

## FEATURES

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- Amsat-Oscar schedule
- Construction • Contests
- Continuous Wave • Digital Bus • DX Prediction • DX World • FCC Highlights • Hamfests • MARS • Mobile
- New Products • Off the Air • Product review • Propagation • Publisher's Microphone • QCWA • Search & Rescue • Special Events • Station Appearance • 10-10 International News • VE Exams • Visit Your Local Radio Club • Visit Your Local Radio Store • With the Handi-Hams • YL Roundup

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# Worldradio

Year 21, Issue 6

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## Two ham sons — one proud dad



Robert Kosakowski, KA3WTG

### JOHN KOSAKOWSKI, KC3TM

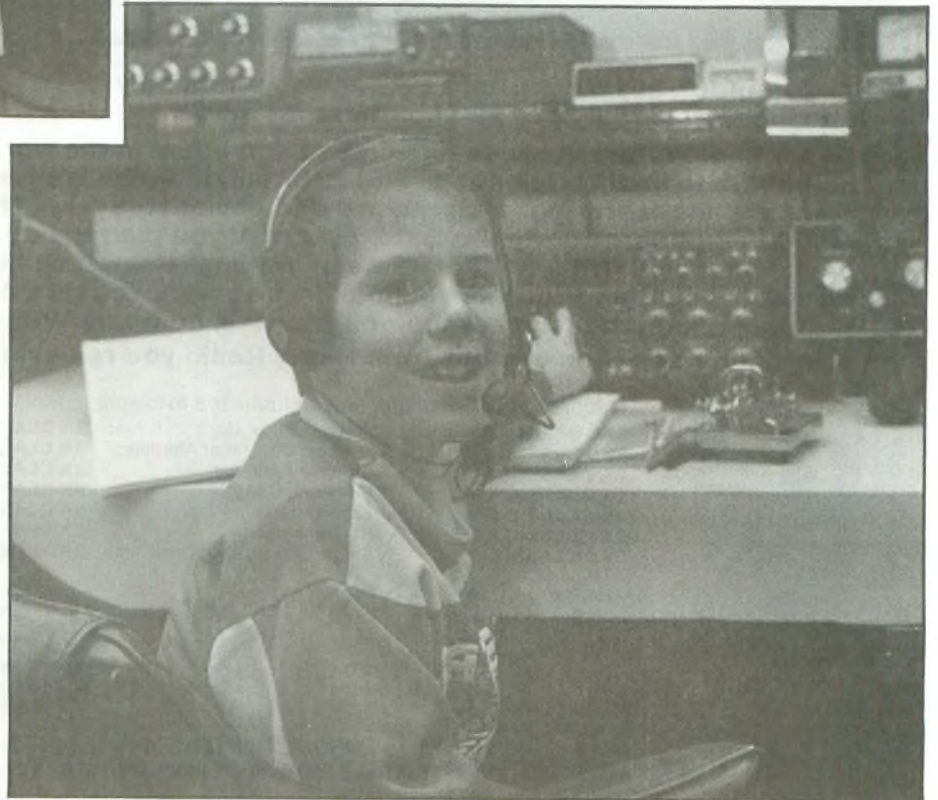
These are my two sons, Robert and Tony Kosakowski. Robert, KA3WTG, is eight years old now. He got his Novice license at the age of seven; he was one of the five youngest hams back then. He received his license September 7, 1990. He is in the third grade at Heights Elementary School in Natrona Heights, Pennsylvania. He was the youngest ham at Butler Hamfest in Pennsylvania last year and won a year subscription to *Worldradio*, which he has enjoyed a lot. Robert plays Little League baseball, soccer and is a wide receiver in football. He has worked 247 countries on CW and SSB. Robert just passed his 20 wpm code and is working for his Extra. He is a competitor, and he is trying to get his Extra before his dad, who has yet to achieve 20 wpm.

Robert says his best contact was on SSB with J6LQC, Rosemund Clery, who is the boxing champion of the

Caribbean. He sent Robert an autographed picture of himself. He says his second best contact was with HP1AC on CW. He talked with him for about 20 minutes and said it was great.

In addition to radio, Robert loves competitive bicycle riding and soccer, and he plays shortstop in Little League. He is very active on the radio and wants to meet more young people. He says thanks to all the old-timers for taking the time and working with young kids and giving them experience as ham radio operators.

Tony, KA3WYS, is now seven years old. He received his license at the age of six on November 20, 1990. Tony is in the first grade at Heights Elementary School. He has worked 158 countries. He finished first place in Novice round-up contests in Western Pennsylvania and has worked over 600 stateside contacts. Tony was the youngest ham for a *(please turn to page 3)*



Tony Kosakowski, KA3WYS



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## Sons

(continued from page 1)

few months. He just passed his 13 wpm and is working for his Advanced. He wants to be like his Dad, KC3TM, he says.

Tony has enjoyed talking with Jim Smith, VK9NS, in Norfolk Island. Jim talked to Tony for a half hour and they both exchanged QSL cards. He also

talked with KH2EO, John, in Guam for about 20 minutes. He enjoys talking with the young people and meeting new friends. He's had many QSOs with N9KIN, Jeff, in Indiana. It's just been a lot of fun on the radio meeting new friends.

Tony also loves sports in addition to radio. Like his brother, he is competitively involved in bicycling, soccer

and baseball. Tony also enjoys swimming and football.

"It's not all just Amateur Radio," the boys say. "We're still kids. We play with trucks and cars and everything else."

Both boys are members of the Western Pennsylvania DX Association.

You better believe I am proud of my two sons! □

## Operation for safe holidays

### TAMI BURROUGHS, KB7HEK

New Years Eve, 1990, was a busy night for our group of Amateur Radio

operators in Newport, Oregon. The Lincoln County ARC and the Lincoln County Booster Club joined forces to

operate Topsy Taxi, a taxi service for those who had had one too many.

We had two vans donated by the Lincoln County school district, a baseball and basketball coach who drove the vans, and the hams providing 2M communications. I ran the control station and dispatched over 50 calls. With the help of 12 members and guests, over 150 happy people were delivered safely to their destinations. Though the service was free, donations were gladly accepted and went to the Booster Club for school sports.

Consider getting together with club members and neighborhood volunteers to make your holiday season a safe operation. □



Tami Burroughs, KB7HEK, and other amateurs and community members organized and operated the Topsy Taxi service last New Year's Eve.

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the flame of vitality to this avocation.

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## PUBLISHER'S MICROPHONE

Albania! Just a short time ago . . .  
who would have believed?

We nominate Martti for next  
Secretary-General of the United Na-  
tions. For Chip, Director-General of  
the International Telecommunications  
Union. And deep thanks to all the  
other operators who braved the  
pileups.

Once again it is my pleasure to in-  
troduce the latest to climb to the pin-  
nacle, the summa cum laude of  
Amateur Radio, The *Worldradio*  
Super-Boosters (lifetime subscribers):

Alvin Neff, Sr., KA4UNS, Louisville,  
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ingston, TX

Gary Jones, KD6VV, Riverside, CA  
Dennis Steinert, KC6UZH, Sylmar,  
CA

Stanley Northey, W6NO, Oakland,  
CA

On the inside cover of November's  
issue the person identified as Mike  
Lamb, N7NL, is, in reality, Dr. Alan  
Chandler, K6RFK. I've known Mike  
Lamb for many years. However, I was  
out of town when that caption went  
down.

Also, kindly people, trying to make  
sense of my struggle with syntax,  
slightly shifted the meaning of a com-  
ment in this column. What was intend-  
ed was something like: In the cost of  
today's equipment there is the justly  
earned percentage (actually quite  
small when compared to other  
household items) that goes to the  
store. If we want knowledgeable peo-  
ple counseling us, we're not going to  
get it for minimum wage.

An era has come to a close. Two  
generations of Nelsons owned the

*Callbook*. Looking at retirement, Herb  
sold the *Callbook*. Truly, one of the  
nicest gentlemen in the commercial  
side of Amateur Radio. Thanks for all  
you did for us.

One of the outstanding outfits in our  
hobby is the G-QRP Club. A great lit-  
tle magazine, one-inch square trans-  
mitters, teeny receivers, data sheets,  
QSO parties and nets are just part of  
the benefits.

There's a good number of US  
members, but many others may have  
been discouraged by having to get a  
Sterling denomination something or  
other. G-QRP Club now has a rep here:  
Luke Dodds, W5HKA, 2852 Oak  
Forest, Grapevine, TX 76051. Drop  
him an SASE for the scoop.

Many people have all sorts of  
Amateur Radio memorabilia that  
would be great museum material. If  
you know of an established Amateur  
Radio museum which would be happy  
to acquire gifts but would promise not  
to sell them for profit other than the  
benefit of the service, let us know  
what they have space for and will ac-

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## FALLERT'S ENGRAVING

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We could develop a directory of  
sorts and print a list in an upcoming  
issue.

Dave Reynolds, KE7QF, Tempe,  
AZ, says: "Were he born a little later,  
Edgar Allan Poe would have made a  
great ham. He was eccentric, lived in  
poverty, and died insane."

There has been quite a bit of  
response to the coffee klatsch idea and  
the ZIP lists being purchased from us.  
This would enable you to know who  
your ham neighbors are. It's best that  
you do know the ones closest to you in  
case of an emergency, even more im-  
portant than the pal of yours who lives  
clear across the city. We'll confer with  
our computer house shortly to see  
what the cost will be.

I'm sure we have some psychologist  
or sociologist subscribers. How about  
writing something (in a manner that  
we can all understand) about groups.

Why is it that local radio clubs seem  
to have activities piled upon activities  
while others do nothing? Some groups  
are always out on the special events  
and others can't find downtown.

Some groups take every opportuni-  
ty they can to display Amateur Radio  
at the various county, state, rail, etc.,  
fairs, and others just can't get off the  
couch.

Is it the club leadership? Do clubs  
need a G.S. Patton, Jr.? Or is it that  
you can't lead what just isn't there?

Are radio clubs a reflection of the  
community itself? Is it that some  
towns' people are just dead? Are other  
communities full of livewires?

Could it be peer example? By exam-  
ple, the go-getters inspire others? Flip  
side is . . . nobody else cares; why  
should I?

Hopefully some of our learned  
readers will share their knowledge  
with us and expound.

—Armond, N6WR



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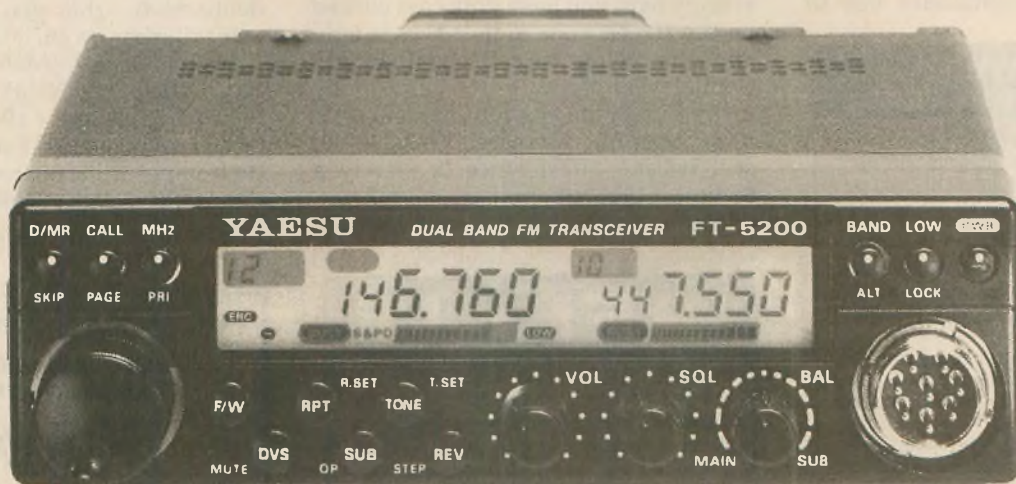
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# Forum highlights from Scottsdale

## The FCC Forum

NORM BROOKS, K6FO

Bravo! to the FCC. They have adopted a new approach to RFI complaints that is certain to have positive results. In their Forum at the Southwestern Division ARRL Convention in Scottsdale, Arizona on October 12, their speaker was a lady who is *not* an electronic expert. Instead, you might say her forte is psychology. She gave us invaluable advice on how to deal with our neighbors on RFI problems.

Her name is Kate Henton. She is the Public Affairs Specialist with the FCC Field Operations Bureau in Douglas, Arizona. She has a diverse educational and professional background, having earned BA, MA and MBA degrees from the Universities of Oklahoma, Michigan and Oklahoma City. She was a Fulbright Scholar. Since May, 1989, she has brought this wealth of background to the FCC field office. Among other important responsibilities, she is the point of contact for over 800 radio interference cases received each year by her office.

Ms. Kenton's talk covered psychology, philosophy, personal ethics, and something called enlightened self-interest; there is a strong relationship between all of these things in handling that irate neighbor who has an RFI problem.

Not all of the over 800 cases she handles each year involve Amateur Radio. However, because of the high power levels that amateurs use in

residential neighborhoods, the amateur cases are by far the most aggravating, time consuming, and difficult to resolve because typically no violations of FCC Rules are involved.

Neighborhood RFI problems are only 10 percent technical; the other 90 percent are either emotional or psychological. Here's an example: an Arizona resident calls the FCC with a common situation. Her unsuspecting ham neighbor has been working that excellent opening on 15M. She knocks on his door, saying "I have been trying to make a long distance telephone call to my son who is in the hospital, but I can't use the phone when you're on the air. You also wipe out my television set." The ham answers with something like "It's not my problem" or "Get rid of your cheap phone and it wouldn't happen" or "Why don't you put a filter on your TV set? I've got a license—I'm legal."

Though she's really upset, she wants to keep peace in the neighborhood so she goes home and thinks it over for a while. The next week, the same thing happens; she tries to call her brother-in-law in New Jersey but can't use the phone at all. She goes next door to ask for help, but this time she's not so nice about it. Some harsh words are exchanged. How does the ham react? Well, he gets red in the face and the hair on the back of his neck stands up. He gets angry, the lady gets angrier, and it just escalates. She shouts "your wife is fat and ugly, your kids have long stringy hair, you have junk cars parked on the street; your radio tower is ugly and I'm going to call the Planning Commission about it. He has equally nasty things to say about her and soon it is totally out of control. Folks, if you still believe interference is merely a technical problem, you are mistaken.

You've got to correct your attitude

and your neighbor's attitude *before* going on to correct the technical problem that is causing the interference.

There is a correlation between your neighbor's anger level, the level of your blood pressure, the activity of your ulcers, and your potential for getting sued. The danger of a radio amateur being sued, for whatever reason, is very real. Many are sued for interference problems, and in most of those cases the amateur operator hasn't gotten the chance to help his neighbor find the technical solution to the interference problem because they've been too busy arguing and the neighbor won't let him in the house.

Here are some effective strategies for working with irate people. Though there isn't any magic formula that will work every time with every angry person you may encounter, a little compassion and a little salesmanship will go a long way.

Denial is probably the number one mistake that radio amateurs make. They don't want to admit that their hobby activity may be the cause of the interference. Instead of denying that there is a problem, *accept* it. If your neighbor thinks you are causing interference, whether you are or not, you *have* a problem. Don't get mad about it. Go to work on the people part of the problem (cooperate with your neighbor) so you can find the technical problem and fix it.

When you're accused of interference and become defensive, you confirm your neighbor's suspicions that you're operating illegally over there. They might even think you're doing this deliberately—that you hate them and *want* to mess up their TV.

Instead of acting defensive, be open. Say, "Okay Mr. Neighbor, thank you for letting me know there's a problem here. I want you to know I'll be more than happy to cooperate with you on this; we're going to find a solution for it."

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When your neighbor tells you that you've wiped out his TV all afternoon and describes what is most likely electrical interference, don't argue that it couldn't be your radio causing it. He probably won't believe you anyway. A much better approach is to actually demonstrate that it is not your equipment causing the problem. Most people, no matter how cantankerous they may be, will eventually believe their own eyes and ears.

When the interference is not caused by Amateur Radio, don't be condescending or insulting. Get on the air, try every band you operate on, and do it with and without your linear amplifier to see if different power levels are involved. And while you're at it, why not help the neighbor out? It may be something in the neighbor's own house. Why not go to the breaker panel and turn off the circuits one by one to find whatever it is?

When in this demonstrating or testing mode, it's a good idea to have witnesses. One of your friends, as your witness, can be at the neighbor's place to witness the interference, while your neighbor's witness can verify that you really did turn the transmitter on and the little lights did light up, etc.

In a recent case, the neighbor complained that the amateur was interfering with his stereo system. The amateur responded that the stereo must be "cheap." As it turned out, the neighbor had purchased a brand-new state-of-the-art system that cost \$3,500. What did that do to the amateur's credibility? In another case, when the neighbor complained about TVI, the amateur bought a high-pass filter at Radio Shack, took it to the neighbor and said "here, this should take care of the problem." It didn't. In-

terference resolution is a trial and error procedure. Don't tell your neighbor that a certain filter will solve the problem until you have tried out different things and you're sure it will.

Most radio amateurs are technically knowledgeable, but there are a lot who are not. It's not like the early days when all amateurs built their own equipment. Likewise, there are a lot of modern RFI problems that many old-time amateurs don't understand, such as interference to telephones.

Is there any correlation between the price and RFI vulnerability of a telephone? No! Actually, the more expensive the telephone, the more features it has, and the more little electronic gizmos it has inside which are susceptible to RFI. If you don't really understand everything about the problem, don't hesitate to call in expert help. Guessing only delays solution of the problem and makes your neighbor angrier. If you belong to a ham club, give them a call. There are always knowledgeable club members who can help. Or, call your nearest FCC office. They can send you a packet of technical information that may help. Whatever you do, don't try to wing it.

Some amateurs have tunnel vision, and their hobby becomes deadly serious with them. A famous case: Living next-door to an amateur was a lady who sold real estate and was the sole support of her family. You may know that real estate people are on the job around the clock, as it is a very competitive business. As his TVI affected her telephones, she asked him to please stay off the air in the mornings when she made most of her business calls. The ham cooperated pretty well until one morning when he got on the air as she was trying to close a \$250,000 deal.

She confronted him saying, "I needed the commission from that deal and I lost a lot of money because of you." He responded "You just don't understand. There was this unusual 6M opening!" How's that for perception? It's much better to follow the Golden Rule. Try to see it from the other person's point of view. Think about what his priorities are too.

Don't dig in your heels. Say you've tried to work with your neighbor, but things have gotten out of control. Neither side is willing to compromise. He asks you to point your beam in another direction; you say no. He asks you to change operating hours; you say no. Could you operate on another band that doesn't cause TVI? You say, "No! I'm legal and I don't have to do a d-n thing to help you with your problem."

This is the type of situation that is ripe for a lawsuit or vandalism. It does happen that people get their antennas shot up or their coax cut up on a dark night. Don't set yourself up for these kinds of problems. Show your neighbors that you're flexible, you're willing to compromise and make some adjustments. Make a goodwill gesture. Change your operating hours, work some other bands, point your beam in the other direction . . . lower your power!

(please turn to page 11)

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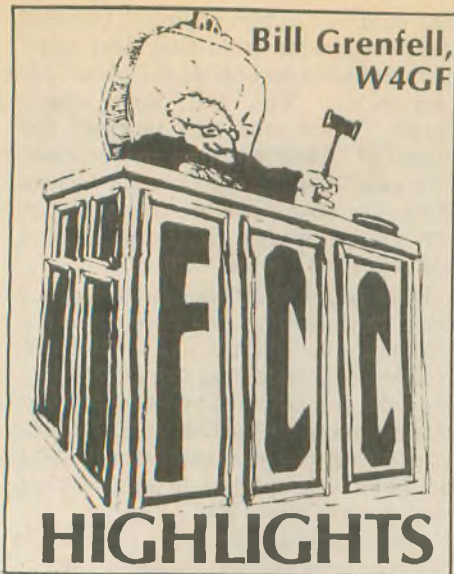
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### Wait just a minute!

The following ARRL release by Perry Williams and Chris Imlay, dated October 16, 1991, calms the wave of misunderstanding which has recently flooded the Amateur Radio community regarding proposed relaxation of FCC Rule 97.113 concerning "business communications."

A recent newsletter item has created some comment in the amateur community. The story—which the newsletter editor had every reason to expect was accurate—was to the effect that Ralph Haller had spoken at Saginaw about revisions to 97.113 and his negotiations with the ARRL. These discussions, the story averred, led Haller to conclude that the Amateur Radio Service has "excess capacity." The newsletter took that reference to mean that the Service has more, or larger, frequency allocations than it needs in order to do routine amateur-to-amateur communications. Amateurs could put that excess capacity to good use, the story said, after revision of 97.113, by amateurs handling messages now transmitted on crowded

business, industrial, maritime and common carrier frequencies. This alleged text made it appear that the ARRL wanted to do communications which would lead to commercial users' claims on our frequency allocations.

Many ARRL directors and other ARRL volunteers attended the FCC Forum at the National Convention. They heard Ralph Haller speak, but never heard the phrase, "excess capacity." Why? The ARRL was assured on October 9 that these words were not spoken by Haller! A staff draft containing these words, but which was not delivered by Haller in that form, was released to persons in the private sector without Mr. Haller's knowledge. He had edited the draft speech extensively before using it, precisely because of the inaccuracy of the draft relative to the spectrum issue.

Still concerned about misinterpretation, Mr. Haller, on October 16, indicated to us that while the staff draft of his speech did include references to excess capacity, he was sensitive to the fact that the term might be misinterpreted and he believes he edited out the term. He pointed out, however, that the term is a standard term of art in the Bureau and he might have used it at some point, perhaps even in response to a question. The term, as used by the Bureau, does not refer to an amount of spectrum; rather, it refers to channel capacity. He gave us the example of a repeater that during drive time might not support other uses, but that could be used to support a parade at mid-day. He also indicated that he rarely fol-

lowed the printed text of a draft speech and did not in this case. The draft speech that was released by a staff member was just that—a draft.

Have there been discussions about amateur "business" communications? Yes indeed! The amateur community wants to be of service to its neighbors, and Ralph Haller has said to us recently that there is good reason for increased public service communications by amateurs, which would not adversely affect the service. Furthermore, there is a continuous stream of questions from amateurs to the Private Radio Bureau of the FCC, probing the limits of permissible communications in the Amateur Service. These questions indicate a lack of clarity in the rules, which the FCC would like to clear up, if possible. For the most part, the questions involve either non-emergency public service or personal affairs in which a business entity is somehow involved (e.g., ordering a tow truck for a disabled motorist or the over-publicized "ordering a pizza.")

While there may not have been more of these questions this year, there has been more publicity, and hence more awareness, about such questions. Some examples:

- The "900 number" incident in which packeteers were cited for allowing a message urging use of such a number to proceed through a bulletin board;
- The Iditerod race in Alaska with consequent discussions about check-point reporting, ordering dog food and the like;

## 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 October 1, 1991.

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

Radio District	Group A Am. Extra	Group B Advanced	Group C Tech./Gen.	Group D Novice
0	AA0GD	KF0UI	N0PMG	KB0JOH
1	WW10	KD1DT	N1KEW	KA1ZHM
2	AA2GP	KF2EK	N2OAC	KB2NQM
3	WR3V	KD3YY	N3KOS	KA3ZKK
4	AC4JV	KO4KJ		KD4FGV
5	AB5BF	KI5UD	N5WLT	KB5QKB
6	AB6FQ	KM6JC		KD6BCK
7	AA7KO	KG7UM	N7UDT	KB7ODE
8	AA8FA	KF8PR	N8QFO	KB8NBD
9	AA9BW	KF9FW	N9MSH	KB9HGI
North Mariana Is.	AH0K	AH0AH	KH0AN	WH0AAQ
Guam	KH2T	AH2CN	KH2FK	WH2AMU
Johnston Is.	AH3D	AH3AD	KH3AG	WH3AAG
Midway Is.		AH4AA	KH4AG	WH4AAH
Hawaii		AH6LK	WH6CP	WH6COI
Kure Is.			KH7AA	
American Samoa	AH8D	AH8AE	KH8AI	WH8ABA
Wake Wilkes Peale	AH9A	AH9AD	KH9AE	WH9AAH
Alaska		AL7NN	NL7ZJ	WL7CCX
Virgin Is.	NP2S	KP2BZ	NP2ER	WP2AHL
Puerto Rico		KP4SK		WP4KNN

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• Messages to an ARRL volunteer section manager, some portion of which may eventually appear in *QST*.

The ARRL, in discussing these matters with the Private Radio Bureau, found there was a mutual agreement on two key points:

1) That strong rules against business messages in the Amateur Service remain necessary to prevent exploitation of the service for non-amateur purposes;

2) At the same time, it is apparent that the rules being applied might be more strict than necessary. This has led to exchanges of draft texts which might permit more flexibility in public service and in personal communication, while still prohibiting business communication as such. Communications for hire; any communications in which the control operator has an interest; and communications for one's employer or one's own business would be strongly and specifically prohibited.

At the ARRL National Convention, Private Radio Bureau Chief Ralph Haller, by choosing Section 97.113 as his topic, opened the discussion of possible changes in these rules to the whole community, a desirable step on the way to any possible rulemaking.

What comes next? If there is to be

any rulemaking to liberalize amateur public service communication, it will have to be subject of a Notice of Proposed Rulemaking (NPRM) in accordance with the Administrative Procedure Act which requires "Notice and Comment." All interested parties would have opportunity to submit their views during the process and the League's ultimate position will take into consideration the views of its members.

### Other happenings

The FCC has affirmed a decision of the Private Radio Bureau to deny a class action civil rights complaint of discrimination against disabled persons seeking amateur licenses.

Peyton L. Moncure alleged that the FCC, through its Morse code exam requirements, unlawfully discriminates against applications who are physically unable to "use a telegraph key or unable to coordinate its use," and sought elimination of the requirement for such individuals.

Moncure argued that the Morse requirement (for all licenses except the code-free Technician Class) violates the US Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 (ADA).

The Commission pointed out that its Morse requirements for amateur licenses allows operation below 30 MHz and stems from an international agreement, i.e., ITU Radio Regulation No. 2735.

The Commission also noted that neither of the acts cited in Moncure's complaint applies to the Amateur Radio service. That is, neither act supersedes the ITU regulation to which the US is a signatory.

"There is no requirement to modify a licensing requirement to accommodate handicapped individuals if such modification would result in a substantial alteration of the amateur operator licensing system," the Commission said.

The action, by FCC Memorandum Opinion and order (FCC 91-281) was dated September 10, 1991. (*The ARRL Letter*, 9/19/91)

An amateur has been sentenced for transmitting false distress calls on police frequencies. James A. Haas, WT8Q, was charged April 5 with mak-



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ng the transmissions on police frequencies in Prince William County, Virginia (see June, 1991 QST, p. 59), according to *The Washington Post*.

On August 30, a federal judge in Alexandria, Virginia sentenced Haas to serve three months in "community confinement" and to "undergo mental health treatment."

Haas, 39, of Athens, Ohio, also was ordered to pay restitution for radio equipment he had purchased with an unauthorized charge card, the *Post* said. (*The ARRL Letter*, 9/19/91)

The FCC has indicated that it probably will no longer go after a ham for talking dirty on the air. That is, if he operates in a place where other hams find his language acceptable.

As quoted in an October 2 article appearing in the *Los Angeles Times*, Dan Emrick, Chief of Investigations for the FCC, said that community standards make obscenity very hard to prove. Emrick was responding to a question from *Times* staff writer Bob Pool for an article titled "Radio Renegades." This was a discussion of the 147.435 MHz repeater in Los Angeles—a repeater plagued for years with this problem.

According to Emrick, the FCC has shied away from this type of enforcement, even in the Amateur Service, because of "community standards." He says that while it may be perfectly all right in New York City to make off-color references to another's ancestors, the same words uttered in the Bible Belt would get you "run out of town on a rail."

Emrick went on to indicate that enforcement of obscenity issues has become selective, based on where you live. The FCC official is quoted in the *Times* as saying: "What goes in Southern California might not be acceptable in North Carolina."

The FCC has said many times that it would look toward community standards for its enforcement of the obscenity rule, but it never really explained what it considered a community to be. We last spoke with representatives of the FCC about this issue at the Dayton Hamvention public forum. There, they vaguely indicated that the agency applied a "regional" definition of a "community." But Chief Emrick leaves no doubt that this has changed. It now appears that local standards of the hams in the area, or perhaps even the hams operating regularly on a given frequency, will be used to determine what is legal for all other amateurs to say on the air there.

The article noted that the FCC has a new monetary forfeiture system that gives them the right to impose fines of up to \$250,000 for some violations. But don't hold your breath waiting for

them to use this tool to get the potty mouths off our bands. (*Westlink Report*, 10/17/91)

The FCC office in Arizona is setting up RFI Resolution committees to mediate disputes between radio amateurs and their neighbors. The RCCs will generally be sponsored through the ARRL Field Organization, with volunteers to help out in what the

## FCC Forum

(continued from page 7)

How much power are you authorized to use for amateur communications? 1500 watts? 500 watts? 100 watts? No! FCC Rules (97.313 (a)) says an amateur station must use the minimum transmitter power necessary to carry out the desired communication. Of course there are maximum limits. But most amateurs don't bother to check just how much power is needed. Last summer the FCC field operations bureau went out and made a spot survey of amateur power. Of the amateurs sampled 75 percent were using more than twice as much power as they needed. Some of the amateurs in the spot check were also the subject of interference complaints. They did find a modest correlation between power

FCC regards as "an unofficial public service organization, not a branch of the FCC," but reporting back to the Commission on the status of RFI complaints under investigation. The possibility of setting up similar RCC programs is being examined in at least two other sections within the ARRL's Southwestern Division, and elsewhere in the United States. (*The Westlink Report*, 9/16/91) □

levels and interference. In one third of the cases, the interference went away or was greatly reduced when the power level was cut in half.

The hostility against radio amateurs that you think you see in your neighbor's eyes is just a reflection of your own hostility towards your neighbor. People mirror each other's emotions. One sends out bad vibes, and the other bounces it back, just like light bouncing off a mirror. That's how neighborhood disputes get out of control so quickly. When your neighbor comes over all mean and nasty, just smile and say, "I'm sorry you're having this problem and I want to help you with it." Keep open, honest and accept it. Little by little, your positive emotions will overwhelm that nasty neighbor. Pretty soon you'll solve that people problem, and you'll be able to go

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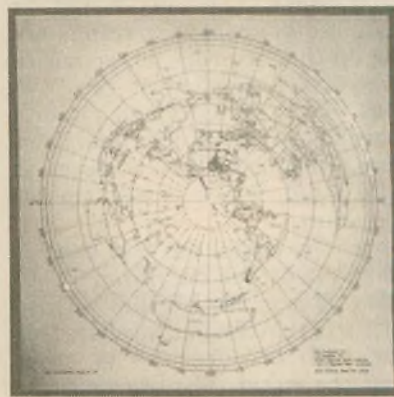
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over to his house and work on the technical problem.

Note for the Dayton Hamvention program committee: Ms. Henton should be invited to present a forum next year. Her presentation deserves national recognition. □

## The ARRL Forum

An ARRL Division Convention is the annual meeting between the ARRL membership and ARRL elected and appointed officials. As time goes on, it is interesting to observe the mood of the membership at the convention's ARRL Forum. You can get a pretty good fix on how the ARRL stands with its membership.

At the ARRL Convention in Scottsdale, I got the impression that Division Director Fried Heyn's constituents thought he was doing a pretty good job. I also got the feeling that those present thought League headquarters was doing a good job, too.

After the usual introductions, where the membership meets its elected and appointed officials, we heard reports of what has been going on for the past year. League First Vice President George Wilson, W4OIV, described the League's work in preparing for the 1992 World Administrative Radio Conference (WARC).

He pointed out that the 1979 WARC was general in nature. That's the WARC at which we got the new 12, 17 and 30M bands. The 1992 WARC is more limited in scope, but things are coming up that are very important to us amateurs. A portion of the 75M band, as well as 1.2 GHz and satellite bands will be discussed. The item most of us are concerned about, however, is the 40M band, which is also up for consideration.

All over the world, the 40M band is exclusively amateur only from 7.0 to 7.1 MHz. It is in the US that we also have 7.1 to 7.3 MHz, but we share this portion with broadcasters in other parts of the world. The broadcasters want us out of there, and options are being examined. It looks like the best deal we can get out of all this is to ask for 6.9 to 7.0 MHz to be additionally exclusively amateur all over the world, in exchange for giving the broadcasters what they want. If this comes about, the amateurs in the rest of the world will see their 40M band double, while

ours will shrink to two thirds its present size. However, not to worry. Whatever is decided on this in 1992 will not become effective until 2007!

## Questions and answers

An amateur from Santa Barbara said she had called ARRL headquarters requesting information on how an amateur group could incorporate, and how to get non-profit status. The answer received from headquarters was that these were legal questions, and headquarters did not have any lawyers. George Wilson answered that the Volunteer Counsel group, although originally set up for antenna ordinance matters, ought to be able to answer such general legal questions. He suggested calling the League and asking for the nearest Volunteer Legal Counsel.

George Wilson told us there were thousands of very fine former hams who had let their licenses lapse for some reason or another. Now, if they want to be hams again, they must start all over and retake all the exam elements. He suggested the possibility of an amnesty period for an ex-amateur to get his or her license back simply by applying for it. The group seemed split on this. Half said they'd pursue this, but half said that too much has changed in the operating rules.

There was a great deal of discussion on call signs. You can recall that for many years now, the FCC has been issuing only new call signs from its computer. No reissuance of old calls, no club calls, no special event calls, no repeater calls, etc. The only off-setting FCC inaction was the rule that you

could carry your present call sign with you when you moved anywhere in the country (which in this writer's opinion has created a mess!). Previously, when you moved to another call area, you had to apply for a new call sign in your new location. A lot of amateurs, when moving, had to turn in a call sign that they loved, and received a new one that they hated.

Harry Dannals, W2HD, former president of the League, stood up and told us of his last official action with the FCC for the League before retiring. A friend, W2OWL, moved to Florida and had to give up that call sign. He asked Harry if he could do something about getting that old call back, now that the rules were such that hams don't have to change calls when moving.

Harry made an appointment with the then chairman of the FCC and told him of the plight of this friend and many, many others. The chairman listened, but was unmoved. He asked, "Why is it you radio amateurs have such a crazy fixation on call signs?" Harry replied, "Because it's our name—our identity on the air. I'm from New York City. Our commercial radio stations are WABC, WNBC and WCBS. It must be that some other people also have fixations with call signs!" There was a roar of applause in the room.

Harry suggested that somehow, somebody get back to the Commission and try to get an amnesty period established during which any amateur could get his old call sign back if he previously had been forced to give it up when moving. □



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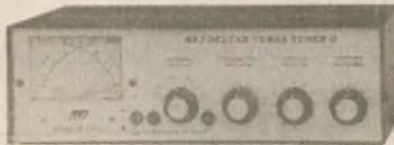
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# Success in Albania

The International Amateur Radio Union (IARU) team of operators and instructors has returned safely from Tirana, Albania after a most successful mission. It was not only that some 71,000 contacts were established, but also that 12 Albanian citizens have passed the Amateur Radio exam and are ready for operating.

The newly founded Albanian Amateur Radio Association will still have many challenges before things are up and running. The organizers of the ZA1A project have agreed to assist in many critical areas. If you or your organization are willing to assist this DXCC counter, you may wish to contact DF5UG, I2MQP, OH2BH, N7NG or JA1BK. They will be happy to provide you with information and facilitate your interest. The names and addresses of the 12 new Albanian amateurs will be made public shortly so that you and they can make friends.

The Albanian administration has forwarded (to the IARU/ARRL) information concerning Amateur Radio licensing in their country. For the ZA1A project, the PTT and the National Frequency Commission—the highest radiocommunication authority

—issued Amateur Radio license ZA1A for the period ending on October 7, 1991. Beginning on October 8, 1991, they will begin to issue additional licenses with the next license going to a French team planning to arrive in Tirana shortly. The administration plans to issue callsigns in the ZA1Z block to foreign nationals seeking to operate in Albania.

On October 8, 1991, the ARRL DX-CC desk reviewed the ZA1A documentation and accredited ZA1A accordingly. The QSL cards are acceptable for DXCC credit immediately. The hard-working NCDXF team is busy entering the QSO data while the QSL card design is ready for the printer. The NCDXF is aiming for the shortest ever turn-around-time in QSLing for any major DXpedition. They expect mailing to begin before the end of October. They also advise two (only) SAE/SASE—one for cards processed normally, and one for problem cards. The QSL address is: NCDXF, P.O. Box 1, Los Altos, CA 94023.

The organizers of the ZA1A project would like to extend their most sincere thanks to their many supporters and friends. They would like especially to

credit Mr. Albert Müller, HB9BGN, who coordinated the logistical operations in Zürich and offered his hospitality to all team members enroute Tirana. They would also like to credit Mr. Erkki Heikkinen, OH2RRF, for his diligence in keeping the information flowing out of Tirana. The assistance of the NCDXF, the Japanese CQ Publishing Company, the Yaesu Corp. and the Kenwood Corp. are also recognized by many of the deserving throughout the world of Amateur Radio.

The ZA1A project has been a splendid example of international friendship among many individuals and national societies. Welcome, Albania, to the family!

#### The international ZA1A team:

DF5UG, I2MQP, I2KMG, I5FLN, IK0FEW, JA1BK, JA1HQG, N7NG, K7JA, W7SW, OH2BH, OH1RY, OH1VR and OH2BAZ.

#### The international supporting team:

Richard Baldwin, W1RU, President of IARU, Shozo Hara, JA1AN, President of JARL and David Sumner, K1ZZ, Executive Vice President of ARRL.

