek South. In one week we traveled by plane, boat and motorcoach. We experienced three seasons and five different landscapes. We also met a great bunch of hams in Anchorage who helped to make our trip even more pleasant than we had anticipated. And yes, we plan to go there again.

In the coming months, I will share some of our experiences with you, as space permits.

de WA6ITF **WR**

If you move, keep us posted!

Don't miss a single issue of

Worldradio!

Search And Rescue Communications

Jerry Wellman, WB7ULH
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Salt Lake City, UT 84147

What I need is an information filter. Almost 30 years ago, the body of SAR knowledge amounted to an evening discussion led by those with field experience. In the past several months, several rescue/SAR journals have crossed my desk and I'm amazed at the complexity now associated with emergency service. Various authors can be found discussing some highly specific scenarios and I wonder just how applicable much of the current body of knowledge is for the "average" volunteer.

Consider technical rescue and the use of ropes to effect recovery of victims during climbing accidents. Some of the proposed solutions involve hundreds of hours of training, thousands of dollars in equipment, and the use of some very specialized equipment. Does this solution offer the victim a "better rescue" than what we once did with a winch, a block-and-tackle, and some common sense experience?

A quick scan of publications and materials available via the Internet produce mountains of scenarios, plans, procedures, and ideas, all of which claim to add some insight to how we conduct emergency service. How do we simply filter out what works and then get the job done? For many years the answer would be to ask the experienced SAR volunteer and trust his or her opinion. If you had tough questions, you could find a select group of people whose names were known from coast to coast and who would welcome a phone call to discuss SAR "state of the art."

I did a number of name searches on the Internet last week and it was sad to discover no hits. I tried several phone inquiries and found some possibilities, but they were unlisted. While I couldn't find some of the "old-timers" from 10 or 20 years ago, I did find a significant number of Internet sites that contain literally megabytes of information. Where 20 years ago the SAR "leaders" could be collected into a small directory published by the National Association for Search and Rescue, today's SAR volunteers number in the thousands. Where there was once only a few SAR agencies, today there are hundreds — many highly specialized.

It's not all bad, and it's not all good. My worry is that we may be forgetting the basics in favor of the glitzy (and expensive) equipment and esoteric seminars that gloss over basics such as how to search, how to communicate, how to report search effort accurately, and how to prepare. Sometimes I worry that we're forgetting the victim in the glare of the SAR "image." This is similar to the wanna-be cops who get the lights, siren, guns, handcuffs, doo-dads, and forget the need to be trained, certified, and sworn peace officers.

Remember that public service seldom happens as the TV shows depict. Most people aren't rescued in 30 minutes (minus commercials). Some events take days and significant amounts of effort. Many events do not depend on sophisticated equipment but on many hours of hiking trails, peering under trees, and conducting an effective visual search effort. Unlike some TV events, recovery of some missing people is very unpleasant and notifying next-of-kin is a gut wrenching experience.

Most of the basics have not changed. Some of the basics are tedious to learn and take some time to master. This week I re-read Dennis Kelley's book, *Mountain Search for the Lost Victim*. The book was published in 1973 and the dedication page was dated 1969. Another book on my shelf that got a quick review is the *Mountain Search and Rescue Operations Handbook* published in 1958 by the Grand Teton Natural History Association.

Paul Williams' 1970 book *Mountain Rescue Leadership* will probably get re-read soon as will *Mountain Search and Rescue Techniques* by Rocky Mountain Rescue's W. G. May. Each of these books is today difficult to locate and not usually used as references when a group organizes. Yet these books give you the "filter" you need to digest the tremendous amount of data with which we are being flooded. When you know the basics, you can select the current materials and ideas that compliment your efforts rather than point you in the wrong direction.

One final note. You cannot learn SAR by thumbing through catalogs and spending money. I love reading current articles concerning public service and discovering equipment that enhances the ability to serve others but I am troubled by the perceived need, however, that one can effectively serve as a volunteer through purchase of more "stuff." I'm also troubled with articles that fly in the face of basics, written I presume, by those who have purchased lots of equipment and who have possibly participated in a rescue event.

Be careful! Instead of trying to be "current" as defined by everyone else, spend time learning the basics and then determine what makes sense for you. And ALWAYS be wary of those groups who spend most of their time playing with toys (the light and siren kids) and who seem to never quite hold those in-depth training sessions. P.S. — I always avoid search commanders who have no idea what POD (probability of detection) is and what to do with PODs when they have them. (A hint, it's one of the SAR basics!)

People? What people?

When your group responds to an event, your most important task (besides assisting those in need) is to keep track of your own people. When you listen, for example, to a fire department response, you'll usually hear traffic concerning the safety of firefighters. Some departments use tags to identify people on scene and others just make a list and then make sure everyone is accounted for.

I prefer using sticky notes and plastic page protectors. I use a marker to title each page as "available," "enroute," "on scene," and "home." Each person gets put on a sticky tag and moved to the appropriate page. When everyone is home at the end of the event, I can rest. If my job is a response coordinator or a net control station, I want to know where my people are and make sure they get home safely. I once had a mission pilot thank me for making sure he called me when he was safe at home. He told me it was great to have someone care enough to personally check on each search participant when the day's search effort wound down.

The worst scenario I can envision is a response that leaves a volunteer unaccounted for when the mission ends. I prefer to have crews check in at regular intervals based on the risk of their assignment. Fire crews generally use a 15-minute time period and I like a 30 or 45-minute interval depending on where the volunteer is located. If I don't hear a station within my time interval, I call them to ensure they're okay.

Keeping track of your responders is critical! The method isn't important, as long as you're doing it. Someone sent me a computer program some months ago that purported to help track responders. It was so complex and confusing to use that in one test scenario I managed to lose someone within the program itself! Keep it simple, make it work, and use it!

Media relations

One of the benefits of working for the media is the ability to scan and read the stuff that doesn't get printed. I have noticed in recent years that many groups are doing less and less public relations work. The result is very little recognition for good works!

I'm not advocating that you steal the show each time you respond to an event, but favorable mention and a feature article or two every month or two cannot hurt. When the public knows you're out there and working to serve them, it's easier to recruit quality members (you have more to choose from and you can select the best) and your fund raising efforts yield better results (people remember you from media coverage and know you're putting their donations to good use).

Some ideas

Designate a public relations person who has time to get to know media people and cultivate media friends. Press releases are great, but personal contact is what gets you favorable coverage. Your group should develop some fact sheets (commonly called press kits) that tell about your group, your qualifications, what you do, and who to contact.

Most important, don't play honesty games. If you don't want something broadcast or printed, don't say it. Don't go "off the record" or speak ill of those agencies you work with. The last thing you want is some reporter deciding your group isn't being honest or not playing nice. We're in the public service business — keep your comments positive and focused on the task at hand (doing good things). Share the credit with everyone involved and never make an elected official look bad. (One group discovered if they made the sheriff look good and helped keep him elected, they got called out more often!)

The bottom line, however, is to simply get going and do public relations work. Don't put it off, stop by the newspaper office or radio station and just plunge right in.

One final thought

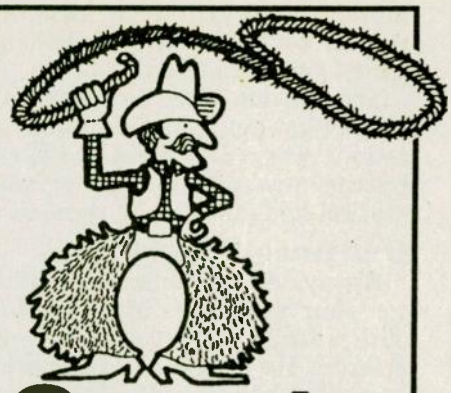
Always designate a safety officer for your responses and exercises. The safety officer is your conscience. He or she will be there to ensure what you do is safe and within your group's charter and guidelines. Sometimes we get the hero syndrome and want to take risks. The safety officer is there to tap you on the shoulder and remind you of your limitations and point out the sharp pointed things we seem to overlook in the excitement of the response.

I recommend your safety officer be someone with experience and ability to see the "unsafe" and who is pushy enough to speak up when the "unsafe" is observed. Be sure your safety officer has the authority to stop an unsafe operation and correct unsafe actions.

Until next month, discover the basics to combat information overload, be safe, and enjoy the rewards of public service. Your comments are always welcome via e-mail (jw@desnews.com) or to the address at the top of the column. WR

• • • • • • Don't forget • • • • • •

to tune in to ***Worldradio's*** QSO Party 7-8 June 1997



County Hunter

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Ashburn, VA 20147
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And the winner is...

In the September and November columns I advertised a prize drawing for an MFJ ALS-500M mobile amplifier. All the reader had to do was send me a QSL card and hope theirs was the lucky card drawn. It was also a unique experience for me to receive lots of feedback from previously silent readers. Thanks for the nice comments everyone. Unfortunately, there can only be one winner.

[Drum roll please] The lucky winner is Warren Locklin, N4RUC, of Mobile, Alabama. Warren, as did others, wrote on his QSL card, "Send my ALS-500M to above address." You see? The power of positive thinking works. He also wrote on his card, "Although I'm not a county hunter, I do enjoy your column." Great Warren, I'm happy you enjoy the column and a big "congratulations" from ***Worldradio*** and me. Of course, 278 others who sent in QSLs (and I!) are a little jealous that you won the loot. I did find it interesting that Warren is from "Mobile," Alabama . . . don't you?

However, there is a catch! Yep, no free lunches here. What's that . . . you didn't see the small print, Warren? I'll read it for everyone. It says "Your mission, should you chose to accept it, is to use the mobile amplifier to run counties on the county hunters net; at least 5 different counties each month." By my calculations, Warren must operate mobile from every US county (all 3,076) by the year 2048. You can operate from more than 5 different counties per month, but you must finish all the counties by 2048. Good luck! . . . oh, and enjoy your new mobile amplifier.

We don't need those QSLs

Although *CQ* magazine still requires confirmations for contacting all counties for the USA-CA award, MARAC decided that that was good enough for them. At the annual MARAC convention, MARAC nixed the requirement for confirmations for other county hunter awards once the USA-CA (First Time Award) is issued. For those county hunters who continue to paper chase after contacting all counties the first time, this is a great time (and cost) saving.

Carlie Ann Jansen picks the winner. ***—photo by N3AHA***

MRC processing

If you're still collecting counties for the USA-CA, you *do* need those QSLs. Many county hunters contact mobile operators on the county hunter nets, then use mobile reply cards (MRC) to confirm multiple contacts on a single card. The card with multiple contacts listed is much more economical than individual cards for each contact. But what makes it really cost effective are the processing companies which save county hunters a bundle on postage costs.

Unfortunately, the Mobile QSL Bureau stopped processing cards recently. I wrote the Bureau to get details but haven't heard back from them. I'm assuming the decision was based on a decrease in the number of customers because of MARAC's decision. It's very sad to see the Bureau quit . . . it's been a part of county hunting for quite some time.

ACES, the Amateur Confirmation Exchange Service, announced a rate increase for similar reasons. ACES believes that 60% of their customers were confirming contacts for the second time award and many have decided not to continue confirming counties as a result of the MARAC decision. ACES also sees fewer new county hunters and a decline in MARAC membership hurting their business. As a result, ACES changed its rate to $0.25 per MRC. This is still a savings of $0.39 if the county hunter sent a card with an SASE (2x$0.32). If you would like additional information on ACES, write Howard, WA2GLU via e-mail 102361.507@compuserve.com or snail mail, 15020 North 7th Drive, Phoenix, AZ 85023-5214.

CHARS, the County Hunters Active Remailing Service, is a brand new service offered by Art Mager, N5DKW. Art cites the Mobile QSL Bureau closing as the impetus for him to start his own MRC processing service. Art plans to run his service similarly to the ARRL QSL Bureaus. He charges a flat fee of $0.20 per card for outgoing QSL/MRCs. For incoming QSL/MRCs, Art requires postage funds in an account (in lieu of SASEs on file . . . Art says different sized SASEs creates a real problem for current incoming DX bureaus). He believes the price may even be lowered, once more county hunters use the service. Art states this service is the county hunters,' not his. If you're interested in more information, contact Art at: n5dkw@primenet.com or send SASE to CHARS, 8619 E. 108th Terrace, Kansas City, MO 64134.

Attention Internet CHers

Speaking of ACES, they're offering a new service . . . and it's FREE! The county hunter web page maintains a growing list of county hunter e-mail addresses. As of 10/15/96, the database exceeded 250 addresses, and is growing at a rate of 5-15 per week. ACES will send the entire list and provide automatic weekly updates of changes to an e-mail address. If you would like to add your e-mail address to their list and receive the entire directory, plus receive updates, send Howard an e-mail at102361.507@compuserve.com with "Full List" in the subject field and your call in the message body.

ZIP

Many have asked for a ZIP Code-to-county conversion routine. ZIP, a product of Hardy Data Systems, makes that conversion a cinch; enter a ZIP Code and ZIP gives the county. The ZIP-County conversion program is priced at $20, postpaid. One word of caution. Although converting from ZIP Code to county is usually accurate, there are times when the conversion is not correct. The official USA-CA rules state that ZIP Codes can be used as a guide to determining the county, but it is not without error.

Jim Hardy sent me an announcement of his new FREEWARE product that uses data directly from the FCC database. After downloading the Amateur Radio call sign database from the FCC FTP site, Hardy's software converts and condenses the information into a usable database which can be searched by call sign.

Although the basic program is free, a $10 registered version will also display the county, date of birth, age, azimuth and distance/bearing from the user. Commercial providers are QRZ, Buckmaster, SAM, and the Callbook© have similar information on CD-ROMs. Hardy's program uses existing data from the FCC and can be updated at no charge . . . unlike buying yearly CD-ROMs.

If you would like to try and download the FREEWARE program, go to Hardy's Web page; (http://www.surfsouth.com/~jhardy/fcc.htm). There is some good news/bad news to this story. The good news is the database will be on your local computer and accessible at any time, the bad news is the amount of time it takes to download the initial data from the FCC FTP site; about 3 hours at 28.8Mbps.

Independent cities, parks, boroughs and parishes

Do you live in an independent city? How about a national park? How about an Alaskan borough? How about a Louisiana parish? Parishes are recognized by *CQ* magazine as a county and therefore county hunters contact all 64 parishes for the award. Most likely you don't live in a national park, but what if you drive your car through one? What county are you in? Once upon a time, you could count your first contact with a national park as any of the adjoining counties. Not anymore. Contacts with operators in national parks do not count for any county today. The *CQ* magazine USA-CA Award Custodian, Norm Van Raay, WA3RTY, decided to change this rule effective 1 July 1995.

Jim Stoneback, K4AXF, sent me e-mail and asked me about independent cities. He lives in Alexandria, Virginia, which is considered an independent city and he's never sure what county he should claim on his QSL card. There are 41 independent cities in Virginia, one in Nevada, and the District of Columbia; all of which are not part of a county. These, too, once counted for any adjoining county up until July, 1995. Norm realizes this may be a problem for fixed stations, but states it ". . . was the decision." I'm not sure what this means to every ham living in an independent city who currently claims on their QSL that they live in a county. The bottom line is that hams who live in independent cities can't help county hunters.

Alaska, like Louisiana, does not have counties, but they don't have parishes, either. They do have 15 boroughs and 11 census areas. Craig Bledsoe, K4TXK/KL7, sent me e-mail from Alaska and asked me why county hunters don't hunt boroughs. He said all but approximately 15,000 of the state's residents live in "organized boroughs" and even the 15,000 bush residents live in the "unorganized borough." I posed this question to WA3RTY and he wants to gather additional information. Currently, county hunters contact the four judicial districts of Alaska. Hunting boroughs would be even more difficult. We'll have to wait and see how this plays out. If any of you faithful readers have information on the Alaskan boroughs or census areas, please forward it to me. Thanks!

MARAC hat

Back in July, Cecil Crider, WE8D, sent me a MARAC hat. The hat modeled by my two year old daughter has a call sign and the words MARAC County Hunters and a MARAC member number. It also has a roadrunner approaching a county line. The *Roadrunner* is MARAC's monthly newsletter. The hats are available postage paid for $6.00 (very reasonable!) from Cecil Crider, 14822 Inkster Road, Redford, MI 48239-3015.

Au revoir!