#### The Albanian hosting team:

Agim, Artur, Dajian, Fatma, Fredi, Geni, Ibrahim, Maksim, Toli—with Arben, Dali, Gezim, Jovan, Lushi, Mirela, Niko, Sadik, Teo, Yiber and many others. □

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## DX tips

Webster says a pileup is "to move in a disorderly fashion." My guess is he wasn't a ham. Pileups are a way of life for the DXer. They range from well ordered and gentlemanly with a polite give and take to a lynch mob complete with name calling, jammers, channel cops and cat calls! Before you dive headfirst into the first logjam you find, here are a few tips to help you sneak through. Remember, "little guns" sneak, we don't bust.

1. Do you even want to try this one?

Even the "big boys" will back away from real mob type pileups. The size and meanness of a pileup is in direct proportion to how rare the DX. Start small and work up.

2. Who is the DX station working? If no stations in your area are making it, wait your turn and *listen* to what the DX is doing—find his pattern.

3. How long is the DX taking before coming back to someone? Timing your call is the real key to being heard through the din of the mob (see chart). A three to five second delay before you make your call can make a lot of difference.

4. If the DX station calls someone more than once and he doesn't come back, this *could* be an opening. However, be careful; this can backfire!

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Listen very closely to how the DX station is taking calls and what is being said.

5. Don't waste a lot of time in one pileup. Try for a while, noting who and how they are getting through, then look for some more action. Take note of what frequency the pileup was on so you can check it out later. By moving around you stand a better chance of finding a station all alone or another pileup.

6. Use standard phonetics and make your calls short. Most of the time the last two letters of your call are all you need. Again, be careful! Some DX ops like to hear the whole call. Listen! Sometimes they will say "complete calls only."

7. Beware of "tailending," it can boomerang on you. Tailending is when you make your call in the split second between the signing of one station and start of the other's transmission, usually at the end of a QSO. Sometimes it works, if you don't QRM someone, if the DX op is taking enders, and if you time it just right—a lot of ifs!

You have guessed by now that DXers spend a LOT of time LISTENING! This can't be stressed enough. You can learn much of what to do and not to do just by listening to what's happening in the pileup. Oh yes, one last thing: Remember that sometimes the magic works and sometimes it doesn't.—*Antelope Valley ARC, Lancaster, CA* □

## ZA in 1960

M.F. NELSON, K4GY

On July 14, 1960, as K3GKF (Delaware) I made contact with ZA1KC (note the two-letter club call) in Tirana, the operator being one "Niko." The contact was made through the help of several YO friends of mine, including YO3AC, whom I heard working him. Within two weeks of the 7 MHz CW QSO I received a direct QSL from Niko. The QSL was later validated by ARRL for my DXCC standing.

Our "friend" Niko, must have been quite friendly with several of the high brass, including Envir Hoxha, since I heard him several times after our QSO on both 3.5 and 7 MHz, over a period of four to six months, QSOing YO, YU and DM stations, but never any other JS/VE boys.

So, there were native Albanians operating less than 45 years ago. Earlier in the late 40s, as W2ESQ, I worked at least two ZA club stations but could never get a QSL from them.

# Are you a lid—on phone?

JOHN E. GERCKEN, KA9EPO

*The following is the second of a series of articles examining common operating habits. Does your operating procedure fall short of proper Amateur Radio operating etiquette?*

The lid population continues to grow as amateurs continue to learn poor operating habits from each other. Usually it's the case that proper Amateur Radio procedures were never learned to begin with. The result is our amateur bands sounding like a CB wasteland. It looks like our clubs have their work cut out for them if they want to maintain the honor and respect they have worked so hard for in the eyes of the public.

It does not take long to find lids operating on just about any band these days. I will admit, however, that some amateurs use some lidisms without realizing it, myself included. But one can always learn to break bad habits.

Let's try to take a closer look at some of the most common lid terms and come up with a logical explanation for their use.

One of my pet peeves is "QRZ the frequency." The *ARRL Operating Manual* says that QRZ is a Q-signal

meaning "Who is calling me?" It sounds like the lid who uses this term is wanting the frequency to call him?! Sounds pretty dumb to me! I would much rather hear, "CQ CQ ... is anyone out there? This is KA9XYZ calling." Doesn't that make more sense? Q-signals were devised by high-speed CW operators as a form of shorthand in order to cram as much information as possible into their transmissions while keeping their transmissions as short as possible. What use they have on phone is questionable.

Then there is "QR-Mary" and "QR-Nancy." Good grief! The operator should say he has static or interference. In many cases, the use of Q-signals on phone causes more confusion than if the operator had gone ahead and said what he meant in "the Queen's English."

Here is another one which you must be ready for at a moment's notice: "Hi." Never laugh if you find something funny—say "Hi" or better yet, "Hi Hi." It does not take the place of laughter, but it tells the other operator that you know how to laugh on CW! I admit that I am guilty of this one myself, and I am trying hard to break

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this lidism.

The use of phonetics made up by the operator as he goes is another problem. We have a set of standard phonetics . . . let's use them *as they are* and not add things to it like "Yokahama" and "Zanzibar." I find it infinitely easier to say "yankee" (only two syllables) or "zulu." I also cringe when "Honolulu" is used instead of a simple word like "hotel." Someone must have stayed up all night thinking up these colorful phonetics just so they could confuse the rest of us with their extra babbling.

I remember when I took my brother along to his first Field Day while he was studying for his Novice ticket. He complained that the other operators confused him by not using standard phonetics, and he even got after me for repeating them back to them. I could see his point very well, and to this day I try to stick as close to standard phonetics as possible, even when the operator I am talking to does not.

Interestingly, it is easy to tell whether an amateur has been in the military, just by listening to his use of phonetics. Here is a good one: "CQ Dog X-ray." Good grief! Who wants an x-ray of a dog! Why not say CQ DX and be done with it! Military amateurs also use "able" instead of "alpha" and "baker" instead of bravo. Also there's "Willy" instead of "whiskey." A good friend who taught me CW was at our Field Day operation one year and was helping me operate 75M phone. To my surprise, he used a mixture of military and standard phonetics. Not so surprisingly, he had to repeat the club call sign at least twice before the other station understood it.

I am sure we all have heard operators saying, "This is KA9XYZ for ID" on the repeaters. Now why do they put the "for ID" in there when everybody knows that is what he is doing in the first place? Any time you utter your call sign you are IDing!

I have also found a new word which is unique and which hams use quite frequently on the repeaters: "destinated." This (though no such word exists) is used to inform other operators that you are at or close to your destination. Why not just say "I am at my destination" or "I am close to my destination" and sound like there's something between the ears besides QRM!

If we take a close look at our operation, we will see just how silly we sometimes sound on the air. Then we can get serious about our Amateur Radio practices and break these bad habits.

Let's restore the craft of Amateur Radio. We, and those who have gone on before us, have worked very hard to get where we are today. Let's not get lazy and become "glorified CBers." □

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mission has evolved into emergency services, aerospace education and cadet programs. With the motto, "Always vigilant," members are perhaps best known for their humanitarian, often spectacular efforts on search and rescue missions.

When a plane is missing or a child reported lost it is often the aircraft of the CAP that are among the first responders. Last year members of the CAP were credited with saving 46 lives—3,000 such saves during the past 50 years.

Missions that perhaps don't have immediate impact but help shape future lives are the cadet program and aerospace education. It is these pro-



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grams that seek to bring the excitement of flying to life. Each year thousands of CAP cadets learn about aviation pioneers and history while gaining leadership experience. Many



Cadets are fitted with Air Force chemical protection suits during a CAP summer encampment.

local squadrons also have activities that include emergency services or radio communication.

Each year the CAP supports some 200 aerospace education workshops, helping approximately 7,000 teachers better prepare aviation-related subjects for their classrooms.

Today there are over 60,000 members divided into eight regions. Each region encompasses several "wings" or state-level groups. In these wings are the local units, or squadrons, found in many cities and towns.

Leading the organization is Brigadier General Warren Barry, CAP, who, as national commander, oversees the program. Gen. Barry, applauded for his vision and understanding, has served in a variety of positions including wing and squadron commander. Dynamic in his leadership of the group, Gen. Barry too is a volunteer, working as a facilities manager for a group of California newspapers.

More than just pilots and cadets, many who volunteer as CAP members fill administrative duties, maintenance and repair positions, chaplains, medical officers, instructors and

communications officers.

Nationwide the CAP maintains a communications network consisting of many nets meeting each day, involving thousands of stations. These members use HF-SSB frequencies and VHF-FM, employing voice modes as well as RTTY and packet. The CAP's communications network will often be called upon during natural disasters to supplement regular public safety channels.

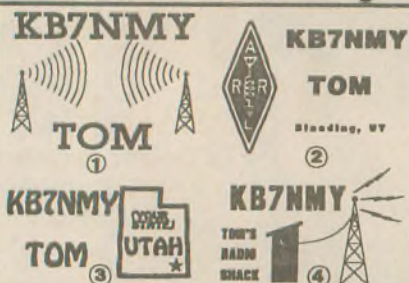
According to Gen. Barry, Civil Air Patrol "provides quality forms of training, leadership and self-discipline that helps develop a well-rounded individual." Membership in CAP is open to youth ages 13-21 as cadets and to persons over age 21 as senior members. Benefits are not limited to public service, but include opportunities to fly, attend international aerospace events, learn technical skills and share in a large fellowship of individuals with like interests.

If there's no local Civil Air Patrol unit listed in your phone directory, contact National Headquarters, Civil Air Patrol, Maxwell AFB, Alabama 36112, for information on becoming a member. □



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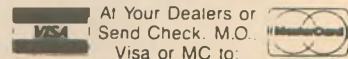
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# PUBLIC SERVICE

## ARES training exercise

ROBERT A. EDER, N7RLJ

In its summer field exercise for members, the Salt Lake County ARES (Amateur Radio Emergency Services) required participants to find and locate stations which could communicate only through clicking their PTT switch.

The exercise was based on the fact that sometimes persons are unable to establish voice communications even though they have radios because of battery failure and weak signals. Additionally, it could happen that persons who are injured or disabled in accidents may not be able to speak and give their condition and location, even though they may have access to a radio. Therefore, the exercise required that ARES members find and locate their assigned target persons by asking questions for which the response could be "yes" (one click of the PTT switch); "no" (two clicks); or "I don't understand your question" (four clicks).

### Within 90 minutes

ARES members were given less than 90 minutes to find their assigned target persons who were located in various sections of the Salt Lake Valley. Of the 20 members who participated, half were assigned the role of targets, and the other ten were assigned the job of finding them.

The training exercise was written by Jerry Wellman, WB7ULH, who, unfortunately, was not present to see how his search-and-find program actually came off. Wellman wrote the exercise as practice training for the following purposes:

1. To have participants carefully prepare their questions in advance, given the fact that all questions could be answered only by yes, no, or not understood.

2. To have participants prepare a game plan before rushing off to the assumed search area. Since there was a time limit, participants who did not carefully prepare their line of questioning could easily waste valuable time and fail to find their search victim.

3. In the cases where more than one ham was assigned the task of locating the same target, the exercise required that participants work as a team and coordinate their questions to avoid duplication and rehashing old information, and this required careful listening and coordination between the searchers.

### Post exercise critique

As a major part of the training, ARES members were given the chance

to critique the exercise at lunch at a local pizzeria. John Dinkleman, KC7AW, brought up the fact that some searchers did not acknowledge the answers given by the targets, thus confusing the target as to whether the searcher had indeed received his message. Other hams commented on the lack of coordination in some cases among the searchers where more than one searcher was involved in the same case. With only 10 minutes left in the exercise, the lack of listening on the part of one team member resulted in that team not being able to find the target person before the deadline. Dick Abbott, KE7MZ, suggested that searchers include in their line of questioning questions commonly asked in childhood games, such as "Am I getting warm?" He indicated that he would have been found by the searchers if they had included such questions.

The ARES exercise began at 0930 local time when the net control station (NCS), Richard Jorgensen, KG7PY, called the roll. Participants were then given assignments and instructions. Each searcher was assigned a discrete

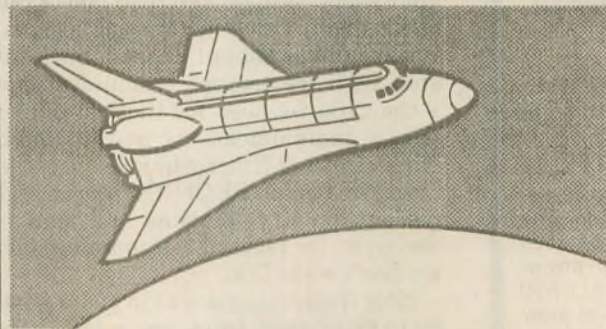
simplex frequency on which to contact the target person.

### Quick response

Before instructions were finalized, an interesting training event occurred which was unplanned and unrehearsed. A newly licensed ham called NCS to ask for help in getting her HT radio operational. It seems she was unsure how to program her radio for simplex operation. Dick Abbott, KE7MZ, then proceeded with permission of NCS to talk her through the programming. John Parken, KA7GZH, Assistant Emergency Coordinator of ARES, remarked later at lunch how difficult it is to talk someone through an operation like that over the radio or telephone. Parken commended KE7MZ for his successful instructions delivered quickly and accurately.

ARES members who participated, in addition to those mentioned above, included: Mel Frost, KB7ESL; Jim Marshall, NY7E; Roland Carr, KA7PGH; Claude Grant, KG7PJ; Linda Arlington, N7RJF; Richard Smith, N7PCE; Max Erickson, N7RSA; Leon Jones, N7TEB; Elaine Broadbend Tschaggny, N7SWY; Bart Van Allen, KA7ZFD; Elaine Christiansen, N7SFK; Graydon Jensen, N7RXL; and Charles Burkhalter, W7KCH. □

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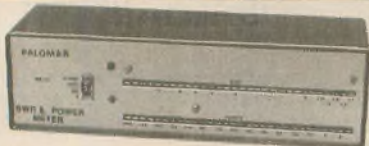
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# A cloud warmer antenna is best for local HF coverage

STANLY E. HARTER, KH6GBX

There has been what can be called more than somewhat mild excitement in Northern California emergency communications circles over a form of high frequency radio propagation. It's not new, but I venture to say that very few have used and understood it. "It" is called NVIS—Near Vertical Incident Skywave.

Patricia Gibbons, WA6UBE, presented a paper on NVIS at the 1990 Pacific Division ARRL convention in San Jose. It caused quite a stir. She quickly ran out of handouts and has since received dozens of requests for more. The handouts included reprints of articles from military communications magazines reporting the results of many tests.

Near vertical incident skywave means forcing your radio signals to travel straight up (i.e., 80 to 90 degrees) and back down. This achieves radio coverage in a circle having a radius of 300 miles and more. Stop and think about that for a moment . . . complete coverage within such a circle on frequencies between 2 and 10 or 12 MHz.

Some readers may wonder what's so good about this. So now is a good spot to say that if only DX (long distance) is your thing, skip on and read one of the other fine articles in this publication. We are talking about dependable local area high frequency communications—the type we need for tactical public safety communications in the Radio Amateur Civil Emergency Service, the Civil Air Patrol, SECURE, search and rescue, forestry, pipeline and similar services. In tactical communications we don't want DX.

How frustrating it was in years gone by to drive away from, say, a 4585 kHz base station, only to lose a good 400W

signal a mile from the transmitter, all the while receiving, loud and clear, a 50W transmitter some 200 miles away! We really didn't know why. When VHF-FM radios and repeaters came along, most of us retired HF mobile radios for tactical communications.

The reasons we haven't enjoyed good HF tactical communications, whether AM or SSB, has been the base and mobile antennas—the classic dipoles, a quarter to a halfwave up in the air. The mobile antennas, designed for use by Amateur Radio operators, have the same general propagation characteristics—low take off angle for DX.

Virtually every Amateur Radio mobile HF antenna is unsuitable for day-to-day tactical communications. They are variously bulky, mechanically weak, won't survive continual whacks from limbs and low overheads, or look like Neptune's trident or a misshapen coat rack. They may be fine for hobby communications but not for tactical public safety use. In that type of service we want one simple antenna that is permanently installed and that we don't have to think about or fuss with again.

So how do we achieve NVIS? By getting those sky hooks down near the ground. Let's start with the base station antenna. Horizontal, of course; dipole or long wire. Place the antenna as low as two feet above the ground but no higher than about thirty feet without a counterpoise. Use an appropriate and sturdy antenna tuner; you can use the one antenna for all frequencies between 2 and 12 MHz.

A longwire antenna is suitable in field setups but not recommended for office buildings or other urban environments. The reason is that unbalanced antennas frequently create interference problems with telephones and other communications and electronic equipment. These problems are substantially reduced or eliminated with a balanced antenna system.

The antenna tuner of preference is one that is automatic. Such tuners are available now that do not require any control cables; they require only the coaxial transmission line from the transceiver and a 12V DC cable. The tuner is placed at the far end of the coaxial cable. There are then two basic options: a longwire or a balanced (dipole) antenna. The longwire can be any length—the longer the better to approach the lowest operating frequency. A very good ground connection is necessary and often quite difficult to

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obtain on a rooftop. (When we are talking about running ground connections we mean the shortest possible runs of 2 to 3 in. copper strap, never wire or braid.) For a balanced antenna, you can place a 4:1 balun on the output of the antenna tuner, thence to a 450 ohm feedline to the dipole antenna. Any NVIS antenna can be enhanced with a ground along the surface that is five percent longer than the antenna and separated by .15 wavelength at the lowest frequency to be used.

For the HF-SSB mobile radio, a 16 ft. whip is probably the best. Such a whip may be both costly and difficult to find. For NVIS, the antenna is used folded down, both in motion and at rest. That's right, it is not released to go vertical. Most use the heavy duty ball joint mount, heavy duty spring, and readily available 106 in. whip.

To further improve the NVIS propagation at rest, the mobile whip is adjusted to go parallel to the ground and away from the vehicle. A further enhancement is to remove the whip and run out a longwire 30, 50, or 100 feet long. Patricia carries orange traffic cones, about 18 inches tall and notched at the top to lay the antenna wire away from the vehicle.

The Russian military have been using NVIS antennas on their vehicles

for quite some time. They appear to be about four meters long and about 6 inches above the top surface of the vehicle. At least one American manufacturer makes an NVIS antenna for both military and civilian vehicles. On a van it looks no more obtrusive than a luggage rack. The automatic antenna tuner is located in the rear of the vehicle, as close as possible to the mobile antenna feedpoint.

An HF-SSB mobile radio was recently installed in one of our State Office of Emergency Services trucks. The installer and the vehicle were 80 airline miles away and the time was about 2 p.m. In the SECURE (State Emergency Capability Using Radio Effectively) system this calls for using a 7 MHz channel. We established contact; the mobile signal was received here in Sacramento, California, at about 5 to S6. I then asked him to loosen the ball mount, flop the antenna down horizontal and away from the truck. I could tell by the pause and tone of his voice that he thought I had lost it. When he returned to the air his signal jumped to S9. He thought I had cut in a linear amplifier, but I assured him that the improvement was due solely to his flopping his antenna horizontal. You need not be concerned over the orientation of an NVIS antenna; it is omnidirectional.

Every Monday night from 7 to 8 p.m. we conduct a State RACES net on 3545.5 kHz using AMTOR. One night the net was concluded and secured. While the amateurs were cleaning up one of them noticed that we were being called; there it was on the screen. But it belied the loudspeaker; there were no

discernible AMTOR signals—only a high noise level. Yet, there was that station, WA6UBE, calling us at W6HIR. It was Patricia Gibbons proving an NVIS point again! She was transmitting to us from 82 miles away with an antenna lying on the ground along her driveway and using 3W of power!

On another statewide evening RACES net (our Monday night 8 p.m. 3952 kHz voice net), Bill Pennington, WA6SLA, compared two antennas. One was a vertical and the other was a horizontal quite close to the ground. His observations were interesting and typical of NVIS propagation. Almost all of the signals received on the vertical were higher in voltage than the NVIS antenna, but the signal to noise ratio was superior with the NVIS antenna. The noise floor is measurably lower on the lower antenna, thereby providing better overall communications.

I heard more than one amateur say, after listening to Gibbons' NVIS presentation and subsequent demonstrations, that they were going to jump back into HF-SSB mobile radio again. These people, like I, are interested primarily in the mobile tactical public safety communication applications.

There is an easy method to improve the NVIS radiation of your dipole antenna. Let the feedpoint sag five to 10 feet below the horizontal. This will alter the radiation and improve the vertical angle to achieve an approximate 2dB improvement at no cost. Many are excited about an old but little understood or practiced means of HF radiation. If you need it, try it. You'll like it!

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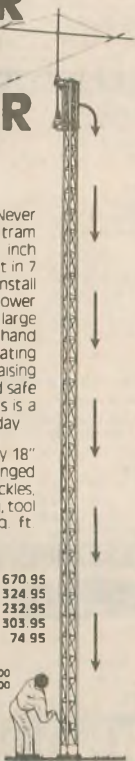
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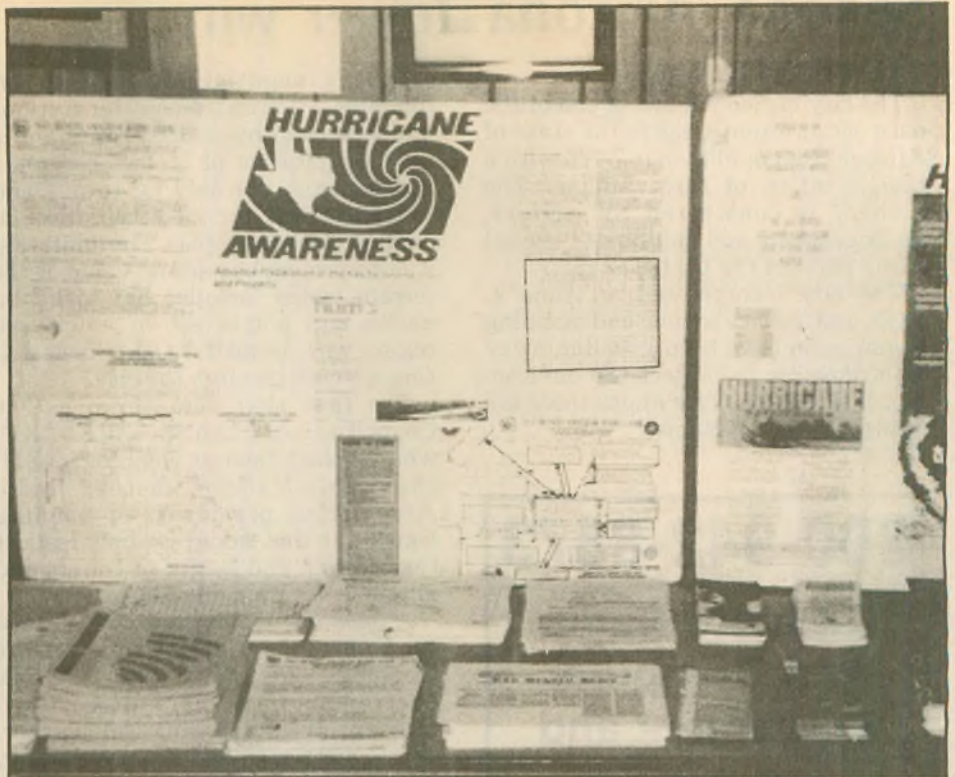


# Hurricane awareness

Each June 1, the start of hurricane season, the San Benito Amateur Radio Club in Texas puts out information to help inform the public about the necessity for advanced preparedness, as well as the role Amateur Radio operators have in emergencies.

The club serves as the emergency communications team for the city and has equipment permanently installed at the Emergency Operations Center. Club president, Fred "Al" Wasielewski, WA2VJL, is the emergency management coordinator for the city also, and the club has a memorandum of understanding with the city.

Information about Amateur Radio is available as well as the ARRL, and information on talks and films is also available to clubs, schools and organizations. The club also sponsors the WA2VJL 146.660 repeater, as well as a scholarship for San Benito High School seniors, awarded each May.



The San Benito Amateur Radio Club recently displayed its annual hurricane awareness and Amateur Radio information at city hall in San Benito.



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# Sedona, Arizona tower win

## CAL TURNER, WI6S

The city of Sedona lies in one of the most picturesque areas in the state of Arizona. Its population is 7,700 with a tourist influx of three million. The scenery is considered by writers, photographers and painters to exceed many parts of the United States.

The city incorporated on June 4, 1988, and the city council and planning commission have been grinding away at ordinances to protect the environment. Within the city limits there are approximately 40 hams.

During negotiations for city ordinances, a ban on transmitter stations and towers in residential zones and a height limitation of 25 feet became a major factor, not only for towers and antennas, but for all structures, including church steeples. The limitation was to protect the scenic value of the terrain which includes red rock pinnacles and buttes set in a forested region with beautiful Oak Creek cutting a swath through the city.

The first alert came from a City Council member, Len Silvern, K6RXU, who notified George Hopping, NZ7I, the Verde Valley Amateur Radio Association president, of pending legislation that would severely restrict the erection and height of towers and antennas for radio amateurs.

A steering committee was formed consisting of resident hams: George Hopping, NZ7I; Bill Byron, N7DHD, chairman of the committee; Carl Osborn, W6RXP; and Cal Turner, WI6S, district emergency coordinator, ARRL. Strategy was planned to determine what subjects would be presented to the city council and who would speak on each subject. The presentations were broken down into several categories: technical (and the need for antenna height); historical; legal (reference to PRB-1); and emergency services.

The amateurs' initial presentation in 1989 resulted in the city council referring the amateurs' request for an exemption to the height limitation to planning and zoning staff. The staff took it upon themselves to verify the existence of PRB-1 by calling the FCC. The FCC spokesperson affirmed that PRB-1 does exist but that it did not prescribe nor set height limitations. This statement gave the hams a few problems to overcome; the biggest was that they had to convince the members of planning and zoning of the need for adequate height in order to perform

their services to the community.

After several sessions before the planning and zoning committees, a vote was taken which resulted in a split decision recommending an exemption to the amateurs provided they adhered to a reclining length (in case of tower collapse) within the bounds of the property. In addition they included a statement that, if the operator no longer holds a valid federal amateur license, the tower and antenna must be dismantled. This recommended ordinance was referred to the city council on December 8, 1990.

At that point the hams still had a divided city council to contend with, so Cal, WI6S, wrote letters to the following persons asking them to join him in writing to the mayor with a request to support the exemption for hams: Barry Goldwater, K7UGA; American Red Cross Disaster Chairman, Will Degarty; and Yavapai County Emergency Services Director, Kim McIntyre, N7MPN. All of the above responded by submitting favorable letters to the mayor who provided copies to each council member. The steering committee researched 13 towns and cities in the area which had either no height limitation or a 70 to 100 ft. limitation. This information was incorporated in the letter by WI6S.

Two more council sessions were attended by the steering committee and members of the Verde Valley ARA before the ordinance was finally voted on and agreed to in a five-to-one decision.

The language in the ordinance as adopted reads as follows:

*Towers and Antennas. The towers and antennas used by federally licensed Amateur Radio operators shall be exempt from the district's height limitations for buildings. Any such tower or antenna must be so located on the lot that its reclining length (in case of collapse) would be contained within the bounds thereof. If the operator no longer holds a valid federal Amateur Radio*

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operator's license, then the tower and antenna must be dismantled.

The bottom line is, *have a presentation plan* and watch for opportunities to put your case forward at the optimum moment.

Our case was aided by having Len Silvern, K6RXU, a member of the city council, keep us up to date on each

development. The Verde Valley ARA members who supported the effort by attending the meetings were: George Hopping, NZ7I; Bill Byron, W7DHD; Carl Osborn, W6RXP; Cal Turner, WI6S; Larry Salisbury, M7APU; Bob Ferry, W7JIU; Art Rissberger, KC2EN; Don Rader, N7HYH; Will Greiner, KA7EBN; Bill Tuers, W6HHJ; and Mike Wilson, W7JAE. □

was on 20M phone with Cab, N6OC, in the California gold-country town of Auburn; he was signing N84OC at the time in honor of the Summer Olympics then being played out in venues up and down the state. We had very solid copy on one another for the duration of the QSO and Cab gave me a 59! He wrote on his QSL: *Super job for an indoor dipole*. The fact that Cab lived at an elevation of 1,500 feet, had a 6-element KLM at 75 feet, and was using a linear probably made the QSO easier for me. But as I discovered by experience, a beam and power at the other end are not a must.

Last summer, after calling CQ DX on 21.325 MHz, I experienced the exhilaration of a three-hour pileup during which I worked some 30 stations in the US from sea to shining sea, with a heavy concentration of Midwesterners, and got reports ranging from 53 to 59. Among the contacts was one with Fred, W6TJO, in Encino, who gave me a 57 and wrote on his QSL:

*Don: Glad we got together. I've told many hams who are locked in with CC and Rs that an attic antenna works. After our QSO, the info was passed on via the local repeater (224.94).*

Six days later, I worked KA7OMZ near Seattle. He was QRP (Ten-Tec Argosy II) with a KT-34 beam and I was (relatively) QRO with the indoor dipole. We were both 559.

## Let's hear it for the tortoise

DONALD JOHNS, WB6FKR

As one can readily gather from the pages of many ham publications these days, QRP is a phenomenon that is catching on with a host of (perhaps bored) operators who have done it all with high power. Many of them who are seeking change and new challenges are going back to the basics: operating skill as opposed to brute force, and even the design and construction of their own equipment. Unlike easy come, easy go QSOs with the Henry 2K at full bore, good QRP contacts tend to be memorable events. I will never forget a 40-minute chat with (then) ZE7JV in Rhodesia (now Zimbabwe), or my only contact with elusive Andorra during a contest. Each of these was with 10W.

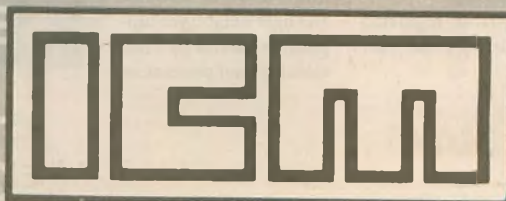
QRP is a marginal operation—at least on the surface—that is normally

entered into on a voluntary—even enthusiastic—basis. But there are other types of less-than-optimal situations that are forced upon the ham operator. One of these is the *invisible antenna*. I'm not referring here to the usual invisible antennas—thin wire and clear buttons for insulators—or even flagpoles. I'm talking *real* invisible antennas—*indoor* antennas. In these days of snooty real estate promotions and pretentious neighborhood images, an indoor antenna—most likely a lowly dipole—is often the last refuge of the ham (especially in Southern California) who wants to work something other than 2M. At what has in recent years become my "summer QTH" (my wife's home in Austria), I have been using indoor dipoles since 1984.

After "going indoors," one of my first astonishing encounters with DX

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Probably the most gratifying and edifying experience with my marginal setup came last summer on July 22 in a QSO with Bud, KD5KE, in North Little Rock, Arkansas. Our encounter was on 20 CW; he gave me a report of 569 and included the following remarks on his QSL card:

*Dear Don: Your indoor dipole and 100W puts out a nice signal! I am using an indoor half-size G5RV antenna here, plus an IC-745 at 100W. Although I have worked quite a bit of DX with this setup, I suspect ours may have been the first "indoor antenna-to-indoor antenna" DX QSO! I'm in a two-story townhouse, and my shack and antenna are on the second*

*floor, which puts the wire at about 16 feet. The flat-top portion is 40 feet long with 6 feet vertical at each end. Seems to work better than my friend W6RKV's Butternut ground-mounted vertical.*

My only QSO last summer with a California station (though I heard others) was on July 6 with Ray, WB6SZZ, in Fremont. Here is the report from his QSL:

*Radio OE3ZDB confirming QSO of 6 July 1990 at 2131-2150 GMT on 21 MHz. Ur CW sigs R 5 S 9 T 9.*

As a local fellow ham has said about his QRP results: "Not too shabby!"

With less than optimum stations using QRP or indoor antennas, you can-

not, of course, expect instant gratification. You have to exercise patience, listen more to be fully aware of skip conditions, and sharpen your operating skills to make up for the power or antenna you don't have. But you can get out of the back yard, and as I have tried to show, you can even enjoy DX-ing if that is your game.

Don't forget: In the race between the tortoise and the hare, the tortoise wins. The tortoise is also a creature that enjoys great longevity. So whether you do it with an indoor or outdoor antenna, QRP or QRO, let's all enjoy a long and happy ham life. □

## The beginner's guide to DXCC (or how to be a little gun)

LEE ZALAZNIK, KI6OY

DX is a part of Amateur Radio that I had no interest in before 1990 when the sunspots started to rise. The bug bit not hard but the sting is still there. In this article I am going to relate how to get DXCC on a semi-low budget using modest equipment and good operating techniques that anyone can learn, how to QSL and get results, and some closing thoughts.

### Equipment

I can tell you from experience that you do not need the latest equipment with all the newest bells and whistles to work DX. The DX station won't care. All he is interested in is hearing your signal. There are many older tube and transistor radios that put out a fine clean sounding signal and have good receivers. I own and operate the Drake Twins R-4B and T-4XB barefoot; both are over 25 years old. They still perform! A hundred watts out is more than enough to work DX. You may not bust the pileups or be the first contact but with some patience you will make that DX contact. It is more important to have a clean sounding signal that is not heavily processed. If the DX station can't understand your signal, he may not be able to work you.

Antennas are a source of much experimentation and debate as seen by Kurt N. Sterba's antenna column in *Worldradio*. The words here to live by are height and amount of wire. Get an antenna as high and with as much wire in the air as your backyard, determination or pocketbook will allow. My favorite antenna is a G5RV up about 30 feet. It's a modest 20M DX antenna and can be used for all-band operation by using an antenna tuner. This antenna fits within a low budget and is easy to get on the air.

### Operating technique

Listen for DX stations. Calling CQ DX is reserved for the big guns. Being a little gun takes more patience, listening and operating savvy. The rule to live by is, "If you can't hear them you'll never work them." Look at the propagation forecast near the end of the DX column in *Worldradio* as a guide to the frequency, time, and where you should hear the DX. Check

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WVW 18 minutes past the hour for the propagation forecast. A high solar flux number and low A index number equals very good propagation on 10, 15 and 20M bands. Use these propagation aids as guides for selection of bands; the ultimate test, however, is listening.

Check band activity and listen for the DX. If the band is dead move down to the next lower band. If a DX station has just started and he has not made any contacts give him that first call before the pileup starts. During the pileup give a call or two. If there's no response move on to another DX station that may be calling.

DX contests are a great way to work those new countries. Forget about busting a big pileup during the start of a contest. Wait until later in the contest after all the big guns have taken their shots. The pickings will be easier. There is some debate about using DX nets. Some say that using them is not working real DX. If DX nets interest you, use them by checking in and getting on the list but be prepared to wait.

### QSLing

Waiting for QSL cards from DX stations could try the patience of Job. Sending your QSL cards via the

outgoing ARRL QSL bureau is a great bargain but can take more than a year for any response. Be sure that your envelopes are on file with the ARRL incoming QSL bureau. More on this important service can be obtained from the ARRL or QST. I have opted for QSLing direct via airmail. This can run into a considerable amount of money but it does get good results.

Be on the lookout for DX stations that have stateside QSL managers. This can save a lot of time and money. A QSL manager's list can help in getting QSL routes. There are several around such as the W6GO/K6HHD list. Most DXers subscribe to these publications. Ask around. Also, the *Worldradio* DX column has QSL routes and very good articles on what is hot in DX.

Include in your QSL card an SASE for stateside or SAE and a couple IRCs for DX. IRCs can be purchased at the post office at 95¢ each, but

there is a less expensive way. Ask some DXers or look in the back of *Worldradio* for ads on hams who buy and sell IRCs at a greatly reduced price. I also make it a practice to use security envelopes and not put any amateur calls on the envelopes to help prevent mail thefts. I keep a permanent written log of all my DX contacts. A log of stations contacted helps in the management of QSL cards. Also order a copy of the ARRL countries list to check off countries from which you have received QSL cards.

With a low budget station you can work DX, have a lot of fun, learn geography, and gain operating skills. If you hear a lone DX station calling, get your signal on the air and work him. Listening, operating skills, and patience are the words to live by in low power DX. Good luck and see you on the bands! —© Copyright 1990 by Lee Zalaznik, K160Y

## Is satellite operation for you?

KEITH C. BAKER, KB1SF

As a newcomer to satellite work, having been on the birds less than a year, I thought it might be helpful to share some of my initial perceptions about this aspect of our wonderful hobby. Unfortunately, there are still a lot of myths surrounding what amateur satellite operation is all about . . . myths which may be preventing many hams (you?) from sampling this unique part of Amateur Radio.

Like you, I've seen the complaints from those who bemoan how horrible it is that satellites have yet to enter the "mainstream" of Amateur Radio. Also, complaints still abound that "the equipment is too expensive" or that satellite operation is "still too complex" and that new "black boxes" must be purchased for each new mode that gets activated.

One of the main reasons I became active in satellite work was precisely to get away from the mainstream of Amateur Radio! Having been a ham for nearly 15 years, I was growing increasingly weary of the same old predictable routine of "name, rank and serial number" QSOs on the other bands. This, along with the increasing amount of "trash" I was hearing there, sent me on a search for something different . . . something off the beaten path that not everybody else was doing and yet still had some challenge left in it. While some may call this an "elitist attitude," I would argue that it's always nice to get away from the mainstream every now and then. (This concept is also known as "vacation"!)

As for the "too expensive" label, I say "Bunk!" I, like most others,

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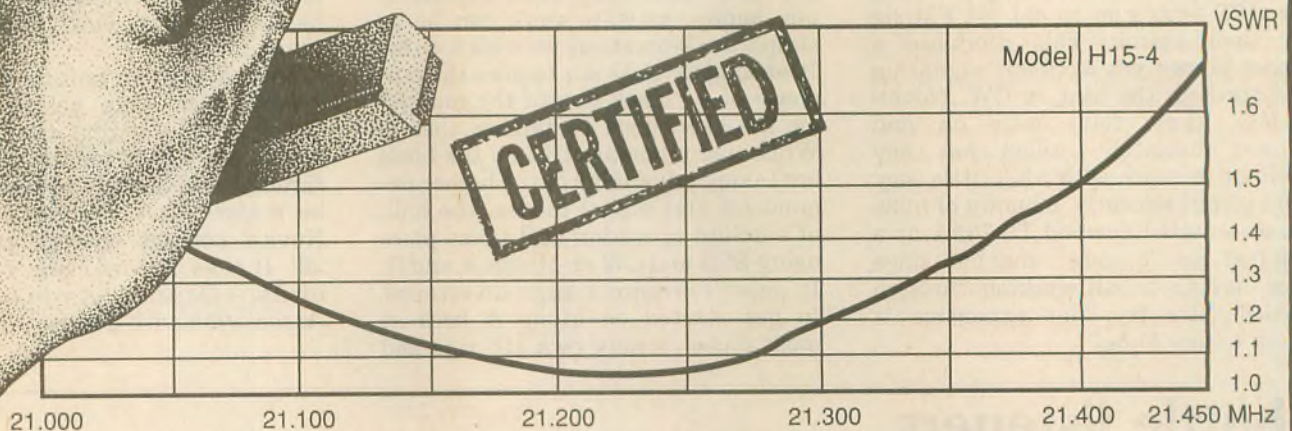
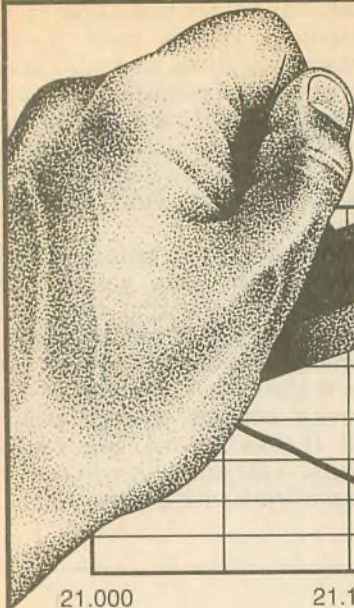
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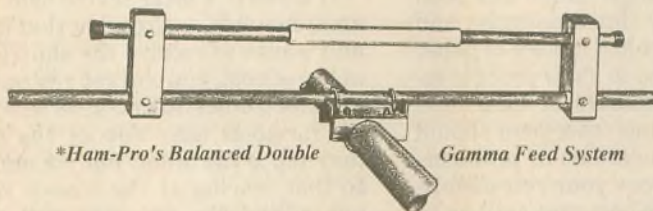
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H144-15H	2m	13.73	1.68	\$145
H144-15V	2m	13.73	1.93	\$145
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H432-24	70cm	16.14	1.76	\$145

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started out on Mode A (uplink on 145 MHz, downlink on 29 MHz) through RS-10/11 with simple vertical antennas and modest power. (Would you believe as little as 5W to a Ringo Ranger?!) In the course of my operations on Mode A, I've contacted several hams who were simply keying the PTT switch on an old 2M FM rig for their uplink. This produced a rather chirpy yet workable signal up and through the bird on CW. Nevertheless, these folks were on and seemed absolutely thrilled that they could do so much with what little they were using! Recently, a buddy of mine found a used Kenwood TS-700A at a hamfest for "a song" and has since been having a ball working through RS-10! Nice try, but expensive it *doesn't have to be!*

Now, granted, my recent leap to Mode B (uplink on 435 MHz and downlink on 145 MHz) is going to put a crimp in my budget for a while. But it was my personal choice to step beyond the crucible of the Mode A birds, and was more of a "want" than a "need." Like most other aspects of our hobby, satellite work can be as simple or elaborate as we wish it to be. It absolutely *does not* require the purchase of a "black box of the month" (or the checkbook to finance them!). While many hams active on the birds are taking advantage of the higher frequencies and digital modes, the bulk of satellite operation still takes place using SSB and CW on Modes A and B. It doesn't require a large investment to get started on Mode A because most hams already own HF rigs and

antennas capable of receiving the 10M downlinks of the two current RS series satellites. What's more, I've found reasonably priced all-mode 2M rigs are now rather plentiful on the used market, so getting a way to "uplink" on Mode A can often be accomplished for a few hundred dollars—less if you, like my friend, hunt around for a bargain!

So what are you waiting for? What's keeping you from giving it a try? Believe me, the first time you hear your own voice coming back down through a satellite's transponder will be a thrill that will rival your first Novice contact—sweaty palms and all! It was for me. See you on the birds!—*Dayton Amateur Radio Association's RF Carrier* □

## Shuttle listeners

As stated in the September 11, 1991, letter from NASA Select, NASA permits you to retransmit shuttle communications. While the waiver has been in effect since 1983, and now part of the new Part 97 (97.113e), those of you who are not part of an affiliated NASA radio club or had contact with a NASA PIO were probably operating under the verbal okay myself and others got back then. At that time, it

was thought that the source of the shuttle communications would be from a NASA ground location via an Amateur Radio link or phone line, and therefore the permission was implied or easily verified.

Thanks to the efforts of Chris Durso, AA4CD, we now have official written permission to retransmit from NASA Select (found on Satcom 2R transponder 13) the audio and video of the space shuttle and general mission coverage. Many individuals believed that permission was automatic, given the original verbal permission and the fact that NASA Select transmissions are via a common carrier leased satellite transponder channel and are in the public domain.

This technical legal point has been brought up many times recently, and operators have not had a piece of paper that they could use to show proof to inquiring fellow amateurs or local FCC engineers. The above statement should put to rest any questions or problems that may arise from your retransmission of the shuttle communications to other amateurs. Also please keep in mind that shuttle communications

retransmission as well as most all amateur transmissions must be directed to at least one other amateur (97.111 and 97.113). However, there is no reason that many non-amateurs cannot also receive it. In fact it just might be the incentive for them to get their license.

If any of the original information you sent me regarding the frequencies, location, or local contact for your shuttle retransmissions has changed, please drop me a note so I may update the list. Your retransmission of the shuttle video and audio is much appreciated by hams and non hams alike as well as students who are interested in science and space exploration, from the feedback I get.

If there is a local school that has an amateur club, or a teacher that is a ham and wants to receive the shuttle video at the school, you can get any one of the PC Electronics downconverters for \$20 off for their use. You or the teacher may place the order, but we must ship to that teacher at the school. We cannot afford the red tape and time it usually takes for the school to go through its purchasing department. For other than schools, we do have a discount of 10 percent on quantities of five or more downconverters that many groups and clubs have taken advantage of. Tnx es 73, Tom O'Hara, W6ORG. □

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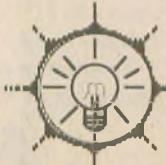
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# Our teacher

We recently received correspondence from Glen Martin Elementary School students Liz Guerrero and Rebecca Barz, who took the initiative to send us information about their teacher, Mr. Fonda, WA6JJM, and his introduction of Amateur Radio to the school program. The kids informed us that last year nine students passed their Novice exams and this year five more did. Two of those students were only eight years old! They said Mr. Fonda had been teaching Amateur Radio for the past two years and that they hold an annual science fair.

When we returned the kids' correspondence, asking for more details, we received the following letter from Mr. Fonda:

*The kids are way ahead of me regarding this. I didn't know that Liz had written you until Carol, my aide, showed me the letter you wrote to her. I asked my "secretary" (Rebecca) to write you a letter regarding the program at our school but when I looked it over, I found a few gaps that I thought I should fill in.*

*Our little school is one of only 29 one-room schools in California. We are a public school, part of the Bear Valley Unified School District (Big Bear). We have grades one through five and currently have 19 students.*

*In the last two years, we have graduated 13 new Novices from our school. This was done via intensive code and theory sessions in the afternoon hours of the school day lasting for about four months. Up to now, every one who's tried has passed.*

*We have a station at the school which includes a Yaesu 747 and a Kenwood 220 transceiver as well as a packet terminal. The antennas include a 136 ft. double Zepp and a 3-element 10-M beam atop our roof. We also use a 220 J pole.*

*Here are the calls of the kids who have graduated from our Novice pro-*

**Mr. Fonda, WA6JJM, presents an award to student Brian Foltz at the 1991 Science Fair.**



*gram: Doug, KC6LDW; Jeremy, KC6LDY; Marta, KC6LDX; Marta, KC6LDV; Rebecca, KC6LDZ; Brian, KC6JTO; Ronny, KC6JTM; Shana, KC6JTS; Liz, KC6TUI; Chuck, KC6TUM; Erin, KC6TUK; Don, KC6TUJ; and Roger, KC6VPJ. Also my aide's son, Matt, KC6JTL, earned his call several years ago after taking a Novice class in Big Bear.*

*We currently have six kids studying the Novice material and the code. I hope to have them tested in January '92.*

*We have not had much of an Amateur Radio theme in our science fairs, although the kids had several projects involving electricity, magnetism, etc.*

*I'm very sorry, but at the moment I*

*don't have a photo of the newly licensed kids. I handed them all out on the last day of school last school year. Thank you for your interest in our school!* □

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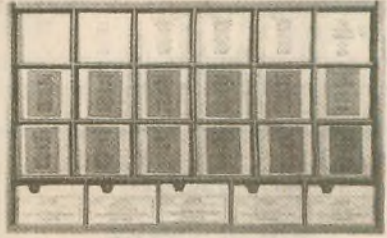
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# Amateur Radio and genealogy research

**KIM E. DANIELSEN, KB7IMC**

When a friend first tried to interest me in ham radio last year, I thought he was crazy. What could possibly entice me to study electronic theory, FCC rules and regulations, and Morse code? These magic words: "You can talk to people all over the world on ham radio." In my mind, that translated to "genealogy research."

I've been researching my family history for the past five years. Living in the desert southwest (sometimes referred to as "the middle of nowhere"), my research has mostly been limited to correspondence with nameless, disinterested clerks of courts in faraway places. I write and wait, write and wait ... always seeking that elusive birth, marriage or death certificate. More often than not the response is: "No record found." The last time that happened, my cousin visited the place and found the very record I'd requested—yep, the one that didn't exist!

The next best thing to doing research myself would be to have another

**Kim Danielsen, KB7IMC, may be your key to successful genealogy research.**



genealogy buff do it for me, without it costing an arm and a leg. Someone who, perhaps, needs research done here in Arizona and with whom I could exchange services. How to meet such a person in New York, or Maryland, or even Norway while I'm "stuck" in Arizona? Voila, ham radio!

One year later I have my General ticket, a second language (Morse code) and, as a result of my query in a ham radio magazine, the support of approximately 50 other hams who share my interest in genealogy. We established a net schedule for the winter, I became the net control operator (couldn't help it—no one else volunteered) and we're on the air!

One of our net schedules is devoted to Novice CW operators. We keep the speed below 13 wpm, are very informal (no use of the formal "Q" signals), and are more than willing to slow down to accommodate the slowest fist. It's a good opportunity for someone who 1) needs the practice for upgrading purposes, 2) wishes to become familiar with "round table" (multiple people) discussions and commonly used CW abbreviations, or 3) just plain enjoys CW. Plus, there's no need to figure out what to say; the topic is preselected!

Although I became involved in ham radio to further my genealogy research, I very quickly learned to like ham radio for itself. I enjoy the people I've met on the air, I love ragchewing and working Morse code, and I participate in contests in my spare time. Most of all, I find it immensely satisfying to combine two favorite hobbies and meet others who share the same interests.

I hope there are more "ham genealogists" out there and hereby invite you to join us on the air for the exchange of research information and techniques,

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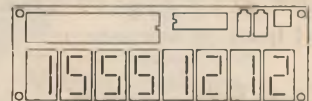
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Ameritron AL-80A **\$1095** Suggested Retail

result is a clean signal without flat-topping.

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The guts of the AL-80A is its heavy duty power supply. A 22 pound transformer using a high silicone steel core, computer grade capacitors, heavy duty bleeders and ten 3 amp, 1000 V power rectifiers give you a stiff 2700 volts fully loaded. Some amplifiers using two 3-500Zs use a light power supply so they can't give much more power output than the AL-80A.

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The AL-80A special Step-Start Inrush Protection stops damaging inrush current with a start up sequence that's easy on your tube and power supply components.

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The Multi-Voltage Primary in the AL-80A lets you compensate for too high or too low line voltage so you get the longest component life and peak operating efficiency -- regardless of line voltage.

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Grid current of the 3-500Z is monitored continuously by one meter. Grid current gives the best indication of overall performance.

**Multi-meter** measures plate voltage, plate current, peak RF output power and drive power/ALC detector voltage.

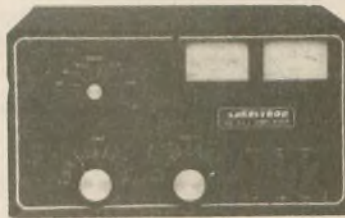
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A whisper quiet internal fan draws in cool air over the power supply components and the Eimac® 3-500Z tube to remove heat for longer tube life.

**Built-in adjustable ALC circuit** makes sure your exciter never overdrives your AL-80A. The

Call your dealer for your best price today!

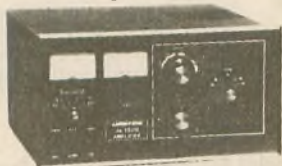
Bust through QRM with a full kilowatt -- right out of the box. Call your dealer for your best price and order today. Two year limited warranty.

## AMERITRON offers the best selection of legal limit linears!

These 3 rugged linears all use a super heavy duty hipersil® power supply capable of 2500 watts!

Ameritron's most powerful amplifier

AL-1500 **\$2625** Suggested Retail



Ameritron super power amplifier uses the herculean 8877 ceramic tube.

It's so powerful that 65 watts drive gives you full legal output -- and it's just loafing because the power supply is capable of 2500 watts PEP.

Ameritron's Dual 3-500Z linear

AL-82 **\$1995** Suggested Retail



This linear gives you full legal output using a pair of Eimac® 3-500Zs. Some competing linears using dual 3-500Zs don't give you 1500 watts because their lightweight power supplies can't use the tubes to their full potential.

Ameritron's 3CX1200A7 linear

AL-1200 **\$2045** Suggested Retail



Get ham radio's toughest tube with the Ameritron AL-1200 -- the Eimac® 3CX1200A7. It has a 50 watt control grid dissipation -- 12 times tougher than the 4 watt rating of the 3CX800A7 -- yet you get the same full legal output as you get from a pair of 3CX800A7s.

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Legal limit antenna tuner

ATR-15 **\$399** Suggested Retail



Ameritron -- the high power specialist -- brings you the ATR-15 antenna tuner that's designed for legal limit amplifiers. Heavy duty silver plated bandswitch virtually eliminates switch failure. High power transmitting capacitors. 1.8-30 MHz. Peak reading SWR/wattmeter. 6 position antenna switch. Selectable 1:1 or 4:1 balun. 5 1/4 x 13 1/4 x 13 1/2 inches. Meter lamps uses 12 VDC.

Remote Coax Switches

RCS-8V **\$149** Suggested Retail



RCS-8V, DC-UHF 5 KW Coax Switch.

Replace 5 coax feedlines with one with this Ameritron Coax switch. Weatherproof box mounts outdoors on your tower or mast. Attractive control unit sits on your operating desk. Low SWR to 450 MHz. Low loss. Rated at 5 KW to 30 MHz. 1 KW at 150 MHz. RCS-4, \$134.50. 4 position HF switch. Similar to RCS-8V. Requires no control cable. Handles 2500 watts PEP.

RCS-4 **\$134.50** Suggested Retail



Legal Limit Dummy Load

Oil cooled so you can run the maximum legal limit of 1500 watts for 5 minutes. High quality industrial grade transformer oil included (no PCB). 50 ohms. SWR under 1.2:1 to 30 MHz. Low SWR to 400 MHz. 7 1/2" H x 6-5/8" Diameter.



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discussion of computerized genealogy programs and titillating tales, and anything else related to genealogy research. Net schedules are listed here. Please drop me a line, too; I'll need your address to send out a brief questionnaire asking for such things as band/time preference and which surnames you may be researching. I keep a computerized list of the families being researched (over 350 names) and advise people having surnames in common. CU on the air! □

**Wednesdays 0100Z**  
(Tuesday nights)  
0200Z

**Fridays 0200Z**  
(Thursday nights)  
**Sundays 2000Z**

**Net schedule**  
40M slow speed CW net (5-13 wpm)  
7.140 (+2)  
40M CW net (13-18 wpm)  
7.140 (+2)  
40M SSB net  
7.273 (+3)  
10M SSB net  
28.335 (+3)

All frequencies are up in increments of 2 (CW) or 3 (SSB) KHz for QRM, i.e. if 7.273 (40M SSB net) is busy, look for the net at 7.276, then 7.279, etc. Write to Kim E. Danielsen, KB7IMC, at P.O. Box 1656, Yuma, AZ 85366.

## Q signals supereasy

### WILLIAM J. BAHR, KB4WIT

Q signals are three-letter abbreviations which begin with the letter Q and which are frequently used internationally. Examples of Q signals are QRS (send slower) and QSL (acknowledge receipt). Each Q signal can have one of two meanings. If followed by a question mark, it asks a question. If not followed by a question mark, it makes a statement. Up until recently, these signals were "nonsense syllables" and learned only by repeated use. BahrNo Products has taken many of the most commonly used Q signals and put them into mnemonic form for easy memorization. The following list provides Q signals, their definitions, and mnemonic aids for many of them. There is space for you to fill in your own mnemonics for a number of them. Refer to the end list of common abbreviations for ideas. Have fun!

### Common Q signals

QRG	Exact frequency is ___
QRH	Frequency varies
QRI	Signal tone is ___
	Received Intonation is ___
QRK	Signal intelligibility is ___
	Received Knowledge is ___
QRL	Busy
	Receiver Loaded
QRM	Interfered with by other stations
	Receiving too Many
QRN	Troubled by static
	Receiving Noise
QRO	Increase power
	Raise Output
QRP	Decrease Power
	Reduce Power
QRQ	Send faster
	Request Quicker
QRT	Stop sending
	Request Termination
QRU	Nothing/Anything for me/you
<hr/>	
QRV	Ready
	RV(recreational vehicle) ready to go
QRW	Tell ___ that I'm calling on (freq)
	Request Warn
QRX	Call again (time/freq)
	RX (prescription-call again)
QRZ	Called by ___
	Received Z (Zorro's calling card) from
QSA	Signal strength is ___
	Signal Amplitude is
QSB	Signal fading
	Signal Below
QSD	Defective keying
	Signal Defective
QSK	Hear between signals
	Signal Crossing (crossing)

QSL	Acknowledge receipt
	Send Log-in
QSM	Last message repeated?
<hr/>	
QSO	Communicate with ___ direct or by relay
<hr/>	
QSP	Relay to
<hr/>	
QSV	Send series of Vs
	Send Vs
QSW	Send on this/___ freq
	Send Where
QSX	Listening to ___ on ___ freq.
<hr/>	
QSY	Change to another freq
	Send Y (fork in road)
QSZ	Send each word/group (twice)
<hr/>	
QTA	Cancel message number ___
	Telegram Abort
QTH	Location is ___
	Transmission's Home
QTR	Correct time is ___
	Time Really is
QTV	Stand by on ___ freq from ___ to ___ hours
	TV (Please stand by comment)
QTX	Keep station open for further communication until notified/___ hours

### Special Q signals for CW Net use

\*Used only by Net Control

QNA*	Answer in prearranged order
	Answer

## HIGH-ACCURACY ANTENNA SOFTWARE

MN 4.0 is the fastest, most powerful, and most accurate MININEC antenna-analysis program available. MN corrects fundamental problems in the MININEC algorithm for improved accuracy. MN features 3-D views of antenna geometry and wire currents, presentation-quality polar and rectangular plots, automatic wire segmentation, automatic frequency sweep, symbolic dimensions, skin-effect modeling, near-field calculation for TVI and RF-hazard analysis, up to 254 pulses for complex models, simple definition of sources and loads, and pop-up menus. MN 4.0, \$85. MNC 4.0 (1.6-2.4 times faster, coprocessor required), \$110. MNH 4.0 (huge-model option), \$25.

YO 4.0 automatically optimizes Yagi antennas for maximum forward gain, best pattern, and minimum SWR. YO handles designs from HF to microwave. YO models stacked Yagis, Yagis over ground, skin-effect, dual driven elements, element tapering, mounting plates, and matching networks. YO runs hundreds of times faster than MININEC. YO is calibrated to NEC for high accuracy and has been extensively validated against real antennas. YO is intuitive, highly graphical, and fun to use. YO 4.0, \$100. YOC 4.0 (1.7-2.7 times faster, coprocessor required), \$130.

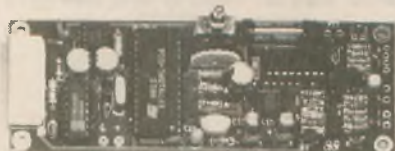
NEC For Yagis 1.0 provides highest-accuracy analysis of Yagi designs with the professional-standard Numerical Electromagnetics Code. NEC For Yagis 1.0, \$50. Coprocessor, hard disk, and 640K memory required.

MN and YO come with comprehensive antenna-design libraries and include both coprocessor and extra-fast no-coprocessor versions. All programs include extensive documentation and an easy-to-use, full-screen text editor. Add 7 1/4" CA, \$5 overseas. VISA, MasterCard, U.S. check, cash, or money order. For IBM PC, 3.5" or 5.25" disk.

Brian Beezley, K6STI, 507-1/2 Taylor, Vista, CA 92084  
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**High quality courses since 1985!**



QNB\* Act as relay between \_\_\_ and \_\_\_

QNC All stations copy  
Copy

QND Net is directed  
Directed

QNE\* Entire net standby  
Entire

QNF Net is free  
Free

QNG Take over as control station  
Nab Guard (and take over)

QNH Your net freq is high  
High

QNI Report(ing) into net  
Into

QNJ Can you copy?  
Jot down

QNK\* Transmit message(s) for \_\_\_ to \_\_\_

QNL Your net freq is low  
Low

QNM\* You are QRMing net; standby.

QNN Who is/\_\_\_ is net control station

QNO Station leaving net  
Out

QNP Unable to copy  
Paralyzed

QNQ\* Move freq to \_\_\_ wait for \_\_\_ to finish.  
Then send him traffic for \_\_\_

QNR\* Answer \_\_\_ and receive

QNS\* Following stations in net  
Net Stations

QNT Request to leave net for \_\_\_ minutes  
Terminate

QNU\* Net has traffic for you; stand by  
U(you)

QNV\* Contact \_\_\_ on this freq. Once done,  
move to \_\_\_ and send him traffic for \_\_\_

QNW How route messages for \_\_\_?

QNX\* Shift to another freq//kHz to clear  
traffic with \_\_\_

QNZ Zero beat your signal with mine  
Zero

Other Q signals  
QRA My station name is \_\_\_

QRB Approximately \_\_\_ far from station

QRD Going to \_\_\_ from \_\_\_

QRR Ready for auto operation  
Ready for Robby Robot

QRY Turn number is \_\_\_

QSG Send \_\_\_ messages at a time  
Send Grams

QSN Heard on \_\_\_ freq  
Signal Noticed on

QSU Send/reply on this/\_\_\_ freq

QTB Agree/disagree with word count?  
Repeat first letter/digit of each word/group

QTC Have \_\_\_ messages for you/\_\_\_  
Telegrams Collected for

QUA Have news of \_\_\_ (call sign)

### Common abbreviations

AA All After; AB All Before; AGN Again; BK Break; BN Been; C Yes; CK Check; CL Call; CLD Called; CNT Cannot; CQ General Call to any station; CU See You; CUL See You Later; DE From; DN Down; DX Distance; FER For; FM From; GA Go Ahead; GB Good Bye; GD Good; GV Give; HI A laugh; HR Here; HV Have; HW How;

LV Leave; MSG Message; N No; NR Number; OP Operator; OT Old-Timer; PKG Package; PLS or PSE Please; PWR Power; R Roger; RCD Received; RE Regards (concerning); RECD Received; REF Refer to; RIG Station equipment; RPT Repeat; RST Readability, Strength, Tone; RX Receiver; SED Said; SIG Signal or signature; SKED Schedule; SRI Sorry; TFC Traffic; TKS or TNX Thanks; TR Transmit; TT That; TXT Text; U You; UR Your; URS Yours; VY Very; W Watts; WA Word After; WB Word Before; WD Word; WID With; WKG Working; WL Well; WRD Word; WUD Would; XMTR Transmitter; XTAL Crystal; XYL Wife; YR Year; 73 Best regards; 88 Love and kisses. □

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...an affordable high quality masthead preamplifier

**HEAR SIGNALS THAT YOU'VE NEVER HEARD BEFORE**

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typ. 0.6 db	typ. 0.6 db	typ. 0.9 db
18-20 db	18-20 db	17-19 db
150 Watt	150 Watt	150 Watt
750 Watt	750 Watt	350 Watt
Type N	Type N	Type N

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# SPECIAL EVENTS

## Toys for Tots

The Toys for Tots Ham Radio Rally will operate special event station KA6RJF on December 1 from 1900 to 2400Z to commemorate the first Toys for Tots Ham Radio Rally charity event.

Operation will be single sideband in the General 40M and 20M and the Novice 10M subbands.

For a certificate, send a QSL and a 9×12 SASE to KA6RJF, 1302 Mar Vista, Pasadena, CA 91104. For further information on the rally itself, see listing in the Hamfests. □

## Pearl Harbor

Region Eight of the Navy-Marine Corps MARS will operate KH6SP, NNN0NBW and NNN0ARZ from 0400Z December 7 to 0400Z December 8 from Ford Island, adjacent to the Arizona Memorial, to commemorate the 50th anniversary of the Pearl Harbor attack and the sinking of the *USS Arizona*.

Operation will be in the lower portion of the General phone bands, AMTOR and RTTY in subbands. MARS operations will be announced separately.

For a QSL, send QSL and SASE to KB4JI/KH6, 106 Ford Island, Honolulu, HI 96818. □

## Pearl Harbor

A group of hams from local clubs in Hawaii will operate a special event station to observe the 50th anniversary of the attack on Pearl Harbor. The call sign is as of yet undetermined.

Operations will begin at 1700Z on December 7 and continue until 1700Z on December 8. Activities are planned for the lower portion of all bands, all modes, including the Novice subbands.

For a commemorative QSL certificate, please send your QSL card, a 9×12 SASE, and six IRCs to Pearl Harbor Special Event, P.O. Box 788, Wahiawa, HI 96786. For further information, please contact Ann Shaver, AH6KY, at 813/867-2100. □

## Bill of Rights

The Westchester ARA will participate in the 200th anniversary of the Bill of Rights by sponsoring a special event station on December 13, 14 and 15 from 1700 to 2200Z.

Operation will occur on 21.290 (±) and 14.290 (±).

For a special Bill of Rights QSL, send an SASE to W2IEI, Saint Paul's Historic Site, Bill of Rights Museum, National Park Service, 897 South Columbus Ave., Mount Vernon, NY 10550. □

## Bill of Rights

The QSO Club of Pasadena City College's Electronics Department will operate club station W6BAB from 0000Z on December 14 to 2400Z on December 15 to conclude a series of campus events pertaining to the bicentennial of the Bill of Rights.

Frequencies will include 7.250, 14.250, 21.350, 28.450 and 25 MHz on CW. In addition to the bicentennial of the signing of the Bill of Rights on December 15, 1791, this operation will celebrate the sixtieth anniversary of the QSO Club. □

A special QSL card bearing the official logo of the Commission on the Bicentennial of the United States Constitution will be provided to all stations working W6BAB. Send QSLs with SASE to the QSO Club of Pasadena City College, P.O. Box 73, Altadena, CA 91003-0073.

## North Pole Steam Train

The amateurs of the Orange Empire Railway Museum will operate special event station KC6TKT and other calls on December 21 from 1900 through 2359Z to celebrate their annual North Pole Limited Steam Train operation. □

## Now it's time to say hello to all our company

Mickey Mouse spoke with fans from all around the world during the Disneyland Amateur Radio Club's (DLARC) international special event station, September 28 and 29. (A

The frequency will be SSB—28.340 MHz. For QSL, send an SASE to OERM, P.O. Box 548, Perris, CA 92572-0548. □

## Tournament of Roses

The Relay Repeater ARC will operate AA6YL December 28 through January 1 from the Wrigley Mansion in Pasadena, California, to commemorate the 103rd anniversary of the Tournament of Roses—103 years of the Rose Parade and 78 years of the Rose Bowl Game.

The station will operate from 1600Z to 0400Z each day on the following suggested frequencies: 14.260, 21.335 and 28.450. Amateurs in California and Nevada can contact the station on 2M via the club repeater 144.970/147.410 or on 147.21(+) or on 220M via the Condor Connection.

For certificate send QSL and a 9×12 SASE to Relay Repeater Club, P.O. Box 81, Arcadia, CA 91066. □

previously announced September 27 operation had to be cancelled at Disneyland due to technical difficulties.) The station operated in commemoration of Walt Disney World's 20th Anniversary. Joining Disneyland



Pictured with Mickey are DLARC members (clockwise from upper left) Russ Petersen, Gardner Harris, Paul Caraso and Theodore Fukushima.

### Personalized Skywave Propagation Programs

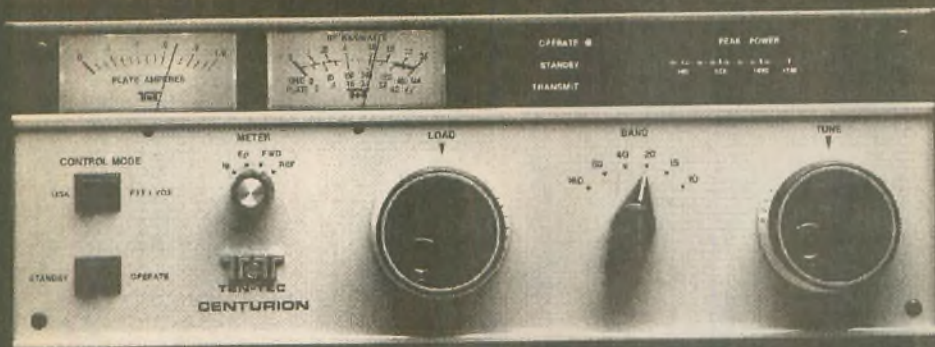
- Skywave Hourly Predicts SKYCOM 1.1 . . . \$39.95  
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  - World day/night Maps DX WINDOW . . . \$39.95  
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- For more info call (703) 255-6600 or SASE to:

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P.O. Box 939  
Vienna, VA 22183

were sister stations at Walt Disney World in Florida, Tokyo Disneyland and the Queen Mary and Spruce Goose Entertainment Center in Long Beach, California.

During the event, the four combined stations made approximately 6,000 contacts with Amateur Radio operators worldwide. Approximately 3,000 of those contacts were made by Disneyland, which reached operators in such far-flung locales as Spain, Tahiti, New Zealand, Hawaii and Japan. □





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One is Ideal for  
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# Centurion... The Classic Kilowatt!

**NEW!**

The Model 422 Centurion uses the classic pair of Eimac® 3-500Z tubes. The RF deck and power supply are combined into a single, attractively styled, desk top cabinet. The power output is rated at 1300 watts on ssb, 1000 watts cw and 650 watts using "key-down" modes. Drive required for full power ssb operation is 100 watts. The duty cycle is 50%.

Semi-break-in cw is achieved using a fast acting, non-vacuum, relay and the excellent QSK electronics used in the Hercules II. This system is also suitable for the fast switching digital modes. (For the "heavy duty" QSK cw operator, an accessory board is available incorporating a Jennings vacuum relay.) VOX ssb operation is silky smooth and virtually noiseless. This versatile control system assures compatibility with all exciters with amplifier control provisions.

A tube-axial fan is used for forced air cooling. Air flow is routed through the power supply as well as the upper and lower sections of the RF compartment. Air inlets and outlets are in the sides and top of the cabinet to optimize low pressure, low noise, air movement.

A dedicated meter for plate current, a multi-meter for plate voltage, grid current and forward or reflected power. A full time 10 element LED bargraph instantly displays peak power output.

The Centurion operates on all bands from 1.8 to 21.5 MHz. 21.5 to 29.7 MHz is enabled with the installation of an expansion board, supplied no-charge upon proof of licensed authority.

A tough, easy to handle, amplifier that doesn't really mind a little abuse. The Centurion is a great value.

## SPECIFICATIONS

**Band Coverage:** 1.8-2.0, 3.2-4.7, 6.5-10.3, 13.4-19.6, 17.6-21.5 MHz. 21.5-29.7 MHz after authorized modification.

**Input Power:** 2000 watts, maximum.

**Power Output:** 1300 watts ssb, 1000 watts cw. RTTY and SSTV 650 watts, 50% duty cycle.

**Drive Power:** 100 watts for full rated output.

**Efficiency:** 50-65%, depending on frequency and load impedance.

**Input/Output Impedances:** 50 Ohms, unbalanced. SWR <2:1.

**Distortion:** -35 dB from 1 kw rf output level.

**Harmonics:** -50 dB typical.

**CW Break-In:** QSK capable. Relay switching.

**Tube Complement:** Two Eimac® 3-500Z.

**Power Amplifier Circuit:** Class AB2, grounded grid.

**Plate Voltage:** 3100 volts, no load. 2600 volts, full load.

**Cooling:** Forced air with full chassis air flow.

**Metering:** Dedicated plate current meter. Selectable multi-meter for plate voltage, grid current, forward or reflected power. Ten element LED bargraph display for peak power indication.

**Front Panel Status Indicators:** Standby, operate, transmit.

**Primary Power:** 220-250 Vac @ 15 A. 110-125 Vac @ 30 A. 50/60 Hz. For full power operation, 220-250 Vac is strongly recommended.

**Circuit Protection:** Primary line fuses. Plate transformer primary interlock and high voltage shorting bar.

**Front Panel Controls:** Power on/off, standby/operate, control mode select (QSK-PTT/VOX), plate TUNE and LOAD, band switch, meter switch.

**Tune and Load Controls:** 6:1 vernier drives with calibrated dial skirts.

**Construction:** Aluminum chassis, front and rear panels, interior partitions and top and bottom covers.

**Size:** HWS 8.25" x 15.25" x 18.5". (20.3 x 38.7 x 46.9 cm).

**Weight:** 47 lbs (21.3 kg).



## Hercules II Solid State, No Tuning!

High tech simplicity, base or mobile. A compact, lightweight HF amplifier that offers a unique combination of virtues that can only be achieved using modern, solid state technology. Instant on, 12-14 Vdc operation, general coverage from 160 through 10 meters, no-tune operation and compact size. Add to that, lightning fast QSK cw, remote control, superb linearity and a low drive requirement. Outstanding!

The Hercules II is attractively styled to match our HF base station transceivers and will interface nicely with virtually all transceivers. The front panel includes an analog multi-meter for collector current, voltage, forward power and SWR. A ten element LED bargraph instantaneously displays peak power output. Band selection is either with the front panel switch or remotely via a rear panel connector. A front panel speaker is built in.

The internal heat sinks are air cooled by a temperature controlled tube axial fan. Whisper quiet in ssb operation, yet enough air capacity for cool operation in the key-down modes. The Hercules II is compact, good looking and generates a signal that is within one S-unit of the mighty Titan.

## MODEL 9420 115/230 VAC POWER SUPPLY



Housed in a separate utility enclosure and remotely controlled through the 6 foot power cable. 100 amperes at 13.7 Vdc is provided. 80 amperes for the amplifier and 20 amps for the exciter. An alternate power supply can be a heavy duty, deep cycle, lead acid battery and an automatic 10 amp charger. This low cost alternative power source will support the Hercules II during sustained amateur service.

## The Mighty Titan... Simply Unbeatable!



The Titan has it all! Maximum legal power with ease, all full power bands 160 through 15 meters (10 and 12 meters after authorized modification), lightning fast QSK for break-in cw and the digital modes and a two speed blower for quiet operation. This awesome performance from a desk top amplifier is made possible by the remote power supply and a pair of Eimac® 3CX800A7 ceramic triodes. The heart of the power supply is our own four core, tape wound Hypersil® transformer. This 41 lb behemoth is conservatively rated 2.5 kVa CCS (9.2 kVa IVS) and is nearly noiseless, even at 1500 watts output!

Other features include a front panel, peak reading wattmeter using an instantaneous ten element LED bargraph display. PTT/VOX or QSK control line select switch, built-in SWR meter and an "over-drive" warning LED. 3:1 vernier TUNE and LOAD controls in combination with an outstanding RF deck design, make the Titan a real "pussy cat" to load and operate.

The Titan is styled to match our transceivers but it interfaces beautifully, no matter what exciter you are using. If you are ready to choose your dream amplifier, the Titan has it all! Check it out.

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# Silent Keys

## A.L. Baughman, NM5A

A.L. "Junior" Baughman, NM5A, died on January 7, 1991, in Muskogee, Oklahoma. He was 69 years old.

Mr. Baughman, a lifelong resident of Okmulgee County, was a member of the Creek Indian Tribe. His QSL cards, which featured illustrations of a fire, a teepee and an antenna tower, read "From smoke signals to SSB."

He served in the Navy from 1942 until 1945, when he was given an honorable discharge. He is survived by his wife and three sisters, as well as many nieces, nephews, and friends. — *Information submitted by Leona Baughman.* □

## Harvey Beagle, KH6DXB (AB6DXB)

It is our sad duty to announce the passing of Harvey (Doc) Beagle, KH6DXB (AB6DXB), April 22, 1991. Doc was USARHAW (US Army Hawaii) MARS Director from 1956 to 1966. Under his management Army MARS made 10 quantum leaps forward in its operations.