Until March, happy hunting. And Warren, we expect 10 counties by my next column . . . . hop to it! 73, Ace, N3 aha! **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. 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,-nix. Info: (602) 631-48 9/97

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(-) rpt 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(-). 11/97

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

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

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

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

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

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

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

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

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

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

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

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

Sierra Foothills ARC. 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

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 Humbolt 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

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.

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

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

Vaca Valley Radio Club. Meets 2nd Wed./monthly, 7:30 p.m. (Board mtg., 7 p.m.) Vaca Fire Dist. Stn., Vine St. in Vacaville, CA. Rptr. WD6BUS 145.47(-) PL 127.3. Mary Turner, (707) 451-2134. 5/97

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

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

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

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

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

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

FLORIDA

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

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

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, KT4PA, (561) 340-4319. Call in 146.955(-). 9/97

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

GEORGIA

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

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

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

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

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

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

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

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(+). 11/97

LOUISIANA

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

MAINE

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

MASSACHUSETTS

Quannapowitt Radio Assoc., Inc. 6 Savin St., Burlington, MA 01803. Meets 4th 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., Wellesley, MA (Sept.-June) Talk-in 147.03(+). Info: J. Driscoll, NV1T, (617)444-2686. 12/97

MICHIGAN

Adrian Amateur Radio Club, W8TQE. Box 26, Adrian, MI 49221. Meets 1st Fri./monthly, 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

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

Edison Radio Amateurs Assoc. Meets 2nd Fri./monthly (Sept.-June), 7 p.m., Edison Western Wayne Div. HQ, 8001 Haggerty, Belleville, MI (So. of Ecorse Rd.). Net each Thurs., 8 p.m. on 145.33(-) and 442.80(+) rptrs. 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. 10/97

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., Carson Valley Museum & Cultural Cntr., 1477 Hwy 395 North, Gardnerville, NV. Contact: George Uebele, WW7E, (702) 265-4278, 147.330 MHz. 11/97

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. 11/97

NEW JERSEY

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

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. 10/97

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

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. 12/97

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! 9/97

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

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. 10/97

Yonkers Amateur Radio Club, (YARC). Meets 2nd Sun./monthly, 10 a.m., 1st Pct., Yonkers Police Station, E. Grassy Sprain Rd., Yonkers, NY. Info: P.O. Box 378, Centuck Sta., Yonkers, NY 10710. (914) 963-1021. 146.865(-), 440.150(+). 10/97

NORTH CAROLINA

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

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(-). 10/97

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

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

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. 11/97

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

PENNSYLVANIA

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

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

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

VIRGINIA

Southern Peninsula Amateur Radio Klub, W4QR (SPARK). Meets 1st Tue./monthly Salvation Army Community Bldg., Hampton, VA. Repeaters 146.73(-), 449.55(-). VE Exam Info: (804) 898-8031, W4RTZ. 2/97

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

The Youth Forum

Brian Mileshosky, N5ZGT
1021 Dakota S.E., Albuquerque, NM 87108
E-mail: n5zgt@swcp.com

We amateurs spend a lot of time to earn our licenses. The knowledge required for Amateur Radio examinations did not come to us overnight. We had to take time out of the day to study the theory and CW that are required for the different license examinations. It has, and still is, paying off by all the fun we have as hams. In this column I am going to write about CW, and show why it is so important and effective. I will also point out just how easy it is to study CW so you can ace your next code test, and make this hobby even more exciting than it already is!

Many young amateurs hold the no-code Technician license. This license class makes it easy for young people to join the Amateur Radio community, because knowing CW is not required. This is the path I took five years ago and I'm glad I did it. But soon after passing my test as a no-code Technician, I set my mind on HF. For those of you who hold a no-code Technician license, you have no idea what you are missing on HF!

The ability to talk to a fellow amateur on the other side of the world is what makes this hobby so exciting. But to be able to do that, you must hold at least a Technician Plus license. To earn that, you need to pass the five word-per-minute CW test. Sounds difficult, doesn't it? Wrong! The five words-per-minute CW test is easy to take and pass!

I thought it would take forever to be able to learn the code when I became interested in upgrading. But I soon found out it was simple to learn. I'll share some small tips on learning CW later in this column.

Many people today believe that CW has no purpose anymore because it is old. The military is not using it as much, if at all, anymore. The Military Affiliate Radio Service (MARS) has required its members to stop using Morse code in its service. Many other services have stopped using CW as well. This is happening because new digital modes of communications are used on the airwaves every day now. These modes include G-Tor, Pactor, and Clover to name a few, and probably others of which I have not heard.

To some people, these modes and other reasons, have caused CW to become "outdated," so they think CW has no purpose in Amateur Radio, or other services. But remember, people all over the world are driving automobiles, which is technology that is almost 90 years old now. AM broadcast stations are just a few years younger than CW, but they are still used across the world. Boolean algebra (the basis of computer circuits) is over 100 years old. It's all still in use today!

CW is just another mode, and is still very important and effective. How and why? Here are just a few reasons: CW is very elementary. Have you ever seen a CW-only transceiver before? If you compare it with a single sideband transceiver, you will realize that the CW transceiver is much smaller in size and the make-up of the radio is much simpler.

I enjoy operating QRP (operating with five watts or less) on HF. I have a 40-meter, CW-only transceiver, called the Forty-Niner, which puts out 750 mW (more than enough to work people around the world!) and fits, with the nine volt battery that runs it, in one of those metal Altoids mint boxes sold at supermarkets everywhere. This radio is sold as a kit by the NorCal QRP club.

Morse code is also very effective. Hams who have HF privileges will readily agree with me that CW is

the mode of choice when band conditions are not favorable. It naturally "punches" through static crashes and other forms of noise to the station with whom you are in contact, because its RF energy is concentrated in around 100 Hz of bandwidth. The RF energy in a SSB signal takes up about 3 kHz of bandwidth, which makes it easy for QRM and QRN to "drown it out."

Last October, I operated on HF during the annual Scouting activity called Jamboree On The Air (JOTA). Band conditions were terrible. Our group had two 100-watt single sideband HF stations set up, as well as my 5-watt CW QRP station. I worked people at a greater distance on my 5-watt CW rig with ease, than the 100-watt stations did. My puny CW signal could be copied through all the noise, even though propagation was terrible!

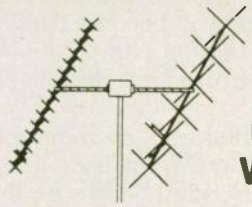
Now that you know why CW is effective and still important, I am going to share some tips on how you can learn Morse code, and pass the Tech Plus CW test. CW, as anything else, takes time to learn. Don't expect to learn CW from scratch in one weekend. It just isn't that simple. There are several sources that will help teach you Morse code, such as audio tapes, and computer programs to name a few. Personally, I like to use audio tapes. You can buy them from such places as the American Radio Relay League, retail stores selling products for Amateur Radio operators and advertisers in Amateur Radio magazines.

Computer programs can also be found at the places listed above, and they can also be downloaded from the Internet. But don't depend on these tapes or programs to teach you CW. These sources are worthless if you don't have your mind set on learning the code, and are willing to exert the effort to put into it.

The next thing to do is practice every day. However, make sure you don't run yourself into the ground. Practice CW for 15 - 20 minutes once or twice a day. This doesn't sound like much time, but it keeps you from over-doing it, and it works. Many people practice for hours, and wonder why they can't recognize any characters being sent to them. Spending 15 to 20 minutes a couple times a day should do it for you. Another great way to learn code at a certain speed is to try to copy characters at a slightly faster rate than needed for the test. For example, if you are studying for the five wpm test, try learning the code at 7 wpm. Once you become used to the code at this speed, the five words per minute test will seem easy!

If you are looking for more advice on learning CW, or increasing your speed, ask somebody who has HF privileges, and uses the mode. He or she will have additional tips which will help you. I hope I have persuaded you to get out and become a Technician Plus operator! HF is a whole different world, and that world has countless experiences! But to get there, you must know CW. Morse code will open many doors in your Amateur Radio career and you will be glad you know it! Remember, CW is easy to learn! Fifteen minutes once or twice a day is all that is needed to learn (and ace) the five words-per-minute code test! I hope to hear you sending dits and dahs on HF soon! Happy New Year and 73! WR

Amateur Satellites



Terry Douds, WB8CKI

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

Welcome to 1997! We all look forward to this being a wonderful New Year, especially in terms of satellite operation. This year will bring us (if all goes well) Phase 3D, which will allow many of you to begin to operate on the satellites very soon. There will also be a few new Low Earth Orbit (LEO) satellites going up this year as well, so excitement is in the air!

However, there is also sadness along with our joy. The loss of Oscar 13, which should be completed by the time this goes to press, is a sad one indeed — but it certainly did a great job for a long number of years. It also appears that some trouble has befallen our newest LEO, MO-30, or UNAMSAT as it is known. At deadline for my last column I reported that it had strong signals and was being copied worldwide. However, early in October reports had been coming across AMSAT-bb that it had apparently ceased to work. News from the Mexican control operators is forthcoming and should soon be able to clear up the mystery.

MIR has been very busy, thanks to the active operating of John Blaha, KC5TZQ, the Shuttle astronaut currently aboard the space station. John has been on phone almost nightly, beginning just after 0400Z. This corresponds to morning hours in Moscow, since the MIR astronauts follow a Russian daily schedule. The FM signal is 59+ in my car on my HTX-212 as I travel from my work to my home (a 40 minute ride). I was able to break through for a moment mobile, so it is possible to work him given some patience. However, keep in mind that the MIR frequencies have CHANGED effective November 1st. Packet operation is now on 145.800 MHz simplex. Voice operation has gone to a split frequency/repeater offset situation. Ground stations should transmit up on 145.800 MHz, and listen to MIR at 145.200 MHz. This corresponds to a positive offset repeater split from 145.200. There has been a great deal of confusion concerning this, as the split was "supposed" to be in reverse according to the Europeans. For those who may be confused, MIR, as a Russian Space Station, is actually under Region 1 ITU rules, and their allocations are actually the reverse of this pair — but John has confirmed it numerous times, as well as posting it on the packet bbs. Please be careful and listen before you transmit however; even though your tracking software may show MIR overhead, if the station is on packet then voice will be a waste of time, or vice-versa. It has been working very well lately, so give it a try when you can.

You may not be aware of the fact that there is also a 70 cm FM repeater aboard MIR at the present time. It utilizes the call sign RRØDL. The basic frequency information is to listen at 437.950 MHz, and transmit using a 2.2 MHz negative offset at 435.750 MHz using a 141.3 Hz CTCSS tone. It is a little bit tricky for some operators due to doppler shifts involved. Mike, N1JEZ, posted a message on

AMSAT-bb, and it went out on the weekly bulletins as well concerning ways to work around the doppler problems, since the shifts tend to be opposite each other on receive and transmit (this is due to the fact that your signal going to MIR seems to shift TO THEM in a similar fashion to the way their signals shift in frequency to us). I've included a table of frequencies that Mike feels work very well as channels that you can program into your rigs to take care of the doppler problems. He says that by starting with the first channel, you can move down the list of channels as the pass progresses. You may be able to use fewer channels, in case you don't have the memory space available. Give this a try and see if you have any luck!

MIR/SAFEX 70cm Doppler Correction

Downlink (MHz)	Uplink (MHz)	Offset (MHz)
437.958	435.742	2.216
437.956	435.744	2.212
437.954	435.746	2.208
437.952	435.748	2.204
437.950	435.750	2.200
437.948	435.752	2.196
437.946	435.754	2.192
437.944	435.756	2.188
437.942	435.758	2.184

Thanks to John Maglicane, KD2BD, *SpaceNews*, and *Amateur Radio Education News* #86 came the notice that the launch of SUNSAT, South Africa's first satellite carrying an Amateur Radio and Experimental commercial payload has been delayed till early August, 1997. The delay is due to rescheduling by the USAF of launch of the primary payload on a McDonald Douglas Delta II, from Vandenberg Air Force Base.

SUNSAT is a 60kg, 45 by 45 by 62 cm micro satellite which is being designed, built and tested by twenty four M.Eng. students at the Electronic Systems Laboratory (ESL) in the Department of Electrical and Electronic Engineering at Stellenbosch University.

The final Memorandum Of Understanding was signed between NASA and the South African Foundation for Research and Development (FRD). This secured the NASA launch in return for a inclusion of a NASA GPS receiver in the payload. Currently the launch is scheduled for early August 1997. It will include a PACSAT BBS, which is currently being tested and is operating well with WISP. The operational frequencies are currently being finalized and will be announced soon. SUNSAT information is also available on the SUNSAT World Wide Web home page at: http://sunsat.ee.sun.ac.za

In my last column I promised to bring you some information concerning FO-29, the new JAS-2 satellite from Japan. FO-29 contains both an analog transponder for CW and SSB, as well as a digital transponder for Pacsat operation. Operation is split between analog and digital use — and is set by the control operators in Japan. It is placed in one mode or the other for a week or two at the present time, but this could change at any moment. At the time of this writing, the bird is in digital mode.

Analog use of the bird is through an inverting transponder, with a downlink from 145.9 - 146.0 MHz, and an uplink from 435.9 - 435.8 MHz. Digital use changes with speed; all digital modes use 435.91 as a downlink, and 1200bps uses 145.85/.87/.89/.91 MHz as uplinks. 9600bps uses only 145.87 as an uplink. The 1200bps system utilizes the standard BPSK encoding (Manchester encoded FM up/BPSK SSB down), while 9600bps uses standard G3RUH FM signals. Additionally, there is also a "digitalker" on the 435.91 downlink. It broadcasts little messages to the listeners — right now its a message saying "this is JAS-2" in both English and Japanese. It's an interesting system that is quite easy to use — give it a try!

Well, that's about it for this month — as always, thanks for all the letters and info you send me — this column is meant to help you, the readers, and particularly you, the newcomer to satellite operation. I know only too well that sometimes the satellites can be a particularly frightening concept to think about — let alone operate on. Feel free to drop me a line — remember, the question you ask may be the same one the person down the street wanted to ask too, but never got around to it — and it could help many others. Take care and see you next time! **WR**

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Propagation

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It's a new year. It's a new solar cycle. And it's a new person writing this propagation column.

The first item is almost true. You're probably reading this in December, so the new year isn't far off.

The second item may or may not be true — I'll look at that in more detail shortly.

The third item is very true. I'm the "younger" person NM7M mentioned in his December column. Of course young is relative, as I've been through my share of sunspot cycles — Cycle 23 will be my fifth. As your new columnist, I plan to look at the whys and hows of propagation, analyze common and unusual modes and paths, review propagation software, and a whole lot more. Most of this will be done on a practical basis, with theory given as appropriate. There will even be an equation or two thrown in.

Now let's get to the item that may or may not be true — the new solar cycle. Has the current cycle, Cycle 22, ended? Has the new cycle, Cycle 23, started? Why is the end of Cycle 22 and the start of Cycle 23 so important? It's important because it means that the return of long distance propagation on a regular basis on the higher bands (10M and 15M) is not too far off.

In his last column, NM7M declared that Cycle 22 is over and that Cycle 23 is about to begin. I'm all in favor of that, but let's dig a bit deeper and try to predict the end. It's an informative journey.

Determining the end of a sunspot cycle and the start of the next (they actually overlap somewhat, so the minimum between two cycles is considered the end of one and the beginning of the other) is a tough question to answer due to the nature of how sunspot cycles are defined. Remember they are defined in terms of monthly smoothed sunspot numbers (abbreviated SSN), as the smoothed sunspot number for a given month has been found to be the best indicator of HF propagation in a given month.

The smoothed sunspot number for a given month is the running average of the monthly means of the previous five months (plus 1/2 the 6th month), the month in question, and the next five months (again plus 1/2 the 6th month). For example, if I want to know the SSN for January 1997 I would calculate it with the following equation:

{1/2 SSN(Ju196) + SSN(Aug96) + SSN(Sep96)+SSN(Oct96)+ SSN(Nov96)+SSN(Dec96)+ SSN(Jan97)+SSN(Feb97)+ SSN(Mar97)+SSN(Apr97)+ SSN(May97)+SSN(Jun97)+1/2 SSN(Ju197)}/12 — where SSN (Ju196) is the monthly mean for July 1996, etc. Note that the official SSN for January 1997 won't be known until the July 1997 monthly mean is available. You should now see why it's tough to answer "where exactly are we?" in a sunspot cycle. We really don't offlcially know until at least six months later.