He was a dedicated communicator and during the Vietnam crisis he was the prime mover getting the civilian MARS members in Hawaii to move thousands of traffic messages, with AB6USA as the gateway to the Pacific. Civilian members manned a communications van 24 hours a day, seven days a week outside Schofield Army Barracks.

Amateur and MARS radio lost a great friend and supporter. Doc was interred in Punchbowl Military Cemetery. — *Information submitted by Arnold Samuels, KH6COY (AB6COY).* □

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At a recent meeting of The Fifty Club in Los Angeles, Bert Ayers, W6CL, (left) demonstrated his spark gap transmitter. With him are Sandra Heyn, WA6WZN, Fried Heyn, WA6WZO (Southwest Division ARRL Director), Archie Willis, W6LPJ, and his wife, Rosemary. (Photo by Michelle Epstein, N6RFD)

## Bert Ayers, W6CL

Amateur Radio lost a true and enormously helpful friend on October 12 when Bert Ayers, W6CL, died at age 84 midway through the ARRL Southwest Division convention in Scottsdale, Arizona.

He'd apparently had a premonition. Bert had taken two long-time friends as his guests, Bill Driml, W6NAT, and Ray Furlong, W6QIL; as they disembarked the plane, Bert smiled and said, "We came here to have a good time and that's what we're going to do! Who knows, it may be my last convention." Other amateurs over recent weeks had heard subtle, similar comments.

As always at conventions, he was among many of his countless friends and admirers. After the Saturday evening entertainment, Bill and Ray accompanied him to his hotel room. Shortly afterward he was stricken and rushed to the hospital, where Sandi, WA6WZN, Fried Heyn, WA6WZO, and others stood by. He died of heart failure.

Over many years, Bert generously used the facilities of his Ayers Commercial Printing company near Long

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Beach to provide (at extremely low prices) all sorts of well-printed bulletins, director communiques, brochures, and convention announcements to amateur clubs of Southern California. For the upcoming 1992 convention in Los Angeles, he had already printed material.

Bert Ayers discovered Amateur Radio in 1923 as 6CL and soon put a spark transmitter on the air. He became proficient in CW, later taking on AM, FM, & SSB as well as teletype. A true pioneer, he once won a bet he could build a 2½ meter transmitter from scratch and be on the air in 15 minutes!

He belonged to many radio clubs, from the Old Old Timers down in seniority; he was a member of ARRL for more than 60 years. Archie Willis, W6LPJ, points out, "Bert was an honored member of the San Fernando Valley Amateur Radio Club, the Associated Radio Amateurs of Long Beach and no doubt several others. He was an expected friendly face at most ham gatherings."

Two years ago, Bert lost his helpful wife, Helen, but leaves two sons: Bert F. Jr. and Donald G. (Donald will carry on the print business.) Also surviving are three grandchildren and three great grand-kids.

At the final service for Bert, the eulogy was given by Nate Brightman, K6OSC, ending with a farewell to the usually smiling friend of amateurs: "Bert, 73 and diddley bump de bump." □





**Brenda  
Reagle-Harper,  
KB8JRL**

## STATION APPEARANCE

Send *Worldradio* a picture of your shack and the staff will choose a winner to receive a free one-year subscription! Stations will be judged by neatness (wires tucked away, etc.) and accessibility of equipment. Monetary value of equipment is not a consideration.

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

*This month's winner, KB8JRL, tells us about her modest station.*

My name is Brenda Reagle-Harper, KB8JRL. I am a Novice and have been a ham for almost nine months (as of January, 1991). My QTH is Fenton, Michigan.

I would like to thank you for giving us all a chance to show off our shacks, no matter how big or small they may be.

My modest station consists of a Uniden 2510 10M driving a Demco Deamon HF linear amplifier, ICOM IC-28H 2M and Hammarlund HQ145-X receiver. My TNC is an MFJ-1278; PC is a Commodore 64 with



**Brenda's station is small but growing.**

a 1541 disk drive. Tuner is an MFJ-986; mike switch is an MFJ-1272B and an MFJ-557 keyer.

Even though my station is still in the

growing stages, I especially like working DX on 10M, 1200 baud packet. I've made many new friends through DX packet. □

## 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*!

*This month's winner is Walter Andariese, W2WLJ, of Berlin, NJ.*

Some years ago, while operating mobile on a western tour, I discovered a unique transmitting situation.

Tuning 40M for a CQ and hearing a 5 from El Paso, I quickly responded — giving my call as "W2WLJ mobile 0," "W2WLJ mobile 7" and "W2WLJ mobile 5." Quite agitated, the 5 came back and asked what I was up to.

I explained that I was truly going through three call areas (and four states) every 20 seconds—as I rounded the Four Corners Monument in Colorado, Utah, Arizona and New Mexico.

*Holiday Greetings*

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# Product Review

## QRV-DX Halfsquare

TOM TORGERSON, N0MOP

Welcome to my first words written for *Worldradio* readers—a review of Antennas West's 17M QRV-DX Halfsquare antenna. This is the first of several articles in which I will review some of the available commercial "physically short and/or unique" HF antennas.

Many short wire antennas may seem attractive because of your space and/or price limitations, but in practice may not work well for you. Not only your lot size but the situation regarding power, telephone and cable lines, low or high water table, and weather (snow or no snow location) conditions need to be considered. The problem is, no antenna advertisement is going to give out unbiased information. I, however, having no vested interests in the companies, had no reason to be for or against any of the antennas. The results of using them in the real world, not the hypothetical world, was the test I was interested in.

The QRV DX Halfsquare is a 2-element, "vertical wire beam" antenna for one band (40, 30, 20, 17, 15, 12 or 10M) that is shaped like half a square and designed for DX work. Figure 1 is a diagram looking broadside at the antenna. The phasing line is a half-wave, and the two vertical sections are quarterwave lengths. The support points would be held up with rope or nylon attached to the antenna's already-installed insulators, at all key points top and bottom. As with most other antennas, try to get the antenna up as high as possible and in the clear.

The key ideas for the halfsquare have been around a long time. The "bobtail curtain" is as above, except it uses three vertical sections and is fed not at the top but bottom middle vertical. The curtain also requires a ground system to work against whereas the halfsquare needs none.

The two vertical elements radiate, while the horizontal section exhibits very little radiation because the phase of current flow reverses at its center, causing the radiation fields from each half to cancel each other at a distance. You end up with about 4dB gain broadside for the particular band you picked.

The whole wire antenna is made up of 41 copper strands twisted together to form the antenna sections; it is nearly impossible to kink. The strands are tinned to resist corrosion, and the whole is covered with a tough and slippery weatherproof casing. Thus it is a quiet antenna; no noise is generated

from uninsulated strands rubbing against each other. The insulation is rated at 2500V for everyone's protection against accidental rope breaks, support snaps, etc. The glass filled end insulators will withstand any legal power while still being lightweight. The above points all add up to good portable operations, Field Days, and other places where limited area is a concern.

No assembly is required, just unroll the connected wire sections. All the antenna needs is a convenient length of 50 ohm coax to your radio. The trickiest thing for me was determining where my two support points should be so that I would get signal concentration where wanted. I layed out the antenna both in and outdoors so I could judge distances to likely support positions, such as a tree or window.

way would have been using an obstacle free area for the outside installation.

Testing was done in a four-day span, covering day and night operations. It certainly lives up to the stated "broadside" effect; nearly all contacts were in that plane both indoors and outdoors. Using the matcher I poured from 100 up to 500W, key down, into it with no problems.

I could usually keep making contacts until about 1 a.m. CST with this antenna. I hadn't worked so much DX in a long time. Though I didn't "go for blood" trying to outdo every beam I heard being used, I can say that it was just easier to hear and work DX with it than with my other L and vertical antennas.

The vertical sections have to be at matched angles for the best gain to be enjoyed. Since there are two directions

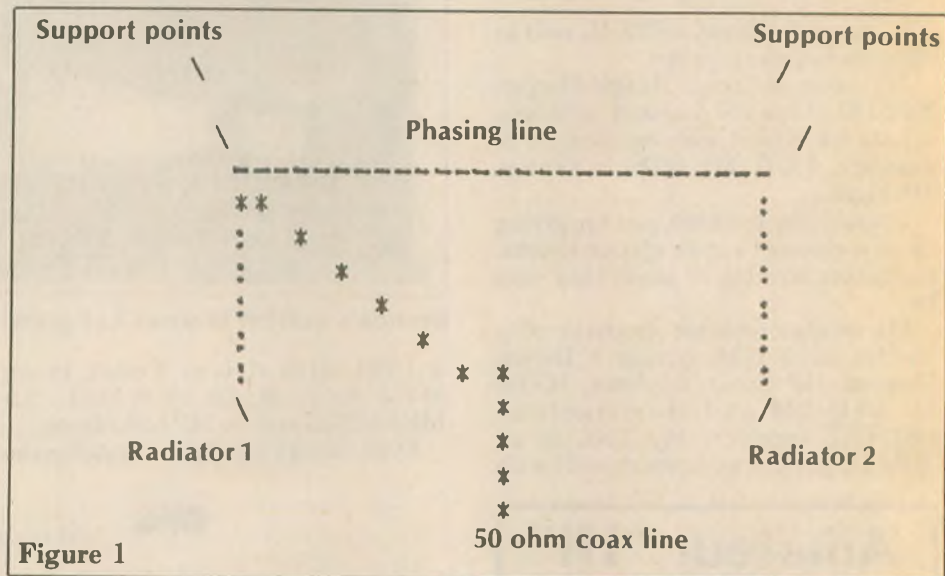


Figure 1

Inside the house I played around with the ends by moving and bending them around, and found a flat 1:1 SWR position. Shortly thereafter was my first contact: a California SSB QSO. Outside the house, due to the proximity of objects like water spouts, I used it at a 2.75:1 SWR with no complaints from the 100W solid state transceiver. Later I did put in line the Ten-Tec 238 antenna matcher and brought the SWR down to 1:1. This was done just to make me feel better, and test the antenna with high power—a better

automatically beamed out, there is no reason not to put up two of them at right angles to each other for a four direction gain antenna. Again considering how near I was to the ground, I can hardly wait to see what difference getting it above ground a few feet will do. Anywhere from 10 to 30 feet from the bottom point of the verticals to the ground should really make it sing, considering how well it did while under my "stress test" conditions.

Fixed or portable, you can't argue with an antenna that's well constructed, already assembled, useable on bands other than the primary "gain" band, includes good instructions and background information, has about 4dB gain broadside, and is offered at a give-away price (\$49.95 for the 17M version) compared to regular beams.

For further information or antenna prices for other 40 through 10M bands, contact Antennas West, 1500 North 150 West, P.O. Box 50062, Provo, Utah 84605; 801/373-8425. □

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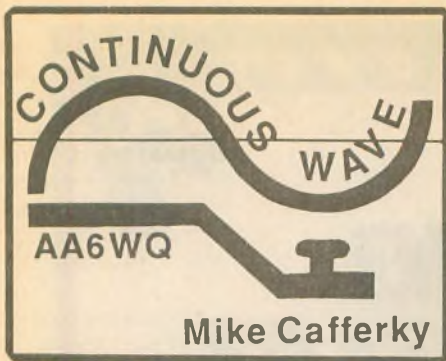
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### A Christmas story in code

Bill Harley, KN6TR, twirled the VFO knob on his old radio as he waited for the finals to warm up. He wondered if he would remember the code well enough to have a QSO. It had been four years since he had used the key and at least two, no, more like three years since he had been on the air.

"Guess I better get up to the Novice part of the band for a bit," he thought to himself. He snorted as he heard the sounds of a broadcast station filling up a wide space. Some things never change. Except for the QRM, the band was quiet.

"Well, here goes." He pressed on the dusty knob of the old key. "QRL?" He sent. The meter flicked full scale but no answer came back. "QRL?" He sent again. Still no answer. "V V V CQ CQ CQ DE KN6TR KN6TR KN6TR K." Bill waited for a response. "CQ CQ CQ DE KN6TR KN6TR KN6TR CUCAMONGA K." Still no response. He remembered that sometimes it takes a while to get a contact.

While he waited Bill picked up his old log book and leafed through a few pages. Regrets of having been off the air for so long filled his mind. The log represented many friends, their voices he never heard, but their fists were a pleasure to copy.

"KN6TR KN6TR DE KC6HSF KC6HSF K."

Lost in thought about his life Bill didn't recognize the audio tones coming from his radio.

"KN6TR DE KC6HSF K." The call came again in slow, measured tones.

Bill jumped in his chair. The unexpected call startled him. "KC6HSF DE KN6TR KN," Bill sent.

"KN6TR DE KC6HSF TNX FER CALL BT BT UR RST RST 579 579 BT BT QTH QTH IS LOS ANGELES LOS ANGELES BT BT NAME NAME LINDA LINDA BT BT HOW COPY OM? KN6TR DE KC6HSF KN"

Bill smiled. Now was his chance to give a Christmas Eve greeting himself, and this time to a Novice operator. He threw the switch.

"KC6HSF DE KN6TR R R. FB LINDA TNX FOR THE CALL. UR

RST IS 589 58N HERE QTH IS CUCAMONGA, CA CUCAMONGA, CA. NAME IS BILL BILL. A VERY MERRY CHRISTMAS TO YOU AND TO YOUR FAMILY. HOW COPY? KC6HSF DE KN6TR KN" Bill put down his pencil and prepared to copy in his head. The worn leather chair creaked as he leaned back to enjoy the relaxing rhythm of the code.

"DE KC6HSF R R BILL, GOOD COPY HERE. TNX ES VERY MERRY CHRISTMAS TO YOU, TOO. WHAT DID YOU GET FROM SANTA? DID YOUR FAMILY OPEN GIFTS YET? BK"

Fine code for a novice, Bill thought to himself. The switch clicked again and his paddle tapped out its own rhythm in response.

"DE KN6TR. R R LINDA. WELL, I LIVE ALONE, LINDA. THERE WEREN'T MANY GIFTS TO OPEN HERE TONIGHT. I GOT A NEW LOG BOOK FROM A FRIEND AND A NEW BOOK WHICH I BOUGHT FOR MYSELF. HOW ABOUT YOU? BK"

"KN6TR DE KC6HSF. R R BT BT BT FB. I COPY ALL. BT BT BT BT I HAD SOME GIFTS FROM THE OFFICE, A NEW PURSE FROM A FRIEND, A COFFEE MUG FROM THE BOSS, WE ALL GOT MUGS, HI HI. SO, BILL, YOU DON'T HAVE ANY FAMILY, BILL? SOUNDS KIND OF LONELY. DE KC6HSF KN"

Bill sat up in the chair and paused before he put his hand on the paddle. Yes, he had to admit he was lonely. For a split second he remembered his wife who had always made the holidays a big occasion. He remembered his daughter trimming the Christmas tree for the first time.

"KN6TR DE KC6HSF BT YOU STILL THERE, BILL?"

Bill jumped again and threw the switch. "VV BT KC6HSF DE KN6TR R R, SORRY LINDA, PHONE CALL. OK NOW. MY XYL DIED 4 YEARS AGO AND MY DAUGHTER MOVED OUT, SO I CAME OUT HERE. GUESS BUDDIES ARE WITH THEIR FAMILIES TONIGHT, HI HI BT BT BT DO U HAVE FAMILY? BK"

"BILL, DO YOU NEED TO TALK ON THE PHONE? BK"

"NO, NO. SHORT PHONE CALL, HI HI. BK"

"OK, HI HI. NO, I DON'T HAVE FAMILY HERE IN L.A. AREA ANYMORE. I HAVE DINNER WITH A FRIEND TOMORROW. BK"

"R R. FB, LINDA. IM GLAD YOU HAVE SOMEONE TO BE WITH ON CHRISTMAS DAY." Bill was impressed with Linda's freedom to move into "conversational CW" so quickly. "CONGRATS ON YOUR NEW LICENSE, LINDA. WHEN DID YOU GET IT?" KC6HSF DE KN6TR K"

"DE KC6HSF R R. TNX BILL. I GOT MY TICKET LAST WEEK AND BORROWED THIS RIG. I HAVE 3 DX CONTACTS ALREADY, HI HI. BK"

"DE KN6TR R R. FB LINDA. HOW DID YOU GET INTERESTED IN RADIO? K"

"R R. MY DAD USED TO BE A HAM AND I USED TO WATCH HIM OPERATE WHEN I WAS LITTLE HI HI. BK"

Bill's mind flashed back to the time when his daughter used to climb up on his lap and watch him operate. She was so curious about all the buttons on the radio. "R R, FB LINDA, YOU SURE HAVE A GOOD FIST FOR A NOVICE. BK"

"R R. TNX, BILL. DID YOUR DAUGHTER GET HER TICKET? BK"

"NO. BUT SHE LIKED RADIO. MAYBE SOME DAY SHE WILL GET HER TICKET. HI HI BK"

"R R. HOPE SO. I AM REALLY ENJOYING RADIO. BT BT BT SAY BILL, IS YOUR DAUGHTER COMING OVER FOR CHRISTMAS DINNER? BK"

"NO. BT BT BT WE ARE NOT ON SPEAKING TERMS THESE DAYS." Bill's face saddened as he thought of the day his daughter moved out of the house. A tear channeled down the side of his nose. He didn't realize the radio was silent. Almost a minute passed when he heard a carrier tuning up on frequency. Quickly he threw the switch again. "KC6HSF KC6HSF DE KN6TR KN6TR. YOU THERE, LINDA? K"

"DE KC6HSF BT BT BT SORRY, BILL. BT BT STILL HERE. BT BT BT BT. QRM QRM NOW. BILL, I MUST QRT. ARE YOU GOOD IN THE CALLBOOK? I'LL SEND YOU A QSL. BK"

"NO. NO. I MOVED. NEW ADDRESS NOT IN BOOK. HOW COPY? BK"

"R R. FB BILL, GIVE ME YOUR LAST NAME AND ADDRESS. QRM GETTING BAD HERE. ILL SEND YOU A QSL CARD. OK? BK"

"R R. WILL BE A PLEASURE TO GET YOUR CARD, LINDA. NAME HERE IS BILL HARLEY HARLEY.

(please turn to page 55)

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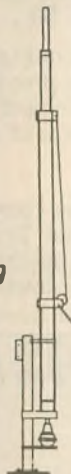


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# DX WORLD

**John F.W. Minke III, N6JM**

6230 Rio Bonito Drive Carmichael, CA 95608

## Activities Calendar

- 8-10 Nov. 59 Japan International DX Contest (SSB)
- 9-10 Nov. DARC European DX Contest (RTTY)
- 23-24 Nov. CQ World-Wide DX Contest (CW)

Refer to your favorite contest section in *QST* or *CQ* for details on the above contest activities.

## W100N

We received no applications for *Worldradio's* Worked 100 Nations Award during this past period. Incidentally, you may mail the applications directly to me if you prefer: P.O. Box 310, Carmichael, CA 95609.



**Lookin' great in 1989, age 93.**

posed for his photo in the mountains. Ron Faulkner, W6TUR, who provided these photos, worked Richard in August 1990. He was 94 years of age.

## Albania (ZA)

According to *QRZ DX* the crew at ZA1A had logged more than 71,000 contacts by October 6. This operation surely moved Albania way down on the most wanted list from the number

one spot. We assume that most of you worked ZA1A. I had called a few times on 20M CW and noticed the split button was not depressed on my rig. Then I got him on the first call. My apologies to anyone I QRMed. And, to the self-appointed policemen—ssptt!

As of this writing there are two other calls presently active, ZA1HA and ZA1QA. Evidently, the demand has been so reduced that these stations are operating transceive and not the usual split operation.

Of course, this is only the beginning. As reported in *DX News Sheet* Albania nationals will receive calls beginning with ZA1T, with 12 students already licensed as ZA1TAA through ZA1TAL. All others will receive calls beginning with ZA1Z. The calls ZA1A, ZA1DX, ZA1HA and ZA1QA are exceptions.

The QSL routes for ZA1A, ZA1HA and ZA1QA are listed later in this column. ZA1HA was also giving HA6KNB as his QSL route, which differs from the original route given. ZA1A often gave W6OAT as a route. However, this applies only for cards to be sent and returned via the bureau. Do not send cards direct to W6OAT.

## French Polynesia (FO)

We have a few calls reported for this one. Checking the 20M band we have the following:

FO4DL	14.236 MHz	0345 UTC
FO4DZ	14.236 MHz	0430 UTC
FO4NS	14.010 MHz	0745 UTC
FO5DV	14.029 MHz	0445 UTC
FO5EX	14.194 MHz	0430 UTC
FO5IV	14.020 MHz	0715 UTC
FO0IGS	14.194 MHz	0900 UTC

On 15M the following were reported:

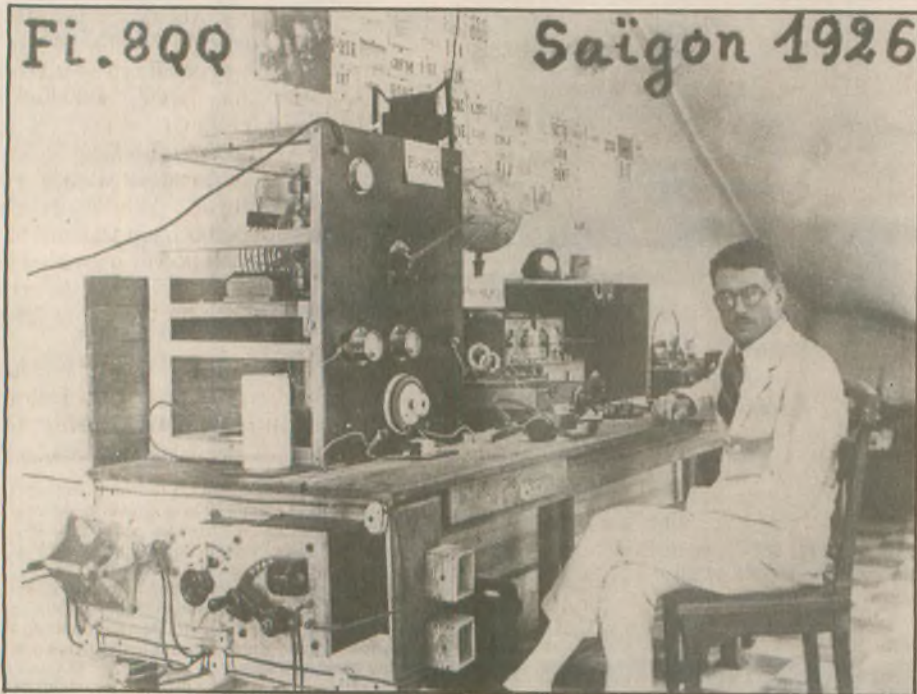
FO4DL	21.300 MHz	0215 UTC
FO4DM	21.300 MHz	0230 UTC
FO5CS	21.289 MHz	1015 UTC
FO0SOS	21.279 MHz	0330 UTC

Other band activity included FO4DL on 28.439 MHz at 0030 UTC and FO0IGS on 18.140 MHz at 1300 UTC.

## Mongolia (JT)

If you happen to work JT1BV you have worked 23-year-old Mongol Naranbaatar. He is a third-year student of the Polytechnical Institute in Irkutsk city, located within the Soviet Union. Naran entered the Amateur Radio hobby three years ago and operates all bands, 80 through 10M, both CW and SSB. He uses a homebrew transceiver running 100W with antennas that include a sloper for 80M, a dipole for 40M, ground plane for 20M, a 3-element Yagi for 15M and a 2-element quad for 10M.

Naran presently has 165 countries confirmed and enjoys the DX nets that include the W7PHO Family Hour and others. These spots included 14.162, 14.197, 14.236 and 14.250



**Richard James, F8QQ, possibly the oldest active amateur in France.**

The young man here is Richard James, F8QQ, who claims to be the oldest Amateur Radio operator in France. He had operated as FI8QQ in Saigon from 1924 to 1931, which at that time was part of French Indo China. He maintained almost daily contacts with noted French, British and US stations of the time.

Sixty-three years later Richard

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MHz in early September. When not at home in Ulaanbaatar, he can be found operating as JT1BV/UA0S from Irkutsk (oblast 124).

Other activity from Mongolia includes the following by bands:

JT1AS	14.007 MHz	1430 UTC
JT1BG	14.195 MHz	1500 UTC
JT1BH	14.004 MHz	1500 UTC
JT1BS	14.026 MHz	0000 UTC
JT1CS	14.019 MHz	2330 UTC
JT1KAA	14.012 MHz	1145 UTC
JT1T	14.175 MHz	0000 UTC
JT7AA	14.187 MHz	0215 UTC

If you need this one on 15M look for the following:

JT1AS	21.277 MHz	1300 UTC
JT1BG	21.243 MHz	0215 UTC
JT1BS	21.245 MHz	2315 UTC
JT1BY	21.267 MHz	1145 UTC
JT1KAA	21.005 MHz	0715 UTC
JT1KAI	21.222 MHz	0630 UTC
JT5AA	21.011 MHz	0145 UTC

On the WARC bands JT1CD has been reported on 18.070 MHz at 1300 UTC and 24.897 MHz at 1030 UTC. And there have been a few non-Mongolian types operating with reciprocal calls including JT1/KC7V, JT1/K5VT and JT/UA6EUT. They have not been heard from since early September.

### Belize (V31)

Most of the activity from Belize occurs during the DX contests such as the recent multi-op V31X entry in the CQ World-Wide bash. However, other activity does show on the bands during non-contest periods, such as V31SW, who was worked on 12M near 24.955 MHz around 0015 UTC in mid-September. The operator, Scotty, AE6U, also worked CW as he was worked on 15M around 0200 UTC on 21.005 MHz at the end of August.

Two other calls were reported, both of them on 10M. V31RA was reported on 28.360 MHz at 2245 UTC with V31SM on 28.308 MHz at 2345 UTC.

### Hong Kong (VS6)

Long Skip reports that VS6CT was to be active on 10M near 28.480 MHz for two hours each Saturday from 0000 to 0200 UTC during the month of October. We did hear him here in California but didn't make note of it.

Several calls were reported from Hong Kong on 20M recently that included the following:

VS6BG	14.022 MHz	1345 UTC
VS6BI	14.020 MHz	1230 UTC
VS6UW	14.002 MHz	1100 UTC
VS6VC	14.026 MHz	2300 UTC
VS6VO	14.026 MHz	1230 UTC
VS6WV	14.191 MHz	1330 UTC

With the winter season approaching you will have a chance to work this one on the lower frequencies, as VS6VO was found working into Europe on 3.798 MHz at 2200 UTC. On 40M VS6JV was reported with a signal into Japan on 7.000 MHz at 2130 UTC,

and VS6WV was on 7.008 MHz at 1045 UTC the end of September working the Midwest.

A check on the WARC bands found the following activity:

VS6BG	10.104 MHz	1045 UTC
VS6WV	18.082 MHz	1830 UTC

And the remaining calls reported included the following:

VS6DV	28.020 MHz	1000 UTC
VS6EF	28.485 MHz	1030 UTC
VS6/N200	21.025 MHz	0230 UTC

### Vanuatu (YJ8)

During this past month or so only three calls were reported from Vanuatu. These included YJ8AB on 14.228 MHz at 1900 UTC working into Japan, YJ8RN on 14.226 MHz at 1200 UTC and again on 28.495 MHz at 2230 UTC, and YJ0NX on 10.105 MHz at 2200 UTC, also working into Japan. Perhaps this is a good one to consider for a future contest DXpedition. Gary Stilwell, KI6T, went out there several years ago and, if I remember correctly, took Oceania for his efforts. Gary is a former *Worldradio* DX Editor, then W6NJU.

### I O T A

The following is a selection of what has been on the bands during September and October.

AF-054 Mafia Island	5H3OH/A
	21.260 MHz 1800 UTC
AS-039 Komandorskiye Island	EZ0Z
	21.260 MHz 0000 UTC
AS-059 Sparaf'yeva Island	EK0I
	14.033 MHz 0445 UTC
AS-066 Sea of Japan group	EZ50PQ
	21.260 MHz 1045 UTC
AS-081 Jodo Island	HL0BLA
	21.263 MHz 0915 UTC
AS-083	UA9K/RA9LI
	14.260 MHz 0500 UTC
AS-092 Kosomeechkyn Island	4K4/EK250RA
	14.260 MHz 0430 UTC
EU-079 Soroyane group	LA4MEA
	14.260 MHz 0600 UTC
EU-084 Lindingo Island	SM0DRB
	14.260 MHz 0445 UTC

EU-105	FD10GG/P
	21.260 MHz 1730 UTC
EU-130 Grado Island	IV3BLQ
	14.260 MHz 0600 UTC
EU-133 Kotlin Island	UV1AD
	14.260 MHz 0400 UTC
EU-146 Schouven Duiveland	PA3EVA
	14.260 MHz 0530 UTC
EU-154 Buda Island	ED3IB
	14.260 MHz 0330 UTC
NA-041 Wrangell Island	AL7NI
	14.259 MHz 0500 UTC
NA-056 Pinos Island	CO4QH
	14.259 MHz 0330 UTC
NA-091 Malcolm Island	VE7APR
	14.260 MHz 0145 UTC
NA-158 Fire Island	AL7HS/KL7
	14.259 MHz 0415 UTC
NA-160 Cayos Cochinos Island	
HR3/K5MK	21.020 MHz 0145 UTC

It seems that more and more DXers are discovering the IOTA Program. You might be interested to know there are several IOTA island groups right in your own back yard. Several years ago many of the Canadian VE8 calls were active and several were island calls. Get out those old VE8 QSL cards and check them out. You could have an island group already confirmed. We have been busy checking ours out. However, some of these were close, but don't count. Two in particular were W1LXE/VE8 and W3DNY/VE8 from the early 1970s. These two calls were from the Dewline Station at Foxe Maine, near Hall Beach on the Melville Peninsula.

Several IOTA types have headed off on DXpeditions, such as Jerry, AL7HS, who recently chartered an aircraft in Anchorage and flew to Fire Island, which is located within the Cook Island group. While on the island, they operated from the end of a gravel airstrip with power provided by a 2000W generator—all this to give IOTA types another island to their collection.

*DX News Sheet* reports that OH4ML/H44 was active from Kolombangara Island (OC-149), during Oc-

## "Where Do We Go Next?"

New book by OH2BH, now a DX author!



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

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

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

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

Sense the heat and excitement of being at the production end of that pileup that you once worked for a new one. Go to Jarvis Island and Conway Reef with today's prominent DXers and examine the profile of "a complete DXpeditioner" as Martti depicts the people with whom he was traveling to all those rare spots.

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

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

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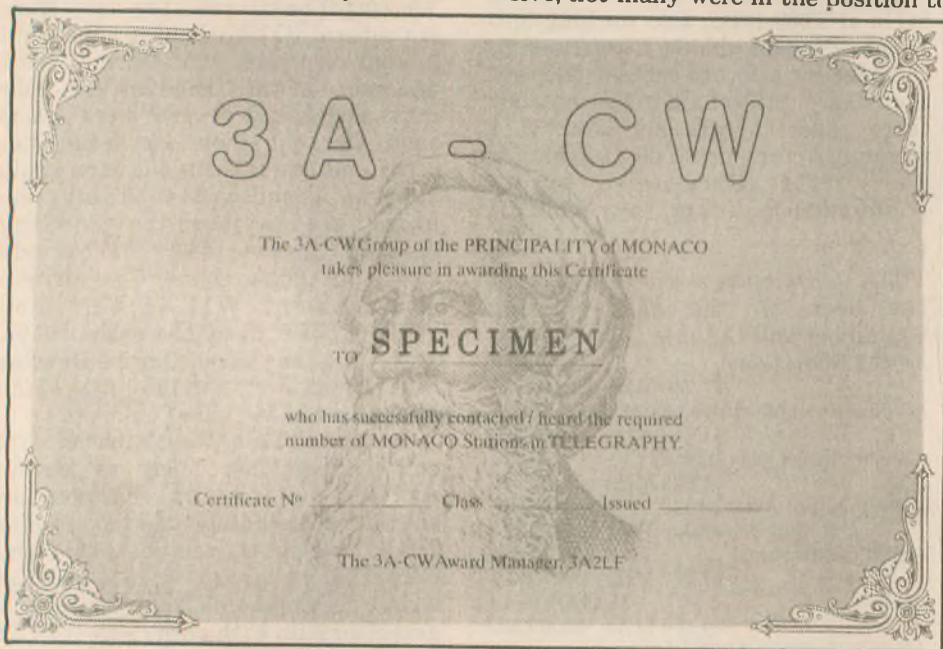
tober 1989. Check your logs for this one.

Look for 9M2NA the latter part of November, including the World Wide DX Contest. This station will be operating from Labuan Island (OC-133).

Fraser Island (OC-142) was to have been active during the first part of November by members of the Hervey Bay Amateur Radio Club signing VK4CHB. This is the same group that had recently operated the special event call of VI4HBW, and the QSL address is the same.

### 3A CW Award

There is a new award offered by the 3A-CW Group for working stations in Monaco via two-way CW. All contacts must be made since January 1, 1981.



Each station worked counts one point and the station may be worked more than once, provided it is on a different band. If you work 3A0CW, 3A2ARM, 3A200SM, 3A7A, 3A8A, 3A9A or 3A7JO, you may claim two points, but only once.

The award is issued in three classes: Basic, two points; First Class, four points, and Excellence, six points. Points for the above classes are double for Europeans.

To apply for this award send log data (certified by your national awards manager, or by an officer in your local CW club) and include an \$8 fee (or 20 IRCs) to: Claude Passet, 7 rue de la Turbie, MC 98000 Monaco.

The 3A-CW Group also sponsors the Principality of Monaco (PMA) and Worked All Small European Countries (WASEC) awards.

### WPX

The new address for the WPX Award, sponsored by *CQ Magazine*, is 880 CR 13, Clovis, NM 88101. The

manager is still Norm Koch, K6ZDL, who has moved from southern California.

### W6AM

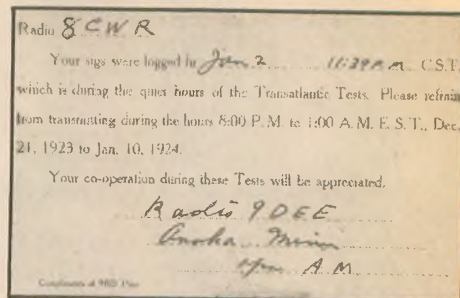
Last month we mentioned Jan Perkins' book on the life of Don Wallace. This is truly a must for all, whether you are new to the hobby or an old-timer. Jan brings you back to the early days of Amateur Radio when Don Wallace first got started back in 1911. Read about this famous DXer who was an Amateur Radio leader from the very beginning.

Many old-timers will enjoy the nostalgia of the days they were on the air. Remember the beginning of the crystal-controlled rigs that eliminated the drifting? As crystals were expensive, not many were in the position to

met him, or has even heard of him. Yes, the rhombic farm is in there!

### OOPS!

This little item could be considered part of the summary of the Don Wallace book.



Bob Baird, W9NN, submitted this little gem for our enjoyment, which dates back to the 1920s. It is self-explanatory and might be considered an early 00 notice. Bob writes, "I'm entrusting you with a card that is very special to me. As a smart-ass kid in Dayton where I started on spark in 1920, this card showed me how much I had to learn. I was ashamed to show it to the other kids!"

Don Wallace was involved with the trans-Atlantic tests with several of his classmates at the University of Minnesota with radio 9XI. We wonder if Don heard this young kid signing 8CWR?

### DX logbook

Tony Japha, N2UN, sent us a copy of his latest DX Logbook, an up-to-date paper record book. Although the logbook is designed for DXers who don't have access to a computer, it is also useful to computer users as a hard copy backup or substitute for times when the computer is not available.

The DX Logbook provides space to record contacts on 12 bands or modes with all DXCC countries, CQ zones and US states. Extra space is available for new DXCC countries as they are added. The record book is printed on heavy stock with spiral binding.

The first page includes instructions as to how to use the DX Logbook, followed with 18 pages of DXCC countries. The last page of this series includes space for deleted countries. Following the DXCC countries segment, there are two pages for the WAZ activity with record keeping for the 50 states at the end.

The DX Logbook is available through Amateur Radio dealers for \$6.95. If no dealer is available we suggest you write directly to Xantek, Inc., P.O. Box 834, Madison Square Station, New York, NY 10159; telephone 212/673-7646. Tony is well-known for his DX Edge, which is available in both a hard package and a computerized version and is still

have a large selection of crystals—thus the saying after a CQ: "now tuning the band." And that wasn't that long ago either.

There are several other old-time amateurs who are mentioned in this book and some of their exploits as some of them parallel Don's accomplishments. From reading this book it is evident that Jan Perkins had been planning its writing for some time. There are numerous quotes made by Don throughout. Be sure to order your copy today. See last month's column for ordering information. Believe us, this book is for everyone who has ever worked Don,

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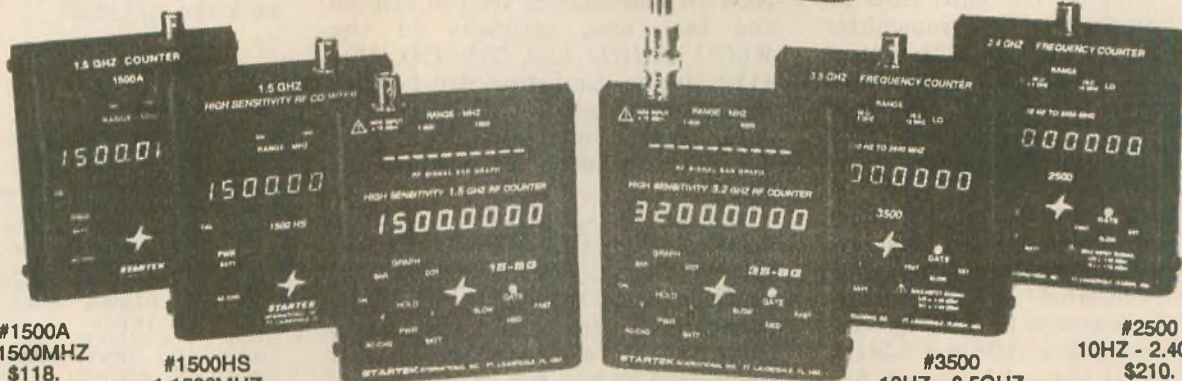
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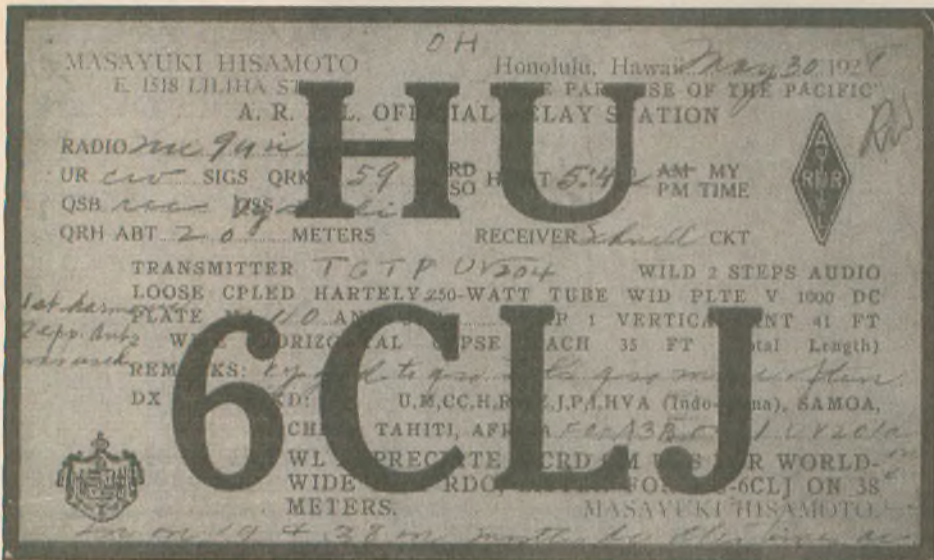
TERMS: Shipping-handling charges for Florida add \$4 + tax, US & Canada add 5% (\$4 min, \$10 max), all others add 15% of total. COD fee \$4. Payment by VISA, MC, DISCOVER, COD for CASH or M.O. Prices & specifications subject to change without notice or obligation.



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### Antique QSL

The following QSL card dates back many years and comes from the collection of the late Roy Weisbach, W9UX, and was provided by Bob Truhlar, W9LNQ.



The contact was a 20M QSO back on May 30, 1928, with Masayuki Hisamoto of Honolulu, who was signing HU6CLJ. Roy at the time was signing NU9UU. The QSL card indicated that the HU6CLJ transmitter was using a UV204 tube with a plate voltage of 1000V and drawing 110mA. His antenna was a Zepp. Those were the days when a QSL card included much data of the station during the contact.

We had a few responses regarding the pre-war Japanese radio amateurs in our September column. John Gerig, W6NHU, informs us that Suzy, JH1WKS, is now a Silent Key. She was licensed back in 1933 and held the call J2IX until the war broke out. She was 84 years of age.

Al Miller, VE7KC, a contributor to our column several years ago, reports that he has sent Taroh, JH1WIX, his

old J2GX QSL card that Al received back in 1938 for the QSO they had, plus the photo of his shack. Incidentally, that was common practice in those days to include a photo with the QSL card. Al also sent one of his former VE5KC cards (British Columbia was the fifth call area in those days).

the *Callbook* as on St. Pierre. This also brings up another point regarding those two-letter Canadian suffixes: The Canadian government is quick to re-issue calls to others after they have been turned in or the original holder becomes a Silent Key.

### QSL Information

*DX News Sheet* reports that the June DXpedition of D2ACA should be in the mail by November.

Valery Sushkov, UA3GPA, offers express QSL service for QSL cards to the Soviet Union. No price was quoted, but for an SASE information is available from Valery at P.O. Box 3, Lipetsk, 398000 USSR.

### Miscellaneous

Igor Gumilevsky, RW3PW, offers any Amateur Radio operator who establishes a contact with him the opportunity to obtain a souvenir of the Soviet Union for seven IRCs.

According to *DX News Sheet*, UK Novice operator Mike, 2E0AAD, called CQ running only 3W from a homebrew rig and was answered by Apollo, SV2ASP/A. That must have been quite a thrill for a newcomer to Amateur Radio. See? You don't necessarily have to get on a list to work the rare stuff.

### QSL Help

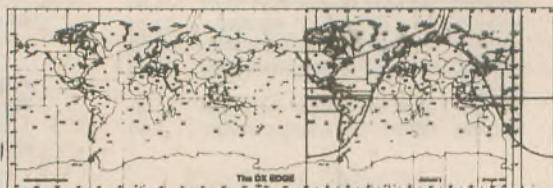
Bob Williams, W9NIP, is looking for some help in obtaining QSL cards for the following calls: ET1N, TZ6DH, XU4XA and Z21HS. We can help on the last one, courtesy of the *W6GO/K6HHD List*. Try P.O. Box 4110, Harare, Zimbabwe. Any help for Bob on the others? He didn't give any dates of the contacts, which should always be included, or at least the year.

Malcolm Swan, AB4PW, needs a valid route for CE0ZZZ. We checked with the famous *W6GO/K6HHD List*, which gave the following: Pedro Barroso, P.O. Box 13312, Santiago, Chile. Malcolm also said that the QSL route to VE1KN for FP9SPM was returned, marked "address unknown." We are not familiar with the FP9SPM call, but most likely the route was via VE1KM, who is listed in

### QSL Routes

A35XJ	-KE6XJ	RF6Q/UL7LS	-UL7LS
AA5K/NH0	-JH4WEE	RH2E	-DF7RX
C6AFQ	-K1TN	RJ4X	-UJ8JMM
C6AFT	-AA6NT	RO6/RB5FF	-DF8BK
C9RAA	-DK7PE	RX3ARM	-RA3RQT
C9RZZ	-SM7DZZ	S21NQ	-W4FRU
	(see note 1)	S79HX	-IK2BHX
CM2VS	-CO2VG	SK8ZZB	-SM6NM
CS0T1	-CT1AHU	T20WW	-NW3W
CT3M	-CT3BX	T20XV	-VK2BCH
D68RH	-KE3A		(see note 3)
ED31B	-EA3KK	T48C	-CO8RCB
EJ2VLP	-DK7UY	TA4/K6KH	-K6KH
EL2CE	-WB2VFH	T12/N9IUO	-WA9BXB
EN50PQ	-UA1ZO	TJ1FN	-I2RRJ
EX1FAL	-UF6FAL	TJ1PD	-N5DRV
EZ0Z	-UY5XE	TL81M	-AC3D
FQ9R	-F9RM	TM1LAW	-F1LAW
FT4YD	-FD1NZO	TT8SA	-6FNU
FW/AA7AF	-WA6ZTF		(see note 3)
FY5FP	-ON4ZD	TU2XR	-KE0LS
HB0/HB9NL	-HB9NL	U100CC	-RT4UF
HC7SK	-SM6DJK	US8R	-UB1RR
HL9AA	-N2JNZ	UX5HQ	-UB4ZWA
HP2CWB	-N4YWY	V31X	-VK2LL
HS0AC	(see note 2)	V47KP	-K2COX
HS0E	-K9EL	V47NS	-W9NSZ
HS0ZAA	-KM1R	V63DX	-JH7HMZ
I2S2	-IK21WU	V85CJ	-G3ORC
J40HS	-DJ8MT	VK9YJ	-VK3AWY
J80D	-W8KFF	VK0KC	-VK4BB
JU1JA	-JA1UT	VK0LL	-VK2LL
JU1SU	-UA4WA	VP25EQ	-KC8JE
JX9EHA	-LA2T	VP8GAV	-GM0LVI
KG4QQ	-W9QQ	VP9AD	-W3HNK
KH2S	-JH4RHF	VS6VO	-N200
KP2A/KP5	-WA2NHA		(see note 4)
KS7G/KL7	-KL7TG	WB2CHO/C6A	-K1RH
LX9DX	-LX1EA	X031G	-VE31G
NP2N	-W0ANZ	XV3UU	-RA3AUU
OH0/SM0FWW	-WA4JTK	XV9MA	-UA9MA
P40T	-K4PI	XW5AHH	-JA5AHH
P40V	-A16V	XX9AW	-KU9C
P40W	-N2MM	YE2T	-YB0PR
PA3EVA	-LA3HY	YE3T	-YB0PA
PJ1B	-K2SB	YE0T	-YB0PR
PV1Z	-PY1NEZ	YJ8RN	-N9DRU

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# DX Prediction — December 1991

YJ0ARW	-ZL1AMO	4U1UN	-W8CZN
YN1CB	-WX5L	5B4BCC	-DL4MEH
ZA1ZMX	-F7EXV	5H3OH/A	-OH2QQ
ZA1ZVX	-F6EXV	5H3RA	-JA3PAU
ZA1ZVW	-F6EXV	5V7JG	-F6AJA
ZF2JR	-N6RJ	5W1JW	-ON4QM
ZF2NT	-N4YBF	5W1YA	-W6YA
ZK1QX	-SM5BOQ	5Z4BH	-KE3A
ZK1XC	-K6PBT	6I2A	-XE2KB
	(see note 5)	7J3ABO	-KR8JMN
ZK1XP	-JA1OEM	7Q7BW	-N5MHZ
ZK2OQ	-SM5BOQ	7Q7BX	-N5MHZ
ZK2XD	-W6YA	7X5ST/3V	-FE1NKC
3B8CF/3B7	-3B8CF	8P9X	-K4FJ
3D2HA	-J11NJC	8P9Z	-K4BA1
3D2MD	-ON4QM	8Q7DA	-DL3RBF
3D2NO	-J11NJC	8R1VMB	-SP5DYO
3D2RW	-ZL1AMO	9H3NT	-G3XSN
3D2ST	-J11NJC	9H3NU	-G4CVZ
3D2SY	-J11NJC	9H3NW	-GW4AMX
3D2TR	-J11NJC	9J2BO	-W6ORD
3D2Y1	-J11NJC	9J2HN	-JH8BKL
3D2YN	-J11NJC	9J2SZ	-SP8DIP
3W/4K2OT	-UB1KA	9K2LX	-ON7LX
4D9CI	-DU6BG	9M2FK	-YU1HA
4J3GM	-RG6GM	9M2ZU	-W4LRE
4K1AFM	-UA1AFM	9M6NA	-JE1JKL
4K2MAL	-UA4RC	9M8AJ	-AA5AZ
4K4ZI	-K4RK1	9Y4H	-K6NA
4K4/EK250RA	-UA90BA		

Maximum Useable Frequency from West Coast, Central U.S. and East Coast (courtesy of Engineering Systems Incorporated, Box 939, Vienna, VA 22180).

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

## WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
10	(14)	*16	*19	(12)	18
12	(14)	*15	*18	(12)	18
14	(23)	*15	*18	(12)	34
16	(29)	*15	*26	(17)	*42
18	31	15	(24)	(14)	*44
20	31	15	31	(13)	*45
22	27	*30	37	(12)	*42
24	*24	*32	40	(12)	*36
2	*18	26	36	12	*24
4	*16	19	24	12	*22
6	(15)	17	22	12	*20
8	(15)	*16	*20	*13	*19

## EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
7	18	*12	(19)	*12	*19
9	18	*12	*18	12	*18
11	31	12	*18	19	26
13	*39	*13	*33	*23	*38
15	*42	(12)	29	22	*42
17	*42	(12)	(23)	17	*44
19	*37	(12)	(29)	14	*44
21	*30	(19)	35	*13	*40
23	*23	(19)	34	*13	*29
1	*21	(15)	24	*12	*23
3	*20	(14)	(22)	12	*21
5	*19	(13)	(20)	12	*20

## CENTRAL USA

UTC	AFRI	ASIA	OCEA	EURO	SO AM
8	(18)	*12	*19	*12	*19
10	(18)	*12	*18	(12)	18
12	30	12	*18	(12)	25
14	38	*16	*31	21	*39
16	41	(15)	26	19	*43
18	*40	(15)	(24)	14	*45
20	*33	(15)	32	(13)	*44
22	*28	25	37	(13)	*40
24	*23	(20)	35	*12	*28
2	*21	(15)	24	12	*23
4	*20	(14)	22	12	*21
6	(19)	(13)	20	12	*20

A71BS	-P.O. Box 1456, Doha, QATAR
AD1S/KH9	-OKDXA, P.O. Box 88, Wellston, OK 74881
BY5QW	-Bush, P.O. Box 317, Fuzhou, PEOPLE'S REPUBLIC OF CHINA
C21BR	-P.O. Box 478, Republic of Nauru, Central Pacific
CS9DI	-P.O. Box 430, Funchal, P-9006 Madeira Island, via PORTUGAL
EK01	-P.O. Box 1691, Magadan, 685024 USSR
EX1FAL	-P.O. Box 31, Tbilisi, Georgia, 380002 USSR
EX0FWR	-P.O. Box 31, Tbilisi, Georgia, 380002 USSR
GM0NDE	-G. Hutchinson, 35 Sunningdale, Orton Waterville, Petersborough, ENGLAND PE2 OUB
H18OMA	-P.O. Box 3272, Santo Domingo, DOMINICAN REPUBLIC
HS1ZEB	-P.O. Box 678, Bangkok 10507, THAILAND
JT1BV/UA0S	-T. Naranbaatar, P.O. Box 2595, Irkutsk 52, 664052 USSR
KH4AF	-Cliff, P.O. Box 19, FPO AP 96516
LU7XR	-Oscar Gigena, Casa 520, Barrio Brown, 9401 Ushuaia, Tierra del Fuego, ARGENTINA
P29AS	-P.O. Box 7159, Boroko, PAPUA NEW GUINEA
R420A	-P.O. Box 115, Volgograd, 400066 USSR
RW3PW	-Igor A. Gumilevsky, P.O. Box 19, Tula, 300000 USSR
TR31GL	-P.O. Box 177, Libreville, GABON
TY2CE	-P.O. Box 84, Porto-Novo, 10024 BENIN
UA9K/RA9LI	-P.O. Box 3371, Tyumen, 625013 USSR
UF6FAL	-P.O. Box 31, Tbilisi, Georgia, 380002 USSR
UF7FWR	-P.O. Box 31, Tbilisi, Georgia, 380002 USSR
WE51/KH9	-OKDXA, P.O. Box 88, Wellston, OK 74881
ZA1A	-NCDXF, P.O. Box 1, Los Altos, CA 94023
ZA1HA	-Globe Foundation, P.O. Box 49, Budapest 1311, HUNGARY
ZA1QA	-Quick Aid Foundation, P.O. Box 5, Komoro 4622, HUNGARY
ZA1TAB	-Marenglen Mema, Rruga Gogonushi, Pallatli 17, Hyrja 10, Tirana, ALBANIA
1S0RR	-Romeo Stepanenko, P.O. Box 812, Sofia 1000, BULGARIA
3D2IS	-Seiichiro Saito, 1015-5, Higashiterayama-cho, Chiba 260, JAPAN
3D2KS	-Seiichiro Saito, 1015-5, Higashiterayama-cho, Chiba 260, JAPAN

### Notes:

1. Address in the *Callbook* is incorrect; use Svalortsv 64, S-24021 Loddekoplinge, Sweden.
2. North American contacts with HS0AC go via KM1R; all others via NY2E.
3. QSL direct only. No bureau cards.
4. This route applies for the period August 24 through 30 only.
5. This route applies for direct only. Bureau cards should be sent via WQ7R, the operator. The *Callbook* address for WQ7R is incorrect.

Many thanks to the following

contributors: DL4MCF, JT1BV, UA3GPA, RW3PW, UF6FAL, UL7LS, VK4JWW, 3A2LF, VE7KC, W1LXE, N2UN, W3DNY, AB4PW, K5FNR, W6NHU, W6TUR, K6ZDL, W9LNQ, W9NIP, W9NN, Salt Lake City DX Association (KB2G), Western New York DX Association (KD2YP), Western Washington DX Club (K7WA), Long Skip (VE3IPR), *DX News Sheet* (G4DYO), *The Long Island DX Bulletin* (W2IYX), *Inside DX* (N2AU), *QRZ DX* (W5KNE), and *The DX Bulletin* (VP2ML).

We still receive news for events on the late side. In particular were two DXpeditions for the October World Wide DX Contest that were received the first of October. We should have received it no later than the first of August. Unfortunately, we could not use the material, as you would be reading it in mid-November.

Several DX stations are now telling callers to give their complete calls

when calling. This busted call business is the corruptness of list operation. The busted call method actually takes longer. Some of these so-called DXers send their "last two letters" and then fail to send their complete call after a contact has been established, which further delays the game. Also, if the DX station is running a pileup, don't give unnecessary information in your QSO. All he really wants is your correct call. 73 de John N6JM. □

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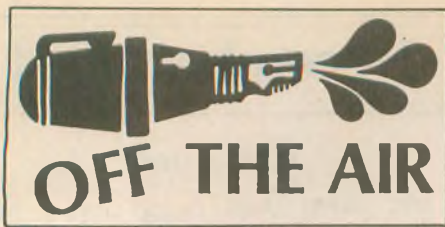
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## Merry Christmas

I wish to express my appreciation for the help, kindness and benevolence of Father Clarence Rupp, my counselor, confidant, confessor and friend, and *Worldradio*, for their cooperation with Father in helping me.

For those who did not read "Listener" in the September issue's *Off the Air*, Father Rupp described my plight as a disabled Amateur Radio enthusiast, living on a very limited income from Social Security, and described the equipment that I was using—one receiver and the copper wire antenna that Father strung on my roof. Then he went "out on a limb," as I see it, and put out a call for anyone who had any equipment that they would like to donate, to contact me. He didn't have to do that, but I'm sure glad he did!

Since the article appeared, I have received in the mail a Swan 350 with an Astatic microphone and a real nice key from Tommy Carver, N5PLT, in Grand Prairie, Texas; a 200D MAXCOM antenna matcher from Sonny Irons, owner of MAXCOM, in Fort Lauderdale, Florida; a call from a gentleman in Pennsylvania who manufactures Lightning Bolt Quad antennas and who said he would make one for me to use; and calls and letters from half a dozen other concerned "friends," asking what they could do.

I have also joined the Courage Center Handi-Hams, and through Maureen Pranghoffer, KF0I, Student Coordinator, I have found out that I am not alone. And for a minimum amount of money, Handi-Hams has provided me with a Ten-Tech Argosy

that I have been using nightly to talk to people on the Triple H Net.

Before any of this took place, I was basically huddled in a corner of my house, unable to face my disability, feeling sorry for myself, reclusive, hostile, even to my wife and kids, looking forward only to my next dose of pain medicine.

Since my buddy, as I respectfully refer to Father, triggered this old interest that I had in Amateur Radio, I feel like I was re-born! One minute I am in the middle of the Russian revolution via Radio Moscow, the next hunting kangaroo in the outback via Radio Australia, or hearing the latest world news on the BBC or World Monitor or Voice of America. The Arizona Amateur Television Club members helped me obtain an ATV downconverter so that I can watch their activities, which I wrote about in the July 1991 *ATV Quarterly*. (Before I became disabled I was in the publishing and advertising business, but I never expected to write or do anything useful again.) The guys in the Arizona Amateur TV club have "adopted" me. Larry, N7NOU, set up a power supply, put up a J-beam, ran coax to my chair, and loaned me his 2M HT so I can talk to the ATV guys while they are operating! Talk about a "people" hobby!

There are no words that I am aware of that can express my gratitude and sincere appreciation for doing much more than help expand my ability to use and enjoy the various areas of radio and television. Your generosity, thoughtfulness and love for fellow-man have well bespoken the nature of each of you, and I hope I can "pass it on." Sincerely and 73,

**BILL MILLER, KB7NHZ**  
Phoenix, AZ

## Simply hobbyists

In the September issue's article, "Is Amateur Radio Really in Decline?," there is a figure error. The caption of the chart on page 16 states the number of amateurs as 0.0019 percent of the general US population. This is not a percentage, it is a ratio. Expressed as a percentage, it should read 0.19 percent. The percentages at the left of the graph would then read 0.25, 0.20, etc.

Also, the comparison of numbers

between hams and lawyers, private pilots, doctors, CPAs, etc., makes no sense. While I will agree that the integrity of some of those practitioners is in doubt, they work a lot harder earning their diplomas than hams do. Compared to them, getting a ham license is child's play. Hams as a group are hobbyists, pure and simple. Only a very few are actually engaged in either public service or meaningful technical pursuits.

I also notice that Figure 2 on page 15 shows a peak in growth rate about 1976 but the text ignores it. *This was about the time the FCC "cut the code test in half" by eliminating the sending part of the test.* The ham population began a quite steady increase over time. Very few in the amateur community made a fuss about it. How many of the "half-code" hams (including my Extra Class license) should be drummed out of the corps because they (we) are considered poor hams?

It is going to become much more difficult to justify the fact that fewer than 500,000 hams have access to far more spectrum than their numbers would deserve compared with what the rest of the approximately 250,000,000 US residents have. Hams don't come close to utilizing their "share." If, as the article states, we are enjoying a good and reasonable growth rate, we are going to have to recruit some good communicators to do our lobbying for us. Hams are darn good complainers, but extremely short on communicating skills!

**IVAN LEE, N7IL**  
Seattle, WA

## Tesla

I was disappointed to see in the August issue that Josh Logan, WX7K, didn't give credit in his informative article entitled "Man Out Of Time" to Margaret Cheney, the author of *Tesla: Man Out Of Time*. Her book, I think, is the single book on Tesla. It's in paperback (i.e. cheap) and I would dare say that probably any library would have a copy.

**GARRY PARRISH, AA6GW**  
Fremont, CA

*There is also an organization, the Tesla Memorial Society, Inc., whose purpose is "to honor and perpetuate the memory and ideals of the great scientist and inventor Nikola Tesla through appropriate academic conferences, scholarship awards, and various cultural activities. It is a non-political and non-profit organization." Currently the society is working to dispell the belief that Thomas Edison was primarily responsible for develop-*

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For more information on the Tesla Memorial Society, write to 453 Martin Rd., Lackawanna, NY 14218.

## It really works

It's clear that many amateurs do not know how to handle emergency communications. On one occasion I heard a mobile station travelling on an Arizona highway commence with: "Is anyone on the repeater? (no answer) Is anyone around? (no answer) This is W6--- looking for anyone on the repeater." Finally receiving an answer from a station in Nevada, he said that he would like to report an accident to the Arizona Highway Patrol. The Nevada station agreed to help but the call was picked up by a station in Kingman, Arizona and traffic was completed to the Arizona Highway Patrol—not without a lot of time wasted, however, as the W6 station needed merely to be direct in reporting the accident. He should have said in the first place, "This is W6---, I need a call to Highway Patrol to report an accident on highway # near milepost #." The call would have been picked up by the Arizona station in the first place.

On another occasion I heard a W6 eastbound on I-40 near Kingman: "Anybody around? Anybody on the repeater? Hello there, must be somebody around? (no answer) . . . Okay, I won't tell you about the 18-wheeler upside down with the wheels still spinning." Totally ridiculous and unnecessary.

On yet another occasion, an amateur who was travelling on I-40 near Kingman in a motor home started the same foolish routine, "Is anyone around? . . ." In this emergency the guy was having a heart attack. My question is, why didn't he say so in the first place?

Many times amateurs are listening and monitoring the repeater, but some of them have to work or are busy doing other things as well so they don't have time to answer every ambiguous call. For instance, one ham I know of is a diamond cutter, and he keeps a radio on his work bench. He doesn't always answer calls from amateurs who just want to ragchew, but if someone calls with an emergency, he will respond immediately.

As a result of all this, the owner of the Kingman .76 repeater announced that the main purpose of the repeater was emergency communications and that all other usage was secondary. He stated that if the repeater (which had been established for 20 years) was to continue operation, amateurs in Kingman would have to devote time to

monitoring it for emergency calls. Naturally, no one wanted to monitor the repeater all day and sift through the ambiguous calls which would invariably come through anyway. So the Kingman Radio Club adopted my proposal for a DTMF decoder system of monitoring the repeater.

Currently we have 14 stations which monitor the repeater 24 hours a day with Motron AK-4 decoders. Each decoder will respond to a three-digit personal touchtone code and all decoders will respond to a long-tone zero (held for at least three seconds). The zero is for emergency communications only. We have added to the repeater a voice announcement that says, "This repeater is monitored by stations using DTMF decoders. In an emergency transmit touchtone zero for three seconds, followed by your call and nature of the emergency. K7EIK repeater."

This voice announcement was installed on July 5, 1991, and the first emergency call came within two seconds after the first automatic announcement by the identifier. (Incidentally, the caller tried several other repeaters but made no contacts because no one was listening.) Emergency response was underway immediately. Since the voice announcement went into service we have been busy responding to emergencies, calling the Highway Patrol and such. Nobody has to listen to anybody talking on the repeater anymore, yet we are available for immediate response. We've had many calls for motorist assistance, and reports of car fires, an overturned 18-wheeler, and even, in California, a call reporting an overturned van with 15 passengers.

The system really works. Those who have used it to report emergency traffic are thrilled with it. Though it may not be as useful for major metropolitan areas of concentrated population, it is ideal for those wide open areas, such as parts of California and Arizona and many midwestern states, where telephones are 50 to 100 miles apart. Amateur Radio can't provide good public service if no one is listening on the base station end of the circuit. Most of the calls we receive are more than 50 miles from the nearest tele-

phone. The amateur who reported the overturned van in California said, "I'm sure glad you guys were there. That's the best darn thing to hit ham radio since I got my license!" Locally, we call it the LiTZ system for "long-tone zero." The Amateur Radio Service—our efficiency in emergency communications service—would greatly benefit from an established national DTMF system.

**VERN GALLINGER, W7JAT**  
Kingman, AZ

*A lengthy article (three parts) describing this system proposal and some ideas and comments surrounding it can be found in QST's December '89, February and March '90 FM/RPT column. The author has submitted a proposal to the ARRL Repeater Advisory and Public Service Committee but has received no response as yet.*

## Help, help, help, help

At a recent swapmeet, I purchased a Knight receiver model R-100A. It doesn't work, or at least I don't know how to make it work.

I need a copy of a schematic for this receiver. Also, I need someone who would be interested in working on this unit. I know this was a kit receiver. Any assistance would be greatly appreciated! I can be reached at (916) 487-3419; or write me at 2924 Watt Ave. #19, Sacramento, CA 95821.

**PATRICK SCHAMUN, KC6YEA**  
Sacramento, CA

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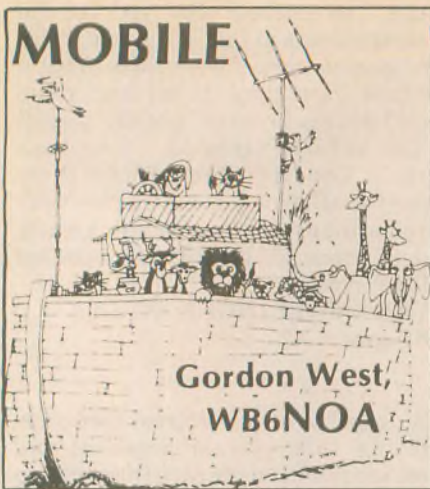
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## Mounting HF whips

Marine installations of high frequency whip antennas may present some challenges, but there are easy solutions. If you plan to set up a power boat or sailboat with your high frequency ham station, a small single-band or multiband whip set-up is just the answer.

If your HF rig is tied into 12V, the 12V source must be capable of at least 20 amps of current pull. This means going directly to a battery selector switch or to your ship's battery. Rarely will the instrument panel handle 20 amp surges without significant voltage drop.

The coax that goes between the rig and your HF antenna whip should be simple RG-8X or RG-213 marine-grade coax. Stay away from the smaller RG-58U. Also avoid using any type of coax with a foam dielectric; foam absorbs moisture. Stick with coax with a PVC-type jacket and PVC-type inner dielectric. I also prefer silver-coated copper conductors, rather than straight copper, as straight copper will sometimes corrode.

As for the whip, the taller the better. Single-band whips work fine. Multiband whips like the Spider™ work great. Multiband, single-shaft whips like the Outbacker™ also work terrific. I especially like the Outbacker because it may be ordered in a combination marine and ham configuration with taps for every single ham band as well as every single marine SSB band.

The whips all terminate to a 3/8 x 24 in. thread. This should screw into a stainless steel mount, and the Valor

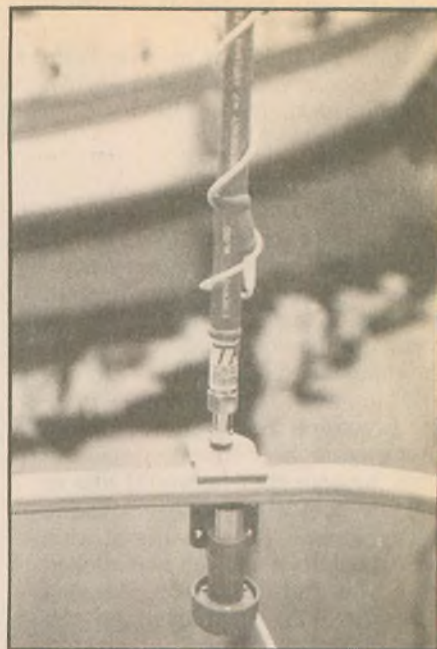
SS100AD three-way stainless mount is a simple way to go.

Now the important part: the stainless steel mount must be securely fastened to something metal that runs horizontal with the water. On a sailboat, the stainless steel rail back aft is the way to go. Mount it on the very top bar of the stainless steel rail. The rail will usually take care of your complete ground plane, and there is absolutely no need for ground radials or foils all the way down to underwater metals. Rather, the whip will see the stainless steel horizontal rail as the ground plane, and you'll be all set with a perfect 50 ohm match. Of course, bonding that horizontal rail into your ground system certainly wouldn't hurt.

On power boats there is usually a horizontal stainless steel rail up on the flying bridge and this is where your whip should go. It will use that stainless steel rail as the ground plane. On very small power boats, there is usually some stainless steel around the windshield, and you should use the horizontal metal as the ground plane.

What absolutely will not work, however, is mounting the stainless steel mount on something fiberglass or wood. Even though you might try to interconnect the mount with some ground down below the water line, the ground plane necessary for the HF whip to be resonant with a 50 ohm feed-point impedance just won't happen. Sure, you have a DC ground, but you haven't brought the ground plane right up to the base of the mount. If the whip doesn't see the horizontal ground plane directly below it, it just won't play.

I have seen valiant attempts to make a whip work where the whip was mounted on the side of the cabin (fiberglass), with a stream of ground wires fanned out from the base of the whip in an effort to rig up a ground plane. Usually this just doesn't work. The whip must be placed within one inch of a horizontal ground plane or else it just won't fly on HF.



For marine installations, the boat rail is the perfect spot to mount an HF whip.

The same goes for fiberglass motor homes—the very best place for an HF whip is way up top on the horizontal aluminum rack on the roof, or off the top of the aluminum roof ladder. The horizontal ground plane must be within one inch of the inter-connected mount, or it just won't work.

In tests with the 8-band Outbacker, we were talking all over the country on some very small sailboats with just a little horizontal rail at the aft end. The stainless steel Valor mount is available at all ham radio stores, and it's a quick way to make the connection. Just be sure to use a coax seal to waterproof the coax cable connector that screws into the bottom of the Valor mount.

Then screw on your favorite HF whip, and get ready to work the world. Absolutely no internal or external antenna tuner is necessary if you mount your whips over a good horizontal ground plane.

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# Visit Your Local RADIO CLUB

## ALABAMA

**Montgomery Amateur Radio Club (W4AP).** P.O. Box 3141, Montgomery, AL 36109. Meets 3rd Mon./monthly, 7 p.m., State Trooper Dist. Office, Coliseum Blvd. & Federal Dr. Nets Sun. 8:30 p.m. 146.84- and Thurs. 8:15 p.m. 147.18+. Info: Fred, KB4AJX, (205) 270-0909.

## ALASKA

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

## ARIZONA

**Cochise Amateur Radio Assn.** Meets 1st Mon./monthly, 7:30 p.m. at club facility on Moson Rd., Sierra Vista, AZ. Net: WOLKI info Net every Thurs., 7 p.m., WA7KYT/R 146.16/146.76 rpt.

**Scottsdale Amateur Radio Club.** Meets 1st Wed./monthly, 7:30 p.m., 7375 E. 2nd St. in Scottsdale, AZ. Net is Mon., 9 p.m., 147.18 rpt.

**Tucson Repeater Assoc.,** P.O. Box 40371, Tucson, AZ 85717-0371. 2nd Sat./monthly, 7:15 p.m., Pima Co. Sheriff Bldg., 1750 E. Benson Hwy. Net Thurs. 7:30 p.m. 146.22/82 (146.88-, 147.08-, 448.550-, & 145.15 Packet).  
**Western Arizona Radio Club.** Meets 2nd & 4th Mon./monthly, 7:30 p.m., Bullhead City Lib. on Handcock Rd., Bullhead City, AZ. Local Net operates Tues. evenings on 147.12 @ 1900 hours. For info contact W6DRM (602) 758-5171.

## ARKANSAS

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

## CALIFORNIA

**Amador County Amateur Radio Club.** P.O. Box 1094, Pine Grove, CA 95665. Senior Citizens Center, Jackson, CA. Meets: first Thur./monthly, 7:30 p.m. WA6WIY Rptr., 146.835, 146.235. Net Tues. 7:30 p.m.  
**Amateur Radio Club of El Cajon. WA6BGS.** P.O. Box 50, El Cajon, CA 92022. Meets 2nd Thurs./monthly, 7 p.m., La Mesa Church of Christ, 5150 Jackson Dr., La Mesa, CA. Rptrs: 147.675(-), 224.080(-). PL 107.2. Nets 147.570 Wed./Sat., 7 p.m. Info (619) 697-2700.

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

**Butte Amateur Radio Club.** Meets 1st Fri./monthly, 8 p.m. at the Cozy Diner, 1695 Mangrove, Chico, CA 95926.

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

**Contra Costa Communications Club, Inc. WD6EZR/Rptr.** P.O. Box 661, San Pablo, CA 94806. Meets 2nd Sun./monthly at 9 a.m. Hickory Post Restaurant/Lucky Lanes. Nets: 07:10-08:30 M-F; 7:30 Thur. eve. all 145.110. 224.300 & 444.275 w/possible PL 82.5. Info call Ed, KA6OFR, (707) 996-0962.

**Downey Amateur Radio Club.** Meets 1st Thurs./monthly, 1930 in the Cafeteria of South Middle School, 12500 S. Birchdale Ave., Downey, CA.

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

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

**Fullerton Radio Club, Inc. W6ULI.** P.O. Box 545, Fullerton, CA 92632. Meets: 3rd Wed./monthly, 7:30 p.m., Sr. Citizens Center, 340 W. Commonwealth, Fullerton. Net ea. Tue., 8 p.m. 147.975 (-600). Info, Phil Gray, KJ6UV (714) 524-5223.

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

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

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

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

**Kern River Valley Amateur Radio Club.** P.O. Box 2611, Lake Isabella, CA 93240. Meets 4th Sat./monthly at 4 p.m. (Pot Luck). Veteran's Hall, Lake Isabella WB6ODZ Rptr. 224.50 down 1.6 low-level. 144.50 simplex.

**Livermore Amateur Radio Klub, (LARK).** Meets 3rd Sat./monthly, 9:30 a.m., City Council Chamber, 3575 Pacific Ave., Livermore, CA. Net Mon. 1900 on 147.12+. For info: Rosalie Powers, KC6RKU, c/o LARK, P.O. Box 3190, Livermore, CA 94551-3190. (510) 447-3815.

**Marin Amateur Radio Club (MARC) W6SG.** Box 1231, San Rafael, CA 94901. Meets 1st Fri./8 p.m.; MARC Clubhouse Bldg. 549, HAFB, Novato, CA (415) 883-9789 (Summer exceptions; contact Pete N6IYU, 924-1578). Sun. AM Club at Red Cross, San Rafael.

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

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

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

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

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

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

**Sacramento "Old Timers" Amateur Radio Society and Sacramento Valley Chapter #169 QCWA (Quarter Century Wireless Assn.).** Meets 2nd Wed./monthly, 8 a.m., Lyon's Restaurant, 1000 Howe Ave. For info contact Paul Wolf, W6RPL (916) 331-1830.

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

**San Gabriel Valley ARC.** P.O. Box 88, Monrovia, CA 91017-0088. Meets 1st Tues./monthly, 7:30 p.m. (except Dec.) at Bowling Green Clubhouse, 405 S. Santa Anita Ave., Arcadia, CA 91006. W6QFK, Rptr. 147.165/765.

**Santa Clara County Amateur Radio Assoc. (SCCARR) W6UW & W6UU.** P.O. Box 6, San Jose, CA 95103-0006. (408) 249-6909. Meets: 2nd Monday/monthly, 7:30 p.m. at Agnews Developmental Center Aud., corner of Circle Dr. & Palm Dr., Santa Clara. Net all other Mon., 7:30 p.m. W6UU/R 146.385 + /442.425 + PL 107.2

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

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

**Shasta Cascade Amateur Radio Society (SCARS) P.O.** Box 664, Anderson, CA 96007. Meets: 3rd Wed./monthly, 7 p.m. at the C.D.F. Conf. Rm., Grape St., near Parkway Ave., Redding, CA. Net 146.64, Wed., 8 p.m.  
**Sierra Amateur Radio Club.** Meets 3 Mon./monthly, 7 p.m., Hamilton Branch Fire Dept., Big Springs Rd., Lake Almanor, CA 96137.