This is where predictions come in. The first reaction may be that it shouldn't be too hard to predict what a solar cycle does, as we have complete data on twenty one of them already. Using this data from Cycle 1 through Cycle 21, it's easy to calculate the average rise time from minimum to peak, the average peak, and the average fall time from peak to minimum. The results of this are:

average rise time = 52 months (4.3 years)

average peak = 113

average fall time = 79 months (6.6 years)

average cycle length = 131 months (10.9 years)

Using these averages and knowing that Cycle 21 ended in September 1986, I could have predicted in early 1987 that Cycle 22 would reach a peak about 4.3 years after September 1986, it would peak at an SSN of about 113, and it would end about 10.9 years after September 1986. Let's see how this simple prediction compared to what actually happened. This might then give some confidence in the prediction of the end of Cycle 22 and the start of Cycle 23.

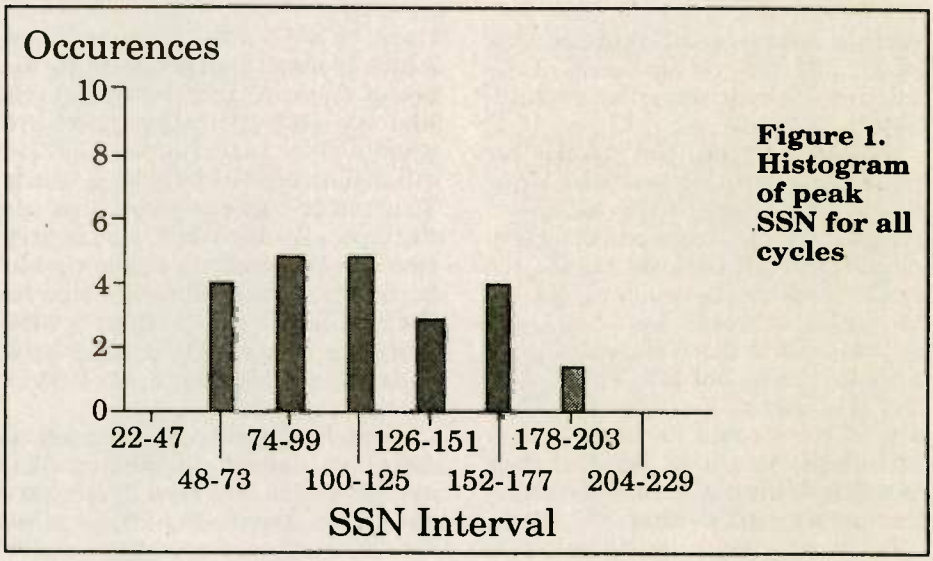

Figure 1. Histogram of peak SSN for all cycles

Here's the comparison:

Parameter-	Cycle 22 pred.	Cycle 22 actual
date of peak	Jan'91	July '89
peak SSN	113	158
date of minimum	Aug 1997	-------

The comparison clearly shows this simple prediction missed by a year and a half on the date of the peak, and also underestimated the peak by quite a bit. This shouldn't give us much confidence in the prediction of the date of the minimum.

Why were my predictions off? There's a simple answer, and the answer is best shown by doing a histogram (distribution) of each parameter over all the cycles. To keep this from getting too long, though, I'll only look at the peak SSN. Figure 1 is the histogram. The horizontal axis is divided into the proper number of intervals based on the

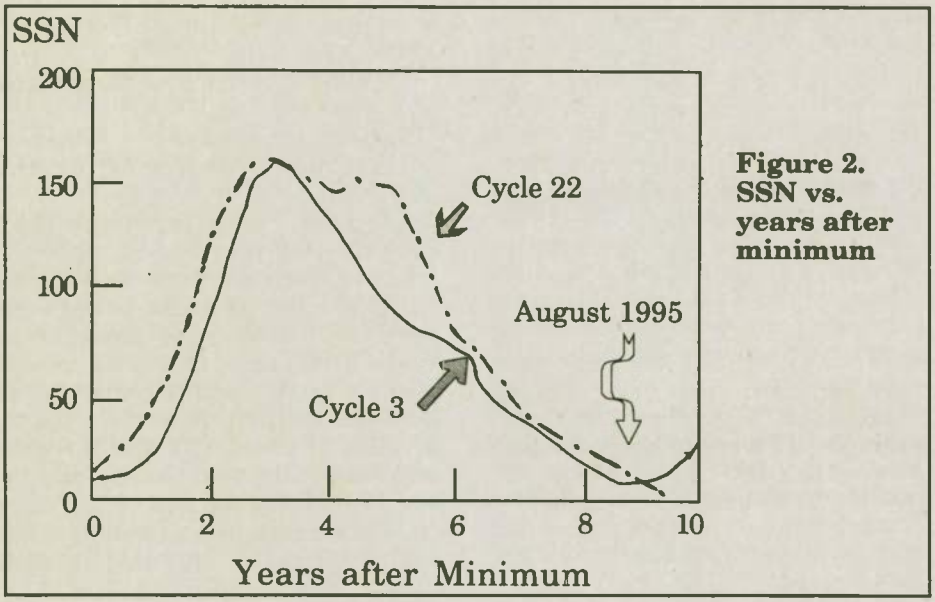

Figure 2. SSN vs. years after minimum

sample size (six intervals in this case), and the vertical axis is the number of occurrences for each interval.

As can be seen, the results for peak SSN 'are all over the map' (they're that way for the other parameters, too). This means the prediction was off because there's too much variation between all the solar cycles. It would have been convenient if the distribution of peak SSN had come out following a normal (bell curve) distribution. Then a prediction could be made with a probability tied to it. But this data is not following a normal distribution, so we can't do that.

Let's not give up quite yet on a prediction, though. Let's try one more thing. Let's try to find a previous cycle with the same time from minimum to peak and the same peak SSN. Maybe matching these two parameters will give us a better prediction of the third (time from peak to minimum). We're in luck here. Cycle 22 took 34 months to go from minimum to peak and peaked at an SSN of 158. Cycle 3 (way back in the late seventeen hundreds) took 35 months to go from minimum to peak and peaked at an SSN of 159. That's a surprisingly close match. Knowing that Cycle 3 took 73 months from peak to minimum gives us a prediction of August 1995 for the minimum between Cycle 22 and Cycle 23.

Unfortunately we know that didn't happen, as Cycle 22 was still going down many months after August 1995. Figure 2 shows what went wrong with this prediction - Cycle 3 was only 9 years long, which is much shorter than the average. Cycle 22 had a double peak, and it's still going down after 9 years.

So now I'm batting zero for 2. That's okay, as the purpose of my first column was to show that it isn't easy to predict a sunspot cycle. What I tried to predict was just for the end of a cycle — think of the problems in trying to predict what a cycle does that hasn't even started yet!

What I've been using is what is called the statistical method. It is based on data observed from previous cycles. There are a couple other general methods for predicting sunspot cycles, and I'll briefly look at those next month. I'll show a prediction for the end of Cycle 22 that comes from one of the scientific communities — it matches up pretty good with NM7M's declaration. I'll also show some early predictions for Cycle 23. Finally, I'll review where all this sunspot data is available for those who would like to get in a little deeper by themselves.

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About K9LA....

According to Carl, he attended Purdue University and received an MSEE degree "back when the Boilermakers used to win football games on a regular basis."

He is an RF design engineer (mostly transmitters and power amplifiers in the 30MHz - 1GHz range) with Hughes Defense Communications (formerly Magnavox Electronics System Company) in Ft. Wayne, Indiana.

Carl's Amateur Radio interests lie in propagation, antennas, contesting, and DXing. He has written several propagation and antenna articles for the *ARRL Antenna Compendium* series and *QST*. He also says he had the pleasure of an eyeball QSO with Bob, NM7M, back in 1994. Carl has been licensed since 1961.

His wife is Vicky, KB5EAM. She received her Technician license when they lived in the Dallas/Ft. Worth area. They have two teenage boys — one is a junior in high school and the other is a freshman.

While we will all miss the regular contributions of Dr. Bob Brown, NM7M, it is reassuring to know that he has chosen Carl to step up and continue his mission to teach us all a thing or two (and more) that we need to know about propagation.

We at ***Worldradio*** *wish to thank Bob for his many years of fine work, and hope to hear from him from time to time, as it suits a gentleman of leisure.*

In that same vein, we welcome Carl to the family, and look forward to a long and happy association. —Lou Ann, KB6HP **WR**

6Y5XX — Pirate call sign

The Jamaica Amateur Radio association says that the call sign 6Y5XX heard during recent contests is a phony. The organization says via an Internet posting that 6Y5XX is not a legal Jamaican Amateur Radio call. The organization asks if anyone has made contact with this call and has obtained QSL information, to please send that information to 6Y5KW at his *Callbook* ™ address.

Traffic

Geri Sweeney, N4GHI

Upcoming traffic events:

January

First Night/New Year's Eve
Boston/Annanapolis
South Florida Fair

What's happening: West Indies

The International Assistance and Traffic Net (IATN) meets on 14303 MHz daily at 1130Z. The IATN is the ARRL's, National Traffic System (NTS) link for traffic leaving the US and Canada. Many Caribbean island countries are regular participants. Two stations, 8P6AA in Barbados, and 9Y4IBN in Trinidad and Tobago are founding members. They also attend the Antilles Emergency and Weather Net on 3815 kHz at 1030Z and 2230Z. Irvine Niffikeer, 9Y4IBN, reports on a traffic training session held on this net.

"Within the recent past, Amateur Radio operators were involved in communication in two disasters involving hurricanes in the West Indies. At the evaluation exercise, weaknesses in communication by Amateur Radio operators were identified by officials of international organizations, disaster management agencies, and radio operators. The group decided that some form of standardization for communicating in emergencies and disasters should be developed. The ARRL format was recommended because this form has been tried and tested."

"Arthur Farmer, 8P6AA, one of the participants at the evaluation exercise was asked by the Amateur Radio operators to organize a training session to familiarize all radio operators on the net with the ARRL format. He was chosen because of his experience with handling traffic on a regular basis on the IATN." (Arthur is NCS every Tuesday.)

"Arthur contacted me (9Y4IBN, Irvine, is NCS on the IATN every Monday), and we worked out a strategy for discussing the ARRL message handling format. The plan envisaged a series of discussions at extended sessions of the Antilles Emergency and Weather Net, on Sunday mornings for three weeks. Announcements were made on the Net for several weeks before the first session.

"On the first session (June/96), Arthur went through the form in detail and explained each item line by line. I can safely say he did a detailed and professional job and I was very satisfied with the manner of his presentation. His discussion was heard by operators from Guyana in the South to Antigua, St. Kitts, and Nevis in the North. Several operators commented favorably about the contents. Unfortunately, after some feedback was received, propagation changed, signals dropped on 75 meters, and the session was adjourned to the next Sunday.

"In the second session, a review was undertaken followed by further discussion by the participants. After a period for questions, Arthur and I exchanged several examples. A short explanation was given to remind participants that in sending messages the operator must take into account the band conditions, the ability of the receiving operator to copy, and to send at a speed such that the receiving station can copy accurately. Then the participants exchanged messages. Because of the success of these two sessions, it was decided that there would be a third session.

"We now have more trained radio operators in the region who are capable to handle formal written messages according to the ARRL formal. These operators, and the others that they will train in their respective countries, we hope, will form the core of operators to handle formal written traffic during emergencies and disasters. It is our hope and desire to encourage Amateur Radio operators to keep abreast with the procedures by originating messages and receiving formal written traffic — hopefully to use the Antilles Emergency and Weather Net during normal times, so that, if and when a real disaster occurs, communication will not itself be a disaster.

(Irvine Niffikeer, 9Y4IBN, operates both VHF and HF packet, Pactor, and has experimented with satellite. He wishes to explain these modes in future sessions on the Net.)

"A very impressive start has been made and once enthusiasm can be maintained, there should be an improvement in performance in handling formal written messages by Amateur Radio operators in the West Indies."

Bravo Irvine and Arthur. If you wish to send a congrats message for this fine work, they can be addressed simply: 8P6AA, Barbados, and/or 9Y4IBN, Trinidad. Your message will go to the evening (Cycle 4) session of the EAN (Eastern Area Net) where it will be picked up by the ARN (Atlantic Region Net) liaison station, who will list it the next morning on the IATN.

Training

Jack Davis, KA8WNO, in Coalton, Virginia, had an excellent article about how to send radiograms in the October *Field Forum*. Jack opens with: "Trouble is, most hams don't know much about sending radiograms, and many of them would, if they just knew how!" The only problem with Jack's wonderful article is that *Field Forum* is sent to ARRL appointees, many of whom are traffic handlers. This is the kind of article that should be featured in a general publication. Wouldn't it be neat if Jack's article could be sent to new licensees?

While they wouldn't be expected to become traffic handlers, they would at least get some traffic exposure, which might pique their interest. Congrats Jack on a fine traffic article.

Section Traffic Manager (STM)

Rose Devere, VE3AJN, was appointed Section Traffic Manager (STM) for Ontario. She is NCS on the IATN Thursdays. Aside from being a wonderful traffic handler, Devere is a superb person. Congrats Rose.

Letters

James Wade, WB8SIW, sent information on Michigan Nets and another organization dedicated to the preservation of code. It will be featured in the next column. Thanks Jim.

Calling the net

By tradition, if you don't hear your net being called within two minutes after published time, you should call the net. This occasionally happens (traffic jams, emergencies, and/or the NCS falls asleep). Members often hesitate due to poor propagation, busy frequencies, etc. Net managers would prefer to get two reports of their net having been called, than none at all. Call the net.

Traffic count

"Over the years NTS traffic has shown a slight decline, probably from the Internet and e-mail sectors taking over. But, we can still make a difference if we continue to originate radiograms. Who can we send messages to? Well, you have our birthday and anniversary list for starters. Then, we have your friends and relatives who would like to hear from you. Another avenue to explore are congratulatory radiograms, like Walter Parker, KA1ODT, of Maine, who won the New England Volunteer of the Year Award from the ARRL. The possibilities are plentiful and all you have to do is to avail yourself of a moment to send them a radiogram." John Benson, N1FLO, EMRI CW Net. (From *The Networks* newsletter, Sep/Oct)

Coincidence

When I arrived home from my trip around the US (40 days), I found a letter from an seasoned (79) traffic handler Robert Slagle, K4GR. He used to be on the Virginia CW traffic nets daily. Then, we met at my radio club when he presented a neat slide presentation of a Navy expedition to the Antarctic. Bob had heart by-pass surgery a couple years ago and moved to an assisted care home. We kept in touch. I always sent him the Virginia Net newsletter, and he occasionally sent me a short letter saying he missed traffic handling.

The other letter I found in my mail upon returning home was from another friend. Enclosed was Bob's obituary from the local newspaper. He had had a stroke. (A Silent Key has been written for Bob on page 24). Aside from being very sad, it points to a problem. CW and traffic handlers seem to be dwindling. Traffic handling is a perfect place for those who love CW. Most Sections have a net or two utilizing CW. If not, you can start one. Another friend, who enjoys daily chats on the CW bands, mentioned that in the past two months, he had communicated with no one under 40. One person was 41. The rest were much older.

I've recently been told by someone on the Eastern Area Staff that he can't discuss a matter with me if I don't get e-mail. It's not the dollars. You can get free e-mail software now. It makes its dollars by running ads on your screen. I have recently joined Fists (an organization to preserve CW, and a frequency for CW ops to hang out). It's not a matter of disliking the other modes. It's a matter of wishing to preserve CW a few more years. I, myself, am over 40 years of age.

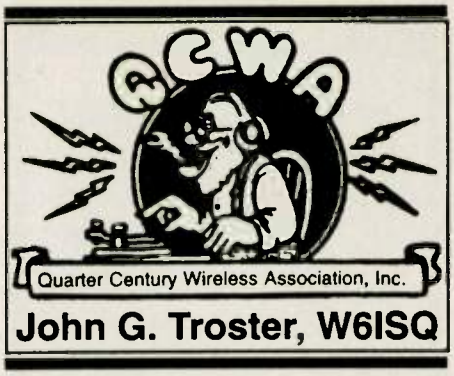
Three California CW nets

There are now three California CW nets. Only your support can sustain them. Folks in Southern California have been working arduously to reactivate their CW traffic net. It now meets Monday through Friday on 3598 kHz at 7:15 p.m. The Net Manager is Jean (Doc), Gmelin, W6ZRJ. The all-California slow speed traffic net meets on 3705 kHz every night at 9 p.m. The West Coast Slow Speed Net meets on 3702 kHz, daily, at 7 p.m.

CW slow speed traffic nets:

WCSPN(CA/OR/WA)	7 p.m.	3702 kHz
ACSN (CA)	9 p.m.	3705 kHz

Let me know of any *slow* speed traffic nets in your area. Slow nets generally run from 5-10 words per minute. As promised, I can now list (in each Traffic column), slow speed nets by Area (Pacific, Central, Eastern). WR



John G. Troster, W6ISQ

Richard L. Baldwin, W1RU

I first met Dick Baldwin in 1959 — by mail, that is — when I sent him an article for *QST* about cleaning up old aluminum antennas. To my astonishment, he accepted it. Thus encouraged, I sent in four short stories, and he took all those too. I knew then this fella must be all right! I kept sending short stories and he kept publishing them for some years. That all began right after he became Managing Editor of *QST*. I could say I started him off on his road to his success at ARRL — but modesty forbids.

Dick's roots harken to Pensacola, Florida, where his father was a naval aviator. When Dick was about two, his father took a job as Editor of a newspaper in Oakville, Connecticut. Little hand writing on the shack wall? That town's only 30 miles from West Hartford where Dick became an Editor. You just never know.

Well, Dick first heard about Amateur Radio as a freshman in high school. His uncle, a ham, W1GQ, lived in Maine and on a visit, asked if Dick would like to drop in on Amateur Radio station W1MK, which was the ARRL station in East Hartford. Actually, Dick had no interest in the ARRL station, but Uncle had a car which Dick's family did not, so Dick went along for the ride. Turned out the station upstaged the car as he became interested immediately in radio. Uncle Elmer helped him get started with the *Boy Scout Handbook* on radio.

Summers were spent in Maine where Dick began to work earnestly on getting a license, with Uncle's help and also that of a young buddy, Charles Parker, later W1ILU. They used the *ARRL Handbook* for the theory, but Dick learned the code himself by copying a German CW press station just below 40 Meters operating at 18 wpm. He received his ticket 13 September 1934, with the call W1IKE, and first thing he did was to put together a Gross receiver kit and a mighty 210 Hartley. Next was a 47 crystal oscillator and a 210 amplifier. Then upgrade to a 6L6-RK20. All these rigs he used on 80, handling traffic in Connecticut's CW Nutmeg Net.

In 1937, like others of you out there, Dick enlisted in the Naval Communications Reserve. In the fall of 1938, he matriculated (Ivy League word) at Bates College in Lewiston, Maine, to major in physics. After freshman year, he ran out of money, so stayed out of school a year to work, returning to his studies as a sophomore in 1940. But it was not to be. He was called to active duty in the Navy and instead reported to Newport, Rhode Island, for basic training. Naval CW Radio Station NAF, in Newport, had lots of radio equipment but no CW operators. So the Officer in Charge, Cmdr. T. R. Pennypacker, W1TR, went hunting through the ranks in boot camp for hams to shanghai for duty at the station. Dick was one of six he confiscated. Dick later became a Supervisor of the Watch at NAF.

After a few months the Commander told Dick to apply for a commission. However, shortly thereafter, and while still at NAF, someone on Dick's watch fouled up on a message. Not a good plan to make mistakes on messages, especially because most of them were directed to a very stern Admiral E. J. King, Commander, Atlantic Fleet on his flag ship anchored just offshore. (Scribe's note: I thought E. J. King was a real nice fella! As Chief of Naval Operations he gave me my commission at Quantico). Dick was called in to explain matters to the Head Man. He explained the problem and what had happened and with no further ado was told to go back to work. Ten minutes later he was again called to the office. This time as he walked through the door, The Man said, "Congratulations, you just made Ensign!" Dick figures his explanation of the message-goof was a kind of test, and he had passed it!

He never finished boot camp and he never went to Officer's Training School, but they made him an Ensign anyway and he went off to war. In May, 1942, he became a "plank owner" as Communications Officer to the Destroyer USS *Coghlan*, DD606, and sent to Bethlehem Ship Yard in San Francisco where the ship was under construction. A "plank owner" is a person assigned to a ship before it is commissioned. After commissioning they headed for the Aleutians. It was near there that his ship took part in the longest American naval battle of WWII, the Battle of Kommanderski. For four hours, six American ships, two cruisers and four destroyers, fought twelve Japanese ships, four cruisers and eight destroyers. The US ships were badly damaged and the Japanese were prevailing when suddenly, the Japanese disengaged and departed. No one knew why, but it saved our fleet.

In March, 1944, DD-606 returned to San Francisco for repairs and Dick was detached and sent to Radar School in Boston. Then to fleet

Dick Baldwin, W1RU, President IARU.
—photo by Phyllis Baldwin

training in Norfolk, and finally to Bremerton, Washington, to join the crew of a new destroyer, the USS *Shields,* DD-596. By now he was a Lieutenant and Communications Officer in charge of radio, radar, sonar, flags, etc. They headed for the Pacific to see action in the Philippines, Borneo, Okinawa. At Okinawa, Dick was able to get ashore for a visit with his father who was Army Air Corps Commander of an Air Service Group there. When the Big One ended, Dick stayed in the Naval Reserve and made Commander before retiring.

After the war, back to Bates, physics, aaannnd an economics major named Phyllis. Tesla coil-sized lightning bolts sparked at Dick and he knew this was The One. Meanwhile studies went on, and after nine years from his matriculation (same Ivy Leaguer) at Bates, he was graduated, setting a new record at the college for the longest time to complete an undergraduate degree.

In the student mode, he continued by launching into studying theoretical physics for an MS at Boston University. That done, enough school, and in 1949 Dick joined ARRL as Assistant Secretary. A job he describes as about the lowest rung on the ladder. (Remember, John Huntoon said the same thing about his entry into ARRL). About the same time, he and Phyllis were married, he got back on the air, and he built up to a pair of 810s for his final.

In 1952, Dick decided he would like to make more money, so he went to work for Motorola as Northern New England Sales Manager for two-way radio. The Baldwins moved to Falmouth, Maine and Dick got back on the air. This time he used a Collins 75A3 and a low power pair of 6L6s in the final to long wire. Good enough to win the Sweepstakes a few times for Maine . . . .

One evening in '56, the phone rang and Dick was surprised to hear John Huntoon's voice from ARRL. Would Dick like to return to Hartford to become Managing Editor of *QST*? Sounded like a great idea to the Baldwins and they moved back to Hartford. In '63, Dick was named Assistant General Manager, and in 1975, General Manager of ARRL. He remained so until his retirement in '82.

Dick had always enjoyed building radios and authored many technical papers for *QST*. He kept improving his own station until he finally ended up with the same 75A3 from previous stations and a 4CX1000 final. Later he built the famous Ted Crosby's HBR-16 receiver, using for guidance the many HBR articles published by *QST*. The antenna was a tri-bander on a 100 foot mast.

Immediately upon retirement, he and Phyllis moved back to Maine, selecting a location about 50 feet from the ocean on which Dick re-erected his 100-foot tower and tri-bander. Think he gets out to Europe and Africa? Wow! Dick and Phyllis have two children; a daughter Judy, a Social Worker in Connecticut, and son Glenn who works out the nautical genes in the family at a nearby Maine shipyard.

Let's digress a bit here and talk about the important work Dick is engaged in now. When Dick retired from the League, he became President of the International Amateur Radio Union (IARU). Dick had been Secretary of the IARU from 1976-82, so was conversant with the aims and purposes of the organization. He states, and I quote, "the primary objective of IARU is to protect the interests of Amateur Radio in the International Telecommunications Union's Conferences." IARU maintains a presence at the ITU to monitor agenda items as they might effect Amateur Radio. A studied response is necessary for such items. The Administrative Council of the IARU, over which Dick presides (the overall International Federation of National Amateur Radio Societies), decides how to respond to the item, then meets with Regional Societies to discuss the matters. Ultimately all 150 IARU member countries are contacted to solicit their opinions and support for a final IARU position.

The ITU works simply: One country, one vote. For example, the USA has one vote and Ghana has one vote, and Paraguay has one vote. They all count the same. It is absolutely essential then, that the final position adopted by IARU be supported and promoted by each individual IARU Society in each member country to their respective governments. Dick goes on to say, "The important thing for us all to keep in mind is that the IARU wants to encourage the growth of Amateur Radio regardless of any changes made in amateur rules and regulations in the forthcoming WARC-99." Certainly no one of us wants to see Amateur Radio descend to the murky miasma of CB radio.

What has IARU done for us lately? We can answer in three words, "10, 18 and 24" megs. It was through the work of the WARC-79 Committee, which prepared the IARU preliminary position papers, later adopted and promoted by all member Societies, that the ITU awarded those bands to amateurs. Incidentally, you'll be pleased to know our QCWA President, Jack Kelleher, W4ZC, was a member of a small group which did the propagation studies which formed the background for that request for the "WARC Bands."

Dick Baldwin and his IARU team have their work cut out for them in the forthcoming WARC-99. There are many controversial issues which must be resolved. We can expect rumors and accusations and arguments for the next several years as amateurs develop a defense for what we now have and, hopefully, something else we would like to have. It's important to support developments that lead to better results for Amateur Radio as a whole.

Dick travels continuously to other countries, mostly in the Third World, to educate government telecommunications officials and to speak and listen to local IARU Societies. What does he do for relaxation when he gets back? He runs up the sails on his 35 foot ketch, christened *Endurance* after the name of Sir Ernest Shackleton's ship, his nautical hero. Yes, he has every type of electronic device you can think of, including GPS, and even a two-meter handheld to work repeaters along the Maine coast.

In 1991, Dick was elected to the QCWA Hall of Fame for a lifetime of work for Amateur Radio. In 1992 he was named "Ham of the Year" at the Dayton Hamvention. He continues a full-time job of working for Amateur Radio. We are pleased indeed that Dick is One Of Us, the Dedicated, the Many, the Elite, the Proud, the QCWA.

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

Don't find fault. Find a remedy.
—*Henry Ford*

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

Results: '96-'97 QRP Survey

Twenty-two regional, national and international QRP groups completed questionnaires in the '96-'97 ***Worldradio*** QRP Organization Survey — the largest number yet in the four years this annual roundup has been conducted.

Since 1993, QRP organizations from around the world have been polled each October to gather up-to-date information for publication in each January's ***Worldradio.*** It has become a most gratifying annual report, given the burgeoning interest in low power communications. Membership continues to grow steadily across the board, and there's no let-up in sight.

New to the listing for '96-'97 are the NoGaQRP Group (Northern Georgia), Arkansas QRP Club, Alaska QRP Club, Adventure Radio Society (dedicated to outdoor QRP operation and reaching remarkable operating locations by human power), and The Knightlites (based in the Southeast).

Only the Cleveland QRP Club is not making the return from last year's survey.

It is apparent that the ease and speed of communication via the Internet is giving lots of groups the cohesiveness to thrive. Please note the addition of many e-mail and Internet homepage addresses in this year's roundup.

Many thanks to the club presidents, membership chairmen and public relations officers who took the time and effort to complete the survey questionnaires and to share the good news about their organizations with readers of the ***Worldradio*** QRP column.

Note: Net times listed here are in UTC. Therefore, for radio amateurs in the Western Hemisphere a net at 0200Z Thursdays, for example, is actually taking place on Wednesday evenings.

NoGaQRP Group (Northern Georgia)

Founded: 1996

Membership: 20, open to all radio amateurs, membership numbers assigned.

Cost to join: None

Annual dues for current members: None

Periodicals: None

Nets: None

Club-sponsored activities: None.

For information: NoGaQRP Group, Jim Stafford, W4QO, 11395 West Rd., Roswell, GA 30075-2122

Arkansas QRP Club

Founded: 1996

Membership: 25, open to all radio amateurs, membership numbers assigned.

Cost to join: None

Annual dues for current members: None

Periodicals: None

Nets: 0030 UTC Tuesdays on 3.560 MHz

Club-sponsored activities: None.

For information: Bob Schill, N9ZZ, 193 Northpointe Dr., Mountain Home, AR 72653-8124; E-mail N9ZZ@juno.com

The Knightlites

Founded: 1995

Membership: 50, open to all radio amateurs, no membership numbers assigned.

Cost to join: None

Annual dues for current members: None

Periodicals: Club homepage: http://www.duke.edu/~djohnson/

Nets: The Knightlites Roundtable meets at 0300Z Mondays on 3.710 MHz.

Club-sponsored activities: Annual Field Day outings and other activities throughout the year, including a trip to Portsmouth Island (Hatteras Group) in Spring '97.

For information: Dave Johnson, WA4NID, 2522 Alpine Rd., Durham, NC 27707; e-mail: WA4NID@amsat.org

Alaska QRP Club

Founded: 1996

Membership: 25, open to all radio amateurs, membership numbers assigned.

Cost to join: None. To receive a membership certificate: $2.50 U.S., and $3.50 outside U.S.

Annual dues for current members: None

Periodicals: The Tundra Telegraph distributed via e-mail quarterly; club homepage at http://www2.polarnet.com/~bhopkins/akqrp

Nets: Roundtable on 3.725 MHz Mondays and Thursdays at 0520Z

Club-sponsored activities: None

For information: Alaska QRP Club, c/o Bruce Hopkins, KL7JAF, P.O. Box 10079, Fairbanks, AK 99710

Adventure Radio Society

Founded: 1996

Membership: 195, open to all radio amateurs with an interest in outdoor QRP operations and in reaching remarkable operating locations by human power. Membership numbers assigned.

Cost to join: None

Annual dues for current members: None

Periodicals: ARS homepage at http://members.aol.com/adradio/index.html

Nets: None

Club-sponsored activities:

Spartan Sprints held on the first Tuesday of each month at 0200Z on or near 7.040 and 14.060 MHz; ARS Piggyback competitions held in conjunction with other major radio contests; WAS P/Q Award for radio amateurs who attempt Worked All States from portable locations reached by human power.

For information: Russ Carpenter, AA7QU, 47227 Goodpasture Rd., Vida, OR 97488; E-mail: russ 1031@aol.com. For membership: Richard Fisher, KI6SN, 1940 Wetherly St., Riverside, CA 92506; E-mail: KI6SN@aol.com

New Jersey QRP Club

Founded: 1995

Membership: 42, open to all radio amateurs, membership numbers assigned.

Cost to join: None

Annual dues for current members: None

Periodicals: Club homepage at http://www.ges.com/~marmor/

Nets: None

Club-sponsored activities: Members participate in Field Day and operate as a club in other contests throughout the year.

For information: Vince Passione, WA2ECP, 1 Courtney Way, Red Bank, NJ 07701; E-mail: wa2ecp@juno.com

Arizona SCQRPION QRP Club

Founded: 1995

Membership: 40, open to all radio amateurs, membership numbers assigned.

Cost to join: None

Annual dues for current members: None

Periodicals: None

Nets: None

Club-sponsored activities: "Freeze Your B___ Off" Winter QRP Field Day in February; club meetings at 1830Z on the first Saturday of the month at Luby's Cafeteria next to Ham Radio Outlet near Dunlap and 19th Avenue in Phoenix.

For information: Joe Gervais, KC7NEV, P.O. Box 1822, Goodyear, AZ 85338; e-mail: vole@primenet.com

Calgary QRP Club

Founded: 1995

Membership: 10, open to all radio amateurs, especially those with an interest in building and troubleshooting QRP equipment, no membership numbers assigned.

Cost to join: None

Annual dues for current members: None

Periodicals: None

Nets: None

Club-sponsored activities: None

For information: Calgary QRP Club, c/o Don Cole, VE6EY, 923 Whitehill Way N.E., Calgary AB, T1Y 3G1, Canada

North Texas QRP Club

Founded: 1986

Membership: 300, open to all radio amateurs, no membership numbers assigned.

Cost to join: None

Annual dues for current members: None

Periodicals: None

Nets: None

Club-sponsored activities: Dallas/Fort Worth area QRPers get together on the first Saturday of each month for "show and tell" and lunch, meeting at 6200 LBJ Freeway, Dallas, near Preston at LBJ. Members also participate in contests including QRP Afield and Field Day.

For information: Chuck Adams, K5FO, P.O. Box 181150, Dallas, TX 75218-8150. (Include a self-addressed, stamped No. 10 envelope).

QRP-L Internet Mail Group

Founded: 1993

Membership: 1,500, open to all radio amateurs interested in discussing all aspects of QRP activities, including — but not limited to — contests, operating, building, experimentation, club activities, the Dayton Hamvention, etc.; membership numbers assigned upon request.