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

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

**Stanislaus Amateur Radio Assoc. (SARA).** P.O. Box 4601, Modesto, CA 95352. Stanislaus Co. Administration Bldg., 12th & H Streets, 3rd Tues./monthly, 7:30 p.m. 145.39 MHz WD6EJF. 224.14 MHz.

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

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

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

**United Radio Amateur Club K6AA.** L.A. Maritime Museum, Berth 84, Foot of 6th St. San Pedro, CA 90731. Meets 3rd Fri./monthly except Dec., 7:30 p.m. Monitors 145.52 Simplex 10 a.m.-5 p.m.

**Vaca Valley Radio Club.** Meets 2nd Wed./monthly, 7 p.m., Vaca Fire Dist. 2nd on Vine St. in Vacaville, CA. Repeater: WX6F 147.475 (-1 Meg) PL 107.2. Ph: (707) 447-0163.

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

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

**West Valley Amateur Radio Assoc.** P.O. Box 6544, San Jose, CA 95150-6544. Meets: 3rd Wed./monthly, 7:30 p.m. at Am. Red Cross Bldg., 18011 Saratoga-Los Gatos Rd., Los Gatos, CA. W6PIY/R. Net Tue., 8:30 p.m. 147.39 + , 223.96-

**Yucaipa Valley Amateur Radio Club.** Meets 3rd Mon./monthly, 7:30 p.m. at Far West Savings, 1195 Calimesa Blvd., Calimesa, CA.

## CONNECTICUT

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

**Tri-City Amateur Radio Club.** P.O. Box 686, Groton, CT 06340. Meets 2nd Tue./monthly, 7:30 p.m. Alternating, Groton Public Library at Rt. 117 & St. Lukes Lutheran Church at Rt. 12. Novice classes. Info, contact Bob, KA1BB, (203) 739-8016.

## DELAWARE/PENNSYLVANIA

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

## FLORIDA

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

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

**Platinum Coast Amateur Radio Society.** P.O. Box 1004, Melbourne, FL 32902. Meets 2nd Mon./monthly, 7:30 p.m., Brevard Co. Red Cross Hdqtrs. Bldg., 1150 Hickory St., Melbourne, FL. Talk-in on 146.25/85 or 146.0161.

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

**West Palm Beach Amateur Radio Club, Inc. W4HAW.** P.O. Box 6834, Southboro Station, W. Palm Beach, FL 33405. Meets 2nd Tue./monthly, 7:30 p.m., Palm Beach Co. Emergency Op. Cntr., 3723 Belvedere Rd., W. Palm Beach, FL. Rptr.: 147.135 MHz. Info: Jeff, WB2OUK, 586-5120; Charlie, K2GNZ, 582-1164 or Henry, WA4HXZ, 655-4632.

## GEORGIA

**Dalton Amateur Radio Club (DARC).** P.O. Box 143, Dalton, GA 30722-0143. Meets 4 Mon./monthly, 7:30 p.m., Dalton College Voc. Tech. Bldg., Dalton, GA. Info net: Sun. 9:30 p.m., 145.230 MHz; Wed. 9 p.m., 147.135 MHz.

## HAWAII

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

## ILLINOIS

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



**DuPage Amateur Radio Club, (DARC).** Meets 4th Mon./monthly, 7:30 p.m., Holy Trinity Catholic Church, 111 S. Cass Ave., Westmont, IL. Club rpters. are 145.25, CTCSS 107.2; 224.68- and 442.55+ CTCSS 114.8.

**Elgin Amateur Radio Society.** P.O. Box 1351, Elgin, IL 60120. Meets in EOC Rm. of Elgin Municipal Bldg. 2nd Fri./monthly, 8:00 p.m.

**Fox River Radio League.** Old Bank Bldg., 900 No. Lake St., lower level, Northgate Shopping Ctr. & Rt. 31, Aurora, IL. Meets 2nd Tue./monthly, 7:30 p.m. VEC Xams 3rd Tue./monthly, 7:30 p.m.

**Hamfesters Radio Club, W9AA.** P.O. Box 42792, Chicago, IL 60642. Meets 1st Fri./monthly, 8 p.m. Crestwood Ctr. Ctr., 139th & Kostner, Crestwood, IL. Nets: Sun. (local) 0100 UTC, 28.410 MHz; Mon. 9 p.m. 146.43 S.; Packet Mailbox 145.07. Info: (708) 535-3496.

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

**Six Meter Club of Chicago K9ONA.** Bank of Lyons, Lower Level, 8601 West Ogden Ave., Lyons, IL. 2nd Fri./monthly, 7:30 p.m. Club Rpters: 146.37/97, 448.30/443.30.

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

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

## LOUISIANA

**Southwest LA Amateur Rptr. Club, Inc. (SWLARC).** Meets 4th Tues./monthly, 7 p.m. in the EOC Rm. Net ea. MWF, 7:30 p.m. Rptr. 146.730 minus 600.

## MARYLAND

**Peninsula Radio Operators Society, Inc. (P.R.O.S.)** Salisbury, MD. Quarterly dinner mtgs. & VE Test sessions. Spring & fall classes. Rptr. K3SVA 146.325/146.925; KC3UV 449.05/444.05. Info: (301) 749-7444.

## MASSACHUSETTS

**Mohawk Amateur Radio Club.** P.O. Box 532, Athol, MA 01331. Meets: 4th Wed./monthly, 7:30 p.m., at the Athol American Legion Hall, Exchange Street, Athol, MA.

## MICHIGAN

**Hazel Park Amateur Radio Club.** Hoover Elementary School-Hazel Park, P.O. Box 368, Hazel Park, MI 48030. 2nd Wed./monthly, 7:30 p.m. Sept. thru May. 147.51 Simplex Call-In. W8JXU Club Call.

**Oak Park Amateur Radio Club.** Oak Park Community Center. 14300 Oak Park Blvd. (same as 9 1/2 Mile Rd., west of Coolidge). Oak Park, MI 48237. 2nd Mon./monthly, 7:45 p.m. Talk-in on our 224.36 MHz or 146.64 MHz.

## MINNESOTA

**Minneapolis Radio Club.** P.O. Box 25167, Minneapolis, MN 55458. Meets 3rd Fri. (exc. June, July, Aug.), Mpls. Red Cross, 11 Dell Place, Mpls, 7:30 p.m. Making waves since 1916.

## MISSOURI

**Joplin Amateur Radio Club.** Meets 2nd and 4th Tue./monthly, 7:30 p.m. at Joplin Municipal Bldg., (basement), 303 E. 3rd, Joplin, MO.

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

## NEBRASKA

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

## NEVADA

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

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

## NEW HAMPSHIRE

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

## NEW JERSEY

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

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

## NEW YORK

**Communications Club of New Rochelle, NY.** Harrison Street Firehouse. Richard Sandell, WK6R, (914) 834-2322. Meets: 1st Mon./monthly, 8 p.m.

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

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

**Lockport Amateur Radio Assoc. (LARA)** Meets last Sat./monthly, 7:30 p.m., Mt. Olive Church, Chestnut Ridge Rd., Lockport, NY. Info net Sun. 9 p.m. on W2RUIR (146.82-). Contact Jim, KB2CUX, (716) 433-8564.

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

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

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

**Suffolk County Radio Club.** 3rd Tue./monthly, 8 p.m. Bohemia Rec. Ctr., Ruzicka Wy. W2DQR 144.610/145.210, 223.080/224.680 rptr. Info call Jim Heacock (516) 473-7529.

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

**Yonkers Amateur Radio Club (YARC).** Meets 2nd Sun./monthly, 10 a.m., 1st Pct., Yonkers Police Station, E. Grassy Spring Rd., Yonkers, NY. Info: P.O. Box 378, Centuck Sta., Yonkers, NY 10710. (914) 963-8995. 146.265/865, 445.150/440.150.

## NORTH CAROLINA

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

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

## OHIO

**Amateur Radio Fellowship, (ARF).** Peggie Hough, Sec., 3888 Stow Rd., Stow, OH 44224. Meets 1st Sat./monthly, 10 a.m., Country Manor Restaurant, 1225 W. Main St., Kent. KA8YKT rptr., 147.075.

**Ashtabula County ARC.** Ken Stenback, A18S (964-7316). County Justice Center, Jefferson, OH. 3rd Tue./monthly, 7:30 p.m. County Rptr., 146.715.

**Clyde Amateur Radio Society (C.A.R.S.)** Meets 2nd Tue./monthly, 7:30 p.m., Municipal Bldg., Clyde, OH 44811. NF8E Rptr. 144.75/145.35. 444.60 (+5 MHz). Net Sun. 9 p.m.

**Dayton Amateur Radio Assoc.** P.O. Box 44, Dayton, OH 45401. Meets 1st & 3rd Fri./monthly (Sept. thru June) 8 p.m., Career Academy on River Corridor Dr. Info on W8BI 146.34/94 & 222.34/223.94.

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

**Lancaster & Fairfield County A.R.C.** Meets 1st Thur./monthly, 7:30 p.m., City Hall, Basement Club Rm., Broad & Main. Info Net every Mon., 8 p.m. K8QIKR 147.63/03 Rptr.

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

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

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

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

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

## OREGON

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

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

**Umpqua Valley Amateur Radio Club.** Meets 3rd Thurs./monthly 7:30 p.m., Douglas County Courthouse, Rm. 311, Douglas St., Roseburg, OR. Info W5P11R 146.90/30.

## PENNSYLVANIA

**Butler County Amateur Radio Assn. P.O.** Box 1787, Butler, PA 16003-1787. Meets 1st Tue./monthly, 7:30 p.m., Red Cross Bldg., 312 Mercer St., Butler, PA. Call-in W3UDX 147.96/36. Net 10:10 p.m. nightly.

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

**Warminster Amateur Radio Club, WA3DFU.** P.O. Box 113, Warminster, PA 18974. (215) 443-5428. Meets 1st Thurs./monthly, 7:30 p.m., Neshaminy-Warwick Presbyterian Church, Warminster, PA. Net on 147.690/147.090 Wed. 8:30 p.m.

## TEXAS

**Arlington Amateur Radio Club, (AARC).** Meets 3rd Fri./monthly, 7:30 p.m., Arlington Human Resources Bldg., 401 Sanford, Arlington, TX. Talk-in-444.2, 224.8 and 147.14.

**Beaumont Amateur Radio Club.** Meets last Tues. of each month at the GSU Aud., South and Oxford Streets, Beaumont, TX, 7:30 p.m. Talk-in on 146.16/76 or 146.10/70. Join the fun!

**Brazos Valley Amateur Radio Club (B-VARC).** P.O. Box 1630, Missouri City, TX 77459. Meets 2nd Thur./monthly, 7:30 p.m., Sugar Land Community Cntr., 226 Matlage Wy., 3 blks SW of Imperial Sugar Co. at HWY US-90A & Brooks St. (HWY 58) in Sugar Land, TX. Talk-in 145.47, 442.5 rptrs.

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

## VIRGINIA

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

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

## WASHINGTON

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

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

## WEST VIRGINIA

**Jackson County Amateur Radio Club.** Robert D. Morris, WA8CTO, Sec.-Treas. 308 Edgewood Circle, Ripley, WV 25271. Meets 1st Thur./monthly, 7:30 p.m., United National Bank of Ripley. Net Mon. 9 p.m. on 146.67/07 WD8JNU/R.

**Tri-state Amateur Radio Assn.** Meets: 3rd Tue./monthly, 7 p.m., Green Valley Vol. Fire Dept., Norwood Rd. & 16th Street Rd., Huntington, WV. ARES net Thur. 9 p.m. on 146.76(-) W8VAR. Info KB8EHJ (304) 824-5958.





Late September and early October mean different things to me now than they did when I was 11. Now they mean that the weather is getting colder, that leaves need to be raked, and that propagation seems to improve. Back when I was 11 they meant that it was exciting to be in a new grade at school, that folks were harvesting, and that Halloween was just around the corner. Fall also meant that it was time to expect the arrival of the "wish book."

The arrival of the "wish book" (adults called it the mail order catalogue) had about as much significance as birthdays, Valentines Day, and Thanksgiving holiday all combined in one. There were two major reasons why waiting for the arrival of the catalogue was so exciting. First—think back to when you were 11—mail was rare. So that in itself was exciting. Second, being able to gaze at the pictures in the mail order catalogue caused one to imagine, dream and wish for things, which often gave as much pleasure as actually receiving them.

It seems that as adults we lose that ability to dream and wish for things. The reality of expense, time limitations and logistics are just too much. Yet this past year at the Handi-Ham System there have been many wishes which have come true. Below are some of the wishes that have come true in 1991 and some of the ones we would list in our Handi-Ham System "wish book."

- The radio camp held last September had a full complement of campers and 80 percent of those taking exams to upgrade passed.
- The Handi-Ham System information seminar held at the ARRL national convention in August was well received. The information booth at the convention also had many visitors. We are pleased to have so many clubs and

able bodied hams helping our Michigan contingent of Handi-Ham students.

- In June we received a grant so that braille study materials can be produced. Also we are now able to provide VEs with braille copies of exams for test candidates.
- In May Pat Tice was hired as the new Handi-Ham System manager, making a fine addition to our staff.
- In February the implementing of the no-code license made it much easier for some of our handicapped participants to become licensed and has presented us with unprecedented growth.
- January began the planning for the Handi-Ham System Jubilee which will be taking place in 1992 throughout the year.

Wishes for the upcoming year include:

- A new four track duplicator for making tapes for our students; ours is working fine but has put in lots of overtime.
- Resources for helping those on respirators to better run their radios from their computer keyboards.
- The same ongoing support from those of you who volunteer your time, equipment, and financial support that has made it possible for the Courage Handi-Ham System to continue serving people for almost 25 years. □

## Continuous Wave

(continued from page 41)

2776 2776 RAMADA RAMADA, ZIP-CODE 91739 91739. HOW COPY? KC6HSF DE KN6TR KN"

"MERRY CHRISTMAS, DAD. THIS IS LINDA. WANT TO HAVE DINNER TOGETHER TOMORROW? YOU UPGRADED. KN6TR DE KC6HSF K"

"QRM BAD HERE, TOO, LINDA. AGAIN PLEASE? BK"

"MERRY MERRY CHRISTMAS CHRISTMAS, DAD DAD. THIS THIS IS IS LINDA LINDA. DINNER DINNER TOMORROW TOMORROW?? DE KC6HSF KK"

"MY LINDA?? K"

"I LOVE YOU DAD, 88. K"

"88 88 88" □

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**Ethel Smith, K4LMB**  
 "The Owl" who gives a hoot

#### Retirement of Ted Heithecker, W5EJ

After a full 15 years as general manager of QCWA National Headquarters, Ted Heithecker, W5EJ, is retiring.

Ted has been responsible for the administration of QCWA headquarters since late 1976 and has also edited the *QCWA Journal*. Actually, he edited the *Journal* for 23 years! He began in 1965 when Gus Girona, W2JE, was general manager/executive secretary and continued into 1974. He then picked it up again when he became general manager in late 1976.

Because of the grueling demands of the job, coupled with health and personal problems, it became evident that it was time to consider giving up the activity that has been his consuming interest for all these years. It has been a hard decision to make. Ted leaves "a very big pair of shoes to fill." The man who will try to fill those shoes is Jim Walsh, W7LVN.

Jim Walsh has been on the national board of directors for a number of years and is well known to QCWA members as our secretary from 1983 through 1989. He is currently serving again as a director. Jim is highly

qualified for the position of general manager and has been working closely with Ted for a number of years. The transition will be taking place as soon as possible and is expected to be completed before the end of the year. Jim will certainly carry on the high standards and traditions of the office. We wish him well.



**Jim Walsh, W7LVN**

#### National convention

QCWA conventions seem to get better every year, and the September convention in Canton, Ohio was no exception. Chapter 21 did an outstanding job of planning and everything went off like clockwork. The open forum on Friday afternoon brought active membership participation. And everyone seemed pleased with the final report of the board of directors on Saturday. There were a number of interesting forums, a popular hospitality room stocked with snacks, interesting tours for the ladies, and wonderful fellowship throughout the convention. Read all the details in the next *QCWA Journal*. And start making your plans

right now to attend the 1992 QCWA Convention in Scottsdale, Arizona.

#### Scholarship winners

The Quarter Century Wireless Association offered eight scholarships this year, each in the amount of \$750. Four of the scholarships were funded in the name of the QCWA Memorial Scholarships and four were funded by individual QCWA members. The scholarships were administered by the Washington DC-based Foundation For Amateur Radio. The winners are as follows:

Jonathan J. Fournier, KA1MPG of Webster, MA—QCWA Cresson F. Donbar Scholarship, \$750. Jonathan will be a senior this year at the University of Massachusetts in Amherst. He is studying electrical engineering and hopes to teach at the college level. He feels there will be a great need for engineers and technicians in the 21st century and by teaching he can help solve some of the country's problems. He holds an Advanced Class license and operates on 80- through 10M SSB and 2M FM and packet. He is active in traffic nets and public service events and assists in teaching Novice classes. He has received a number of scholastic awards. His father is KA1MPI.

Jerry A. Hensley, N8HUT, of New Paris, OH—QCWA Memorial Scholarship, \$750. "Jay" plans to major in rehabilitation and social work at Wright State University, Dayton, Ohio. It is his goal to become a counselor at an organization that works with the handicapped and eventually to start his own rehabilitation facility and/or organization. Although he is legally blind, he has maintained high academic achievements and is involved in several areas of community and extra-curricular activities. He holds a General Class license and operates primarily on 10M, mostly CW but some phone. He enjoys most the public service activities. His mother is KA8YSF, his father is KA8YSE and his sister is KA8YTO.

Evan Caplan, KA3NED, of Richboro, PA—QCWA Memorial Scholarship, \$750. Evan has been selected for the Honors program at the University of Delaware. He will be in the College of Arts and Sciences. He is considering a career in teaching communications. He was first licensed at the age of 11 and immediately became an avid DXer (following in his father's footsteps). He advanced to General Class a year later. He is active on 10, 15 and 20M CW and SSB and 2M FM and packet. He particularly

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## 25 for 25

Join us in celebrating Courage Handi-Ham System's silver Jubilee in 1992.

Work 25 Handi-Ham members and receive a handsome Jubilee Commemorative Certificate. The award period will last from 0000 UTC January 1, 1992 to 0000 UTC December 31, 1992.

Some suggested frequencies are: CW—3.757, 7.127, 14.037; and phone—3.952, 7.237, 14.297, 21.327, 28.317, 28.397, and 2M simplex. No net frequencies please.

To qualify send 25 QSL cards with Jubilee seals attached and \$1 to cover handling and return postage to: Courage Handi-Ham system, 3915 Golden Valley Road, Golden Valley, MN 55422. □

## Copper Country

The Copper Country Radio Amateur Association, Inc., sponsors the Copper Country Award.

To qualify for the award, make four QSOs, each with a different Copper Country ham, using at least two different Amateur Radio bands (all modes equal). Contacts must have taken place on or after September 1, 1990. Copper Country hams are amateur operators in residence in Keweenaw, Houghton, Ontonagon, or Baraga counties in Michigan. Contacts can be any mode but must be person to person (no digital bulletin board messages).

To claim your 8 × 10 award certificate send evidence of your four QSOs (log entries preferred), \$1 and SASE to: Awards Manager, Copper Country Radio Amateur Association, P.O. Box 217, Dollar Bay, MI 49931. □

## Rhode Island

The Kent County Amateur Radio Group has a very nice certificate for working Kent County Rhode Island. The rules are very simple. Work any band and any mode. Outside Rhode Island you must work only two stations; if you are in Rhode Island, work four Kent County stations. Kent County is comprised of the city of Warwick and the towns of West Warwick, Coventry, East Greenwich and West Greenwich.

To receive your certificate send the call signs of the stations worked along with the band, date and time. No other verification is needed. Please include \$1 to help defray the cost.

Send to K1STB, Certificate Manager, P.O. Box 7052, Warwick, RI 02887. □

enjoys DXing and contesting and is a member of the prestigious Frankford Radio Club. He also does some ragchewing. His father is N3EC and his mother is WB3AKT.

Robert M. Popella, KA3HIE, of Tidioute, PA—QCWA Leo Meyerson Family Living Scholarship, \$750. Robert is in his third year at the Clarion University of Pennsylvania, majoring in secondary education and social studies. He feels it is important for our youth to comprehend and appreciate the skills and aspects of world cultures. He is also very active in sports and is interested in coaching or playing professional hockey or baseball. He holds an Extra Class license and operates on all bands 100 percent CW. He can copy around 60 wpm in his head, "which comes in handy working DX." He also enjoys contesting and ragchewing. His father is WA3CXW, his mother is KR3L, his brother is KS3V, and his grandfather is W3EBJ.

Rebecca B. Knoll, N4JST, of Staunton, VA—QCWA Robert S. Cresap Memorial Scholarship, \$750. Becky is in her senior year at Southern College, Collegedale, Tennessee. She wants to become an attorney and is majoring in history and pre-law. She feels law provides an endlessly changing opportunity, and a degree in history will be an asset because "its emphasis on social patterns and human experiences provides a historical frame of reference for the past while showing the possibilities for the future." She holds a General Class license and is active on 2 through 75M SSB and CW. Her ham family includes her dad, KR8C; her mom, K48D; her brother, KB4KRC; her grandmother, KA8JVF; another grandmother, N8EDH; and her aunt, N9DEY.

Thomas R. Knoll, KB4KRC, of Staunton, VA—QCWA Memorial Scholarship, \$750. Thomas is entering Southern College, Collegedale, Tennessee, where he will major in pre-med. His ambition is to become a surgeon. He holds a General Class license and is active on 2M through 75M. He enjoys talking to friends who live far away and DXing as time from school will permit. He also enjoys traffic handling. Other hams in his family include his father, mother, brother, both grandmothers and an aunt. He received several achievement awards in high school and has been employed during the summers at Potomac Corporation in Staunton, VA, as an assistant for auxiliary services.

Jerry A. Hart, N7FYS, Bellingham, WA—QCWA Memorial Scholarship, \$750. Jerry is in his senior year at

Massachusetts Institute of Technology, Cambridge, Massachusetts. He is carrying double majors in architecture and mechanical engineering. He wants to combine engineering and design to provide better houses and buildings where people live and work. He is already working with his brother to start their own engineering firm. He holds an Extra Class license and is active on 80 and 40M SSB and CW. His father is N7FYU, and his brother is N7FTY. Jerry is the only Amateur in his high school of 1,200 students and he is committed to involving more young people in Amateur Radio.

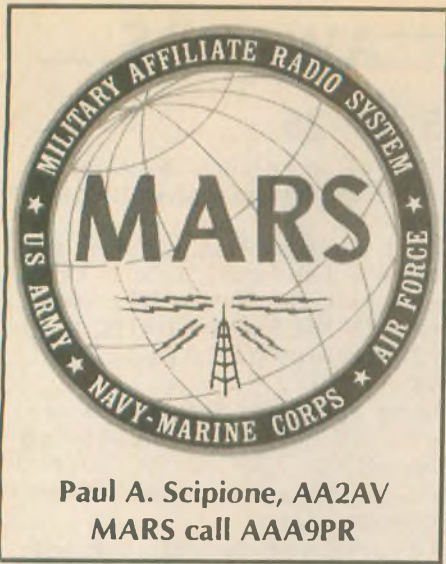
These scholarships were open to all radio amateurs meeting the specified qualifications and residence requirements of the various sponsors. Announcements for the 1992 scholarships will appear in the March or April issue of major Amateur Radio publications.

## QCWA Museum

The QCWA Museum is rapidly becoming a reality. Thanks to the efforts of Leo Meyerson, W0GFQ, about 3,000 square feet of display space has been obtained at the Western Heritage Museum in Omaha, Nebraska. QCWA plans to have a "display of the decades," which will chronicle the complete history of Amateur Radio with representative equipment and archival material for each decade from 1900. It is planned to have an operating spark gap transmitter on display and a modern station with the best state-of-the-art equipment. It should provide a display of considerable interest to amateurs and to the general public. We believe it will be the first display of its kind in the country.

The Western Heritage Museum was once the Omaha Union railroad station and it has been restored into a beautiful museum. The Amateur Radio display will be in the communications wing, which will also have exhibits of early telephone, telegraph, etc. Leo Meyerson will serve as curator of the QCWA section of the museum. Storage space is already available and Leo is now soliciting material to add to the collection. Leo emphasizes the importance of establishing such a museum while gear is still available. If you have any appropriate equipment, make your donations now or make arrangements in your will to provide for the disposition of such items. The museum is a non-profit organization so deductions can be taken for tax purposes. For more information, contact Leo Meyerson at 69911 Via Del Sur, Cathedral City, CA 92234; 619/321-1138. The best time to call is after 4 p.m. PST. □





### Famous callsigns

Last night I got an unexpected phone call (lima-lima, meaning landline in MARS vernacular) from a total stranger that would end up exciting both of us and change my plans for this month's *Worldradio* column. I had never given it a thought before the call from NØEFX, Russ Quackenbush, of Campbell, California but there are now 16 hams in the US who have call signs which were once famous. This column is intended to make those calls famous again by relating their heritage and historical significance.

It seems that Russ Quackenbush was living back in his native state of Colorado a few years ago when he upgraded and applied for a new call sign on his 610 form. On a strictly random basis, the FCC assigned him the call NØEFX. Russ liked the call so much that he decided to keep it when he moved to Campbell, California. He told me he wasn't really sure why he felt so attached to his call (most of us are!), but after our phone conversation, he said he finally realized why his call was so special.

Both NØEFX and NØEFV were call signs used at one time or another by the Navy/Marine MARS station aboard the *USS Repose* which, along with its sister hospital ship the *USS Sanctuary*, provided vital medical treatment to thousands of GIs off the coast of Hue, Vietnam in the South China Sea from 1967 to 1972. I know because I was one of these GIs—first being treated on the *Repose* and then having surgery aboard the *Sanctuary* in December, 1969. There was also a MARS station aboard the *Sanctuary* that used the call sign NØEFW.

Both ships were old Victory ships that had been built toward the end of World War II in anticipation of an Allied ground invasion of Japan. But

The atomic bombs were dropped on Hiroshima and Nagasaki in August 1945, and that ended the need for any more troop and supply ships. So the Navy scrapped most of the Victory ships. The *Repose* and *Sanctuary* were retained and converted into floating hospitals, equipped to handle up to 200 patients. The two ships were used briefly during the Korean War but then went into mothballs at the Mare Island shipyard near San Francisco. There they stayed for more than 10 years until mounting casualties in the Vietnam War put them back into action.

The ships were both based in DaNang and rotated their patrols off the most dangerous spots in northern I Corps—the *Repose* would patrol for a week or 10 days while the *Sanctuary* transferred its patients to landbased hospitals and medevac flights at DaNang and also took on supplies—then the ships would switch. Each ship had six operating suites and state-of-the-art triage areas (emergency rooms). Each ship was retrofitted with a small (approximately 25 × 25 ft.) helipad with a big red cross painted in its center. All of the Huey, Loach and Kiowa model choppers could land, although the Hueys were so long that the tail section hung off the back of the landing pad. Both hospital ships were painted bright white with big red crosses on each side of their hulls.

Down inside each hospital ship were several large medical wards (all painted a dull shade of green), a small PX, cafeterias and rooms for the doctors, nurses and crew members, and a MARS station. The small size of the MARS shack was not a reflection of its importance, though, since free calls

home via MARS was the highlight of every patient's day! More than 30,000 American service men and women were treated aboard each of the hospital ships and it's a good bet that the majority of those patients were able to make phone patches home via MARS.


Russ was astounded to hear the distinguished and fascinating history of his call sign during its "previous life." When he asked me what had become of the *Repose* and *Sanctuary* since the end of the Vietnam War, I reported sadly that the *Repose* was scrapped in the early 1980s, but the *Sanctuary* still lives on.

My family and I were driving back from vacation at Williamsburg, Virginia, this summer. As we drove through the maze of bridges and tunnels to get through the harbor of Baltimore I spotted a ship that was painted all white. As we got close I saw a large red cross painted on its side and said to my wife and daughter, "Gee, seeing that ship reminds me of the *Repose* and *Sanctuary* in Nam. I wonder where they are..."

Just before we went down into the harbor tunnel, I saw the rusty name "USS Sanctuary" painted near the bow. It was like a big, white ghost had surfaced from more than twenty years before! As soon as we got home, I got on the phone and started calling anyone in Baltimore who I thought might be able to tell me why the *Sanctuary* was there. I was afraid they were about to scrap it, MARS station and all! It took quite a few calls, but I finally got through to a partner in a Baltimore public relations agency who, it turns out, is also president of a non-profit group which is raising funds to bring the *Sanctuary* up to date so that it can be sent to third-world countries to facilitate the treatment of children and adults for various diseases.

The group has invited me and my family to take a tour through the *Sanctuary*. Sometime soon we are determined to make the trip and walk through the same areas that I walked as a GI patient 22 years ago. I have the feeling that as I lean into that small MARS shack I will be able to hear again the voices of MARS operators on different sides of the world and the sounds of wounded or sick GIs, scared to death but also overjoyed to have the miracle of a phone call home from the war zone. "November-Zero-Echo-Foxtrot-Xray, this is November-Zero-Alpha-Alpha-Alpha. We have the patient's parents on the line. Please have the patient initiate the phone patch, over." Those are sounds I will always be able to copy 5×9+20 because they are in my heart.

Here are the lucky hams whose current civilian call signs all share



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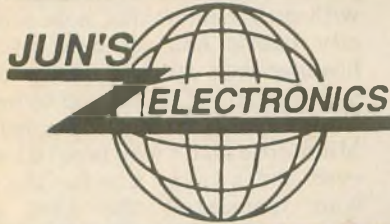
distinguished MARS service during their "previous lives." Included is the Vietnam station location of each call.

N0EFA Nathan Housman Mediapolis, IA  
DaNang area  
N0EFB Thomas Eicher Washington, IA  
DaNang (N/M Mars NCS station)  
N0EFC James Princer Grinnel, IA  
Chu Lai/Tam Ky area  
N0EFD Winona Burman Fort Dodge, IA  
Chu Lai/Tam Ky area  
N0EFE Manford Therme Farmington, IA  
Chu Lai/Tam Ky area  
N0EFF Richard Flebbe, Jr. Omaha, NE  
Vung Tau & Quang Tri

N0EFG Dean Frye Independence, IA  
DaNang area  
N0EFH Wilma Bessler St. Louis, MO  
DaNang Area  
N0EFI Pamela Westling Robbinsdale, MN  
DaNang & Saigon  
N0EFJ Verda Bates Liberty, MO  
Phu Bai  
N0EFK Charles Nickless Platte City, MO  
DaNang area  
N0EFL Don Lentz Indianola, IA  
DaNang area  
N0EFM David Baker Winterset, IA  
Gai Le (Camp Eagle, Hue area)  
N0EFN Timothy Moen Burnsville, MN  
Cam Ranh Bay

N0EFO Not currently assigned to civilian  
DaNang area  
N0EFP Not currently assigned to civilian  
USS Benewah  
N0EFS Not currently assigned to civilian  
DaNang & Chu Lai  
N0EFT Ignacy Justyna El Paso, TX  
An Hoe (Elephant Valley)  
N0EFU Earl Hughes Lincoln, NE  
Dong Tam  
N0EFV William Eimer III Lincoln, MO  
USS Repose (also see N0EFX)  
N0EFW Ward Culbertson S. Sioux City, NE  
USS Sanctuary

(please turn to page 74)



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C468A  
440 Mini HT  
List \$499. CALL!

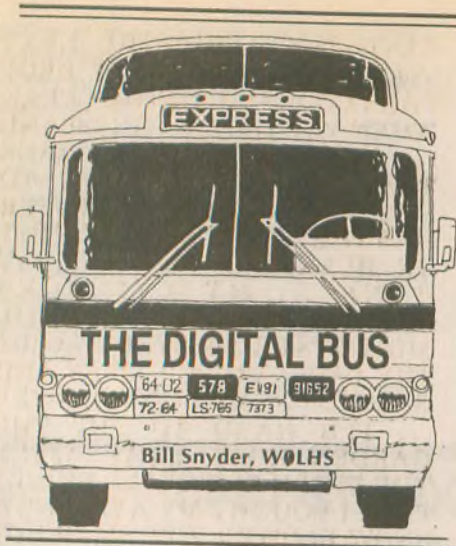


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The more I watch incoming traffic on my packet BBS, the more disgusted I get with the system. I receive a fair amount of personal message traffic from friends around the country, plus an occasional note from somewhere outside the US — like Marty Mullican, G0NJN, in England. I enjoy getting personal messages and I answer every one that arrives. I'm not sure all my answers make it back, but I do send them out.

In between personal messages my BBS collects a ton of "junque" packet mail: stuff I don't want and stuff I don't know why in the world someone wanted to distribute in the first place. I wish there was some way we could regulate junk mail, but there isn't.

This morning, as I made my overnight check of arrivals in the BBS, I printed out the first two messages on the list, numbers 27358 and 27359. The message number will give you an idea of how many messages my BBS has handled since the last time the computer crashed. In my packet BBS career I've started message numbers over from zero about 10 times. I know the traffic count has reached into the 7,000 and 8,000 numbers on two occasions, so you have an idea of the amount of traffic that flies through the nodes and BBS stations in North Dakota. My board handles a lot of stuff, even out here in the boondocks, packet-wise.

The first message I printed was from New York City, announcing a new packet BBS in the city. Now I really don't need to know about a new BBS station in the Big Apple, and I particularly don't care about the gear employed there, but the message was full of such details. It listed the type of computer, the software version, the size of the floppies and the hard disk, the manufacturers of the transceivers on 440, 2M and HF, the various antenna systems, the TNCs, and the fact

that a vertical antenna will be used for forwarding.

In addition to all that information, the message had this line: "The PBBS is intended primarily as an information source, however any legal messages or traffic are welcome." Another bit of information in the message said, "Most traffic forwarding will be done on 441 to help reduce the congestion on 145.05."

Then to conclude this message (addressed to "ALL") it stated: "Generally speaking, if you are able to access this BBS directly, you can greatly reduce the usage time when the BBS will not be available to another user." I really can't imagine why I would want to hook up directly with a station in the New York City area on 2M. It would take a jillion nodes to make it there from North Dakota, and I haven't got six months to sit and try to make the contact.

So why did I get that useless message? Because that is one of the things that is really wrong with the packet system. There is no geographical limit on the forwarding of regional traffic. A message addressed to "ALL" goes crazily through the system in a random order. The NY BBS message, believe it or not, started on the island of Grenada; it had been put there on 28.105 MHz. Then it hopped to Virginia, Maryland, Pennsylvania, Wisconsin, Minnesota and finally to me in North Dakota. It was 16 days en route, 10 of which were stuck in one forwarding station.

The message preamble listed 18 forwarding stations, which means 18 lines of copy in the heading. The message body contained 20 lines, so the overhead for that little message was nearly as much as the message itself. As a message tours the world it adds a line per hop. Doing this our packet system sort of strangles itself, but it isn't necessary.

If we would have adapted the Zip Code system for message addressing, it probably would have been possible to develop a simple geographic limit code to include in each message heading. Then that particular message would have only been distributed in the New York area—period.

Another useful feature in the BBS system would be a date/time "kill" code embedded in a preamble so the

message would self-destruct when the time limit arrived. For example: a message containing the Keplerians for a shuttle bird would die when the time period for the mission was over instead of being sent to me after the bird has landed.

A "for sale" message could use both a time and a geographical limit switch to prevent it being junk mail in other parts of the country. If used properly, it might cut traffic in half.

The second message I printed out dealt with the subject of traffic jams. No, not packet message traffic jams, but highway and street type traffic jams. The 23 line message dealing with carbon monoxide, headaches, and city traffic had 30 lines of packet heading data stacked on top of it. It had started in Canada and toured New York, Pennsylvania, Wisconsin, and Minnesota on its way here to Fargo. It even had a credit line for the person who translated the first packet message from French to English.

Why can't the packet message traffic system exclude non-ham radio related messages as well as junk mail featuring jokes, "for sales," etc. I'd like to see us keep packet mainly for person-to-person traffic and a few other items where fast distribution is important. We also need a priority designator in the system, especially for emergency traffic in time of need.

Why do I fuss over the plugged up traffic system? I would like to see the whole country be able to get the Keplerian elements in a day or two. Whenever there is a NASA shuttle mission with ham radio on it the Keps for the space craft usually arrive in my shack about a week after the mission has landed. It never fails.

(To fill in those operators who do not run packet traffic, one line is added by each BBS it passes through, so it's easy to read the heading and see the history of the message: dates and times, call signs and the address of each forwarding station. It's a great feature. If you wish to see the listing, just add the letter "H" to the "R" command when you read a message. Type RH (file number) and the machine will show you the audit trail.)

### Packet DXing

I've had a few questions asking how to contact England and other foreign countries on packet. Well, you don't try to contact them direct like some newcomers believe; you just put a message in your local public bulletin board and let the automatic features of packet take over. You do, however, need to have the packet address for the station that you wish to send a message to in order to start it out in his direction. Take this example: You wish to send a message to Marty

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Mullican, G0NJJ, in England. Marty's packet address is G0NJJ @ GB7DDX.GBR.EU. First contact your local BBS and type SP G0NJJ @ GB7DDX.GBR.EU and hit the return key. Then all you have to do is answer the BBS questions for "Title" and "Message." When you finish with the body of the message, type CONTROL Z and hit the return key.