To join the QRP-L Internet Mail Group send e-mail to: LISTSERV @lehigh.edu and in the body of the message write: subscribe QRP-L (Your name) (Your call).

Cost to join: None

Annual dues for current members: None

Periodicals: None

Nets: None

Club-sponsored activities: Regularly scheduled CW *Fox Hunts*, and QRP propagation studies.

For information: Chuck Adams, K5FO; e-mail: adams@sgi.com

Michigan QRP Club

Founded: 1978

Membership: More than 1,550, open to all radio amateurs, membership numbers assigned

Cost to join: $7 U.S./VE, $12 DX

Annual dues for current members: $5 U.S./VE, $10 DX

Periodicals: *The Five-Watter*, published quarterly. Club home page: http://www.geocities.com/CapeCanaveral/2844/miqrp.htm

Nets: MI-QRP Net at 0200Z Wednesdays on 3.535 MHz

Club-sponsored activities: Michigan QRP Club CW Contest, January 1997; Good Friday CW Sprint, 28 March 1997; MI-QRP La-

bor Day CW Sprint, 1 September 1997.

For information: Michigan QRP Club, 654 Georgia, Marysville, MI 48040-1243

MFJ 90's Radio Club

Founded: 1993

Membership: 120, open to all radio amateurs with an interest in operation and modification of the MFJ series of QRP transceivers and accessories. No membership numbers assigned.

Cost to join: $5

Annual dues for current members: $5

Periodicals: *MFJ Nineties*, published quarterly

Nets: Members meet Sunday afternoons on recognized QRP frequencies.

Club-sponsored activities: None

For information: David Luscombe, W5RIF, MFJ 90's QRP Club, 13506 Clareton Lane, Cypress, TX 77429

St. Louis QRP Society

Founded: 1987

Membership: 45, open to all radio amateurs in the St. Louis metropolitan area. No membership numbers assigned.

Cost to join: None

Annual dues for current members: $12

Periodicals: *The Peanut Whistle*, published monthly, with an expanded anniversary bonus issue each November.

Nets: Club members meet on 145.33 MHz FM the first Wednesday of each month.

Club-sponsored activities: Field Day and occasional portable outings are scheduled each year. There is an annual tailgate swap-sale and open house in place of a regular meeting in July. Also, the club sponsors an annual Builders Contest in January, and in November the club meeting is in the form of a club anniversary dinner. Each year the club recognizes one member for significant services on behalf of the organization.

For information: Keith Arns, KCØPP, 2832 Pembroke Ln., Saint Charles, MO 63301-0344.

NorthWest QRP Club

Founded: 1992

Membership: 446, open to all radio amateurs, membership numbers assigned.

Cost to join: $12 ($13 Canada, $15 DX); $3 for all radio amateurs for E-mail newsletter-only membership.

Annual dues for current members: $12 ($13 Canada, $15 DX) to receive printed newsletter; $2 renewal to receive e-mail newsletter

Periodicals: *The NWQ Newsletter*, published bimonthly. Club homepage: http://www.scn.org/IP/nwqrp/nwqrp.html

Nets: NWQRP Net meets Tuesdays at 0300Z on 10.123 MHz, 0330Z on 3.710; and Saturday at 1530Z on 3.561 MHz.

Club-sponsored activities: NWQRP Winter Sprint, 9 February 1997; and NWQRP Spring Sprint, May 1997; Norwester Award for contacting 10 or more members; endorsements for contacting 25 and 50 members.

For information: Bill Todd, N7MFB, NW QRP Club, P.O. Box 354, Bay Center, WA 98527

QRP Club of New England

Founded: 1991

Membership: 500, open to all radio amateurs, membership numbers assigned.

Cost to join: $10

Annual dues for current members: $10, add $5 for outside U.S.

Periodicals: *72*, published quarterly

Nets: Members meet on CW on the Great Lakes Net Thursdays at 0200Z on 3.560 MHz.

Club-sponsored activities: QRP Afield Contest in September; 79er Sprint (CW) from 0200Z-0300Z Fridays during February and March on 3.579 MHz; Field Day in June; and a club outing to W1AW in Newington, CT annually in January or February.

For information: For membership: Bill McNally, AE1D, 7 Blueberry Rd., Windham, NH 03087. (Include an SASE.). For renewals: Bill Studley, AA1OC, 133 Baboosic Lake Rd., Merrimack, NH 03054. Note: The club year is from January to December and renewals are from September to December for the following year.

Maryland Milliwatt Club

Founded: 1992

Membership: 40, currently by invitation only, membership numbers assigned.

Cost to join: None

Annual dues for current members: None

Periodicals: None

Nets: None

Club-sponsored activities: Promotion of QRP in the 3rd call district; sponsors QRP "show and tell" sessions; administrates a QRP reference library.

For information: Maryland Milliwatt Club, 3052 Fairland Rd., Silver Spring, MD 20904

G-QRP Club of Great Britain

Founded: 1974

Membership: 5,000, open to all radio amateurs, membership numbers assigned

Cost to join: $12 (subscriptions may be paid by Mastercard or Visa. Although new members are asked to join directly to the UK, there is a U.S. representative who can accept renewal fees in U.S. dollars)

Annual dues for current members: $12

Periodicals: *SPRAT*, published quarterly

Nets: None

Club-sponsored activities: QRP tests and activities organized by A.D. Taylor, G8PG. Extensive awards program including: Worked G-QRP Club Award, QRP Countries, Two-Way QRP, QRP Master, and CW Novice Award. Trophy program including the G2NJ, Partridge, G4DQP, Chelmsley and Suffolk trophies. Annual club-sponsored contest is "Winter Sports" from 26 December to 1 January, inclusive.

For information: G-QRP Club, Rev. George Dobbs, G3RJV, St. Aidans Vicarage, 498 Manchester Rd., Rochdale, Lancs, OL11 3HE, England. E-mail: g3rjv@gqrp.demon.co.uk

QRP Amateur Radio Club International

Founded: 1961

Membership: More than 8,600, open to all radio amateurs, membership numbers assigned.

Cost to join: $17, U.S.; $20, Canada; $27, DX

Annual dues for current members: $15, U.S.; $17, Canada; $25 DX

Periodicals: *QRP Quarterly*, published quarterly

Nets: TCN on 14.060 MHz at 2300Z Sundays; SEN on 7.030 MHz at 0100Z Wednesdays (QSY to 3.535 MHz at 0130Z if 40 meter conditions are poor); GSN on 3.560 MHZ at 0200Z Thursdays; GLN on 3.560 MHz at 0200Z Thursdays; NEN on 7.040 MHz at 1300Z Saturdays; WSN-80 on 3.558 MHz at 0400Z Thursdays; WSN-40 on 7.040 MHz at 1700Z Saturdays.

Club-sponsored activities: QRP ARCI Operating Awards Program includes QRP-25, WAC-QRP, WAS-QRP, DXCC-QRP, 1,000 Mile-Per-Watt and QRP-Net (QNI-25) awards. Contests include the Spring QSO Party in April, Hoot Owl Sprint-CW in May, Summer Homebrew Sprint-CW in July, Summer Daze Sprint-SSB in August, Fall QSO Party-CW in October, Holiday Spirits Sprint-CW in December, and Novice-Tech Roundup in January-February.

For information: Michael Bryce, WB8VGE, P.O. Box 508, Massillon, OH 44646.

NorCal (Northern California) QRP Club

Founded: 1993

Membership: 1,900, open to all radio amateurs, membership numbers assigned

Cost to join: None

Annual dues for current members: To receive the club publication there is an annual fee of $10 for U.S. stations, $15 for Canadian stations, and $20 for DX.

Periodicals: *QRPp*, published quarterly

Nets: None

Club-sponsored activities: The club sponsors the QRP To The Field contest in April and holds monthly meetings in Pleasanton, CA. It has also developed and distributed hundreds of transceiver, keyer, antenna tuner and vertical antenna kits for the QRP homebrewer and has an ongoing project development program.

For information: Jim Cates, WA6GER, 3241 Eastwood Rd., Sacramento, CA 95821

Colorado QRP Club

Founded: 1994

Membership: 375, open to all radio amateurs, membership numbers assigned

Cost to join: $10, U.S.; $12 outside U.S.

Annual dues for current members: $10, U.S.; $12 outside U.S.

Periodicals: "The Low Down," published bi-monthly

Nets: CQC Net meets Tuesdays on the 147.225 FM repeater (145.16 in Colorado Springs), covering Cheyenne, WY to Pueblo, CO.

Club-sponsored activities: Colorado QRP Club Winter QSO Party in February; Summer QSO Party in August; and sponsors the Colorado QRP Counties award.

For information: CQC, P.O. Box 371883, Denver, CO 80237-1883; E-mail: CQC@aol.com

QRP Society of Central Pennsylvania

Founded: 1993

Membership: 20, open to all radio amateurs, membership numbers assigned

Cost to join: None

Annual dues for current members: $5, U.S.; $7 outside U.S.

Periodicals: *QRP Gazette*, published six times per year

Nets: None.

Club-sponsored activities: The club has a special interest in QRP homebrewing.

For information: Robert B. Wicks, W3HAH, 20 Brenely Ln., Mt. Holly Springs, PA 17065-1401; or John Jaminet, W3HMS, 912 Robert St., Mechanicsburg, PA 17055; e-mail: W3HMS@aol.com

QRP Club of British Columbia

Founded: 1990

Membership: 35, open to all radio amateurs, no membership numbers assigned

Cost to join: $5

Annual dues for current members: None. But periodic assessments are made to cover meeting and mailing costs.

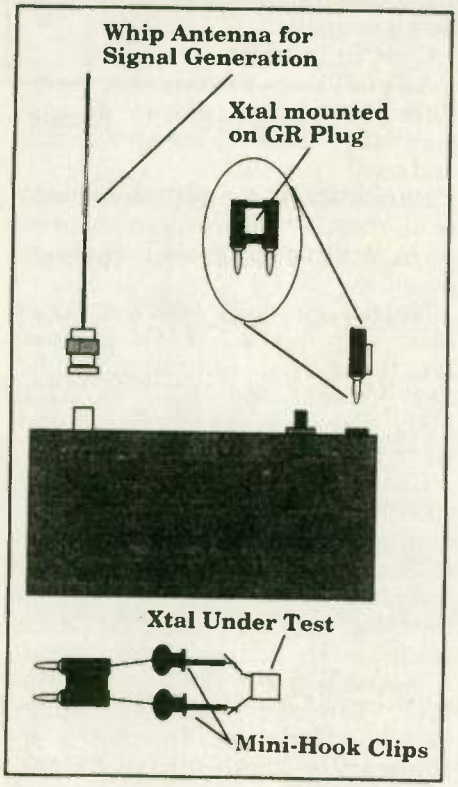
Periodicals: A newsletter is sent to all members following each quarterly meeting (by e-mail wherever possible).

Nets: Three daily: 0000Z on 3.729 MHz; 0400Z on 3.729 MHz (following the British Columbia Public Service Net); and 1830Z on 3.760 MHz with U.S. members. All stations welcome.

Club-sponsored activities: The club is primarily interested in promoting the design and construction of SSB transceivers. Presentations are made at local club meetings, at hamfests and on Field Day. Lunch meetings are held quarterly and alternated between the Lower Mainland (Vancouver) and Vancouver (Victoria/Nanaimo). The club is affiliated with the Northern California QRP Club.

For information: Derry Spittle, VE7QK, 1241 Mount Crown Rd., North Vancouver, BC, V7R 1R9, Canada. E-mail: jds@vcn.bc.ca WR

Wires & Pliers

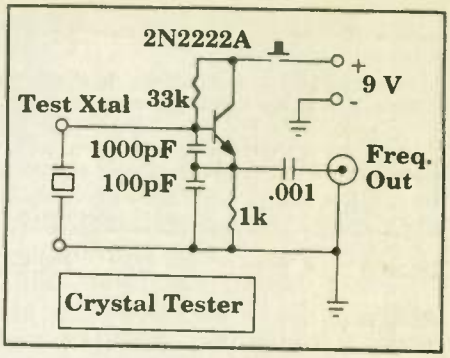


Crystal tester

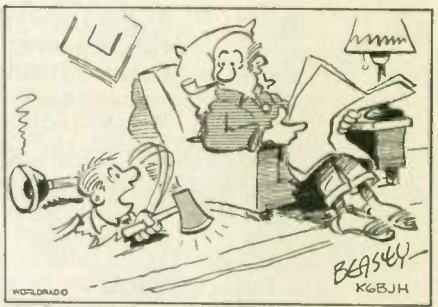
Dave Evison, W7DE
ex N6HKV

A very handy item for the experimenter — especially the QRP homebrewer — is a simple crystal tester. The little tester described will test crystals from 1 MHz to over 15 MHz, and it may be also used as a signal source for checking dial calibration.

As with any design, there are trade-offs. In order to be able to test a wide frequency range, low frequency crystals, such as 100 kHz, cannot be tested with this circuit. Also, the exact oscillating frequency of a crystal cannot be determined since it is dependent upon the circuit values of the specific oscillator in which it will be used. However, this oscillator will test activity and frequency close enough to identify, sort, and match crystals. Frequency is measured by either using a frequency counter or by listening on a calibrated receiver.



Since the oscillator only operates when the pushbutton switch is pushed, the battery will last for years. The prototype is several years old and is still using its original alkaline battery. **WR**



OH, EXCUSE ME, I THOUGHT THIS WAS MY ATTIC--SAY, DO YOU MIND IF I STRING MY ATTIC DIPOLE IN YOUR ATTIC?

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 April, please have the information to us by mid-January.

p/r pref. = pre-register preferred but w/i OK
p/r = pre-register only — no w/i

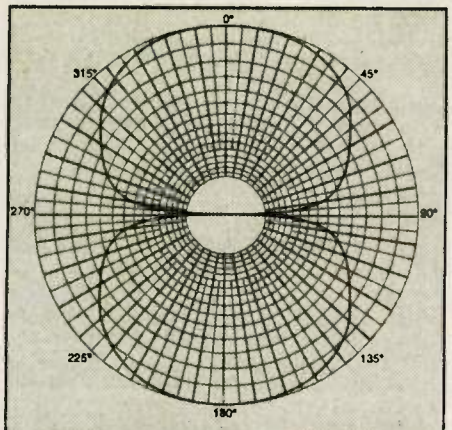
Worldradio, 2120 28th St., Sacramento, CA 95818. Please mark the envelope "VE Exams."

List the location (City), any information examinees should have (advance registration, etc.) and the name and telephone number of a person to contact for further information.

w/i pref. = w/i preferred to p/r
w/i = walk-in only

State	City	Contact	Notes
Alabama			
2/04/97	Mobile	David, WA4VAC 205/649-5229	
Arizona			
2/08/97	Tucson	Joe, K7OPX 520/886-7217	w/i
Arkansas			
2/08/97	Siloam Sprgs	Mike, KJ5OP 501/524-8090	p/r pref.
California			
2/26/97	Anaheim	Robert, AC6JM 310/429-8275	p/r pref.
2/08/97	Brea	Robert, KD6DA 310/691-1514	p/r
2/02/97	Chico	Jackie, W6YKU 916/342-1180	p/r pref.
2/27/97	Colton	Harold, AB6RN 909/825-7136 days or 909/685-6073 eves	
2/02/97	Concord	Gene, WW6H 510/254-5090	w/i only
2/22/97	Culver City	Scott, K6PYP 310/459-0337 or Dave N3BKV 818/559-2572	w/i
2/08/97	Culver City	Clive, AA6TZ 310/827-2538	p/r pref.
2/01/97	Cupertino	Emmett, AE6Z 408/243-8349	w/i only
2/15/97	Downey	Wes, KA3DSE 310/923-5598	p/r pref.
2/20/97	Ftn. Valley	Allan, AB6UB 714/531-6707	p/r pref.
2/15/97	Long Beach	Donald, NN6Q 310/420-9480	p/r pref.
2/17/97	Mission Viejo	Louis, 714/951-0336	p/r
2/01/97	Ontario	Gary & Pamona 818/810-0442	
2/22/97	Pomona	Don, WA6HNC 909/949-0059	p/r pref.
2/09/97	Sacramento	Dick, N6DK 916/383-2113	p/r pref.
2/08/97	San Pedro	Elvin, N6DYZ 310/325-2965	p/r pref.
2/12/97	Santa Ana	James, 714/493-0309	
Colorado			
2/08/97	Denver	Glenn, WØIJR 303/366-0155	w/i pref.
2/01/97	Littleton	Dave, NØHEQ 303/795-5718	w/i pref.
Connecticut			
2/14/97	Stamford	Tom, WB1L 203/363-0319 or Marv, N1AWJ 203/438-7889	
2/20/97	Trumbull	Kevin, N1KGM 203/268-5015 or Bob, KA1ZMF 203/933-9587	
Florida			
2/27/97	Pensacola	Steve, KO4TT 904/968-1092	
Idaho			
2/08/97	Boise	Lem, W7JMH 208/343-9153	w/i pref.
Illinois			
2/08/97	Oak Forest	David, NF9N 708/448-0580	p/r pref.
Indiana			
2/08/97	Chesterton	Bill, N9SLQ 219/762-2887	w/i pref.
Iowa			
2/22/97	Council Bluffs	Lorraine, AAØBS 712/322-1454	p/r pref.
Maryland			
2/25/97	Annapolis	Lois, KA3VVQ 410/647-4178	p/r pref.
Massachusetts			
2/15/97	Melrose	Scott, WB1F 617/665-7654	p/r pref.
New Jersey			
2/20/97	Bellmawr	Bill, NT2N 609/933-1500	w/i
2/08/97	Cranford	24 hour hot-line 201/377-4790	w/i pref.
2/12/97	Ft. Monmouth	Jerry, WB2GYS 908/532-5354	p/r pref.
New York			
2/02/97	Yonkers	Emily, AC2V 914/237-5589	p/r pref.
2/23/97	N.Lindenhurst	Walter, KA2RGI 516/957-0218	p/r pref.
Ohio			
2/01/97	Cincinnati	Herb, WA8PBW 513/891-7556	p/r pref.
Rhode Island			
2/13/97	Providence	Judy, KC1RI 401/231-9156 or Al, NN1U 401/454-6848	w/i pref.
2/22/97	Slatersville	Bob, W1YRC 401/333-2129 or 401/333-2373	
Texas			
2/22/97	Austin	Jim, AB5EK 512/327-6184	w/i pref.
2/13/97	Ft. Worth	Ted, AB5QU 817/293-6745	p/r
Wisconsin			
2/01/97	Racine	Bob, WØWLN 414/886-8551	p/r pref.

Happy New Year! Be sure to send in your 1997 VE exams now.



AERIALS

Kurt N. Sterba

It's a Sunday afternoon on 20 Meters. And what do you hear?

"This is antenna number one. One, two, three, four. Aaaaaaaah. Now, I'll go to antenna number two."

(Fumble, fumble, fumble. Reaching behind the transceiver, unscrewing a connector, putting another in its place.)

"This is antenna number two. One, two, three, four. Aaaaaaaah. Which antenna was stronger?"

The station on the other end asks him to do the test again!

First, a difference in mouth-to-microphone distance when testing the two different antennas will make a difference in signal strength. Second, did the operator give the exact same volume, from his vocal chords, on the first aaaaaaah as the second aaaaaaah?

The only way to really do this test is with the transmitter in 'tune,' 'MOX,' or key down (depending on your transmitter). This test needs an RF carrier of constant (and repeatable) amplitude.

And, to get around the slight changes in band conditions that can occur between antenna connectors being swapped, use an ANTENNA SWITCH. Instant change.

In fact, I wouldn't even turn off the transmitter between switches. Oh, yes, I know that some will speak against what is called "hot switching." Those who don't like it say that in that split second between leaving one antenna and engaging the other, the transmitter is without a load and that's bad news. Theoretically true. However, I have done hundreds of hot switches and detect no damage to my rigs.

Following the procedure outlined above, the antenna #1 and antenna #2 tests will be far more accurate in their results.

I already see a hand going up from someone who will say that the switch will lose some of the power. He is from the same camp that says that connectors lose power. Well, at the KNS RF Laboratory I gathered up and hooked together TWENTY connectors in a row: Double male, double female, etc., so-called UHF connectors, that is. Measuring (at 28 MHz) the drop from 20 of them in series was less than 1dB. Measuring the same string of 20 connectors at 14 MHz the loss was about half of the 28 MHz measurement.

I'm sure you've heard the snort and wheeze crowd carry on about "Tuners are lossy!" You may have even repeated it yourself. How lossy is a tuner? Have you ever measured it? Here's how to do it.

First, from your transmitter run a short cable to a wattmeter input and then a short cable from the wattmeter output to a 50-ohm dummy load. The higher the power (in the range selected) the greater the accuracy of the meter. For work we're really taking pains on, we'll change slugs and read the reverse power on the (for HF) 50-watt full scale slug.

Now insert a tuner between the transmitter and the wattmeter. Put the tuner on bypass and send the same amount of power into the system. The wattmeter should read the same.

The next step is to find an antenna that exhibits SWR of, let's say, three or four to one. Replace the dummy load with the antenna that will need tuner adjustment to display 50 ohms (1:1) back to the transmitter. With the wattmeter on the antenna side of the tuner (instead of the usual case, on the transmitter side) you will read the true situation. Next, read the forward power, and then read the reverse power.

Subtract the reverse power from the forward power. Compare that number to the number when it was just straight to a perfect (or at least near perfect) load. Now you will see how "lossy," or not, the tuner is. I could give you the answer but what would that accomplish? This way you will have to find out for yourself!

Now let's look at another oft-stated phrase I'm sure you've heard over and over again regarding the tuner. Some say the tuner makes the radio "happy" (what a sappy statement), but it does nothing for the antenna. Well, try this: using a field strength meter, read the intercepted voltage (at 4:1 SWR) without the tuner in the line, write down the numbers. Then put the tuner in the line and adjust for 1:1 SWR between the rig and the tuner. Read the FSM and write down the result. You will have the answer. That way you are not taking my word for it, or taking someone else's word for it. YOU have done it yourself and you can take YOUR own word for it.

The FSM is a great, but oddly, neglected instrument amongst hams. The FSM sees all, knows all and tells all. Are there more millivolts or fewer millivolts? That's it! People can argue theory all day and night if they wish but the FSM tells the real story.

Antennas West (P.O. Box 50183, Provo, UT, 801/373-8425) has a couple of very interesting products, that is, even beyond their myriad antennas. First is a telescoping (8.5 ft. to 24 ft.) fiberglass pole. I reported on this some time back using it to get a 20M, 0.25 WL vertical (made of aluminum tubing) up off the ground a quarter-wavelength. Going up the pole 17 ft., there is now 7 feet of pole to overlap the 20M vertical. Use enough electrical tape, and it will last forever. Get that vertical 1/4 wave off the ground and four radials is all you will really need. That antenna played very well relative to its cost and simplicity.

Antennas West also has a seven-section, telescoping (5'8" to 26') aluminum pole which can support VHF Yagis, etc. The mast tapers from 2" to 1.25." I have not used this pole, but besides its normal uses it seems as if it would make a dandy 14 MHz vertical. Also, strap

some more tubing to it and you could have a 40M vertical. The length needed for resonance would be less than the formula (234/F in MHz) because that formula is for very thin wire and the thicker the antenna, the less length needed. And there is this: Even if you are not right on the button the losses from some SWR at 7 MHz with good feedline will be meaningless.

(I recently saw an article in which the author said that antennas should be at resonance because it was only at one particular frequency where the antenna really did sparkle. What rubbish!)

If you really wanted to be snazzy about it you could put a tuner right at the base of the 40M antenna. An old Dentron should be quite reasonable at the swapmeets. Build some sort of weatherproof box.

Readers write in and say I repeat myself. Yes, I do. Admittedly so. Probably each and every time I see a baddy. This is in an effort to spare that new cycle of amateurs from absorbing nonsense, and possibly rescue some old timers, too. I have in hand a construction article for a 144 MHz "J" Pole antenna. The author, a 1 by 3 "K" call, in showing the feedline says "RG-58 coaxial cable in .5 wavelength increments." Then in the instructions it says, "It's highly advisable to have the feedline made up in multiples of .5 wavelengths."

Hmmmm. Well, again Uncle Kurt to the rescue. Whatever virtue is being sought by this 1/2-wave business only occurs if the VELOCITY FACTOR has been cranked in to it. The ELECTRICAL length can be quite different than the PHYSICAL length. Also, all of the different coax types do not possess a velocity factor of 0.66, contrary to what you may have read in the "Gene Wilder" set of license manuals.

I was very surprised to see a particular antenna company's advertisement in *QST*. This company is another in the long line of those "far better than any other antenna ever known," etc. We have so many antennas now that are better than any other antenna that we have spiraled up into a situation similar to the nuthouse where a multitude all think they are Napoleon.

Anyway, a Kurt pal sent me the data he received when he wrote them for more information. He was informed that this HF antenna (2 el) had a gain of 10 dB when (are you ready for this?) raised to 120 feet. Now, here is what is really happening. The antenna itself has four dB and the other six dB is that wonderful "ground reflection gain."

That's a rather nefarious gain designed to pull the wool over. . . What all those companies sliding into the ooze of attempted bamboozle neglect to mention is that the dB gains of ground reflection come at the expense of the other lobes. (There is no free lunch.) At certain angles there will be loss compared to whatever prior condition existed to which it is being compared. The true engineering folks look at antennas in free space (where there is no ground). And that was done intentionally to avoid this present and growing madness. (If St. Peter is a ham, a lot of people will someday see him push a button and the trap door under their feet opening.)

I expect to see some antenna company come out with a dipole, which at 140 feet, has a gain of 20 dBd log. The sappy hammys will think that the "log" is some scientific term not realizing that it stands for "lying on ground."

Stick with the good guys like KLM, Hy-Gain, M², Swiech. Don't give your dough to those who spit in your face!

Some may think that writing a column results in fame, fortune and glory. Actually, it can sometimes be a wrenching experience. For example, one polite letter writer said I was wrong and he was going to prove it. He repeated back part of my column to me but instead, everywhere I had written "tuner" he wrote "transmitter" and obviously made a botch of it all. I do hope he does better in other endeavors.

Next, let's make a deal, okay? Don't write in and tell me I'm wrong unless you have done the exact set-up under discussion. After you have duplicated the very conditions I'm talking about we'll talk. And put the SWR meter AFTER the tuner not between the rig and tuner and then write back.

With some of these meters that have remote heads you could do a little work and put it right at the junction of the feedline and the antenna. It's only DC coming back down the line so don't worry about it. If enough people would do that I would probably get a wheelbarrow's worth of letters of apology.

I was baffled by what I consider a totally illogical response to my recent column pointing out errors in books. The letter writer very harshly said I just beat up over and over again on the book when just saying it contained many errors would have sufficed. Hey, then the errors would have gone uncorrected! Readers of that book deserve warning against the individual items of bum dope. Sadly, amateurs are being assaulted with erroneous information and when I try to keep some of them out of the quicksand, they get angry.

I'll give an example of where an older amateur is leading the newer folks astray. I quote, "It is wise never to buy surplus coax unless facilities are available to measure actual RF loss in dB. Since this is rather rare in Amateur Radio circles, the conclusion is obvious that the best coax is new coax."

The advice on coax is warranted, the other is not and may cause the newcomer to throw up his hands and give up. First, measuring the transmitter power into a dummy load and then measuring it at the end of a feedline will give you the loss (chart next month, I'm running out of space) There are two methods of reading the dB loss with the Auteck RF Analyst (an amazing instrument for $130). The loss can also be measured with the everyday SWR meter (see *The ARRL Antenna Book*).

(Stay tuned for the next KNS show when he may relate how he [or the CIA] turned a gold cufflink into an antenna). **WR**

Contest Corner

Don Durk, KA1DWX
76226.1414@compuserve.com

Is this band REALLY dead?

It seems to never fail! Here we are in the propagation "pits" and along comes another major contest. Suddenly, bands like 10 and 15 magically open up! Or is it magic? After watching this over several contest seasons it appears that our beloved spectrum is partly dead by default! Yes, I know the winter propagation is here, and for North America we get improved conditions; but really, boys and girls, the improvement noted on 15 and to a lesser extent on 10 during the CQWW SSB 'test was orders of magnitude!

Hmmm! What does this mean? Ever hear of the lemming instinct? Well I think we are suffering from this maladay. Let's all do ourselves a favor and try to utilize what little spectrum we have available before the next round of satellite spectrum requests come up! Oh yes, kudoos to the 10-10 people who are always there and to we contest folk who apparently work this magic on these 'dead' bands. I guess I'll have to swallow my ego a bit and call CQ a few extra times on 10 and 15 without an answer! Oh well, perhaps if a bunch of us folk did this, the band wouldn't appear dead!

Here we are — it is January again, QRP Nirvana! Enjoy the winter propagation and have a good time contesting! All times are in UTC. WARC bands excluded. Get logs in within 30 days!

Late December 'tests

•Straight Key Night
1 January 00:00-24:00
(See ***Worldradio*** December issue)

•AGCW Happy New Year CW 'test
1 January 09:00-12:00
(RST+number+AGCW number if member)
Q 1x per band 80-20. Score-pts (1 per Q) x mults (1 for each AGCW member). Categories-Single op only-1.<250 W, 2.<50W, 3.<5W, DL1YEX.

January 'tests

•SARTG New Year RTTY 'test
1 January 08:00-11:00 1 January
(RST+number+name+"Happy New Year" in your local language)
Scandinavian Amateur Radio Teleprinter group. Q1x/band, only 80 and 40 Meters two-way RTTY. Score- pts (1 per Q) x mults (each Scandinavian prefix(0-9)+ ea DXCC country). Record msg recvd in log! Single op// multi op. SM4CMG

•Hunting Lions On The Air CW 'test
4 January 09:00-5 January 21:00
(RST + number; Lions also send/L, also Lion, Lioness and Leo Club members send club name, district and club QTH.)
(See below Hunting Lions On The Air SSB 'test 11-12 January)

•AGCW-DL QRP CW 'TEST
4 January 15:00-5 January 15:00
(RST+number+VLP/ QRP/ MP/ QRO)
Q 1x/band, 80-10. QRO stns not to work other QRO stns. only 15 hr. max. Rest period of at least 9 hrs in one or two periods. Score- pts (1 pt own continent; 2 pts diff continent; added points allowed by contest manager for VLP,QRP or MP if log received) x mults (DXCC country with added mults available from contest manager for VLP,QRP or MP Qs from stations who submit logs)). VLP <1W out; QRP <5W out; MP <25W out; QRO >25 W out. DJ7ST.

•ARRL RTTY 'test
Packet/RTTY/AMTOR/ASCII
4 January 18:00-5 January 24:00
(RST+state/prov or number for DX)
Q 1X/band, 80-10. NA and SA
Recommended Fqs. : RTTY DX - 3.590 &7.040; Others - 3.605-3.645, 7.080-7.100, 14.070-14.095, 21.070-21.100, 28.070-28.150. EU/AF: 3.580-3.620, 7.035-7.045; 14.080 14.099, 21.080-21.120, 28.050-28.150. Novice/Tech: 28.100-28.150; Simplex packet - 28102.3, 28.104.3. 24 hr max. two rest periods for combined six hours in two single blocks (CK RULES!).Single op multi band: class 1 - < 150 W out; class 2 - >150 W out//multi op single xmtr- 10 min rule. Score - pts(1/QSO) x mults (total state/prov/DXCC country, not per band). Certs. ARRL.

•MI QRP Club CW 'test
11 January 12:00-12 January 24:00
(RST+st/prov/DXCC country +MI QRP number or power output for nonmember)
Q 1x per band 160-6 Meters.
Frequencies 1810, 3560, 3710, 7040, 7110, 14060, 21110, 21060, 28060, 28110, 50060 Catagories A < 250 mW; B 250 mW - 1 W.; C 1W - 5W; D > 5W. Score - pts (5/member; 2 for W/VE nonmember; 4 for non members outside W/VE) x mults (states +prov.+DXCC countries per band). Multiply total by 1.25 if using homebrew Rx or Tx or by 1.5 for homebrew xcvr or Tx/Rx combo. Separate log for each band. N8CQA.

•JA Int'l DX 'test CW
11 January 2200-12 January 2200
(RST+CQ zone or prefecture 01-50 forJAs)
Q1x per band 160-10. 10 min. rule. Work only JAs. DX to DX and JA to JA QSOs do not count. Single op multi band/single op QRP multi-band// multi op, multi band. Score - pts (1 per Q for 40,20,15; 2 for 10 and 80; 4 for 160) x mults (prefectures per band).10 minute rule. Separate log/ band. SASE for results. *59 Magazine*, JA Int'l DX Test, PO Box 59, Kamata,Tokyo144, Japan.