Your local BBS then takes the message and forwards it to the next BBS that it thinks is programmed to relay messages to England. And so on until it gets to Marty. The message will eventually wind up (hopefully) in a stateside station that has a high frequency link to GBR (Great Britain) and EU (Europe). Keep in mind that packet is a "store and forward" mode and it pushes a message along until it gets to the addressee. One of my friends calls packet a "store and store and store and hopefully forward" mode, but it isn't all that bad. Where I live we have some long links that sometimes become erratic and messages lie dormant for days. But it works in most cases. Try a message to Marty. He's a Yank from Nebraska at an air base in England, and he'll answer your message.

### Eavesdroppings

"FINE ON YOUR FINE RIG AND FINE SHACK ... I WORK UNDERGROUND AS A MINK INSPECTOR ... ANYBODY USING THIS FREAK-FREQUENCY NOW? ... I NEVER KNEW THAT BEES HAD KNEES ... PROFESSIONAL BASEBALL ON TV WOULD BE BETTER IF THEY ONLY SHOWED THE NINTH INNING ... I RECEIVED MY HAM TICKET IN 1930 BUT I HAVE BEEN OFF THE AIR FOR ABOUT 50 YEARS ... I THINK THEY INVENTED THAT GAME TRIVIAL PURSUIT BY LISTENING TO 75 METER PHONE BANDS ... MY FINGERS DON'T ALWAYS SEE WHAT MY EYES ARE LOOKING AT ... I'M A BIBLE TYPER—SEEK AND YE SHALL FIND ... WHAT EVER HAPPENED TO BRAG TAPES ON RTTY? ... IT'S TIME TO WAKE UP OVER THERE AS I'M TURNING IT BACK TO YOU ... THE THREE HARDEST COUNTRIES TO WORK ON RTTY WERE ALBANIA, BURMA, AND SOUTH DAKOTA ... IF YOU DESIRE TO TRANSMIT OUTSIDE OF THE

BAND THEN SKIP THE NEXT STEP ... PLEASE DON'T DROP THE LOG BOOKS IN THE OCEAN WHEN YOU LEAVE THE ISLAND ... IF YOU WANT TO ACT LIKE THAT, PLEASE GO BACK TO SIDEBAND ... MY COMPUTER HAS THE JITTERS AND IT MUST BE BLANKING THE MEMORY BANK ... MY XYL DOES COUNTED CROSS STITCH UNTIL SHE GETS CROSS-EYED ... I PUT THE LAWN MOWER AWAY AND GASSED UP THE SNOW BLOWER ... IT'S HARD TO PUT THE GARDEN HOSE AWAY AFTER THE THIRD SNOWFALL BURIES IT ... I BOUGHT MY XYL A NEW SNOW BLOWER FOR XMAS BUT ITS TOO BIG TO PUT UNDER THE TREE ... I'D LIKE TO GO SOUTH FOR THE WINTER, BUT I CAN'T TAKE MY BEAM WITH ME ... 73 FROM CHRISTMAS TREE AND RAINDEER LAND."

Write me, Bill Snyder, 1514 South 12th Street, Fargo, ND 58103 or try a packet to W0LHS @ W0LHS.ND.U.S.A.NOAM. Thanks to WA4KZZ, W0HAH, Don Saba, W0ML, and the guys calling ZA1A on RTTY. 73 de Bill, DIT DIT. □

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*I'm not speaking about the youngsters. They're fine. They're our only hope for saving this old mudball we live on from total extinction. It's their parents and relatives. The wise ones, the elders, who claim they have the answer to what's right and wrong and they call it "common sense." And what's common sense? A conglomeration of folklore and fables and prejudices handed down from their parents and grandparents, and a pack of half-digested limited experiences and observations and thoughts . . . lit-*

*tle realizing they're the ones . . . with crusts around their brains. Those people are simply afraid of anything new.*  
— (Irving Wallace, The Seven Minutes)

I attended an ARES meeting last month and it was an eye-opener! Roughly 95 percent of those attending had been licensed within the last year. These new operators were eager to learn, had many talents to contribute and a lot of energy to participate.

A local church group held radio classes and their neighborhood now has almost 40 licenses, a repeater and a weekly net. As one old-timer said, "There's more of them than there are of us!"

It's happening! There is interest in Amateur Radio and public service. Over 70 radio operators helped out on the Wasatch Front Endurance Race. According to Alan Cranney, KA7RZR, that's the largest support group ever and they consisted of many newly licensed operators.

The challenge for us old-timers is to peel the crust away from the brain and look for new solutions and new ways to get involved. Closing the door to the shack will result in being left behind. Take your experience and wisdom and get involved—there are a lot of newcomers ready to learn.

A new syndrome has been named in the volunteer world of public service.

You probably have a few members of your group who have a narrow interest but who are expert in that area. When you need their expertise they'll drop everything and respond. But every once in a while the team leadership begins to wonder what these people do? They only see that they don't flock to every meeting and they don't fit into the "good old boy network." Forgetting these members' expertise, the

leaders often ask, "What has this person done for me this week?"

Then they ask these members to do other things. "Get active or get out," they say. When these experts don't hop to and pitch in, they become subject to the dreaded put-down. You know: "No good, lazy, no understanding of what we need, no motivation, poor team player, doesn't want to help, picks and chooses, etc." Bottom line is these experts quit. They found their niche, learned and became an expert, and were finally chased away.

If you're in SAR management, take the time to understand what motivates your people. If they're expert in one area, consider it covered and use the time to work on weak areas. If you chase away your experts, you're left with a bunch of "good old boys" who shout a lot, complain a lot and seldom accomplish much.

I attended an Air Force MARS meeting some years ago where several of the old hands were upset because there were no freebies (equipment giveaways) any more. I recall my first years in CAP where equipment bonuses were issued on meeting nights. Pretty soon I understood that the members who were there the longest or attended the most meetings got the most stuff.

When giving such bonuses becomes a way to gain participation, it also becomes the seed of corruption which grows to subvert equipment and public safety response for personal gain. In the past 10 years equipment has become even more valuable. But motivation for recent members isn't the equipment issue; it's simply a desire to belong to a status group.


It saddens me to hear commanders dangle the "benefit" carrot in front of members. Don't you want members who just enjoy public service? If you have to issue "bribes" to get anything done, well . . . the thought scares me when it applies to life and death situations.

There are ways to motivate your people and get the job done through communication and genuine caring. People want to feel needed; recognition and

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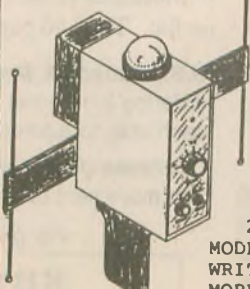
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group identity are most important. With this approach you can place equipment where it does the most good—to help save lives.

### Shopping for answers

Those group members (or leaders!) who go "shopping for answers" are a serious resource drain. Rather than carefully researching sources to find the correct answer to a dilemma, they prefer to "shop around" and ask others until they find what they *want* to hear. When the most pleasing answer is found, it's cited, whether it's right or wrong.

You can spot answer shoppers because they quote nameless sources: "A national official told me;" "I read it somewhere;" "The former commander said it was our policy;" "My friend in New York said their group does it this way." Answer shoppers thrive when there is an information void.

The best defense is to open communication channels and share information. Many groups have rules, regulations, charters or operation manuals. Most answer shoppers choose not to read information or check sources, but instead spend countless hours "shopping" for the answer they want to hear. Be careful not to allow this in your group. It erodes morale, wastes time and confuses people.

### Family considerations

Often in search and rescue you'll be confronted with a close family member or relative of the person(s) you're looking for. This can be an unsettling situation. Here are some tips on dealing with the family.

Keep the family informed. Assign responsibility to a member of your staff to be the communicator. A member of the clergy in this role usually works best.

Discourage family participation in the field if at all possible. If the family can help around mission headquarters, though, they'll feel useful and they'll see that everything possible is being done. Remember it's their loved one(s) you're looking for and they want to know you really care.

Family members should not be in briefing/debriefing areas or the communications room. Let everyone know if members of the family are present and remind your SAR teams to be sensitive to their feelings.

Be aware that as an SAR person you may be asked to assist in a death notification. It's best done by law enforcement or clergy but with today's on-screen TV cameras you may be asked to convey the message to avoid having the family hear it from the media. If you're sensitive to their needs

and understand their grief you'll do okay. Do it quickly, professionally, offer your sincere condolences and leave. Avoid discussing the "what if" or conditions of the find.

If you're involved in SAR, you might consider scheduling a meeting and inviting a sheriff or police chief and a member of the clergy to lead a discussion on family involvement and death notification. Even if you never have to do it, you should be aware of what is involved. It also makes you think a little about the people you're serving. They become "people," not just "search objects."

### The rewards

Public service, search and rescue and helping others as an Amateur Radio operator means having fun and feeling wanted, needed, appreciated and good inside when the mission's over. It also means understanding people. You could be looking for your best friend, your son or daughter or your neighbor. Don't let people become numbers, "search objects" or "stupid idiots." People make mistakes, people get in trouble and sometimes people need help. Remember that you're striving to help a person with a family and loved ones and he or she is relying on your expertise. "That others may live." □

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# YL Roundup



Many women radio amateurs, even those who enjoy checking in to nets, are reluctant to be net managers and net control operators because they lack confidence in their operating skills. Yet one of the best ways for YLs to improve their on-the-air technique is to take on a leadership role in a daily, weekly or monthly net. Nets for YLs offer a congenial forum for gaining operating skills while meeting new friends. There are a number of YL nets that operate locally, regionally, nationally or internationally.

Ann Benway, KE2US, of Stafford, New York, started one of the newest, the YL Roses net. "I started it on 10M because there are lots of Novice YLs and there was nothing for them."

The YL Roses Net meets on Mondays at 1800 UTC on 28.433 MHz with Joan Pegram, KA6IAK, of El Monte, California, as assistant net control. Women wishing to join the net may simply check in. There are no dues and no formal membership. The net's purpose is to inform YLs about YL activities and to keep the female operators in contact with one another. YLs are always welcome to the net, Ann stresses.

"We've had about 20 girls on the net," Ann says. "Of course, all summer we don't have much of a net because of the propagation. Otherwise, I haven't had too many problems. I've had a few OMs try to check in to the net. I just encourage them to listen rather than talk with the girls. But occasionally, we give them a short contact. A lot of the men have been spreading the word about the 10M net. One OM complimented us for having a net for the Novice YLs." She adds, "We occupy a frequency one hour once a week, so kindness and cooperation are greatly appreciated."

Ann, KE2US, is an Advanced Class licensee. She tried to get her license when her OM got his but was stopped

by the code. Then when her nine-year-old son decided to get his license, she got hers. Soon after, she turned into an avid YL hunter. She has over 100 YL contacts confirmed. She also spends time trying to get YLs on HF.

Being net control can be time-consuming. "I plan my Monday around the net," Ann says. "I have a hard time when my OM is home or when the kids have something going."

Ann also stays in touch with some of the ladies through packet, especially during the summer when 10M propagation is uncertain. "I enjoy the net. I really like talking with the girls every week," Ann emphasizes.

A good example of a regional net for YLs is TYLRUN, the Texas Young Ladies Round-Up Net, which has members in Arkansas, Kansas, Oklahoma and Texas. It meets on Thursdays at 8 a.m. CST on 3.942 MHz. To join this net, a YL must check in four consecutive weeks and pay dues.

"It's not a club; it's a net," stresses Judi Jaksa, N0IDR/5, of Garland, Texas. "Although you don't have to be a member to check in to the net, you do have to have a General Class license to talk on the 75M band.

"At first, I didn't want the job," says Judi, who is president and net control of TYLRUN. "I didn't feel qualified. But all the ladies are helpful. The one thing I had to learn was to match up the ladies' names with their calls. And I can't make it every week, so it's good to have backups."

This is Judi's second year to be president, which gives her the duty of being net control. "It's gotten easier," she says. "You get to know everyone. And TYLRUN meets once a year for a birthday party, so you become friends."

The ladies tend to talk about their illnesses, birds, pets, gardening and what they have done that week. "The challenge is to make it more interesting. Some suggestions have been made to come up with topics. But some of the ladies only get on the radio this one time a week," contends Judi.

Since propagation plays an important part in each YL's ability to hear what is said, Judi points out, one of her jobs as net control is to repeat the information from each of the YLs. "Conditions are better during the

winter."

Band conditions are constantly changing, agrees Irma Weber, K6KCI, of Thousand Oaks, California. For 26 of the 32 years that YL Open House Net has been on the air, she has been its net control and has operated around most of the band problems. The YL Open House Net meets on Wednesdays at 1900 UTC (winter) and 1800 UTC (summer) on 14.288 MHz. There are no prerequisites to getting on the Open House net. YLs must only wait their turn to talk, Irma says.

Open House was begun in 1959, after a letter written to all the YLs known to be on SSB. "It moved to the 'Love and Kisses' frequency (14.288) in 1963," Irma adds. "I've had a lot of help from a lot of YLs," she reflects. "Every week someone has to help, but there were some that acted as net control. I haven't done it by myself. I've had as many as 55 YLs check in to Open House.

"I'm also net control for the Ironing Board Net," Irma notes. The Ironing Board Net meets on Tuesdays at 1800 UTC (winter) and 1700 UTC (summer) on 7.235. This net is open to all YLs with no minimum check-ins, dues, or other requirements.

Although Irma, who holds an Advanced Class license, has been very predominant on the YL nets, her shack is well-wallpapered with certificates and awards from many aspects of Amateur Radio. She has been active handling traffic, going to conventions, attending club meetings, and doing MARS (Military Affiliate Radio System) work.

"At the time of the Southeast Asian confrontation, I handled traffic. I was one of the first home stations to handle phone patches from Southeast Asia. At the same time I was handling traffic and phone patches from Guam and Okinawa and other Pacific bases," Irma recalls. "My husband became totally blind in 1968, so most of the building and construction, I did. I built a Heathkit linear, several power supplies, and a rotator. And I put up our antennas."

She has helped provide communications for numerous events, including the Santa Barbara Fiesta and the Rancheros Visitadoras, where many famous celebrities and politicians ride horseback into the mountains.

"I'd be home," Irma explains, "and I would set up the phone patches. I put in a phone patch to Lucille Ball one time."

K6KCI lost her OM (Lou) in 1987. "With Lou gone, ham radio has been a lifesaver," she says. "Without the friends met through ham radio, I don't know what we would've done. It kept Lou in touch when he lost his sight. And it keeps me going now." □

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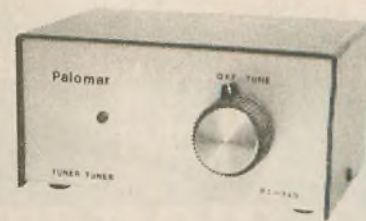
Day	Time	Net	Frequency
Daily	1400 local	PJYLS	146.550 S
Monday	1400 UTC (9EST)	Buckeye Belles	3.950
	1800 UTC	YL Roses	28.433
	1915 UTC	BYLARA	3.688
Tuesday	0100 UTC (8EST) subject to DST in summer	Buckeye Belles	3.9725
	1400 UTC	CLARA	7.070
	1700 UTC	CLARA	14.120
	1800 UTC/winter	Ironing Board	7.235
	1700 UTC/summer		
Wednesday	0030 UTC	CLARA	3.740
	1330 UTC (0830ET)	Yankee Lassies	3.910
	1230 UTC/summer		
	0930 ET	SMYLS	3.940
	0400 UTC	BAYLARC	28.133
	0300 UTC (during DST)		
	1900 UTC/winter 1800 UTC/summer	YL Open House	14.288
Thursday	1400 local time	SAYLARC CW Net	3.725
	1400 UTC	TYLRUN	3.725
	1800 UTC	Tangle Net	14.298
Friday	0800 local time	MINOW	3.913
	1100 local time	West Coast Round Table	7.235
	1300 UTC/winter	SAYLARC	3.945
	1400 UTC/summer		
Saturday	1400 UTC/winter	SAYLARC	7.245
	1400 UTC/summer		
	1400 UTC	HAWK	3.910
	2000 UTC/winter	Ontario Trilliums	3.770
	2100 UTC/winter 2200 UTC/summer	CLARA	3.770
Sunday	0400 UTC	BAYLARC	146.295
	0300 UTC (during DST)		

## DX YL nets

Daily	1200-1300 (when band opens)	YLISSB	14.332 or 21.373
Monday	0600 UTC	ALARA (also called YL DX Net or 222 Net)	14.222
	1300-1400 UTC	JLRS 1 Area	144.280
	1300 UTC/winter		
	1200 UTC/summer	IYLRC	7.500
	1915 British time	BYLARC (official net)	3.703
Tuesday	01300-1400 UTC	JLRS 1 Area	50.200
Wednesday	0100-0230 UTC	JLRS 8 Area	7.050
	0500 UTC (1st Wed.)	JLRS 3 Area	21.180
	1115 British time	BYLARA Group	7.065
	1900-2100 UTC	BRYLA	14.246
	2000 UTC	Girls Around Europe	3.655
	2200 UTC (when band opens)	YLISSB	28.673
Thursday	1200-1300 UTC	JLRS 1 Area	430.380
	1700 UTC	European YL-DX Net	14.246
	2330-0130 UTC	JLRS All Areas	7.050
Saturday	0000-0130 UTC	JLRS 7 Area	7.060
	0030 (1st Sat)	JLRS 5 Area	7.050
	0130 (1st Sat)	JLRS 0 Area	7.060
	0330 UTC	YLISSB	14.332

Source: YLRL 1991 Directory and YLS

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In recent years, people have been paying a lot of attention to their "roots." Indeed, those concerns have even reached the high-tech part of our life with wonderful software becoming available for those interested in genealogy.

Recently I was visiting a new Novice, helping him get on the air. Reaching for the paddles, I found he had the dots and dashes reversed. I bruskiy exchanged the two connections and said that was the way it should be. He wasn't totally convinced and said he felt he was getting along fine the way it was wired, thank you.

Obviously, when it came to HF radio, he'd "lost his roots," as they say. So I went through a one-minute lecture about the origins of Amateur Radio, saying that this all got started with straight keys but evolved with the advent of the "bug," dots being sent with the thumb and dashes with the forefinger.

That took care of the matter of the paddles. But how about HF radio propagation and its relationship with VHF radio propagation? There, too, a good number of new amateurs have "lost

their roots." Thus, they were raised with powerful VHF machines (TVs) always before their eyes, and the typical route for a new amateur nowadays is to go for the Technician license as soon as the Novice license is in hand and then invest in a handy-talkie before an HF rig.

But maybe the "youngsters" I talk about aren't as unsophisticated as I imply. For example, how many of them noticed the TV image of Captain Kangaroo fluttering on the screen while the sound of nearby airplanes was heard? If they did notice what I'm talking about and put the two-and-two together, they'd have been eligible for an award for re-inventing radar. Well, not really "re-inventing" but at least recognizing the basic phenomena of radio wave reflection and interference.

When one talks about "re-inventing" something, the next question is just how late in the game did it occur? As for radar, it's generally conceded that it was successful in 1935, about four years before WWII. The technical progress made in the next decade was nothing short of incredible, the wavelengths used going down from about 10M to 3 cm, with a corresponding improvement in the spatial resolution of targets.

But there were "rumblings" about such techniques, radio wave reflections from conducting targets, even before that date. Thus, "ionospherists," as they came to be called by R.A. Watson-Watt, were considering the possibility of reflection of radio waves by the conducting layer overhead as early as 1923. For technical reasons, those efforts were not successful until about 1926.

With 20/20 hindsight, we can see the difference in the two problems: the "ionospherists" were attempting to get reflections from wide, lightly ionized regions in the upper atmosphere while the radar pioneers were trying to get reflections from small, highly-

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conducting metal objects, say ships or aircraft.

In a sense, the "ionospherists" had an advantage in their efforts, the laws of Maxwell dealing with electromagnetic waves having been in hand for some time. The biggest difficulty was that they had no knowledge of the degree of ionization in the upper atmosphere and how it was distributed. That was their challenge, their task.

The radar pioneers could talk about the reflection of RF waves from metal objects, having estimates of electrical conductivity from laboratory experiments. And they knew something of the size of their targets. The problem was that their sources of RF radiation were weak and generally too low in frequency for their purposes. So higher frequencies and higher powers were their challenge.

To the credit of both groups, they succeeded in their work but since the two techniques are similar, it is not surprising that there has been some squabbling about who discovered what and when.

It's clear that HF propagation is essentially taken for granted at the present time. To me, that's scandalous. Along that line of thought, if you'll permit a play on a word or two, I would take "scandalize" over to "scalarize" and say that's what's happened to Amateur Radio: it's been "scalarized"!

In short, we've "lost our roots" by dwelling on scalar quantities, say volts, amps or watts, that have magnitude but not direction. Thus, we've lost sight of the fact that our communications depend on vector quantities, the electric and magnetic fields in HF waves; those quantities have magnitude, so many volts/meter or amps/meter, and direction or polarization.

In the early days of radio, the vector nature of electromagnetic fields was quite a BIG DEAL. Thus, the advent of ionosondes showed that the ionosphere was controlled by the earth's magnetic field, a vector quantity, and that the theory of wave polarization was of importance in considering wave propagation. Indeed, Sir Edward Appleton in the UK received the Nobel Prize in 1947 for his work on the magneto-ionic theory of the ionosphere.

I should add that part of the "lost roots" problem comes from the fact that we've moved steadily up in the spectrum. By the time you get to the VHF range, the quiet ionosphere is not very relevant, with only the occasional outbursts associated with effects from auroral and sporadic E-layers. And by the time the UHF range is reached, the ionization above us is of no importance at all and the dielectric properties of the atmosphere take control.

So now we have other exciting things in the radio scene, brief excursions in VHF propagation with changes in humidity or temperature inversions. They give rise ducting with UHF signals going off parallel to the earth's surface and far beyond the usual limit given by the line of sight. There's even VHF DXing!

Having complained about "lost roots," I must say that the future holds something different for Amateur Radio. Indeed, as spectrum utilization moves above 10 GHz, our communication efforts will become limited by quantum effects, the discrete energy levels in oxygen and water molecules. Those atmospheric constituents give rise to strong attenuation of UHF

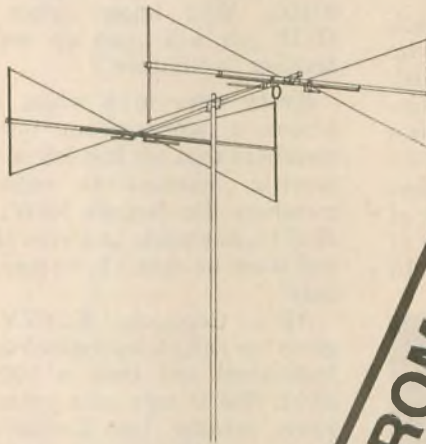
signals and may serve to limit spectrum utilization to frequencies below 50 GHz.

So having taken a backward step and complained about Amateur Radio being "scalarized," now I take a step forward and warn you that some of our efforts in the future may be in peril for being "quantized." That was a terrible play on words but you get the idea. □

A reminder that few copies remain of the *HW-8 Handbook*. Tons of mods for the HW-7, HW-8 and HW-9. Order quickly (\$8.95) from Michael Bryce, WB8VGE, 2225 Mayflower NW, Massillon, OH 44647.

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# 10-10 INTERNATIONAL News

Chuck Imsande, W6YLJ  
10-10 19636

It is with deep regret that I must announce that Jim Michaels, W6PGM, 10-10 #10, has become a Silent Key. As can be noted by his famous 10-10 number #10, Jim was around when 10-10 was born. From the very beginning Jim was a strong supporter of 10M and particularly of 10-10. He gave of his time endlessly by holding too many "volunteer" jobs to list. In going over my old 10-10 News, one of the many jobs Jim did so well was that of Editor. He became Editor in 1981 and published a "newsy" magazine that gave 10-10 a "professional look."

Jim, a member of the Long Beach Amateur Radio Club, was one who worked long and hard to establish W6RO on the Queen Mary. He was instrumental in establishing W6RO as a 10-10 member with the special 10-10 number of 25000. Jim was most recently a director and historian of 10-10, and he prepared the history of 10-10 that appears in the new 10-10 Information Manual.



Jim Michaels, W6PGM, 10-10 #10, now a Silent Key

He will be missed by many of our membership, both those who knew him and those who "just happened to work him on the air." I for one am proud to have called Jim a friend and will cherish his 10-10 #10 QSL card forever.

Mark Murphy, KC4HIT, 10-10 #57448, has "volunteered" to take over the duties of 10-10 Worked All

Continents manager. The author is now the manager of this award; after issuing 350 certificates, I have decided that if I do not unload some of my responsibilities I will never have time to do a few other things I would like to do for 10-10.

Mark has only been an amateur for a couple of years, but he is it with "both feet." He comes from a ham family; his dad, Al, is N4BDM and his mother, Jean, is N4VLN. Mark is married and his XYL, Patricia, is studying for her license. Mark and Patricia have two harmonics, Bryan, three and a half, and Anna who is one and a half.

Send an SASE for an application for the Worked All Continents Award, and send applications to Mark Murphy, KC4HIT, 108 Old Country Lane, Claremont, NC 28610-9561.

If you are interested in helping 10-10 by volunteering for a job when one becomes available, send your name along with a brief resume of your personal and ham activities to our president, Norm Lefcourt, W6IRT, 10-10 #14981, 7713 Wilkerson Ave., North Hollywood, CA 91605. Who knows when another 10-10 job will open up and require another "volunteer"?

Every once in a while, we come across a story about one of our members that we just know will be of terrific interest to other 10-10 members. Jim Rogers, N6WUQ, 10-10 #54715, has made us aware of this YL, and when he says YL, he means young lady!

Alice Coppock, KC6VYI, often gives her call phonetically Very Young Individual and that is 100 percent right. She is only nine years old and since earning her Technician Plus license and 10-10 number (#60316) this past summer, she has set her sights on passing her General Class license. She is also actively pursuing her Worked all States Award. She is also a talented artist, designing and printing her own QSL cards on her computer.

For Alice, Amateur Radio is a family affair. When not collecting states on 10M, she contacts her mom, KB6OGM, or dad, N9EPY/6 with her 2M hand-held from her home QTH in San Diego, California.

Alice checks in quite regularly to the 2300 Zulu Net which is on Monday

through Saturday at 2300Z on 28.390 plus or minus QRM. By the way, the 2300 Zulu Net, run by Jim Rogers, N6WQU, has a very informal format and is open to all amateurs, 10-10 member or not. This net has been around since 1988 and just keeps attracting new amateurs every night. If propagation favors San Diego from your location, give a listen for Kilo Charlie Six Very Young Individual and exchange numbers with Alice. Who knows? Maybe you will be her 50th state for her Worked all States Award.



Alice Coppock, KC6 Very Young Individual

Last month I listed the 1991 10-10 Scholarship Award winners: Daniel Lawrey, KA1PNE, of Claremont, NH and Jason Lovett, N1EJD, of Kennebunk, ME. Each year 10-10 awards two young deserving amateurs a \$750 scholarship. As you are well aware, the cost of a college education today is a very expensive endeavor and the officers and directors of 10-10 sincerely believe that the 10-10 Scholarship Program is one way 10-10 can help members of the amateur community.

We need your help. Please send contributions to 10-10 Scholarship Fund, c/o Gerry Gross, WA6POZ, 10-10 Treasurer, 643 N. 98th #142, Omaha, NE 68114. Note that 10-10 Scholarship donations go to Gerry and not to your district manager.

Do it now while it is fresh on your mind. I thank you, the officers and directors thank you and, best of all, the winners of the 1992 awards will thank you.

If you are not a member of 10-10 and are interested in finding out more about 10-10 and how you can become a member, send \$1 and two first class stamps (please no SASE) and your address label to 18130 Bromley Street, Tarzana, CA 91304-1701. This will get you a complete information package, consisting of the 24 page Information Manual and a copy of the latest issue of the 10-10 International News. 73, es cu next month. □

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# CONSTRUCTION

## Bigloop (a full wavelength 160M horizontal loop antenna)

WAYNE SUTHERLAND, NQ7Q

I'd been thinking about reorganizing my wire antennas for the lower bands during the fall of 1985, but I hadn't been satisfied with any ideas that I'd heard. I had low slung dipoles for 160M, 80M and 40M, and I was hoping to put up something for the new 30M and 12M bands as well.

November's *QST* article, "The Loop Skywire," by Dave Fischer, W0MHS, caught my eye! After at least an hour of cogitation, I decided to give the horizontal loop a try. It sounded like it should have a number of advantages for me if it worked as well as claimed . . . by reducing the number of wires in the air, adding more bands, and maybe even improving my signal.

Living on a five-acre lot out of town

and enjoying 160M, I decided to go whole hog on cutting wire and resolved to cut my fullwave horizontal loop for the center of that band. After all, the majority of the work would be the same for 40M or 160M—just a tad more wire for the Bigloop. Lacking any trees, I would have to plant four corner poles for either size loop. I'd never heard of a fullwave 160M horizontal loop before so I figured I might learn something; besides, there were few other amateurs around to laugh if it was a flop.

The wire I planned for the loop was used military communications plastic coated stranded cable of about 22 gauge, which a friend had picked up for me after a National Guard exercise. The wire had three strands of steel and four of copper, which I figured would

stand up to the Wyoming wind.

My antenna needed a lot of wire! The *QST* article, the *ARRL Antenna Book* and numerous other sources give the formula for a fullwave loop in feet:

$$L \text{ total} = 1005/F$$

where F is frequency in MHz.

This gave me  $1005/1.900 = 528.9$  feet for the whole loop, or about 133 feet on a side for a square configuration aimed at the center of the 160M band. I planted four poles spaced 135 feet apart on my sloping lot, assuming that I would probably shorten the wire to tune it rather than adding any length to it. The poles were all in the clear from nearby buildings or other obstacles. The wire would hang nearly horizontal, about 22 feet above the ground on the high side of the hill and about 30 feet above the ground at the corner where the hill dropped off.

Surrounding structures and wires could all have an effect on the antenna performance, not to mention my low antenna height relative to wavelength. My loop would only be about 1/17 of a wavelength above the dirt at the highest. I also had a wire fence 19 feet below one side of the loop, with a power line paralleling another side at a distance of 130 feet. My feedline was about 70 feet of RG8X.

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This was my Buffalo, Wyoming QTH, and the first location for my Bigloop antenna. Comparisons with my current Laramie, Wyoming QTH are helpful to show the same antenna's performance in another setting.

The second home for my Bigloop has been just outside of Laramie since September, 1987, again on a treeless, gently sloping rural lot. The wire here is about 20 feet above the dirt on three wooden pole corners on the low side of the hill, supported at 30 feet on the high corner by a 32 ft. freestanding metal tower. The tower also supports a triband beam five feet above the loop, with a 2M beam six feet above that. A TV antenna also hangs on the tower six feet below and off the corner of the loop.

The entire loop slopes slightly downward and southwest and is a lop-sided square with one corner set inward, reducing the area encompassed by the loop. My feedline is 70 feet of RG213. The shifts in the SWR curves between locations are probably caused by coupling interaction between the loop and the large collection of metal objects at the loop's northeast corner and the imperfect square configuration.

Insulators for the loop were made from scraps of 1/4 in. thick plexiglass. The dimensions were cut roughly 1 1/2 x 3 inches, with 1/4 in. holes centered near each end for the loop wire and the support cord (see Figure 1).

All holes and edges were filed smooth to prevent abrasion to the support or wire. The feedpoint insulator measured approximately 3 x 6 inches and was drilled in the center to accept an SO239 connector, flanked 1 1/2 inches out toward each end by 1/4 in. holes through which 1/4 in. bolts would secure both the leads from the SO239 and the terminal ends actually attached to the antenna wire. Additional 1/4 in. holes were drilled near each corner of this insulator to support it with cord and to

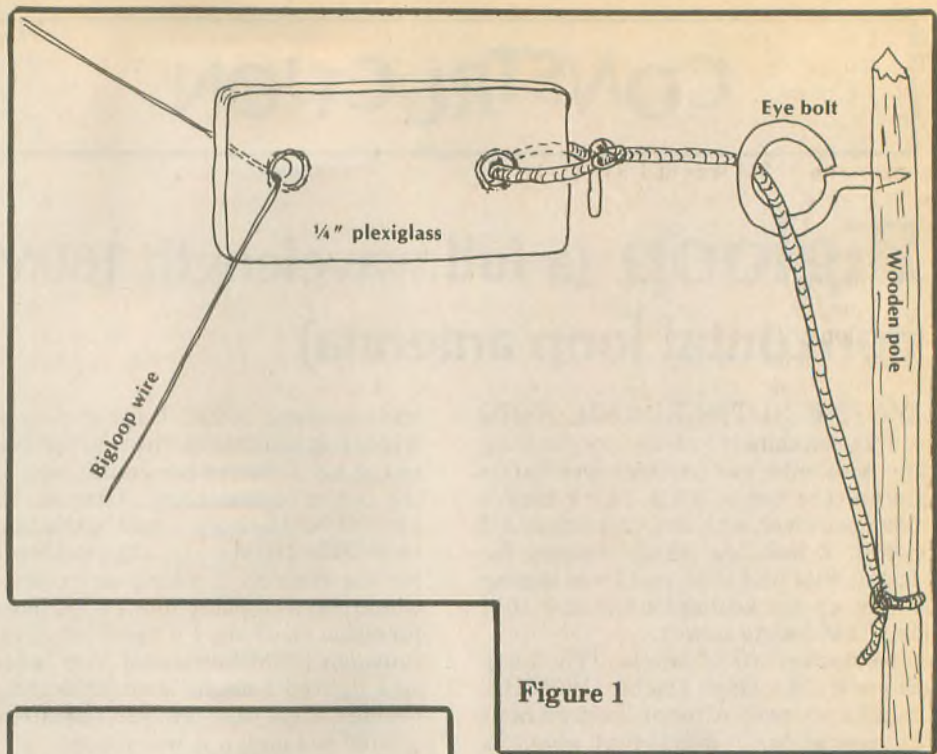


Figure 1

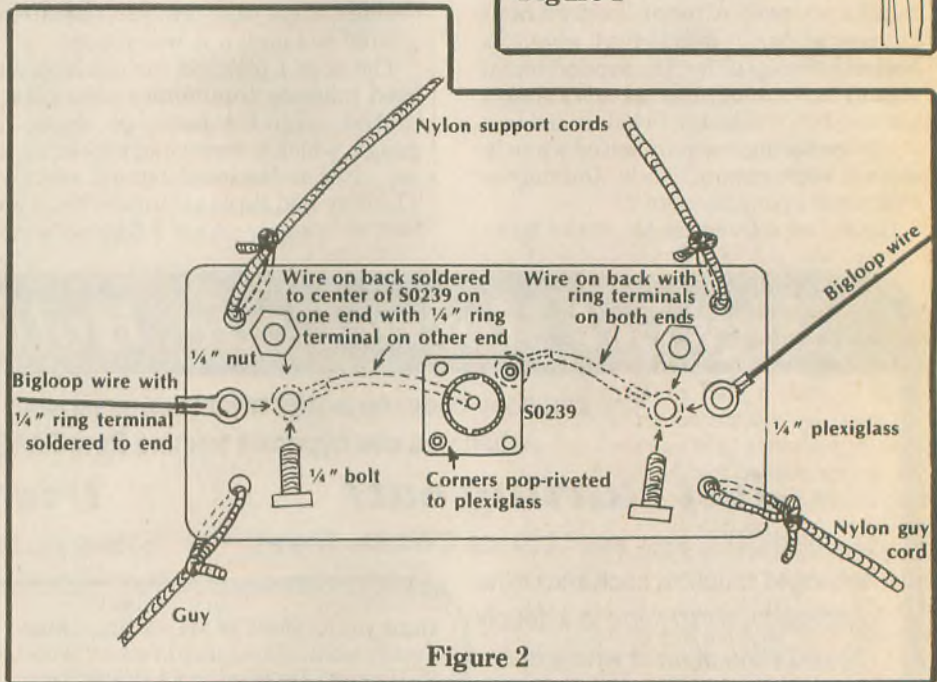


Figure 2

keep it from twisting when bounced by the wind (see Figure 2).

This type of construction was chosen in part to avoid having to untangle the antenna wire while keeping the coax straight at the same time. With this amount of wire, a tangle caused by allowing slack into it could lead to some very frustrating moments.

My initial loop was put up in Buffalo, with 522 feet of wire (I measured a bit wrong while messing with such a big chunk of wire, about seven feet shorter than planned) and the SWR was measured, resulting in a 1.28:1 SWR low centered at 1.815 MHz, with a 2:1 SWR bandwidth of about 38 kHz. On 80M the SWR showed a low of about 1.8:1 centered on 3.655 MHz with a 38

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kHz 2:1 SWR bandwidth.

The loop needed some adjustment, but it is a lot easier to calculate the adjustment than to whack away haphazardly. If the closest point to resonance on 160M was at 1.815 MHz, then my original formula would have been correct if it had shown:

$$1005/1.815 = 553.72 \text{ feet.}$$

My antenna was close to resonant at this frequency, but was actually only 522 feet long. That formula, however, assumes a somewhat unrealistic situation; it does not take into account the local ground or structures that might effect the antenna.

My preferred adjustment method had worked for me before on dipoles and on a wire vertical. If theory says a loop 553.72 feet long should be resonant at 1.815 MHz, and a loop 528.9 feet long should be resonant at 1.900 MHz, I needed to adjust for the difference between these two lengths by shortening the loop by  $553.72 - 528.9 = 24.82$  feet, regardless of what its true length was. Actually, I cut an even 25 feet off the total length because it was an even amount, and three inches would not be significant in relation to 160M. This adjustment resulted in a total loop length of 497 feet ( $522 - 25 = 497$ ).