•Hunting Lions On The Air SSB 'test
11 January 09:00-12 January 21:00
(RS+number; Lions also send/L, also Lion, Lioness and Leo Club members send club name, district and club QTH.)
Q 1x per band, 80-10. Op max 24 of 36 hrs, off times at least 3 hrs and note in log. Score- pts (1 pt for same country, 2 pts stn in diff country but same continent, 3 pts other cont.) Bonus pts-10 for ea QSO w/ ea Lion/ Lioness/Leo Club in diff countries (5 pts if same country). QSO with /LM or Melvin station for 5 pts if ur USA and 10 pts if non-US. Also 5 pts for W7YU/ MJM. Log to Lions Club Flen, PO Box 106,S-642 23 Flen, Sweden.

•NA QSO Party CW
11 January 18:00-12 January 06:00

(Name + state/VE call area/NA country)

Q 1x/band. 160 -10. Fqs- 1.815, 35 kHz up 80-10. Non NA countries do not count as mults but do count for QSO credit.Score - pts (Qs) x mults per band. Single op//multi op 2 trans //pre-registered teams.150 W max out. Single ops max 10 hrs. Off times at least 30 mins and noted in log. *NCJ/QST*

•YL Int'l QSO Party CW

17 January 0001-19 January 2359 (non members welcome).

Name, RST,country/state/ province, partners call, ISSB# if available.

Q 1x/band; all bands except WARC. Score- pts (3 for two-way member contacts in same continent; 6 for two-way member contacts in diff continents; 1 for non-member Qs) x mults-only member stns count as mults-(one for each — work both DX/stateside partners; each YL/OM team member; state; province; DX country;VK call district; ZL district). Add 2 mults if you op <1000 W thruout the party, 5 mults if <25 W. Single op; DX/ stateside partners; YL/OM team. Certs + ZL award for stateside member w/ most ZL Qs. N4KNF.

•HA DX CW Test

18 January 0000-19 January 2400

(RST+number or county/member number for HA stations)

Q1x per band, 80-10. Q HA and other stns. Single Op single band; Single op multi band// multi op single band; multi op multi band. Score- pts (6 for HA stns; 3 for non-HA stations on other continents) x mults (HA counties + club member numbers per band). HA counties - BA, BE, BP, BN, BO, CS, FE, GY, HA, HE, KO, NO, PE, SA, SO, SZ, TO, VA, VE, ZA. HA DX Club, P.O. Box 79, H-7031 Paks, Hungary.

•NA QSO Party SSB

18 January 18:00-19 January 06:00

(name + state/VE call area/NA country)

See NA QSO Party CW above.

Fqs - 1.865, 3.850, 7.225, 14.250, 21.300, 28.450.

•ARRL Jan VHF Sweeps

18 January 19:00-20 January 04:00

(Send - grid locator square)

50 MHz and up. Q 1x per band, not 1x per grid square! Score -1 pt for 50 or 144 QSO; 2 pts for 222 or 432; 4 for 902 or 1296; 8 for 2.3 GHz or higher. Single op single band//single op QRP portable - 10 W or less output //single op multi band//rover// multi op//limited multi op (not more than 4 bands)//club competetion. Ck *QST* for FM details and misc rules. SASE w/2 oz postage to *QST* for forms. Numerous certificates. *QST*.

•CQ WW 160 CW 'test

25 January 22:00-26 January 16:00

(RST+48 state/13 provinces/ DXCC country)

Score- pts (2 for own country; 5 for diff country in same continent, 10 for different contintent) x mults (states + provs+DXCC countries). Provinces are VO1,VO2,VE1-NS, VE1/VY2- PEI, VE2,VE3,VE4,VE5, VE6,VE7, VE8-NWT and VY1-YKN. *CQ*.

•REF French CW 'test

25 January 0600 -26 January 1800

(RST+number)

Q 1x/band, 80 -10. Work F stns; overseas territories and DA1/DA2. Score - pts (1 for own cont; 3 for other cont.) x mults (French Depts, DA, DA2, F6REF/00, each DOM-TOM per band). F6ETI.

•UBA SSB 'test (Belgium)

25 January 13:00 - 26 January 13:00

(RS+number or province for ON stns)

prov-(AN, BT, HT, LB, LG, LU, NR, OV, WV).

Q 1/band 80 -10. Single op 1 band/multi band; multi 1 xmtr all band.; QRP 5 W = class B. Score - pts (ON=10; other EU community members=3; others =1) x (total # Belgian provinces + all ON prefixes +EU community members). Re ck this: - EU community members = CT/CU/DL/EA/EA6/EI/F/G/GD/GI /GJ/GM/GU/GW/I/IS/LX/OZ/PA/SV/SV5/SV9/SY/TK/ZB2. ON4JG.

February 'tests

2/1 weekend

*No. New England (ME/NH /VT) SSB/CW 'test

*Classic Radio Exchange

*NA SSB Sprint

*AGCW Straight Key

*QCWA CW QSO Party

2/8 weekend

*RSGB 1.8 MHz CW 'test

*PACC (Netherlands) SSB/CW 'test

*WW RTTY WPX 'test

*Asia/Pacific 20/40 CW Sprint

*NA CW Sprint

*YLRL SSB YL/OM 'test

*QCWA CW QSO Party

*UTAH 160 Meter Challenge

*EA RTTY 'test

2/10-2/14 (Mon-Fri)

*School Club Roundup

2/15 weekend

*ARRL Int'l CW DX 'test

*YL Int'l SSB 'test

2/22 weekend

*RSGB 7 MHz CW 'test

*CQ WW 160 SSB 'test

*UBA (Belgium) CW 'test

*No. Carolina QSO Party

*YLRL CW YL/OM 'test

*ARRL 160 CW 'test

*CO QRP Party

*High Speed CW 'test

*North Dakota QSO Party

March 'tests

3/1 weekend

*ARRL Int'l SSB DX 'test

3/8 weekend

*RSGB Commonwealth 'test

*QCWA SSB QSO Party

*WI QSO Party

3/14-3/15

*CLARA HF CW 'test

3/15 weekend

*Bermuda Contest

*BARTG RTTY 'test

*Russian DX 'test

*VA QSO Party

3/18-3/19

*CLARA HF SSB 'test

3/22 weekend

*KL7 QSO Party

3/30 weekend

*CQWW SSB WPX 'test

WR

Clara

CLARA, the Canadian Ladies Amateur Radio Association is holding a 30-year anniversary, 3-day Gala in September '97 in Ontario with early registration by 31 January 1997. Contact Cathy,VE3GJH.

Hamfests

January

Do you have a hamfest coming up? Send your information to our 28th St. office at least 2 months in advance of your event. We'll send prizes!

California

The **Livermore ARK** will hold a swap meet on 5 January from 7 a.m. to noon at Las Positas College, 3033 Collier Canyon Rd., Livermore, CA (Airway Blvd., exit to north of 580 highway). Features include new, used, surplus ham, computer gear, miscellaneous electronics and testing equipment, refreshments available. Admission and parking are free; vendors $10 per space (equals two parking spaces). No VE exams. Contact Noel Anklam at 510/447-3857 (eves.) or 510/783-2803 (days). Talk-in on 145.350(-) PL 100 (receive and send), 147.045(+) PL 94.8, 147.120(+) PL 100.

Colorado

The **Northern Colorado ARC** will hold its Winter Superfest swapmeet on 11 January, from 9 a.m. to 3 p.m. at the Larimer County Fairgrounds, 700 Railroad Ave.. Features include commercial exhibits, computer and radio goodies, VE session, refreshments and much more. Reserve tables from Jeanene Gage, NØYHY, 970/351-7327. For general information, 970/352-5304. Talk-in on 145.115(-) or 146.85(-).

Indiana

The **Machiana Valley Hamfest Association** will hold their South Bend Hamfest and computer expo on 5 January from 8 a.m. (vendor setup 6 a.m.) to 3 p.m., downtown at the Century Center, US-33 North at Jefferson Blvd. Features include dealer and swappers of Amateur Radio equipment, computer hardware and software, door prizes and large flea market. For information or ordering, please send SASE to Michiana Valley, Hamfest Assoc., 21970 Kern Rd., South Bend, IN 46614; 219/291-0252 (Denny). Talk-in on 145.29(-).

Maryland

The **Maryland Mobileers ARC** will hold a post holiday swapfest and flea market (indoor, no tailgating) on 28 January, from 8 a.m. to 2 p.m. at the Odenton Volunteer Fire Department Hall, 1425 Annapolis Rd. (Route 175) — 9 miles east of I-95. Indoor flea market (no tailgating) and refreshments. Admission is $3; tables $7 (table and one operator). Free VE testing (preregister with Jerry Gavin, NU3D, at 410/761-1423). For information, contact Bill Ziegler, KA6TYY, 1307 Ashburton Dr., Millesville, MD 21108; 410/987-2384 (evenings). Talk-in on 146.805(-).

Missouri

The 7th Annual Northwest Missouri winter hamfest sponsored by **MVARC, Green-Hills ARC and Ray-Clay ARC** will be held 18 January from 9 a.m. to 4 p.m. at the Ramada Inn in St. Joseph. Special rates are available for hamfest participants. FCC exams, major exhibitors and flea market all indoors, plus free parking. Preregistration: $2 each or 3 for $5; at the door $3 or 2 for $5. Preregistration requests received after 8 January will be held at the door. Swap tables $9 each first two tables. Commercial exhibitors welcome, write for details: Northwest Missouri Winter Hamfest, c/o Gaylen Pearson, WBØW, 1210 Midyett Rd., St. Joseph, MO 64506. Talk-in on 146.85(-) or 444.925(+).

New York

The **Metro 70CM Network** presents a giant electronic flea market to be held on 19 January, from 9 a.m. to 3 p.m. (rain or shine) at Lincoln High School in Yonkers. Free parking, no tailgating; indoor flea market only! Unlimited free coffee; VE exams, food. Donation is $6, kids under 12 free. Sellers $16 first table, $13 each additional. Bring your own table $13 for a 6' space. Table setup 7 a.m., no paid reservations for space will be held past 9 a.m. No refunds given unless prior notification of cancellation has been received 72 hrs. in advance. For registration, call Otto Supliski, WB2SLQ, 914/969-1053. Talk-in on 443.350(+) PL 156.7.

Ohio

The **Union County ARC** will hold a winter ham radio fair on 19 January from 8 a.m. to 3 p.m. in Broadway, OH on State Hwy 347, 3/10 mile west of State Route 31. Feature include free parking, old/new radio gear, scanners, electronic equipment, Amateur Radio equipment, books, technical info, computer parts, and demonstrations. Tickets $2/door (no advance sales), age 16 and under are free. Tables $10 (full table, 8'); $5 (half table, 4'), reservations encouraged. Send check and SASE to: Union ARC, Gene Moore, N8YRF, 24461 Claibourne Rd., Marysville, OH 43030; 937/246-5943.

•

The **Tusco ARC** hamfest will be held on 26 January from 8 a.m. (6 a.m. setup) at the Ohio National Guard Armory, 2800 North Wooster Ave., Dover. Admission is $2/door; tables $8. Food available on site. For information and reservations, contact Howard Blind, KD8KF, 6288 Echo Lake Rd., N.E., New Philadelphia, OH 44663; 330/364-5258. Talk-in on 146.73(-), W8ZX repeater.

Tennessee

The **Tennessee Amateur Radio Network** will hold a hamfest and computer show on 25 January from 8 a.m. to 2 p.m. (setup on Friday 5-9 p.m. and Sat. 5-8 a.m.), at the Gallatin Civic Center. Admission $5, XYLs and children under 16 are free, tables $10. Food available, free parking, handicapped accessible, VE testing by preregistration only (send 610, copy of license or cert. of successful completion, and SASE to Ronnie Gilley, 512 Hillside Dr., Gallatin TN 37066). For hamfest info, contact Bill Ferrell, 1253 Woodvale Dr., Gallatin, TN 37066 or telephone 615/230-7923 and leave message. Talk-in on 147.30(+) or 444.450(+). WR

Don't miss out on any hamfest happenings in your area. See it here first!

Information in "New Products" is supplied by the manufacturers to acquaint *Worldradio* readers with new products on the market.

Call Sign bumper magnets

"Signs by Ron" introduces call sign bumper magnets. The magnets are priced at $6 each plus $1.50 shipping and handling. They come in plain white with black letters and are sized at 3" x 12" (like a standard bumper sticker). You can display your call sign or favorite simplex/repeater frequency. Great for travel, they can be used on various vehicles and won't damage the finish. Delivery within 2-3 weeks. Make checks payable to Signs by Ron and mail to: Signs by Ron, 64 Neal Court, MicroDyne Office, Plainville, CT 06062; 860/632-1070.

BURY FLEX™ cable

Davis RF Company is pleased to announce its new product, "BURY FLEX™, a low loss, buriable and flexible low cost alternative for 9913, 9914 and Times LMR cables (the latter which require expensive custom connectors for most sizes). BURY-FLEX™ was designed by Davis RF Company — a custom hi-tech cable design firm, to provide the only alternative to any other market choices for non-flood low loss flexible coax which has the added attribute of being buriable.

The cable outside diameter is comparable to 9913, 9914 and RG 213, etc., thus it accepts standard PL 259s and Ns (most Ns will accept the larger honed center pin provided free by Davis RF) with purchases of BURY-FLEX. Exceptional loss characteristics are obtained, in part, by the slightly larger than average center conductor and a highly moisture resistant foamed dielectric (not gas injected). Flexibility is enhanced by the stranded center conductor and the durometer choice of the polyethylene jacket chosen to provide buriability. Note: Contrary to common misunderstanding, PVC jacketed cable, even Mil C-17 non-contaminating is not a buriable cable. The PE jacket utilized is highly abrasive and water resistant as well as buriable. Loss per 100 ft at 400 MHz is only 2.9 dB and only 5.3 dB at 1 GHz. The cable is applicable from HF to as high as 15 GHz. Its advantages would be most cost effective above 50 MHz. Average suggested list is 59 cents per foot. Dealers are available by writing or calling Davis RF Company, P.O. Box 730, Carlisle, MA 01741; 800/328-4773; e-mail to DavisRFinc@aol.com or visit our web page http://www.cqinternet.com/davisrf.

DR-140T Two-meter mobile/base

Alinco Electronics introduces the addition of a new two-meter mobile/base radio. The announcement was made by Taka Nakayama, AB6VE, Vice President for Alinco's U.S. operations. "The DR-140T represents a step up in value for Amateur Radio operators who are seeking a 'basic' two-meter transceiver," he said. "We have added several features and memory channels to the basic unit and continue to hold the line on price."

The DR-140T standard features include alpha-numeric display, aircraft band and extended range receive, 51 memory channels, CTCSS encoder, European tone bursts and DTMF microphone. Switchable output 50W to 5W.

The new alpha-numeric display is capable of showing up to seven characters and numbers for each memory channel. Included with the base Latin character set are symbols and Cyrillic alphabet characters, as well as numbers 0-9. The compliment of memory channels is 50 plus a "call" channel for a total of 51. Each memory channel is capable of recording frequency, CTCSS tone or European tone burst, alpha-numeric display data, repeater offset and non-standard offsets of up to plus or minus 99.995 MHz (full tuning range of radio).

The DR-140T can also be equipped with the EJ-20U CTCSS Tone Decode Unit, which adds capabilities to the radio including receiver tone squelch operation, "busy channel" lock out and the ability to operate with different transmit and receive CTCSS codes loaded into any memory channel.

Equipped with CTCSS tones and European tone bursts, the DR-140T radio can operate worldwide through repeaters just about anywhere its transmissions are permitted. In addition to the standard European tone burst of 1000

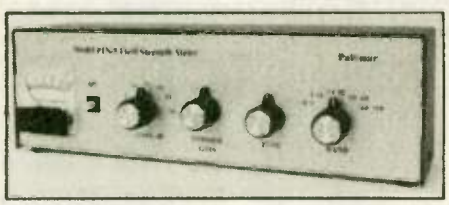
Hz, bursts of 1450, 1750 and 2100 Hz are also included, as these are used in some areas of central and eastern Europe.

The versatility of the radio is underscored by additional features including VFO or Memory Channel scan functions, "time-out" timer and a wire cloning capability to other DR-140 units. The DR-140T can also be used for packet radio for data speeds up to 1,200 bps.