Antenna adjustment can be a bit confusing, but it had to work. After all, I had the loop up once for the initial SWR check and had rechecked my mystical calculations several times. The temperature hovered around 10 degrees F with a stiff north wind accompanied by scattered snow flakes. My friends always told me that antenna adjustments worked best when the temperature was low enough to prevent my fingers from feeling anything.

This antenna pruning exercise completed, I checked the SWR across both the 160M and 80M bands, which are the curves labeled Buffalo in Figure 3. Not too bad for an amateur! The 160M SWR low point was about 1.25:1 at 1.905 MHz, with a 2:1 bandwidth of almost 50 kHz. (I wonder where I picked up that extra 12 kHz of bandwidth over my initial antenna test?) The 80M curve showed an SWR low of 1.82:1 at 3.843 MHz and a 2:1 SWR bandwidth of about 24 kHz. (Looks like I lost some bandwidth there.)

The second set of SWR curves in Figure 3 shows a shift lower in frequency for both 160M and 80M at the Laramie QTH. The SWR lows are also noticeably higher at about 1.7:1 on 160M, with a 40 kHz 2:1 SWR bandwidth, and the 80M SWR stays at or above 2.7:1 near 3.835 kHz. The antenna was the same length, only the site and its shape differed, as described above. Performance, however, appeared to be identical to the Buffalo

QTH when used with a tuner.

At both locations I coated all connections with silicon sealer to keep moisture from causing corrosion problems. That was *after* I had completed all adjustments.

Okay, now it is up and adjusted as close as possible to my operating preferences. I always like to have some part of the band available for use without a tuner. However (as Obie Wan must have sounded to Luke Skywalker), I heard the words of Kurt N. Sterba: "*The tuner Wayne, use the tuner!*" (Aerials, 1985). Minor adjustments with my Drake MN-75 matching network produced a flat 1:1 SWR anywhere on both the 160M and 80M bands and allowed me to put out my best possible signal. In fact, the

loop easily tuned flat on all bands!

What kind of performance did I get? GREAT! I had dipoles up for 160, 80 and 40M, but only 15 to 18 feet high, and I had a triband beam way up at 19 feet as well. Not fancy, but those antennas would provide some basis for comparison.

My first test was a sked with KB7M in Laramie (about 250 miles away) on 1.918 MHz. I bypassed my tuner for this test since the frequency was very close to the SWR lows on both the loop and the dipole. Jerry gave me about a 5dB improvement on the loop over the dipole. Other stations around the state, including W7JID in Sheridan and WA0LRJ in Cheyenne, gave me essentially the same report. When the tuner was used to flatten both antennas to

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1:1 SWRs, I again got the same comparison.

Switching to 80M and using the tuner on both the dipole and the loop, I received reports consistently indicating that my signal showed about a 5dB gain with the loop over the dipole. Various stations actually ranged from a minimum of 3dB up to 10dB gain over the dipoles on both bands. Many amateurs may have more antenna height, but the major improvement in my signal was my concern at the time.

Moving up to 40M, signal comparisons between the loop and the dipole varied. It appeared that close stations (surrounding states) reported a 3 to 5dB gain for the loop over the dipole. Stations farther away, such as east of the Mississippi River, gave either equal reports for the loop and the dipole or gave the dipole a slight edge over the loop.

I haven't worked much DX on 160M or 80M, but stations east of the Mississippi River heard me about equally well on those bands, with no apparent preference for either the loop or the dipole. However, I consistently heard them much better with the loop under a variety of conditions. The loop also seemed to be quieter concerning QRN of different types than were the dipoles.

Comparisons between the loop and the triband beam on 20, 15 and 10M indicated signal strengths about 3-5dB weaker on the loop. That compared favorably with what I have been told about the difference between the tribander and a dipole.

I should mention that all signal reports I used for antenna comparisons were subjective. That is, they were based on another operator's opinion,

## 25 Years a Ham?



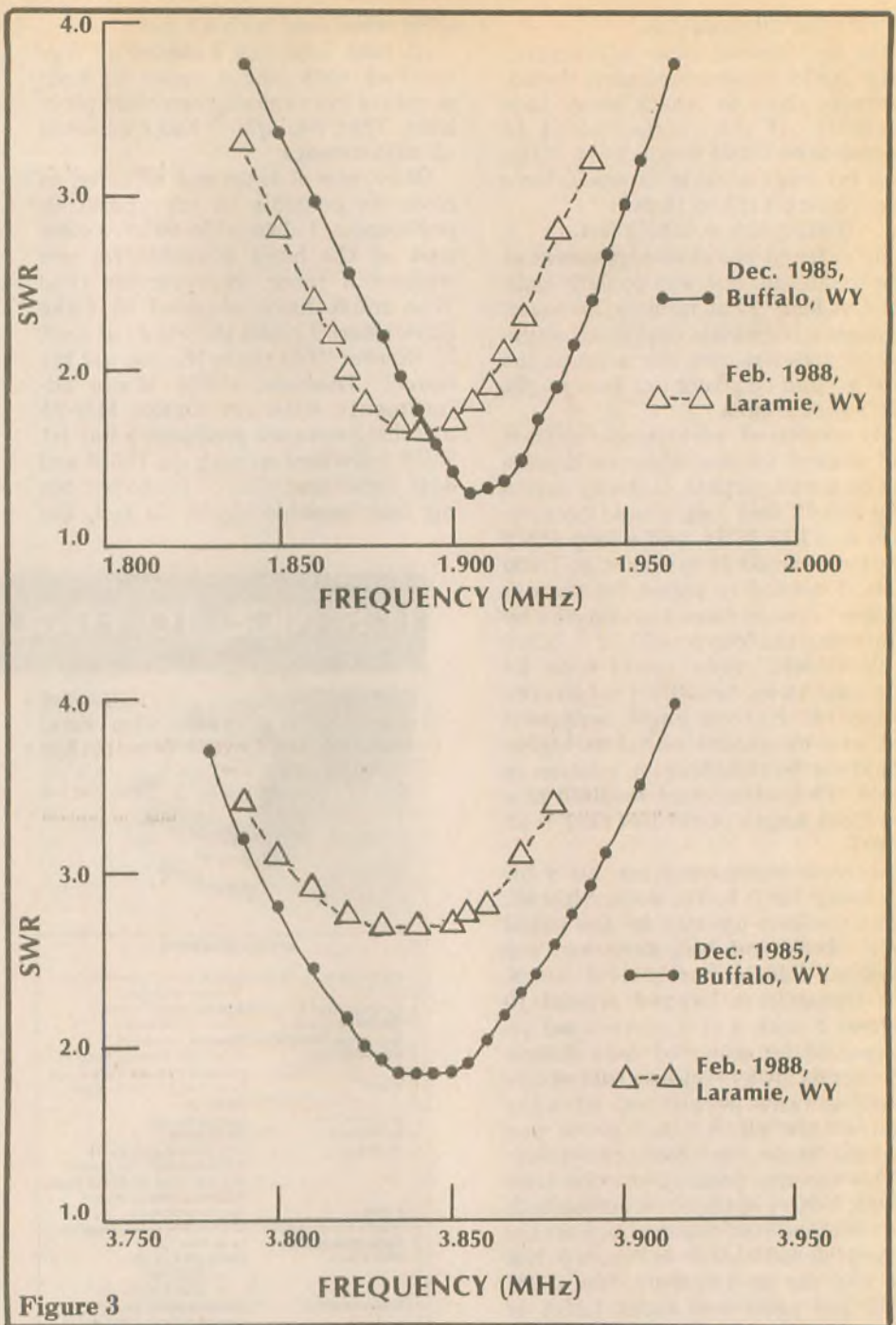
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his equipment unrelated to a defined standard, and to the varying band conditions at the time. My listening reports were similarly subjective. No precision measurements were made.

I have no amplifier, but running a Kenwood TS430S barefoot I have worked stations as far east as New

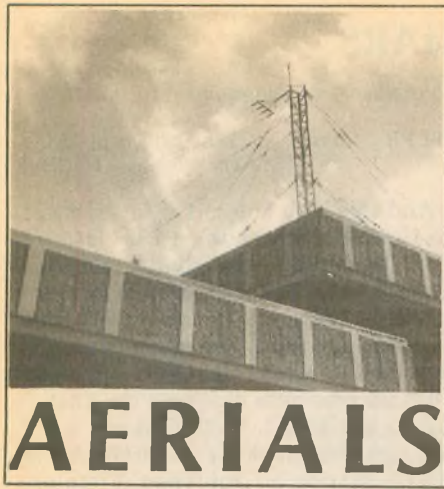
York and Pennsylvania on 160M with the loop. The loop seems to be an excellent performer for use on 160 and 80M, and may have some listening advantages. A vertical would probably be a better DX radiator. Other than the listening advantages, the 160M full-wave horizontal loop seems to have nothing to recommend it for the 40M and higher bands, except less wires and feedlines to mess with.

### Selected references:

- American Radio Relay League, 1977, *The ARRL Antenna Book*, Thirteenth Edition.
- Fischer, Dave, 1985, "The Loop Skywire," 1985 *QST*.
- Sterba, Kurt N., 1985, *Aerials* column, *Worldradio*

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I think the reason I like cigars today is because of the cigar boxes my father would give me. My first receivers went in them—one tube, run with batteries.

Handwound coils for the one-tube transmitter. Built on a wooden board. Up to two tubes. Fingers in the wrong places. Wham! In that half-second your thought is that your mother will be sad.

You realize you are still alive but both your arms feel like rubber. You never tell your parents.

The Fahenstock clip. We needed so many. For all the battery leads, headphones, key. Who today would ever think that at one time, to build a radio, you needed wood screws?

Copper wire. Up in the air. Beautiful! And how the sun glistened on the wire. Today the pollution darkens the wire so quickly.

But, to the topic at hand. Is the SWR you read in the comfort of your shack

the same as what it is up at the antenna?

Nope, it is always higher at the antenna because the power coming back down (to be measured) is attenuated by the line. Or, what is lost doesn't get measured. Depending on the frequency used, the length of the line and the quality of the line, there can be great discrepancies between that quite acceptable reading inside and the "pretty bad" upstairs.

We now turn to the wisdom of Mike Hemken, KE2NT, Glens Falls, New York, verbatim:

Hello Old Timer:

By golly, I had to read your column for three and a half years, but it finally sank in. Keep it simple, keep it fun, keep on the air.

I'm a fairly new ham and have been duly instructed in all the finer horse-apples of antenna construction by our local antenna experts. I've put up every manner of complicated antenna, followed every gospel preaching laid upon my young ears, strove for that perfect 1:1 SWR.

But I was always up in a tree fooling around with antennas and never behind the key. So I said, "The heck with it!" I unrolled all my complex failures, put together a 40 through 30M fan dipole and hung it in a tree. Then I cut a 17 through 12M fanned inverted V and put it on a PVC pipe on the garage roof.

I don't have optimum height, may not have ideal patterns, and am claiming no fantastic gain figures, but I can guarantee one thing—I'm having fun operating for a change. The simple antennas aren't affected as much by the weather and require no maintenance at all. Why didn't you tell me this sooner?! (Hi Hi)

And you know? That 80M horizontal loop from your October 91 column—that may be my answer.

Thanks a lot for all the sense.

Not a whole lot written about the 1-element Delta Loop. Delta Loop—fancy name for "triangle."

One manufacturer makes a big quad-like jobby, driven element and reflector for way up on the tower. Let's instead look at a hideaway version.

First, figure the length of a full one-wavelength loop of wire. That's 1005/FMHz. Example: 1005 divided by 14.200. Answer is: 70.77 feet. Divide that by three and you get 23.59 feet on a side.

Visualize a triangle with the point

(apex) at the top. Get the bottom wire up off the ground a bit. Where do you feed it? Well, you could put it at the top like an inverted V. Some feed it along the bottom, half way.

Some feed it along one corner. Some look at one side instead of right at the corner. Move up so there is a quarter wavelength from the apex to the feed-point (16.47 feet).

Note: The actual length of the loop can vary considerably from "text-book" figures due to the vagaries of your particular surroundings. Figures can also be scaled up or scaled down for various bands by using the original formula.

As you can see for 20M it doesn't take a very big center support pole. 15M and 10M get even smaller.

Which one of the various feeds mentioned will work best for you? A true experimenter doesn't want the answer from me. He wants to work it out himself! Fill your back yard with these monsters. Switch between them. Record the results painstakingly.

If the neighbors complain, tell them that you are Nick Tesla's grandson and you are working on transmitting power and they shouldn't be bothering a scientist while he is at work.

(Thought by some to be an old grouch, KNS goes by his monicker so no one will know that he really is Mother Theresa's radio operator.) □

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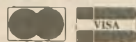
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## JT-80 International

The year 1991 is the 80th anniversary of the National Liberation Movement of the Mongols. To celebrate this occasion the Mongolian Radio Sport's Federation (MRSF) will host the JT-80 International contest from December 21, 0000Z to December 22, 0000Z.

**Classes:** Bands will be 1.8 through 28 MHz, no WARC. Participation in one mode only, CW or phone. A) Single operator, multibands; B) Multi operator, multi bands, single transceiver; C) SWL.

**Exchange:** For JT, RST plus last two digits of year first licensed; for foreign, RST plus a three-figure QSO number starting with 001.

**Scoring:** Five points for contact with Mongolian stations; three points for contact with another continent; one point for contact with own continent. **Multiplier**—DXCC countries plus each JT station on each band. Final score: Total QSO points from all bands multiplied by the sum of the multiplier from each band.

**Awards:** Gold, silver, and bronze trophies will be awarded to the first places of each class. Amateurs who made more than 80 contacts will also be awarded.

**Logs:** Submit separate logs for each band. Include a summary sheet showing the scoring, transmitter power, and other essential information. The usual signed declaration is also requested. Logs must be received no later than two months after the end of the contest by JT-80 Contest Commission, P.O. Box 639, Ulaanbaatar-13, Mongolia, Asia. □

## Michigan QRP CW Contest

The Michigan QRP Club will sponsor its 12th annual CW contest from January 4, 1200Z to January 5, 2400Z (36 hours). Operation will be on CW only, 160 through 6M (WARC bands excluded). The contest is open to all amateurs and all are eligible for awards.

**Classes:** A) 250mW or less output; B) 1W to 250mW output; C) 5W to 1W output; D) over 5W output.

**Exchange:** RST, QTH (state/province/country) and MI-QRP membership number (non-members send power-output).



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**Frequencies:** 1.810, 3.560, 7.040, 14.060, 21.060, 28.060 and 50.060 MHz; Novice: 3.710, 7.110, 21.110 and 28.110 MHz.

**Scoring:** Stations may be worked once per band for QSO points. Member contacts count five QSO points each, non-member contacts count one QSO point each. Multiply total QSO points (all bands) by the number of states/provinces/countries worked per band, for total points. **Bonus points:** total points multiplied by 1.25 for battery or 1.5 for 100 percent natural power.

**Awards:** Certificates will be issued for the highest score in each state/province/country. A separate log is required for each band, as well as your name, call, address, equipment description and power output.

**Logs:** All logs must be received by February 7, 1992. Please send an SASE for a copy of the results. Mail logs to L.T. Switzer, N8CQA, 654 Georgia, Marysville, MI 48040. A set of one log sheet and one entry form are available for an SASE to this address. □



## California

Amateur Radio operators in the Los Angeles area will hold the first ever Toys for Tots Ham Radio Rally on Sunday, December 1 from 11 a.m. to 4 p.m. at the Rose Bowl (parking lot 1) in Pasadena. Anyone is invited—all you have to do is bring a new toy valued at \$5 or more. All toys are collected by the US Marine Corp Reserves Toys for Tots program. Scheduled events include a mobile installation concours and live radio demos. Talk-in on 145.180 (-600). For more info contact Bruce, N6TFS, P.O. Box 41446, Los Angeles, CA 90041; 213/257-5502. □

## Texas

TEXAS SOUTHWEST ARC will sponsor a swapmeet December 7 at the Pavillion at Dixieland Park in Harlingen. Talk-in on 146.7 and 146.96 MHz. Contact Charlie Brabham, WA5ZRP, for further information at Rt. 2, Box 46, Lyford, TX 78569 or call 512/347-3612. □

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Name Index - by last name .....\$10  
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All three - \$25

\$3 shipping per order

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## MARS

(continued from page 59)

NØEFX Russell Quackenbush Campbell, CA  
USS Repose (also see NØEFV)

And this isn't the end of this story. I just looked in my October 1991 issue of *Worldradio* and saw that the Extra Class call signs in Area 8 are now up to AA8EK. Let's see, at that rate, sometime during 1992 there is going to be a new Extra Class in Ohio or West Virginia who gets assigned the "new" call sign AB8AB. Well, that call has a distinguished past life too as the Army MARS station at Qui Nhon, Vietnam. The Army MARS call signs in Nam ran from AB8AB through AB8AZ and even beyond into the three-letter suffixes, and the Air Force MARS stations in Nam ran from AI8AB to AI8AX. So it looks like there will be several dozen other lucky amateur operators who will enjoy the distinction of having a call sign with a previous life of MARS service. Don't you wish you could actually request one of these calls from the FCC?!

*Dr. Scipione encourages anyone with an interesting story about the Military Affiliate Radio Systems to write him at 5 Burr Drive, Metuchen, NJ 08840, or call evenings at 908/548-8096.* □

## Letter of appreciation

*Please extend my sincere appreciation to your Military Affiliate Radio System (MARS) operators for a job well done. The dedication and unswerving devotion of the thousands of MARS volunteer operators were outstanding. Their tireless and unselfish efforts contributed significantly to the morale of the hundreds of thousands of soldiers, sailors, airmen and marines participating in Operations Desert Shield and Desert Storm.*

*Especially appreciated were the many holiday hours the MARS operators gave up so the troops in the field could call or send messages home. The many highly favorable comments we have received attest to the importance of this service.*

*Again, on behalf of all the troops serving in the desert, thank you for a job well done. You can be justly proud of your contribution to Desert Shield and Desert Storm.*

*H. Norman Schwarzkopf  
General, US Army*







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

## Ham radio in space

A new Amateur Radio educational videotape series entitled *Ham Radio in Space*, suitable for classroom use, has just been announced. The series contains six individual segments which can be used separately or combined according to instructional needs. This tape will interest viewers of all ages who are interested in space. Loan copies of VHS videotapes will be available from the Educational Activities Department (EAD) of the American Radio Relay League (ARRL), 225 Main Street, Newington, Connecticut; 203/666-1541; FAX 203/665-7531. Inquire of ARRL/EAD for formats other than VHS. ARRL Publications Sales will also have VHS copies for \$10 plus \$3 for shipping and handling.

Segments in the series include an introduction, "You Can Fly;" "How Ham Radio Went into Space;" "Ham Stations on Earth and in Orbit;" "Hams Go to School;" and "Ham Radio in the 21st Century."

The series was a cooperative effort by Roy Neal, K6DUE; Bill Pasternak, WA6ITF; Mark Neal; Rosalie White, WA1STO; and Larry D'Anna, WA3KOK, at Professional Video Services in Washington, DC. Funding for this project was provided by ARRL, CQ Communications, ICOM America and Kenwood.

For further information, contact ARRL Educational Activities Assistant Zoe Belliveau at ARRL HQ. □

## ATV Secrets

*Amateur Television Quarterly Magazine* is publishing a new book entitled *ATV Secrets For Aspiring ATVers* which utilizes the drawing power of television to interest hams and non-hams alike to Amateur Television and Amateur Radio. The book features a glitzy full color approach emphasizing the fun of Amateur Radio using the ATV mode for DX, public service, space and terrestrial operations including ATV balloons, rockets, R/C models and the STS 37 shuttle ATV. It also contains an index to over 500 articles, features and build-it projects which lets the reader find more information on many areas of interest.

Also in the book is a page for local information that clubs or individuals can fill in to promote local activity to the reader. The book is designed to be used as a handout by amateurs to other amateurs or non-amateurs. Copies are available for \$1.50 each plus shipping (in bulk quantities of 10 or more copies) or \$2.98 retail. The book contains several examples of current amateur activities in NASA shuttle communications, R/C model and public service application. The publication is non-technical in content but provides information for those who want more technical details of any of the subject areas. Contact ATVQ, 1545 Lee St., Des Plaines, IL 60018; 708/298-2269; FAX 708/803-8994. □

## Keys Keys Keys

*Keys Keys Keys* is a tribute to the art of CW and Morse code. Written by one of Amateur Radio's most prolific and knowledgeable authors, Dave Ingram, K4TWJ, this richly illustrated volume is the only book to ever have been written on such an integral part of our hobby, the manual code key.

Sending Morse code by hand has become a lost art in this day and age of computers and electronic keyers. Ingram's new book on keys, however, is a tribute to how it used to be done "in the old days!"

Loaded with pictures and full descriptive text, this book shows just about every key that was ever used in both Amateur and pro-

fessional communications circuits—from simple "cootie" and miniature spy keys to gold plated presentation models—they're all here.

In addition, Ingram gives the reader plenty of helpful hints, tips and tricks on how to collect, restore and display a key collection.

*Keys Keys Keys* is available from CQ Bookstore in Greenville, NH for \$9.95 (plus \$4 shipping via mail US only); 800-457/7373; FAX 603/878-1951. □

## Lightning strike preventer

Electron Processing today announced a useful product designed to reduce the chances of lightning striking a radio tower or mast. Lightning strikes cause tremendous damage, and reducing the probability of a strike to your tower is a wise move.

The Lightning Reducer model LRU-1 prevents the buildup of high cloud to tower voltages responsible for lightning strikes.



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### Jun's Electronics

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### NEW YORK

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The LRU-1 is priced at \$40 with a "three pack" (normally recommended configuration for towers 30 to 100 feet) model LRU-3 priced at \$99. There is an additional \$5 shipping and handling charge. To order or for additional information, contact Electron Processing, Inc. at P.O. Box 68, Cedar, MI 49621 or call 616/228-7020. □

## Time zone decal

Time & Again Co. is proud to be the distributor of the World Time Zone Map decal, which can be placed on a shortwave receiver or on any other object to reference international time zones at a glance. Since many shortwave receivers and other



Amateur Radio equipment are lacking a time zone map imprinted on the case, the decal ideally fills the need.

These decals are made of a high quality polyester and are self-adhesive for easy application to any surface. They are attractively toned with silver continents and blue oceans. Two sizes are available for accommodation on small areas.

The prices per size are: 2¼ × 4¾ inches: \$2; 1¼ × 3¾ inches: \$1.50, or both for \$3. Prices include tax. Send SASE and payment to Time & Again, P.O. Box 306, Dickinson, TX 77539. □

## Quick cards

Quick-n-Easy 2M repeater maps are maps of your state, with an up to date list of 2M Amateur Radio repeaters in your state. On

the back is a listing of 220 MHz, 440 MHz, 900 MHz, and 1.2 GHz repeaters in your state. They are easy to read and great for travel!

Quick-n-Easy DXCC offers a listing of all DXCC countries, along with their most common prefix, and the beam heading from your location.

The Quick-n-Easy QSO helper is a handy card listing the RST system, Q signals, UTC time conversion, Fahrenheit to Celsius temperature conversion, and feet to meters conversion.

Quick-n-Easy shortwave listening consists of four cards for shortwave listeners. Each card lists six hours of the day with listings for shortwave broadcast stations (BBC, Radio Moscow, etc.)

The QSL kit is a package containing everything needed for QSLing DX stations via the bureau. It includes envelopes (the right size!), as well as addresses for each bureau and instructions on how to use the bureau.

All of these cards retail for \$4.95, and the QSL kit is just \$1.99. Our products are available through many dealers or may be ordered direct. Dealer inquiries are always welcome. Contact FBEnterprises, 8818 Rainier Dr., Vancouver, WA 98664; 206/695-3637. □

## World Map Clock

MFJ Enterprises, Inc. announces the release of the new MFJ-110 DXer's World Map Clock for only \$24.95. This new clock not only shows the time and date at any QTH in the world—it also lets you see the place where your contact is. It's the neatest ham logging clock on the market. MFJ-110 DXer's World Map Clock also shows day of week, month, date and year.

Easy-to-use push buttons let you instantly move the display to a QTH in every time zone. Recall feature instantly moves the display back to local time. It also features an alarm. The tan map is on a gold background with black border. The clock measures 5¼ × 3¼ × ¾ inches.



MFJ's one year unconditional guarantee is naturally included. For more information or to order, contact any MFJ dealer or MFJ Enterprises, Inc., P.O. Box 494, Mississippi State, MS 39762, or call 601/323-5869; FAX 601/323-6551; or order toll free at 800/647-1800. □

## Discount software

Milestone Technologies announced today that it is making its popular ham radio software *Codemaster* and *Logmaster* available to radio clubs at wholesale prices.

The *Codemaster* Morse code trainer normally retails for \$19.95, and the *Logmaster* log keeping program retails for \$29.95. Both packages run on any IBM compatible personal computer.

*Codemaster* is a full-featured Morse code training package which, for the beginner, teaches Morse in a structured learning environment with full documentation on screen, along with programmed instruction in the code using groups of five or six characters at a time; and for the student who has learned the code, *Codemaster's* flexible practice module offers an easy and efficient way to improve code copying proficiency—all the way up to 41 words per minute (the "Farnsworth Method" of proportional spacing is supported). Features of the package include: Morse Tutor—structured learning environment; Keyboard Echo—Morse equivalent as keys are struck; Random Groups—fully configurable speed, spacing, group content; Random Words—fully configurable speed, spacing; Speed Words—common words for high-

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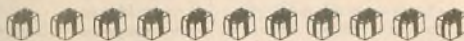
Logmaster is a full-featured application for the automation of Amateur Radio log keeping. Details of each QSO are entered into a temporary file for further editing, review, and production of QSL card labels. After the temporary file is posted to the main station log, the user can print an alphabetical list of all stations worked, or a formal log. Details of any QSO can be located and displayed on screen quickly enough for real-time reference during station operation. Logmaster incorporates flexible reporting and searching facilities, which allow the user to restrict a search or report to selected criteria.

All Logmaster output, whether QSL card labels or reports, can be directed optionally to the screen, disk (ASCII text file) or the printer, and a fully configurable printer control utility is included. Logmaster requires an IBM-PC or compatible with at least 512K memory, a single diskette drive (a hard disk is recommended), and DOS 2.10 or later.

Any club officer will be eligible to purchase the software at standard wholesale rates, plus shipping. The club can then make the software available to members. For more information about the software or the discount program, contact Marshall Emm at 303/752-3882 or write to him at Milestone Technologies, 3551 S. Monaco Parkway, Suite 223, Denver, CO 80237-1228. □



Haven't found that perfect gift? Not sure what the ham in your life needs? Consider one of the great catalogs listed here and let him pick for himself.



## CQ Buyer's Guide

Just in time for the holiday season: a brand new edition of CQ's very popular *Equipment Buyer's Guide*.

This new edition is full of information every amateur will want as they eye buying new rigs and accessories. CQ Editor, Peter O'Dell, WB2D, spent countless hours going through product sheets, ads and on the telephone putting this invaluable new edition together.

The new *Buyer's Guide* also includes information on how to get the new no-code amateur license, a packet radio tutorial by packet "guru" Buck Rogers, K4ABT, and an intriguing article on lightning protection by noted DXer and CQ columnist, John Dorr, K1AR.

Equipment is listed and cross-referenced for maximum convenience. It covers HF through UHF rigs, specialized mode equipment, tuners, and just about every accessory imaginable to computers and related amateur software.

This exciting new reference guide is available from most Amateur Radio dealers and other vendors for just \$4.95. It is also available for \$6.95 postpaid (\$4.95 plus \$2 shipping and handling) from CQ Bookstore. Additional dealer inquiries invited. □

## Super Catalog

The fall issue of the Radio Works' catalog is now available. It is a source book of high performance wire antenna systems, parts and accessories. Within its 80 pages is a complete selection of coax, connectors, antenna wire—everything for the wire antenna enthusiast. A full array of complete antenna systems like the Carolina Windom, "G5RV Ultra" and "SuperLoop" are featured.

New in this issue is a Line Isolators made specifically for vertical antennas and the new, field-reconfigurable, 80 through 10M Carolina Beam and the 40 through 10M Carolina Beam/2. The "something-new-under-the-sun" antenna is an exciting new "vertically radiating" dipole system.

Available for immediate shipment are the latest Diawa, Emoto, and Create power meters, power supplies and rotators. Everything you need to accessorize or update your present antenna system is in this catalog, all at discount prices.

The cover price of the Radio Works' catalog is \$2, but to all *Worldradio* readers, it is FREE. (If you want your copy extra fast, send \$2 to cover first class postage.) Contact the Radio Works, Box 6159, Portsmouth, VA 23703; 804/484-0140; FAX 803/483-1873. □

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# VE exam schedules

As a service to our readers, Worldradio presents a feature listing those VE exams, times and locations which are sent to us. Please remember that our deadline for publication is three months in advance. For example, if your VE group is scheduling an exam for September, please have the information to us by mid June.

Worldradio, 2120 28th St., Sacramento, CA 95818.

Please mark the envelope "VE Exams."

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

p/r=pre-register

w/i=walk-in

Date	City	Contact	Notes	Date	City	Contact	Notes
<b>Arizona</b>				<b>Nevada</b>			
Jan. 4	Tucson	K7OPX (602) 886-7217	w/i only	Jan. 18	Minden	W7QO, (702) 265-3430	w/i
<b>California</b>				<b>New Jersey</b>			
Feb. 1	Apple Valley	N6ZCA (619) 244-4012	p/r pref; w/i OK	Jan. 16	Bellmawr	WA2VQG (609) 546-7710	w/i
Jan. 4	Los Angeles	Ali Hassan, AA6WC, (213) 778-6226	w/i OK	<b>New York</b>			
Jan. 11	San Pedro	N6DYZ, (213) 325-2965	w/i OK	Jan. 15	Lancaster	Stan, N2IAE, (716) 887-6608	
Jan. 25	Vacaville	Irene, KK6XB, (707) 446-8376	w/i only	Jan. 25	Lockport	Bob, KA2EGC, (716) 433-4584	p/r only
Feb. 8	Camarillo	Jess Roark, NY3S, (805) 483-6864; Tom St. George, KC6JLW, (805) 486-7619	w/i OK	Jan. 26	North Babylon	KA2RGI (516) 957-0218	w/i OK
<b>Colorado</b>				Jan. 4	North Tonawanda	Vern, AA2AC, (716) 693-5977 days, (716) 634-5276 nights	p/r only
Jan. 18	Westminster	N0CFM (303) 451-1231; N0HNR (303) 278-4280	p/r or w/i	<b>North Carolina</b>			
<b>Connecticut</b>				Jan. 25	New Bern	Andy Griffith, W4ULD, (919) 726-5924	w/i OK
Jan. 22	Shelton	WJ1T (203) 736-0488	w/i pref.	Jan. 12	Salisbury	Isabelle, AB4UX, (704) 284-2414	w/i OK
Jan. 19	West Hartford	Larry, K1IED, (203) 644-2356	p/r pref	<b>Pennsylvania</b>			
<b>Florida</b>				Jan. 4	Erie	W3CG (814) 665-9124	w/i
Jan. 18	Melbourne	WB9IVR (407) 724-6183	w/i OK	<b>South Carolina</b>			
<b>Georgia</b>				Jan. 18	Charleston	Pat Foster, AC4IH, (803) 553-3871	w/i
Jan. 11	Augusta	Jim Abercrombie, N4JA, (404) 790-7802	w/i	Jan. 18	Sumpter	Dan Mask, KB5SGH, (803) 775-9106	w/i
<b>Hawaii</b>				<b>South Dakota</b>			
Jan. 18	Hilo	AH6P, (808) 959-8893	w/i	Jan. 18	Hot Springs	WS0V, (605) 745-5929	p/r pref.; w/i OK
<b>Illinois</b>				<b>Tennessee</b>			
Jan. 21	Aurora	N9AKE (708) 892-1252	w/i pref	Jan. 6	Chattanooga	Alan Painter, WA4QCH, (404) 866-1200	w/i
Jan. 17	Elmhurst	W9PCS, (708) 833-7371	p/r	Jan. 24	Crater County	Joe Hopkins, K4BKI, (615) 543-4022	w/i
<b>Indiana</b>				Jan. 16	Fentress County	Mike Ledbetter, AB4BX, (615) 879-8626	w/i
Jan. 4	South Bend	NI9Y (219) 255-4455	w/i OK	Jan. 25	Gallatin	Ronnie Gilley, KA4LUG, (615) 452-0883	w/i
<b>Iowa</b>				<b>Texas</b>			
Jan. 19	Des Moines	NA0R, (515) 964-0900 or (515) 967-3890	w/i	Jan. 14	Houston	ND5F (713) 464-9044	p/r pref; w/i OK
<b>Maryland</b>				Jan. 11	Midland	KT5G, (915) 694-9450	w/i OK
Jan. 11	Laurel	NT3Z (301) 761-7115; or WC3I (301) 262-5083	w/i	<b>Vermont</b>			
<b>Michigan</b>				Jan. 18	Montpelier	WB1AJG, (802) 433-6172	p/r pref.; w/i OK
Jan. 30	Hazel Park	John, WD8R, 791-4289; Mike, WD8S, 399-7970	w/i OK	<b>Wisconsin</b>			
<b>Nebraska</b>				Jan. 4	Racine	NW9P (414) 658-8390	w/i
Jan. 28	Omaha	KM0Y (402) 553-2610	w/i only				

*Doesn't the VE exam listing look short this month? We do not yet have 1992 schedules from everyone. Remember, you can send us your club's entire 1992 VE exam schedule (please include all exact dates) in advance. We'll keep it here on file and list your sessions as they come up. Schedules commencing with February '92 exam dates must be in by December 15 to ensure inclusion in our February issue.*

## Dear Santa,

I wrote to you last week and sent my list, but I think I'd better tell you some more stuff. It's not for me. I heard my dad tell my mom what he wanted for Christmas. Some of it's OK, but mom would really be mad if you brought some of it. They argue enough anyway.

It would be OK to bring a satellite dish, a heat sink, a filter and a phone patch. Mom could use more dishes; and, of course, a new sink to wash them in; but it's just more work for her if you

bring more filters. She is always the one that has to change them in the furnace. But Dad may mean the ones in the car, and he does those.

About the phone patch. That may be a joke 'cause he is always telling Sis about wearing out the phone.

He always talks on the radio. Mom says it keeps him out of her hair. Dad calls her his external speaker.

I don't know why he wants a loaded dummy, and he didn't say what meter he wanted. Just a what meter.

There are two things that you really

hadn't better bring. He is not supposed to eat a lot of salty stuff so forget the hamfest tickets unless they have other stuff to eat. Mom screams if I bring home worms or frogs so scratch off the bug and the spider antenna.

Thanks for what you bring me on Christmas. Be real careful about that junk Dad wants.

Thank you, Mikie

P.S. The rubber duck that Dad wants must be for my little brother to play with in the bathtub.

—Findlay Radio Club, Findlay, OH



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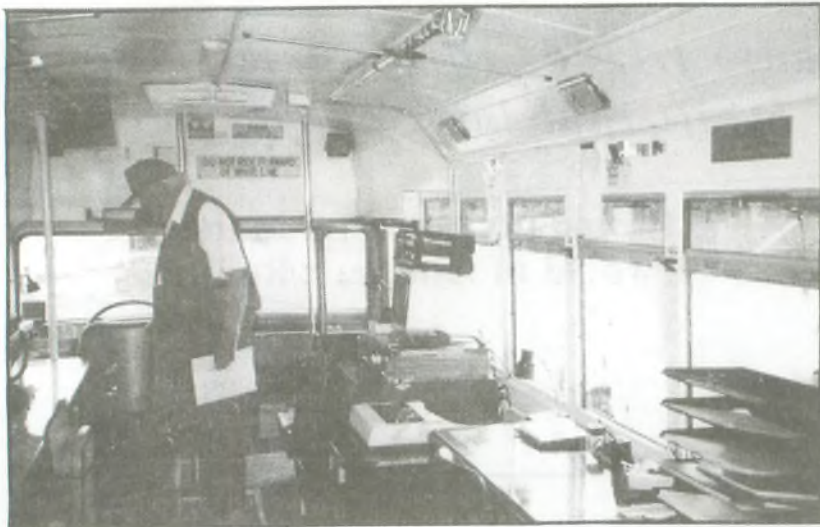


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## VIP members on line at the Geysers fire

The Santa Rosa Ranger Unit of the California Department of Forestry Volunteers in Prevention were called out October 20, 1991, at about 0900 hours. The Geysers fires took off with high winds, high temperatures and very dry fuel. The VIP organization is an auxiliary communications unit to the California Department of Forestry. •The fires of about 5,700 acres started at 0600 the morning of October 20. Communications van 1429 was dispatched to Healdsburg, CA. Communication was established with the ECC

at CDF headquarters in Santa Rosa, CA. •Twenty-six individual amateurs so far have been involved in approximately 400 hours of service; several were on location for three days steady. Three voice circuits and one packet circuit were used. Three repeaters had to be used to keep communications viable. Some 99 messages were handled. One early packet message consisted of 600 computer lines of resource requests. Sure glad packet can take this load off the voice circuits. •A communications link was established with the Oakland fire for information services. •Communications van 1429 was built from an old 42-passenger crew bus, plus 3,000 hours of volunteer labor as well as donations. It has 2,220, 440, HF, ATV and packet, as well as two CDF circuits plus maps and work space. The cost was about \$20,000 and a lot of hard work. It has 800 pounds of battery power plus a generator and accessory items. — We thank Henry Davis, W6DTV, for getting this information to us as we went to press. Next month we'll have more on the Amateur Radio Service during the fires. □



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