Wynn said that the MSRP for the DR-140T is $288; Amateur Radio dealers frequently discount from manufacturer's suggested prices. "Our target was to build a solid two-meter radio with many desired features at a very affordable price. By introducing the DR-140T well below $300, we feel we have a unit that will appeal to a broad segment of the Amateur Radio community."

"The DR-140T redefines what an entry-level two-meter radio can and should do," said Doug Wynn, KB6YZD, Sales Manager for Alinco. "As a mobile or base unit, there is tremendous value inside." Wynn pointed out that the radio reflects input received from the Amateur Radio community. "People wanted more memories, so we now provide 51. With all those memories, it's a challenge to keep them all straight, so the alpha-numeric display allows the operator to apply names, locations, call signs, tactical calls or any other combination up to seven letters, numbers or symbols. Aircraft receive and extended receive is desired by many, along with MARS/CAP capabilities for those who have the proper permits. And we keep hearing that customers want radios that are easy to use and easy to program. The DR-140T features large buttons and knobs along with a large display."

For more information, contact Alinco Electronics Inc., 438 Amapola Ave., Ste #130, Torrance, CA 90501; 310/618-8616, fax 310/618-8758.

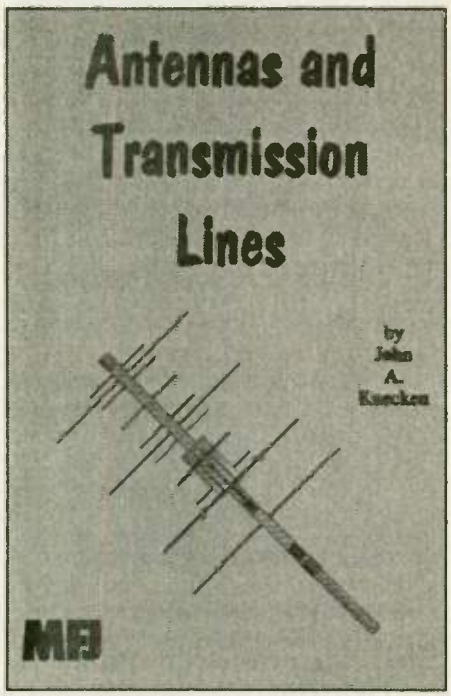


Field Strength Meter

Palomar Engineers announces a new Field Strength Meter, Model PFS- 1. It has features needed for serious antenna work: A detector linear over nearly a 30 dB range, an accurate step attenuator with 30 dB range, a 25 dB RF amplifier, high Q-tuned circuits to suppress out-of-band local signals and a panel meter readable to .1 dB.

The meter covers 1.8 to 150 MHz and is powered by 9V or 12 volt batteries. Antenna connection is a SO-239 jack on the rear of the aluminum cabinet. Model PFS-1 is priced at $195.

For further information, contact Palomar Engineers, P.O. Box 962222, Escondido, CA 92046, telephone 619/747-3343, fax 619/747-3346, e-mail 75353.2175@compu serve.com WR



Antennas and Transmission Lines

Antennas and Transmission Lines is the newest book from MFJ Publishing. It will be a quick, handy reference, or good study manual for Amateur Radio operators and costs only $19.95.

Most books on the theory of antennas and transmission lines are in one of two classes: The highly mathematical, graduate level class and the simplified, non-mathematical class. Nearly all the math is simple algebra and calculus.

Most of the 37 chapters are short, and all are to the point, making the book a quick and handy reference that is easily adapted to home study. John A. Kuecken has made this book extremely easy to understand with a thorough writing style with many useful diagrams and graphics.

The first third of the text covers basic antenna theory, including point array sources, wave interference, standing waves, collimators, lenses, apertures, and simple radiators.

The second third of the book deals with transmission lines, discussing such subjects as line impedance matching, Smith and emission charts, lumped circuits, wave-guides, directional couplers, hybrid junctions, reactive elements, resonant circuits, and Q.

The final third of the text consists of selected antenna topics such as self-impedance, balance, short and antifade antennas, frequency-and ground-independent antennas noise, and radio-range protection.

John A. Kuecken has had wide experience as an engineer engaged in research and development of antennas and related devices. Currently, he is consulting engineer for Electro Magnetic Development. He has owned his consulting business for 31 years. Prior to that, Mr. Kuecken was a technical staff assistant to the chief engineer of the communications laboratory in the Electronics Division of General Dynamics.

Mr. Kuecken is a member of the Scientific Research Society and the Institute of Electrical Engineers. He is the author or co-author of several technical papers and magazine articles and has had twelve books published. Mr. Kuecken is in the top 1% of American inventors as ranked by number of patents held.

For more information or your nearest dealer, contact MFJ Enterprises, Inc., 300 Industrial Park Rd.; telephone 601/323-5869; fax 601/323-6551; Internet: http://mfjenterprises.com; or order toll-free by calling 800/647-1800.

Amateur Television Transmitter

P. C. Electronics announces its new TX33-1b. This 33cm (902-928 MHz) transmitter is ready to go in a rugged 7.3" x 4.7" x 2.1" inch die-cast aluminum box for those who want to get on this mode right away.

This transmitter, with its crystal-controlled stability, as well as power, will allow communicating video and sound over much greater distances, more reliably. With 1 watt PEP the snow-free, line-of-sight DX (assuming 16 dBd loop Yagis) is 11 miles. If you add one of Downeast Microwave's 20 watt linear amplifiers, the signal reaches 50 miles.

The front panel RCA jacks accept

video from most all camcorders, cameras or VCRs. You can transmit live-action color or black and white video. A video monitor jack outputs the camera video while in receive mode to enable setting up the focus and lighting before transmitting, and then presents the actual detected composite video in transmit so you can fine adjust the video gain. There is a low impedance mic jack for mixing with the line audio input to allow voice-over commenting while showing your home video tapes to other hams.

The TX33-1b has a built-in RF T/R relay so you can connect the companion P. C. Electronics TVC9G 33cm downconverter through this box to a single antenna for simplex operation, however, many areas use a separate band for full duplex or repeater. The PTL (Push To Look) jack is in parallel with the transmit/receive toggle switch. This transmitter is AM, same as broadcast TV, so all you need to receive is a down-converter and a TV set. The down converter output uses a BNC and the common antenna is type N. The TX33-1b comes with one crystal, the frequency of which must be specified. 910.25 MHz is the most common, but others are stocked or can be special ordered.

Price is $329 delivered, UPS ground in the contiguous USA, and sold only to licensed radio amateurs. For more information, hams can call, write or e-mail for a complete ten-page ATV catalogue from P. C. Electronics, 2522 Paxson Ln., Arcadia, CA 91007; telephone 818/447-4565, e-mail: tomsmb@aol.com

DSP-59Y plug-in for Yaesu® speakers

The DSP-59Y is a plug-in module that fits into the Yaesu® SP-5 or SP-6 speakers. It has the same filters, noise reduction and heterodyne elimination as the DSP-599zx. The DSP-59Y is field upgradable, LCD display for Visible Memories™ and Calibrated Filters™. CW filters from 10 Hz to 600 Hz with CW pitch shift, Voice filter up to 5 kHz wide for SSB, FM and AM shortwave listening. User programmable filters.

Features the new Hyper-speed DSP processor at 36.8 MIPS CPU. The DSP-59Y uses the existing 1/4" phone jack in the speaker cabinet, A/B switch for selectable input channels and the analogue filters already in the speaker. This gives the operator maximum flexibility of both filters and can be used at the same time. It also has automatic notch and manual notch filters. Variable noise aggressiveness from the front panel. Meets FCC Type B and EC requirements. Suggested retail price is $389.

Yaesu is a registered trademark of Yaesu Musen Co., Ltd., Tokyo, Japan

Contact Timewave Technology Inc., 2401 Pilot Knob Road, Ste 134, St. Paul, MN 55120; 612/452-5939, fax 612/452-4571; web site http://www.timewave.com WR

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—*Transmitter,* The North Shore Radio Club

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EDITING A CLUB PAPER? Need one for your club? Interested in Amateur Radio public relations? Need some help? Amateur Radio News Service would like to hear from you. For info write SUSAN BIGGS, 9708 Skillman #107, Dallas, TX 75243. F397

AUTO-CALL MAGAZINE, official journal of the Foundation For Amateur Radio, a federation of over 80 clubs in the greater Baltimore/Washington DC area. Great coverage of FCC, ARRL, VEC, Public Service and club activities in the area. A must for those even passing through the area. For a sample copy write FOUNDATION FOR AMATEUR RADIO, P.O. Box 7612, Falls Church, VA 22046-7612. F198

WANTED REPLY COUPONS of all types, IRCs & others. Buy, sell, trade. JIM NOLL, P.O. Box 3410, Escondido, CA 92033. 396-397

FREE HAM GOSPEL TRACTS. SASE, N3FTT, 5133 Gramercy, Clifton Heights, PA 19018. 1096-1097

WANTED: ELECTRON TUBES, ICs, semiconductors. ASTRAL, P.O. Box 707WM, Linden NJ 07036. Call 800/666-8467. 1296-298

HAM RADIO REPAIR! Reasonable charges. JIM RUPP (WARRC), 998 Whipple, Grayland, WA 98547-0697, 360/267-4011, AB7DR. 696-697

QSLs — ELEGANT, AFFORDABLE. Samples $1 (refunded with order). ELEMENTAL DESIGNS, Dept. W7014, 1639 Fordham, Mountain View, CA 94040. 896-497

SELLING VARIABLE CAPACITORS, 25 to 250 pF 4kV removed from new equipment, ideal for tuners. $50 each including postage. W6QEU, 1236-40th Ave., Sacramento, CA 95822. Msg phone 916/421-1637 (Kopps). F197

NW80/20 5 WATT CW TRANSCEIVER Kit offered on 80M, 40M, 30M, 20M, specify band $73.95. Ck/MO to DAN'S SMALL PARTS & KITS, Box 3634 Missoula, MT 59806; phone/fax 406/258-2782. Catalog two stamps or visit our web page: http//www.fix.net/dans.html 1096-397

FOREIGN AIRMAIL POSTAGE for successful QSLing! Monthly bargains. Low cost European nesting airmail envelopes! BILL PLUM, 12 Glenn Rd., Flemington, NJ 08822; 908/788-1020. 1-697

PERSONALIZED HOURLY HF SKYWAVE PREDICTIONS from your city or town: SKYCOM v1.5 floppy disk for Apple Macintosh or IBM PC and compatible personal computers. Includes complete mathematical description of theory ($30). DX window v2.0 floppy disk circular projection world radio map centered on your QTH shows sunrise-sunset gray line for any time of interest. Includes feature which displays any of 400 prefixes on world map instantly. For all Apple Macintosh machines ($50). Satellite Predictions MACSAT 3.1, $50; P/H $5 N. America; $10 International. SASE for more info: ATTN: DX; ENGINEERING SYSTEMS INC., P.O. Box 939, Vienna, VA 22183. F397

WANTED FOR MUSEUM: Apple-1 and other pre-1980 micro-computers, also early micro-computer journals, newsletters and advertising literature. KK4WW, P.O. Box 341, Floyd, VA 24091, 703/231-6478 or 703/763-2321. 196-197

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- Your next door neighbor has no idea you're a ham.
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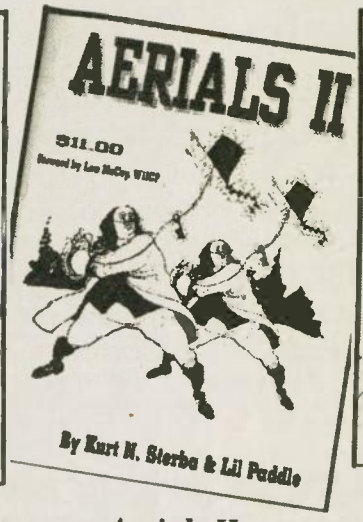

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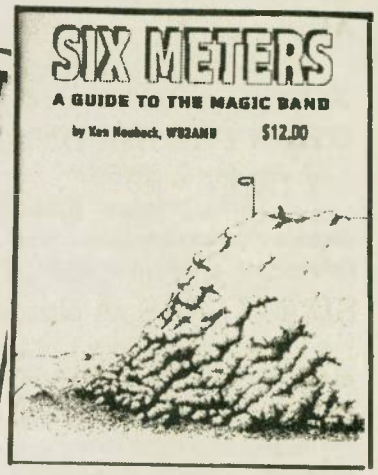

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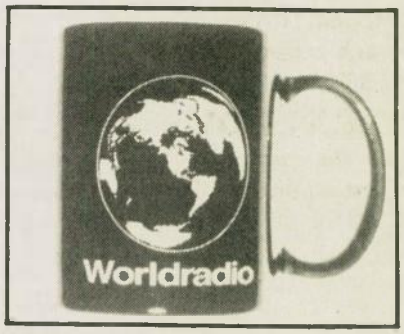

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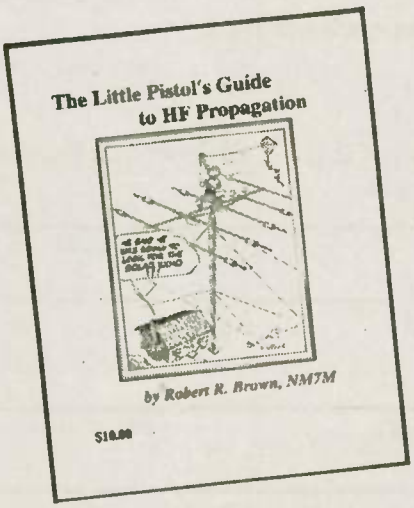

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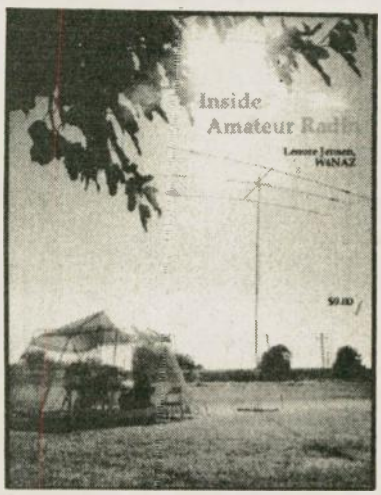

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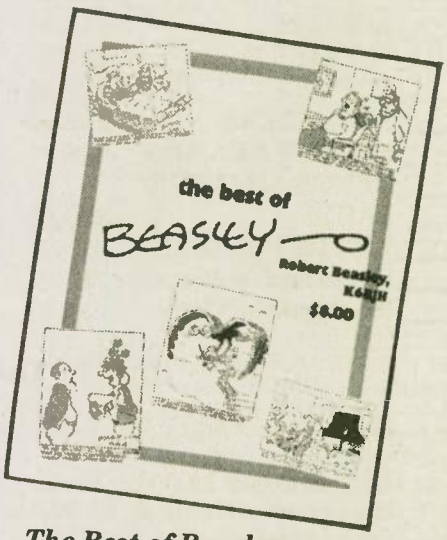

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Late breaking news...

Vanity calls put on hold

The FCC has confirmed reports that no more Gate 2 vanity call sign applications will be processed until Commission personnel deal with complaints from several hams whose vanity applications arrived too early and were dismissed.

The American Radio Relay League reports that an FCC spokesperson in Washington related that all of those applicants had used the same express service and had requested delivery on Saturday, 21 September, so they would be in the lineup for the opening day of Gate 2 on 23 September. Instead, all of the applications arrived on Friday, 20 September. They were designated as "untimely filed" and dismissed by the FCC.

Those amateurs are now seeking to have their applications reinstated, but the FCC says that it has no idea when a decision will be made in the matter. The applicants say that they were not aware that their applications had been dismissed until a week or so after the opening of Gate 2.

The FCC's position is not yet known. The Commission's spokesman says the issue is "under review." At best, the applications might be included with the second day's applications. At worst, they could remain as dismissed. Either way, in many cases, the requested call signs already may have been assigned.

Meanwhile, the FCC says that its Gettysburg office is a little more than halfway through a stack of up to 550 first day vanity applications that needed some kind of special handling. These are applications that the FCC calls WIPS for "works in process."

Those applications ended up in this "holding bin" because the FCC was unable to match one of the applicant's call sign choices or because the application contained inconsistencies, some as simple as a missing date of birth on an application, or one which failed to match the date in the FCC's database. For anyone wanting a vanity call sign, there may be a long wait. WR

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